# MACKENZIE.



# TUX PROJECT TRANSPORTATION IMPACT ANALYSIS

# To

City of Tualatin

#### For

Lam Research

# **Dated**

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(Revised October 10, 2024)

**Project Number** 

2240022.00



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#### **EXECUTIVE SUMMARY**

- 1. Three new buildings are proposed at the southwest corner of the Lam campus in Tualatin, Oregon, developed in two phases.
- 2. Phase 1 includes an approximately 147,000-square-foot (SF) laboratory facility (Building X), 164,000 SF office building (Building T), 55,000 SF utility building (Building U), and 283 additional parking spaces.
- 3. Phase 2 includes expansion of the laboratory area in Building X to 205,000 SF and 551 parking spaces.
- 4. At full occupancy of both Phases, the proposed campus expansion is estimated to generate an additional 244 AM peak hour, 233 PM peak hour, and 2036 daily trips.
- 5. A safety review, capacity analysis, and queuing analysis was conducted for all City intersections within a 1/4-mile of the project site, all ODOT facilities anticipated to be impacted by 50 or more peak hour trips, and intersections of concern as noted by ODOT or the City.
- 6. No study area intersections were found to have a crash rate higher than 1.0 for the five-year crash data from 2018 through 2022, nor were significant patterns found that could be addressed by improvements to the intersections.
- 7. All but two public street intersections are projected to meet City of Tualatin and ODOT mobility standards with the proposed TUX project. The intersection of SW Tualatin Road with SW 115th Avenue will fall below standards with the addition of site trips on the southern approach. SW Hazelbrook Road/OR 99W will have long delays in the PM peak hour for vehicles turning right onto OR 99W.
- 8. Queuing for all study area intersections is currently estimated to be accommodated by existing storage areas except for intersections along OR 99W at the new site access on SW Tualatin Road.
- 9. Based on a review of safety, capacity, and queuing, the following mitigation measures are recommended:
  - Install a traffic signal at the site access on SW Tualatin Road opposite SW 115th Avenue with Phase 1. The signal can operate with a common green phase for the driveway and SW 115th
  - Provide separate left and right turn lanes on the driveway approach to SW Tualatin Road opposite SW 115th Avenue.
  - Stripe left turn lanes on SW Tualatin Road where a center left turn lane is currently provided.
  - Coordinate left turn movements from OR 99W to SW Tualatin Road at the intersections with SW 124th Avenue. This will minimize the queue lengths and delays for southbound left turns on SW 124th Avenue and avoid potential spill back to OR 99W.
  - Trim vegetation at the site access locations as needed to provide the recommended intersection sight distances.



#### I. INTRODUCTION

This Transportation Impact Analysis (TIA) has been prepared in support of an Architectural Review for the proposed TUX laboratory and office buildings at the Lam Research campus in Tualatin, Oregon. Figure 1 in Appendix A presents a vicinity map indicating the project location.

# **Project Description**

An approximately 205,000 SF laboratory facility (Building X), 164,000 SF office building (Building T), and 55,000 SF utility building (Building U) are proposed in the southwest corner of the Lam campus. These buildings, referred to as TUX, will be occupied by up to 600 new employees. Much of this space is currently used as surface parking, which will be relocated to the north section of the campus. The net increase in parking is anticipated to be 430 spaces. The buildout year for the laboratory facility is assumed to be 2027 for Phase 1 and 2030 for Phase 2, as summarized below.

Phase 1 – 2027 Occupancy for up to 360 employees:

- Building T (office)
- Building X (147 thousand square feet (KSF) of lab)
- Building U (utility building)
- Expand north parking lot (new + replaced parking)
- New employee access to SW Tualatin Road opposite SW 115th Avenue

Phase 2 – 2030 occupancy for an additional 240 employees:

- Building X (lab expansion to 205 KSF)
- New parking lot at northwest corner of campus

The west access to SW Leveton Drive at the southwest corner of the site will be relocated to the east and repurposed as a truck access for deliveries to the existing and proposed buildings.

The parking areas along the north side of the campus will be expanded to offset the loss of the southwest lot and to accommodate additional need with the TUX project. The permanent access to the expanded employee parking lots is proposed at SW Tualatin Road opposite SW 115th Avenue. This access is currently used by JAE and a gated emergency access is provided to Lam. With the proposal, the driveway would primarily be used as access for Lam employees and will continue to provide access to JAE. The Phase 1 and Phase 2 site plans are presented in Figures 2A and 2B.

# Scope of Analysis

This TIA has been prepared in accordance with the City of Tualatin Traffic Study Requirements (updated March 16, 2022), Tualatin Development Code (TDC) Section 74.440, and the Oregon Department of Transportation's (ODOT) Analysis Procedures Manual (APM) Version 2. This study includes a summary of existing traffic conditions, crash review, proposed trip generation, and an analysis of intersection operations, sight distance, queuing, and signal and turn-lane warrants.

Appendix B includes the scoping documents including a TIS scoping letter dated June 20, 2024, email requests from City of Tualatin and ODOT staff adding intersections, and Incomplete Notice dated July 24,



2024. Based upon these documents and discussions with City staff, the study area intersections were confirmed.

#### Study Area

The City's Traffic Study Requirements document requires all intersections within a 1/4-mile radius of the project site be included as part of the study area. Washington County requires analysis for all intersections where project trips will exceed 10% of the existing average daily traffic (ADT). No Washington County intersections were found to meet this threshold. In general, ODOT intersections impacted with 50 or more site peak hour trips or with specific concerns were included in the study area.

These public intersections are included in the study area:

- SW Leveton Drive/SW 118th Avenue
- SW Leveton Drive/SW 108th Avenue
- SW Tualatin Road/SW Teton Avenue
- SW Tualatin Road/SW 108th Avenue
- SW Tualatin Road/SW 112th Avenue
- SW Tualatin Road/SW 115th Avenue
- SW 124th Avenue/SW Leveton Road
- SW 124th Avenue/SW Tualatin Road
- SW 124th Avenue/OR 99W
- SW Herman Road/SW 108th Avenue
- SW Hazelbrook Road/SW 115th Avenue
- SW Hazelbrook Road/OR 99W
- SW Herman Road/SW Teton Avenue
- OR 99W/SW Fischer Road
- OR 99W/SW Durham Road

The following site driveways will also be studied (includes those opposite public streets listed above):

- SW Leveton Drive/West Access (to be relocated east)
- SW Leveton Drive/Center Access
- SW Leveton Drive/East Access
- SW 108th Avenue/Center Access (approved with Building G)
- SW 108th Avenue/South Access (approved with Building G)
- SW Tualatin Road/SW 115th Avenue

All study area intersections are located within City of Tualatin jurisdiction or are along OR 99W, an ODOT facility.

#### **Analysis Scenarios**

This TIA addresses AM and PM peak hour conditions for the following scenarios:

- 2024 Seasonally Adjusted Existing Volumes
- 2027 Pre-Development without the project
- 2027 Post-Development with Phase 1
- 2030 Post-Development with Phase 2



#### II. EXISTING CONDITIONS

The existing conditions analysis is based on a current year 2024 inventory of transportation facilities and traffic data.

#### Site Conditions

The project site is in Tualatin, Oregon within the Portland metropolitan area. The site is approximately 75.95 acres and consists of tax lot 100 of Washington County tax map 2S1 22BA, lot 100 of map 2S1 22AB, and lots 500 and 800 of map 2S1 22AA. The site is part of the City's Manufacturing Park (MP) Planning District. The Novellus Industrial Master Plan (IMP) was approved in 2001 as a four-phase development consisting of 1,440,000 SF. The proposed site plan for both phases of the TUX project, along with the entire campus, is presented in Figure 2.

# **Vehicular Transportation Facilities**

Figure 3 presents existing lane configurations and traffic control devices for all study area intersections. Table 1 below summarizes roadway characteristics within the study area.

TABLE 1 – ROADWAY CHARACTERISTICS											
Roadway	Functional Classification	Posted Speed	Travel Lanes	Bike Lanes	On-Street Parking	Sidewalks					
OR 99W (Pacific Highway W)	Major Arterial/ (Urban Principal Arterial)	45/55 mph	4	Yes	None	Intermittent					
SW 124th Avenue	Major Arterial	45 mph	4/5	Yes	None	Yes					
SW Tualatin Road	Major Collector	35 mph	3	Yes	None	Yes					
SW Leveton Drive	Minor Arterial	35 mph	2	Yes	None	Yes					
SW 108th Avenue	Minor Collector (north of SW Leveton Drive)	35 mph	2	Yes	None	Yes					
SW Herman Road	Minor Arterial	35 mph	2	Yes	None	Yes					
SW Teton Avenue	Minor Arterial	35 mph	2	Yes	None	Yes					
SW 115th Avenue	Minor Collector	35 mph	2	No	None	Yes					
SW Hazelbrook Road	Minor Collector	35 mph	2	No	None	South side					

# Pedestrian and Bicycle Facilities

The study area has nearly complete bicycle and pedestrian networks. Clearly marked bike lanes are provided on all study area roadways. Curb-tight sidewalks are provided on SW 108th Avenue and SW Tualatin Road, as well as some segments of the north side of SW Herman Road. Separated sidewalks are provided on all other study roadways and segments.



# **Transit Facilities**

The study area is served by TriMet Bus Lines 94 and 97 with stops on OR 99W (Pacific Highway W) and SW Tualatin Road. The Tualatin Shuttle Blue Line has two stops on SW Leveton Drive just south of the site and a stop on SW Tualatin Road east of SW Teton Avenue. Transit maps and bus schedules are provided in Appendix C for reference.

# **Existing Traffic Counts**

Initial traffic counts were collected on Tuesday, April 23, 2024, from 7 AM to 9 AM and 4 PM to 6 PM and most study area intersections. As the study area was expanded based on City and ODOT comments, additional counts were conducted:

- SW Tualatin Road/SW 112th Avenue on May 14, 2024, from 7 AM to 10 AM and from 4 PM to 6 PM.
- OR 99W/SW Hazelbrook Road and SW Hazelbrook Road/SW 115th Avenue on June 11, 2024, from 7 AM to 9 AM and 2 PM to 6 PM.
- SW Teton Avenue/SW Herman Road on July 9, 2024, from 7 AM to 9 AM and from 4 PM to 6 PM.
- All intersections along OR 99W and SW 124th Avenue/SW Tualatin Road were counted on September 12, 2024, from 7 AM to 9 AM and 3 PM to 6 PM in order to provide consent volumes between intersections.

A summary of all intersection turning movement counts collected in 2024 is presented in Figure 4.

Per ODOT standards, a system peak hour was selected for the OR 99W intersections in the AM and PM. The system peak hour chosen for the highway intersections is 8 AM to 9 AM and 4:45 PM to 5:45 PM, consistent with the peak of site trips. The actual system peak of the Highway is closer to 7:15 AM and 3:30 PM, but site volumes are much less at these times. The current campus driveway counts during the peak hours of the site (8-9 AM, 4:45-5:45 PM) are 371 and 378, respectively, compared to only 289 and 211 during the highway system peak. A summary of the driveway volumes during these peak hours of the site is included in Appendix D.

# Seasonal Adjustment

OR 99W is a state facility which requires a seasonal adjustment as specified in the APM. There is no seasonal adjustment data available for this location as there is no nearby Automatic Traffic Recorder (ATR). Therefore, a seasonal adjustment of 1.01 derived from data presented in ODOT's 2022 Seasonal Trend Table for the "Commuter" trend was applied to 2024 existing through volumes on OR 99W. The 2022 seasonally adjusted traffic volumes are presented in Figure 5. The seasonal adjustment calculation is provided in Appendix E for reference.

#### Crash Analysis

Historical crash data reported for the study area intersections were evaluated to identify patterns that might indicate a safety concern. Crash data for the 5-year period of 2018 through 2022 were obtained from ODOT's online crash data system and used to review crash patterns and estimate intersection crash rates.

The crash evaluation is summarized in Table 2. The raw crash data are provided in Appendix F.



TABLE 2 – INTERSECTION CRASH RATES										
Intersection (Traffic Control Type)	2018	2019	Year 2020	2021	2022	Total Crashes	ADT	Crash Rate		
OR 99W/ SW 124th(Signalized)	3	4	1	4	3	15	48,400	0.17		
SW Tualatin/ SW 124th (Signalized)	1	3	1	4	5	14	26,900	0.29		
SW Tualatin/ SW 115th (TWSC)	1	0	0	0	0	1	15,500	0.04		
SW Tualatin/ SW 112th (TWSC)	0	0	0	0	0	0	14,700	0.00		
SW Tualatin/ SW 108th (TWSC)	0	0	1	1	1	3	15,300	0.13		
SW Leveton/ SW 124th (Signalized)	1	4	1	0	1	7	15,700	0.24		
SW Leveton/ SW 118th (AWSC)	0	0	0	0	0	0	4,200	0.00		
SW Leveton/ Center Site Access (TWSC)	0	0	0	0	2	2	3,500	0.31		
SW Leveton/ SW 108th (TWSC)	0	0	0	0	0	0	3,200	0.00		
SW Herman/ SW 108th (Signalized)	0	0	1	0	0	1	11,700	0.05		
SW Tualatin/ SW Teton (TWSC)	1	2	0	0	0	3	16,300	0.10		
SW Hazelbrook/SW 115th (TWSC)	0	0	0	0	0	0	5,000	0.00		
SW Hazelbrook/OR 99W (TWSC)	1	1	1	0	2	5	38,513	0.07		
SW Herman/ SW Teton (Signalized)	0	1	0	1	1	3	19,700	0.11		
OR 99W/ SW Fischer (Signalized)	1	6	1	3	5	16	50,000	0.17		
OR 99W/ SW Durham (Signalized)	9	4	4	6	4	27	49,400	0.30		



#### Crash Data Summary

All study area intersections had low crash rates, and no fatal crashes have occurred at the study area intersections within the study period.

One crash involving a pedestrian occurred at the intersection of SW Tualatin Road and SW 124th Avenue in 2019, resulting in a possible injury (Injury C). The most common crash type at this intersection is turning movement crashes; however, the crash volume is not high enough to warrant further investigation, and all left turn movements already have protected turning phases.

One crash involving a bicyclist occurred at the center Lam site access in 2022, resulting in a suspected serious injury (Injury A) to the cyclist. The crash was caused by a failure to yield.

One crash involving a pedestrian occurred at the intersection of OR 99W and SW Durham Road at the crosswalk, resulting in a suspected minor injury (Injury B), caused by a driver's failure to yield. Two crashes involving pedestrians occurred at the intersection of OR 99W and SW Fischer Road at the crosswalk, resulting in a possible and suspected minor injury (Injury C and B), caused by a failure to yield and/or disregard for the traffic control.

At the intersection of OR 99W and SW 124th Avenue, the intersection with the highest crash volume, rearend crashes were the most common crash type. These are largely due to inattention, and none resulted in serious injury being reported.

#### Intersection Crash Rates

Intersection crash rates were calculated as a measure of the number of crashes occurring per one million entering vehicles (MEV) per year. The intersection crash rate is calculated by dividing the average number of crashes per year by the MEV per year. An average daily traffic (ADT) volume was estimated by dividing the PM peak hour volume at each intersection by a peak-to-daily factor, or k-factor, of 0.09 obtained from ODOT's 2022 traffic flow data on OR 99W just west of SW 124th Avenue.

All intersections have crash rates below 1.0/MEV. Additionally, none of the study area intersections appear on either the ODOT or Washington County Safety Priority Index System (SPIS) list. Therefore, no further analysis is recommended.



#### III. PRE-DEVELOPMENT CONDITIONS

The pre-development conditions reflect build-out year conditions without the proposed development. This scenario includes existing year 2024 traffic volumes, a seasonal adjustment to traffic on OR 99W, a background growth to year 2027 and 2030, and in-process trips from nearby approved developments. The pre-development traffic without project trips will indicate if traffic issues are present before the addition of the proposed development.

# **Planned Transportation Improvements**

The City of Tualatin Capital Improvement Plan 2024-2028 (CIP) was reviewed for any planned transportation improvements in the area that may affect capacity. SW Herman Road will be improved near the site; however, none of these improvements will affect any of the study area intersections.

SW Tualatin-Sherwood Road is currently under construction for a widening project, but this project is not in the study area and does not appear to have had a significant effect on existing volumes at study area roadways and intersections.

The City of Tualatin has planned for a future traffic signal at the intersection of SW Tualatin Road with SW 115th Avenue, but no funding or schedule has been determined.

To our knowledge, no mitigations or improvements have been required for development of the in-process projects at any study area intersections included in this analysis.

# **Background Traffic Growth**

Background traffic growth was applied to adjusted year 2024 traffic volumes to forecast future traffic demand. A linear 1% annual growth rate over three years was applied to year 2024 traffic volumes to estimate 2027 background traffic volumes. This growth adjustment was based on ODOT traffic volume projections for OR 99W just south of SW 124th Avenue between years 2019 and 2040. Background growth was applied to all movements at all intersections, except driveways. Figure 6 presents the background growth from 2024 to 2027 for the AM and PM peak hours.

#### In-Process Traffic

In-process traffic volumes account for developments that have been approved or that are under construction at the time of a traffic study. These traffic volumes account for traffic that will be added to the external roadway network before buildout of the proposed development. Traffic volumes for the following developments were included as in-process:

- Lam Building G
- 124th Business Park
- Tualatin Logistics Park
- Fujimi Expansion

Figure 7 presents the total trip assignment for the 124th Business Park, Tualatin Logistics Park, and Fujimi Expansion.



The Lam Building G project was approved with two new driveways on SW 108th Avenue and a change in use of the existing East Access on SW Leveton Drive to be exclusive for trucks. Figure 8 presents the Lam Building G trip assignment as approved for that project. Figure 9 presents an updated reroute of passenger vehicle traffic from the existing East Access on SW Leveton Drive to the new driveways on SW 108th Avenue, utilizing the new traffic counts at that access. Detailed copies of the respective project trip assignment sheets are included in Appendix G.

# **Pre-Development Traffic**

The 2027 pre-development analysis scenario is a combination of existing year 2024 traffic volumes, a seasonal adjustment factor on OR 99W, background growth of 1% over three years, and in-process trips from nearby approved developments. Figure 10 presents the 2027 pre-development traffic volumes during the AM and PM peak hours.

Figure 15 presents the additional three years of background growth applied between the 2027 and 2030 scenarios, used to grow traffic volumes for the Phase 2 analysis.



#### IV. SITE DEVELOPMENT

The trip-making characteristics of the proposed development are described below.

# **Trip Generation**

Trip generation estimates for the full occupancy of approximately 600 employees were prepared utilizing rates for a Research and Development Center from the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th Edition. This land use was found to best match the existing campus trip generation based on employees. Trip generation estimates for the planned expansion are presented in Table 3.

	TABLE 3 – PROPOSED TRIP GENERATION											
Dhara	ITE Land Have	Faculty 1	AM	Peak H	lour	PM	Peak H	lour	0-1-			
Phase	ITE Land Use	Employees	In	Out	Total	In	Out	Total	Daily			
1	Research and Development Center	360	124	22	146	17	123	140	1222			
2	(LUC 860)	240	83	15	98	11	82	93	814			
	Total	600	207	37	244	28	205	233	2036			

As shown in Table 3, the planned campus expansion is estimated to generate an additional 244 AM peak hour, 233 PM peak hour, and 2036 daily trips with both phases of development. A proportionate number of trips was assigned to each phase, based on the number of employees.

#### **West Access Reroutes**

Going forward, the existing West Access on SW Leveton Drive will be relocated and restricted to trucks. Figure 11 presents a reroute of existing volumes to the Center Access on SW Leveton Drive and the proposed access on SW Tualatin Road.

# Trip Distribution and Assignment

Site trip distribution has been modified slightly from the original master plan based on employee zip code information provided by Lam, as well as counts conducted in April 2024 at the three active site driveways on Leventon Drive and the surrounding intersections. The following general percentages apply to both the AM and PM Peak hours.

- 24.5% to/from the north on OR 99W
- 26.5% to/from the south on OR 99W
- 4% to/from the east on SW Tualatin Road
- 4.5% to/from the south on SW 118th Avenue
- 10% to/from the south on SW 124th Avenue
- 21% to/from the west on SW Tualatin-Sherwood Road via SW 108th Avenue and SW Teton Avenue
- 9.5% to/from the west on SW Herman Road via SW 108th Avenue



The detailed site trip distribution is based on the following assumptions:

- 30% of the new trips are expected to utilize the one remaining employee driveway (middle access) on Leveton Drive. The remaining 70% would use the new driveway to SW Tualatin Road.
- Existing counts indicate some vehicles arriving from the southwest on OR 99W are turning right and traveling along the full length of Leveton Drive instead of turning at SW 124th Avenue.
- 8% of site trips will use SW 115th Avenue and Hazelbrook Road to access OR 99W, or approximately one-third of the 30% of site trips anticipated to travel north on OR 99W. This is consistent with current volumes traveling westbound on SW Tualatin Road and assumes no mitigation to discourage or prohibit this travel route.

At ODOT's request, trip distribution estimates were carried out to the Nyberg and Boones Ferry interchanges with Interstate 5 in order to address the anticipated number of vehicles that would be added at these locations.

Figure 12 presents the overall trip distribution at the study area intersections and routes to Interstate 5. This distribution is used for both Phase 1 and Phase 2 trips. Figure 13 presents the trip assignment for Phase 1 and Figure 16 presents the trip assignment for Phase 2.

# **Post-Development Traffic**

Post-Development traffic volumes are the sum of the pre-development traffic volumes, the project trips, and background growth at 1% over three years. Figure 14 presents the 2027 Phase 1 post-development traffic volumes for the AM and PM peak hours. Figure 17 presents the 2030 Phase 2 post-development traffic volumes for the AM and PM peak hours.



#### V. SITE ACCESS AND CIRCULATION

The on-site evaluation of traffic access and circulation and a review of sight distance at the proposed site driveways are presented below.

#### Site Access

To accommodate added TUX employee traffic to the new parking lots at the north side of the site, the existing emergency access on SW Tualatin Road opposite SW 115th Avenue is proposed to be expanded and opened for Lam employee access.

#### Access Standards

The TDC includes several sections related to access standards. Chapter 75 of the TDC presents access standards relative to driveway widths and spacing on the site. Per Table 75-1 of the TDC, minimum driveway approach width for industrial driveways is 36 feet and the maximum is 40 feet for driveways providing access for over 250 parking spaces. The existing driveways for the site meet these standards. The proposed driveways on SW 108th Avenue will meet these standards at a proposed width of 36 feet.

Per TDC 75.120, driveways on Minor Collectors must be spaced at a minimum of 100 feet. Driveways must be located at least 150 feet from the intersection of Collector or Arterial streets, as measured from the stop bar, per TDC 75.040(11)(a). Additionally, driveways must provide a minimum distance of 40 feet between on-site driveways per TDC 75.040(10). Table 4 below presents a summary of required and proposed access spacing.

TABLE 4 – ACCESS SPACING SUMMARY									
Access	Roadway	Functional	Spacing Standard		ess ed Edge-to-Edge				
		Classification		To East	To West				
SW 115th Avenue	SW Tualatin Road	Major Collector	150' from intersection with Arterial or Collector	>750'	>350'				
East Access (relocated)	SW Leveton Drive	Minor Arterial	150' from intersection with Arterial or Collector	>600'	>600'				

### **On-Site Circulation**

With the proposed project, employee parking will be located along the north side of the campus and at the southeast corner of the campus. The north side parking area will primarily have access to SW Tualatin Road opposite SW 115th Avenue as well as continued use of the Center Access on Leveton Drive. The southeast parking area will have two driveways to SW 108th Avenue. An internal connection is provided between these main parking areas through the lot located between Buildings B and G. Truck access will be provided to Building G at the East Access and to the new TUX buildings as well as existing facilities at the relocated West Access. The existing north access to SW 108th Avenue will continue to be used for emergency access and may be utilized for truck egress from the bulk gas yard.



# Sight Distance Evaluation

Intersection sight distance was evaluated for the proposed site driveway locations. The American Association of State Highway and Transportation Officials' (AASHTO) A Policy on Geometric Design of Highways and Streets, 7th Edition provides recommendations for intersection sight distance (ISD) based on roadway design speed. At minimum, stopping sight distance (SSD), also based on roadway design speed, must be provided.

Two driveways are currently under construction on SW 108th Avenue, which have been reviewed in previous studies. The West Access on SW Leveton Drive is proposed to relocate and the emergency access on SW Tualatin Road is proposed to be expanded and used for employee access.

The posted speed on SW Tualatin Road and SW Leveton Drive is 35 mph, for a design speed of 40 mph. There is no posted speed on SW 108th Avenue north of SW Herman Road. Therefore, the design speed on SW 108th Avenue is assumed to be 5 mph over the posted speed of 35 mph for other Minor Collectors in the area, or 40 mph. A time gap of 7.5 seconds and 11.5 seconds were assumed for passenger vehicles and combination trucks completing a left turn from stop, respectively. The recommendations for ISD have been noted for left turns from stop on a stop-controlled minor approach (driveway). The sight distance evaluation for the site driveways is presented in Table 5.

TABLE 5 – SIGHT DISTANCE EVALUATION										
Access/	Design	Daging Valsiala	Recommended Intersection	Required	Available Sig					
Intersection	Speed (mph)	Design Vehicle	Sight Distance (feet)	Stopping Sight Distance (feet)	To North/West	To South/East				
SW 108th Avenue	40	0 Passenger Car 445 305 Already revie		eviewed						
SW Leveton Drive	40	Passenger Car	445	305	500	500				
SW Tualatin Road	40	Passenger Car	475	305	500	>500				

As presented in Table 5, sight distances for the driveways along SW 108th Avenue are being reviewed and approved under Building G and will meet the standards with that project. At the proposed relocated West Driveway on Leveton Drive, sight distance can be made available in excess of 500 feet, meeting the standards for intersection sight distance, although some landscaping and street trees may need to be trimmed.

At the Tualatin Access, sight distance is available in excess of 500 feet to the east and approximately 500 feet to the west. Some landscaping and street trees may need to be trimmed to maintain the required 475 feet of intersection sight distance.



#### VI. OPERATIONAL ANALYSIS

Two aspects of operational analysis were evaluated for the study area intersections: 1) intersection operations analysis, which evaluates how well an intersection processes traffic demand, and 2) queuing analysis, which compares intersection queues with available storage for different travel lanes.

# **Intersection Operation Analysis**

Intersection operations are generally measured by three mobility standards: volume-to-capacity (v/c) ratio, level-of-service (LOS), and delay (measured in seconds). Signalized and all-way, stop-controlled (AWSC) intersections are measured by one overall v/c ratio, LOS, and delay. Two-way, stop-controlled (TWSC) intersections are typically measured by a single v/c ratio, LOS, and delay representative of the worst stopped movement.

# **Performance Measures**

All study area intersections are located within City of Tualatin jurisdiction but OR 99W is under ODOT's jurisdiction.

#### City of Tualatin

The TDC Section 74.440(3)(e) requires the following mobility standards for intersections within City jurisdiction:

- LOS D or better for signalized intersections
- LOS E or better for unsignalized intersections

# ODOT

The *Oregon Highway Plan* (OHP) designates OR 99W as a Principal Arterial Route at SW 124th Avenue. Table 7 of the OHP establishes a v/c target of 0.99 for the OR 99W/SW 124th Avenue intersection.

# Methodology

Intersection operations were analyzed with the use of Synchro 12 software, which utilizes the Transportation Research Board's *Highway Capacity Manual* (HCM) 2000, HCM 2010, and HCM 7 methodologies. Signalized study area intersections were reported using HCM 2000 reports for overall v/c ratio and HCM 7 reports for delay and LOS. Two-way, stop-controlled (TWSC) and AWSC intersections were reported using HCM 7 reports. Signal timing plans were obtained from the Washington County traffic plans database, as well as from ODOT staff, and are provided in Appendix H for reference.

#### Calibration

For 2024 Existing conditions at the OR 99W/SW Hazelbrook Avenue and SW Tualatin Road/Teton Avenue intersections, Synchro and SimTraffic results did not match the delay and queues expected and observed in the field.

The City's Traffic Study Requirements document dictates that the existing conditions calculations shall be calibrated to reflect observed site conditions through delay studies and other observations, so queue and



delay studies were conducted in order to determine the methodology and any calibration needed to match observed conditions in the field.

# OR 99W/SW Hazelbrook Avenue

Field observations based on traffic count video at the intersection indicate the drivers treat this right turn similar to a yield, with several vehicles clearing the stop sign without stopping if there is a gap in traffic.

Rather than report Hazelbrook as a yield control, which seemed to match existing delay and queuing, we reviewed the peak 15 minutes in the PM for the critical gaps in traffic accepted by approaching westbound vehicles. This was done by specifically noting situations where more than one vehicle was in a queue, but only one accepted a gap in approaching traffic. The smallest gap taken was four seconds, and four of the 10 critical gaps observed were less than six seconds. We changed the critical gap acceptance in Synchro from seven seconds to six seconds. A summary of the critical gaps observed is included in Appendix L. We also reviewed follow up gaps and found them to be consistent with the default of 3.3 seconds at the intersection.

In order to adjust the critical gap in the Synchro calculations, output for HCM 2000 was required. HCM 6th and 7th Editions do not allow for such an adjustment to the gaps — results are unchanged if gap acceptance values are adjusted.

# Tualatin Road/Teton Avenue

A delay survey at this intersection indicated actual delays at much less than the HCM 7 output was providing. We found HCM 2000 output provides a better match to existing conditions. Survey results are included in Appendix L.

At both intersections we have included Synchro output results for both HCM 7 and HCM 2000 as noted in Table 6.

# **Findings**

Table 6 below summarizes the AM and PM peak hour capacity results. For signalized intersections, the overall intersection performance (v/c ratio, LOS, delay) is reported along with the lane group with the maximum v/c ratio and the lane group with the maximum delay. For unsignalized sections, the lane group with the maximum delay are reported. The Synchro output reports and summary tables of all lane groups are provided in Appendix I.

TABLE 6 – PEAK HOUR INTERSECTION OPERATIONS										
			Analysis Results (v/c-	LOS-Delay in seconds)						
Intersection (Control)	Peak Hour	2024 Existing	2027 Pre- Development	2027 Post- Development	2030 Post- Development					
OR 99W/	AM	0.74-C-29.0	0.80-C-31.6	0.82-C-32.4	0.85-C-34.7					
SW 124th (Signalized)	PM	0.74-C-27.3	0.79-C-28.5	0.80-C-29.5	0.84-C-30.9					
SW Tualatin/	AM	0.57-B-14.2	0.60-B-14.0	0.74-B-16.3	0.79-B-17.6					



	TABLE 6 – PEAK HOUR INTERSECTION OPERATIONS									
			Analysis Results (v/c-	LOS-Delay in seconds)						
Intersection (Control)	Peak Hour	2024 Existing	2027 Pre- Development	2027 Post- Development	2030 Post- Development					
SW 124th (Signalized)	PM	0.51-C-20.8	0.57-C-22.0	0.58-C-22.4	0.63-C-23.1					
SW Tualatin/ SW 115th/	AM	0.02-E-39.5 (NBL)	0.02-E-42.6 (NBL)	0.34-F-103.1 (NBL)	0.59-F-172.1 (NBL)					
Site Access (TWSC)	PM	0.24-D-29.2 (SB)	0.27-D-32.0 (SB)	1.10-F-171.9 (NBL)	1.48-F-318.9 (NBL)					
SW Tualatin/	AM	0.06-B-14.4 (SB)	0.07-B-14.8 (SB)	0.07-C-15.4 (SB)	0.08-C-16.1 (SB)					
SW 112th (TWSC)	PM	0.04-C-19.2 (SB)	0.04-C-19.9 (SB)	0.05-C-20.6 (SB)	0.05-C-21.4 (SB)					
SW Tualatin/	AM	0.02-C-16.1 (NB)	0.03-C-16.7 (NB)	0.22-C-20.2 (NB)	0.28-C-22.1 (NB)					
SW 108th (TWSC)	PM	0.15-C-16.3 (NB)	0.21-C-17.3 (NB)	0.24-C-19.8 (NB)	0.27-C-20.9 (NB)					
SW 108th/	AM	N/A	0.02-A-8.9 (EB)	0.02-A-8.9 (EB)	0.02-A-8.9 (EB)					
Center Access (TWSC)	PM	N/A	0.12-A-8.9 (EB)	0.12-A-9.1 (EB)	0.12-A-9.2 (EB)					
SW 108th/	AM	N/A	0.01-A-9.1 (EB)	0.01-A-9.1 (EB)	0.01-A-9.2 (EB)					
South Access (TWSC)	PM	N/A	0.05-A-9.5 (EB)	0.05-A-9.7 (EB)	0.06-A-9.8 (EB)					
SW 124th/	AM	0.43-B-12.9	0.48-B-14.1	0.47-B-14.4	0.49-B-15.0					
SW Leveton (Signalized)	PM	0.36-C-20.2	0.43-C-29.3	0.41-C-20.3	0.42-C-21.0					
SW Leveton/	AM	0.40-A-9.8 (EB)	0.57-B-12.4 (EB)	0.43-B-10.2 (EB)	0.46-B-10.6 (EB)					
SW 118th (AWSC)	PM	0.43-C-10.2 (WB)	0.63-B-14.3 (WB)	0.48-B-10.9 (WB)	0.51-C-11.6 (WB)					
SW Leveton/	AM	0.02-B-14.6 (SBL)	0.03-C-17.7 (SBL)	0.01-B-11.5 (SBL)	0.01-B-11.8 (SBL)					
West Access (TWSC)	PM	0.22-B-10.4 (SBR)	0.26-B-12.0 (SBR)	0.01-B-11.8 (SBL)	0.01-B-12.0 (SBL)					
SW Leveton/	AM	0.01-B-10.7 (SBL)	0.01-B-12.6 (SBL)	0.02-B-13.7 (SBL)	0.03-C-14.7 (SBL)					
Center Access (TWSC)	PM	0.05-B-11.0 (SBL)	0.06-B-12.7 (SBL)	0.16-C-12.7 (SBL)	0.19-B-13.2 (SBL)					
SW Leveton/	AM	0.01-B-10.5 (SB)	0.03-B-11.1 (NB)	0.03-B-10.9 (NB)	0.03-C-11.0 (NB)					
East Access (TWSC)	PM	0.12-B-10.3 (SB)	0.10-B-12.0 (NB)	0.09-B-11.5 (NB)	0.09-B-11.8 (NB)					
SW Leveton/	AM	0.12-B-10.2 (EB)	0.44-C-16.1 (EB)	0.45-C-2.3 (EB)	0.49-C-18.4 (EB)					
SW 108th (TWSC)	PM	0.24-A-9.8 (EB)	0.32-B-12.0 (EB)	0.29-B-11.9 (EB)	0.33-B-12.5 (EB)					
SW Herman/	AM	0.45-A-5.9	0.53-A-6.5	0.56-A-6.9	0.59-A-7.2					
SW 108th (Signalized)	PM	0.58-A-9.6	0.65-B-11.9	0.66-B-12.3	0.68-B-13.5					



	TABLE 6 – PEAK HOUR INTERSECTION OPERATIONS									
		Analysis Results (v/c-LOS-Delay in seconds)								
Intersection (Control)	Peak Hour	2024 Existing	2027 Pre- Development	2027 Post- Development	2030 Post- Development					
SW Tualatin/	AM	18 s <sup>1</sup> 0.43-E-38.3 (NBL) <sup>2</sup> 0.20-C-16.7 (NBL) <sup>3</sup>	0.47-E-43.5 (NBL) <sup>2</sup> 0.22-C-17.3 (NBL) <sup>3</sup>	0.48-E-44.1 (NBL) <sup>2</sup> 0.22-C-17.4 (NBL) <sup>3</sup>	0.52-E-49.7 (NBL) <sup>2</sup> 0.23-C-15.0 (NBL) <sup>3</sup>					
SW Teton (TWSC)	РМ	43 s <sup>1</sup> <b>0.95-F-110.9 (NBL)</b> <sup>2</sup> 0.46-C-23.6 (NBL) <sup>3</sup>	<b>1.05-F-144.0 (NBL)</b> <sup>2</sup> 0.49-D-25.2 (NBL) <sup>3</sup>	<b>1.09-F-155.8 (NBL)</b> <sup>2</sup> 0.50-D-25.6 (NBL) <sup>3</sup>	<b>1.18-F-192.0 (NBL)</b> <sup>2</sup> 0.53-D-27.4 (NBL) <sup>3</sup>					
SW Hazelbrook/	AM	0.45-B-13.9 (NB)	0.46-B-14.3 (NB)	0.47-B-14.4 (NB)	0.49-B-14.9 (NB)					
SW 115th (TWSC)	PM	0.69-C-24.3 (NB)	0.73-D-26.5 (NB)	0.82-D-33.8 (NB)	0.87-E-40.9 (NB)					
SW Hazelbrook/ OR	AM	10 s <sup>1</sup> 0.53-C-24.4 (WBR) <sup>2</sup> 0.45-C-18.8 (WBR) <sup>3</sup>	0.58-D-27.0 (WBR) <sup>2</sup> 0.48-C-20.0 (WBR) <sup>3</sup>	0.59-D-27.5 (WBR) <sup>2</sup> 0.48-C-20.3 (WBR) <sup>3</sup>	0.63-D-30.4 (WBR) <sup>2</sup> 0.52-C-21.6 (WBR) <sup>3</sup>					
99W (TWSC)	PM	38 s <sup>1</sup> <b>0.95-F-73.3 (WBR)</b> <sup>2</sup> 0.77-E-37.8 (WBR) <sup>3</sup>	1.06-F-108.3 (WBR) <sup>2</sup> 0.85-E-49.7 (WBR) <sup>3</sup>	1.12-F-126.5 (WBR) <sup>2</sup> 0.89-F-56.9 (WBR) <sup>3</sup>	1.24-F-170.3 (WBR) <sup>2</sup> 0.98-F-76.5 (WBR) <sup>3</sup>					
SW Herman/	AM	0.62-B-18.3	0.68-B-20.0	0.71-C-21.1	0.75-C-22.7					
SW Teton (Signalized)	PM	0.58-B-19.4	0.65-C-22.3	0.72-C-25.0	0.76-C-27.7					
OR 99W/	AM	0.68-D-45.1	0.71-D-47.2	0.72-D-46.1	0.76-D-44.7					
SW Fischer (Signalized)	PM	0.84-D-52.8	0.86-E-55.4	0.88-E-56.8	0.90-E-59.6					
OR 99W/	AM	0.74-D-40.3	0.77-D-41.1	0.77-D-41.5	0.80-D-42.5					
SW Durham (Signalized)	PM	0.83-D-49.6	0.88-D-53.3	0.89-E-55.6	0.92-E-60.5					

As shown in Table 6, all but two of the study area intersections will meet operational standards with the addition of site trips:

- SW Hazelbrook Road/OR 99W long delays are expected on the stop-controlled approach to OR 99W during the PM peak hour. Mitigation is not recommended because it would encourage vehicles to travel this route from SW Tualatin Road instead of using SW 124th Avenue to access OR 99W northbound.
- SW Tualatin Road/SW 115th Avenue/Site Access with the addition of this site access to SW Tualatin Road, left turns to SW Tualatin Road will experience long delays. A traffic signal has been

<sup>&</sup>lt;sup>1</sup> Italics indicate Observed

<sup>&</sup>lt;sup>2</sup> HCM 7th

<sup>&</sup>lt;sup>3</sup> HCM 2000



noted in the City's Transportation plan for this intersection, so signal warrants and operations are addressed below as possible mitigation.

# **Intersection Queuing Analysis**

An intersection queuing analysis was conducted for the study area intersections for both the AM and PM peak hours to evaluate any potential queue spillbacks.

#### Methodology

The 95th percentile queues during the AM and PM peak hours were estimated using Synchro and SimTraffic software. Queue demand results were rounded to the nearest 25 feet to represent average vehicle lengths. Because queues are based on an average of five traffic simulations using random arrivals, some fluctuation in results can be anticipated, particularly for movements that are near or over-capacity.

Available queue lengths were estimated using Google Earth Pro software and rounded to the nearest 5 feet. For turn lanes, two available storage values are stated: the first represents the striped storage and the second is the effective storage, or the length physically available regardless of striping, such as a center turn lane upstream of a striped left-turn lane at an intersection. Although travel lanes have no storage defined by striping at signalized locations, we note the distance to an upstream public street intersection.

#### **Findings**

The 95th percentile queues obtained from SimTraffic for the AM and PM peak hours are presented in Table 7. The detailed SimTraffic reports are provided in Appendix J for reference. Queue lengths in **bold** type show movements which exceed the effective storage length.

Where intersections have high volumes and/or are close to capacity, simulation results can vary significantly from observed queues. In such cases, the HCM 2000 methodology queue output is noted because it better matches actual queues.

Where intersections are closely spaced and coordinated, SimTraffic results will generally provide better estimates for queue length because the HCM 2000 methodology cannot account for progression as well as the simulation. This is very apparent for the left turns from SW 124th Avenue to Tualatin Road.

	TABLE 7 – 95TH PERCENTILE QUEUING ANALYSIS										
		Striped/		AM/PM Peak Ho	our Queue (feet)						
Intersection (Control)	Approach/ Movement	Effective Storage (Feet)	2024 Existing	2027 Pre- Development	2027 Post- Development	2030 Post- Development					
OR 99W/	EBT	>1000	1,200/1,250	1,575/900	1,775/775	2,250/825					
SW 124th	EBT	>1000	1,250/1,250	1,650/900	1,825/750	2,275/825					
(Signalized)	EBR	225/305	525/500	500/450	500/425	500/450					



	TABLE 7 – 95TH PERCENTILE QUEUING ANALYSIS									
		Striped/		AM/PM Peak Ho	our Queue (feet)					
Intersection (Control)	Approach/ Movement	Effective Storage (Feet)	2024 Existing	2027 Pre- Development	2027 Post- Development	2030 Post- Development				
	WBL1	550/770	<i>575/450</i> <sup>1</sup> 675/525 575/350 <sup>3</sup>	<b>1,225</b> /650 700/400 <sup>3</sup>	<b>1,525</b> /575 725/400 <sup>3</sup>	<b>1,725</b> /750 775/425 <sup>3</sup>				
	WBL2	550/690	<i>575/325</i> <sup>1</sup> 475/400 575/350 <sup>3</sup>	<b>1,150</b> /525 <b>700</b> /400 <sup>3</sup>	<b>1,475</b> /475 <b>725</b> /400 <sup>3</sup>	<b>1,700</b> /625 <b>775</b> /425 <sup>3</sup>				
	WBT	>1,000	200/375	700/425	1,000/450	1,175/475				
	WBT	>1,000	200/400	525/425	825/450	875/475				
	NBL1	315/475	<i>125/450</i> <sup>1</sup> 125/400 25/250 <sup>3</sup>	125/475 25/250 <sup>3</sup>	125/475 25/325³	175/475 25/350 <sup>3</sup>				
	NBL2	315/475	75/400 <sup>1</sup> 125/425 25/250 <sup>3</sup>	125/ <b>500</b> 25/250 <sup>3</sup>	125/475 25/325 <sup>3</sup>	175/ <b>500</b> 25/350 <sup>3</sup>				
	NBR1	295/330	125/275 <sup>1</sup> 150/325 175/300 <sup>3</sup>	150/ <b>400</b> 200/ <b>350</b> <sup>3</sup>	150/ <b>375</b> 200/325 <sup>3</sup>	150/ <b>425</b> 200/ <b>350</b> <sup>3</sup>				
	NBR2	295/315	75/250 <sup>1</sup> 150/200 175/300 <sup>3</sup>	150/225 200/ <b>350</b> <sup>3</sup>	150/225 200/ <b>325</b> ³	150/225 200/ <b>350</b> <sup>3</sup>				
	WBL	310/350	100/75	100/100	100/100	100/100				
	WBR	300/350	125/ <b>400</b> PM: 100 <sup>3</sup>	100/ <b>550</b> PM: 125 <sup>3</sup>	125/ <b>625</b> PM: 300 <sup>3</sup>	150/ <b>950</b> <b>PM: 425</b> <sup>3</sup>				
	NBT	995	150/300 PM: 325 <sup>3</sup>	175/ <b>475</b> PM: 400 <sup>3</sup>	150/ <b>625</b> PM: 350 <sup>3</sup>	175/ <b>850</b> PM: 350 <sup>3</sup>				
SW 124th/ SW Tualatin (Signalized)	NBT	995	350/475 PM: 325 <sup>3</sup>	350/750 PM: 400 <sup>3</sup>	350/825 PM: 350 <sup>3</sup>	375/ <b>1075</b> PM: 350 <sup>3</sup>				
(Signalized)	NBR	145/230	100/225	75/ <b>275</b>	125/ <b>300</b>	150/ <b>325</b>				
	SBL	200/300	225/300 <sup>1</sup> 375/350 375/150 <sup>3</sup>	<b>400/350</b> <b>400/</b> 175 <sup>3</sup>	<b>450/400</b> <b>850</b> /175 <sup>3</sup>	<b>450/375</b> <b>1,000</b> /175 <sup>3</sup>				
	SBT	450	250/275	350/250	500/425	550/375				

<sup>&</sup>lt;sup>1</sup> Italics indicate Observed <sup>3</sup> HCM 2000



TABLE 7 – 95TH PERCENTILE QUEUING ANALYSIS							
	Approach/ Movement	Striped/ Effective Storage (Feet)	AM/PM Peak Hour Queue (feet)				
Intersection (Control)			2024 Existing	2027 Pre- Development	2027 Post- Development	2030 Post- Development	
	SBT	450	125/200	150/150	175/200	175/200	
SW Tualatin/ SW 115th	EBL	60	50/75	50/50	50/75	50/75	
	WBL	60	25/25	25/25	125/25	125/25	
	NBL	TBD	25/25	25/25	75/225	125/400	
(TWSC)	NB	TBD	25/50	25/50	50/125	75/300	
	SB	630	75/75	75/75	125/75	150/100	
SW Tualatin/	EBL	750	25/25	25/25	25/25	25/25	
SW 112th (TWSC)	SBL+R	95	50/25	50/50	50/25	50/50	
SW Tualatin/	WBL	140	50/25	75/25	50/25	50/350	
SW 108th (TWSC)	NB	330	25/50	25/75	75/100	100/125	
SW 108th/ Center Access (TWSC)	EB L+R	60	N/A	50/75	50/75	50/75	
SW 108th/ South Access (TWSC)	EB L+R	60	N/A	25/50	25/50	25/50	
	EBL	100/130	25/50	25/50	50/50	50/50	
	EBT+R	580	175/50	175/50	200/75	200/50	
	WBL	145/185	50/75	50/100	50/75	75/100	
	WBT+R	>1,000	75/100	50/150	75/100	75/100	
SW 124th/	NBL	155/230	50/25	50/25	50/50	50/25	
SW Leveton (Signalized)	NBT	>1,000	75/150	100/175	75/150	100/150	
	NBT+R	>1,000	150/150	175/500	200/150	175/150	
	SBL	165/245	125/50	175/75	100/75	100/75	
	SBT	>1,000	125/100	150/100	150/125	150/125	
	SBT+R	995	150/125	175/125	150/150	175/125	
SW Leveton/	EB	>1,000	75/50	125/50	100/50	100/50	
SW 118th	WB	>1,000	50/75	50/125	50/100	75/100	
(AWSC)	NB	>1,000	50/50	50/50	50/50	50/50	



TABLE 7 – 95TH PERCENTILE QUEUING ANALYSIS							
	Approach/ Movement	Striped/ Effective Storage (Feet)	AM/PM Peak Hour Queue (feet)				
Intersection (Control)			2024 Existing	2027 Pre- Development	2027 Post- Development	2030 Post- Development	
	SB	650	25/50	25/50	25/50	25/50	
SW Leveton/ West Access (TWSC)	SBL	135	25/50	25/75	25/25	25/25	
	SBR	135	50/75	50/100	25/25	25/25	
SW Leveton/	SBL	125	25/50	25/50	25/50	25/75	
Center Access (TWSC)	SBR	125	25/50	25/50	50/75	50/75	
SW Leveton/ East Access (TWSC)	SB	105	50/75	25/25	25/25	25/25	
SW Leveton/ SW 108th (TWSC)	EB	270	50/75	100/75	100/75	100/75	
	EBL	100/390	25/25	50/25	50/25	50/25	
SW Herman/	EB	>1,000	125/125	125/150	150/150	150/175	
SW 108th	WB	435	125/175	150/200	150/200	175/250	
(Signalized)	SBL	135/165	50/100	50/150	75/150	75/175	
	SBR	115/790	25/25	25/25	25/25	25/50	
	WBL	260	75/50	75/50	75/50	75/50	
SW Tualatin/ SW Teton (TWSC)	NBL	95/170	50/150 <sup>1</sup> 100/175 25/50 <sup>3</sup>	125/175 25/75³	100/ <b>200</b> 25/75³	100/ <b>200</b> 25/75³	
	NBR	30/>1,000	25/25 <sup>1</sup> 75/150 25/25 <sup>3</sup>	100/200 25/25³	75/200 25/25³	100/450 25/25 <sup>3</sup>	
SW 115th/SW Hazelbrook (TWSC)	NB	215	100/100	100/175	75/ <b>500</b>	100/975	

<sup>&</sup>lt;sup>1</sup>Italics indicate Observed <sup>3</sup> HCM 2000



TABLE 7 – 95TH PERCENTILE QUEUING ANALYSIS							
		Striped/ Effective Storage (Feet)	AM/PM Peak Hour Queue (feet)				
Intersection (Control)	Approach/ Movement		2024 Existing	2027 Pre- Development	2027 Post- Development	2030 Post- Development	
OR 99W/ SW Hazelbrook	WBR	325	50/ <b>500</b> <sup>1</sup> 125/ <b>450</b> 50/150 <sup>3</sup>	125/ <b>650</b> 75/200 <sup>3</sup>	75/ <b>1,100</b> 75/225 <sup>3</sup>	125/ <b>1,300</b> 75/275 <sup>3</sup>	
	EBL	>1000	25/25	50/25	25/75	50/25	
	EB T+R	>1000	225/200	225/325	275/375	275/475	
	WBL	100/150	50/75	75/75	50/75	50/75	
SW Teton/	WB T+R	500	225/175	250/175	275/200	300/200	
SW Herman (Signalized)	NBL	>1000	150/100	175/150	175/150	175/150	
	NB T+R	800	125/125	175/175	200/200	250/200	
	SBL	50/100	50/50	50/25	50/25	50/50	
	SB T+R	>1,000	125/125	125/175	150/150	150/175	
	EBL	290/400	475/475	475/500	500/525	525/500	
	EBR	300/>1,000	575/675	700/875	625/950	900/775	
	NBL	270/475	525/525	550/525	575/525	525/525	
OR 99W/	NBT	80/>1,000	675/1,600	1,000/1,750	1,250/1,775	1,175/2,000	
SW Fischer (Signalized)	NBT	80/>1,000	650/1,650	1,000/1,750	1,225/2,100	1,175/2,050	
	SBT	330/>1,000	650/1,250	475/1,675	550/1,750	525/1,575	
	SBT	330/>1,000	500/1,300	475/1,725	525/1,775	525/1,625	
	SBR	200/725	225/450	200/450	275/475	225/475	
	EB LT	275	100/125	125/150	100/150	125/150	
OR 99W/ SW Durham	EB TR	175/440	175/200	175/225	175/225	175/225	
	WBL	310/440	300/425	275/425	300/425	325/425	
	WB LT	440	375/ <b>900</b>	325/ <b>1,050</b>	350/ <b>775</b>	350/ <b>950</b>	
(Signalized)	WBR	310/440	200/ <b>775</b>	200/ <b>1,025</b>	175/ <b>625</b>	225/ <b>775</b>	
	NBL	550/600	125/425	125/650	125/550	175/650	
	NBT	350/>1,000	525/725	525/1,150	525/1,025	525/1,125	

<sup>&</sup>lt;sup>1</sup> Italics indicate Observed <sup>3</sup> HCM 2000



TABLE 7 – 95TH PERCENTILE QUEUING ANALYSIS							
Intersection (Control)	Approach/ Movement	Striped/ Effective Storage (Feet)	AM/PM Peak Hour Queue (feet)				
			2024 Existing	2027 Pre- Development	2027 Post- Development	2030 Post- Development	
	NBT	350/>1,000	550/750	550/1,175	575/1,050	550/1,150	
	NBR	230/260	375/425	400/425	375/425	375/425	
	SBL	240/300	300/ <b>325</b>	300/ <b>375</b>	300/ <b>325</b>	300/ <b>325</b>	
	SBL	240/300	350/400	325/475	350/400	350/450	
	SBT	890/1,300	325/500	350/675	375/500	400/575	
	SBT	890/1,300	325/500	350/650	375/500	375/575	
	SBR	400/425	25/25	25/75	25/75	25/175	

#### **Alternate Results**

#### OR 99W/SW 124th Avenue

For this intersection, the queue output from HCM 2000 more accurately represents the westbound left turn queues observed in the field. The HCM 2000 queue length calculations for the pre- and post-development scenarios seem to be in line with expectations given the volume increases at the intersection. SimTraffic estimates for queuing are much higher and not reasonable based on the existing observation.

#### SW 124th Avenue/SW Tualatin Road

While a queue or delay study was not conducted for these movements, SimTraffic results for the westbound right and northbound through movements in the PM are significantly higher than reasonable in pre- and post-development scenarios. The number of site trips added to these movements is not high enough to cause queue length increases of 10-13 vehicles in one cycle as is predicted by SimTraffic, especially when these queue lengths increase on multiple approaches. The queuing output from HCM 2000 is provided as a more realistic alternative.

#### SW Tualatin Road/SW Teton Avenue

At this intersection, SimTraffic results overestimate the queues for the existing scenario compared to the conditions observed in the field, so HCM 2000 results are provided for comparison and appear to be much more reasonable for the pre- and post-development scenarios as well.

#### Recommendations

As shown in Table 7, queues at some intersections along OR 99W appear to be longer than available storage lengths. These intersections are built out to their full capacity, and little can be done to mitigate these queues. At the intersections of OR 99W and SW Tualatin Road with SW 124th Avenue, we are recommending coordination of the left turn movement from OR 99W with the left turn movement to SW



Tualatin Road in order to minimize queuing and delays in the short segment between the two intersections, especially during the AM commute times.

At the intersection of SW Tualatin Road/SW 115th Avenue, left turn lanes should be striped to provide the necessary storage. Currently, Tualatin Road is striped for a center left turn lane.

# Pedestrian and Bicycle Facilities

Pedestrian and bicycle facilities are currently provided in the study area and along the frontages of the campus. With development of the TUX project, these facilities will remain and will be enhanced as appropriate with any required frontage or intersection improvements, especially where curb ramps are replaced. There are no gaps in the bicycle or pedestrian facilities that need to be addressed along the site frontage or nearby roadways.

Existing bicycle volumes along SW Tualatin Road are less than 10 per hour.

Pedestrian volumes on the SW Tualatin Road frontage are currently low with less than 10 per hour. Leveton has higher pedestrian volumes including approximately 20 pedestrian crossing at the center and west driveways during peak hours.

# **Transit Facilities**

No changes are proposed to existing transit facilities or locations of stops.



#### VII. WARRANTS

The City of Tualatin has plans to signalize the SW Tualatin Road/SW 115th Avenue intersection. We reviewed signal warrant criteria established by the Federal Highway Administration's (FHWA) and published in the Manual on Uniform Traffic Control Devices (MUTCD) for this intersection. 2027 volumes were developed using the same methodologies used to calculate future year peak hour volumes. The warrant analysis calculations are provided in Appendix K for reference.

# **Traffic Signals**

Peak hour signal warrants were reviewed for the intersection of SW Tualatin Road with SW 115th Avenue using the AM and PM peak hour volumes for both Phase 1 and 2 post development conditions.

Based on the volumes anticipated at the site driveway, traffic signal warrants are met in the PM peak hour for both Phases.

The 2027 and 2030 Post-Development volumes were analyzed at the proposed SW Tualatin Road access with a traffic signal, consistent with the City of Tualatin's plans to install one. In both scenarios, the traffic signal operates at about 75% capacity with an overall LOS of B. Synchro reports for the traffic signal mitigation are included in Appendix I.

#### Turn Lanes

Turn-lane criteria were reviewed for the proposed driveway on SW Tualatin Road using the right-turn lane criteria established by the Texas Transportation Institute (TTI) for unsignalized intersections.

SW Tualatin Road is currently a two-lane roadway with no existing turn lanes into the site. Based on 2027 and 2030 Post-Development volumes, right-turn lane criterion are met for the eastbound direction in the AM peak hour, and for the westbound direction in both the AM and PM peak hours. Note the intersection operation is at acceptable levels without right turn lanes when a traffic signal is installed.



#### VIII. RECOMMENDATIONS

The following recommendations for mitigation are made to address impacts of the project on the transportation system:

- Install a traffic signal at the site access on SW Tualatin Road opposite SW 115th Avenue with Phase
   The signal can operate with a common green phase for the driveway and SW 115th Avenue.
- 2. Provide separate left and right turn lanes on the driveway approach to SW Tualatin Road opposite SW 115th Avenue.
- 3. Stripe left turn lanes on SW Tualatin Road were a center left turn lane is currently provided.
- 4. Coordinate left turn movements from OR 99W to SW Tualatin Road at the intersections with SW 124th Avenue. This will minimize the queue lengths and delays for southbound left turns on SW 124th Avenue and avoid potential spill back to OR 99W.
- 5. Trim vegetation at the site access locations as needed to provide the recommended intersection sight distances.



# IX. APPENDIX

Appendix A. Figures

Appendix B. Scoping Material

Appendix C. Transit Information

Appendix D. Traffic Count Summaries

Appendix E. Seasonal Adjustment Data

Appendix F. Crash Data

Appendix G. In-Process Data

Appendix H. Signal Information

Appendix I. Operations Calculations

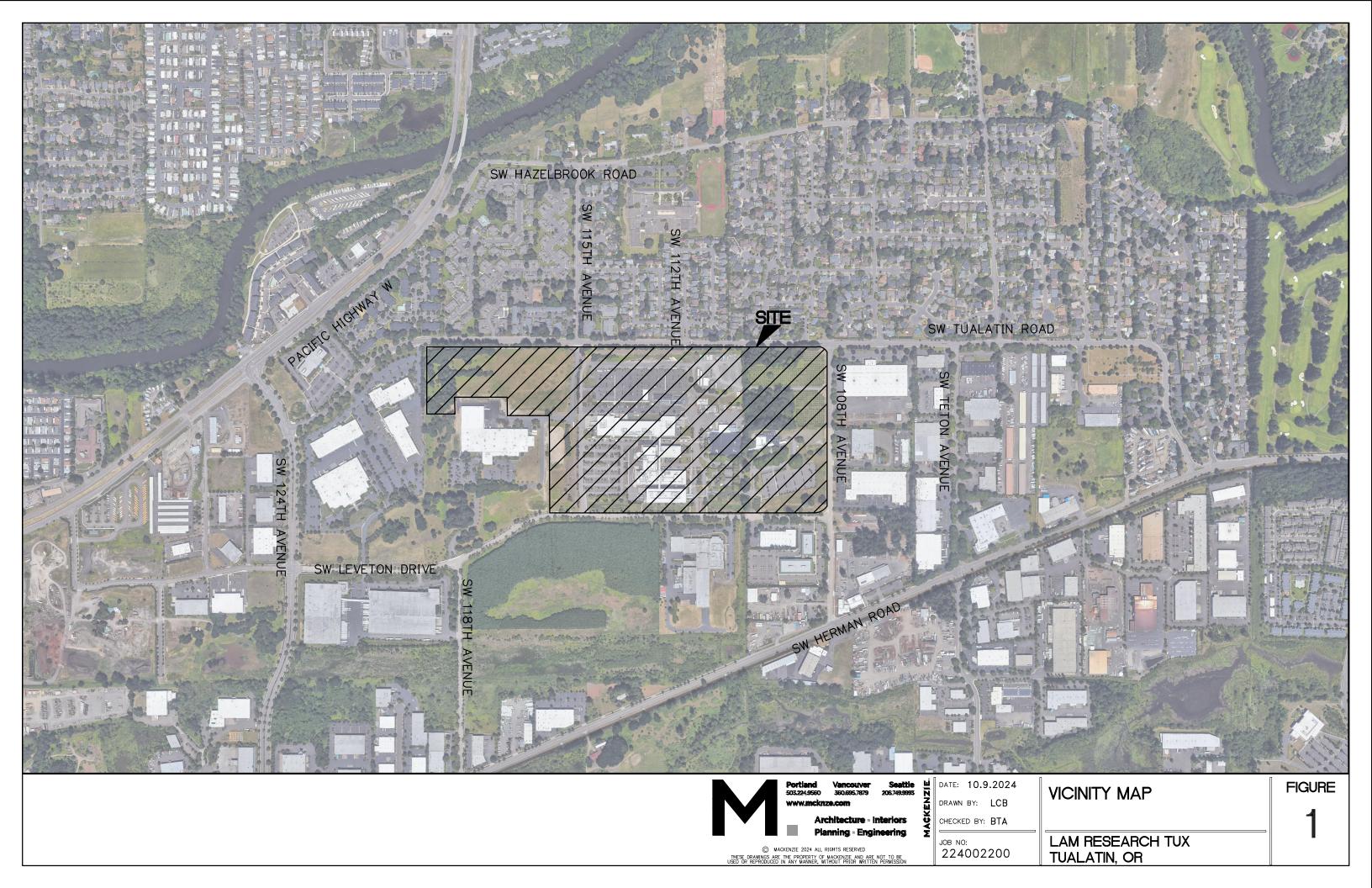
Appendix J. Queuing Analysis

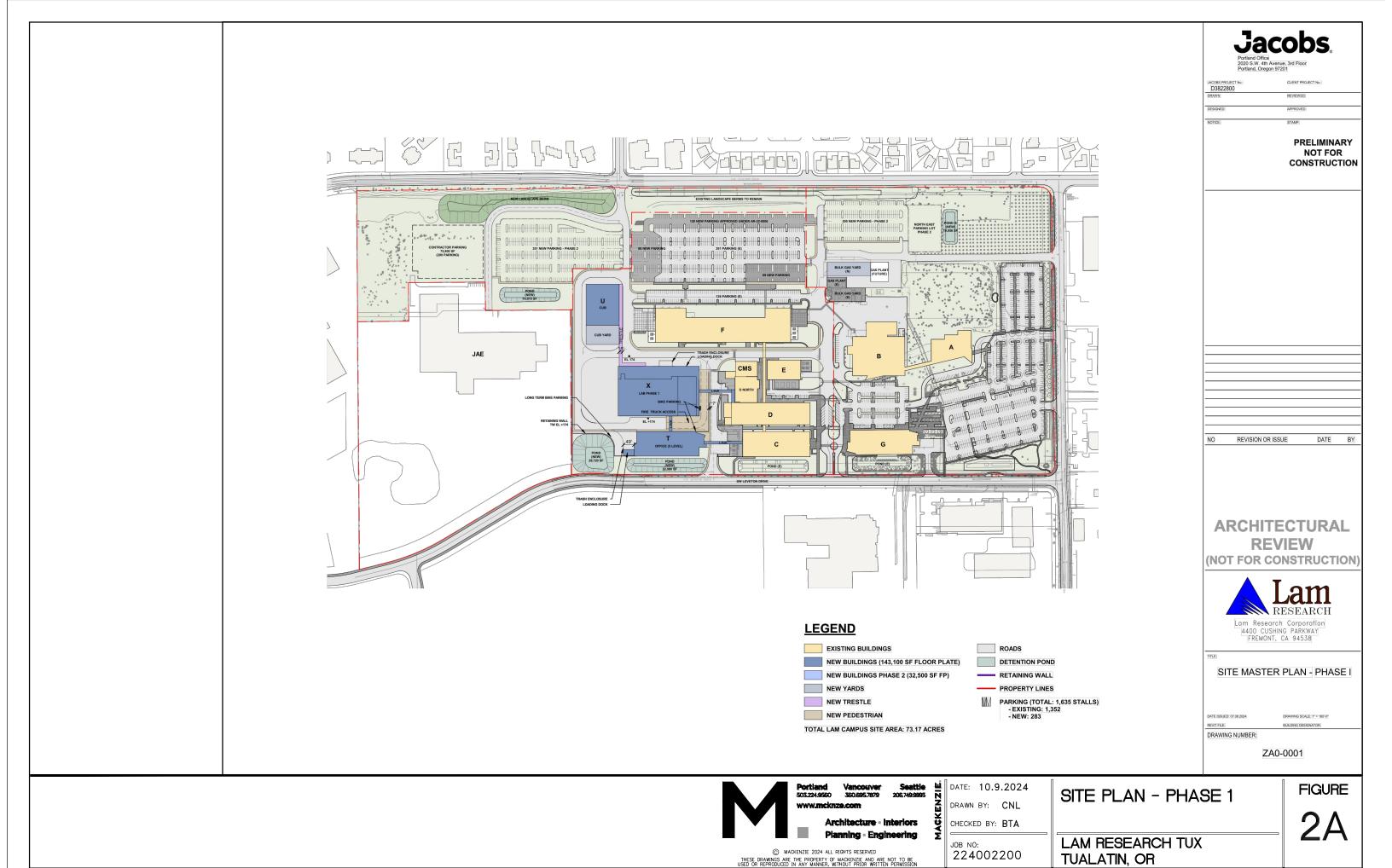
Appendix K. Warrants

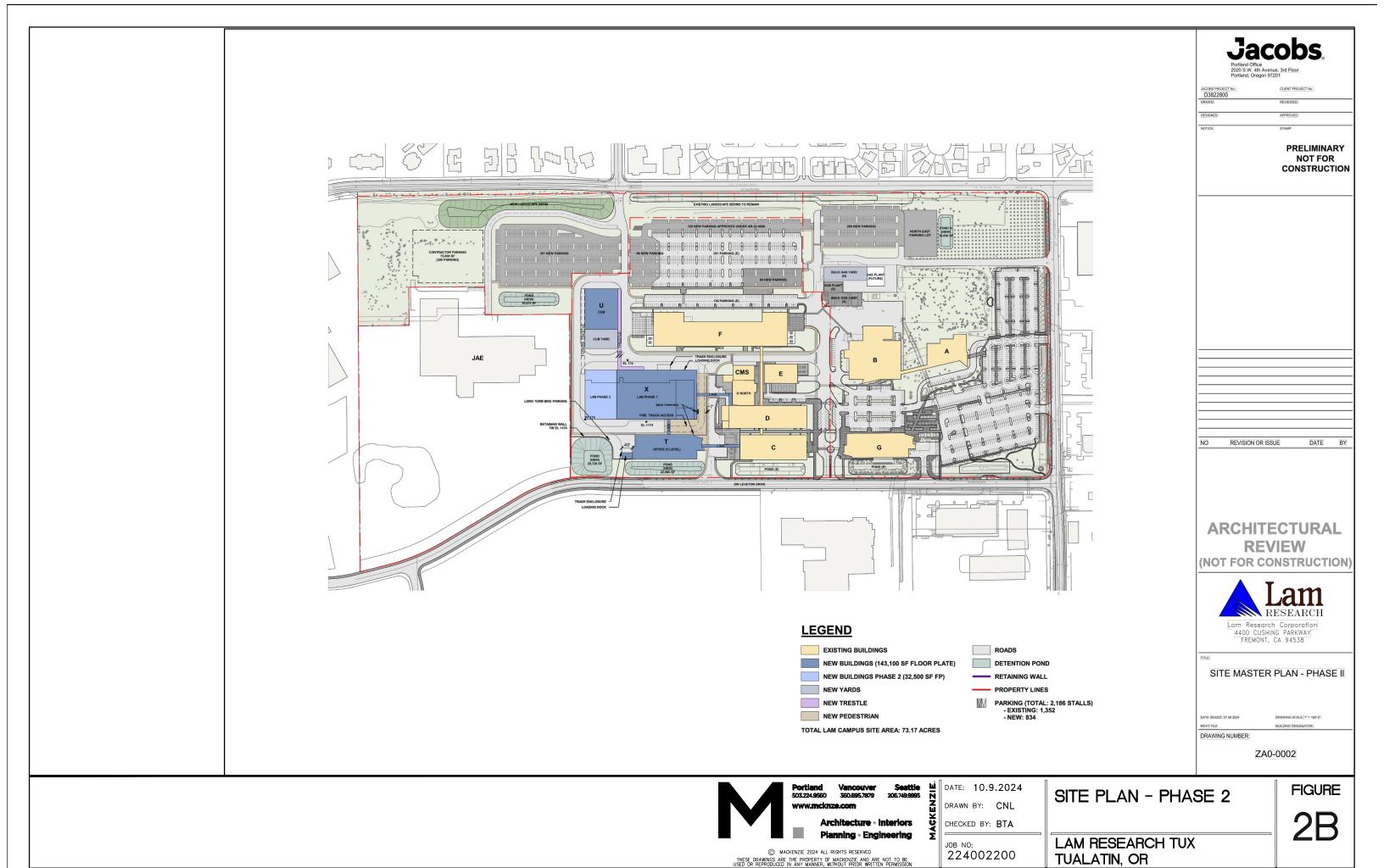
Appendix L. Calibration Materials

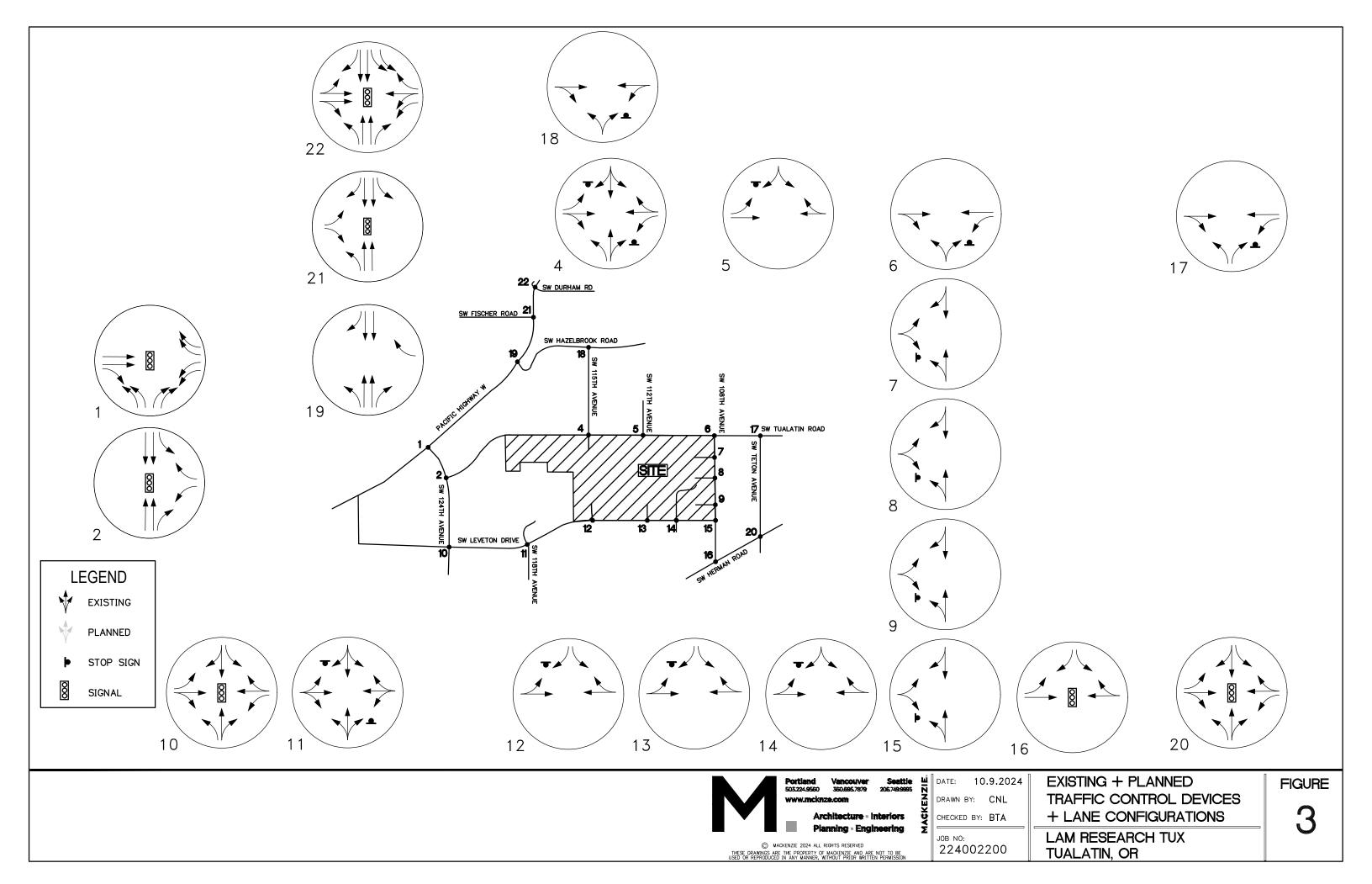
APPENDIX A.

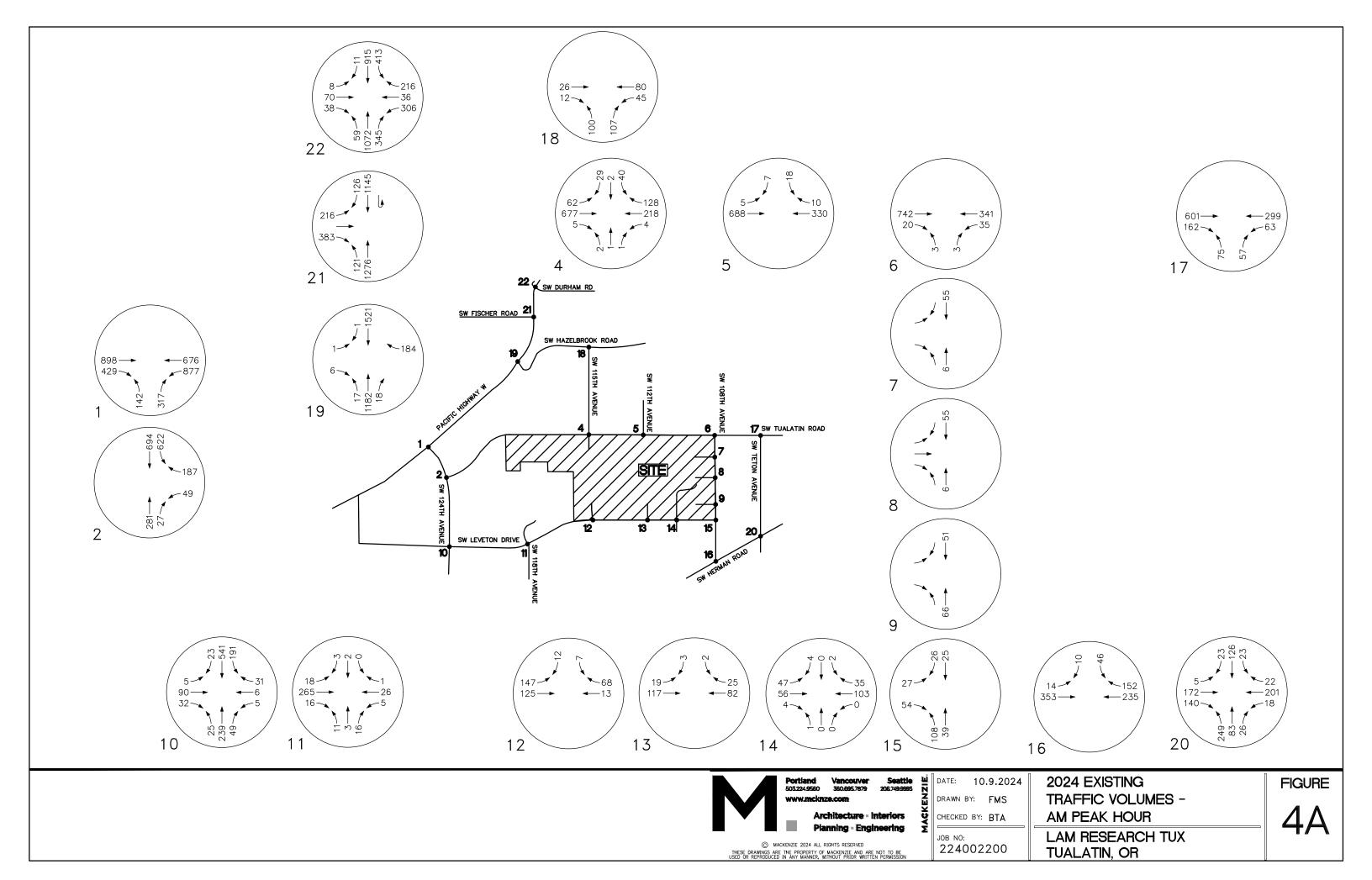
**FIGURES** 

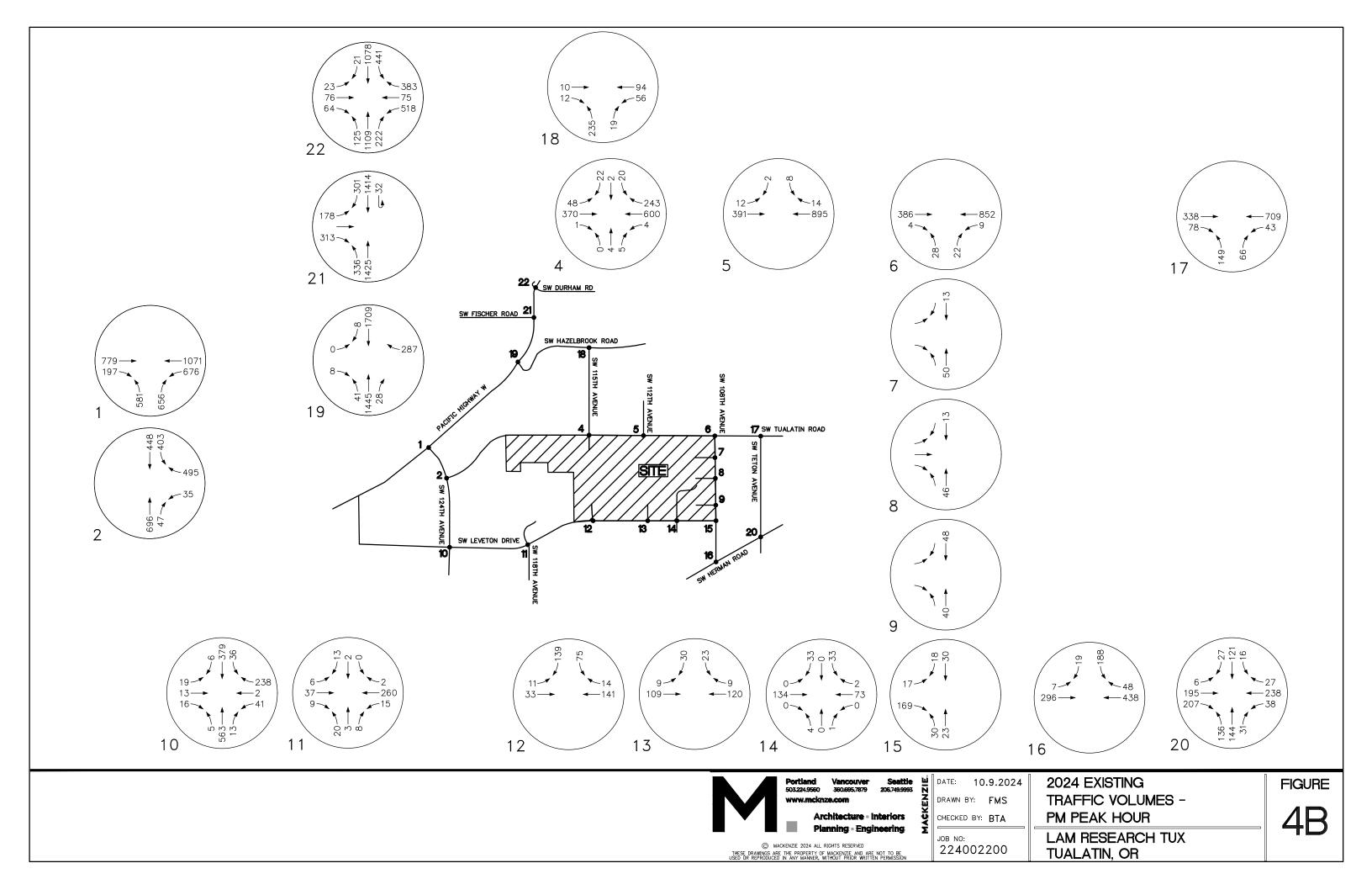


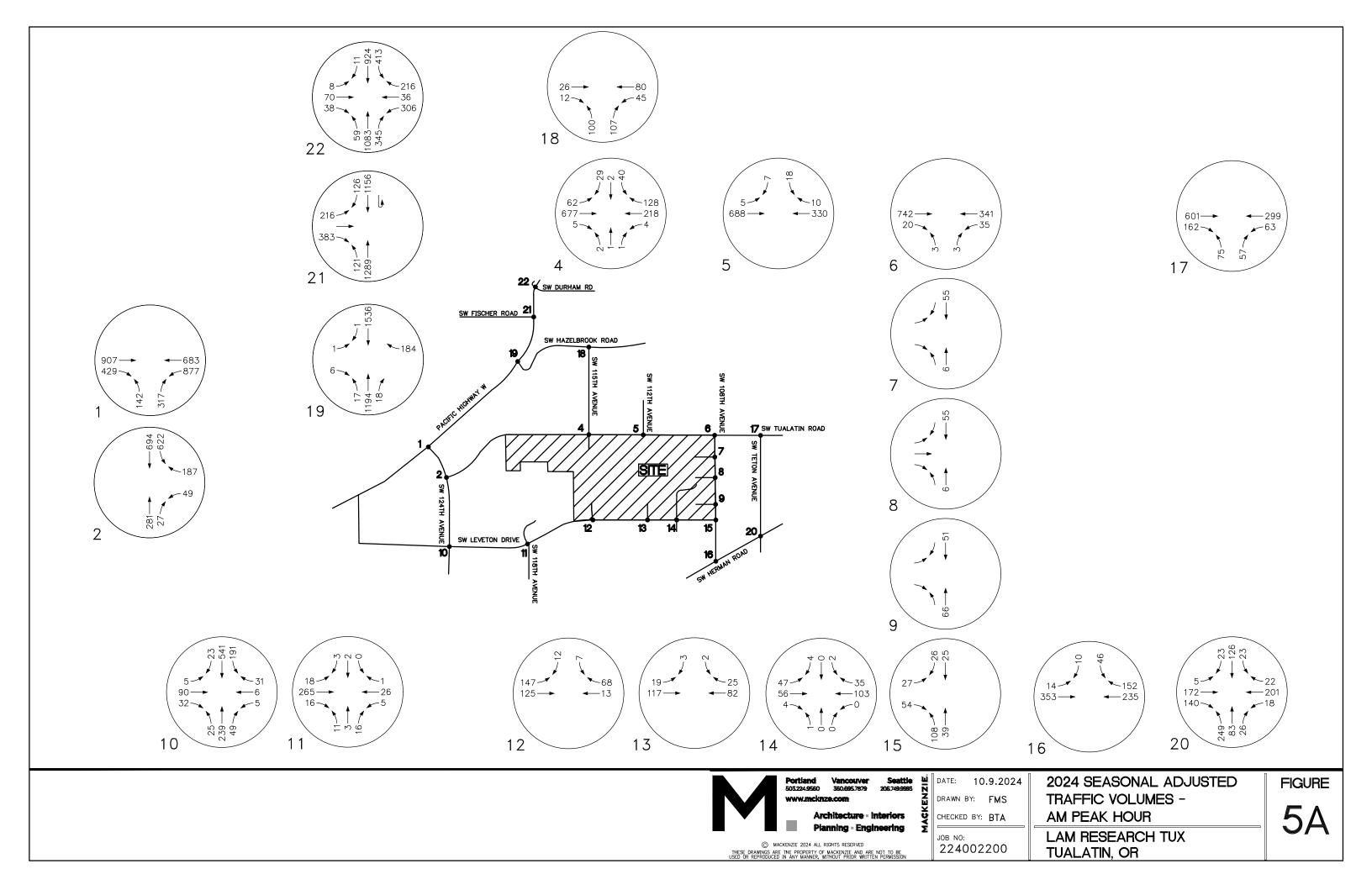


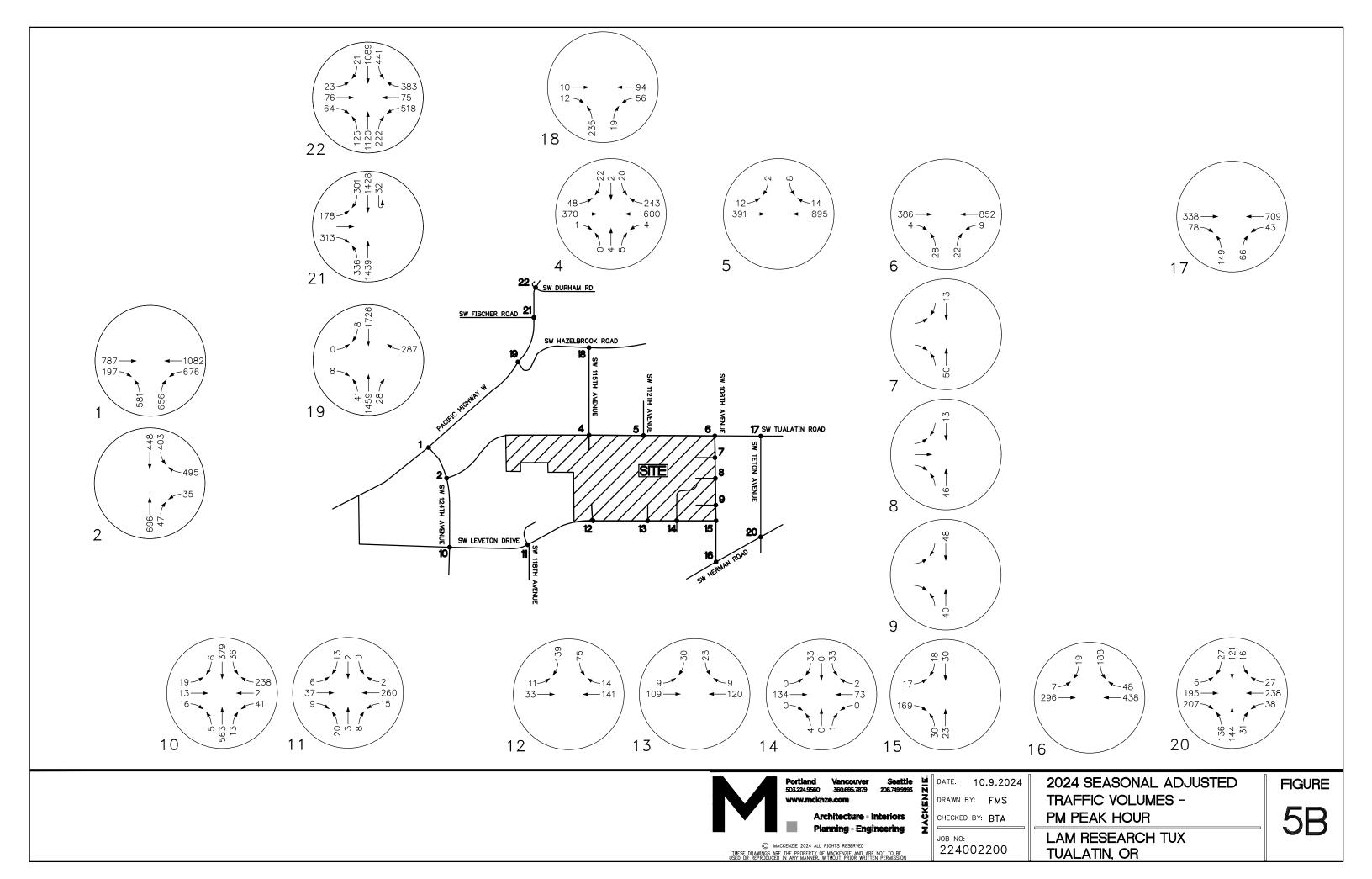


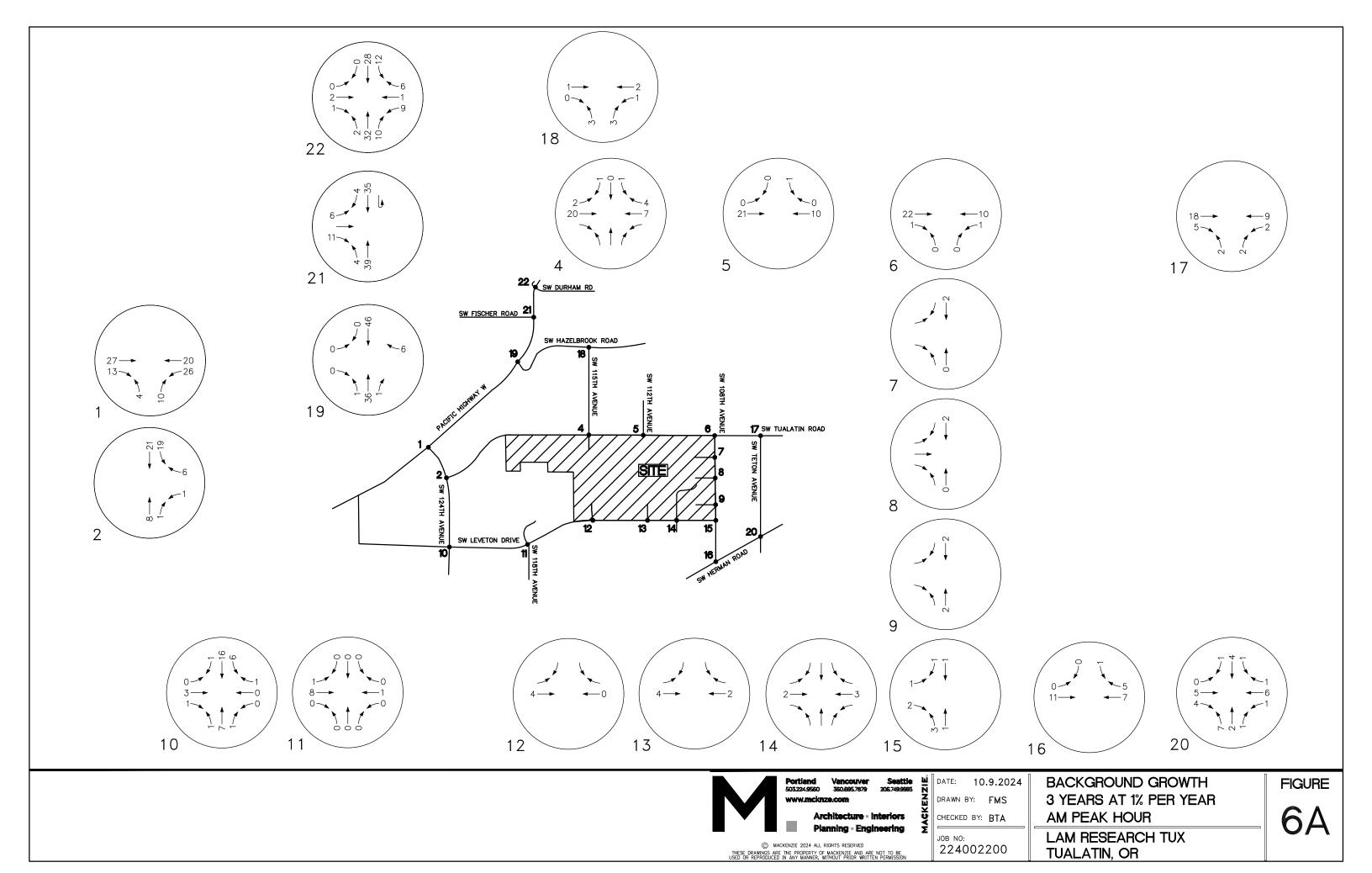


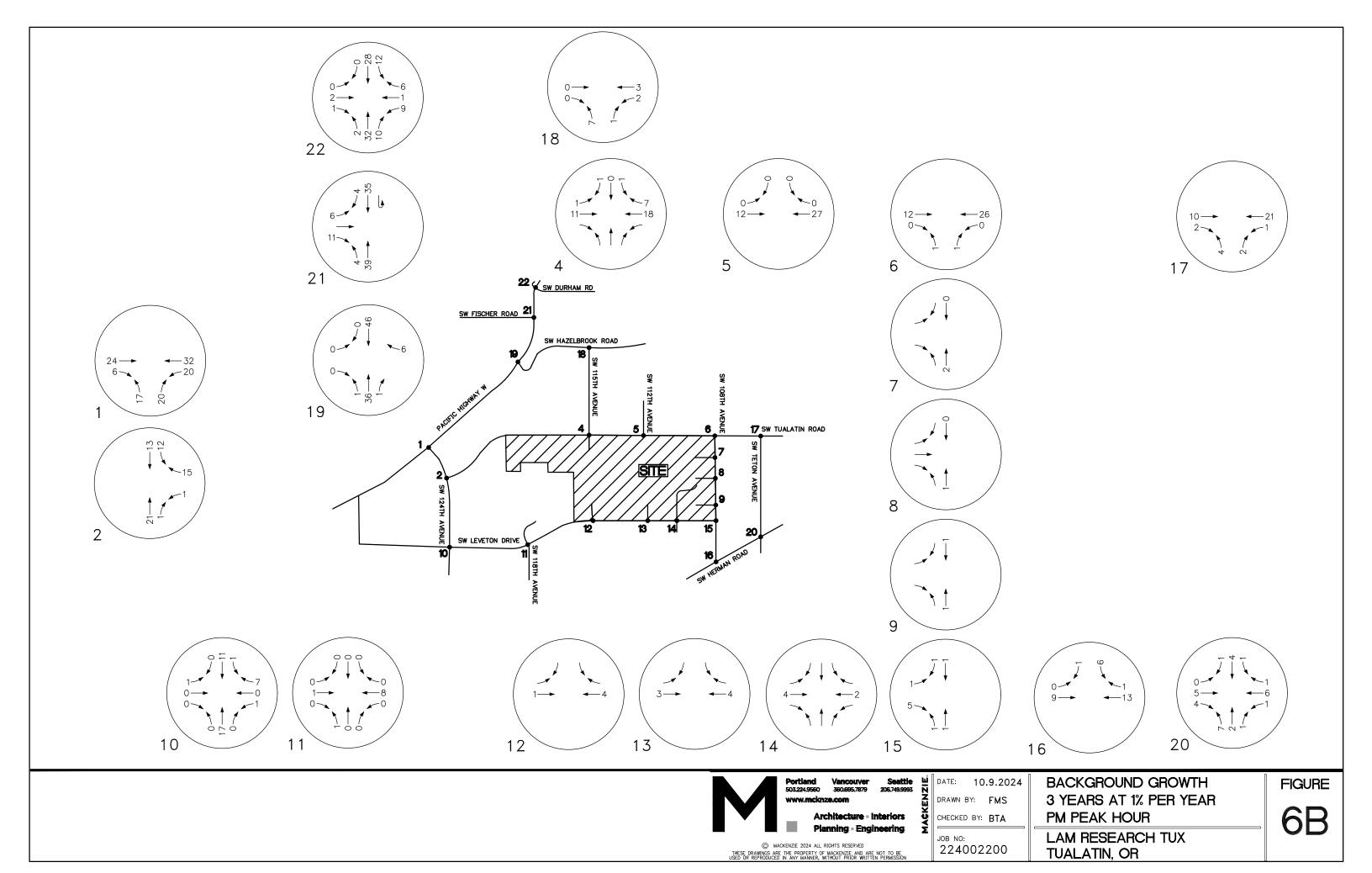


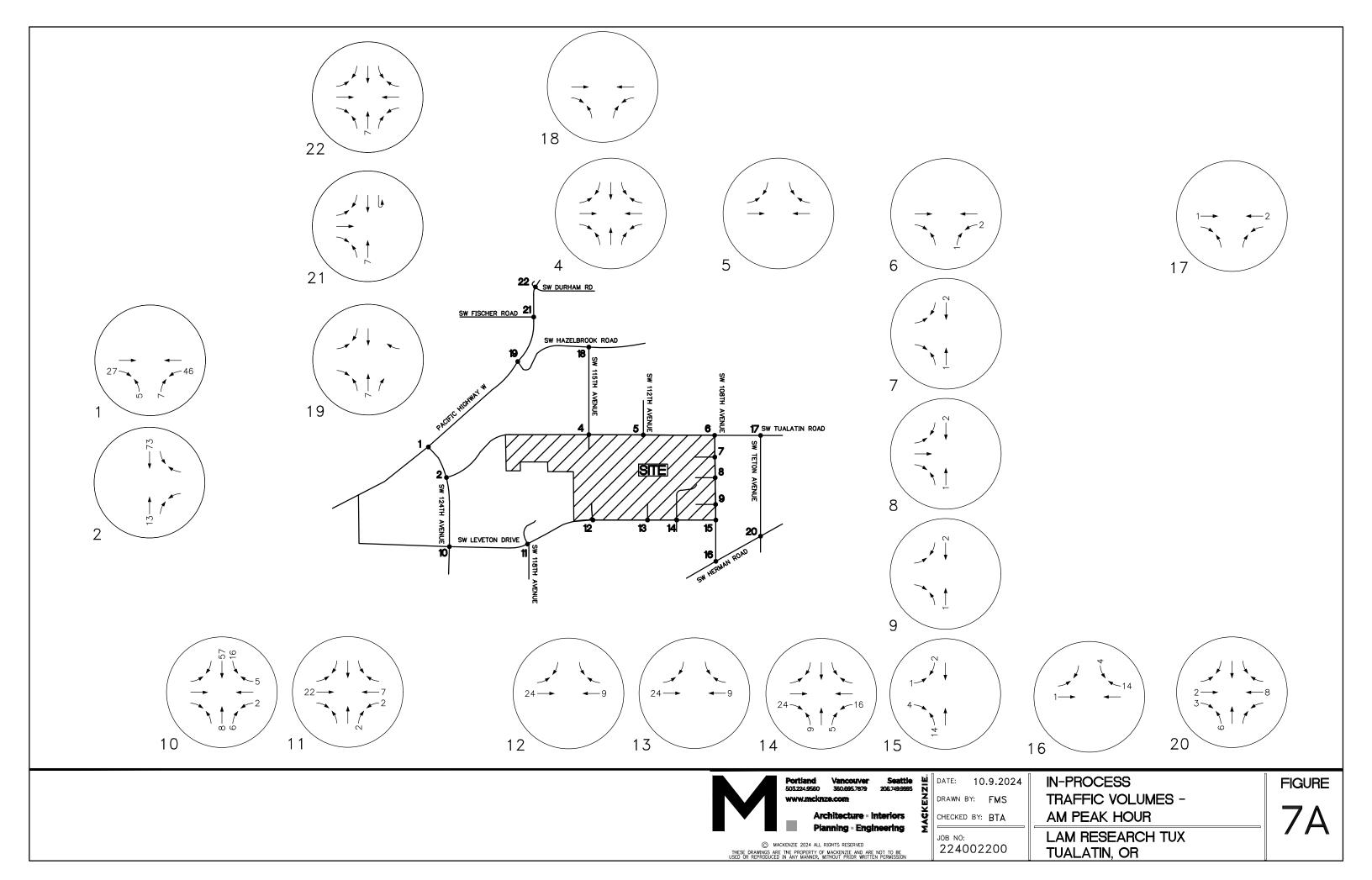


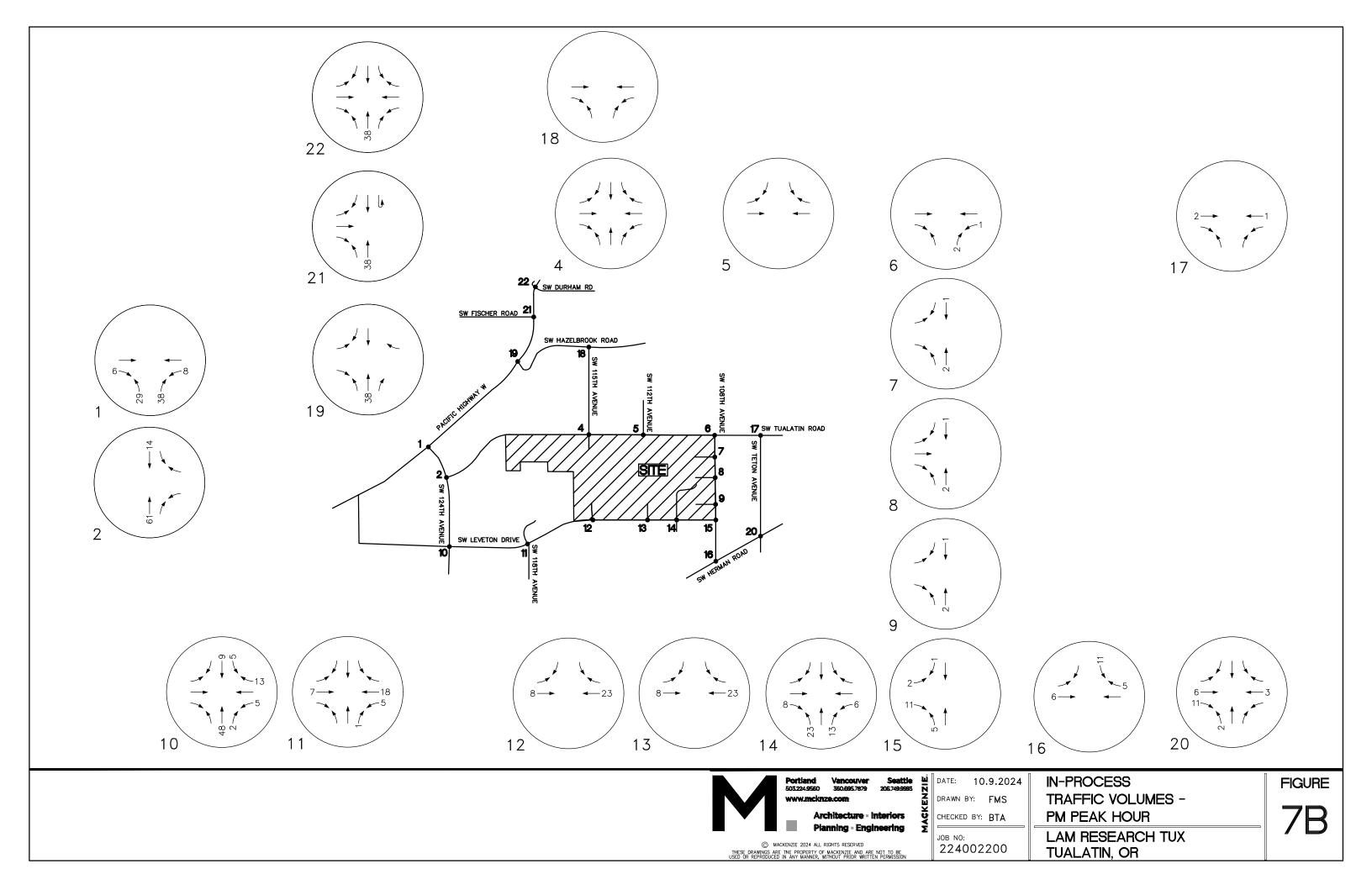


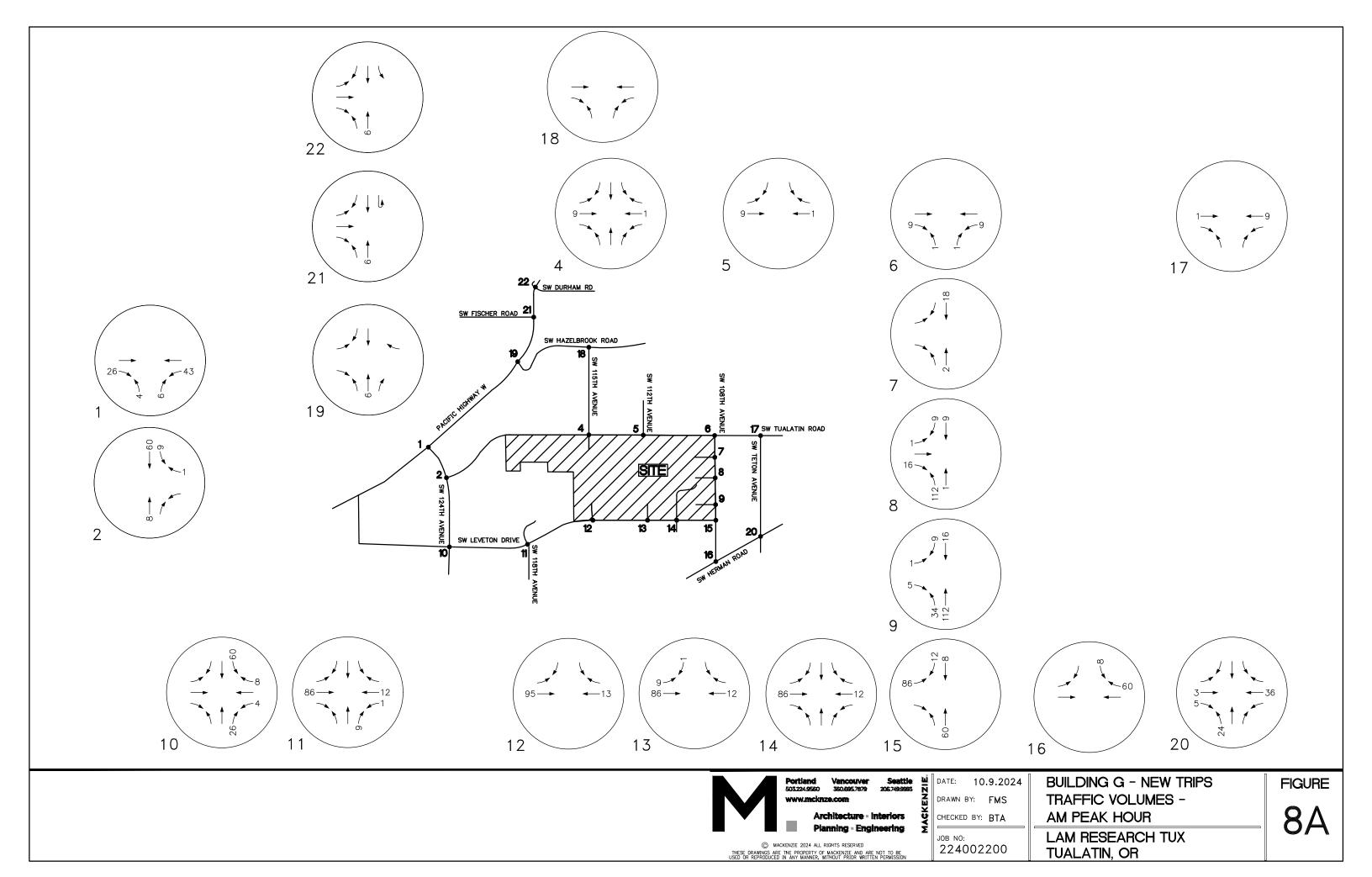


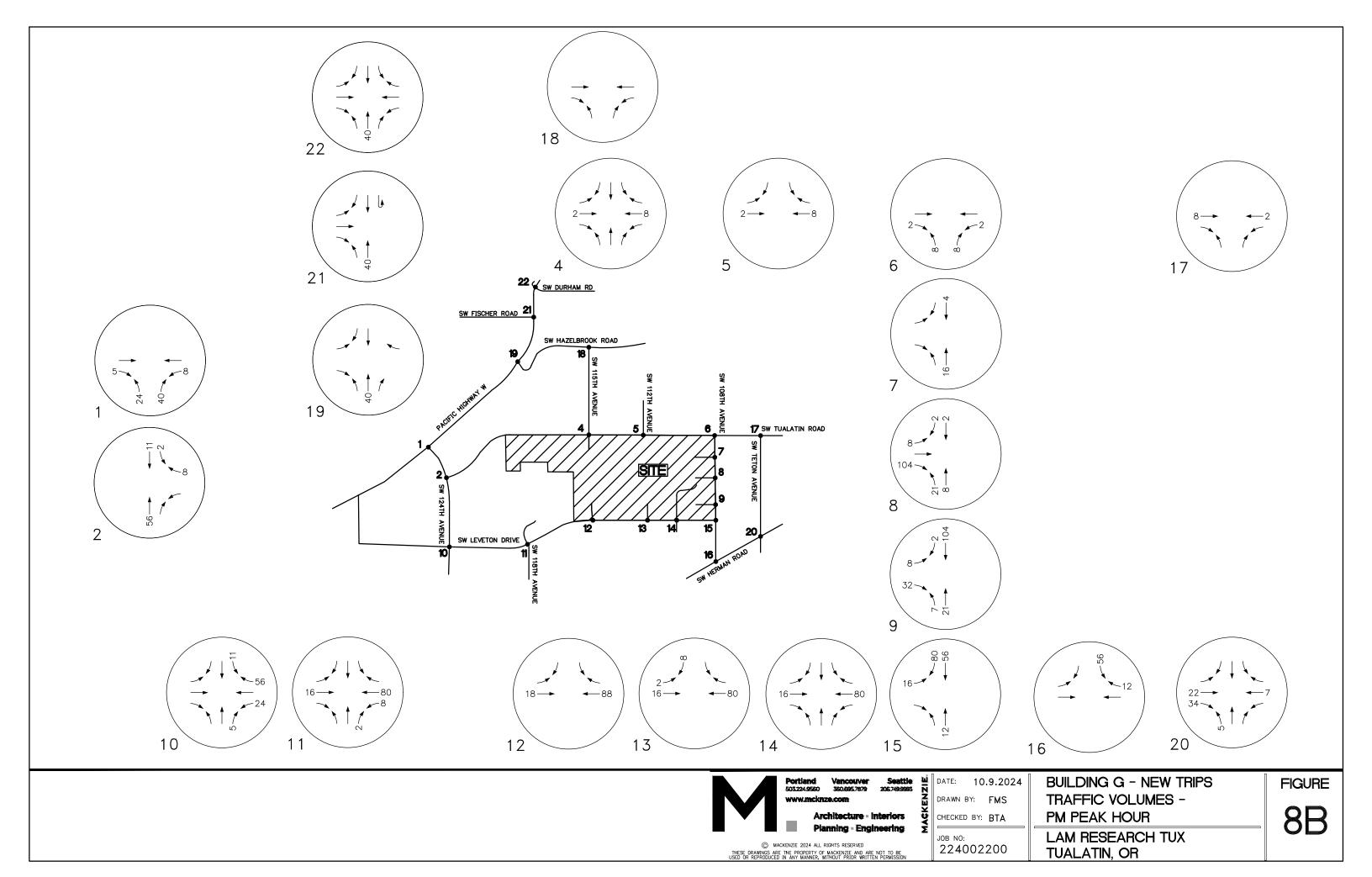


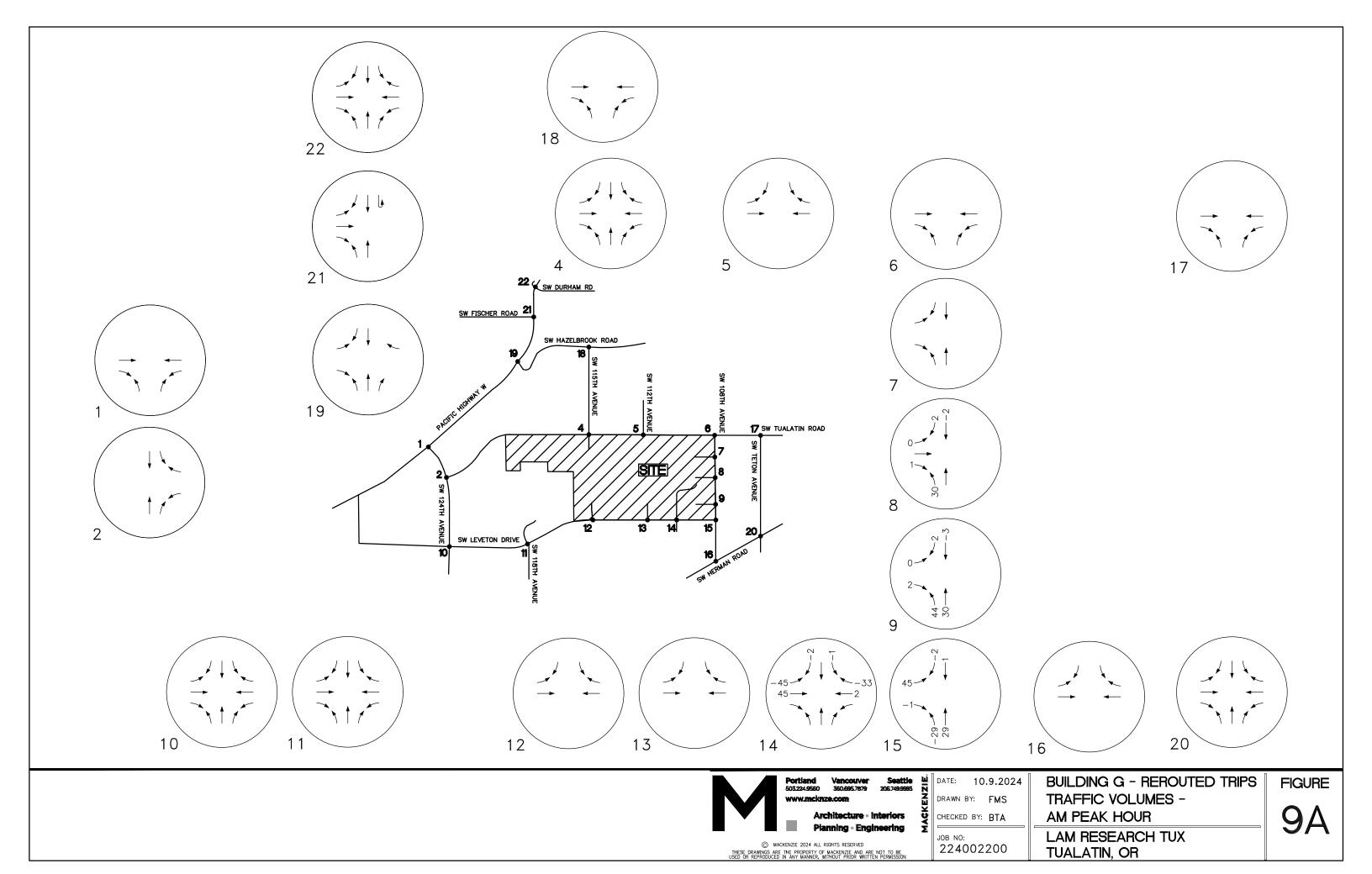


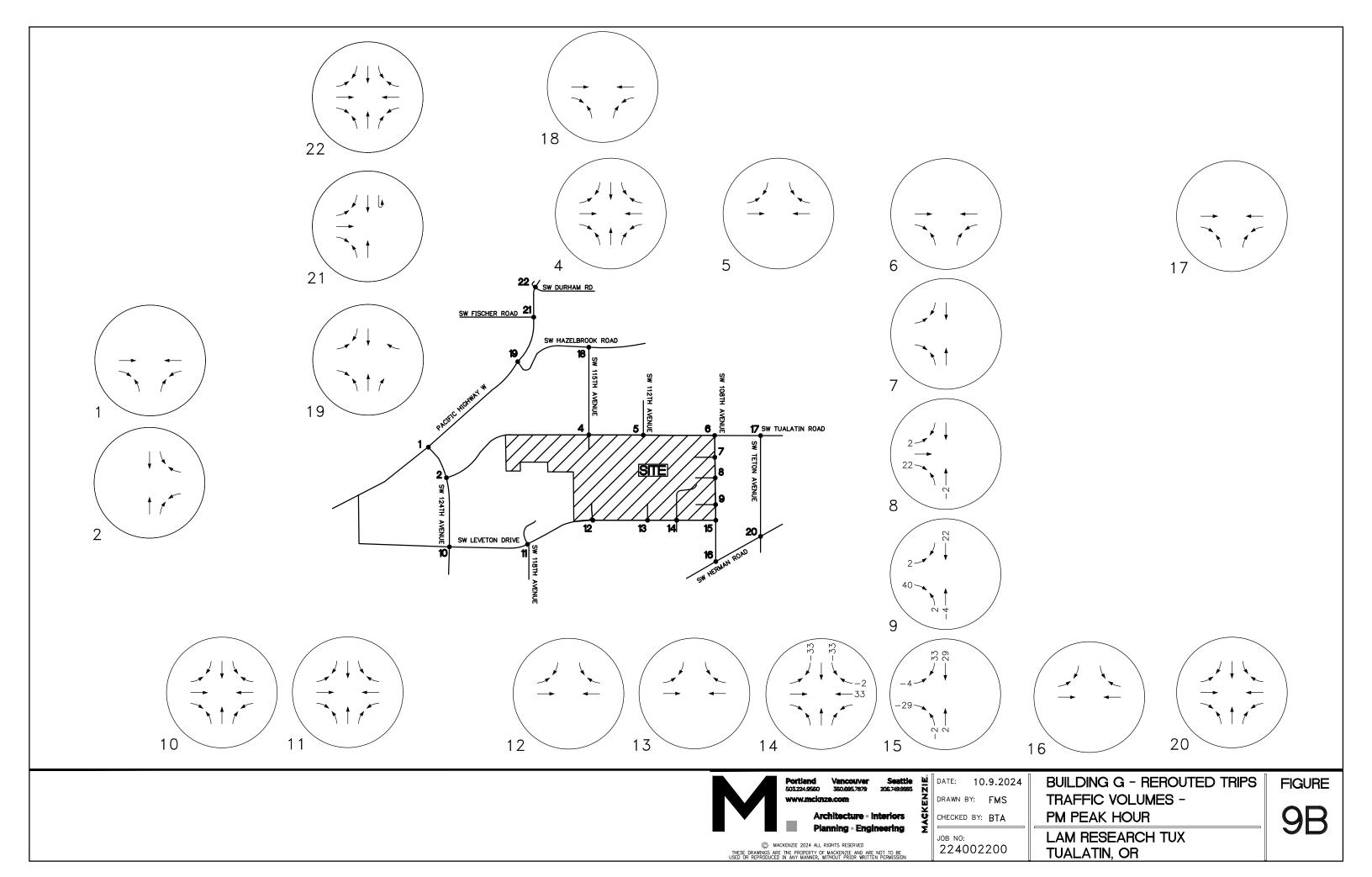


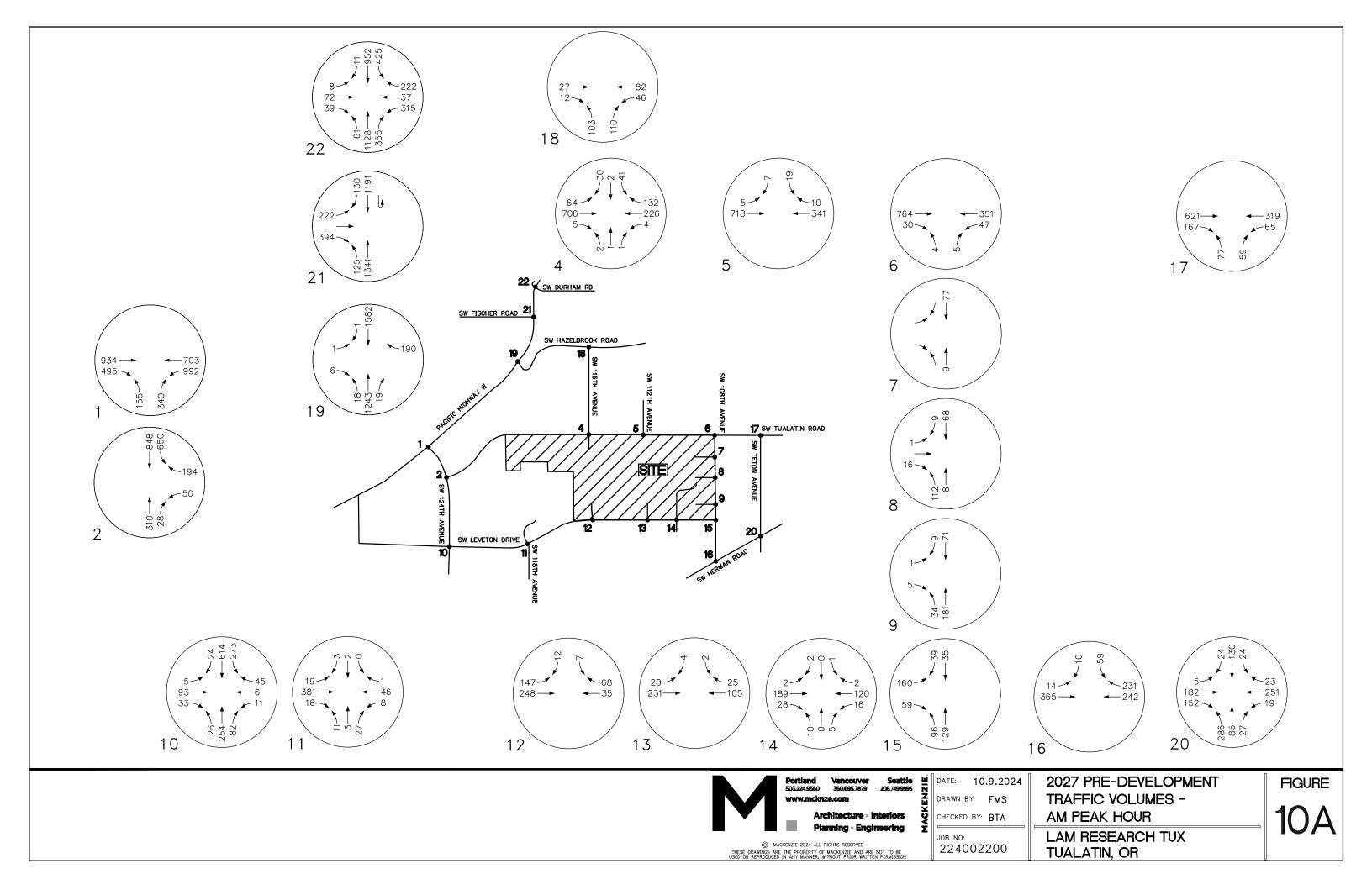


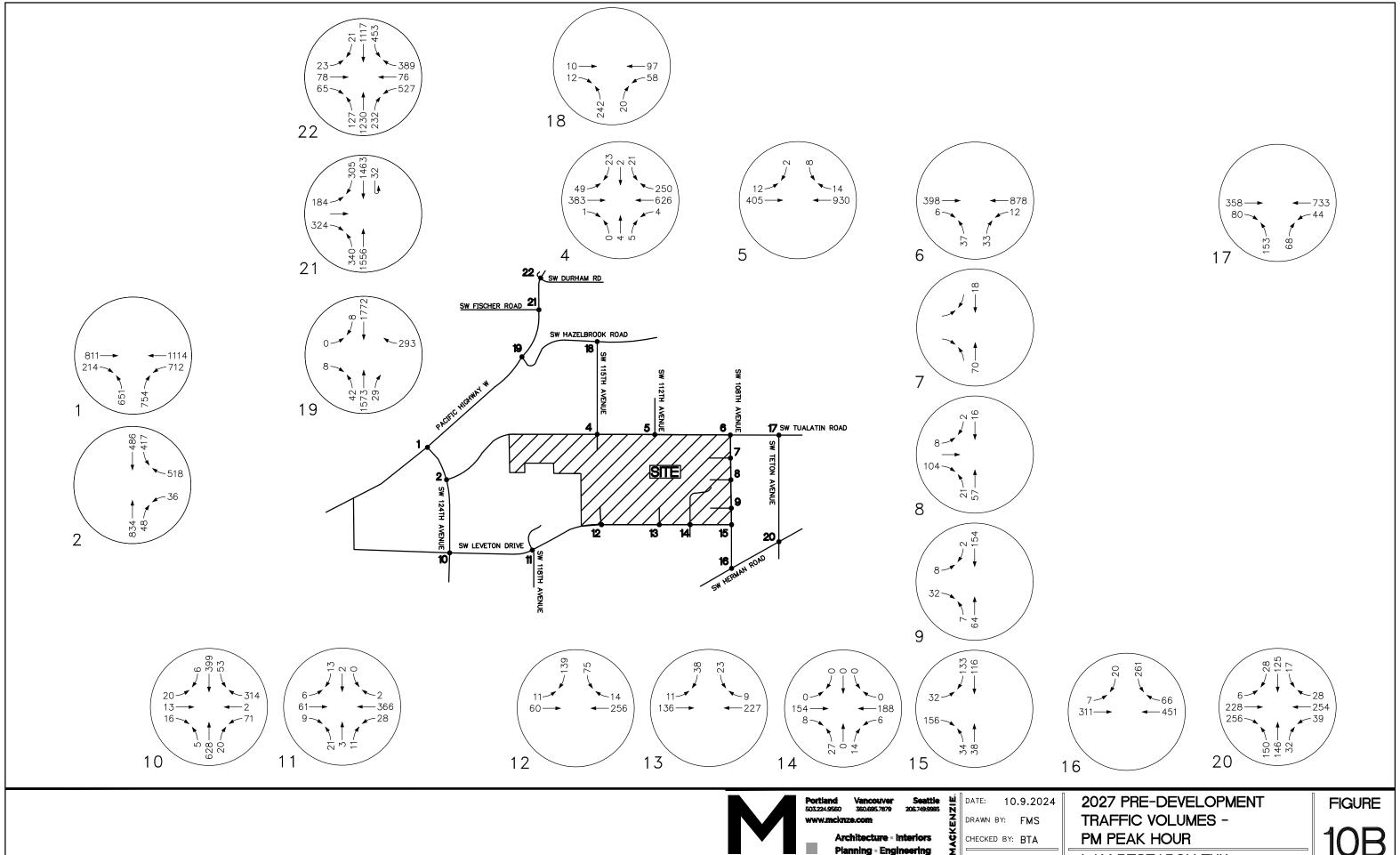




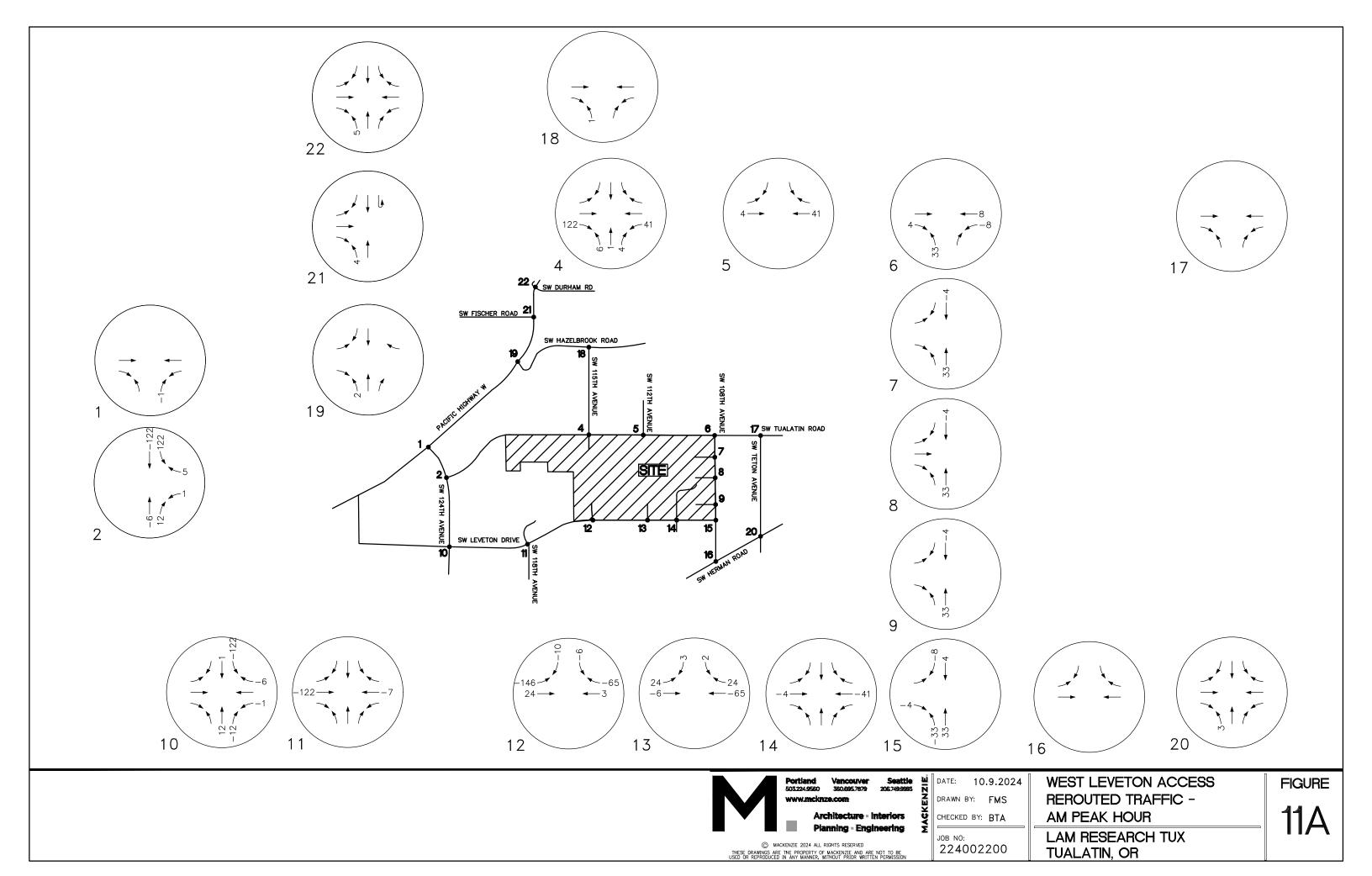


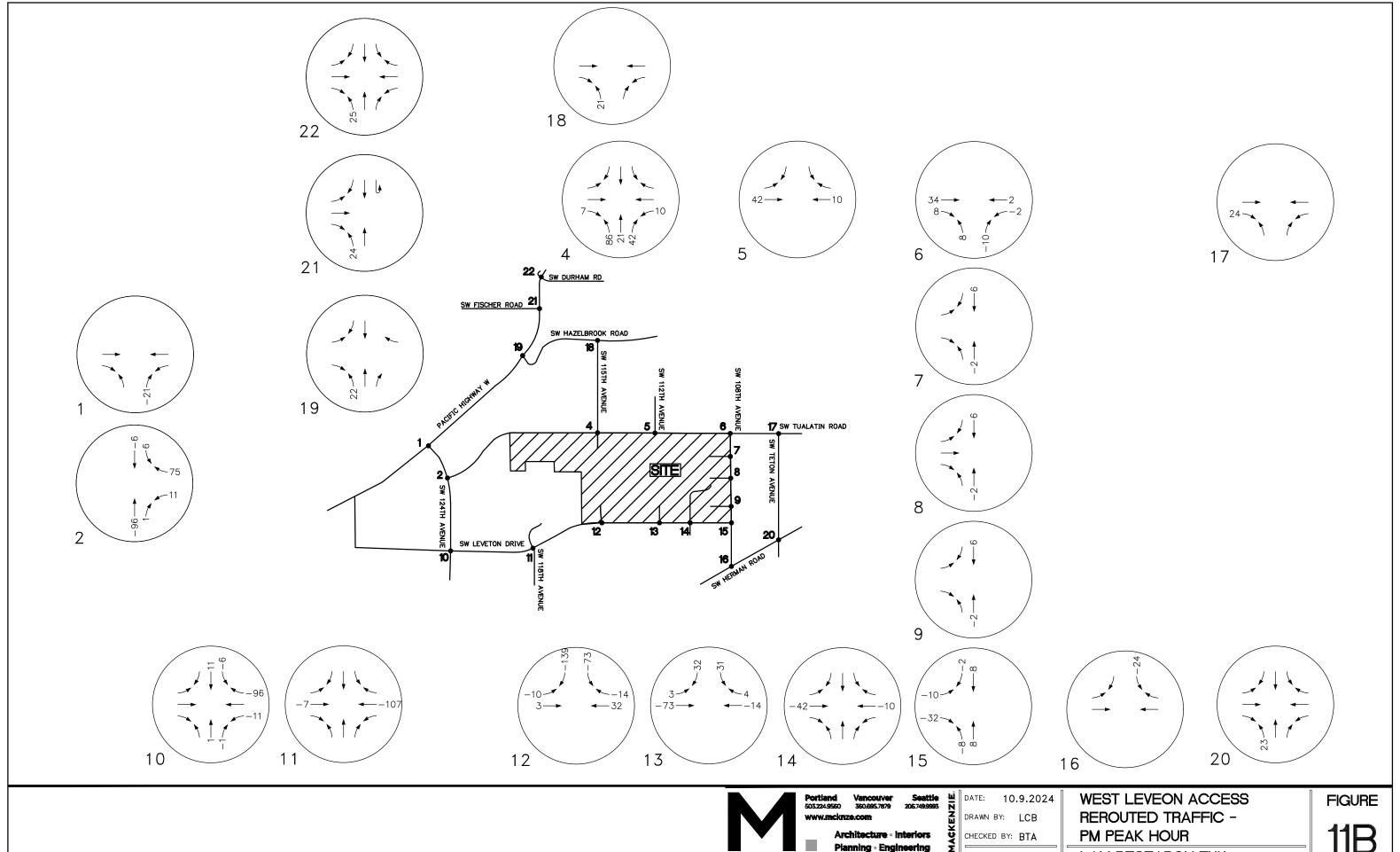




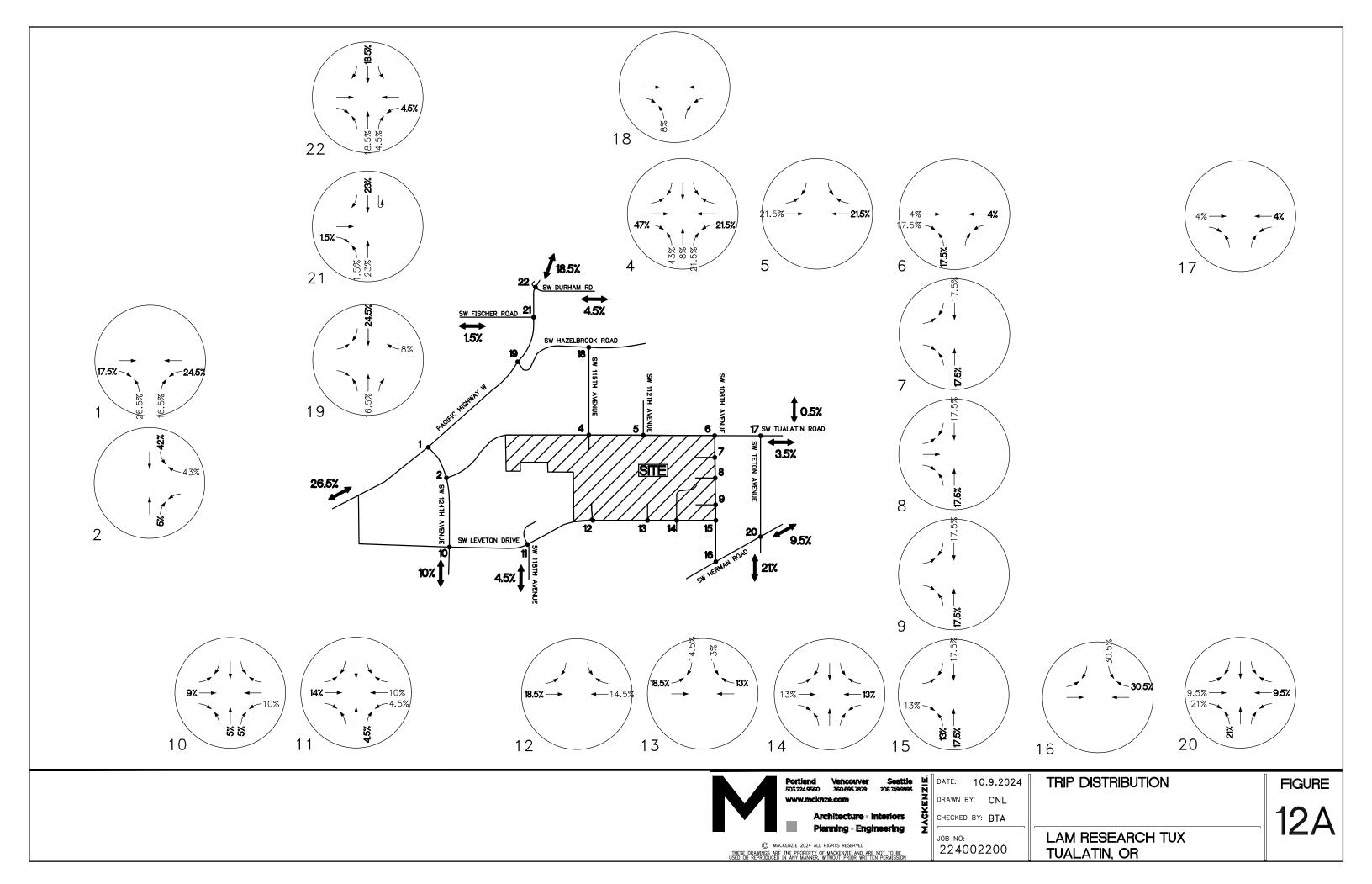


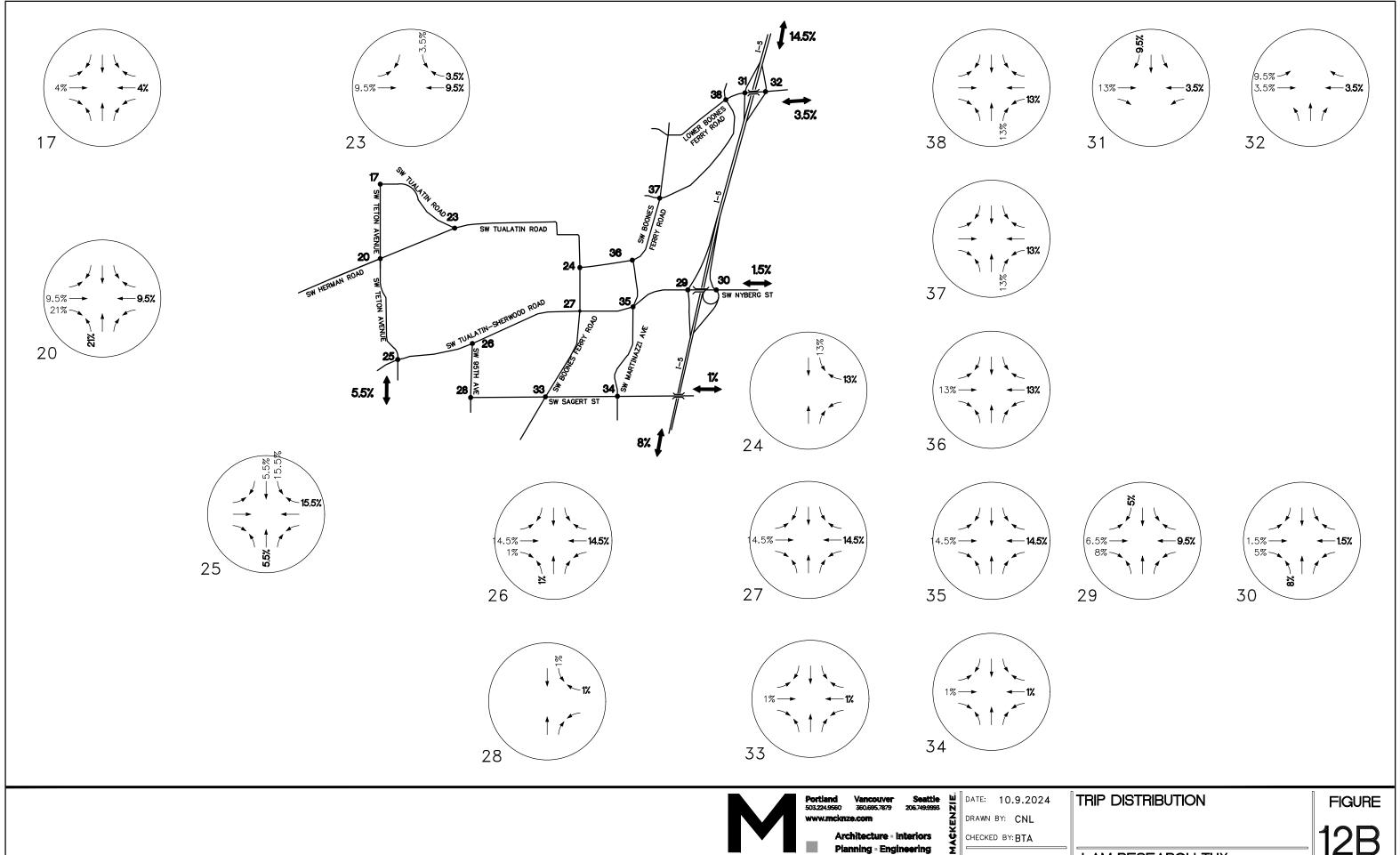
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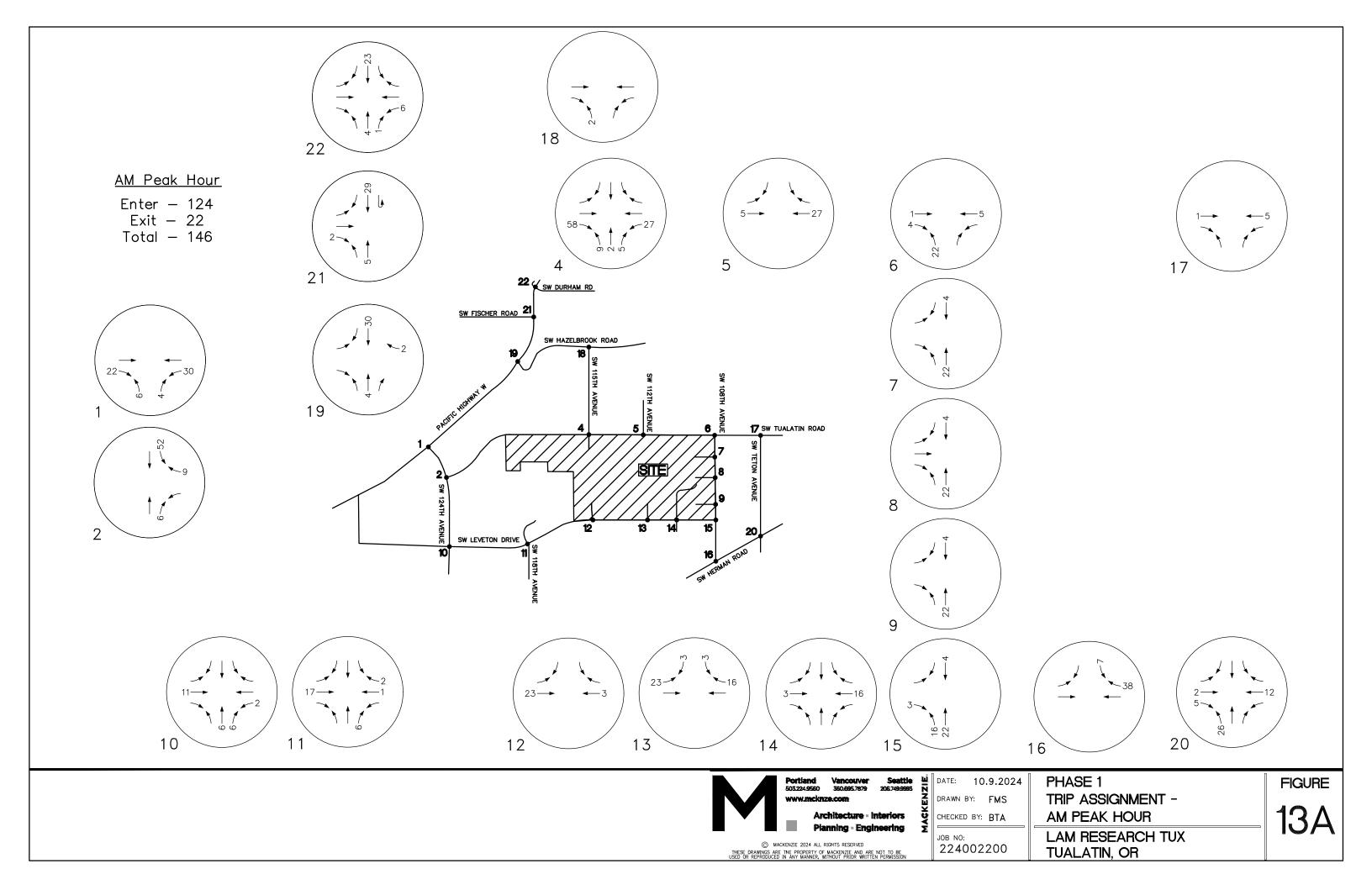


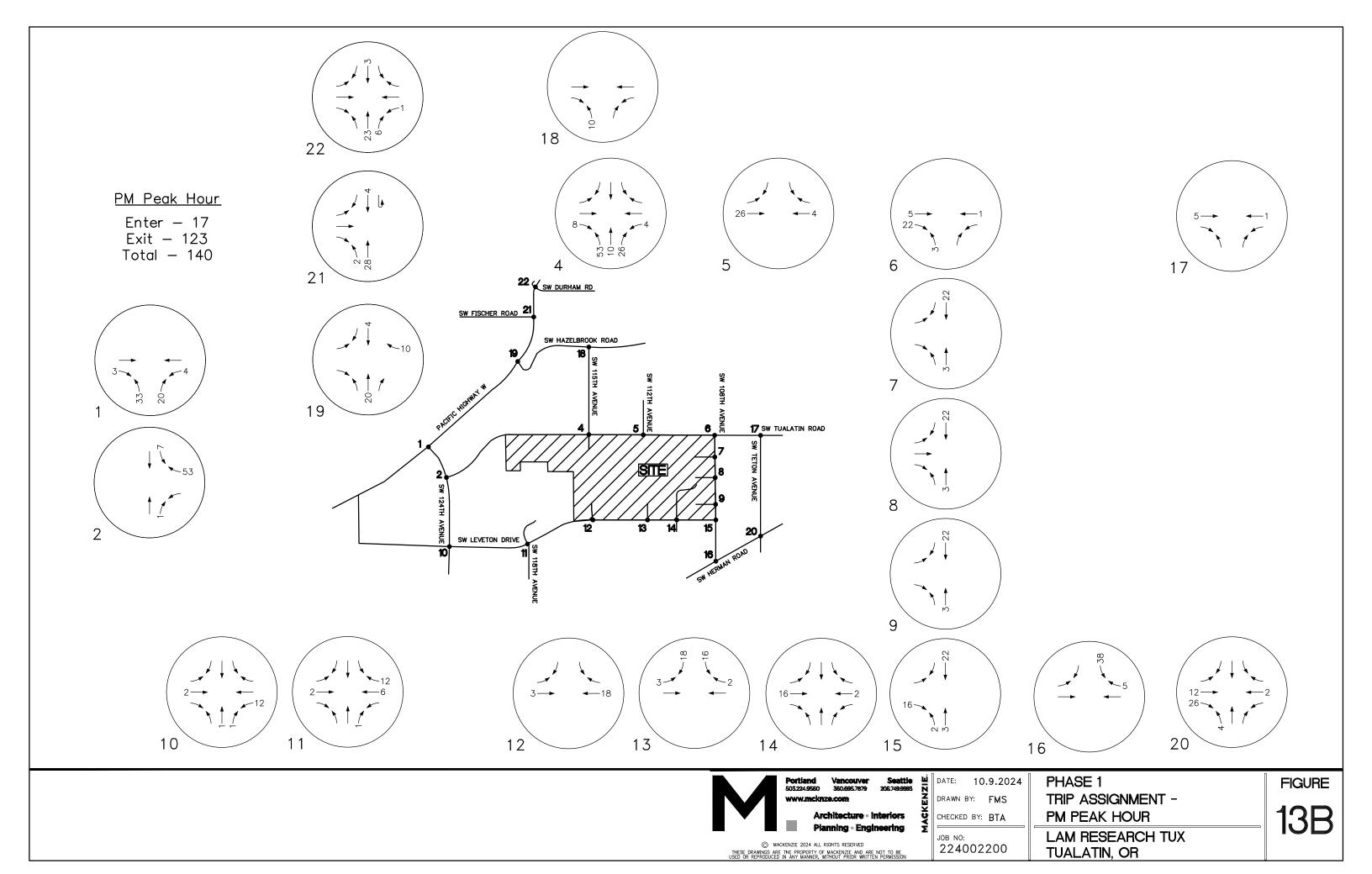
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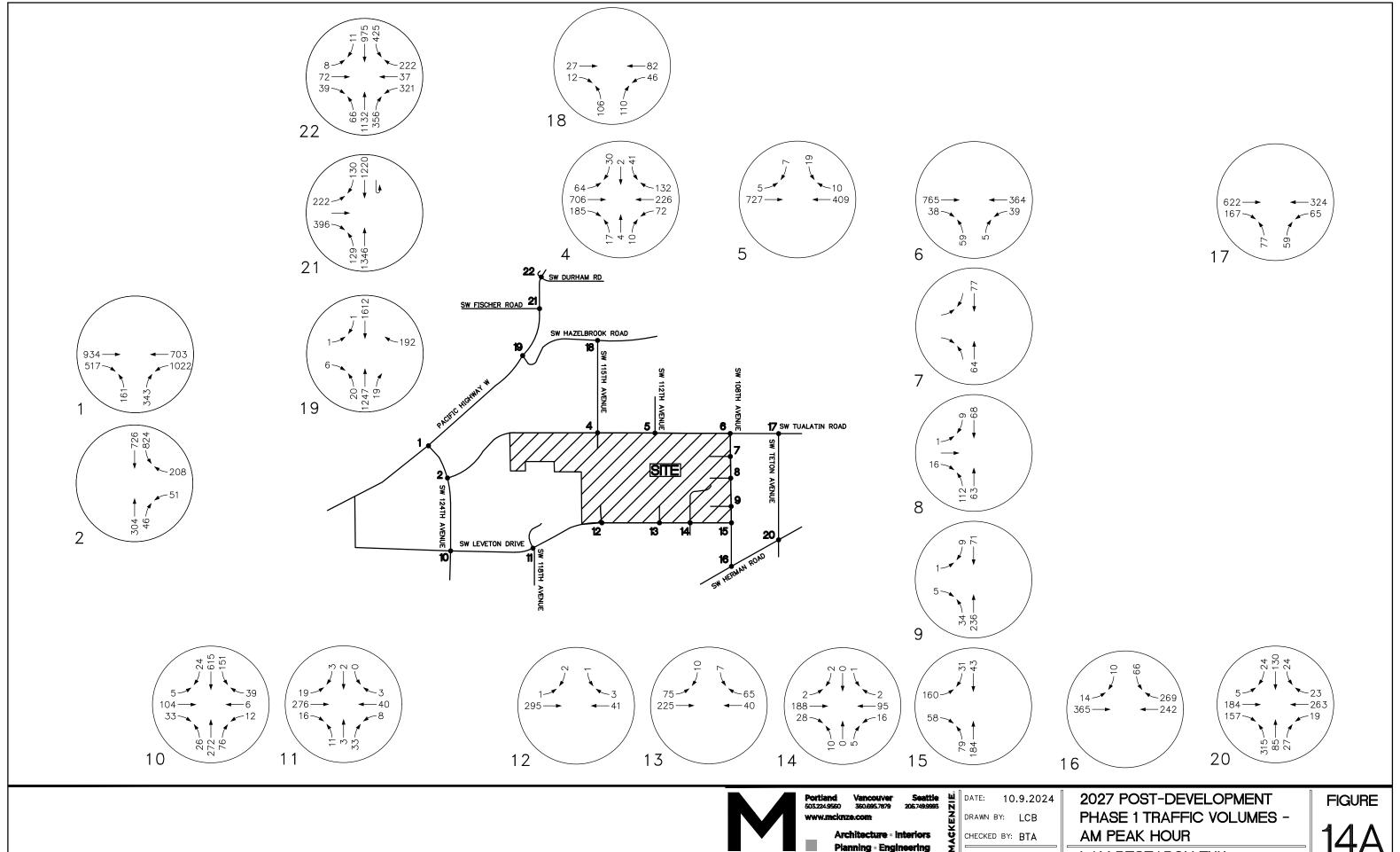




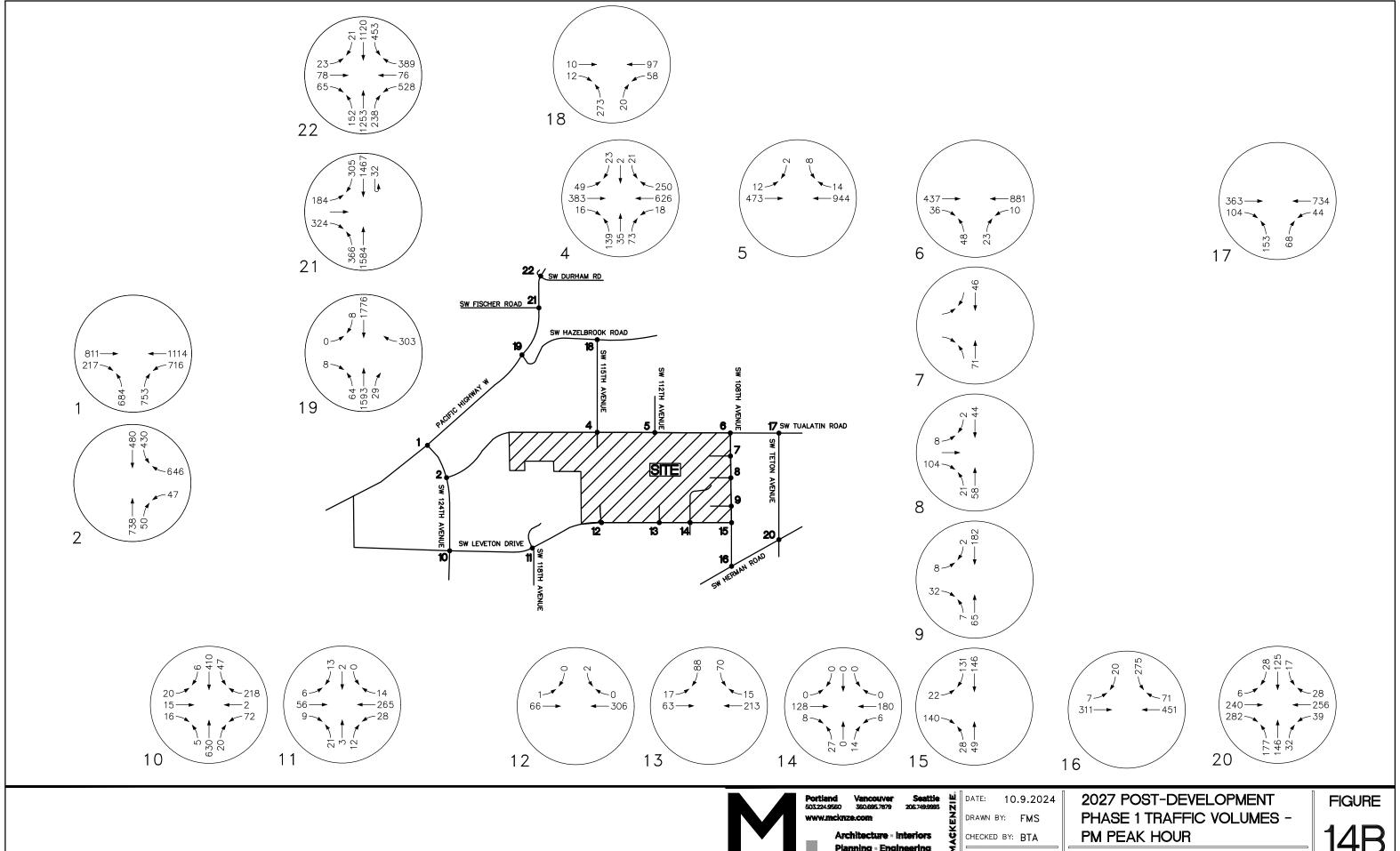
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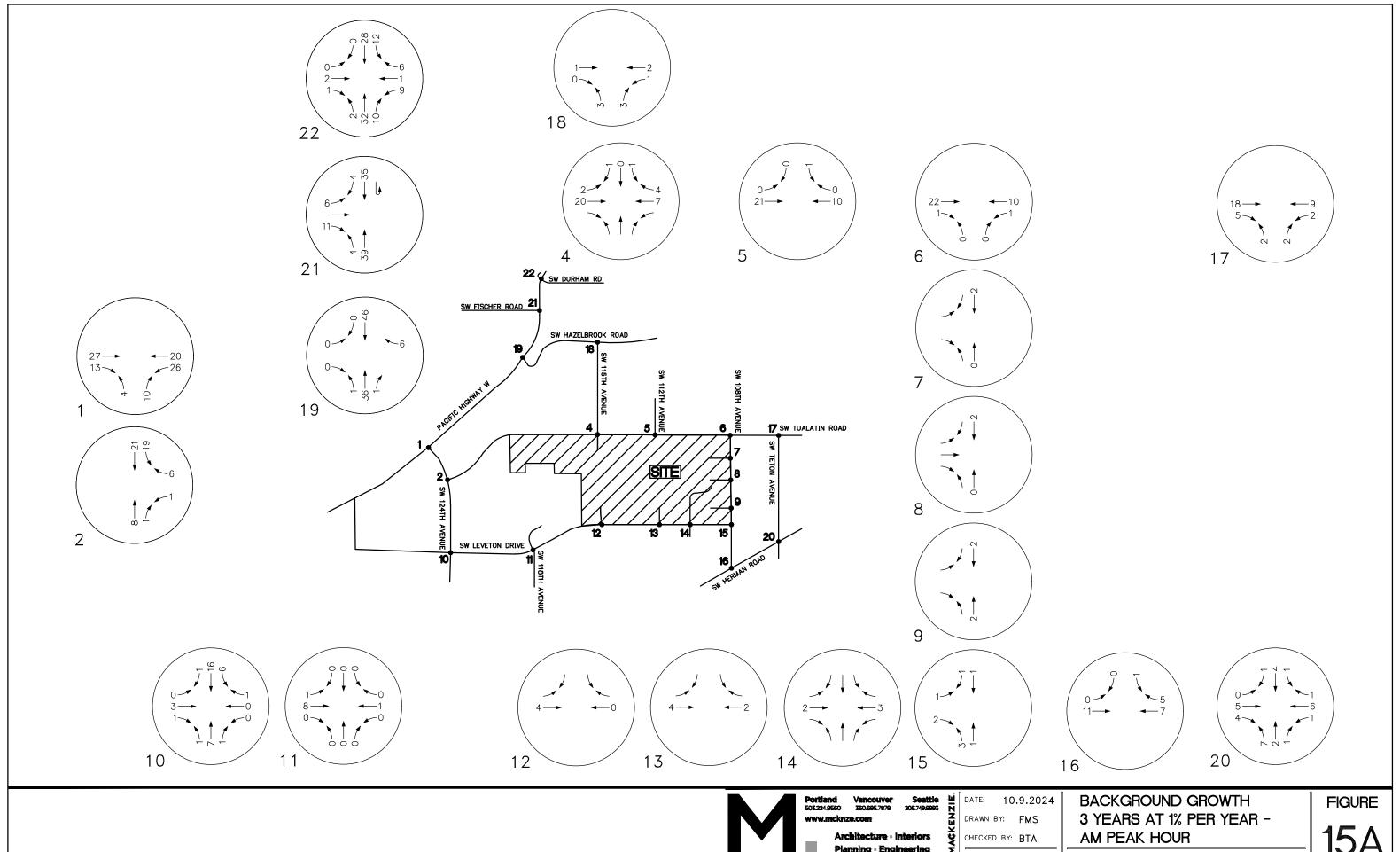




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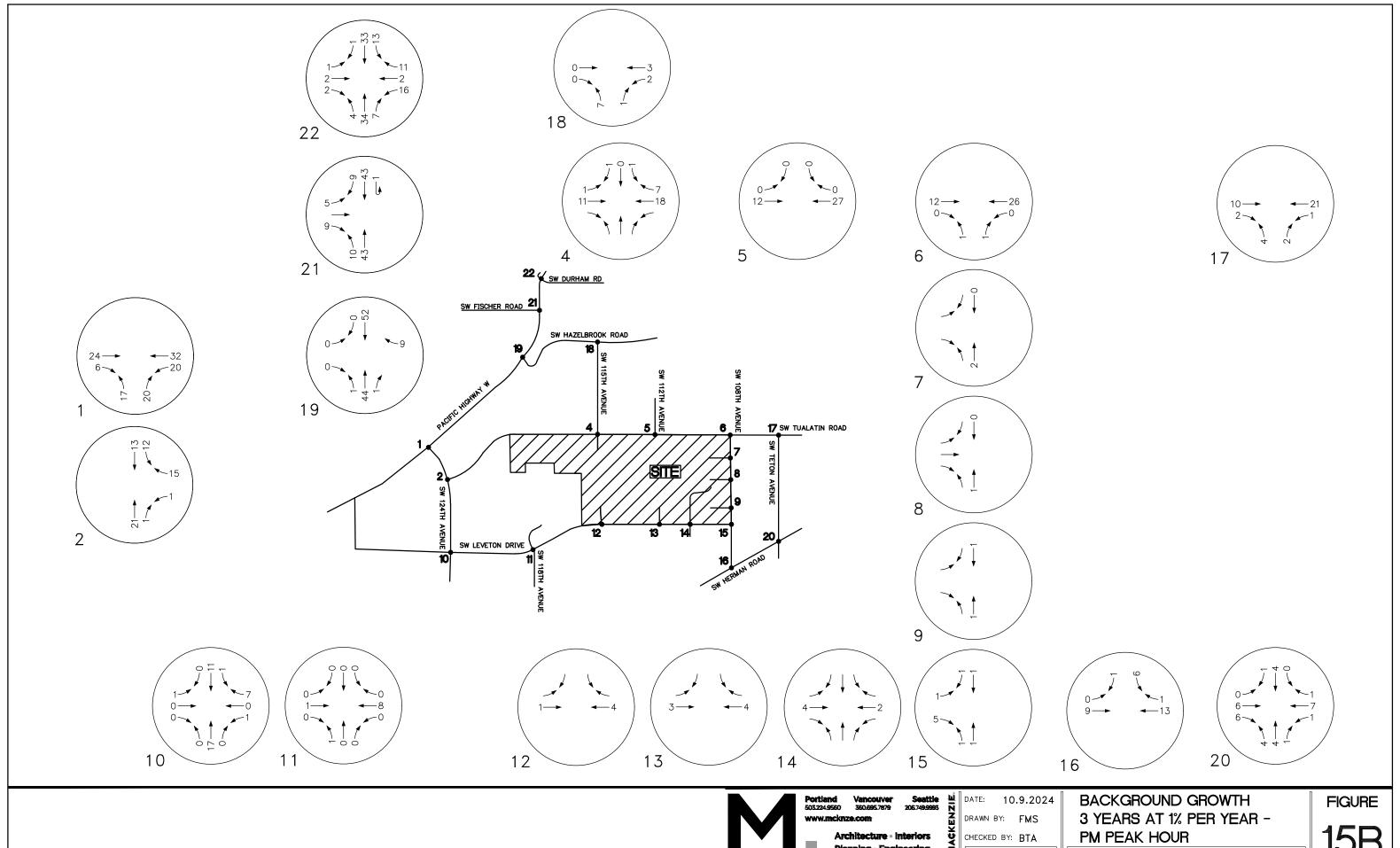


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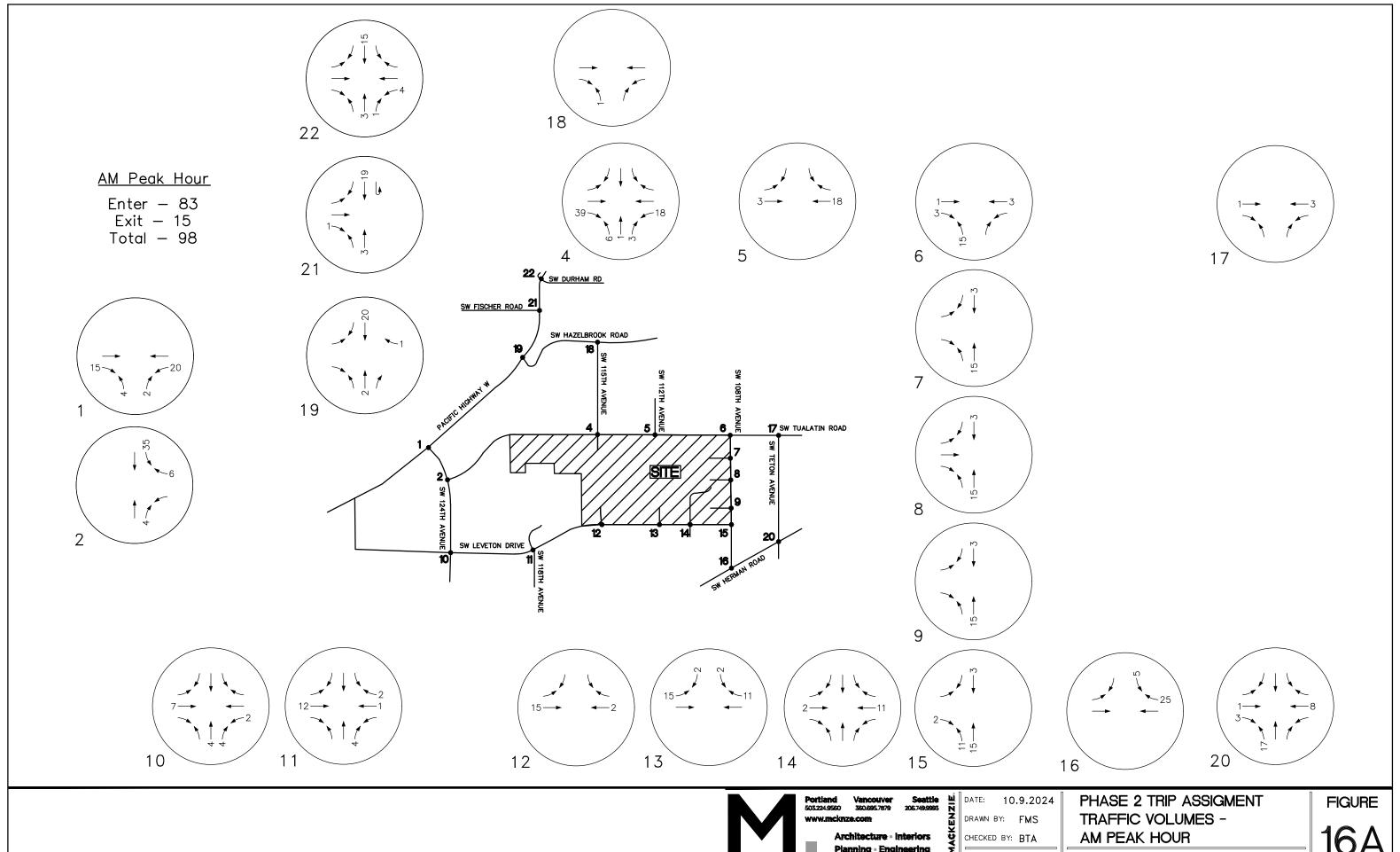




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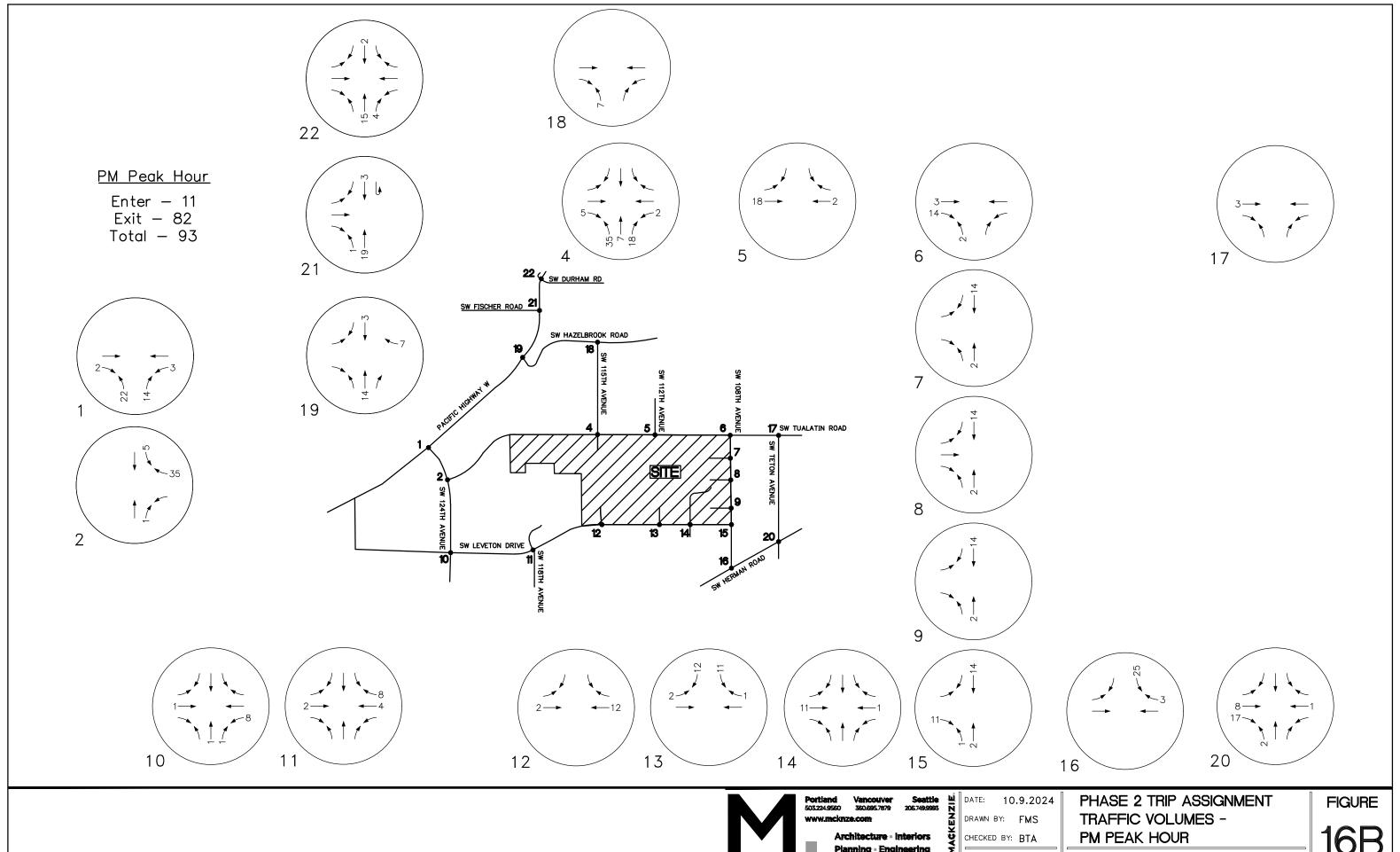


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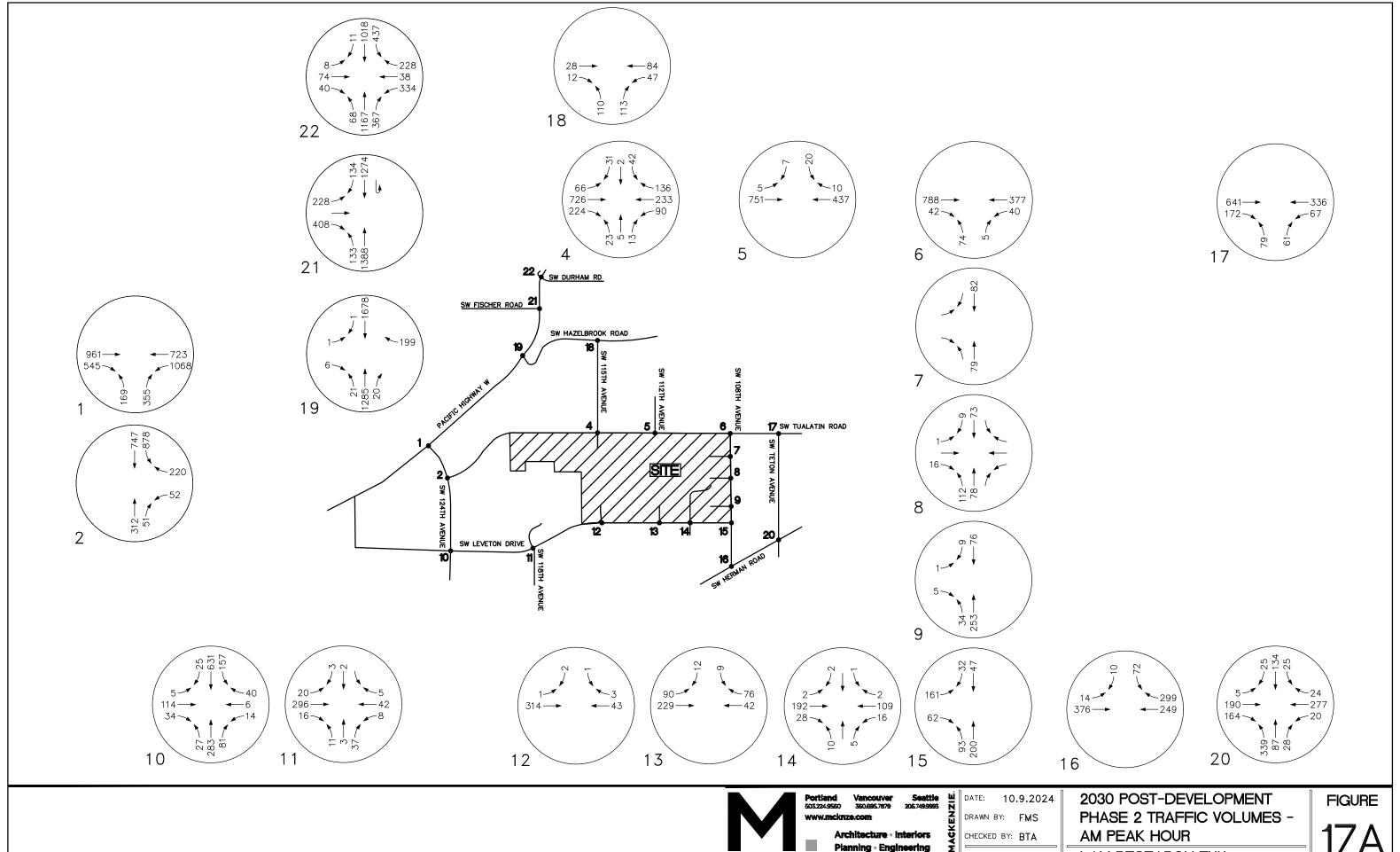


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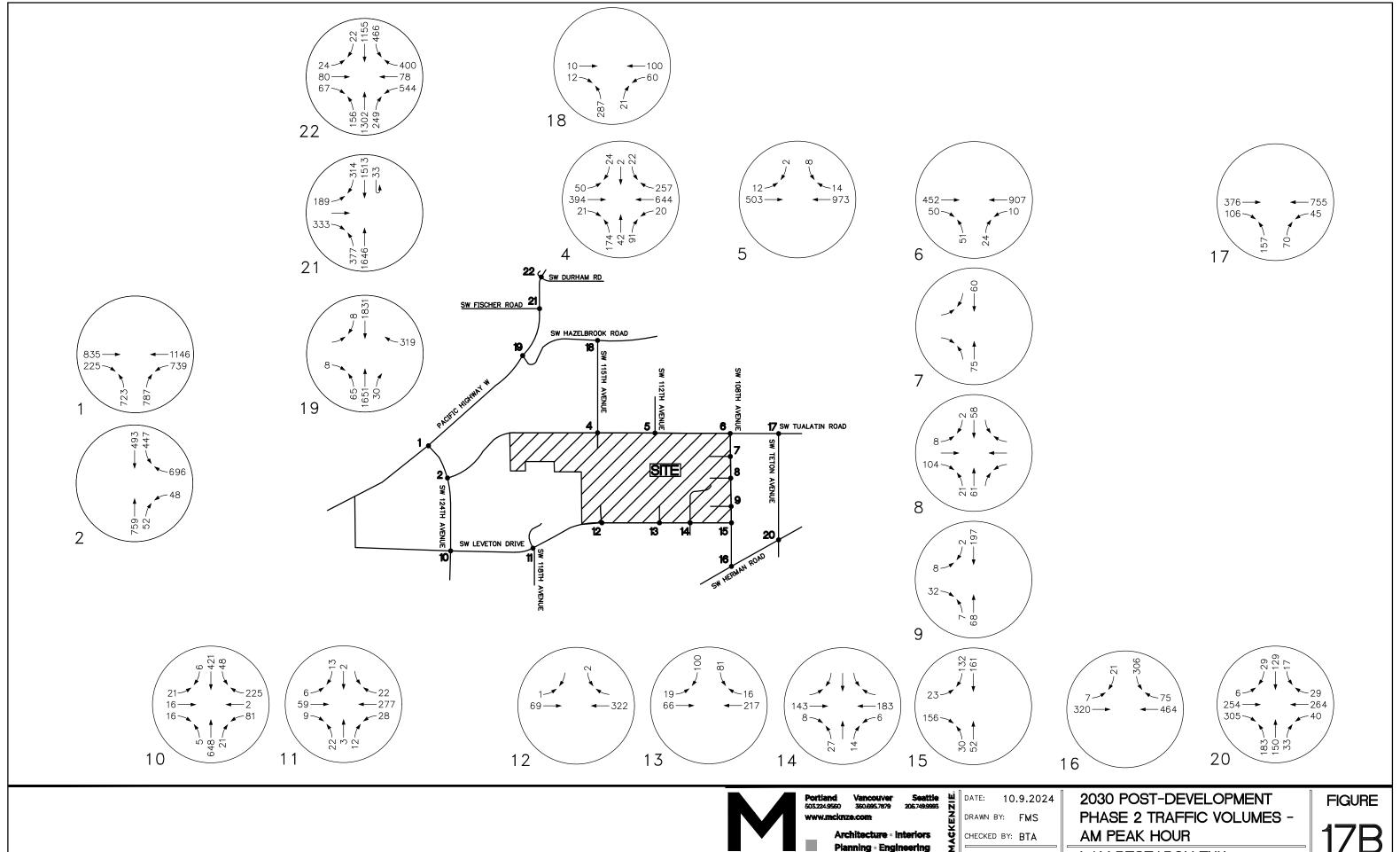




224002200



224002200



JOB NO: 224002200

APPENDIX B. **SCOPING MATERIAL** 

# MACKENZIE.

June 7, 2024 (Revised June 20, 2024)

City of Tualatin Attention: Mike McCarthy 18880 SW Martinazzi Avenue Tualatin, OR 97062

Re: Lam TUX-Site

Transportation Impact Analysis Scoping
Project Number 2240022.00

Dear Mike:

Mackenzie has prepared this scoping letter in advance of preparing the required Transportation Impact Analysis (TIA) for the proposed laboratory/research and development building, office building, and utility building at the Lam Research campus in Tualatin, Oregon.

# SITE CONDITIONS

#### **Existing**

The Lam Research campus is bounded by SW Tualatin Road to the north, SW 108th Avenue to the east, SW Leveton Drive to the south, and JAE Oregon to the west. The site currently has three full-movement driveways on SW Leveton Drive, a gated access on SW 108th Avenue, and a gated fire access from Quackenbush Lane, opposite SW 115th Avenue. The existing buildings include office, laboratory, manufacturing, and utility uses, totaling approximately 560,040 square feet (SF).

## **Approved**

The campus was approved for Building G and associated parking improvements (AR 22-0006) in January 2023, and the project is currently under construction. With this project, the total building area increases by 120,000 SF to 680,040 SF, parking is expanded at the southeast corner of the site and two new driveways are provided to SW 108th Avenue.

# **TUX Proposal**

The TUX project includes the addition of three buildings. Building T is an office building with an area of up to 164,000 SF, Building U is a utility building with an area of approximately 55,000 SF, and Building X is a laboratory building with an area of approximately 200,000 SF for a total of approximately 419,000 SF. Initially, only the first phase of the laboratory building will be constructed, with a potential expansion in the future to the full 200,000 SF size. An estimated 600 employees will work in the new buildings at full occupancy. Phase 1 will provide capacity for 360 employees (60%) and Phase 2 will add the remaining 240 employees (40%).

The new buildings will be located at the southwest corner of the site, replacing the existing surface parking lot. The west access to SW Leveton Drive at the southwest corner of the site will be relocated to the east and repurposed as a truck access for deliveries to the existing and proposed buildings.



The parking areas along the north side of the campus will be expanded to offset the loss of the southwest lot and to accommodate additional need with the TUX project. The permanent access to the expanded employee parking lots is proposed at Tualatin Road opposite SW 115th Avenue. This access is currently used by JAE and a gated emergency access is provided to Lam. With the proposal, the driveway would primarily be used as access for Lam employees and will continue to provide access to JAE, especially for their loading dock area.

We propose to analyze the following two phases:

Phase 1 – 2027 Occupancy for up to 360 employees:

- Building T (office)
- Building X (145 KSF of lab)
- Building U (utility building)
- Expand north parking lot (new + replaced parking)
- New employee access to Tualatin Road opposite SW 115th Avenue

Phase 2 – 2030 occupancy for an additional 240 employees:

- Building X (lab expansion to 200 KSF)
- Add parking lot at northwest corner of campus

# TRIP GENERATION

The three buildings operate in conjunction with each other and best match the description of a "Research and Development Center" (LUC 760) from the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th Edition.

The appropriateness of this land use was confirmed by comparing with the current campus conditions. The campus has approximately 1,160 office and lab employees assigned and working a day shift (generally 8-5) plus 400 manufacturing staff who work 12-hour shifts with changes outside the peak hours (7-7 shift schedule). The current campus driveway counts during the peak hours of the site (8-9 AM, 4:45-5:45 PM) are 371 and 378, respectively. Applying the R&D trip rate to the 1160 employees working a typical day shift results in an estimate of 418 AM, 402 PM and 3609 daily trips, indicating actual trip generation is about 10% lower than predicted using this approach.

The proposed trip generation for the TUX project is presented in Table 1 below. We utilized the trip generation equations for each time period based on the full occupancy of 600 employees. Each phase trip estimate was made by applying the percentage of employees in that phase to the full occupancy estimates.

TABLE 1 – PROPOSED TRIP GENERATION									
Phase	ITE Land Use	Employees	AM Peak Hour			PM Peak Hour			Daile
			In	Out	Total	In	Out	Total	Daily
1	Research and Development Center LUC 860	360	124	22	146	17	123	140	1222
2		240	83	15	98	11	82	93	814
Total		600	207	37	244	28	205	233	2036

As shown in Table 1, the planned campus expansion is estimated to generate an additional 244 AM peak hour, 233 PM peak hour, and 2036 daily trips with both phases of development.

## TRIP DISTRIBUTION

Site trip distribution has been modified slightly from the original master plan based on counts conducted in April 2024 at the three active site driveways on Leventon Drive and the surrounding intersections. The following percentages apply to both the AM and PM Peak hours.

- 30% to/from the north on Highway 99W
- 15% to/from the south on Highway 99W
- 5% to/from the east on SW Tualatin Road
- 5% to/from the south on SW 118th Avenue
- 10% to/from the south on SW 124th Avenue
- 35% to/from the west on SW Herman Road via SW 108th Avenue

The attached Distribution Figure presents the percentage of trips at each study area intersection, based on the following assumptions:

- 30% of the new trips are expected to utilize the one remaining employee driveway (middle access) on Leveton Drive. The remaining 70% would use the new driveway to Tualatin Road.
- Existing counts indicate some vehicles arriving from the southwest on Highway 99W are traveling along the full length of Leveton Drive instead of turning at SW 124th Avenue.
- Vehicles leaving the site at the Tualatin Road driveway and traveling to the east on SW Herman Road may find it easier to travel west on Tualatin Road and turn Right on Teton Avenue instead of SW 108th Avenue.
- 10% of site trips will use SW 115th Avenue and Hazelbrook Road to access Highway 99W, or approximately one-third of the 30% of site trips anticipated to travel north on Highway 99W. This is consistent with current volumes traveling westbound on Tualatin Road and assumes no mitigation to discourage or prohibit this travel route.

#### STUDY AREA

Based on previous studies, as well as the City's *Traffic Study Requirements* document requiring that all intersections within a 1/4-mile radius of the project site be included as part of the study area and City and neighborhood concerns, the following public intersections are included in the study area:

- SW Leveton Drive/SW 118th Avenue
- SW Leveton Drive/SW 108th Avenue
- SW Tualatin Road/SW Teton Road
- SW Tualatin Road/SW 108th Avenue
- SW Tualatin Road/SW 112th Avenue
- SW Tualatin Road/SW 115th Avenue
- SW 124th Avenue/SW Leveton Road
- SW 124th Avenue/SW Tualatin Road
- SW 124th Avenue/OR 99W
- SW Herman Road/SW 108th Avenue
- SW Hazelbrook Road/SW 115th Avenue
- SW Hazelbrook Road/OR 99W

The following site driveways will also be studied (includes those opposite public streets listed above):

- SW Leveton Drive/West Access (to be relocated east)
- SW Leveton Drive/Center Access
- SW Leveton Drive/East Access
- SW 108th Avenue/North Access (currently gated)
- SW 108th Avenue/Center Access (approved with Building G)
- SW 108th Avenue/South Access (approved with Building G)
- SW Tualatin Road/SW 115th Avenue

No additional Washington County intersections are proposed because projected trips are not expected to meet the threshold of 10% impact of the roadway's average daily traffic (ADT).

### TRAFFIC COUNTS

Traffic counts were conducted at the above listed intersections for standard peak periods of 7:00-9:00 AM and 4:00-6:00 PM. An extended time period was counted at the three existing driveways on SW Leveton Drive. Most of the intersections were counted on Tuesday, April 23rd, 2024. The intersection of SW Tualatin Road/SW 112th Avenue was counted on Tuesday, May 14th, 2024. The remaining two intersections on SW Hazelbrook Road were counted on June 11, 2024. At the intersections of SW 115th Avenue with SW Tualatin Road and SW Hazelbrook Road, an extended PM period from 2:00-6:00 PM was counted to capture afternoon traffic to the nearby middle school.

Based on our review of the counts in comparison with those conducted in 2022, it does not appear that construction activity on SW Tualatin-Sherwood Road has had a significant impact on volumes at these study area intersections and roadways.

#### TRANSPORTATION IMPACT ANALYSIS

Based on the City's traffic study requirements, as well as the required scope for the new Lam Research office building, the TIA will review AM and PM peak hour conditions at the study area intersections for the following scenarios:

- 2024 Existing
- 2027 Pre-Development without project
- 2027 Post-Development with Phase 1
- 2030 Post-Development with Phase 2

The TIA will also include the following analysis components:

- 1% annual background growth per ODOT's 2040 Future Volumes table for OR 99W south of 124th Avenue.
- Seasonal adjustment factor of 1.04 applied to through volumes on OR 99W per ODOT's Seasonal Trend Table.
- Intersection capacity analyses will be conducted at the study area intersections using Synchro software which implements the methodologies of the *Highway Capacity Manual* (HCM).
- Trips from the approved Lam Building G project will be included as in-process volumes.
- Additional in-process project trips will be included for the following projects:
  - Tualatin Logistics Park
  - Fujimi property
  - 124th Business Park
- Crash data will be compiled and evaluated for safety concerns.
- Intersection sight distance evaluations will be based on AASHTO methodology for the proposed site access points.
- Intersection queuing, turn-lane warrants, and signal warrants will also be evaluated where appropriate.

Please confirm the proposed trip generation, trip distribution, study area, TIA analysis components, and in-process project list are acceptable for the required TIA.

Please contact me at bahrend@mcknze.com or 971-346-3781 if you have any questions or comments regarding the information presented in this scoping letter.

Sincerely,

Brent Ahrend, PE

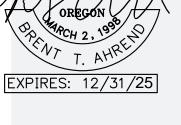
Associate Principal | Traffic Engineer

Enclosure(s): Attachment A – Site Plan

Attachment B – 2024 Turning Movement Counts

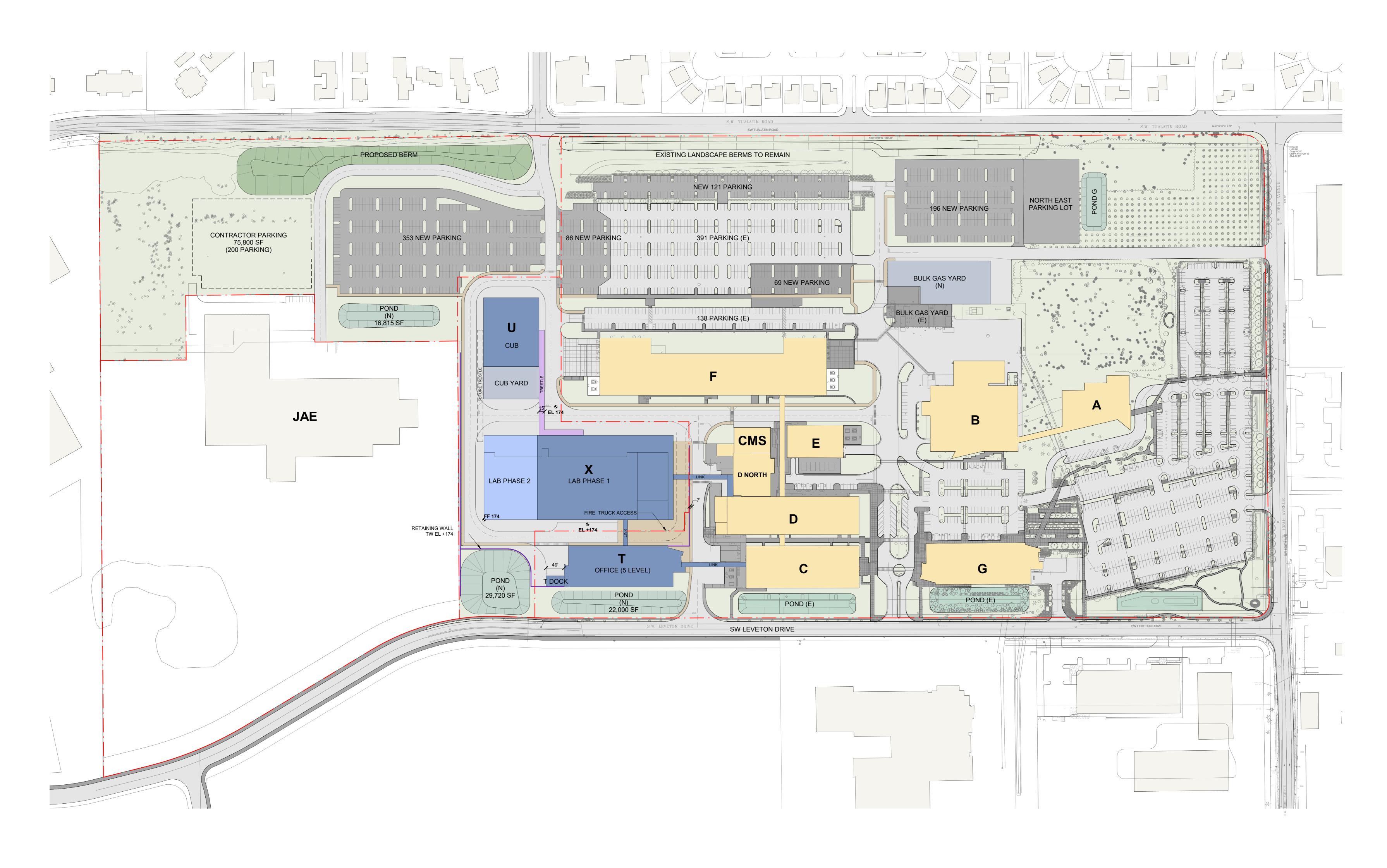
Attachment C - Trip Distribution Figure

c: Steve Koper, Kim McMillan, Abby McFetridge, Tony Doran, Hayden Ausland – City of Tualatin Liatt Braun, Todd Chittenden, David Mustonen – Jacobs



Jennifer Otterness, Stefanie McEvers, Paul Roessler, Todd Fosler – Lam Research Suzannah Stanley, Bill Bezio, Megan Diaz, Clara Layton – Mackenzie





# **LEGEND**

**EXISTING BUILDINGS** 

NEW BUILDINGS (143,100 SF FLOOR PLATE)

NEW BUILDINGS PHASE 2 (32,500 SF FP)

NEW YARDS

NEW TRESTLE

**NEW PEDESTRIAN** 

ROADS

DETENTION POND

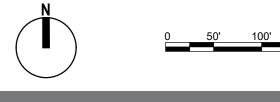
RETAINING WALL

--- SITE BOUNDARY

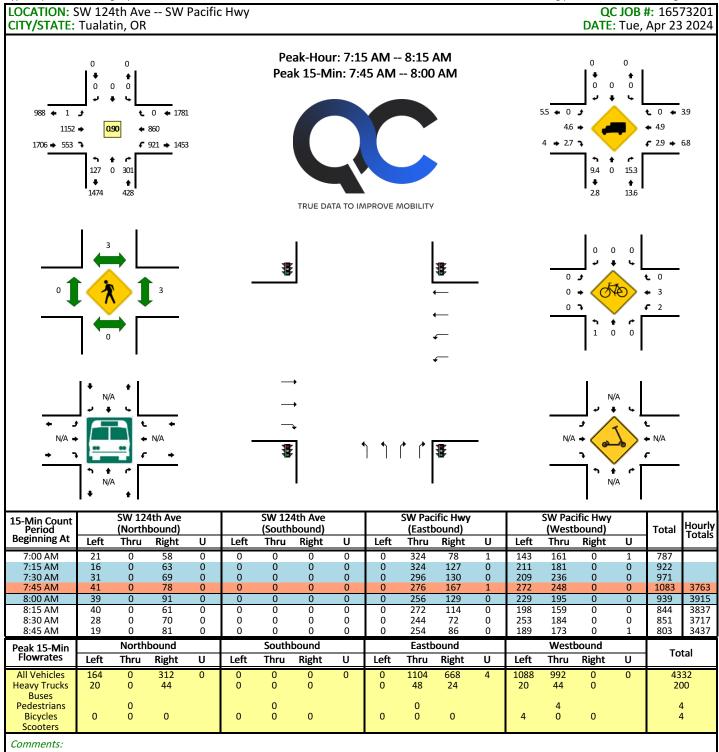
PARKING (TOTAL: 2,177 STALLS)
- EXISTING: 1,352

- NEW: 825

**TOTAL LAM CAMPUS SITE AREA: 76 ACRES** 







Report generated on 6/7/2024 12:47 PM

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

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15-Min Count Period Beginning At	n ↑ N// ↑	SW 124 (North Thru	bound) Right	U	Left	(South Thru	bound) Right	U	Left	(Eastb	ound) É Right	U	Left	(West	ific Hwy bound) Right	/A		Hourly Totals
→ 3 15-Min Count Period	N//	SW 124 (North	bound)	U 0 0	Left 0 0	(South	bound)	0	Left 0	(Eastb	ound) ´	U 0 0	Left 105 116	(West	ific Hwy bound)	/A	Total  1090 1008	Hourly Totals
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM	Left 167 156 184	SW 124 (North Thru	bound) Right  216 181 190	0 0 0	0 0 0	(South Thru 0 0 0	Right  0 0 0 0	0 0 0	0 0 0	(Easth Thru 262 207 178	Right  42  63  50	0 0 0	105 116 159	(West Thru 297 285 299	ific Hwy bound) Right	U 1 0 0	1090 1008 1060	
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM 4:45 PM	Left 167 156 184 133	SW 124 (North Thru	bound) Right 216 181 190 193	0 0 0 0	0 0 0 0	(South Thru 0 0 0 0	Right  0 0 0 0 0	0 0 0	0 0 0 0	(Easth Thru 262 207 178 212	Right  42  63  50  58	0 0 0 1	105 116 159 122	(West Thru 297 285 299 234	ific Hwy bound) Right	U 1 0 0 1	1090 1008 1060 954	4112
15-Min Count Period Beginning At  4:00 PM  4:15 PM  4:30 PM  4:35 PM  5:00 PM  5:15 PM	Left 167 156 184 133 157 201	SW 12- (North Thru 0 0 0 0	bound) Right 216 181 190 193 189 206	0 0 0 0 0	0 0 0 0	(South Thru 0 0 0 0 0 0 0 0	Right  O  O  O  O  O  O  O  O  O  O  O  O  O	0 0 0 0	0 0 0 0	(Easth Thru 262 207 178 212 209 135	oound) Right 42 63 50 58 55 48	0 0 0 1 0	105 116 159 122 132 129	West Thru 297 285 299 234 198 247	Right  0 0 0 0 0 0	U 1 0 0 1 0 0	1090 1008 1060 954 940 966	4112 3962 3920
15-Min Count Period Beginning At  4:00 PM  4:15 PM  4:30 PM  4:45 PM  5:00 PM  5:15 PM  5:30 PM	Left 167 156 184 133 157 201 166	SW 12- (North Thru 0 0 0 0 0	bound) Right 216 181 190 193 189 206 179	0 0 0 0 0	0 0 0 0 0	(South Thru 0 0 0 0 0 0 0 0 0	Right  0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	(Easth Thru 262 207 178 212 209 135 181	oound) Right 42 63 50 58 55 48 45	0 0 0 1 0 0	105 116 159 122 132 129 110	West Thru 297 285 299 234 198 247 262	sific Hwy bound) Right 0 0 0 0 0	U 1 0 0 1 0 0	1090 1008 1060 954 940 966 944	4112 3962 3920 3804
15-Min Count Period Beginning At  4:00 PM  4:15 PM  4:30 PM  4:45 PM  5:00 PM  5:15 PM  5:30 PM  5:45 PM	Left 167 156 184 133 157 201	SW 12- (North Thru 0 0 0 0 0	Right  216  181  190  193  189  206  179  166	0 0 0 0 0	0 0 0 0	(South Thru  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Right  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0	0 0 0 0	(Easth Thru 262 207 178 212 209 135 181 203	Right  42  63  50  58  55  48  45  47	0 0 0 1 0	105 116 159 122 132 129	West Thru 297 285 299 234 198 247 262 244	ific Hwybound) Right 0 0 0 0 0 0 0	U 1 0 0 1 0 0	1090 1008 1060 954 940 966	4112 3962 3920
15-Min Count Period Beginning At  4:00 PM  4:15 PM  4:30 PM  4:45 PM  5:00 PM  5:15 PM  5:30 PM  5:45 PM	Left 167 156 184 133 157 201 166 109	SW 12- (North Thru 0 0 0 0 0 0 0	Right 216 181 190 193 189 206 179 166 bound	0 0 0 0 0 0	0 0 0 0 0 0	(South Thru 0 0 0 0 0 0 0 0 0 South	Right  0 0 0 0 0 0 0 0 0 0 bound	0 0 0 0 0 0	0 0 0 0 0 0	(Easth Thru 262 207 178 212 209 135 181 203 Easth	63 50 58 55 48 45 47	0 0 0 1 0 0 0	105 116 159 122 132 129 110 121	West Thru 297 285 299 234 198 247 262 244 West	sific Hwy bound) Right 0 0 0 0 0 0 0	U 1 0 0 1 0 0 1 2	1090 1008 1060 954 940 966 944	4112 3962 3920 3804 3742
15-Min Count Period Beginning At  4:00 PM  4:15 PM  4:30 PM  4:45 PM  5:00 PM  5:15 PM  5:30 PM  5:45 PM	Left 167 156 184 133 157 201 166	SW 12- (North Thru 0 0 0 0 0	Right  216  181  190  193  189  206  179  166	0 0 0 0 0	0 0 0 0 0	(South Thru  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Right  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	(Easth Thru 262 207 178 212 209 135 181 203	Right  42  63  50  58  55  48  45  47	0 0 0 1 0 0	105 116 159 122 132 129 110	West Thru 297 285 299 234 198 247 262 244	ific Hwybound) Right 0 0 0 0 0 0 0	U 1 0 0 1 0 0	1090 1008 1060 954 940 966 944 892	4112 3962 3920 3804 3742
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:30 PM 5:30 PM 5:30 PM Flowrates  All Vehicles Heavy Trucks	Left 167 156 184 133 157 201 166 109	SW 12- (North Thru 0 0 0 0 0 0 0 0 0 0 North	Right  216 181 190 193 189 206 179 166 bound Right	0 0 0 0 0 0 0	0 0 0 0 0 0 0	(South Thru  O O O O O O South Thru	Right  O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	(Easth Thru 262 207 178 212 209 135 181 203 Easth Thru	63 50 58 55 48 45 47 50 00und	0 0 0 1 0 0 0 0	105 116 159 122 132 129 110 121	Thru  297  285 299 234 198 247 262 244  Westl Thru	sific Hwy bound) Right 0 0 0 0 0 0 0 0 0 0 0	U 1 0 0 1 0 0 1 2	1090 1008 1060 954 940 966 944 892	4112 3962 3920 3804 3742
15-Min Count Period Beginning At  4:00 PM  4:15 PM  4:30 PM  4:45 PM  5:00 PM  5:15 PM  5:30 PM  5:45 PM  Peak 15-Min Flowrates  All Vehicles	Left  167 156 184 133 157 201 166 109  Left 668	SW 12- (North Thru 0 0 0 0 0 0 0 0 0 0 0	Right  216 181 190 193 189 206 179 166 bound Right	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	(South Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Right  O  O  O  O  O  O  O  O  O  O  O  O  O	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	(Easth Thru 262 207 178 212 209 135 181 203 Easth Thru	Right  42 63 50 58 55 48 45 47 cound Right  168	0 0 0 1 0 0 0 0	105 116 159 122 132 129 110 121 Left	(West) Thru 297 285 299 234 198 247 262 244 West  Thru 1188	sific Hwy bound) Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	U 1 0 0 1 0 0 1 2	1090 1008 1060 954 940 966 944 892	4112 3962 3920 3804 3742 tal

LOCATION: S	SW 124	4th Ave	e SW											8	Q	JOB	<b>#</b> : 1657	
CITY/STATE:	Tualat	tin, OR													DATE	Tue,	Apr 23	2024
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15-Min Count Period Beginning At	Left		4th Ave bound) Right	U	Left		4th Ave bound) Right	U	Left		llatin Rd cound) Right	U	Left		llatin Rd bound) Right	U	Total	Hourly Totals
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8:15 AM 8:30 AM	0	47 50	12 8	0	178 135	157 196	0	0	0	0	0	0	10 5	0	53 51	0	457 445	1990 1961
8:45 AM	0	54	10	0	113	162	0	0	0	0	0	0	7	0	41	0	387	1786
Peak 15-Min Flowrates	Left	North Thru	bound Right	U	Left	South Thru	bound Right	U	Left	Eastb Thru	ound Right	U	Left	Thru	bound Right	U	Tot	tal
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Pedestrians	0	0 0	0		0	0 4	0		0	0 0	0		0	0	0		0	
Bicycles Scooters	Ü	Ü	Ü															

LOCATION: SW CITY/STATE: Tu	124th Ave													~			7000
CHY/STATE: TU		e 3vv	Tualat	in Rd												#: 1657	
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+ 7 + 15-Min Count	N/A SW 124	+ 4th Ave		-	SW 12	4th Ave		<u>†</u>	SW Tua	alatin Rd	_		SW Tua	latin Rd	, , , ,		Hourly
15-Min Count Period	SW 124 (North	+ 4th Ave bound)	U	Left	SW 12-	4th Ave bound)	U		SW Tua (Easth	alatin Rd Dound)	<b>-</b> 	Left	SW Tua (Westl	latin Rd	/A		Hourly Totals
15-Min Count Period Beginning At	N/A SW 124	+ 4th Ave	<b>U</b>	Left 85	SW 12	4th Ave	<b>U</b>	Left 0	SW Tua	alatin Rd	<b>U</b> 0	Left 10	SW Tua	latin Rd	, , , ,	Total 568	Hourly Totals
15-Min Count Period Beginning At Le	SW 124 (North) eft Thru 0 240 0 164	4th Ave bound) Right	0 0	85 96	SW 124 (South Thru	4th Ave bound) Right	0	Left 0 0	SW Tua (Easth Thru	alatin Rd bound) Right 0 0	0	10 10	SW Tua (Westl Thru	latin Rd bound) Right	U 0 0	Total 568 517	Hourly Totals
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM	SW 124 (North) eft Thru 0 240 0 164 0 190	4th Ave bound) Right 12 10 14	0	85 96 97	SW 12- (South Thru 64 84 101	4th Ave bound) Right 0 0	0	Left 0	SW Tua (Easth Thru	alatin Rd bound) Right	0 0 0	10 10 9	SW Tua (Westl Thru	latin Rd bound) Right 157 153 179	U 0 0 0 0	Total  568 517 590	
15-Min Count Period Beginning At Le 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM	SW 124 (North) eft Thru 0 240 0 164 0 190 0 187 0 206	4th Ave bound) Right 12 10 14 11 11	0 0 0 0	85 96 <b>97</b> 102 86	SW 12- (South Thru 64 84 101 93 100	4th Ave bound) Right	0 0 0	0 0 0 0	SW Tua (Easth Thru 0 0	alatin Rd bound) Right 0 0 0	0 0 0 0	10 10 9 7 15	SW Tua (Westl Thru 0 0 0	latin Rd cound) Right 157 153 179 139 152	U 0 0 0 0 0 0 0 0	Total  568 517 590 539 570	2214 2216
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SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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N/A →	N/A	, t	N/A <b>→</b>												N,			
15-Min Count	N/F	SW 10 (North	÷ 8th Ave bound)		1.6	(South	8th Ave			(Eastk	llatin Rd bound)			(West	llatin Rd bound)	/A	Total	Hourly Totals
15-Min Count Period Beginning At	↑ ↑ N/A ↓	SW 10 (North Thru	8th Ave bound) Right	U	Left	(South Thru	bound) Right	U	Left	(Eastk Thru	oound) Right	U	Left	(West	llatin Rd bound) Right	/A		Hourly Totals
15-Min Count Period Beginning At 4:00 PM 4:15 PM	Left	SW 10 (North Thru	8th Ave bound) Right	0 0	0	(South Thru 0 0	Right 0 0	0 0	0	(Eastk Thru 80 99	Right 2	0 0	3 2	(West Thru 248 200	slatin Rd bound) Right	U 0 0	344 309	Hourly Totals
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM	Left 7 5 12	SW 10 (North Thru	8th Ave bound) Right 4 3	0 0 0	0 0 0	(South Thru 0 0	Right  0 0 0	0 0 0	0 0 0	(Eastk Thru 80 99 103	Right  2 0 1	0 0 0	3 2 0	(West Thru 248 200 225	slatin Rd bound) Right	U 0 0 0	344 309 352	
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM 4:45 PM	Left 7 5 12 4	SW 10 (North Thru 0 0	8th Ave bound) Right 4 3 11 4	0 0 0	0 0 0	(South Thru 0 0 0	Right  0 0 0 0	0 0 0	0 0 0	(Eastk Thru 80 99 103 104	Right  2 0 1	0 0 0	3 2 0 4	(West Thru 248 200 225 179	alatin Rd bound) Right	U 0 0 0 0 0 0	344 309 352 296	1301
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM	Left 7 5 12	SW 10 (North Thru	8th Ave bound) Right 4 3 11 4 9	0 0 0	0 0 0	(South Thru 0 0	Right  0 0 0	0 0 0	0 0 0	(Eastk Thru 80 99 103	Right  2 0 1 1	0 0 0	3 2 0 4	West Thru 248 200 225 179 220	slatin Rd bound) Right	U 0 0 0	344 309 352	1301 1284
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 5:00 PM 5:15 PM 5:30 PM	Left 7 5 12 4 14 4 5 5	SW 10 (North Thru 0 0 0 0	88th Ave bound) Right 4 3 11 4 9 2 5	0 0 0 0 0	0 0 0 0 0 0	(South Thru  0 0 0 0 0 0 0 0 0 0	Right  0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	(Easth Thru 80 99 103 104 83 72 98	Right  2 0 1 1 2 2 2 2	0 0 0 0 0	3 2 0 4 0 2 1	248 200 225 179 220 230 199	Nation Rd bound) Right 0 0 0 0	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	344 309 352 296 327 312 310	1301 1284 1287 1245
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM	Left 7 5 12 4 14 4	SW 10 (North Thru 0 0 0 0 0 0	88th Ave bound) Right 4 3 11 4 9 2 5 4	0 0 0 0	0 0 0 0	(South Thru  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Right  O O O O O O O O O O O O O O O O O O	0 0 0 0	0 0 0 0	(Easth Thru 80 99 103 104 83 72	Right  2 0 1 1 2 2	0 0 0 0	3 2 0 4 0 2	(West Thru 248 200 225 179 220 230 199 132	Notation Rd bound) Right 0 0 0 0 0 0 0	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	344 309 352 296 327 312	1301 1284 1287
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 5:00 PM 5:15 PM 5:30 PM 5:30 PM 5:45 PM	Left 7 5 12 4 14 4 5 5	SW 10 (North Thru 0 0 0 0 0 0	88th Ave bound) Right 4 3 11 4 9 2 5	0 0 0 0 0	0 0 0 0 0 0	(South Thru  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Right  0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	(Easth Thru 80 99 103 104 83 72 98 88	Right  2 0 1 1 2 2 2 2	0 0 0 0 0	3 2 0 4 0 2 1	(West Thru 248 200 225 179 220 230 199 132	Nation Rd bound) Right 0 0 0 0	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	344 309 352 296 327 312 310 234	1301 1284 1287 1245 1183
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:30 PM	Left 7 5 12 4 14 4 5 5	SW 10 (North Thru 0 0 0 0 0 0	88th Ave bound) Right 4 3 11 4 9 2 5 4	0 0 0 0 0	0 0 0 0 0 0	(South Thru  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Right  O O O O O O O O O O O O O O O O O O	0 0 0 0 0	0 0 0 0 0	(Easth Thru 80 99 103 104 83 72 98 88	Right  2 0 1 1 2 2 3	0 0 0 0 0	3 2 0 4 0 2 1	(West Thru 248 200 225 179 220 230 199 132	Notation Rd bound) Right 0 0 0 0 0 0 0	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	344 309 352 296 327 312 310	1301 1284 1287 1245 1183
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 5:00 PM 5:15 PM 5:30 PM 5:35 PM 5:45 PM  Peak 15-Min Flowrates  All Vehicles	Left 7 5 12 4 14 4 5 7 Left 48	SW 10 (North Thru 0 0 0 0 0 0 0 0 0 North Thru	8th Ave bound) Right 4 3 11 4 9 2 5 4 bound Right	0 0 0 0 0 0	0 0 0 0 0 0 0 0	(South Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Right  O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	(Easth Thru 80 99 103 104 83 72 98 88 Easth Thru	Right  2 0 1 1 2 2 3 cound Right 4	0 0 0 0 0 0	3 2 0 4 0 2 1 0	Thru  248 200 225 179 220 230 199 132 Westl Thru  900	Note that the state of the stat	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	344 309 352 296 327 312 310 234	1301 1284 1287 1245 1183
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM Peak 15-Min Flowrates	Left 7 5 12 4 14 4 5 7	SW 10 (North Thru 0 0 0 0 0 0 0 0 0 North Thru	8th Ave bound) Right  4 3 11 4 9 2 5 4 bound Right	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	(South Thru 0 0 0 0 0 0 0 0 0 0 0 0 South Thru	Right  O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	(Easth Thru 80 99 103 104 83 72 98 88 Easth Thru	Right  2 0 1 1 1 2 2 3 cound Right	0 0 0 0 0 0 0	3 2 0 4 0 2 1 0	Thru  248 200 225 179 220 230 199 132 Westl	slatin Rd bound) Right 0 0 0 0 0 0 0 0 0 0 0	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	344 309 352 296 327 312 310 234	1301 1284 1287 1245 1183
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:30 PM Fight PM 5:45 PM Peak 15-Min Flowrates All Vehicles Heavy Trucks	Left 7 5 12 4 14 4 5 7 Left 48	SW 10 (North Thru 0 0 0 0 0 0 0 0 0 North Thru	8th Ave bound) Right 4 3 11 4 9 2 5 4 bound Right	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	(South Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Right  O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	(Easth Thru 80 99 103 104 83 72 98 88 Easth Thru	Right  2 0 1 1 2 2 3 cound Right 4	0 0 0 0 0 0 0	3 2 0 4 0 2 1 0	Thru  248 200 225 179 220 230 199 132 Westl Thru  900	Note that the state of the stat	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	344 309 352 296 327 312 310 234	1301 1284 1287 1245 1183 tal

ype of peak nour being reported: in LOCATION: SW 124th Ave S								IVICTI	104 101	acteriii	iiiiig pc			ntering #: 1657	
CITY/STATE: Tualatin, OR														Apr 23	
755 275  23 541 191  24 4 5 4 6  127 4 32 7 6 5 4  578 313				ak-Hou k 15-M	in: 7:4	5 AM	8:00				1.48 ← 20 1.1 3.39 → 9.4	+ 🚚	• •	. 9.7 ← 1 • 16.7 • 60 → 1	
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15-Min Count Period Beginning At SW 124th A (Northboun Left Thru Rigl	d)	Left		4th Ave bound) Right	U	Left		reton Dr bound) Right	U	Left		veton Dr bound) Right	U	Total	Hourl Total
7:00 AM 10 38 9 7:15 AM 6 50 4	0 0	29 33	83 125	5 9	0	6 4	7 10	3 10	0	2	0 2	7 5	0	199 259	
7:30 AM 4 55 6 7:45 AM 9 61 14	0	42 54	130 175	5 5	0	4	27 27	9	0	2	1 2	10 6	0	295 363	1116
8:00 AM 9 66 18	0	51	119	8	0	1	25	6	0	2	2	12	0	319	1236
8:15 AM 3 57 11 8:30 AM 4 53 8	0	44	117 138	<u>5</u>	0	2	11 9	<u>8</u> 6	0	3	2	2	0	260 274	1237
8:45 AM 6 67 9  Peak 15-Min Northbound	0	57	111 South	10 <b>bound</b>	0	1	10 Facth	7	0	2	1 Wost	1 bound	0	282	1135
Peak 15-Min Northbound Flowrates Left Thru Righ		Left	Thru	Right	U	Left	Thru	ound Right	U	Left	Thru	Right	U	To	tal
All Vehicles 36 244 56 Heavy Trucks 0 52 4	0	216 0	700 28	20 4	0	0 0	108	36 4	0	4 4	8	24 4	0	14 10	
Buses Pedestrians Bicycles Scooters  0 0 0 0 0		4	0 0	0		0	0 0	0		0	0 0	0		0	

LOCATION:	SVV 124														~	2 100	U 4CE	
ITV/CTATE.	Tualat			Levet	on Dr												#: 165 Apr 23	
CITY/STATE:	Tudidi	un, OK													DATE	: rue,	Apr 23	2024
13 <b>4</b> 19 . 13 <b>4</b> 48 <b>4</b> 16 •	09:	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	2238 <b>4</b> 281 2 41 <b>4</b> 62				eak-Houdak 15-M	lin: 5:0	00 PM		PM			38.5 <b>←</b> 0 0 2.1 <b>→</b> 6.3			<b>t</b> 0.4 <b>♦</b> 50 <b>€</b> 2.4 <b>♦</b>	
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15-Min Count Period	N/	SW 124	← N/A → 4th Ave bound)		_	SW 12	_		1	SW Lev	veton Dr	-		SW Lev			← N/A	Hourly
15-Min Count Period Beginning At	Left	SW 12- (North	4th Ave bound) Right	U	Left	SW 12 (South Thru	4th Ave abound) Right	U	Left	SW Lev	veton Dr pound) Right	U	Left	SW Lev (West Thru	veton Dr bound)	V	← N/A	Hourly Totals
15-Min Count Period Beginning At	Left 2	SW 12- (North Thru	4th Ave bound) Right	0	4	SW 12 (South Thru	4th Ave	0	7	SW Lev (Easth Thru	veton Dr pound) Right	<b>U</b>	8	SW Lev (West Thru	veton Dr bound) Right	V 0	Total	Hourly Totals
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM	Left 2 4 2	SW 12- (North Thru 195 120 161	4th Ave bound) Right  3 4 4	0 0 0	4 5 10	SW 12 (South Thru 61 87 94	Ath Ave abound) Right	0 0 0	7 5 4	SW Lev (Easth Thru 4 4	veton Dr bound) Right 12 6 6	0 0 0	8 5 8	SW Lev (West Thru	veton Dr bound) Right 54 41 45	/A U	► N/A  F  Total  354 287 339	Hourly Totals
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM 4:45 PM	Left 2 4 2 1	SW 12- (North Thru 195 120 161 133	4th Ave bound) Right	0 0 0	4 5 10 10	SW 12 (South Thru 61 87 94 84	Ath Ave abound) Right	0 0 0	7 5 4 7	SW Lev (Easth Thru 4 4 4	veton Dr bound) Right 12 6 6 3	0 0 0 0	8 5 8 9	SW Lev (West Thru 1 0 0 1	veton Dr bound) Right 54 41 45 43	U 0 0 0 0 0 0	► N/A  F  Total  354 287 339 299	1279
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM	Left 2 4 2	SW 12- (North Thru 195 120 161	4th Ave bound) Right  3 4 4	0 0 0	4 5 10	SW 12 (South Thru 61 87 94	Ath Ave abound) Right	0 0 0	7 5 4	SW Lev (Easth Thru 4 4	veton Dr bound) Right 12 6 6	0 0 0	8 5 8	SW Lev (West Thru	veton Dr bound) Right 54 41 45	/A U	► N/A  F  Total  354 287 339	
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM	Left 2 4 2 1 1 1 0 0	SW 12- (North Thru 195 120 161 133 131 138 120	4th Ave bound) Right  3 4 4 5 2 0	0 0 0 0 0	4 5 10 10 9 7	SW 12 (South Thru 61 87 94 84 112 89 53	A4th Ave abound) Right 3 6 1 2 1 1	0 0 0 0 0	7 5 4 7 4 4 5	SW Lev (Easth Thru 4 4 1 5 3	veton Dr cound) Right 12 6 6 6 3 1 6 6 3	0 0 0 0 0 0	8 5 8 9 13 11	SW Lev (West Thru 1 0 0 1 1 0 0	reton Dr bound) Right 45 43 84 66 59	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	▼ N/A  F  Total  354 287 339 299 365 328 260	1279 1290 1331 1252
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM	Left 2 4 2 1 1 1 1	SW 12- (North Thru 195 120 161 133 131 138 120 108	4th Ave bound) Right  3 4 4 5 2 0 1	0 0 0 0 0	4 5 10 10 9 7	SW 12 (South Thru 61 87 94 84 112 89 53 84	Atth Ave abound) Right  3 6 1 2 1 1 2	0 0 0 0 0	7 5 4 7 4	SW Lev (East) Thru 4 4 4 1 5 3 1 2	veton Dr pound) Right 12 6 6 3 1 6 3 2	U 0 0 0 0 0	8 5 8 9 13	SW Lev (West Thru 1 0 0 1 1 0 0	reton Dr bound) Right 41 45 43 84 66 59 38	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	▼ N/A  F  Total  354 287 339 365 328	1279 1290 1331
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM	Left 2 4 2 1 1 1 0 0	SW 12- (North Thru 195 120 161 133 131 138 120 108	4th Ave bound) Right  3 4 4 5 2 0 1 bound	0 0 0 0 0	4 5 10 10 9 7	SW 12 (South Thru 61 87 94 84 112 89 53 84	A4th Ave abound) Right 3 6 6 1 2 2 1 1 2 abound	0 0 0 0 0	7 5 4 7 4 4 5	SW Lev (East) Thru 4 4 4 1 5 3 1 2	veton Droound) Right  12 6 6 3 1 6 3 2 Doound	0 0 0 0 0 0	8 5 8 9 13 11	SW Lev (West Thru 1 0 0 1 1 0 0	reton Dr bound) Right 41 45 43 84 66 59 38 bound	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	▼ N/A  F  Total  354 287 339 299 365 328 260	1279 1290 1331 1252 1202
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM	Left 2 4 2 1 1 1 0 0 0	SW 12- (North Thru 195 120 161 133 131 138 120 108 North	4th Ave bound) Right  3 4 4 5 2 0 1	0 0 0 0 0	4 5 10 10 9 7 7 5	SW 12 (South Thru 61 87 94 112 89 53 84 South	Atth Ave abound) Right  3 6 1 2 1 1 2	0 0 0 0 0	7 5 4 7 4 4 5 3	SW Lev (Easth Thru 4 4 1 5 3 1 2	veton Dr pound) Right 12 6 6 3 1 6 3 2	0 0 0 0 0 0	8 5 8 9 13 11 11 4	SW Lev (West Thru 1 0 0 1 1 0 0 0 0 0 West	reton Dr bound) Right 41 45 43 84 66 59 38	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  354 287 339 299 365 328 260 249 To	1279 1290 1331 1252 1202
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM Peak 15-Min Flowrates All Vehicles	Left 2 4 2 1 1 1 0 0 0 Left 4	SW 12- (North Thru 195 120 161 133 131 138 120 108 North Thru	4th Ave bound) Right  3 4 4 5 2 0 1 bound Right 8	0 0 0 0 0 0	4 5 10 10 9 7 7 5 Left	SW 12 (South Thru 61 87 94 84 112 89 53 84 South Thru 448	A4th Ave abound) Right 3 6 1 2 2 1 1 2 abound Right 8	0 0 0 0 0	7 5 4 7 4 4 5 3 <b>Left</b>	SW Lev (East) Thru 4 4 1 5 3 1 2 East) Thru 20	veton Dr pound) Right 12 6 3 1 6 3 2 pound Right	U 0 0 0 0 0 0 0 0 U	8 5 8 9 13 11 11 4 Left	SW Lev (West Thru 1 0 0 1 1 1 0 0 0 0 West Thru	reton Dr bound) Right  54 41 45 43 84 666 59 38 bound Right  336	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  354 287 339 299 365 328 260 249 To	1279 1290 1331 1252 1202 tal

OCATION: CITY/STATE	SW 11	8th Ave									Wieti	100 101	determ	ming pc	Q	CJOB	ntering #: 165 Apr 23	7320
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• 1		→ L 1 → T	1		-	STOP	•			<u>[</u>	<b>●</b>	-		0 0 1	* <b>&amp;</b>		€ 0 ← 0	
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L5-Min Count Period Beginning At			8th Ave bound) Right	U	Left		8th Ave nbound) Right	U	Left		veton Dr bound) Right	U	Left		eton Dr bound) Right	U	Total	Hou Tota
7:00 AM 7:15 AM	1 1	0 2	2 5	0	0	0	0 2	0	2 2	34 37	6 6	0	4 0	8 5	1 4	0	58 65	
7:30 AM 7:45 AM	3 2	2 1	2 3	0 0	0	1 0	0 0	0 0	7 4	47 75	7 3	0 0	2 1	11 6	0 1	0 0	82 96	30
8:00 AM 8:15 AM	5	0	3 8	0	0	0	2	0	5	85 58	2	0	1	8	0	0	110 78	35 36
8:30 AM 8:45 AM	0	0	1 1	0	0	0	0	0	2 2	52 68	3 1	0	1 0	6 5	0	0	65 79	34 33
eak 15-Min	Ĺ		bound				bound				oound		Ľ		bound			
Flowrates	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		tal
	20	0	12	0	0 0	4 0	4 0	0	8	340 8	16 4	0	4 0	32 4	0 0	0		10 4
All Vehicles eavy Trucks Buses	4	0	4															

Peak 19  293 + 6 J  37 + 260  52 + 9 7  15 - Min Count Period Beginning At (Northbound)  Beginning At Left Thru Right U							Apr 23	73210 2024
15-Min Count Period Beginning At Left Thru Right U Left Thru Right 4:15 PM 9 0 1 1 0 0 2 1 4:45 PM 9 0 1 1 0 0 2 2 4 4:45 PM 3 1 2 0 0 0 1 3 5:00 PM 10 1 2 0 0 0 1 3 5:15 PM 1 0 2 0 0 1 3 5:15 PM 1 0 2 0 0 0 1 3 5:15 PM 1 0 2 0 0 0 1 3 5:15 PM 1 0 2 0 0 0 1 3 5:15 PM 1 0 0 2 0 0 0 1 3 5:15 PM 1 0 0 2 0 0 0 1 0 5:15 PM 1 0 0 2 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0	Hour: 4:45 P 5-Min: 5:00	PM 5:15			0 0 0 54 + 8 + 111 7	0 0 0 0 0 + - 0 0 25 + 9.7	<b>t</b> 0 <b>+</b> 0 <b>*</b> 0 <b>*</b> 0 <b>*</b> 0	
15-Min Count Period Beginning At   Left   Thru   Right   U   Left   Thru   Right   U   Left   Thru   Right		ļ	<b>●</b>		v	MO)	<b>t</b> 0	
Northbound   Couthbound   Couthbound   Right   U   Left   Thru   Right   Right   U   Left   Thru   Right   Right   U   Left   Thru   Right		∳∫	<u></u>		N/A +	N/A P	• N/A	
4:00 PM     10     1     0     0     2     1     5       4:15 PM     9     0     1     0     0     2     4       4:30 PM     7     0     2     0     0     1     1       4:45 PM     3     1     2     0     0     0     5       5:00 PM     10     1     2     0     0     1     3       5:15 PM     1     0     2     0     0     1     1       5:30 PM     6     1     2     0     0     0     4       5:45 PM     3     0     3     0     0     2     2       Peak 15-Min Flowrates     Northbound     Southbour Flowrates       All Vehicles     40     4     8     0     0     4     1	nd)		eton Dr oound) Right U		SW Leveton D (Westbound) Thru Right		Total	Hourly Totals
Flowrates Left Thru Right U Left Thru Rig	5 0 4 0 1 0 5 0 3 0 1 0 4 0	0 7 1 13 0 15 0 11 1 15 3 6 2 5 2 6	1 0 0 0 6 0 3 0 0 0 3 0 3 0 3 0 3 0	2 1 4 3 4 3 5 3	49 0 30 1 41 0 43 2 89 0 69 0 59 0 32 0	0 0 0 0 0	78 62 77 73 126 89 87 56	290 338 365 375 358
All Vehicles 40 4 8 0 0 4 12	ght U L	Eastb Left Thru	ound Right U	Left	Westbound Thru Right	U	To	
Heavy Trucks         0         0         4         0         0         0           Buses         Pedestrians         0 </td <td>0</td> <td>4 60 0 4 0 0</td> <td>0 0</td> <td>16 0 0</td> <td>356 0 0 0 0 4 0</td> <td>0</td> <td>50 8 0 8</td> <td>)</td>	0	4 60 0 4 0 0	0 0	16 0 0	356 0 0 0 0 4 0	0	50 8 0 8	)

STATE: Tualatin, OR	23
Peak 15-Min: 8:00 AM 8:15 AM    125 + 16   13 + 16   13 + 16   13 + 16   15   14 + 10   15   14 + 10   15   14 + 10   15   14 + 10   15   14 + 10   15   15   14 + 10   15   15   14 + 10   15   15   14 + 10   15   15   16   16   16   16   16   16	
1	
15-Min Count Period Beginning At   Left   Thru   Right   U   Right   Right   U   Right   Right   U   Right   Right   U   Right   Rig	
Court   Cour	ı
Beginning At   Left   Thru   Right   U   Left   Thru   Right   Thru   Thru	Hourh
7:00 AM 0 0 0 0 0 0 0 7 0 15 25 0 0 0 6 11 0 64 7:15 AM 0 0 0 0 0 0 3 0 21 20 0 0 0 6 7 0 57 7:30 AM 0 0 0 0 3 0 4 0 14 34 0 0 0 10 12 0 77	Hourly Totals
7:30 AM 0 0 0 0 3 0 4 0 14 34 0 0 0 10 12 0 77	T
7:45 AM 0 0 0 0 0 0 3 0 29 50 0 0 0 4 13 0 99	
8:00 AM 0 0 0 0 2 0 4 0 40 44 0 0 0 5 23 0 118	297 351
8:15 AM 0 0 0 0 1 0 1 0 42 26 0 0 0 1 19 0 90	384
8:30 AM 0 0 0 0 2 0 3 0 25 24 0 0 0 4 12 0 70 8:45 AM 0 0 0 0 2 0 4 0 40 31 0 0 0 3 14 0 94	377 372
Peak 15-Min Northbound Southbound Eastbound Westbound	otal
riowiales Left Thru Right U Left Thru Right U Left Thru Right U Left Thru Right U	
All Vehicles 0 0 0 0 8 0 16 0 160 176 0 0 0 20 92 0 Heavy Trucks 0 0 0 0 0 4 4 8 0 0 0 0	72 16
Buses Pedestrians 4 0 0 0 0 0 0 Scooters	
Comments:	4 0

214 25	1:45 PM 5:45 PM 5:00 PM 5:15 PM		*
214 25 Peak-Hour: 4 Peak 15-Min:  280 + 11		0.9 0 0.7 • 9.1 •	4 0 27 • • • 13
280 + 11		0.7 <del>4</del> 9.1 <b>3</b> 9.1 <b>4</b>	0 27
l	O IMPROVE MOBILITY	0	0 0
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N/A N/A N/A N/A N/A	<b>500</b>	N/A + (	N/A N/A N/A
• <sup>''</sup> •	•		N/A
15-Min Count West LAM Access West LAM Access	SW Leveton Drive	SW Leveton D	N/A Prive
+ +	(Eastbound)		N/A  Orive d) Total
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The image is a part of the image is a part	Castbound   Cast	SW Leveton D (Westbound  Left Thru Right  0 25 4 0 12 4 0 25 2 0 24 7 0 51 5	Orive d) Total ht U 76 0 76 0 77 0 136 0 105 0 95
15-Min Count Period Beginning At Left Thru Right U Left Thru Righ	Castbound   Cast	SW Leveton D   (Westbound   Westbound   Westbound	Orive d) Total h  1 Total h  2 Total h  3 Total h  4 Total h  5 Total h  6 Total h  7 To
	Castbound   Cast	SW Leveton D	Orive d) Total h  1 Total h  2 Total h  3 Total h  4 Total h  5 Total h  5 Total h  6 Total h  7 To
15-Min Count Period Beginning At	Castbound   Cast	SW Leveton D   (Westbound   Westbound   Westbound	Orive d) Total ht U
15-Min Count Period Beginning At	Castbound   Cast	SW Leveton D (Westbound Left Thru Righ  0 25 4 0 12 4 0 25 2 0 24 7 0 51 5 0 34 1 0 32 1 0 16 0  Westbound Left Thru Righ	N/A  Orive d) ht U  Total ht U  73 0 56 0 76 0 77 0 136 0 105 0 95 0 57 d  Total ht U  Total

LOCATION: CITY/STATE:						,									~	,		
CITT/STATE.	Tualat			- SW L	evetor	Drive											#: 1657	
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91 <b>←</b> 25 137 162 <b>→</b> 0	<b>→</b> 0.8	87 + 	18 <b>4</b> 101 83 0 <b>4</b> 141				eak-Hou k 15-M	in: 8:0	OO AM	8:15	AM			666 ← 0 15 12 → 0	٠ 👍		<b>t</b> 5.6 <b>←</b> ↑ 7.2	
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15-Min Count	N//	enter L	AM Acces	ss	C		AM Acces	ss	5		ton Drive	2	S		ton Drive	/A -	·	Hourly
-	N//	enter L	· •	ss U	C Left		AM Acces	ss U	Left			e U	S Left			/A -	Total	Hourly Totals
15-Min Count Period Beginning At	Left 0	enter LA (North Thru	AM Acces	0	Left 6	(South Thru	Right	0	Left 6	(Eastle Thru 22	ton Drive cound) Right	0	Left 0	(West Thru	ton Drive bound) Right	U 0	Total 55	Hourly Totals
15-Min Count Period Beginning At	N/A  C  Left	enter L/ (North Thru	AM Acces	U	Left 6 5	(South Thru	bound) Right	U	Left	(Eastl Thru	ton Drive bound) Right	U	Left	(Westl	ton Drive bound) Right	VA U	Total	Hourly Totals
15-Min Count Period Beginning At 7:00 AM 7:15 AM 7:30 AM 7:45 AM	Left 0 0 0 0 0	enter LA (North Thru 0 0 0	AM Accessibound) Right 0 0 0	U 0 0 0	Left 6 5 2 1	(South Thru 0 0 0	Right  2 0 4 1	<b>U</b> 0 0 0 0 0	Left 6 3 6 8	(Eastle Thru 22 19 33 42	ton Drive bound) Right 0 0 0	<b>U</b> 0 0 0 0 0	Left 0 0 0 0	15 15 18 18	ton Drive bound) Right 4 1 2 7	U 0 0 0 0 0 0	Total  55 43 65 77	240
15-Min Count Period Beginning At 7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	enter LA (North Thru 0 0 0	AM Acces bound) Right 0 0 0 0	0 0 0	6 5 2 1	(South Thru  0 0 0 0 0 0	Right  2 0 4 1	U 0 0 0 0	Left 6 3 6 8 5	(Eastle Thru 22 19 33 42 41	ton Drive bound) Right 0 0 0	U 0 0 0 0	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15 15 18 18 24	ton Drive bound) Right 4 1 2 7 6	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  55 43 65 77 79	240 264
15-Min Count Period Beginning At 7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	enter L/(North Thru 0 0 0 0 0 0 0	AM Acces bound) Right 0 0 0 0 0 0	0 0 0 0 0 0	Left  6 5 2 1 0 1	(South Thru  0 0 0 0 0 0 0 0 0 0	Right 2 0 4 1 3 0 0 0	0 0 0 0 0	Left  6 3 6 8 5 6 3	(Easth Thru 22 19 33 42 41 21 24	ton Drive cound) Right 0 0 0 0	0 0 0 0 0	Left 0 0 0 0 0 0 0 0 0 0	15 15 18 18 24 23	ton Drive bound) Right 4 1 2 7 6 3 7	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  55 43 65 77 79 54 50	240 264 275 260
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15-Min Count Period Beginning At 7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	enter L/(North Thru 0 0 0 0 0 0 North	AM Acces abound) Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	U 0 0 0 0 0	Left 6 5 2 1 0 1 0	(South Thru  0 0 0 0 0 0 0 0 South	Right  2 0 4 1 3 0 0 0 bound	U 0 0 0 0 0	Left 6 3 6 8 5 6 3 5	(Easth Thru 22 19 33 42 41 21 24 31 Easth	ton Drive cound) Right 0 0 0 0 0 0	U 0 0 0 0 0	Left 0 0 0 0 0 0 0 0 0 0 0 0	Thru  15 15 18 18 24 23 15 20 Westl	ton Drive bound) Right 4 1 2 7 6 3 7 9	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  55 43 65 77 79 54 50	240 264 275 260 248
15-Min Count Period Beginning At 7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM Peak 15-Min Flowrates	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	h   North	AM Acces bound) Right  0 0 0 0 0 0 sbound Right	U 0 0 0 0 0 0 0 0 U	Left 6 5 2 1 0 1 1 0 Left	(South Thru  O O O O O O South Thru	Right  2 0 4 1 3 0 0 0 bound Right	U 0 0 0 0 0 0 0 0 0 U	Left 6 3 6 8 5 6 3 5	(Easth   Thru   22   19   33   42   41   21   24   31   Easth   Thru   Easth   Thru   Easth   Thru   Easth   Easth	ton Drive cound) Right 0 0 0 0 0 0 cound Right	U 0 0 0 0 0 0 0 0 U	Left  0 0 0 0 0 0 0 Left	Thru  15 15 18 18 24 23 15 20 Westl Thru	ton Drive bound) Right 4 1 2 7 6 3 7 9 cound Right	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  55 43 65 77 79 54 50 65	240 264 275 260 248
15-Min Count Period Beginning At 7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	enter L/(North Thru 0 0 0 0 0 0 North	AM Acces abound) Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	U 0 0 0 0 0	Left 6 5 2 1 0 1 0	(South Thru  0 0 0 0 0 0 0 0 South	Right  2 0 4 1 3 0 0 0 bound	U 0 0 0 0 0	Left 6 3 6 8 5 6 3 5	(Easth Thru 22 19 33 42 41 21 24 31 Easth	ton Drive cound) Right 0 0 0 0 0 0	U 0 0 0 0 0	Left 0 0 0 0 0 0 0 0 0 0 0 0	Thru  15 15 18 18 24 23 15 20 Westl	ton Drive bound) Right 4 1 2 7 6 3 7 9	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  55 43 65 77 79 54 50 65	240 264 275 260 248
15-Min Count Period Beginning At 7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM Peak 15-Min Flowrates All Vehicles	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	enter L/ (North Thru 0 0 0 0 0 0 North Thru	AM Acces abound) Right  0 0 0 0 0 0 sbound Right 0	U 0 0 0 0 0 0 0 0 U	Left 6 5 2 1 0 1 1 0 Left	(South Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Right  2 0 4 1 3 0 0 bound Right  12	U 0 0 0 0 0 0 0 0 0 U	Left 6 3 6 8 5 6 3 5 Left 20	(Easth Thru 22 19 33 42 41 21 24 31 Easth Thru	ton Drive cound) Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	U 0 0 0 0 0 0 0 0 U	Left 0 0 0 0 0 0 0 0 Left	Thru  15 18 18 18 24 23 15 20 Westl Thru  96	ton Drive bound) Right 4 1 2 7 6 3 7 9 cound Right 24	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  55 43 65 77 79 54 50 65 To:	240 264 275 260 248

LOCATION: (						Drive								8			#: 165	7321/
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<b>→</b> 3	N/A		← N/A →		_	_2	, 				••••	-		N/A	N. 1		L ► N/A	
15-Min Count	C		M Acces	s	С		AM Acces	s	S		ton Drive	·	5		ton Drive	<b>;</b>		Hourly
Period Beginning At	Left	(North Thru	bound) Right	U	Left	(South	bound) Right	U	Left	(Eastb Thru	ound) Right	U	Left	(West	bound) Right	U	Total	Hourly Totals
4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM	0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0	3 3 5 3 6 7 7	0 0 0 0 0 0	7 5 4 8 6 12 4	0 0 0 0 0	0 2 1 3 4 2 0	14 13 24 16 30 35 28 24	0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	21 12 16 23 48 22 27 13	1 3 3 3 3 2 1	0 0 0 0 0	46 38 53 56 97 80 67 46	193 244 286 300 290
Peak 15-Min		North	bound			South	bound			Eastb	ound			West	bound		-	hal
Flowrates	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	То	tal
All Vehicles Heavy Trucks Buses Pedestrians Bicycles	0 0	0 0 0	0 0	0	24 0	0 0 8 0	24 0	0	16 0	120 8 0 0	0 0	0	0 0	192 0 0 4	12 0	0		
Scooters  Comments:																		

134 <b>4</b> 27 <b>3</b> 0 <b>4</b> 81 <b>5</b> 54 <b>7</b>	088	0 + 0 0 0 + 0		_		TRUE DA	in: 7:4	IS AM	8:00 MOBILITY	AM	_		6 + 74 0 3.7 + 1.9	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5.5 0 0 0 0	• 0 • • 0 • • 0 •	0
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+	N/A	N/A →		_	STOR	\$			<b>1</b>		_		N/A	N 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		► N/A	
15-Min Count Period Beginning At Le		8th Ave bound) Right	U	Left		8th Ave bound) Right	U	Left		veton Dr bound) Right	U	Left		reton Dr bound) Right	U	Total	Hourl Total
7:15 AM 1 7:30 AM 2	23 3 17 9 24 11	0 0 0	0 0 0	0 0 0	5 6 5	4 4 3	0 0 0	6 7 2	0 0 0	12 15 17	0 0 0	0 0	0 0 0	0 0 0	0 0 0	53 58 62	
8:00 AM 3	28 10 30 12 26 6	0 0 0	0 0 0	0 0	5 11	11 7 5	0 0 0	13 7 5	0 0 0	13 13 11	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	79 74 64	252 273 279
8:30 AM 2	24 3 29 7	0	0	0	5 4	8	0	3 5	0	4 3	0	0	0	0	0	47 56	264 241
Peak 15-Min	North	bound			South	bound			Eastb	ound			Westl	bound		To	
All Vehicles 11	eft Thru 12 40	Right 0	0	Left 0	Thru 16	Right 44	0	Left 52	Thru 0	Right 52	0	Left 0	Thru 0	Right 0	0	31	
Buses Pedestrians	0 0 0	0		0	0 0 0	0		0	0 32 0	0		0	0 0 0	0		3	2

CITY/STATE			e SW		on Dr							100 101			Q	JOB	#: 1657 Apr 23	
48 + 17 0 186 + 169		40	0 <b>4</b> 0 0 <b>3</b> 0				eak-Hou ak 15-M	lin: 5:0	00 PM	5:15	PM			2.1 <b>4</b> 5.9 0 3.2 <b>4</b> 3	+ 🚚		• 0 • • 0	
1			0		-		J↓				STOP	-		0 0	→	(a)	• 0 • 0	
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15-Min Count Period Beginning At	Left		8th Ave bound) Right	U	Left		8th Ave bound) Right	U	Left		reton Dr bound) Right	U	Left		reton Dr bound) Right	U	Total	Hourl Total
4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM	8 8 9 14 15 6 6	5 2 8 5 10 5 3	0 0 0 0 0	0 0 0 0 0	0 0 0 0	14 5 6 6 10 9 4	4 2 3 4 10 2 4	0 0 0 0 0	2 2 5 3 6 1 4	0 0 0 0 0	23 21 29 23 42 46 46	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	56 40 60 55 93 69 67	211 248 277 284
5:45 PM Peak 15-Min	3	5 North	0 bound	0	0	7 South	2 bound	0	6	0 Eastb	35 oound	0	0	0 West	0 bound	0	58 To	287
FIGWITATOS	Left	Thru 40	Right 0	0	Left 0 0	40 0	Right 40 0	0	Left 24 0	Thru 0 0	Right 168 4	0	Left 0 0	0 0	Right 0 0	0	37	
All Vehicles Heavy Trucks	60 0	4	0										_		_			

LOCATION: S	SW 108	8th Ave	e SW													JOB	<b>#</b> : 1657	
CITY/STATE:	Tualat	tin, OR													DATE	: Tue,	Apr 23	2024
245  ← 14 . 353 · 367  → 0 ·	→ 0.8	• 1 • 2 • 7	387 235 0 <b>→</b> 399				ak-Hour k 15-Mi	in: 7:4	5 AM -	- 8:00				1.14 ← 28.6 21.5 21.8 → 0	+ 🚜	· [	. 59 ★ 9 • 11.5 • 0 → 2	
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→ N/A →	N/A	-	<b>←</b> N/A <b>→</b>		_		:   				<b>E</b>			N/A	N 4 3 4 N N N N N N N N N N N N N N N N		⊾ N/A	
15-Min Count Period			8th Ave bound)				8th Ave				man Rd oound)				rman Rd bound)		Total	Hourly
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	iolai	Hourly Totals
7:00 AM 7:15 AM 7:30 AM 7:45 AM	0 0 0	0 0 0 0	0 0 0	0 0 0 0	13 19 14 7	0 0 0	2 5 3 2	0 0 0	4 1 6 3	44 87 92 97	0 0 0	0 0 0	0 0 0 0	52 59 58 76	28 25 35 50	0 0 0	143 196 208 235	782
8:00 AM 8:15 AM	0	0	0	0	6 11	0	0 3	0	4	77 81	0	0	0	42 27	42 40	0	171 163	810 777
8:30 AM	0	0	0	0	3	0	3	0	1 3	54	0	0	0	51	34	0	148	717
8:45 AM	0	0	0	0	4	0	0	0	1	60	0	0	0	46	39	0	150	632
Peak 15-Min Flowrates	1.64	North			164		bound		164		ound		164		bound		To	tal
All Vehicles	Left 0	Thru	Right 0	0	Left 28	Thru 0	Right 8	0	Left	Thru 388	Right 0	0	Left 0	Thru 304	Right 200	0	94	10
	0	0 0	0	U	0	0	8	U	12 0	388 60	0	U	0	304 32	200 8	U	10	
Heavy Trucks						0								0				
Buses Pedestrians Bicycles Scooters	0	0 0	0		0	8	0		0	0	0		0	0 4	0		2	

LOCATION:	SW 10																	
II IIV/CTATE.				Herm	an Kd												#: 1657	
CITY/STATE:	Tuala	un, Ok	1												DATE	. rue,	Apr 23	2024
457 ← 7 296 303 → 0	<b>→</b> 0.9	22 + 	48 ← 486 438 0 → 484				eak-Hou ak 15-M	lin: 4:3	80 PM	4:45	S PM			63 <b>4</b> 143 68 69 <b>4</b> 0	3 9 4 4		€ 63 ← 64 <b></b> 0 →	
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,		SW 10 (North	08th Ave	U	- Left	SW 10 (South	8th Ave	U	Left	(Eastl	rman Rd bound)		Left	SW Her	rman Rd	J WA	◆ N/A	Hourly Totals
15-Min Count	N/	SW 10	• → 08th Ave	<u>U</u>	Left 40	SW 10	8th Ave	<u>U</u>	Left 2		rman Rd		Left 0	SW Her	rman Rd	I I/A	← N/A	Hourly Totals
15-Min Count Period Beginning At 4:00 PM 4:15 PM	Left 0 0	SW 10 (North Thru	98th Avenbound) Right 0	0 0	40 26	SW 10 (South Thru	8th Ave hbound) Right	0 0	2 2	(Eastl Thru 76 78	rman Rd bound) Right	<b>U</b> 0 0	0	SW Her (West Thru 120 121	rman Rd bound) Right	U O O	◆ N/A <b>F</b> Total  255 235	Hourly Totals
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM	Left 0	SW 10 (North Thru	98th Avenbound) Right	0	40	SW 10 (South Thru	8th Ave hbound) Right	0	2	(Eastl Thru	rman Rd bound) Right	<b>U</b>	0	SW Her (West Thru	rman Rd		• N/A • Total	Hourly Totals
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM	Left 0 0 0 0 0 0	SW 10 (North Thru	08th Avenbound) Right 0 0 0	0 0 0	40 26 38 32 50	SW 10 (South Thru 0 0	8th Ave abound) Right 5 3 4 6	0 0 0 0	2 2 4 0 1	76 78 84 63 85	rman Rd bound) Right 0 0 0	U 0 0 0	0 0 0	SW Her (West) Thru 120 121 132 101 99	rman Rd (bound) Right 12 5 10 16 14	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	← N/A	978 978
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM 4:45 PM	Left 0 0 0 0	SW 10 (North Thru	98th Avenbound) Right 0 0 0	0 0 0	40 26 38 32	SW 10 (South Thru	8th Ave abound) Right 5 3 4 4	0 0 0	2 2 4 0	(Eastl Thru 76 78 84 63	rman Rd bound) Right 0 0	0 0 0	0 0 0	SW Her (West Thru 120 121 132 101	rman Rd bound) Right 12 5 10 16	U O O O O	← N/A    Total  255 235 272 216	978
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SW 10 (North Thru	OBth Avenbound) Right  0 0 0 0 0 0 0 0	0 0 0 0 0	40 26 38 32 50 68	SW 10 (South Thru 0 0 0 0	88th Ave nbound) Right 5 3 4 6 5 5 7	0 0 0 0 0	2 2 4 0 1 2	76 78 84 63 85 64	rman Rd bound) Right 0 0 0	0 0 0 0	0 0 0 0 0	SW Her (Westi Thru 120 121 132 101 99 106 66 46	rman Rd (bound) Right 12 5 10 16 14 8 8 5	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	▼ N/A  F  Total  255 235 272 216 255 253	978 978 996
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM 5:00 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SW 10 (North Thru 0 0 0 0 0 0 North	OBth Avenbound) Right  O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0	40 26 38 32 50 68 52 49	SW 10 (South Thru 0 0 0 0 0 0 0 0 0 0	88th Ave abound) Right 5 3 4 6 5 7 abound	0 0 0 0 0 0	2 2 4 0 1 2 0 0	76 78 84 63 85 64 53 45 Eastl	rman Rd bound) Right 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	SW Her (West) Thru 120 121 132 101 99 106 66 46 West)	rman Rd debound) Right 12 5 10 14 8 8 5 bound	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  255 235 272 216 255 253 184 152	978 978 996 908 844
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:30 PM	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SW 10 (North Thru	OBth Avenbound) Right  0 0 0 0 0 0 0 0	0 0 0 0 0 0	40 26 38 32 50 68 52	SW 10 (South Thru 0 0 0 0	88th Ave abound) Right 5 3 4 6 5 5 7 abound Right	0 0 0 0 0 0	2 2 4 0 1 2	76 78 84 63 85 64 53 45	rman Rd bound) Right 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	SW Her (Westi Thru 120 121 132 101 99 106 66 46	rman Rd (bound) Right 12 5 10 16 14 8 8 5	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	← N/A   Total  255 235 272 216 255 253 184	978 978 996 908 844
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM Peak 15-Min Flowrates All Vehicles	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SW 10 (North Thru	OBth Avenbound) Right  O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0	40 26 38 32 50 68 52 49 Left	SW 10 (South Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	88th Ave shound) Right 5 3 4 6 5 7 shound Right 16	0 0 0 0 0 0	2 2 4 0 1 2 0 0 0	(Eastl Thru 76 78 84 63 85 64 53 45 Eastl Thru	rman Rd bound) Right 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	SW Her (West) Thru 120 121 132 101 99 106 66 46 West) Thru	rman Rd (bound) Right  12 5 10 16 14 8 5 bound Right 40	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  255 235 272 216 255 253 184 152 Total	978 978 996 908 844 tal
15-Min Count Period Beginning At  4:00 PM 4:15 PM 4:30 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM Peak 15-Min Flowrates  All Vehicles Heavy Trucks Buses	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SW 10 (North Thru 0 0 0 0 0 0 0 North Thru	OBth Avenbound) Right  O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0	40 26 38 32 50 68 52 49	SW 10 (South Thru 0 0 0 0 0 0 0 0 South Thru	88th Ave abound) Right 5 3 4 6 5 5 7 abound Right	0 0 0 0 0 0	2 2 4 0 1 2 0 0	(Eastl Thru 76 78 84 63 85 64 53 45 Eastl Thru	rman Rd bound) Right 0 0 0 0 0 0 0 0 0 0	U 0 0 0 0 0 0 0 0 U	0 0 0 0 0 0 0	SW Her (West) Thru 120 121 132 101 99 106 66 46 West) Thru	rman Rd bound) Right 12 5 10 14 8 8 5 bound Right	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  255 235 272 216 255 253 184 152 Total	978 978 996 908 844 tal
15-Min Count Period Beginning At 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:30 PM 5:45 PM Peak 15-Min Flowrates All Vehicles Heavy Trucks	Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SW 10 (North Thru	OBth Avenbound) Right  O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0	40 26 38 32 50 68 52 49 Left	SW 10 (South Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	88th Ave shound) Right 5 3 4 6 5 7 shound Right 16	0 0 0 0 0 0	2 2 4 0 1 2 0 0 0	(Eastl Thru 76 78 84 63 85 64 53 45 Eastl Thru	rman Rd bound) Right 0 0 0 0 0 0 0 0 0 0 0 0	U 0 0 0 0 0 0 0 0 U	0 0 0 0 0 0 0 0	SW Her (West) Thru 120 121 132 101 99 106 66 46 West) Thru	rman Rd (bound) Right  12 5 10 16 14 8 5 bound Right 40	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  255 235 272 216 255 253 184 152 Total	978 978 996 908 844 tal

LOCATION:																	#: 165	73219
CITY/STATE:				a ciii i v	u												Apr 23	
374 ◆ 0 601 763 ◆ 162	<b>→</b> 0.9						ak-Hou k 15-M	in: 8:1	5 AM	8:30				8.6 ← 0 2.7 2.4 → 1.2	+ 👍		• 7 • 48 •	
0 1	3	• [	0		-	<u>sm</u>					 	-		0 0	÷ 🍼	(a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	• 1 • 0	
<b>←</b>	N/A		N/A		_	7				<u> </u>	alatin Rd	-		N/A			⊾ ► N/A	
15-Min Count Period		(North	n Ave bound)			(South	n Ave bound)			(Eastb	ound)			(West	bound)		Total	Hourly Totals
7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM	7 16 12 17 25 21 12 22	Thru 0 0 0 0 0 0 0 0 0 0 0	Right  4 5 6 4 26 21 8 8	0 0 0 0 0 0	0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0	Right  0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	76 128 160 153 138 150 90 96	8 Right  39 25 50 51 33 28 50 25	0 0 0 0 0 0	5 8 5 4 18 36 18 7	70 83 70 83 72 74 67 55	Right  0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	168 210 303 312 312 330 245 213	993 1137 1257 1199 1100
Peak 15-Min Flowrates			bound				bound			Eastb			, ,		oound		То	tal
All Vehicles	Left 84	Thru 0	Right 84	0	Left 0	Thru 0	Right 0	0	Left 0	Thru 600	Right 112	0	Left 144	Thru 296	Right 0	0		20
Heavy Trucks	8	0	12	U	0	0	0	U	0	20	4	U	8	28	0	U		0
Buses Pedestrians Bicycles Scooters	0	0 0	0		0	8 0	0		0	0 0	0		0	0 0	0		(	
Comments:																		

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

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LOCATION: 7			SW Tual	atin R	d													73220
CITY/STATE:	Tuala	tin, OK													DATE	Tue,	Apr 23	2024
858 <b>←</b> 0 , 338 , 416 <b>→</b> 78 ,		21 • •	0				eak-Hou k 15-M	in: 4:3	80 PM	4:45				1.5 ← 0 2.7 3.1 → 5.1	+ 👍		<b>t</b> 0 <b>←</b> 13 <b>f</b> 7 <b>→</b>	
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0 1	3	1	0		-	sno					<u> </u>	-		0 1 0	→		<b>L</b> 0	
+	N/		← N/A →		-	_2	, ]			<b>^</b>	<b>≶TOP</b>	_		N/A	N 1		⊾ ► N/A	
15-Min Count Period			n Ave				n Ave				latin Rd				latin Rd			Hourly
Period Beginning At	Left	(North Thru	bound) Right	U	Left	(South	bound) Right	U	Left	(Eastb	ound) Right	U	Left	(West Thru	bound) Right	U	Total	Hourly Totals
4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:30 PM	47 36 39 27 45 36 24 22	0 0 0 0 0 0	23 10 25 8 13 3 7 5	0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0 0	69 88 86 95 74 62 79 74	12 21 28 17 15 13 21 12	0 0 0 0 0 0	5 17 11 10 10 6 2 4	200 166 189 154 182 196 174 115	0 0 0 0 0 0	0 0 0 0 0	356 338 378 311 339 316 307 232	1383 1366 1344 1273 1194
Peak 15-Min			bound	J			bound	J	J		ound	J			bound	J		•
Flowrates	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	То	tal
All Vehicles Heavy Trucks	156 0	0	100	0	0	0	0	0	0	344 16	112 8	0	44 4	756 12	0	0		12 0
Buses Pedestrians Bicycles Scooters	0	0	0		0	4 0	0		0	0 0	0		0	0 0	0		4	4 D
Comments:												· <u> </u>						

LOCATION: East LAM Access SW Le	eveton Dr		
CITY/STATE: Tudiatin, OK			QC JOB #: 16573221
			<b>DATE</b> : Tue, Apr 23 2024
3 68 1 0 2 1 10 2 1 10 2 1 10 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0	Peak 15-Min: 7:4	5 AM 8:45 AM 15 AM 8:00 AM	45 + 26 + 37 + 3.6 + 3.7 + 0 + 3.8
0 1 0		<b>↓</b>	
N/A			N/A
N/A + N/A	<del>*</del>	<b>↔</b>	N/A + N/A
15-Min Count East LAM Access (Northbound)	East LAM Access (Southbound)	SW Leveton Dr (Eastbound)	SW Leveton Dr (Westbound) Total Totals
15-Min Count Period Beginning At Left Thru Right U	East LAM Access (Southbound) Left Thru Right U	SW Leveton Dr (Eastbound) Left Thru Right U	SW Leveton Dr (Westbound)  Left Thru Right U  N/A  N/A  N/A  Total  Hourly Totals
15-Min Count Period Beginning At Left Thru Right U  7:00 AM 0 0 1 0 7:15 AM 0 0 0 0 0 7:30 AM 0 0 0 0 0	East LAM Access (Southbound)     Left   Thru   Right   U     0   0   0   0   0   0   0   1   0   1   0   0	SW Leveton Dr (Eastbound)     Left   Thru   Right   U     0   20   3   0   0   24   1   0   0   5   18   1   0	N/A   N/A
15-Min Count Period Beginning At Left Thru Right U  7:00 AM 0 0 1 0 7:15 AM 0 0 0 0 0 7:30 AM 0 0 0 0 0 7:45 AM 0 0 0 0 0 8:00 AM 0 0 0 0 0	East LAM Access (Southbound)     Left   Thru   Right   U	SW Leveton Dr (Eastbound)     Left   Thru   Right   U     0   20   3   0   0   24   1   0   0   5   18   1   0   0   0   16   19   1   0   0   16   19   1   0   0   0   0   16   19   1   0   0   0   0   0   0   0   0   0	SW Leveton Dr (Westbound)   Total Hourly Totals
15-Min Count Period Beginning At Left Thru Right U  7:00 AM 0 0 1 0 7:15 AM 0 0 0 0 0 7:30 AM 0 0 0 0 0 7:45 AM 0 0 0 0 0 8:00 AM 0 0 0 0 0 8:15 AM 1 0 0 0 0	East LAM Access (Southbound)   Left   Thru   Right   U     0   0   0   0   0   1   0   0   0	SW Leveton Dr (Eastbound)     Left   Thru   Right   U     0   20   3   0   0   24   1   0   5   18   1   0   9   31   0   0   16   19   1   0   0   16   19   1   0   0   0   16   19   1   0   0   0   0   16   19   1   0   0   0   0   0   0   0   0   0	N/A   N/A
15-Min Count Period Beginning At Left Thru Right U  7:00 AM 0 0 1 0 7:15 AM 0 0 0 0 0 7:30 AM 0 0 0 0 0 7:45 AM 0 0 0 0 0 8:00 AM 0 0 0 0 0	East LAM Access (Southbound)     Left   Thru   Right   U	SW Leveton Dr (Eastbound)     Left   Thru   Right   U     0   20   3   0   0   24   1   0   0   5   18   1   0   0   0   16   19   1   0   0   16   19   1   0   0	SW Leveton Dr (Westbound)   Total Hourly Totals
15-Min Count Period Beginning At Left Thru Right U  7:00 AM 0 0 1 0 7:15 AM 0 0 0 0 0 7:30 AM 0 0 0 0 0 7:30 AM 0 0 0 0 0 8:00 AM 0 0 0 0 0 8:15 AM 1 0 0 0 0 8:30 AM 0 0 0 0 0 8:35 AM 1 0 0 0 0 8:34 AM 0 0 0 0 0	East LAM Access (Southbound)  Left Thru Right U  0 0 0 0 0 0 0 0 0 0 1 0 1 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SW Leveton Dr (Eastbound)     Left   Thru   Right   U     0   20   3   0   0   24   1   0   0   5   18   1   0   0   0   16   19   1   0   0   16   19   1   0   0   10   10   3   0   0   10   1	SW Leveton Dr (Westbound)   Total   Hourly Totals
15-Min Count Period Beginning At Left Thru Right U  7:00 AM 0 0 1 0 7:15 AM 0 0 0 0 0 7:30 AM 0 0 0 0 0 7:45 AM 0 0 0 0 0 8:15 AM 1 0 0 0 0 8:15 AM 1 0 0 0 0 8:30 AM 0 0 0 0 0 8:45 AM 0 0 0 0 0 8:45 AM 0 0 0 0 0 Peak 15-Min Flowrates LAM Access (Northbound)  Peak 15-Min Flowrates LAM Access (Northbound)	East LAM Access (Southbound)   Left   Thru   Right   U	SW Leveton Dr (Eastbound)	SW Leveton Dr (Westbound)
15-Min Count Period Beginning At Left Thru Right U  7:00 AM 0 0 1 0 7:15 AM 0 0 0 0 0 7:30 AM 0 0 0 0 0 7:45 AM 0 0 0 0 0 8:05 AM 0 0 0 0 0 8:05 AM 1 0 0 0 0 8:30 AM 0 0 0 0 0 8:35 AM 1 0 0 0 0 8:35 AM 1 0 0 0 0 8:45 AM 0 0 0 0 0 Peak 15-Min Flowrates Left Thru Right U  All Vehicles 0 0 0 0 0	East LAM Access (Southbound)   Left   Thru   Right   U     0	SW Leveton Dr (Eastbound)	SW Leveton Dr (Westbound)
15-Min Count Period Beginning At Left Thru Right U  7:00 AM 0 0 1 0 7:15 AM 0 0 0 0 0 7:15 AM 0 0 0 0 0 7:45 AM 0 0 0 0 0 8:00 AM 0 0 0 0 0 8:15 AM 1 0 0 0 0 8:30 AM 0 0 0 0 0 8:15 AM 1 0 0 0 0 8:30 AM 0 0 0 0 0 8:45 AM 0 0 0 0 0 Peak 15-Min Flowrates  Left Thru Right U  All Vehicles Heavy Trucks Buses	East LAM Access (Southbound)     Left   Thru   Right   U	SW Leveton Dr (Eastbound)	SW Leveton Dr (Westbound)   Total Hourly Totals
15-Min Count Period Beginning At   Left   Thru   Right   U	East LAM Access (Southbound)   Left   Thru   Right   U     0	SW Leveton Dr (Eastbound)	SW Leveton Dr (Westbound)

Type of peak no											ivieti	100 101	ueteiiii	illing pe	ak nour:			
LOCATION: CITY/STATE:				w Lev	eton D	r											#: 1657 Apr 23	
100 <b>4</b> 0 140 <b>4</b> 0	76	1 40 40 40 40 40 40 40 40 40 40 40 40 40	1 <b>4</b> 62 61 0 <b>4</b> 182				eak-Hou ak 15-M	lin: 5:0	00 PM	5:15	PM			1 ← 0 43 43 → 0	0 0 0 0 0 0	0	€ 0 ← € 16	16
• 1	12	1	0		-	Sm	],	IA TO IIV	PROVE		<del>\$</del>	_		0 2 0	+		<b>€</b> 0 <b>←</b> 2 <b>F</b> 0	
N/A •	N/		. ← N/A →		-	-4				'	<b>STOP</b>	_		N/A	٠ ٠ ر	S C F	<b>t</b> • N/A F	
15-Min Count Period Beginning At	Left	(North Thru	M Access bound) Right	U	Left	(South Thru	M Access nbound) Right	U	Left	(Eastb	veton Dr bound) Right	U	Left	(West	reton Dr bound) Right	U	Total	Hourly Totals
4:00 PM 4:15 PM 4:30 PM 4:45 PM	0 0 1 1	0 0 0	0 0 0	0 0 0	6 3 5 6	0 0 0	7 3 3 5	0 0 0	0 0 0	19 19 28 21	0 1 0 0	0 0 0	0 0 0	13 12 14 18	1 0 0 1	0 0 0	46 38 51 52	187
5:00 PM 5:15 PM 5:30 PM 5:45 PM	0 0 0	0 0 0 0	0 1 0 1	0 0 0 0	6 9 13	0 0 0 0	7 8 8	0 0 0 0	0 0 0 0	35 41 37 27	0 0 0 0	0 0 0 0	0 0 0 0	30 13 12 6	0 0 1 0	0 0 0 0	93 68 67 55	234 264 280 283
Peak 15-Min Flowrates	Left	North Thru	bound Right	U	Left	South Thru	bound Right	U	Left	Eastb Thru	ound Right	U	Left	Westl Thru	bound Right	U	To	tal
All Vehicles	12	0	Right 0	0	48	0	52	0	0	140	0	0	0	120	0	0	37	72
Heavy Trucks Buses	0	0	0		0	0	0		0	4	0		0	0	0		4	1
Pedestrians	0	4 0	0		0	12 0	0		0	0 0	0		0	0 8	0		1	
Bicycles Scooters	ŭ																	

LOCATION: S CITY/STATE:	SW 115	5th Ave	e SW								ivieti	100 101	determ	iiiiiig pe		JOB		73223
	46 24 3 4 3	306 † 19 19 • • • •	255 💠 853				ak 15-N	ur: 4:00 /in: 4:0	00 PM	4:15				24 <b>4</b> 2 25 <b>2</b> 5 <b>4</b> 0	10.9 † 16.7 (	1.6	<b>1.</b> 1.6 <b>← 1.8 ←</b> 0 <b>→</b>	18
1 1	4	• [	0		-	STO					<u>*</u>	_		0 2 0	9 9 9	<b>A</b>	<b>€</b> 0	
+ 3 N/A + + 3	••	SW 11	N/A →  Sth Ave		-		5th Ave				alatin Rd	_			alatin Rd		• N/A	Hourty
Period Beginning At	<b>Left</b>	(North Thru	Right	0	Left	(South Thru	Bound) Right	<b>U</b>	Left	(Eastk	Right	0	Left	(West Thru 21	Right	0	Total	Hourly Totals
7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 9:00 AM 9:15 AM 9:30 AM 10:15 AM 10:30 AM 10:45 AM 11:45 AM 11:45 AM 11:45 AM 11:45 AM 12:45 PM	0 0 0 1 0 1 0 0 0 0 1 1 0 0 0 0 1 1 0	0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0		2 6 10 11 7 12 8 7 1 2 2 3 2 6 2 2 7 2 5 4 4 4 1 1 1 6 6 3 4 8 2 6 6 6 7 6 7 6 6 7 6 7 6 7 6 7 6 7 6 7	1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 5 5 4 8 12 3 1 1 1 4 3 2 4 4 3 3 7 2 6 6 6 7 7 4 1 3 5 5 5 4 4 2 4 4 3 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		8 10 3 11 19 29 10 6 3 2 2 6 7 6 10 5 5 3 10 4 13 7 4 8 5 11 11 23 8 7 4 8 5 7 4 8 5 7 4 8 7 7 4 8 7 7 8 7 8 7 8 7 8 7 8 7 8	142 181 184 151 161 127 93 78 78 68 58 78 49 58 63 57 56 68 75 66 82 78 76 66 79 71 68 76 76 88 76 76 88 76 88 76 88 78 78 78 78 78 78 78 78 78 78 78 78	0 1 2 2 0 1 1 0 0 1 0 0 1 1 0 0 1 1 0 0 1 1 0 0 1 0 0 1 0		3 0 1 0 2 1 1 1 1 0 0 0 1 1 1 0 0 0 1 1 0 0 0 0	217 237 53 60 59 46 47 47 34 57 33 29 30 44 57 43 59 65 52 59 62 67 56 64 65 77 56 64 67 77 98 84 107 128 128 128 128 128 128 128 128 128 128	13 21 28 26 53 26 19 33 18 12 19 17 16 31 26 28 22 15 15 28 30 26 24 33 30 37 68 24 45 44 59 68 80		204 276 302 275 316 224 176 151 153 116 140 113 135 164 145 152 181 179 191 187 189 171 191 189 174 192 263 260 223 294 301 301 301 301 301 301 301 301 301 301	945 1057 1169 1117 991 867 702 631 571 560 522 557 596 642 634 655 690 691 706 719 723 728 726 721 722 798 889 938 1040 1078 1078 1078

15-Min Count Period			5th Ave bound)				5th Ave bound)				latin Rd ound)				llatin Rd bound)		Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		Totals
4:30 PM	0	1	1	0	4	0	3	0	8	94	0	0	0	164	68	0	343	1281
4:45 PM	0	0	0	0	9	0	7	0	19	97	1	0	0	129	49	0	311	1315
5:00 PM	0	1	1	0	2	0	5	0	9	90	0	0	2	159	66	0	335	1304
5:15 PM	0	1	2	0	4	0	4	0	17	71	1	0	1	165	58	0	324	1313
5:30 PM	0	0	0	0	4	0	3	0	9	103	1	0	0	139	54	0	313	1283
5:45 PM	0	1	1	0	3	0	4	0	10	85	2	0	0	98	47	0	251	1223
Peak 15-Min		North	bound			South	bound			Eastb	ound			Westl	bound		т.	4-1
Flowrates	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	10	tal
All Vehicles	0	0	16	0	8	4	28	0	40	324	0	0	4	640	320	0	13	84
Heavy Trucks Buses	0	0	0		0	0	4		0	4	0		0	20	12		4	.0
Pedestrians		0				12				0				0			1	.2
Bicycles Scooters	0	0	0		0	12 0	0		0	4	0		4	8	0		1	.6
Comments:																		

LOCATION: S	SW 11	2th Av	e SW								Wietii	00 101	acterini	В РС	Q	JOB	#: 166	14101
CITY/STATE:	Tuala	tin, OR													DATE:	Tue, I	Viay 14	1 2024
337  ← 5 . 638 • 693 <b>→</b> 0 °		* * <u>*</u>	10 <b>4</b> 340 330 0 <b>4</b> 706				rak-Hou k 15-M	in: 7:3	SO AM	7:45	AM			8.3 ← 20 3.3 → 0	+ 👍		<b>€</b> 20 <b>←</b> 8.5 <b>r</b> 0 <b>→</b>	
0	6		0		_	STO	. ↓				<b>.*</b> _	_		0 2 0	* <b></b>	(a)	• 0 • 0	
+ → → N/A + → → → → → → → → → → → → → → → → → →	N/ N/	A A	. +		-		↑ → 2th Ave		Г	SW Tua	alatin Rd	-	Г	N/A			<b>\</b>	
Period Beginning At		(North	nbound)			(South	bound)			(Eastk	oound)				bound)		Total	Hourly Totals
7:00 AM	Left 0	Thru 0	Right 0	0	Left 3	Thru 0	Right 1	0	Left 1	Thru 105	Right 0	0	Left 0	Thru 35	Right 1	0	146	
7:15 AM	0	0	0	0	8	0	1	0	0	149	0	0	0	42	0	0	200	
7:30 AM 7:45 AM	0	0	0	0	11 1	0	1	0	1	190 191	0	0	0	71 76	5	0	275 275	896
8:00 AM 8:15 AM	0	0 0	0	0	1 5	0 0	3 2	0	3 1	158 149	0	0	0	87 96	0 3	0	252 256	1002 1058
8:30 AM	0	0	0	0	6	0	1	0	3	164	0	0	0	64	1	0	239	1022
8:45 AM 9:00 AM	0 0	0 0	0 0	0	1	0 0	2 1	0 0	2 1	131 97	0 0	0 0	0	78 78	1 3	0 0	215 183	962 893
9:15 AM	0	0	0	0	6	0	0	0	2	74	0	0	0	67	2	0	151	788
9:30 AM 9:45 AM	0 0	0 0	0 0	0	2 1	0 0	0 2	0 0	0	69 59	0 0	0 0	0	58 72	0 3	0 0	129 137	678 600
Peak 15-Min			bound				bound				oound	-			oound	-		
Flowrates	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	To	tal
All Vehicles	0	0	0	0	44	0	4	0	0	760	0	0	0	284	8	0		.00
Heavy Trucks Buses Pedestrians Bicycles	0	0 0 0	0		0	0 4 0	0		0	32 0 0	0		0	36 0 0	0			68 4 O
Scooters  Comments:																		

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

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8:20 AM 8:25 AM 8:30 AM 8:35 AM 8:40 AM 8:45 AM	8 8 2 9 12 4	0 0 0 0 0 0	6 6 2 3 5	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	3 2 0 2 1	1 0 2 2 2 2 0	0 0 0 0 0 0	3 3 2 1 4	18 7 8 5 8 5 3	0 0 0 0 0 0	0 0 0 0 0	61 27 29 13 25 27	342 351 355 356 362 370 358
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Page 1 of 2

5-Min Count Period	iod (Northbound)						5th Ave bound)		S		lbrook Ro ound)	d	SW Hazelbrook Rd (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		Totals
5:10 PM	19	0	0	0	0	0	0	0	0	3	0	0	0	8	0	0	30	345
5:15 PM	21	0	0	0	0	0	0	0	0	1	0	0	1	4	0	0	27	346
5:20 PM	22	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	25	347
5:25 PM	18	0	1	0	0	0	0	0	0	1	1	0	3	2	0	0	26	344
5:30 PM	27	0	0	0	0	0	0	0	0	0	1	0	1	3	0	0	32	349
5:35 PM	22	0	1	0	0	0	0	0	0	0	1	0	0	4	0	0	28	331
5:40 PM	18	0	2	0	0	0	0	0	0	2	1	0	0	4	0	0	27	325
5:45 PM	18	0	1	0	0	0	0	0	0	5	0	0	1	3	0	0	28	331
5:50 PM	16	0	2	0	0	0	0	0	0	1	1	0	0	2	0	0	22	320
5:55 PM	15	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	18	321
Peak 15-Min		North	bound			South	bound			Eastb	ound			Westl	oound		_	
Flowrates	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	10	tal
All Vehicles	168	0	40	0	0	0	0	0	0	12	12	0	152	188	0	0	5	72
Heavy Trucks	0	0	0		0	0	0		0	0	0		28	4	0			2
Buses																		
Pedestrians		164				0				0				0			1	64
Bicycles Scooters	0	0	0		0	0	0		0	0	0		0	4	0		4	4
Comments:																		

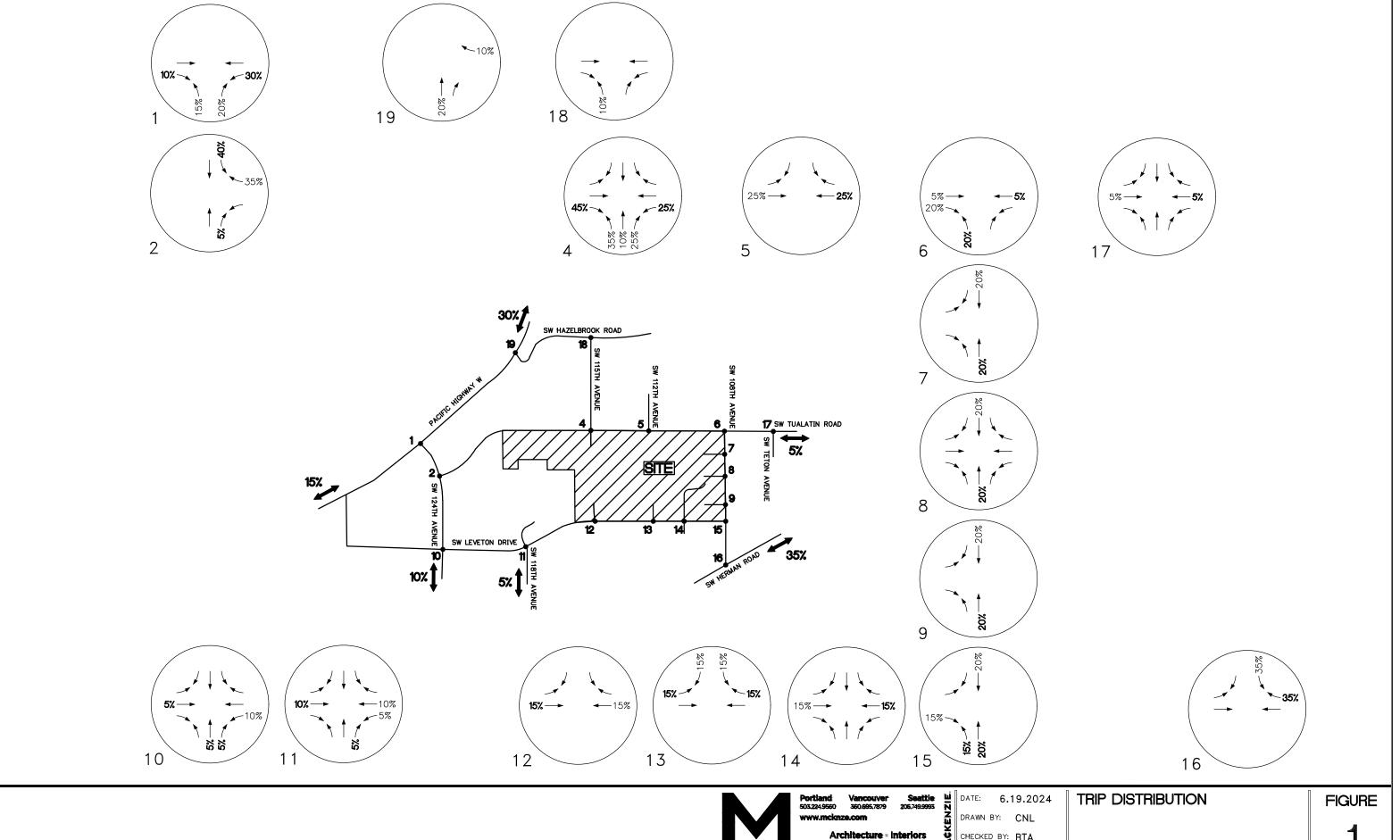
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Page 1 of 2

5-Min Count Period			ific Hwy bound)				ific Hwy bound)		S		lbrook Ro ound)	t	S		lbrook Ro bound)	d	Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		Totals
5:10 PM	0	144	4	0	0	0	0	0	0	0	0	0	0	0	31	0	179	1832
5:15 PM	0	104	2	0	0	0	0	0	0	0	0	0	0	0	20	0	126	1802
5:20 PM	0	118	1	0	0	0	0	0	0	0	0	0	0	0	26	0	145	1796
5:25 PM	0	103	2	0	0	0	0	0	0	0	0	0	0	0	22	0	127	1783
5:30 PM	0	111	1	0	0	0	0	0	0	0	0	0	0	0	25	0	137	1788
5:35 PM	0	113	1	0	0	0	0	0	0	0	0	0	0	0	26	0	140	1754
5:40 PM	0	102	2	0	0	0	0	0	0	0	0	0	0	0	25	0	129	1712
5:45 PM	0	129	6	0	0	0	0	0	0	0	0	0	0	0	16	0	151	1711
5:50 PM	0	79	1	0	0	0	0	0	0	0	0	0	0	0	25	0	105	1702
5:55 PM	0	127	0	0	0	0	0	0	0	0	0	0	0	0	16	0	143	1698
Peak 15-Min		North	bound			South	bound			Eastb	ound			Westl	bound		_	
Flowrates	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	10	tal
All Vehicles	0	1624	24	0	0	0	0	0	0	0	0	0	0	0	348	0	19	96
Heavy Trucks	0	32	0		0	0	0		0	0	0		0	0	8			.0
Buses																		
Pedestrians		0				0				0				0			(	)
Bicycles Scooters	0	0	0		0	0	0		0	0	0		0	0	0		(	Ö
Comments:																		

Report generated on 6/17/2024 10:33 AM



Planning - Engineering

CHECKED BY: BTA

224002200

LAM RESEARCH TUX- SITE TUALATIN, OR

## Re: Lam TIA

## Joel Rabinovitz < joel.rabinovitz@dksassociates.com>

Tue 7/2/2024 9:52 AM

To:Brent Ahrend <BAhrend@mcknze.com>

Cc:Kim McMillan <a href="mailto:kmcmillan@tualatin.gov">kmcmillan@tualatin.gov</a>;Garth Appanaitis <gaa@dksassociates.com</a>;Hayden Ausland

<hausland@tualatin.gov>;Tony Doran <TDORAN@tualatin.gov>;Mike McCarthy <mmccarthy@tualatin.gov>;Abby McFetridge

<Amcfetridge@tualatin.gov>;Suzannah Stanley <SStanley@mcknze.com>;Bill Bezio <WBezio@mcknze.com>;

rsj@dksassociates.com <rsj@dksassociates.com>;brian.copeland@dksassociates.com <bri>Clara Layton <CLayton@mcknze.com>

I concur with the items noted.

loe

Joel Rabinovitz, PE (OR, TX, WA) | Senior Transportation Engineer

Direct: 503.972.1209 | Cell: 925.285.6574 | joel.rabinovitz@dksassociates.com

On Mon, Jul 1, 2024 at 12:48 PM Brent Ahrend < BAhrend@mcknze.com > wrote:

All,

Thanks for the review of our revised TIA scoping letter and discussion at the meeting on June 27. This email summarizes the discussion and agreement to add an intersection to the study area.

- The intersection of Herman Road with Teton Avenue will be added to the study area based on the number of trips (up to 85 peak hour) added to the intersection. Joel confirmed it is a signalized intersection.
- In order to meet the current schedule, we will utilize counts from 2019, which Joel noted are likely higher than current volumes.
- We will not be adding the intersection of Tualatin-Sherwood Road/Teton Avenue because the increase is below the 10% threshold, with about half of the trips from the Herman/Teton intersection traveling to/from the south.
- The three buildings of the TUX project will have 600 employees working a typical day shift schedule. No manufacturing employees will be added. Therefore no additional daily trips would be generated beyond the 2036 estimated in the letter.

Let us know if you have any questions or comments on the summary,

**Brent Ahrend PE** 

Transportation Planning

**D** 971-346-3781 **C** 503-705-7554

Associate Principal

**Professional Licenses & Certifications** 

Mackenzie.

ARCHITECTURE • INTERIORS • STRUCTURAL, CIVIL, AND TRAFFIC ENGINEERING LAND USE AND TRANSPORTATION PLANNING • LANDSCAPE ARCHITECTURE

<u>Disclaimer</u> PORTLAND, OR | VANCOUVER, WA | SEATTLE, WA

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Our offices will be closed Thursday, July 4th through Friday, July 5th. We will reopen on Monday, July 8th, 2024. If you need immediate assistance, please leave a message at 503.224.9560, which will be monitored closely. Happy Independence Day!

From: Kim McMillan < <a href="mailto:kmcmillan@tualatin.gov">kmcmillan@tualatin.gov</a> Sent: Wednesday, June 26, 2024 3:15 PM To: Bill Bezio <a href="mailto:kmcmillan@tualatin.gov">kmcmillan@tualatin.gov</a> Sent: Wednesday, June 26, 2024 3:15 PM

Subject: FW: Lam TIA

Hi Bill.

Garth with DKS will be attending our meeting tomorrow. I'm forwarding you his email with questions and comments that Brent may want to see ahead of tomorrow's meeting. I also think that a transportation focused meeting with DKS, Mackenzie, and city staff may need to be scheduled in the very near future.

Kim McMillan, P.E.

Community Development Director

City of Tualatin

Phone: 503-691-3036 | Cell: 503-866-5784

www.tualatinoregon.gov

kmcmillan@tualatin.gov

From: Joel Rabinovitz < joel.rabinovitz@dksassociates.com >

**Sent:** Wednesday, June 26, 2024 2:45 PM **To:** Kim McMillan **< kmcmillan@tualatin.gov**>

**Cc:** Garth Appanaitis <<u>gaa@dksassociates.com</u>>; Hayden Ausland <<u>hausland@tualatin.gov</u>>; Tony Doran

<TDORAN@tualatin.gov>; Mike McCarthy <mmccarthy@tualatin.gov>; Abby McFetridge

< <u>Amcfetridge@tualatin.gov</u>>; Randy Johnson < <u>rsj@dksassociates.com</u>>; Brian Copeland

<br/>brian.copeland@dksassociates.com>; Joel Rabinovitz <<u>JAR@dksassociates.com</u>>

Subject: Re: Lam TIA

Kim,
The conflict I had for tomorrow's meeting has been cancelled, so I will be able to attend instead of Garth.
It looks like they addressed most of the questions I had previously. However, with this new approach, I have a few comments:
- The memo shows 35% distribution east on Herman Rd. The next intersection (Teton Ave) is only ~1000' to the east of the Herman Rd/108th Ave intersection. Should this intersection not also be added as a study intersection?
- Would the distribution east of Herman Rd/108th Ave intersection at Teton Ave be all to/from the east on Herman or would some turn down/come from Teton Ave to/from Tualatin-Sherwood Rd?
- The memo states that no other WA County intersections were assumed as the added volume does not exceed the 10% ADT threshold. However, there is no table or graphic showing that this is the case. If they are proposing 35% to/from Herman Rd, and a good portion of that would actually be coming/going to/from Teton Ave, that could very easily exceed the 10% on Teton Ave.
- The existing campus has 1160 office/lab employees plus 400 manufacturing staff. For the proposed TUX site, it is not clear if the 600 employees are inclusive or exclusive of any manufacturing staff (if there are any). While this would not change the AM and PM peak hour trips, it would increase the daily trips beyond just the 600 employees. This in turn could result in additional intersections needing to be analyzed, as the percent increase could exceed 10%,
Cheers,
Joel
<b>Joel Rabinovitz, PE (or, Tx, wa)</b>   Senior Transportation Engineer Direct: 503.972.1209   Cell: 925.285.6574   joel.rabinovitz@dksassociates.com

On Mon, Jun 24, 2024 at 1:23 PM Kim McMillan < <a href="mailto:kmcmillan@tualatin.gov">kmcmillan@tualatin.gov</a>> wrote:

I couldn't find where I had sent this latest TIA Scoping email to you for review and comment ahead of Thursday's meeting. Call me if you have questions.

Kim McMillan, P.E.

Community Development Director

City of Tualatin

Phone: 503-691-3036   Cell: 503-866-5784	
www.tualatinoregon.gov	
kmcmillan@tualatin.gov	
From: Garth Appanaitis <gaa@dksassociates.com> Sent: Friday, June 21, 2024 12:11 PM To: Kim McMillan <kmcmillan@tualatin.gov> Cc: Hayden Ausland <has begin{pictual}hausland@tualatin.gov=""> ; Tony Doran <tdoran@tualatin.gov>; Mike McCommccarthy@tualatin.gov&gt;; Abby McFetridge <hac begin{pictual}hausland@tualatin.gov="">; Randy Johnson <hac begin{pictual}hausland@dksassociates.com="">; Joel Rabinovious Alamadaksassociates.com&gt;; Joel Rabinovious Alamadaksassociates.com&gt; Subject: Re: Lam TIA</hac></hac></tdoran@tualatin.gov></has></kmcmillan@tualatin.gov></gaa@dksassociates.com>	
Hi Kim,	
Yes, we'll take a look and provide comments to cover this while Randy is out. I know Joel Rabinovitz has this one and I've chatted with him and we will coordinate comments early next week.	been involved in
When are you seeking comments on the updated letter?	
We can also plan to attend the weekly Thursday morning meetings. Joel has a conflict next week so I or s that is up to speed may need to cover in his place for the initial meeting. In the meantime can you please invite to Joel and me?	
Thanks, Garth	
Garth Appanaitis, PE (OR) (he/him)   Project Manager, Portland Planning Group Mar Direct: 503.972.1212   Cell: 971.570.4709   gaa@dksassociates.com	nager
1050 SW 6th Avenue, Suite 600 Portland, OR 97204   503.243.3500 dksassociates.com	

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n T	nu, Jun 20, 2024 at 3:15 PM Brian Copeland < <u>brian.copeland@dksassociates.com</u> > wrote:
	Kim -
	vill be out next week, but I will reach out to someone in our planning group and find someone to help with this. V Il be back in touch once we figure out a plan.
Tŀ	anks!
Bı	ian
	rian K. Copeland, PE (he/him)   Principal, Sr. Project Manager
	rian K. Copeland, PE (he/him)   Principal, Sr. Project Manager rect: 503.972.1240   Cell: 503.753.8992   bkc@dksassociates.com
D	rect: 503.972.1240   Cell: 503.753.8992   bkc <u>@dksassociates.com</u>
10	
10 <b>d</b>	rect: 503.972.1240   Cell: 503.753.8992   bkc <u>@dksassociates.com</u>
10 <b>d</b>	rect: 503.972.1240   Cell: 503.753.8992   bkc@dksassociates.com  050 SW 6th Avenue, Suite 600   Portland, OR,97204   503.243.3500  (sassociates.com
D 10 d D D D D D D D D D D D D D D D D D D	rect: 503.972.1240   Cell: 503.753.8992   bkc@dksassociates.com  050 SW 6th Avenue, Suite 600   Portland, OR,97204   503.243.3500  (Sassociates.com  (S Associates is an employee-owned company.  S message contains information which may be confidential and privileged. Unless you are the addressee (or authorized to receive for the addressee), y
D 10 d Di	rect: 503.972.1240   Cell: 503.753.8992   bkc@dksassociates.com  050 SW 6th Avenue, Suite 600   Portland, OR,97204   503.243.3500  (Sassociates.com  (S Associates is an employee-owned company.
D 10 d Di	rect: 503.972.1240   Cell: 503.753.8992   bkc@dksassociates.com  050 SW 6th Avenue, Suite 600   Portland, OR,97204   503.243.3500  (Sassociates.com  (S Associates is an employee-owned company.  S message contains information which may be confidential and privileged. Unless you are the addressee (or authorized to receive for the addressee), you out use, copy, distribute or disclose to anyone this message or any information contained in or attached to this message. If you have received this
D 10 d Di	rect: 503.972.1240   Cell: 503.753.8992   bkc@dksassociates.com  050 SW 6th Avenue, Suite 600   Portland, OR,97204   503.243.3500  (Sassociates.com)  (S Associates is an employee-owned company.  Is message contains information which may be confidential and privileged. Unless you are the addressee (or authorized to receive for the addressee), you not use, copy, distribute or disclose to anyone this message or any information contained in or attached to this message. If you have received this
D d d	rect: 503.972.1240   Cell: 503.753.8992   bkc@dksassociates.com  050 SW 6th Avenue, Suite 600   Portland, OR,97204   503.243.3500  (Sassociates.com)  (S Associates is an employee-owned company.  S message contains information which may be confidential and privileged. Unless you are the addressee (or authorized to receive for the addressee), you not use, copy, distribute or disclose to anyone this message or any information contained in or attached to this message. If you have received this
D d d	rect: 503.972.1240   Cell: 503.753.8992   bkc@dksassociates.com  050 SW 6th Avenue, Suite 600   Portland, OR,97204   503.243.3500  (S Associates.com  (S Associates is an employee-owned company.  Is message contains information which may be confidential and privileged. Unless you are the addressee (or authorized to receive for the addressee), you not use, copy, distribute or disclose to anyone this message or any information contained in or attached to this message. If you have received this sesage in error, please advise the sender and delete this message along with any attachments or links from your system.

Also, we have a weekly coordination meeting on Thursdays at 11 am. The Lam team has asked if DKS, as the City's traffic consultant, can attend the next 6-8 meetings. Is that workable – the meetings are on Teams?

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Kim McMillan, P.E.

Community Development Director

City of Tualatin

Phone: 503-691-3036 | Cell: 503-866-5784

www.tualatinoregon.gov kmcmillan@tualatin.gov

# **Clara Layton**

**From:** Abby McFetridge <Amcfetridge@tualatin.gov>

**Sent:** Tuesday, July 9, 2024 1:26 PM

**To:** Abby McFetridge

**Subject:** FW: Lam TUX - Traffic Analysis Update

From: RUSSELL John < John.RUSSELL@odot.oregon.gov >

**Sent:** Tuesday, July 2, 2024 5:45 PM **To:** Tony Doran <TDORAN@tualatin.gov>

**Cc:** Mike McCarthy < mmccarthy@tualatin.gov >; Kim McMillan < kmcmillan@tualatin.gov >; Hayden Ausland

<a href="mailto:square;"><a href="mailto:hausland@tualatin.gov"><a href="mailto:hausland@tualati

Subject: RE: Lam TUX - Traffic Analysis Update

# Tony,

After reviewing the updated scoping memo, **ODOT does not have concerns with the proposed trip generation** for the Lam TUX site. ODOT recommends that the City of Tualatin require analysis of any ODOT intersections impacted by at least 50 peak hour trips.

In our previous comments I expressed that 5% to the east on SW Tualatin Road seemed low, but after reviewing Figure 1 showing trip distribution (excerpt included below), I am realizing that "35% to/from the west on SW Herman Road via SW 108th Avenue" should instead read "35% to/from the east on SW Herman Road via SW 108th Avenue," which is in line with my expectations and previous comments. With 40% of trips heading to/from the east, ODOT would recommend analysis if the development generates at least 50 peak hour trips along ODOT facilities to the east, which could include on- and off-ramps at the SW Nyburg St Interchange (I-5 exit 289) and/or the intersection of SW Lower Boones Ferry Rd & SW Boones Ferry Rd, depending on trip distribution further east.

With 30% of trips heading to/from the north on OR 99W (while less than the 45% of trips originally proposed), it is not unreasonable to expect that traffic generation at additional intersections along OR 99W may exceed our analysis thresholds, including but not limited to **Fischer Rd, Durham Rd, Royalty Pkwy, Beef Bend Rd**, etc. As before, ODOT recommends that the City of Tualatin require analysis of these intersections along OR 99W in King City that exceed 50 new peak hour trips.

Please let us know if you have any remaining questions.

Thank you,

John Russell, PE [he/him] Traffic Analysis Engineer Oregon Dept of Transportation John.Russell@odot.oregon.gov 503.731.8282



# **RE: LAM TUX TIA Scoping - ODOT Comments**

From Brent Ahrend <BAhrend@mcknze.com>

Date Thu 7/18/2024 8:59 AM

To Abby McFetridge < Amcfetridge@tualatin.gov>

Joel <joel.rabinovitz@dksassociates.com>

Cc Mike McCarthy <mmccarthy@tualatin.gov>; Kim McMillan <kmcmillan@tualatin.gov>; Tony Doran <TDORAN@tualatin.gov>; Hayden Ausland <hausland@tualatin.gov>; Steve Koper <skoper@tualatin.gov>; Keith Leonard <kleonard@tualatin.gov>; Bill Bezio <WBezio@mcknze.com>; Clara Layton <CLayton@mcknze.com>; Franklyn Santos <FSantos@mcknze.com>; Suzannah Stanley <SStanley@mcknze.com>; Jennifer.Otterness@lamresearch.com <Jennifer.Otterness@lamresearch.com>; Megan Diaz <MDiaz@mcknze.com>; Braun, Liatt <Liatt.Braun@jacobs.com>; Chittenden, Todd <Todd.Chittenden@jacobs.com>; Mustonen, David <david.mustonen@jacobs.com>; Paul.Roessler@lamresearch.com>; Todd.Fosler@lamresearch.com <Todd.Fosler@lamresearch.com>; Rabinovitz,

# Abby,

We took a look at ODOT's request to add intersections to the study area as well as your suggestion to include the Fischer and Durham Road intersections with Hwy 99W.

# Per ODOT's Development Review Guidelines and Appendices

https://www.oregon.gov/odot/Planning/Documents/Development-Review-Guidelines-and-Appendices.pdf, unless a project is requesting access on an ODOT highway or a Plan Amendment is proposed (neither is for Lam) the decision on the scope of the traffic analysis including study area intersections is up to the local jurisdiction. In general, ODOT recommends intersections within a one-mile radius, and suggests a threshold of 50 peak hour trips for ODOT approach permits.

Assuming the one-mile study area and 50 trip threshold, only the intersections of Fischer and Durham Roads with Hwy 99W would meet. We have already analyzed the Hwy 99W at SW 124<sup>th</sup> Avenue intersection and found that intersection would meet standards with both phases of the Lam project, and with fewer trips added at the Fischer and Durham Road intersections they would also likely meet standards.

Here is a summary of our review:

We extended our distribution to the east towards I-5 and north along Hwy 99W.

We assumed 40% of the site trips travel to and from the east on Herman and Tualatin Roads, with up to 20% of the site trips using the Nyberg interchange and up to 10% of the trips traveling through the SW Lower Boones Ferry Rd/SW Boones Ferry Rd intersection. Both of these intersections are outside the one-mile radius and would have up to 49 peak hour trips at Nyberg and 24 trips at the Lower Boones Ferry/Boones Ferry intersection. Based on 2018 volumes of 5164 trips at the interchange this is less than a 1% impact.

We assumed 30% of site trips would travel north on Hwy 99W at the Tualatin River crossing. The 30% carries to the Fischer Road intersection and most of that will make it to Durham Road. This represents up to 73 AM and 70 PM trips. Hwy 99W/SW Fischer Rd is a 1.6% impact from 4,387 trips in 2018, and

Hwy 99W/SW Durham Rd with 4,465 peak hour trips in 2019 is a 1.6% increase. Beyond Durham Road, we anticipate 20% of site trips would continue north, so there would be less than 50 peak hour trips at the SW Beef Bend Rd and Bull Mountain Rd intersections, plus both are well over one mile from the site.

We can include this information in our traffic analysis regarding trip distribution, number of trips and percentage impact at each of these intersections noted by ODOT. We are not sure a detailed analysis would be of value given the less than 2% impact at these intersections.

**Brent Ahrend** PE D 971-346-3781 C 503-705-7554 Transportation Planning
Associate Principal

**Professional Licenses & Certifications** 

From: Abby McFetridge < Amcfetridge@tualatin.gov>

Sent: Tuesday, July 9, 2024 1:31 PM

To: Brent Ahrend <BAhrend@mcknze.com>

**Cc:** Mike McCarthy <mmccarthy@tualatin.gov>; Kim McMillan <kmcmillan@tualatin.gov>; Tony Doran <TDORAN@tualatin.gov>; Hayden Ausland <hausland@tualatin.gov>; Steve Koper <skoper@tualatin.gov>; Keith Leonard <kleonard@tualatin.gov>; Bill Bezio <WBezio@mcknze.com>; Clara Layton <CLayton@mcknze.com> **Subject:** RE: LAM TUX TIA Scoping - ODOT Comments

Hi Brent,

Yes, I have attached the original ODOT email.

Thanks,

# Abby McFetridge, EI

Engineering Associate | Community Development

From: Brent Ahrend <BAhrend@mcknze.com>

**Sent:** Tuesday, July 9, 2024 12:07 PM

To: Abby McFetridge < <a href="mailto:Amcfetridge@tualatin.gov">Amcfetridge@tualatin.gov</a>>

**Cc:** Mike McCarthy <<u>mmccarthy@tualatin.gov</u>>; Kim McMillan <<u>kmcmillan@tualatin.gov</u>>; Tony Doran <<u>TDORAN@tualatin.gov</u>>; Hayden Ausland <<u>hausland@tualatin.gov</u>>; Steve Koper <<u>skoper@tualatin.gov</u>>; Keith Leonard <<u>kleonard@tualatin.gov</u>>; Bill Bezio <<u>WBezio@mcknze.com</u>>; Clara Layton <<u>CLayton@mcknze.com</u>>

**Subject:** RE: LAM TUX TIA Scoping - ODOT Comments

Abby,

Thanks for sharing ODOT's comments. We will review and be ready to discuss on Thursday.

Can you provide us with their original letter or email for our records?

Brent Ahrend PE

**Transportation Planning** 

**D** 971-346-3781 **C** 503-705-7554

Associate Principal

Professional Licenses & Certifications



Mackenzie.

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From: Abby McFetridge < Amcfetridge@tualatin.gov >

**Sent:** Tuesday, July 9, 2024 10:50 AM **To:** Brent Ahrend < <u>BAhrend@mcknze.com</u>>

**Cc:** Mike McCarthy < <a href="mmccarthy@tualatin.gov">mmccarthy@tualatin.gov">; Tony Doran</a>

<<u>TDORAN@tualatin.gov</u>>; Hayden Ausland <<u>hausland@tualatin.gov</u>>; Steve Koper <<u>skoper@tualatin.gov</u>>; Keith

Leonard <<u>kleonard@tualatin.gov</u>>; Bill Bezio <<u>WBezio@mcknze.com</u>>

**Subject:** LAM TUX TIA Scoping - ODOT Comments

### Hi Brent,

We recently received the response below from ODOT regarding the TIA scoping memo for the LAM TUX project. We wanted to give you a heads up with the intent to discuss more at the Thursday meeting.

First, it would be helpful to have the Trip Distribution extended on Tualatin-Sherwood Rd to I-5 and north on OR 99 to Beef Bend Rd so that we can see the percentages at ODOT's mentioned intersections. It would also be helpful to have what percent the 50 veh threshold is (by our initial calculations, it appears to be just under 22% - AM 50/233 = 21.5% and PM 50/244 = 20.5%).

While we understand the proportionality from the LAM development is likely low on the subsequent intersections, we also see potential benefit in including the Hwy 99 & Fischer Rd and Hwy 99 & Durham Rd in the analysis, rather than dismissing *all* of their comments. Additionally, it could be beneficial in conversations with the community.

"After reviewing the updated scoping memo, ODOT does not have concerns with the proposed trip generation for the Lam TUX site. ODOT recommends that the City of Tualatin require analysis of any ODOT intersections impacted by at least 50 peak hour trips.

In our previous comments I expressed that 5% to the east on SW Tualatin Road seemed low, but after reviewing Figure 1 showing trip distribution (excerpt included below), I am realizing that "35% to/from the west on SW Herman Road via SW 108th Avenue" should instead read "35% to/from the **east** on SW Herman Road via SW 108th Avenue," which is in line with my expectations and previous comments. With 40% of trips heading to/from the east, ODOT would recommend analysis if the development generates at least 50 peak hour trips along ODOT facilities to the east, which could include on- and off-ramps at the SW Nyburg St Interchange (I-5 exit 289) and/or the intersection of SW Lower Boones Ferry Rd & SW Boones Ferry Rd, depending on trip distribution further east.

With 30% of trips heading to/from the north on OR 99W (while less than the 45% of trips originally proposed), it is not unreasonable to expect that traffic generation at additional intersections along OR 99W may exceed our analysis thresholds, including but not limited to **Fischer Rd, Durham Rd, Royalty Pkwy, Beef Bend Rd**, etc. As before, ODOT recommends that the City of Tualatin require analysis of these intersections along OR 99W in King City that exceed 50 new peak hour trips."

Again, we can discuss this more on Thursday. Best.

# Abby McFetridge, El

Engineering Associate
City of Tualatin | Community Development
503.691.3020 | www.tualatinoregon.gov



Emailed: July 24, 2024

Mackenzie

Attn: Suzannah Stanley, Senior Associate

1515 SE Water Ave., Suite 100

Portland, OR 97214

<u>SStanley@mcknze.com</u> (emailed and sent first class mail)

RE: Completeness Determination for: Lam Research TUX Expansion, IMP24-0001 and AR24-0002, 11155-11361 SW Leveton Dr., Tax Lots 2S122AA00500, 2122SSAA00800, 2S122AB00100 and 2S122BA00100.

Ms. Stanley,

Thank you for submitting an Industrial Master Plan (IMP) and Architectural Review (AR) applications for the Lam Research TUX expansion at 11155-11361 SW Leveton Drive (Tax Map/Lots: 2S122AA00500, 2122SSAA00800, 2S122AB00100 and 2S122BA00100) on July 8, 2024. Please be advised both IMP24-0001 and AR24-0002 have been **deemed incomplete** in accordance with the Tualatin Development Code (TDC) Subsection 32.160 and Oregon Revised Statutes (ORS) 227.178. All references below are to the TDC unless otherwise noted. The time period in which the City must take final action is suspended pending resolution of the items listed below.

<u>Completeness Items</u>: The following items can be submitted by email or other electronic means. For IMP24-0001 and AR24-0002 the following items are needed to demonstrate the application is complete:

- 32.140(1)(c): an updated Transportation Impact Analysis including the following information:
  - Trip distribution with the ODOT-identified intersections on Hwy 99 and Nyberg/I-5 interchange, if development would add more than 50 trips per hour. Identify number of trips if under the 50 trip threshold.
  - Meet all standards from Tualatin Traffic Study Requirements document (Example: executive summary is missing. Add anything else that is missing).
  - Hazelbrook Rd & OR 99W needs to be modeled with the actual traffic control device (stop sign, not yield).
  - For any road or intersection that is not meeting LOS standards or has queues that exceeds available turn storage, recommended improvements in the Recommendations section.
    - Queue length exceeding available storage must be addressed.
    - Movements for which demand exceeds capacity must be addressed.
  - Discussion/analysis of post-development conditions or upgrades to ped/bike/transit facilities. Refer to statements in the Traffic Study Requirements document.
  - Addressing queue lengths; ex: queues are shown to decrease from 2027 predevelopment to 2027 post-development (SBL at 124th & Tualatin Rd).
  - SimTraffic video files.

10699 SW Herman Road, Tualatin, Oregon 97062



32.140(1)(h): A statement as to whether any City-recognized Citizen Involvement Organizations
(CIOs) whose boundaries include, or are adjacent to, the subject property were contacted in
advance of filing the application and, if so, a summary of the contact. The summary must include
the date when contact was made, the form of the contact and who it was with (e.g. phone
conversation with neighborhood association chairperson, meeting with land use committee,
presentation at neighborhood association meeting), and the result;

For IMP24-0001: The following items are needed to demonstrate the application is complete:

• 33.050(4)(b) A written statement describing all alternate development standards that may include the following: Building Height, Parking lot Landscaping standards and any other section of code that is proposed to be modified through the IMP process must be described in the narrative.

For AR24-0002 the following items are needed to demonstrate the application is complete:

- 32.140(1)(i): Hydraulic Modeling
  - Apply in TRAKiT for a HWM
  - Attach: A plan clearly highlighting the existing and proposed public water system matching your needs and the water master plan.
  - If staff indicate a need, you will need to submit revised plans matching the results of modeling.
- 32.140(1)(i): TVF&R SPL
  - o Including hydrant test reports; and the application indicating use.
  - Pay the \$2,000 deposit requested by TRAKiT matching the fee schedule. (Staff will
    provide your submittals to our consultant. One a resulting memo is available actual
    consultant costs will be provided. Any additional expenses will be requested prior to
    providing your team the memo.)
- 32.140(1)(i) Republic Services SPL

Additional Items: The following items can be submitted by email or other electronic means. For IMP24-0001 and AR24-0002 the following items are needed to support a recommendation of approval to the applicable hearing bodies and are recommended to be submitted before a hearing is scheduled. Note that the applications have not been fully reviewed for conformance against the applicable approvals standards. While our best effort has been made to identify any potential approvability items, further review of the applications will be required before a recommendation to the applicable hearing bodies can be made.

- 32.140(1)(b): address or update the responses to the following:
  - 32.120 Neighborhood Meeting.
  - o 32.130 Initiation of Applications.
  - 32.150 Sign Posting.
  - o 32.230 Type III Procedure (Quasi-Judicial Review Public Hearing).

For AR24-0002 the following items are needed to support a recommendation of approval to the applicable hearing bodies and are recommended to be submitted before a hearing is scheduled.

- 33.020 Architectural Review
  - (4)(b) Existing conditions plan, site plan, grading plan, utility plan, landscape plan, and lighting plan all drawn to scale. Please provide the existing conditions and lighting plans with a scale on all plan sheets.

- 33.110 Clarify whether tree removal is occurring with application as show on Sheet SCI-06EO.
   If trees are being removed then an arborist report and other requirements of this section are needed to be submitted.
- 33.020(6)(b)(i) Propose a "reasonable time schedule placed on construction activities associated with the proposed development, or portion of the development." No time schedule is identified. Please include details regarding phasing of both private improvements and public improvements as required by 74.110. In lieu of a plan to phase the development, Section (iii) allows for the entirety of the development to be approved as a single phase and developed on a phased schedule subject to "security from the property owners in such an amount that will assure compliance with approval granted."

For AR24-0002 the following items are needed to satisfy conformance with the below listed standards. Without additional information, conditions of approval requiring completion these items following approval of the land use application will be recommended.

- 73A.300: A plan sheet showing screening details for all outdoor storage areas including the bulk gas yard facility.
- 73B.020, 73B.040, 73B.080 and 73B.090: additional details, including a planting schedule that are mentioned in the narrative with the reference to plan sheet SLA-1600 including:
  - Clarifies the planting plan in hatched area of plan set
  - o Provides landscaping calculations
  - o Includes plan details showing perimeter landscaping per 73B.040
  - Provides plan details showing that landscape buffer is being "extended" as identified in narrative
  - Details addressing 73B.080 including irrigation plan.
  - Planting schedule per 73B.090. Please provide the planting schedule that is referred to in the narrative findings.
- A detail showing screening for loading facilities per 73C.120(3). It appears that some of this loading facility will be located within Building "T" but it's unclear if that will sufficiently screen the loading facility.

# **Next Steps:**

Per ORS 227.178, please be advised that until you—as the applicant—take one of the three below listed steps, no further action will be taken on the application and your application will be void if one of the three actions listed is not taken within 180 days of the date you submitted your application (by Monday, January 5, 2025).

- 1. Submit all completeness items; or
- 2. Submit some completeness items and request that the City deem your application complete; or
- 3. Submit no completeness items and request that the City deem your application complete.

Once your application is deemed complete, staff will review your application for approvability. Staff makes every effort to identify all completeness issues with the first submittal. However, other completeness issues may arise as a result of each review. If you feel that we have made an error in our assessment, please notify us immediately so that we may resolve the issue. Please contact me with any questions at (503) 691-3029 or <a href="mailto:kleoanrd@tualatin.gov">kleoanrd@tualatin.gov</a>.

Sincerely,

Keith Leonard, AICP Associate Planner

Cc: Ajay Changaran, Lam Research Senior Director of Real Estate & Construction

Cc via email:

Kim McMillan, PE, Community Development Director

Steve Koper, AICP, Assistant Community Development Director

Mike McCarthy, PE, City Engineer

Hayden Ausland, PE, Principal Engineer

Tony Doran, Engineering Associate

Abby McFetridge, El, Engineering Associate

Ed Jones, Senior Plans Examiner

Bill Belzio, Architect, Associate Principal, Mackenzie

Ian Sisson, Mackenzie

Brett Ahrend, Mackenzie

Clara Layton, Mackenzie

Aisha Bouziane, Mackenzie

Andrew Jepson-Sullivan, Mackenzie

Megan Diaz, Mackenzie

Steven Tuttle, Landscape Architect, Mackenzie

Franklyn Santos, Mackenzie

Alan Lurie, Lam Research

Paul Roessler, Lam Research

Jennifer Otterness, Lam Research

Liat Braun, Architect, Jacobs

Benjamin Sommer, Engineer, Jacobs

David Mustonen, Jacobs

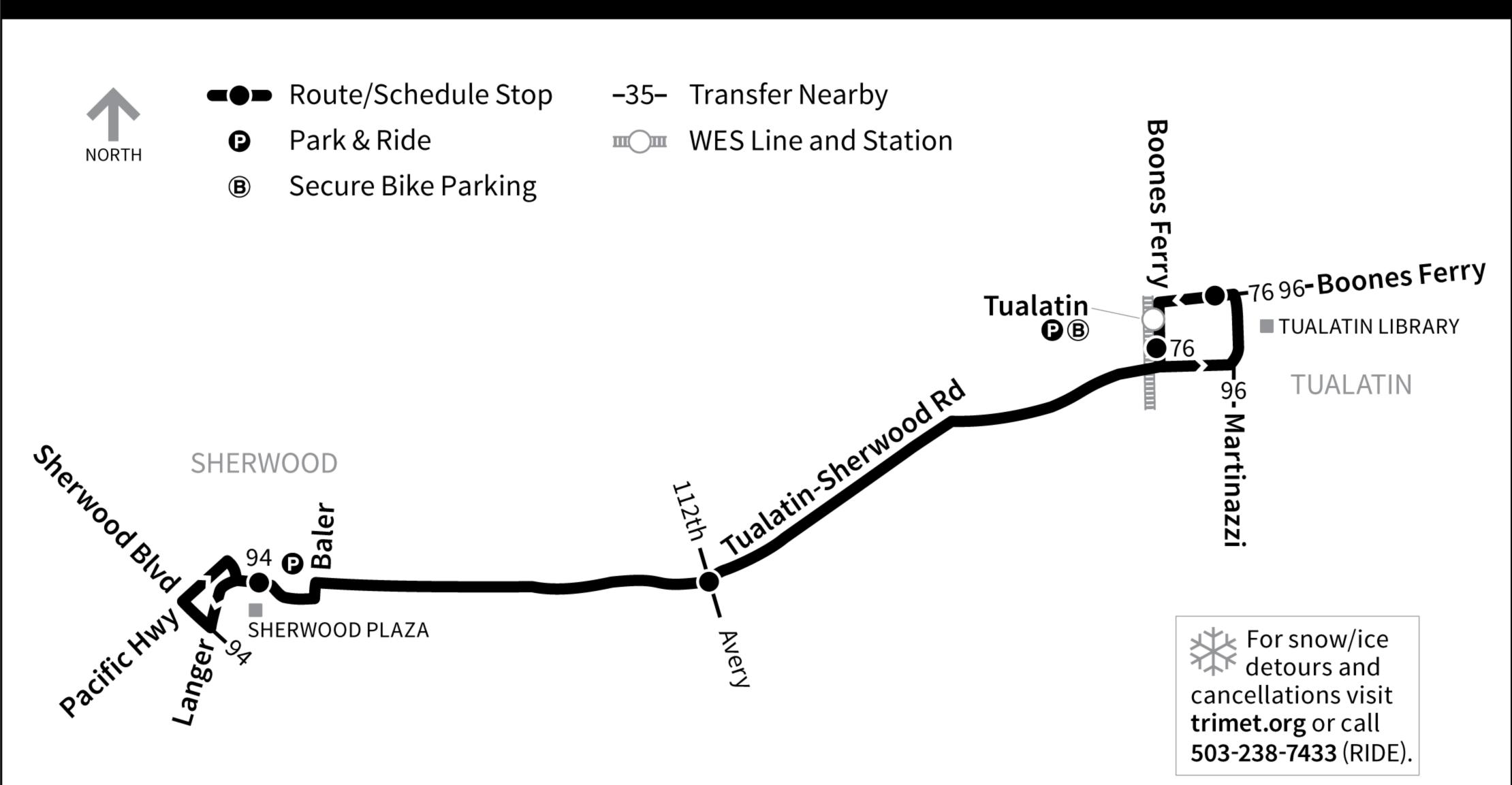
Todd Chittenden, Jacobs

Cc file: IMP24-0001/AR24-0002

APPENDIX C.

TRANSIT INFORMATION

# 97-Tualatin-Sherwood Rd





# 97-Tualatin-Sherwood Rd

Weekday	To SW Langer Dr	Sherwood Plaza
SW Boones Ferry Rd & Nyberg	9 <b>22 4</b>	SW Langer & Sherwood Plaza Stop ID 9188
6:1		6:32
7:1		7:32
8:1	8 8:23	8:32
9:1	8 9:23	9:32
3:3	3 3:39	3:50
4:4	3 4:49	5:00
5:5	3 5:59	6:10

# Times in darker print are p.m.

Please note: Schedules may change without notice by up to three minutes to relieve overcrowding or adjust to traffic conditions. Service can also be affected by construction, accidents and weather conditions. You can check for any current detours or service disruptions at *trimet.org/alerts* or call 503-238-RIDE (7433) for real-time arrival information from TransitTracker™. All buses, MAX trains and streetcars are accessible to people with disabilities.



# 97-Tualatin-Sherwood Rd Stop ID 3008 Stop ID 3008 Stop ID 3008 Stop ID 13843 Stop ID 13078 The transfer of the tr

8:16

9:16

3:31

4:41

5:51 7:01 8:18 9:18

4:43

5:53 7:03

8:08 9:08

3:20

4:29

5:38 6:50

# Times in darker print are p.m.

8:00 9:00

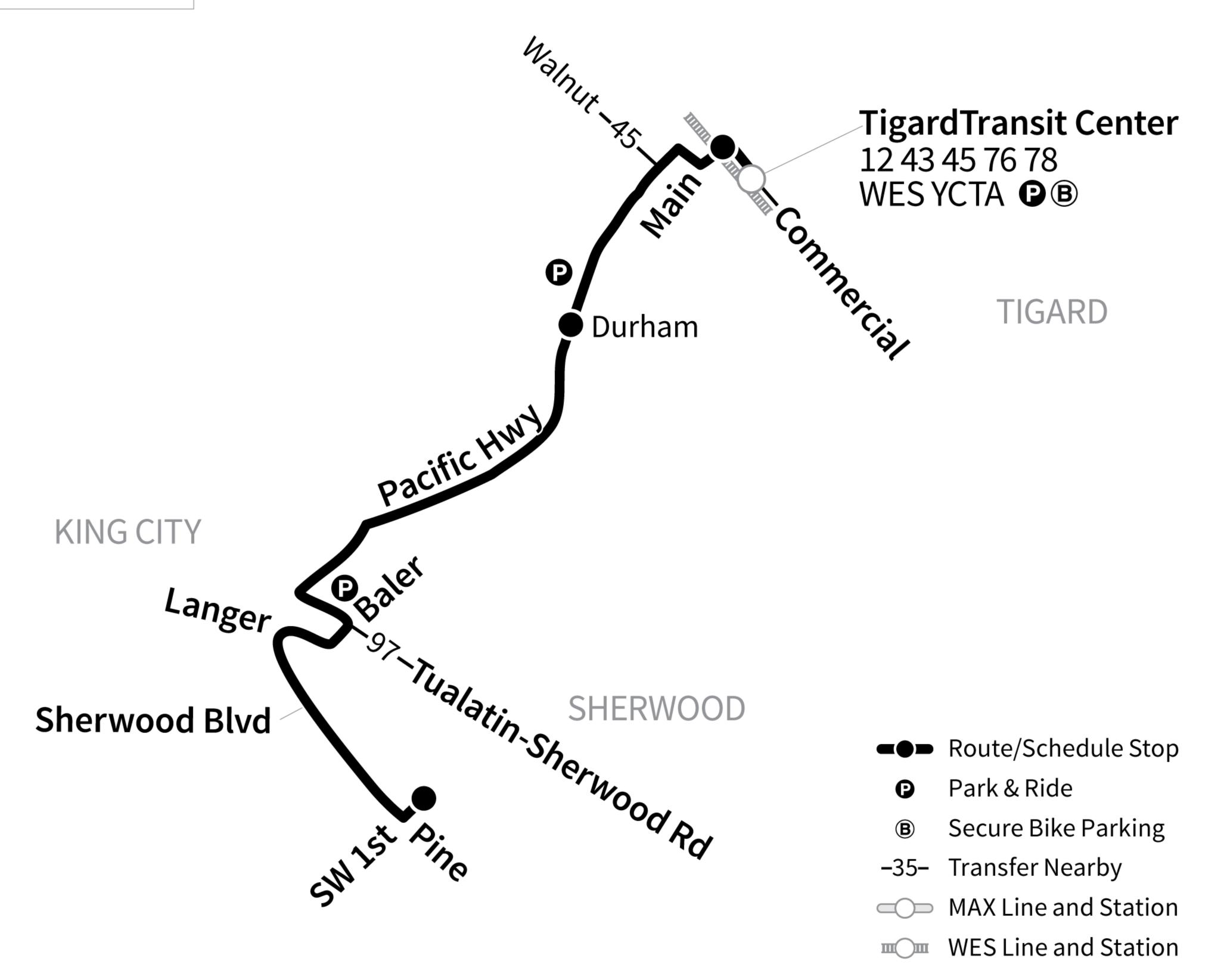
3:12

5:30 6:42

Please note: Schedules may change without notice by up to three minutes to relieve overcrowding or adjust to traffic conditions. Service can also be affected by construction, accidents and weather conditions. You can check for any current detours or service disruptions at *trimet.org/alerts* or call 503-238-RIDE (7433) for real-time arrival information from TransitTracker™. All buses, MAX trains and streetcars are accessible to people with disabilities.

For snow/ice detours and cancellations visit trimet.org or call 503-238-7433 (RIDE).







#### 94-Tigard/Sherwood Weekday To Tigard Transit Center SW Pacific Hwy & Durham Stop ID 8792 **1st & Pine** DID 14108 Stop 4:32 4:53 4:46 5:12 5:33 5:47 6:01 6:08 6:23 6:27 6:43 6:47 7:03 7:23 7:43 7:07 7.27 7:47 8:03 8:07 8:23 8:27 8:43 8:47 9:03 9:23 9:43 9:07 9:27 9:47 10:03 10:07 10:23 10:27 10:47 10:43 11:03 11:07 11:23 11:27 11:44 11:47 12:04 12:07 12:24 12:44 12:27 1:04 1:24 12:47 1:07 1:27 1:44 1:47 2:04 2:07 2:27 2:24 2:44 2:47 3:05 3:07 3:25 3:45 4:05 3:47 4:07 4:25 4:27 4:47 5:05 5:07 5:25 5:45 5:27 5:47 6:05 6:07 6:25 6:27 6:44 6:47 7:03 7:07 7:37 7:23 7:53 8:07 8:23 8:36 8:51 9:07 9:22 10:00 9:37 9:52 10:09 10:22

# Times in darker print are p.m.

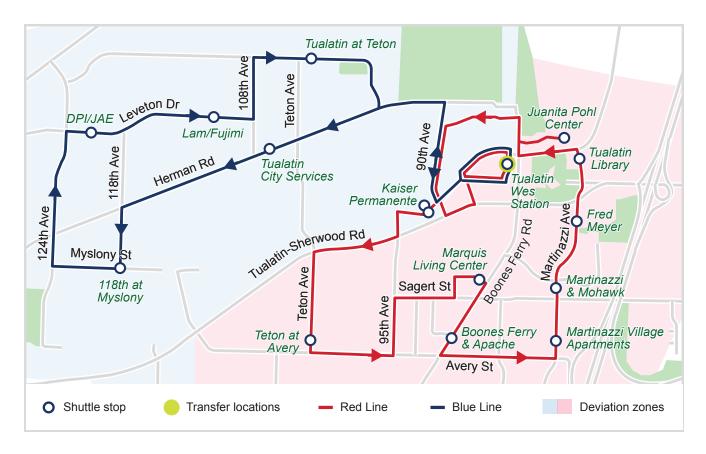
Please note: Schedules may change without notice by up to three minutes to relieve overcrowding or adjust to traffic conditions. Service can also be affected by construction, accidents and weather conditions. You can check for any current detours or service disruptions at *trimet.org/alerts* or call 503-238-RIDE (7433) for real-time arrival information from TransitTracker™. All buses, MAX trains and streetcars are accessible to people with disabilities.



94-Tigard/She	rwood	
Weekday		To Sherwood
Tigard Transit Genter Stop ID 10180	SW Pacific Hwy & Durham Stop ID 8644	<b>SW 1st &amp; Pine</b> Stop ID 14108
6:04	6:12	6:27
6:23	6:31	6:47
6:43	6:51	7:07
7:02	7:10	7:27
7:21	7:29	7:47
7:40	7:49	8:07
8:00	8:09	8:27
8:20	8:29	8:47
8:40	8:49	9:07
8:59	9:09	9:27
9:19	9:29	9:47
9:39	9:49	10:07
9:59	10:09	10:27
10:18	10:29	10:47
10:38	10:49	11:07
10:58	11:09	11:27
11:18	11:29	11:47
11:38	11:49	12:07
11:58	12:09	12:27
12:18	12:29	12:47
12:38	12:49	1:07
12:58	1:09	1:27
1:18	1:29	1:47
1:38	1:49	2:07
1:58	2:09	2:27
2:18	2:29	2:47
2:38	2:49	3:07
2:58	3:09	3:27
3:18	3:29	3:47
3:38	3:49	4:07
3:58	4:09	4:27
4:18	4:29	4:47
4:38	4:49	5:07
4:57	5:08	5:27
5:17	5:28	5:47
5:38	5:49	6:07
5:59	6:10	6:27
6:19	6:30	6:47
6:39	6:50	7:07
7:09	7:20	7:37
7:40	7:51	8:07
8:11	8:21	8:36
8:42	8:52	9:07
9:14	9:23	9:37
9:47	9:56	10:09
10:19 11:01 11:47 12:18 1:04	10:27 11:09 11:54 12:25 1:11	10:40 11:22 12:07

# Times in darker print are p.m.

Please note: Schedules may change without notice by up to three minutes to relieve overcrowding or adjust to traffic conditions. Service can also be affected by construction, accidents and weather conditions. You can check for any current detours or service disruptions at *trimet.org/alerts* or call 503-238-RIDE (7433) for real-time arrival information from TransitTracker™. All buses, MAX trains and streetcars are accessible to people with disabilities.





# **CAR SEAT REQUIREMENT**

Child passengers must be restrained in child safety seats until they weigh forty pounds or reach the upper weight limit for the car seat in use. Infants must ride rear-facing until they reach two years of age. Ride Connection does not provide/install child safety seats.



# **HOLIDAY CLOSURES**

Service will not be available on: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day. Limited service on Christmas and New Year's Eve. If a holiday falls on Saturday, there is no service on Friday; if a holiday falls on Sunday, there is no service on Monday. Information about closures available at **rideconnection.org** 



# **SEVERE WEATHER**

Information about closures available at rideconnection.org



# **COVID-19 SAFETY**

All our vehicles and drivers follow CDC protocols for COVID safe practices.



# **CONTACT US**

503-226-0700 | TTY: 711 info@rideconnection.org

## Tualatin Shuttle is operated by:



To link accessible, responsive transportation alternatives with community and individual needs.

We respect civil rights. For a copy of our policy or to request a brochure in an alternate format call the number above.

Updated December 2022



We'll get you there.

Connect with

# Tualatin Shuttle Blue & Red Line

Free weekday service open to the public



# **Tualatin Shuttle**

Blue	Line S	chedu	le					
Southbound WES Arrival Time	Tualatin WES Station	Tualatin City Services	118th at Myslony	O DPI/JAE	SW Leveton Fujimi & LAM Research)	SW Tualatin Rd & SW Teton Ave	Tualatin WES Station	Northbound WES Depart Time
IW	TM-	<b>-</b> 0-	<b>-</b> 0-				TM-	
	5:41	5:46	5:51	5:54	5:55	5:57	6:17	6:11
6:25	6:26	6:31	6:36	6:39	6:40	6:42	7:02	6:56
7:10	7:11	7:16	7:21	7:24	7:25	7:27	7:47	
7:55	7:56	8:01	8:06	8:09	8:10	8:12	8:32	
8:40	8:41	8:46	8:51	8:54	8:55	8:57	9:17	
9:25	9:26	9:31	9:36	9:39	9:40	9:42	10:02	
	3:03	3:08	3:13	3:16	3:17	3:19	3:24	3:38
	3:33	3:38	3:43	3:46	3:47	3:49	4:09	4:23
	4:18	4:23	4:28	4:31	4:32	4:34	4:54	5:08
	5:03	5:08	5:13	5:16	5:17	5:19	5:39	5:53
	5:48	5:53	5:58	6:01	6:02	6:04	6:24	6:38
6:07	6:33	6:38	6:43	6:46	6:47	6:49	7:09	

Red	Line	Sched	ule						
Southbound WES Arrival Time	Tualatin WES Station	Kaiser Permanente	SW Teton Ave & SW Avery St	Marquis Living Center	Fred Meyer	Tualatin Library	Juanita Pohl Center	Tualatin WES Station	Northbound WES Depart Time
	5:02	5:06	5:10	5:18	5:24	5:25	5:30	5:38	
	5:47	5:51	5:55	6:03	6:09	6:10	6:15	6:23	
6:25	6:32	6:36	6:40	6:48	6:54	6:55	7:00	7:08	
7:10	7:17	7:21	7:25	7:33	7:39	7:40	7:45	7:53	
7:55	8:02	8:06	8:10	8:18	8:24	8:25	8:30	8:38	
	8:53	8:57	9:01	9:09	9:15	9:16	9:21	9:29	
	12:15	12:19	12:23	12:31	12:37	12:38	12:43	12:51	
	1:00	1:04	1:08	1:16	1:22	1:23	1:28	1:36	
	1:50	1:54	1:58	2:06	2:12	2:13	2:18	2:26	
	3:00	3:04	3:08	3:16	3:22	3:23	3:28	3:36	3:38
	3:42	3:46	3:50	3:58	4:04	4:05	4:10	4:18	4:23
	4:24	4:28	4:32	4:40	4:46	4:47	4:52	5:00	5:08
	5:14	5:18	5:22	5:30	5:36	5:37	5:42	5:50	5:53
	5:56	6:00	6:04	6:12	6:18	6:19	6:24	6:32	6:38
	6:38	6:42	6:46	6:54	7:00	7:01	7:06	7:14	



# **FLAG TUALATIN SHUTTLE DOWN**

If you are on a residential street along the route, and not near a designated stop, you can "flag" or simply wave using your full arm to signal the Tualatin Shuttle bus driver to stop. Be sure to stand on the same side of the road as the bus' direction of travel. Please identify a safe location, where the bus can stop without creating a hazard, and where the driver can see you in plenty of time to stop.



# **DEVIATIONS**

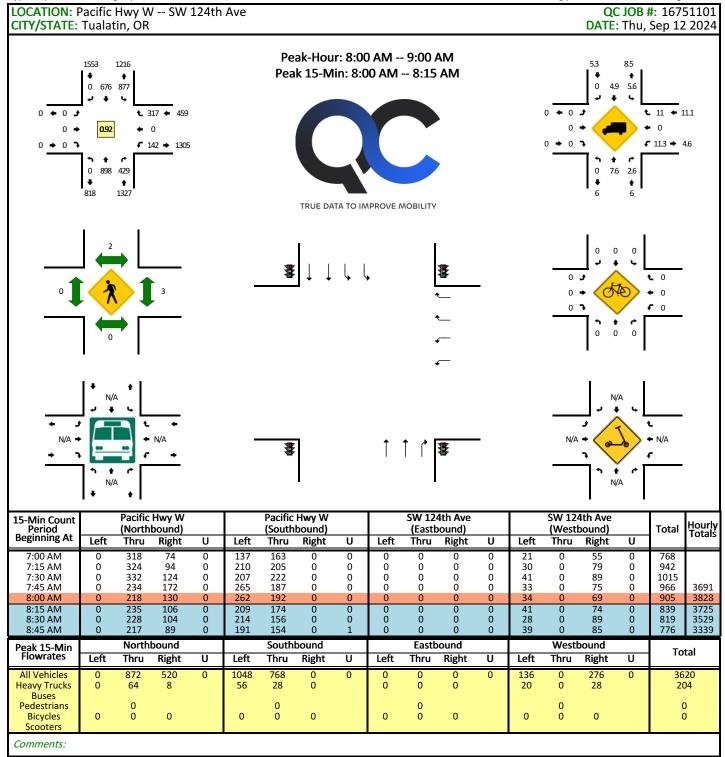
We will deviate off the route to pick you up or drop you off for one leg of your trip. Deviation requests must be called in one day in advance. To call in for a deviation, please call 503-226-0700 between 7:30am and 5pm Monday-Friday. TTY: 711.

Deviations are not reservations. If the shuttle reaches capacity, we will make every effort to accommodate you.

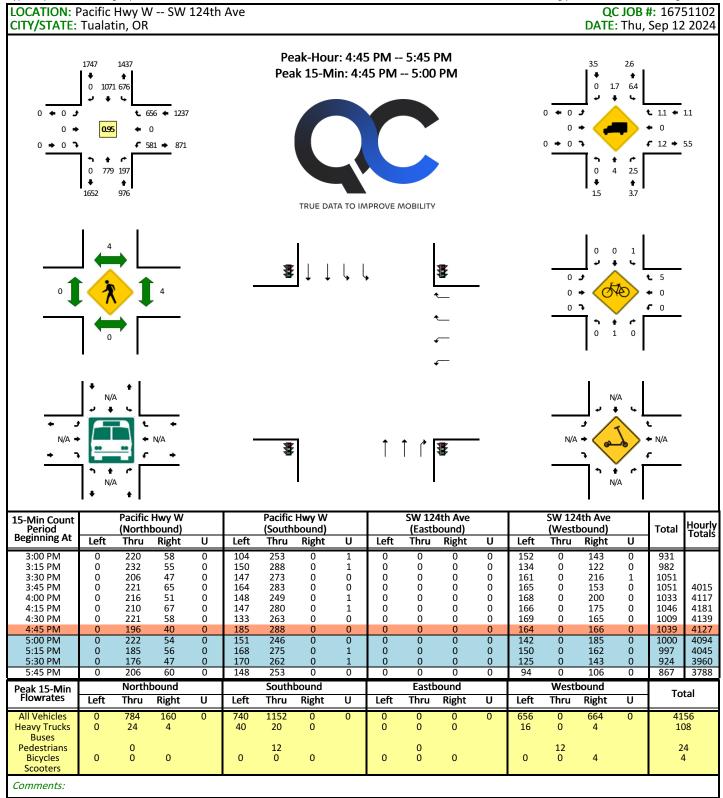


APPENDIX D.

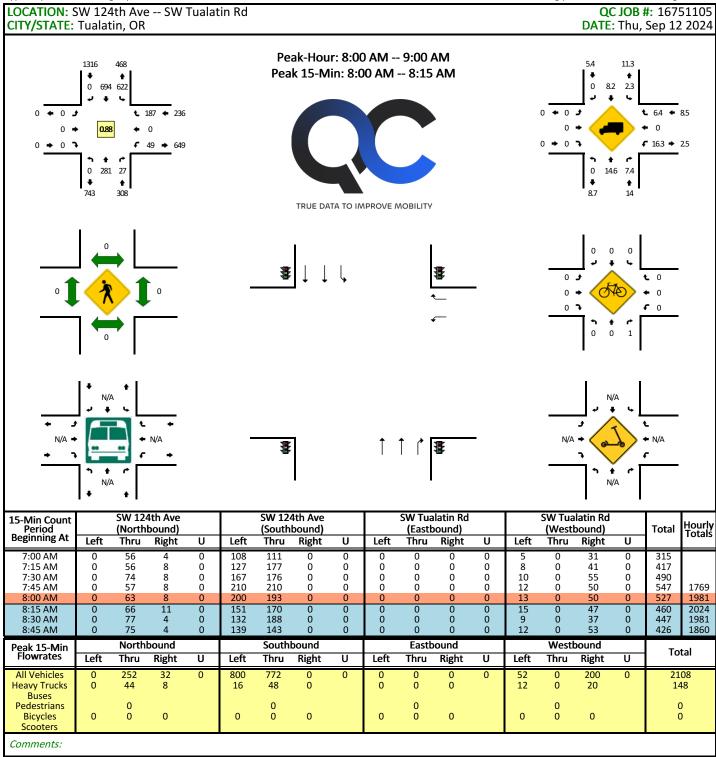
TRAFFIC COUNT SUMMARIES



Report generated on 9/20/2024 1:18 PM



Report generated on 9/20/2024 1:18 PM



Report generated on 9/20/2024 1:18 PM

LOCATION: SW 124th Ave -- SW Tualatin Rd QC JOB #: 16751106 **DATE: Thu, Sep 12 2024** CITY/STATE: Tualatin, OR Peak-Hour: 4:45 PM -- 5:45 PM 5.9 0.9 Peak 15-Min: 5:00 PM -- 5:15 PM 448 403 9.4 **t** 495 **+** 0 **+ ℃** 0.6 **←** 0.8 530 **+** 0 0 🍑 0.94 0 > 0 + 0 7 0 + 0 7 **€** 2.9 → 2 **f** 35 → 450 • 1.1 2.1 . . TRUE DATA TO IMPROVE MOBILITY 0 🗲 **t** 1 **+** 0 0 3 **•** 0 ŧ N/A Ł N/A ♠ N/A # # ç N/A N/A SW 124th Ave SW 124th Ave SW Tualatin Rd SW Tualatin Rd 15-Min Count Hourly Totals (Eastbound) Total (Northbound) (Southbound) (Westbound) Period Beginning At Left Thru Right υ Left Thru Right υ Left Thru Right υ Left Thru Right υ 3:00 PM 3:15 PM 3:30 PM 3:45 PM Ō Ō Ō Ō Ō Ō 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM Northbound Southbound Eastbound Westbound Peak 15-Min Flowrates **Total** Left Thru Right U Left Thru Right U Left Right U Left Right U Thru Thru All Vehicles **Heavy Trucks** Buses Pedestrians O O Ö Bicycles Scooters Comments:

Report generated on 9/20/2024 1:18 PM

15-Min Count Period	SW 115th Ave (Northbound)				SW 115th Ave (Southbound)						latin Rd ound)		SW Tualatin Rd (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		TOtals
4:30 PM	0	1	1	0	4	0	3	0	8	94	0	0	0	164	68	0	343	1281
4:45 PM	0	0	0	0	9	0	7	0	19	97	1	0	0	129	49	0	311	1315
5:00 PM	0	1	1	0	2	0	5	0	9	90	0	0	2	159	66	0	335	1304
5:15 PM	0	1	2	0	4	0	4	0	17	71	1	0	1	165	58	0	324	1313
5:30 PM	0	0	0	0	4	0	3	0	9	103	1	0	0	139	54	0	313	1283
5:45 PM	0	1	1	0	3	0	4	0	10	85	2	0	0	98	47	0	251	1223
Peak 15-Min	Northbound				Southbound				Eastbound					Westl	Total			
Flowrates	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	10	tai
All Vehicles	4	0	4	0	48	0	48	0	116	644	0	0	4	184	212	0	12	64
Heavy Trucks	4	0	4		12	0	4		4	12	0		4	12	20		7	6
Buses																		
Buses Pedestrians		0				0				0				0			(	)
	4	0 0	0		0	0 0	0		0	0 0	0		0	0 0	0			) 1

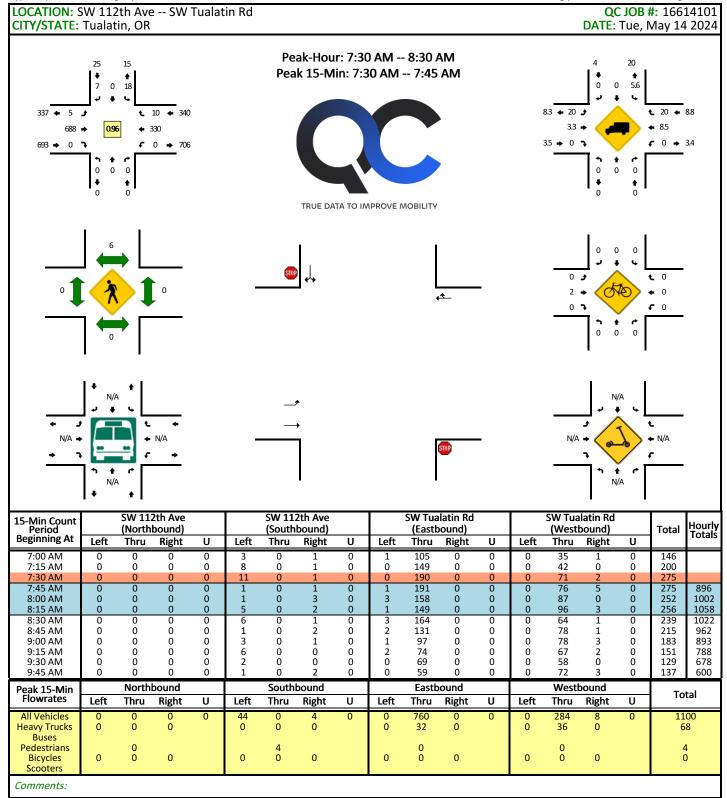
Report generated on 6/20/2024 10:17 AM

LOCATION: SW 115th Ave -- SW Tualatin Rd QC JOB #: 16573223 CITY/STATE: Tualatin, OR **DATE:** Tue, Apr 23 2024 Peak-Hour: 4:00 PM -- 5:00 PM 306 10.9 Peak 15-Min: 4:00 PM -- 4:15 PM **♦ • •** 16.7 0 5.3 **1.** 255 **←** 853 2.4 💠 2 🖈 **1.6 4** 1.8 2.5 🖈 **4** 1.8 0.95 **4** 595 357 → **f** 3 **→** 383 2.5 → 0 → **€** 0 **→** 2.9 407 → 1 → **↑** 0 **↓ 1**4.3 0 TRUE DATA TO IMPROVE MOBILITY N/A → **←** N/A f

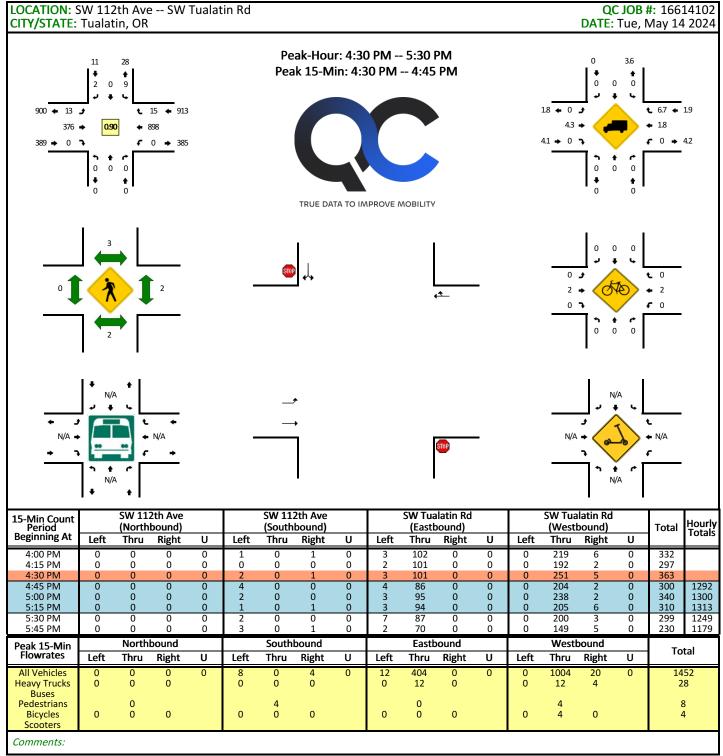
15-Min Count			5th Ave		SW 115th Ave (Southbound)						latin Rd	SW Tualatin Rd (Westbound)				l l	Hourly	
Period Beginning At		_	bound)								ound)			_			Total	Totals
beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	2	0	3	0	8	110	0	0	3	21	16	0	163	
7:15 AM	0	0	0	0	6	1	5	0	10	142	0	0	0	27	13	0	204	
7:30 AM	0	1	0	0	10	0	5	0	3	181	1	0	1	53	21	0	276	0.45
7:45 AM	1	0	0	0	11	1	4	0	11	184	2	0	0	60	28	0	302	945
8:00 AM	0	0	0	0	7	1	8	0	19	151	2	0	2	59	26	0	275	1057
8:15 AM	1	0	1	0	12	0	12	0	29	161	0	0	1	46	53	0	316	1169
8:30 AM	0	0	1	0	8	0	3	0	10	127	1	0	1	47	26	0	224	1117
8:45 AM	1	0	0	0	7	0	1	0	6	93	1	0	1	47	19	0	176	991
9:00 AM	0	0	0	0	1	0	1	0	3	78	0	0	1	34	33	0	151	867
9:15 AM	0	0	0	0	2	0	1	0	2	73	0	0	1	54	18	0	151	702
9:30 AM	0	1	0	0	2	0	4	0	2	68	1	0	0	57	18	0	153	631
9:45 AM	1	0	0	0	3	0	3	0	6	58	0	0	0	33	12	0	116	571
10:00 AM	0	0	2	0	2	0	2	0	7	78	1	0	0	29	19	0	140	560
10:15 AM	0	0	0	0	6	0	4	0	6	49	0	0	1	30	17	0	113	522
10:30 AM	0	0	0	0	2	0	4	0	10	58	0	0	1	44	16	0	135	504
10:45 AM	1	1	0	0	2	0	3	0	5	63	1	0	0	57	31	0	164	552
11:00 AM	1	0	0	0	7	1	4	0	5	57	1	0	0	43	26	0	145	557
11:15 AM	0	0	1	0	2	0	2	0	3	56	1	0	0	59	28	0	152	596
11:30 AM	0	2	1	0	5	0	7	0	10	68	0	0	1	65	22	0	181	642
11:45 AM	0	0	1	0	4	0	3	0	4	75 66	1	0	1	52	15	0	156	634
12:00 PM	1	0	2	0	0	0	7	0	13	66	2	0	1	59	15	0	166	655
12:15 PM	1 0	0	3	0	4 4	0	2	0	7 4	82 78	0 1	0	0 2	62	28	0	187	690
12:30 PM	•	•	3	0	1	•	6	0	8	78 76	1	0	0	67 56	17 22	0	182	691
12:45 PM	1	0 1	0	0		0	6 7	0	_		0	0	1			0	171	706 719
1:00 PM 1:15 PM	1	0	2	0	2 1	0	7	0	5 10	66 79	1	0	0	64 65	30 26	0	179 191	719 723
1:30 PM	0	0	0	0	6	0	4	0	5	79 71	0	0	0	77	24	0	187	728
1:45 PM	0	0	0	0	6	0	1	0	7	68	0	0	0	54	33	0	169	726 726
2:00 PM	1	0	0	0	3	0	3	0	4	76	1	0	0	56	30	0	174	720
2:15 PM	0	0	1	0	4	0	5	0	5	76 76	0	0	0	64	30 37	0	192	721
2:15 PM 2:30 PM	0	1	2	0	8	0	5 5	0	11	76 85	4	0	2	77	68	0	263	722 798
2:45 PM	0	0	1	0	2	0	4	0	11	89	0	0	0	98	52	0	260	889
3:00 PM	0	0	0	0	6	0	2	0	23	63	0	0	0	96 84	45	0	223	938
3:15 PM	0	0	0	0	19	0	24	0	8	89	0	0	3	107	44	0	294	1040
3:30 PM	1	1	2	0	5	0	3	0	7	94	1	0	0	128	59	0	301	1078
3:45 PM	0	0	1	0	6	0	4	0	8	88	0	0	1	101	68	0	277	1078
4:00 PM	0	0	4	0	2	1	7	0	10	81	0	0	1	160	80	0	346	1218
4:15 PM	0	1	2	0	4	2	7	0	12	85	0	0	2	142	58	0	315	1239
4.13 FIVI	U			U	4		,	U	12	65	U	U		142	50	U	213	1233

15-Min Count Period			5th Ave bound)		SW 115th Ave (Southbound)						llatin Rd oound)		SW Tualatin Rd (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		Totals
4:30 PM	0	1	1	0	4	0	3	0	8	94	0	0	0	164	68	0	343	1281
4:45 PM	0	0	0	0	9	0	7	0	19	97	1	0	0	129	49	0	311	1315
5:00 PM	0	1	1	0	2	0	5	0	9	90	0	0	2	159	66	0	335	1304
5:15 PM	0	1	2	0	4	0	4	0	17	71	1	0	1	165	58	0	324	1313
5:30 PM	0	0	0	0	4	0	3	0	9	103	1	0	0	139	54	0	313	1283
5:45 PM	0	1	1	0	3	0	4	0	10	85	2	0	0	98	47	0	251	1223
Peak 15-Min	Northbound				Southbound					Eastb	ound			West	Total			
Flowrates	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	10	tai
All Vehicles	Left 0	Thru 0	Right 16	0	Left 8	Thru 4	Right 28	U	Left 40	Thru 324	Right 0	0	Left 4	Thru 640	Right 320	0		84
		Thru 0 0															13	
All Vehicles Heavy Trucks	0	0	16		8	4 0	28		40	324	0		4	640 20 0	320		13 4 1	84 0 2
All Vehicles Heavy Trucks Buses	0	0	16		8	4	28		40	324	0		4	640	320		13 4 1	84

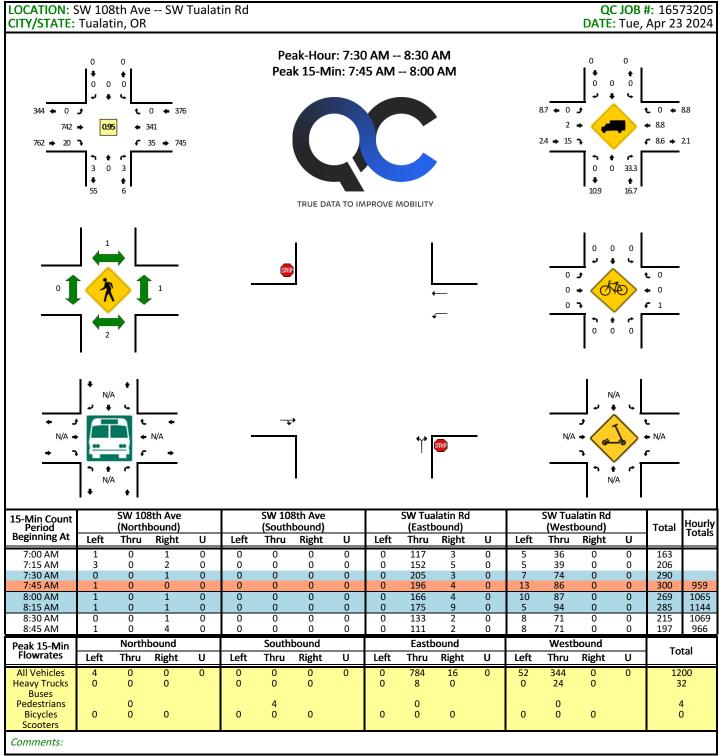
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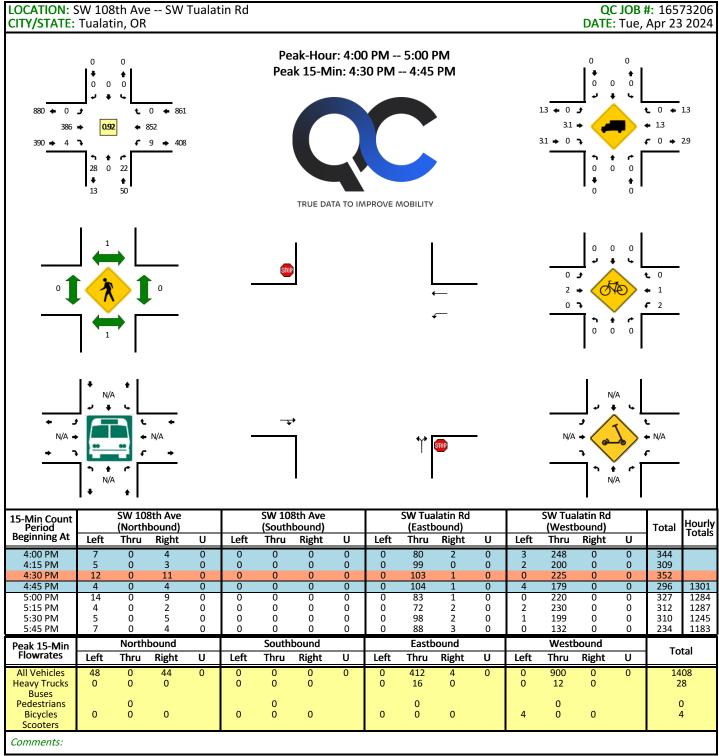


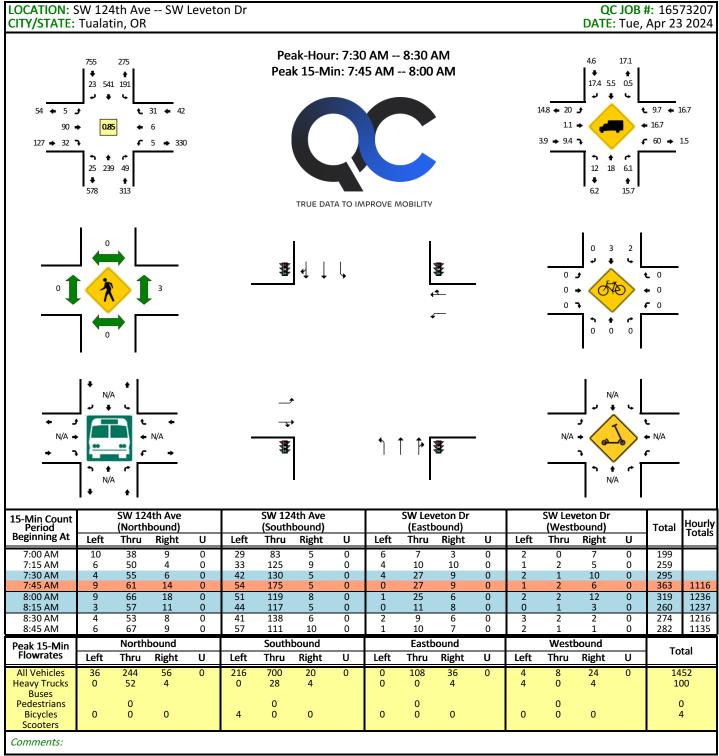
Report generated on 6/20/2024 10:20 AM

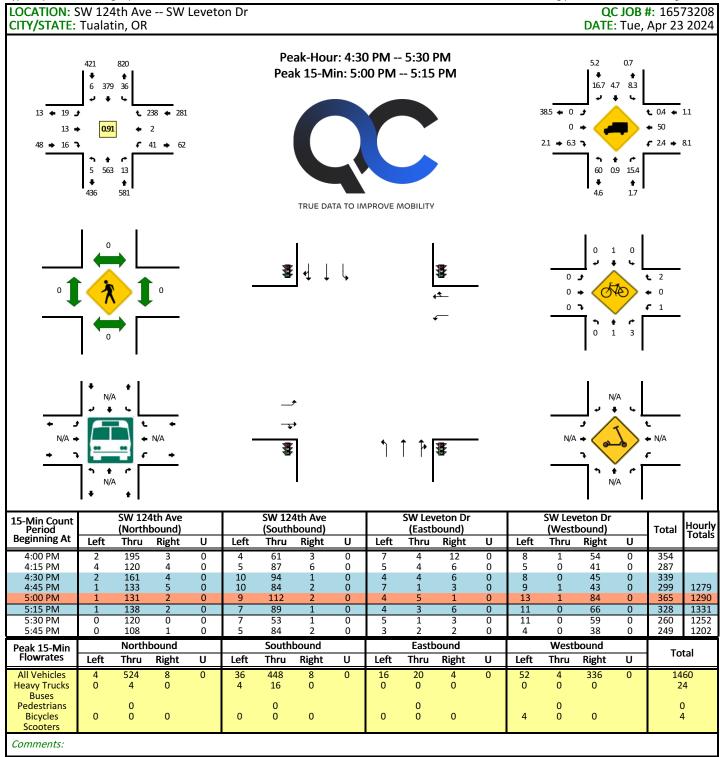


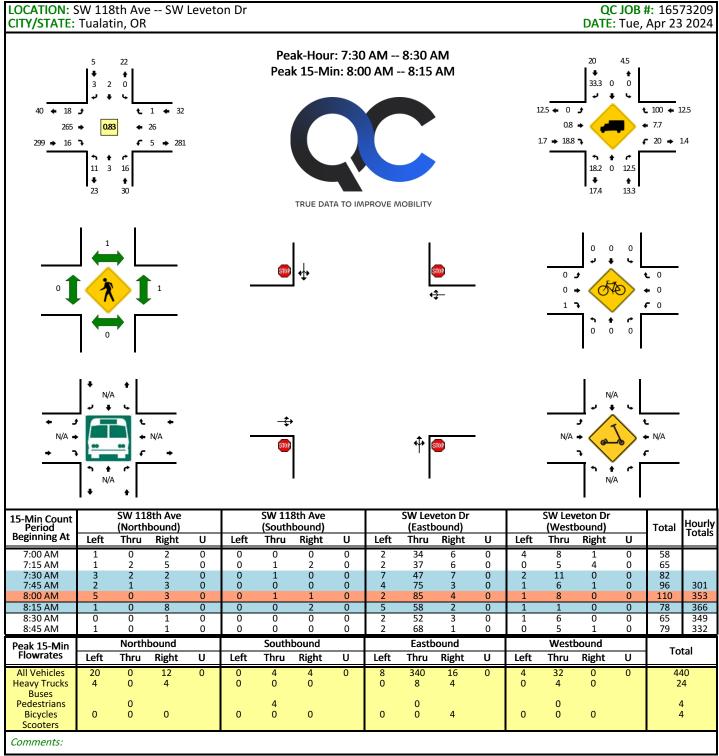
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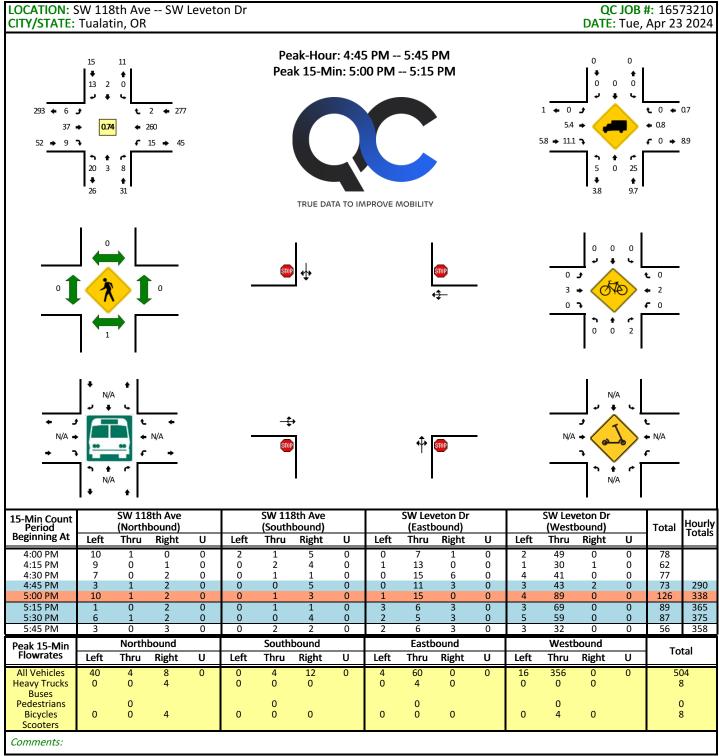


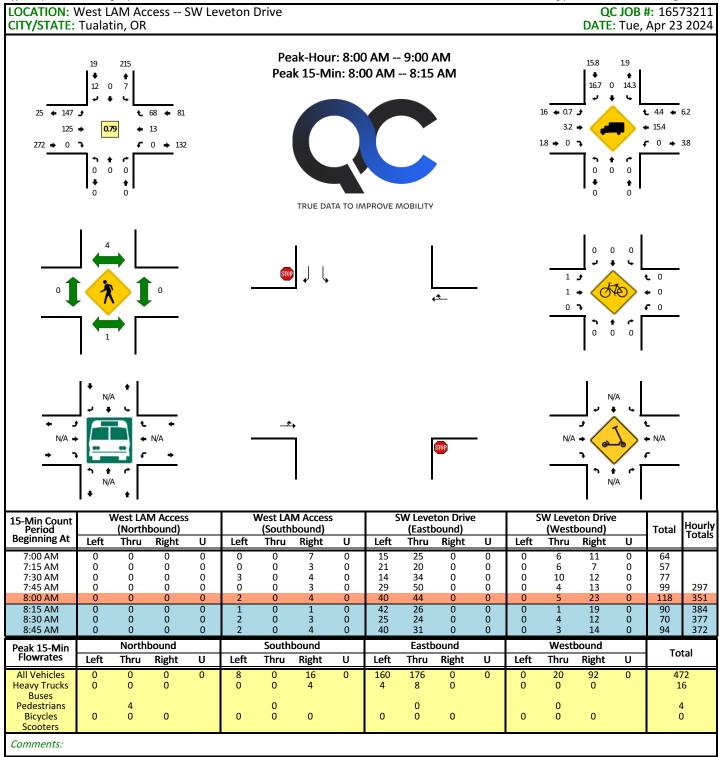


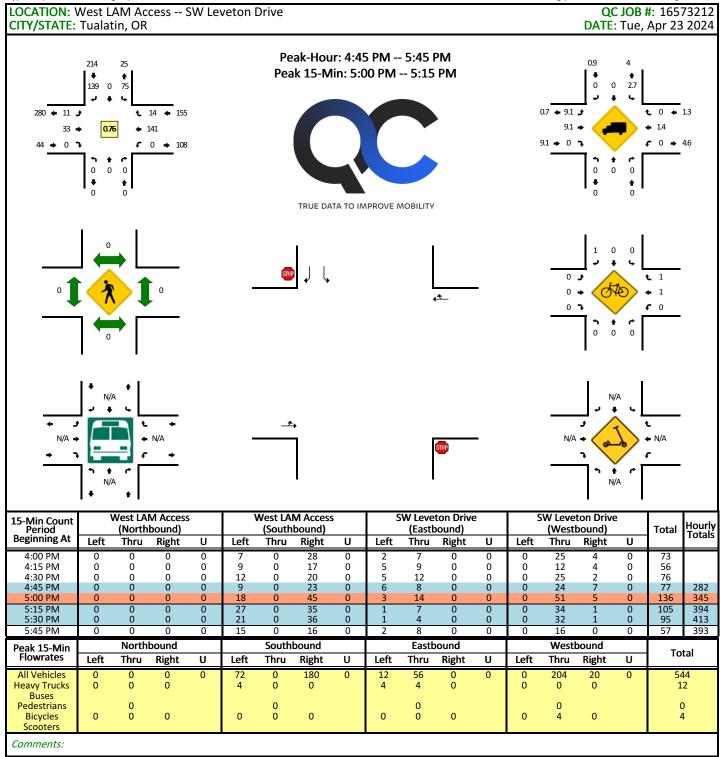


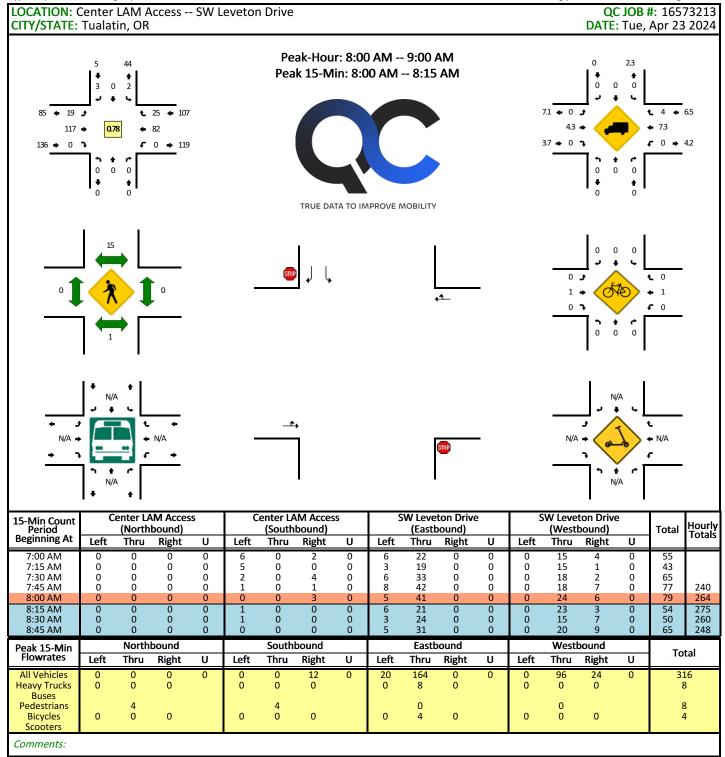


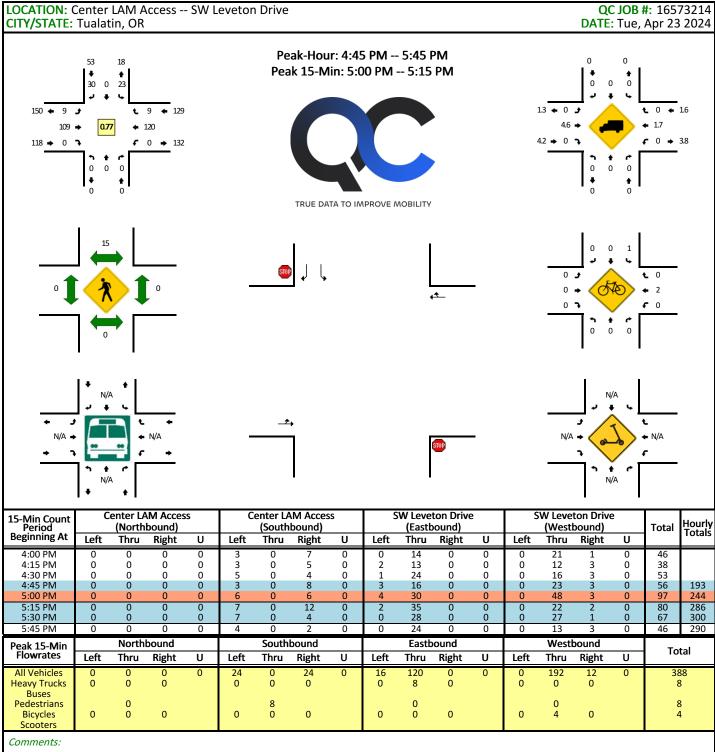


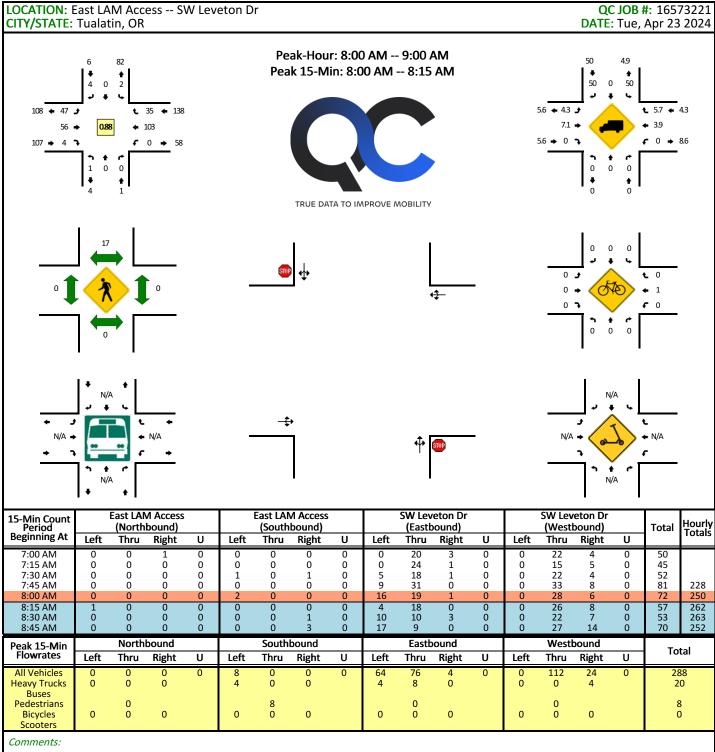


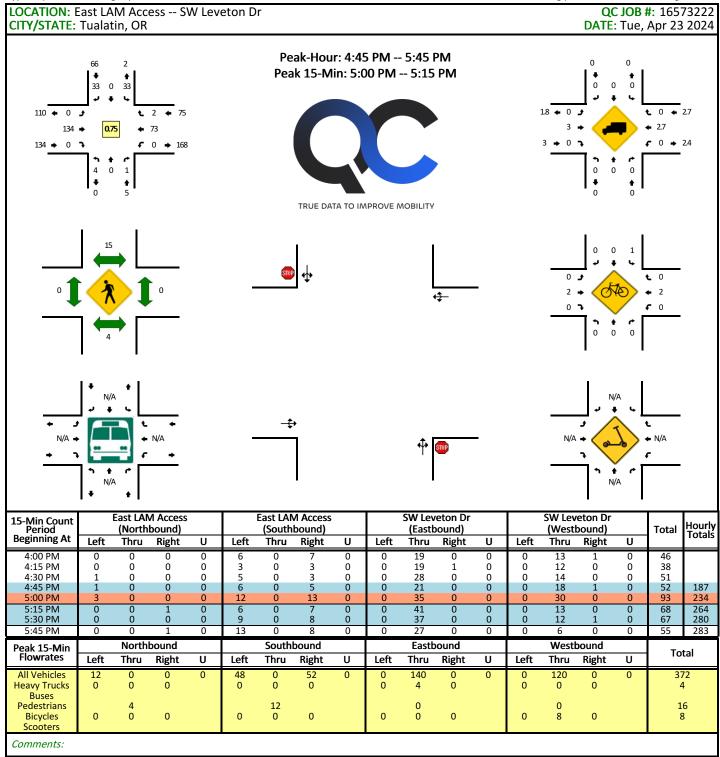


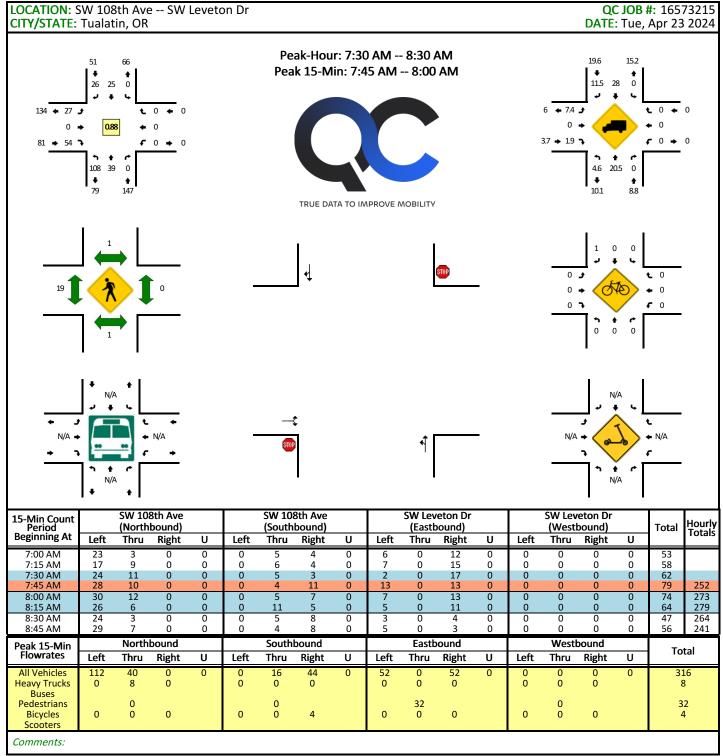


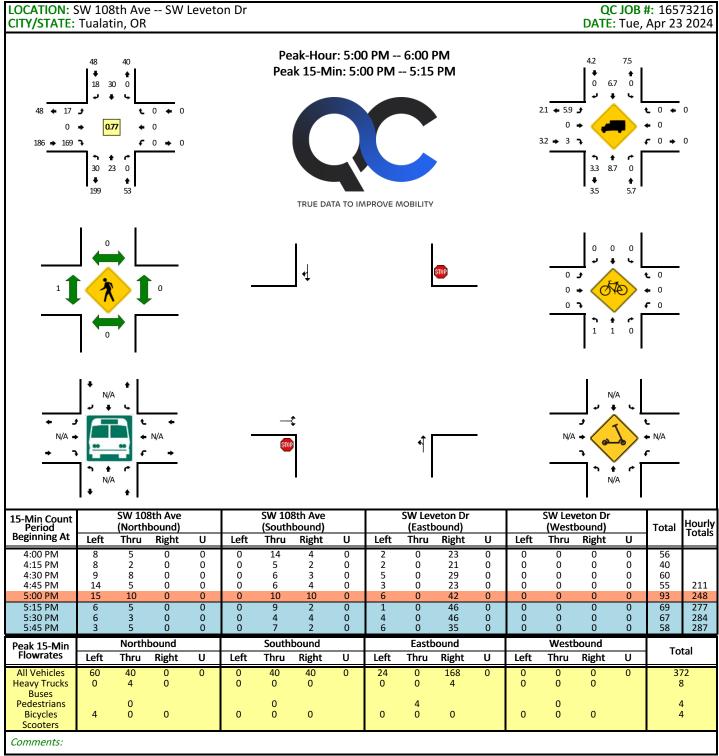


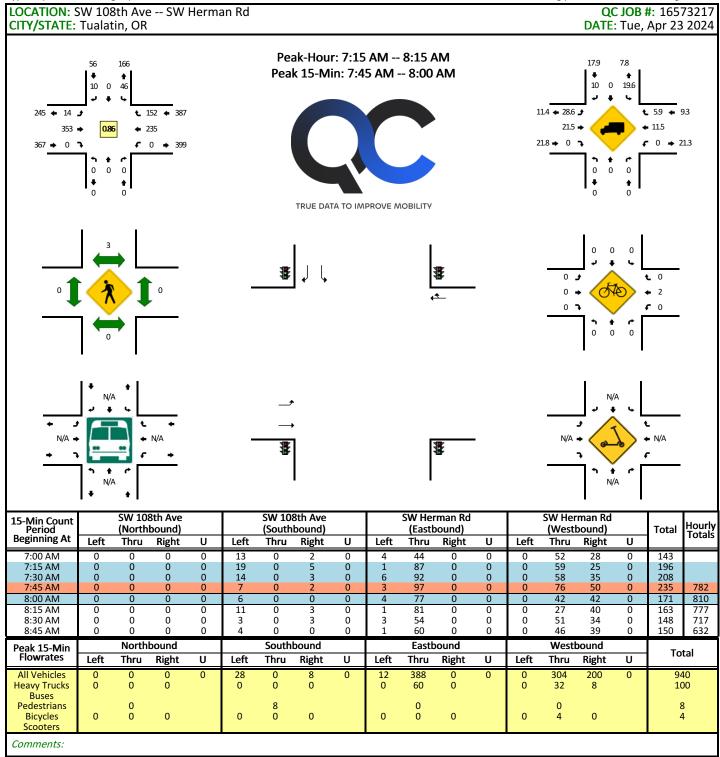


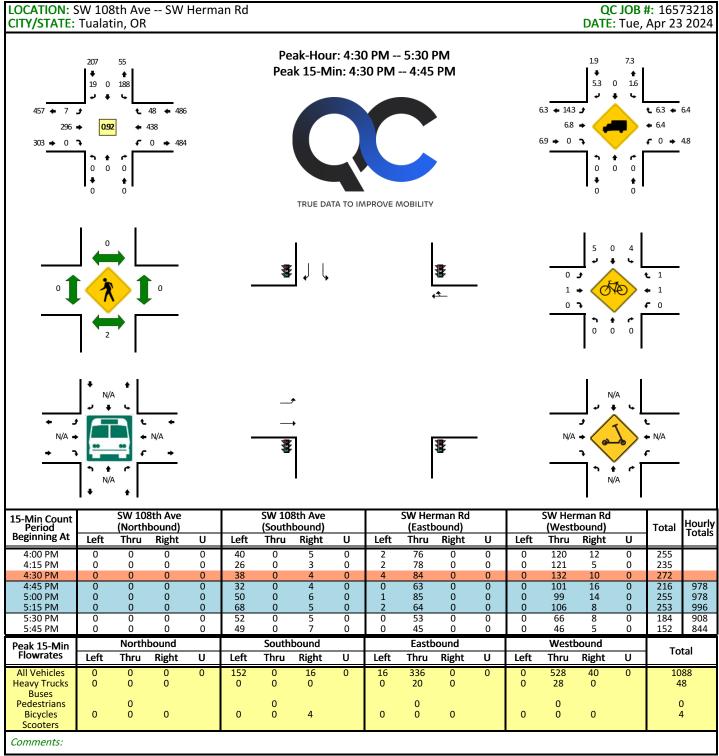


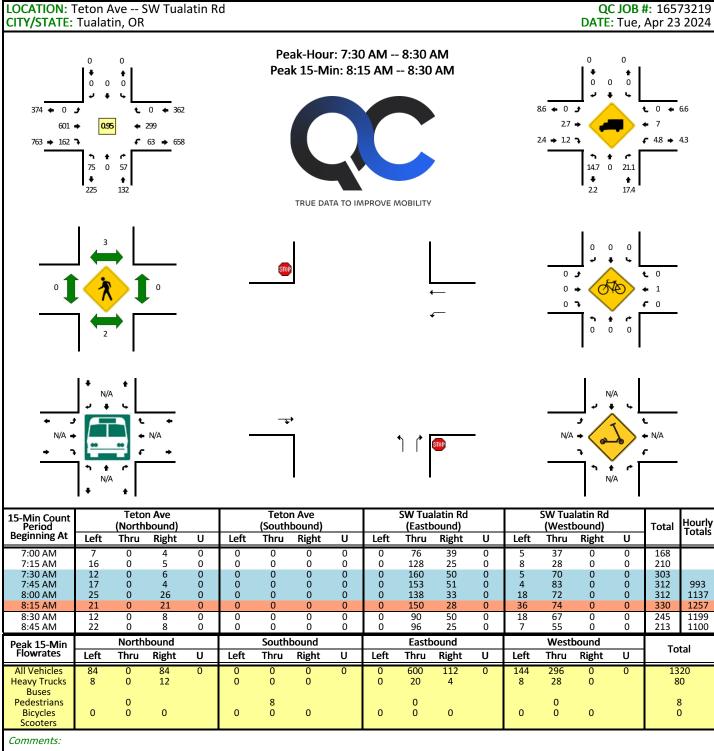


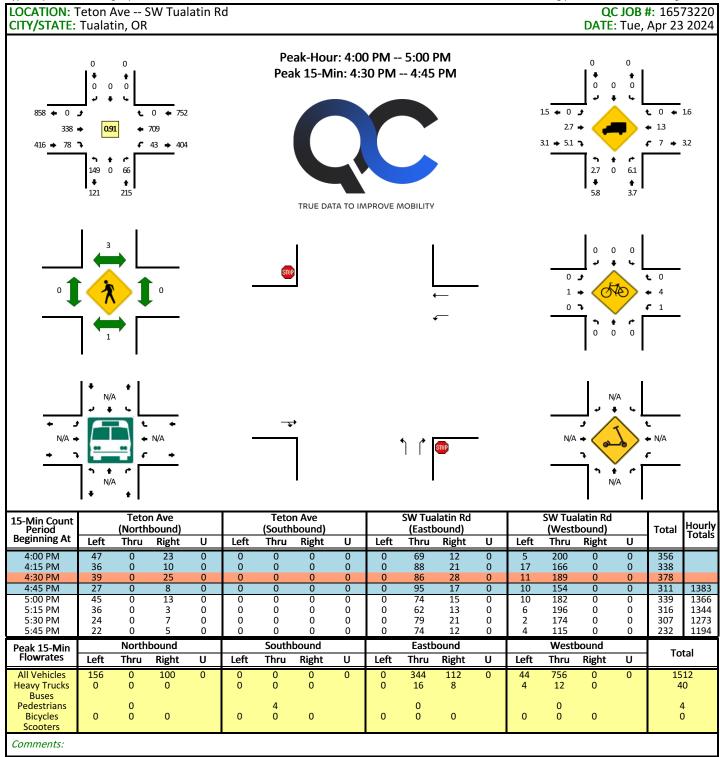












LOCATION: SW 115th Ave -- SW Hazelbrook Rd QC JOB #: 16651303 CITY/STATE: Tualatin, OR **DATE: Tue, Jun 11 2024** Peak-Hour: 7:50 AM -- 8:50 AM Peak 15-Min: 8:10 AM -- 8:25 AM 0 180 💠 **+** 0 0 → 6.3 26 → 0.64 **€** 45 **→** 133 7.9 🖈 25 🦜 **€** 6.7 **→** 3.8 38 🖈 12 🦜 **♠** 0 100 0 4.7 . . TRUE DATA TO IMPROVE MOBILITY 0 🗲 € 0 0 3 **•** 0 N/A Ł N/A → N/A N/A ç N/A SW 115th Ave SW 115th Ave SW Hazelbrook Rd SW Hazelbrook Rd 5-Min Count Period Beginning At Hourly (Northbound) (Southbound) (Eastbound) (Westbound) Total Left Thru Right υ Left Thru Right υ Left Thru Right U Left Thru Right υ 7:00 AM 7:05 AM 7:10 AM 7:15 AM Ō Ō Ō Ō Ō 7:20 AM 7:25 AM 7 7:30 AM 7:35 AM 7:40 AM 8 7:45 AM O O 7:50 AM 7:55 AM 8:00 AM 8:05 AM 8:10 AM 6 8:15 AM 8:25 AM 8:30 AM 8:35 AM 8:40 AM 8:45 AM 8:50 AM 8:55 AM Northbound Southbound Eastbound Westbound Peak 15-Min **Total Flowrates** Left Thru Right U Left Thru Right U Left Thru Right U Left Thru Right U All Vehicles **Heavy Trucks** Buses Pedestrians **Bicycles** Scooters Comments:

4:50 PM

4:55 PM

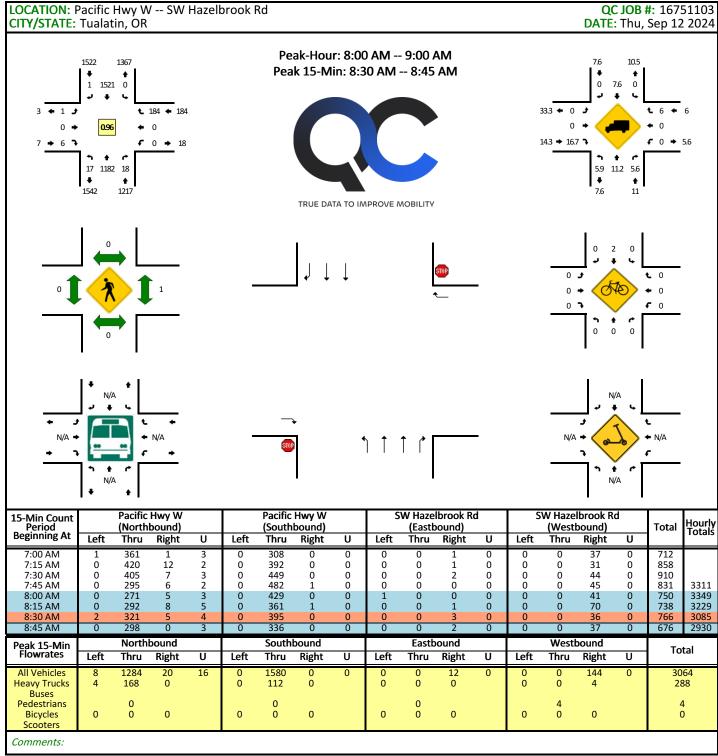
5:00 PM

Page 1 of 2

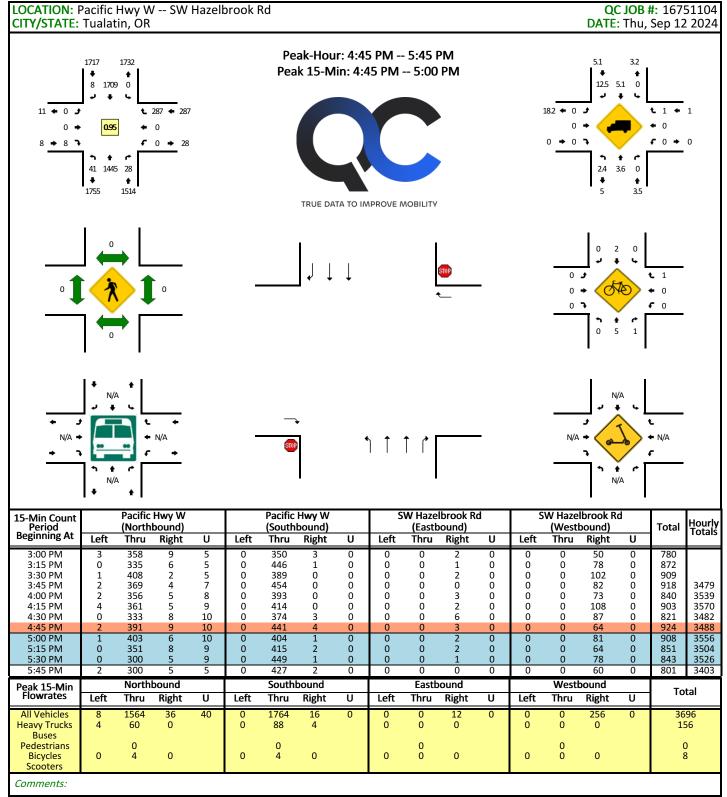
Ō

5-Min Count Period			5th Ave bound)				5th Ave bound)		S		lbrook Re oound)	d	S		lbrook Ro bound)	d	Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		Totals
5:10 PM	19	0	0	0	0	0	0	0	0	3	0	0	0	8	0	0	30	345
5:15 PM	21	0	0	0	0	0	0	0	0	1	0	0	1	4	0	0	27	346
5:20 PM	22	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	25	347
5:25 PM	18	0	1	0	0	0	0	0	0	1	1	0	3	2	0	0	26	344
5:30 PM	27	0	0	0	0	0	0	0	0	0	1	0	1	3	0	0	32	349
5:35 PM	22	0	1	0	0	0	0	0	0	0	1	0	0	4	0	0	28	331
5:40 PM	18	0	2	0	0	0	0	0	0	2	1	0	0	4	0	0	27	325
5:45 PM	18	0	1	0	0	0	0	0	0	5	0	0	1	3	0	0	28	331
5:50 PM	16	0	2	0	0	0	0	0	0	1	1	0	0	2	0	0	22	320
5:55 PM	15	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	18	321
Peak 15-Min		North	bound			South	bound			Eastb	ound			Westl	oound		т.	a - 1
Flowrates	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	10	tal
All Vehicles	168	0	40	0	0	0	0	0	0	12	12	0	152	188	0	0	5	72
Heavy Trucks	0	0	0		0	0	0		0	0	0		28	4	0		3	2
Buses Pedestrians		164				0				0				0			1.0	64
Bicycles Scooters	0	0	0		0	0	0		0	0	0		0	4	0			4
Comments:																		

Report generated on 6/17/2024 10:33 AM

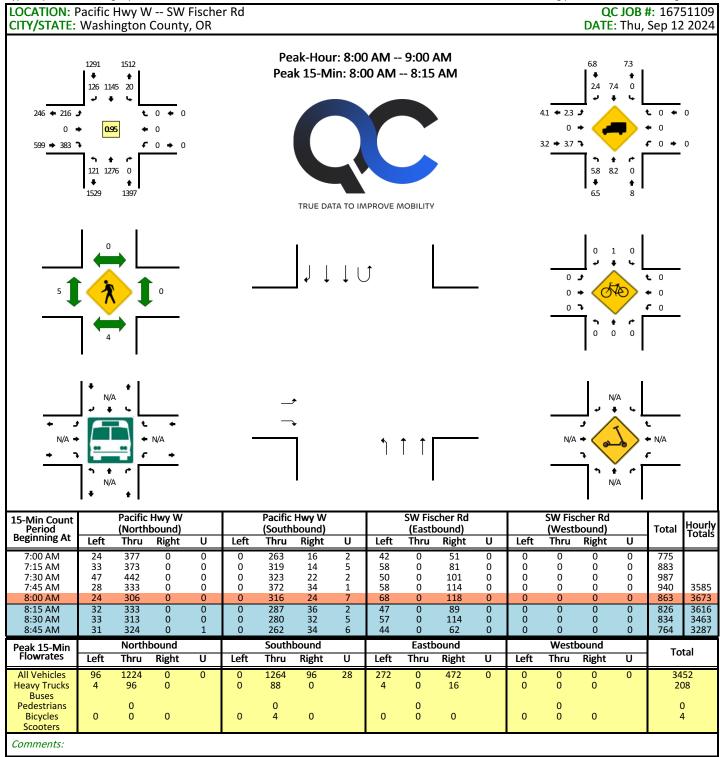


Report generated on 9/20/2024 1:18 PM

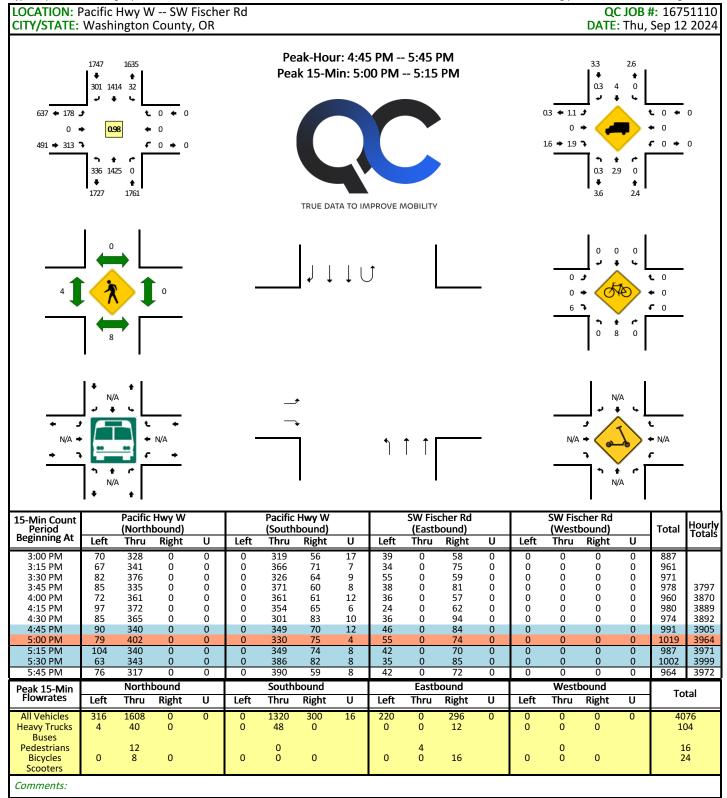


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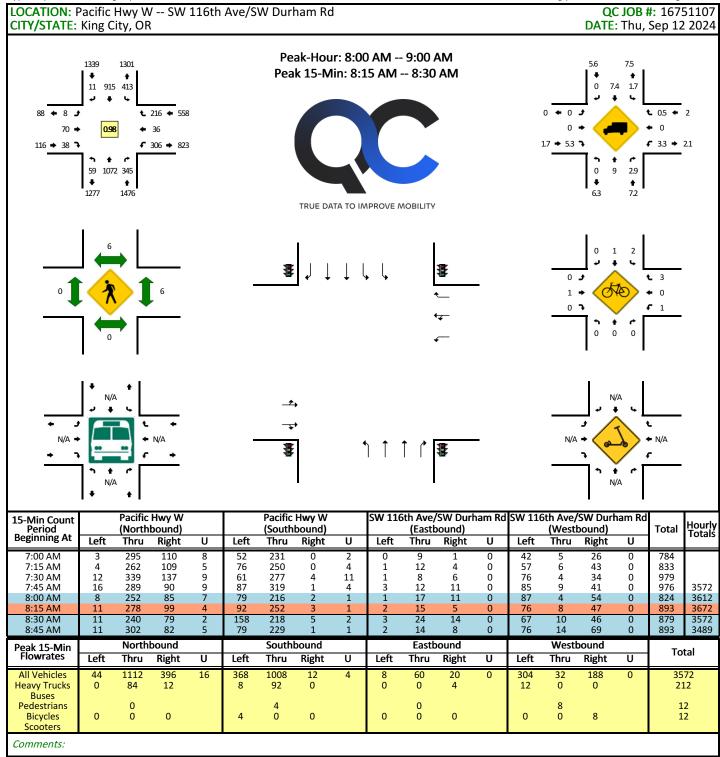
LOCATION: Teton Ave -- SW Herman Rd QC JOB #: 16670601 CITY/STATE: Tualatin, OR DATE: Tue, Jul 9 2024 Peak-Hour: 7:20 AM -- 8:20 AM 9.3 Peak 15-Min: 7:40 AM -- 7:55 AM **↑** 13 30.4 4.8 23 126 23 **t** 22 8.2 🖚 60 🖈 € 27.3 ← 7.5 473 🖛 16.3 → 4.5 172 → 0.89 201 **€** 18 **→** 221 21.5 → 26.4 🦜 **€** 16.7 **→** 15.8 317 🖈 140 🦜 9.2 24.1 15.4 249 83 . ŧ . TRUE DATA TO IMPROVE MOBILITY 0 🗲 € 0 O N/A N/A → N/A → ♣ N/A **→** # ç N/A Teton Ave Teton Ave SW Herman Rd SW Herman Rd 5-Min Count Period Beginning At Hourly (Northbound) (Southbound) (Eastbound) (Westbound) Total Left Thru Right υ Left Thru Right U Left Thru Right υ Left Thru Right υ 7:00 AM Ō 7:05 AM 7:10 AM 7:15 AM ō Ō 7:20 AM 7:25 AM 7:30 AM 7:35 AM 10 21 14 7:40 AM 7:45 AM 7:55 AM 28 Ö O 20 8:00 AM n 101 Ö Ö ŏ 8:05 AM 8:10 AM 92 8:15 AM 8:20 AM O O 7 O ō 8:25 AM 8:30 AM O 8:35 AM 8:40 AM 8:45 AM Ö ō Ö Ö Ö ŏ 8:50 AM 8:55 AM Northbound Southbound Eastbound Westbound Peak 15-Min **Total Flowrates** Left Thru Right U Left Thru Right U Left Thru Right U Left Thru Right U All Vehicles **Heavy Trucks** Buses Pedestrians **Bicycles** Scooters Comments:



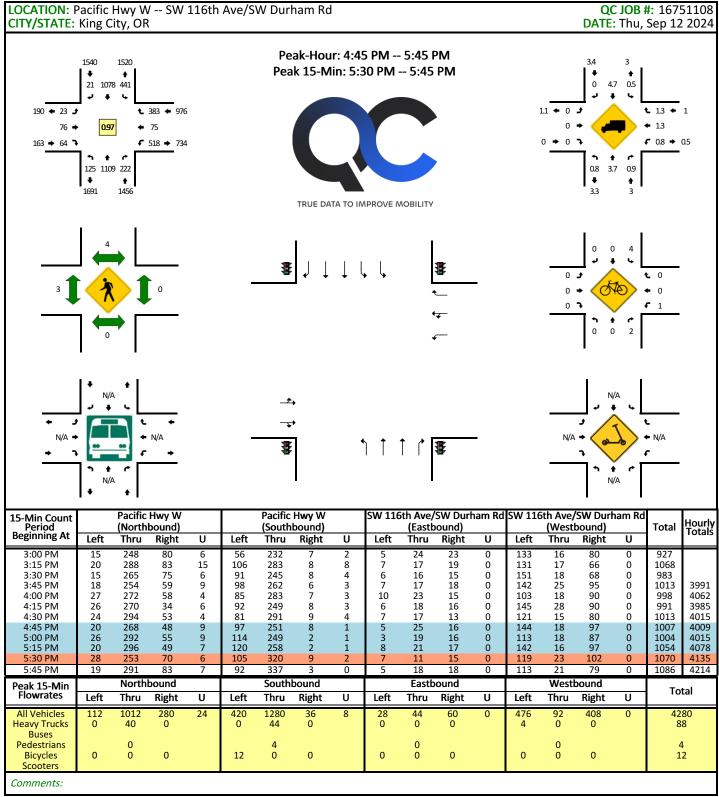
Report generated on 9/20/2024 1:18 PM



Report generated on 9/20/2024 1:19 PM



Report generated on 9/20/2024 1:18 PM



Report generated on 9/20/2024 1:19 PM

APPENDIX E.

SEASONAL ADJUSTMENT DATA

							S	EASONA	L TREN	TABLE	(Updated	d: 11/08/2	023)												Seasonal Trend
TREND	1-Jan	15-Jan	1-Feb	15-Feb	1-Mar	15-Mar	1-Apr	15-Apr	1-May	15-May	1-Jun	15-Jun	1-Jul	15-Jul	1-Aug	15-Aug	1-Sep	15-Sep	1-Oct	15-Oct	1-Nov	15-Nov	1-Dec	15-Dec	Peak Period Factor
INTERSTATE URBANIZED	1.0869	1.1041	1.0688	1.0335	1.0182	1.0028	0.9995	0.9962	0.9901	0.9840	0.9641	0.9443	0.9502	0.9562	0.9510	0.9458	0.9575	0.9692	0.9791	0.9891	1.0107	1.0324	1.0532	1.0739	0.9443
INTERSTATE NONURBANIZED	1.2459	1.2915	1.2286	1.1657	1.0907	1.0158	1.0059	0.9960	0.9728	0.9496	0.9128	0.8760	0.8650	0.8540	0.8612	0.8684	0.8905	0.9126	0.9488	0.9850	1.0336	1.0822	1.1717	1.2612	0.8540
COMMUTER	1.0905	1.0986	1.0636	1.0285	1.0162	1.0038	0.9959	0.9879	0.9814	0.9749	0.9631	0.9512	0.9614	0.9717	0.9608	0.9500	0.9548	0.9595	0.9634	0.9673	1.0090	1.0507	1.0733	1.0958	0.9500
COASTAL DESTINATION	1.2064	1.1715	1.1234	1.0753	1.0545	1.0337	1.0372	1.0407	1.0216	1.0024	0.9586	0.9147	0.8760	0.8372	0.8371	0.8370	0.8678	0.8985	0.9578	1.0170	1.0730	1.1290	1.1823	1.2357	0.8370
COASTAL DESTINATION ROUTE	1.3937	1.2897	1.2245	1.1594	1.1247	1.0901	1.0911	1.0921	1.0516	1.0111	0.9493	0.8875	0.8172	0.7469	0.7455	0.7440	0.7916	0.8391	0.9274	1.0158	1.1126	1.2094	1.3193	1.4291	0.7440
AGRICULTURE	1.4537	1.4624	1.3705	1.2786	1.2139	1.1492	1.1207	1.0923	1.0075	0.9226	0.8742	0.8258	0.8348	0.8439	0.8422	0.8405	0.7976	0.7547	0.8073	0.8598	1.0041	1.1484	1.3339	1.5194	0.7547
RECREATIONAL SUMMER	1.6049	1.5814	1.4924	1.4034	1.3208	1.2382	1.2380	1.2377	1.0939	0.9500	0.8669	0.7839	0.7392	0.6945	0.7065	0.7185	0.7404	0.7624	0.8468	0.9311	1.1270	1.3230	1.5054	1.6879	0.6945
RECREATIONAL SUMMER WINTER	1.0075	0.9570	0.9184	0.8799	0.9701	1.0603	1.0675	1.0747	1.0843	1.0939	1.0045	0.9151	0.8244	0.7336	0.7795	0.8254	0.9368	1.0482	1.1794	1.3105	1.4969	1.6833	1.3470	1.0108	0.7336
RECREATIONAL WINTER**	0.8059	0.6710	0.6475	0.6240	0.7462	0.8685	0.9307	0.9928	1.1496	1.3064	1.2173	1.1282	0.9996	0.8709	0.9526	1.0342	1.1225	1.2108	1.4061	1.6013	1.9826	2.3639	1.6332	0.9026	0.6240
SUMMER	1.2374	1.2352	1.1733	1.1114	1.0786	1.0459	1.0330	1.0202	0.9851	0.9500	0.9160	0.8819	0.8660	0.8501	0.8561	0.8620	0.8891	0.9161	0.9430	0.9698	1.0525	1.1352	1.2002	1.2653	0.8501
SUMMER < 2500	1.2836	1.2576	1.1943	1.1310	1.1011	1.0712	1.0448	1.0184	0.9633	0.9082	0.8861	0.8641	0.8609	0.8578	0.8695	0.8813	0.8874	0.8936	0.9165	0.9394	1.0500	1.1607	1.2535	1.3463	0.8578
																		Sept 12th							_

<sup>\*</sup> Seasonal Trend Table factors are based on previous year ATR data. The table is updated yearly.
\* Grey shading indicates months were seasonal factor is greater than or less than 30%

Seasonal Adjustment Factor (September 12th): 1.01

<sup>\*\*</sup>Use Recreation Winter Trend with Caution! ATR site was down for most of of 2022 due to loop issues and was estimated while the site was down

APPENDIX F.

**CRASH DATA** 

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

# 124TH AVE at PACIFIC HY 99W, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

1 - 4 of 15 Crash records shown.

S D M																			
	S W DATE	CLASS	CITY STREET		INT-TYPE					SPCL USE									
INVEST E A U I	C O DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			А	S				
RD DPT E L G N	H R TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E LICNS	S PED			
NLOC? D C S V	L K LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVRTY	E	X RES	LOC	ERROR	ACT EVENT	CAUSE
04948 N N N N	N N 09/26/2019	9 16	SW PACIFIC HY 99W	INTER	3-LEG	N	N	CLR	S-1STOP	01 NONE 9	TURN-R								08
CITY	TH	0	SW 124TH AVE	E		TRF SIGNAL	N	DRY	SS-O	N/A	SE-NE							000	00
1	6A 45 23 20.8	32 -122 48 19.67		09	1		N	DAWN	PDO	PSNGR CAR		01 DRVR	NONE	00 Uı	nk UNK UNK		000	000	00
		19.07								02 NONE 9 N/A	STOP SE-NE	01 DDIM	NONE	00 11	-1- 1101/2		000	011 000	00
										PSNGR CAR		01 DRVR	NONE	00 01	UNK		000	000	00
6351 N N N N	12/02/2019	9 16	SW PACIFIC HY 99W	INTER	3-LEG	N	N	CLR	S-1STOP	01 NONE 0	STRGHT								29
ONE	MO	0	SW 124TH AVE	SE		TRF SIGNAL	N	DRY	REAR	PRVTE	SE-NW							000	00
	5P 45 23 20.8	32 -122 48		09	1		N	DUSK	INJ	PSNGR CAR		01 DRVR	NONE	49 M	OR-Y OR<2!		026	000	29
		19.67								02 NONE 0	STOP								
										PRVTE	SE-NW							011	00
										PSNGR CAR		01 DRVR	INJC	47 M	OR-Y OR<2!		000	000	00
)515 Y N N N	02/14/2023	L 16	SW PACIFIC HY 99W	INTER	3-LEG	N	N	SNOW	S-1STOP	01 NONE	STRGHT								01,07
ONE	SU	0	SW 124TH AVE	SE		TRF SIGNAL	N	SNO	REAR	PRVTE	SE-NW							000	00
	9A 45 23 20.8	34 -122 48		09	1		N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	00 M	OR-Y UNK		026	000	01,07
		19.67								02 NONE	STOP								
										PRVTE	SE-NW							012	00
										PSNGR CAR		01 DRVR	INJC	66 F	OR-Y OR<2!		000	000	00
866 N N N N	N N 04/26/2022	2 16	SW PACIFIC HY 99W	INTER	3-LEG	N	N	RAIN	S-1STOP	01 NONE 9	STRGHT								07
TY	TU	0	SW 124TH AVE	SE		TRF SIGNAL	N	WET	REAR	N/A	SE-NW							000	00
	11A 45 23 20.8	32 -122 48		06	1		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00 Uı	nk UNK UNK		000	000	00
		19.67								02 NONE 9 N/A	STOP SE-NW							011	00
										PSNGR CAR		01 DRVR	NONE	UU Ui	nk UNK UNK		000	000	00
847 N N N N	N N 02/17/2018	3 14	SW PACIFIC HY 99W	INTER	3-LEG	N	N	CLD	S-1STOP	01 NONE 0	STRGHT								27,07
TY	SA		SW 124TH AVE	SW		TRF SIGNAL	N	DRY	REAR	PRVTE	SW-NE							000	00
	5P 45 23 20.8	32 -122 48	009100200s00	06	1		N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	32 F	OR-Y OR<2!		016,043	038	27,07
		19.67								02 NONE 0	STOP								
										PRVTE	SW-NE							011	00
										PSNGR CAR		01 DRVR	INJC	56 F			000	000	00
															OR<2!	0			

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

# 124TH AVE at PACIFIC HY 99W, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

5 - 9 of 15 Crash records shown.

S D M																		
ER# P R J S W		CITY STREET		INT-TYPE					SPCL USE									
NVEST E A U I C O		FIRST STREET	RD CHAR	(MEDIAN)		OFFRD	WTHR	CRASH	TRLR QTY	MOVE			A					
D DPT E L G N H R	TIME FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E LICN	S PED			
NLOC? D C S V L K	LAT LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVRTY	Е	X RES	LOC	ERROR	ACT EVENT	CAUSE
									02 NONE 0 PRVTE	STOP SW-NE							011	00
									PSNGR CAR	SM-NF	02 PSNG	NONE	01	īnk		000	000	00
									PSNGR CAR		UZ PBNG	NONE	OI	JIIK		000	000	00
5197 N N N N	10/10/2019 14	SW PACIFIC HY 99W	INTER	3-LEG	N	N	CLR	S-1STOP	01 NONE 0	STRGHT							013	29
DNE	TH	SW 124TH AVE	SW		TRF SIGNAL	N	DRY	REAR	PRVTE	SW-NE							000	00
	5P		06	1		N	DAY	INJ	PSNGR CAR		01 DRVR	INJC	43	F OR-Y		026	000	29
	45 23 20.82 -122 48 19.67	009100200S00												OR<2				
									02 NONE 0	STOP								
									PRVTE	SW-NE							011 013	00
									PSNGR CAR		01 DRVR	NONE	51	M OTH- N-RE		000	000	00
									03 NONE 0	STOP								
									PRVTE	SW-NE							022	00
									PSNGR CAR		01 DRVR	NONE	26	F OR-Y		000	000	00
288 N N N N	05/08/2019 14	SW PACIFIC HY 99W	INTER	3-LEG	N	N	CLR	S-1STOP	01 NONE 9	STRGHT								29
NE	WE	SW 124TH AVE	SW		TRF SIGNAL	N	DRY	REAR	N/A	SW-NE							000	00
	5P		06	1		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk UNK		000	000	00
	45 23 20.82 -122 48 19.67	009100200S00												UNK				
	13.07								02 NONE 9	STOP								
									N/A	SW-NE							011	00
									PSNGR CAR		01 DRVR	NONE	0.0	Jnk UNK		000	000	00
														UNK				
O31 YNNNNN	08/17/2020 14	SW PACIFIC HY 99W	INTER	3-LEG	N	Y	CLR	FIX OBJ	01 NONE 9	TURN-L							058	01
ГҮ	MO	SW 124TH AVE	SW		TRF SIGNAL	N	DRY	FIX	N/A	SE-SW							000	00
	4P		05	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Jnk UNK		000	000	00
	45 23 21.43 -122 48 20.24	009100100s00												UNK				
854 NYNN	03/12/2021 14	SW PACIFIC HY 99W	INTER	3-LEG	N	N	CLD	S-1STOP	01 NONE	STRGHT								29,07
TY	FR	SW 124TH AVE	SW		TRF SIGNAL	N	DRY	REAR	PRVTE	SW-NE							000	00
	10P		06	1		N	DLIT	INJ	PSNGR CAR		01 DRVR	NONE	33	F OR-Y		000,026	000	29,0
	45 23 20.83 -122 48 19.67	009100200S00												OR<2	5			
									02 NONE PRVTE	STOP SW-NE							012	00
									PSNGR CAR	SW INE	01 DRVR	INTC	36 1	м Отн-	Y	000	000	00
									2 22.010 07110		JI DIVIN		50 1	N-RE				00
									02 NONE	STOP								
									PRVTE	SW-NE							012	00
									PSNGR CAR								000	00

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

# 124TH AVE at PACIFIC HY 99W, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

Page: 5

10 - 14 of 15 Crash records shown.

05702 N N N N N 12/17/2021 14 SW PACIFIC HY 99W INTER 3-LEG N N WET TURN N/A SE-SW  CITY FR SW 124TH AVE SW 15 1 N N DLIT PDO PSNGR CAR 10 DRVR NONE 00 Unk UNK 000 UNK UNK 19.67  O500 D N N N N N 12/17/2021 14 SW PACIFIC HY 99W INTER 3-LEG N N WET TURN N/A SE-SW  O500 D N WET TURN N/A SE-SW  O500 D N DLIT PDO PSNGR CAR SHOW NONE 00 Unk	000	000	00	08 00
RD DFT E L G N H R TIME FROM SECOND STREET DIRECT LEGS TRAF- RNDBT SURF COLL OWNER FROM PRIC INJ G E LICNS PED TO PH TYPE SVRTY ON PED TO PH TYPE SVRT	000	000	00	08
UNLOC? D C S V L K LAT LONG LRS  LOCTN (#LANES) CONTL DRVWY LIGHT SVRTY V# TYPE  TO P# TYPE SVRTY E X RES LOC ERROR  1 N N N N N N N N N N N N N N N N N N	000	000	00	08
05702 N N N N N 12/17/2021 14 SW PACIFIC HY 99W INTER 3-LEG N N CLD S-OTHER 01 NONE 9 TURN-L  CITY FR SW 124TH AVE SW TRF SIGNAL N WET TURN N/A SE-SW  N 5A	000	000	00	08
CITY FR SW 124TH AVE SW TRF SIGNAL N WET TURN N/A SE-SW  N 5A N 45 23 20.82 -122 48 009100200S00 19.67  O2 NONE 9 TURN-L N/A SE-SW PSNGR CAR 01 DRVR NONE 00 Unk UNK 000 UNK 19.67  O2 NONE 9 TURN-L N/A SE-SW PSNGR CAR 01 DRVR NONE 00 Unk UNK 000 UNK	000	000		
N 5A 05 1 N DLIT PDO PSNGR CAR 01 DRVR NONE 00 Unk UNK 000 UNK 19.67  02 NONE 9 TURN-L N/A SE-SW PSNGR CAR 01 DRVR NONE 00 Unk UNK 000 UNK	000	000		00
UNK 19.67  UNK 02 NONE 9 TURN-L N/A SE-SW PSNGR CAR 01 DRVR NONE 00 Unk UNK 000 UNK	000	000	00	
19.67  02 NONE 9 TURN-L  N/A SE-SW  PSNGR CAR 01 DRVR NONE 00 Unk UNK 000  UNK				00
N/A SE-SW PSNGR CAR 01 DRVR NONE 00 Unk UNK 000 UNK				
PSNGR CAR 01 DRVR NONE 00 Unk UNK 000 UNK				
UNK	000			0.0
3539 N N N N N N 08/30/2021 14 SW PACIFIC HY 99W INTER 3-LEG N N CLR S-1STOP 01 NONE 9 STRGHT		000	J0	00
				07
ITY MO SW 124TH AVE SW TRF SIGNAL N DRY REAR N/A SW-NE	000	000	00	00
6P 06 0 N DAY PDO PSNGR CAR 01 DRVR NONE 00 Unk UNK 000	000	000	00	00
45 23 20.58 -122 48 009100200S00 UNK 20.24				
02 NONE 9 STOP				
$\mathrm{N/A}$ SW-NE	011	011	11	00
PSNGR CAR 01 DRVR NONE 00 Unk UNK 000 UNK	000	000	00	00
4216 N N N N N N 08/15/2018 14 SW PACIFIC HY 99W INTER 3-LEG N N CLR ANGL-OTH 01 NONE 0 STRGHT				04
ITY WE SW 124TH AVE CN TRF SIGNAL N DRY TURN PRVTE SW-NE	000	000	00	00
5P 02 1 N DAY INJ PSNGR CAR 01 DRVR NONE 82 M OR-Y 020	000	000	00	04
45 23 21.44 -122 48 009100100S00 OR<25				
20.25 02 NONE 0 TURN-L				
	000	000	00	00
PSNGR CAR 01 DRVR INJC 71 M OR-Y 000	000	000	00	00
OR<25				
7122 N N N N N N 12/23/2018 14 SW PACIFIC HY 99W INTER 3-LEG N N RAIN O-1 L-TURN 01 NONE 0 STRGHT				04
TY SU SW 124TH AVE CN TRF SIGNAL N WET TURN PRVTE SW-NE	000	000	00	00
	000	000	00	04
45 23 20.82 -122 48 009100200S00 19.67				
02 NONE 0 TURN-L				
	000	000	00	00
PSNGR CAR 01 DRVR INJC 69 F OR-Y 000	000	000	00	00
OR<25				
1025 N N N N N N 09/06/2022 14 SW PACIFIC HY 99W INTER 3-LEG N N CLR ANGL-OTH 01 NONE 0 STRGHT				04
ITY TU SW 124TH AVE CN TRF SIGNAL N DRY TURN PRVTE SE-NW	019	019	19	00
8A 02 1 Y DAY INJ PSNGR CAR 01 DRVR NONE 68 F OR-Y 000	000	000	00	00
OR<25 20.25				
02 NONE 0 TURN-L				
				00
	000	000	00	04
OR<25				

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

# 124TH AVE at PACIFIC HY 99W, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

15 - 15 of 15 Crash records shown.

S D M																			
SER# P R J S	W DATE	CLASS	CITY STREET		INT-TYPE					SPCL USE									
INVEST E A U I C	O DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			A S					
RD DPT E L G N H	R TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G E	LICNS	PED			
UNLOC? D C S V L	K LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVRTY	E X	RES	LOC	ERROR	ACT EVENT	CAUSE
91096 N N N N	04/14/2022	14	SW PACIFIC HY 99W	INTER	3-LEG	N	N	CLR	S-OTHER	01 NONE 9	TURN-L								05,08
NO RPT	TH		SW 124TH AVE	CN		TRF SIGNAL	N	DRY	TURN	N/A	SE-SW							000	00
N N	9A 45 23 20.82	2 -122 48	009100200s00	03	0		N	DAY	PDO	SEMI TOW		01 DRVR	NONE	00 Unk	JNK JNK		000	000	00
		19.67								02 NONE 9	TURN-L								
										N/A	SE-SW							000	00
										PSNGR CAR		01 DRVR	NONE	00 Unk	JNK JNK		000	000	00

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

# 124TH AVE at TUALATIN RD, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

1 - 5 of 15 Crash records shown.

S D M																				
SER# P R J	S W DATE	CLASS	CITY STREET		INT-TYPE					SPCL USE										
INVEST E A U I	C O DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			A	S					
RD DPT E L G N	H R TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E LIC	NS	PED			
UNLOC? D C S V	L K LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVRT	Y E	X RES		LOC	ERROR	ACT EVENT	CAUSE
06122 N N N N	10/29/2018	16	SW TUALATIN RD	INTER	3-LEG	N	Y	RAIN	FIX OBJ	01 NONE 9	TURN-L								040,062	25
NONE TIRE F	AILŮŔE	0	SW 124TH AVE	E		TRF SIGNAL	N	WET	FIX	N/A	N -E								000	00
N	UNK			05	0		N	UNK	PDO	PSNGR CAR		01 DRVR	NONE	00 t	Jnk UNK			000	000	00
N	45 23 16.3														UNK					
		15.23																		
01730 N N N N	02/01/2019	16	SW TUALATIN RD	INTER	3-LEG	N	N	RAIN	S-1STOP	01 NONE 0	STRGHT									29
NONE	FR	0	SW 124TH AVE	E		TRF SIGNAL	N	WET	REAR	PRVTE	E -W								000	00
N	UNK			06	0		N	UNK	INJ	PSNGR CAR		01 DRVR	INJC	34 M	ı or-	Y		026	000	29
N .	45 23 16.3														OR<	25				
		15.23								02 NONE 0	STOP									
										UNKN	E -W								011	00
										PSNGR CAR		01 DRVR	NONE	00 t	Jnk UNK			000	000	00
															UNK					
2835 N N N N	08/07/2020	16	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	S-1STOP	01 NONE 0	STRGHT									29
ONE	FR	0	SW 124TH AVE	E		TRF SIGNAL	N	DRY	REAR	PRVTE	E -W								000	00
Ī	3P			06	0		N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	18 F	OR-	Y		026	000	29
1	45 23 16.3														OR<	25				
		15.23								02 NONE 0	STOP									
										PRVTE	E -W								012	00
										PSNGR CAR		01 DRVR	INJC	53 M	OR-	Y		000	000	00
															OR<	25				
1503 N N N N	N N 03/24/2018	16	SW TUALATIN RD	INTER	3-LEG	N	N	RAIN	O-1 L-TUI	RN 01 NONE 0	STRGHT									02
TITY	SA	0	SW 124TH AVE	CN		TRF SIGNAL	N	WET	TURN	PRVTE	S -N								000	00
1	4P			04	0		N	DAY	INJ	PSNGR CAR		01 DRVR	INJC	31 F	OR-	Y		000	000	00
I	45 23 16.3														OR<	25				
		15.23								02 NONE 0	TURN-L									
										PRVTE	N -E								000	00
										PSNGR CAR		01 DRVR	NONE	40 M				028,004	000	02
4115 37 37 37	00/12/2010	1.0	CH EINLAETH DD	TAMED	2 1 80	NT.		GT D	DED	01 NOVE 0	MIIDN D				OR<	25				0.0
)4115 NNNN	08/13/2019		SW TUALATIN RD	INTER	3-LEG	N	N	CLR	PED	01 NONE 0	TURN-R									02
ONE	TU	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	PED	PRVTE	E -N								000	00
I	6A			02	0		N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	38 M				029	000	02
I	45 23 16.3	6 -122 48 15.23													N-R	ES				
		19.43																		
											-	01		0.0	_			000	0.25	0.0
											STRGHT	01 PED	INJC	28 M	1		1 XWLK	000	035	00
											N S									

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

# 124TH AVE at TUALATIN RD, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

Page: 3

6 - 10 of 15 Crash records shown.

S D M																			
SER# P R J S	W DATE	CLASS	CITY STREET		INT-TYPE	1				SPCL USE									
INVEST E A U I C	O DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			A	5				
RD DPT E L G N H	R TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G I	E LICNS	PED			
UNLOC? D C S V L	K LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVRTY	E :	K RES	LOC	ERROR	ACT EVENT	CAUSE
01501 N N N N N	N 03/26/2019	16	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	O-1 L-TUR	N 01 NONE 9	TURN-L								02
CITY	TU	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	TURN	N/A	N -E							000	00
N N	3P 45 23 16.36			04	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00 U1	ık UNK UNK		000	000	00
		15.23								02 NONE 9	STRGHT								
										N/A	S -N							000	00
										PSNGR CAR		01 DRVR	NONE	00 U1	ık UNK UNK		000	000	00
02476 N N N N N	N 06/25/2021	16	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	O-1 L-TUR	N 01 NONE	STRGHT								04,08,27
CITY	FR	0	SW 124TH AVE	CN		L-GRN-SIG	N	DRY	TURN	PRVTE	S -N							000	00
N N	8A 45 23 16.39	9 -122 48		04	0		N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	38 M	OR-Y OR<25		000	000	00
<del>-</del>		15.25								00 NONE	miini 1								
										02 NONE PRVTE	TURN-L N -E							000	00
										PSNGR CAR	IV E	01 DRVR	INJC	75 F	OR-Y OR<25		004,028	000	04,07,27
02512 N N N N	06/27/2021	16	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	O-1 L-TUR	N 01 NONE	STRGHT								02
NO RPT	SU	0	SW 124TH AVE	CN		L-GRN-SIG	N	DRY	TURN	PRVTE	S -N							000	00
N N	11A 45 23 16.38	3 -122 48 15.24		04	0		N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	00 M	UNK OR<25		000	000	00
		15.24								02 NONE	TURN-L								
										PRVTE	N -E							000	00
										PSNGR CAR		01 DRVR	INJB	34 F	OR-Y OR<25		004,028	000	02
03913 N N N N N	N 09/20/2021	16	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	O-1 L-TUR	N 01 NONE 0	STRGHT								02
CITY	MO	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	TURN	PRVTE	S -N							000	00
N N	5P 45 23 16.30			04	0		N	DAY	INJ	PSNGR CAR		01 DRVR	INJB	22 M	OR-Y OR<25		000	000	00
		15.23								02 NONE 0	TURN-L								
										PRVTE	N -E							000	00
										PSNGR CAR		01 DRVR	INJC	19 M	OR-Y OR<25		028,004	000	02
92512 N N N N	06/27/2021	16	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	O-1 L-TUR	2N 01 NONE 9	STRGHT								08,02
CITY	SU	0	SW 124TH AVE	CN		L-GRN-SIG	N	DRY	TURN	N/A	S -N							000	00
N	11A	9 -122 48		04	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00 U1	ık UNK UNK		000	000	00
N	45 23 16.39																		
	45 23 16.39	15.24								02 NONE 9	TURN-L								
	45 23 16.39	15.24								02 NONE 9 N/A	TURN-L N -E							000	00

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

# 124TH AVE at TUALATIN RD, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

11 - 13 of 15 Crash records shown.

Mark		S D M																		
March   Marc			CLASS	CITY STREET		INT-TYPE					SPCL USE									
Market   M					RD CHAR			OFFRD	WTHR	CRASH		MOVE			A	3				
March   Marc													PRTC	TNJT			DED			
																		FRROR	ACT FVFNT	CAHSE
The content of the													Ι π ΙΙΙΙ	BVICII		X KED	НОС	BRROK	ACT EVENT	
	03070	14 14 14 14 14 07/11/2022	. 10	SW TOADATIN KD	INTER	3 1110	14	IV	СШС	0 1 11 1	old of None	BIRGIII								02
	CITY	MO	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	TURN	PRVTE	S -N							000	00
15.45   15.4	N		100 40		04	0		N	DAY	INJ	PSNGR CAR		01 DRVR	INJB	42 M			000	000	00
Part	IN	45 23 10.3														UR<25				
											01 NONE	STRGHT								
Column   C											PRVTE	S -N							000	
											PSNGR CAR		02 PSNG	INJB	51 F			000	000	00
1											02 NONE	TURN-L								
State   Stat											PRVTE	N -E							000	00
State   Stat											PSNGR CAR		01 DRVR	INJA	92 F			004,028	000	02
No.   1	03835	N Y N N N N 08/24/2022	. 16	SW THALATIN RD	TNTER	3-1.EG	N	N	CI'B	O-1 I,-Ti	IIRN 01 NONE 0	STRGHT				01(123				02.04
N						3 110														
N	CLTY	WE	U	SW 124TH AVE	CN		TRF SIGNAL	N			PRVTE	S -N							000	00
1.2   1.2					04	0		N	DUSK	INJ	PSNGR CAR		01 DRVR	NONE	33 M			000	000	00
	N	45 23 16.3														OR<25				
			13.23								02 NONE 0	TURN-L								
Column   C											PRVTE	N -E							000	00
C											PSNGR CAR		01 DRVR	NONE	29 M	SUSP		028,004,020	000	02,04
PRINT   PRIN																OR<25				
PSNG   CAP   PSNG   CAP   PSNG   CAP   PSNG   CAP   PSNG   PSNG   NB   PSNG																			0.00	0.0
04348 N N N N N N N O 9/23/2022 16 SW TULLATIN RD INTER 3-LEG N N O DRY TURN 0 PRVTE N -E N												N -E	02 Dana	TMTD	20 17			000		
CITY FR SIGNAL N DRY SIGNAL N D											PSNGR CAR		UZ PSNG	INUB	29 F			000	000	00
N 3P 04 0 N DAY INJ PSNG CAP	04348	N N N N N N 09/23/2022	16	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	0-1 L-T	URN 01 NONE 0	TURN-L							013	02,04
N 45 23 16.36 -122 48 15.23  102 NNE   0   STRGHT   S - N   S - N   STRGHT   S - N	CITY	FR	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	TURN	PRVTE	N -E							000	00
N 45 23 16.36 -122 48 15.23  102 NNE   0   STRGHT   S - N   S - N   STRGHT   S - N	N	מפ			0.4	0		M	DAV	TNIT	DONGD CAD		מזמת 11	TNITD	/12 E	OB-V		029 004 020	0.00	02 04
02 NONE 0 STRGHT PRVTE S -N	N		6 -122 48		04	U		IN	DAI	INO	PSNGR CAR		OI DRVR	INUD	43 F			020,004,020	000	02,04
PRVTE S -N PSNGR CAR 01 DRVR INJB 49 M OR-Y 000 003 00 OR<25  10 NONE 0 STRGHT PRVTE S -N PSNGR CAR 02 PSNG INJB 29 F 000 003 00 00 013 00 OR<25  10 NONE 0 STRGHT PRVTE S -N PSNGR CAR 02 PSNG INJB 29 F 000 000 000 000 000 00 000 000 000 00			15.23								0.2 NONE 0	STRGHT								
PSNGR CAR																			000 013	0.0
OR<25  02 NONE 0 STRGHT  PRVTE S -N 000 013 00  PSNGR CAR 02 PSNG INJB 29 F 000 000 000 00  03 NONE 0 STOP  PRVTE E -W 5 -W 01 DRVR INJB 31 M OR-Y 000 000 000 000												5 1	01 DRVR	INJB	49 M	OR-Y		000		
02 NONE 0 STRGHT  PRVTE S -N 000 013 00  PSNGR CAR 02 PSNG INJB 29 F 000 000 00  03 NONE 0 STOP  PRVTE E -W 01 DRVR INJB 31 M OR-Y 000 000 00																				
PSNGR CAR 02 PSNG INJB 29 F 000 000 00  03 NONE 0 STOP PRVTE E-W 5011 00 PSNGR CAR 01 DRVR INJB 31 M OR-Y 000 000 00											02 NONE 0	STRGHT								
03 NONE 0 STOP  PRVTE E-W  011 00  PSNGR CAR  01 DRVR INJB 31 M OR-Y  000 000 00											PRVTE	S -N							000 013	00
PRVTE E -W 01 DRVR INJB 31 M OR-Y 000 000 00											PSNGR CAR		02 PSNG	INJB	29 F			000	000	00
PRVTE E -W 01 DRVR INJB 31 M OR-Y 000 000 00											0.3 NONE 0	STOP								
PSNGR CAR																			011	0.0
													01 DRVR	INJB	31 M	OR-Y		000		
																OR<25				

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

# 124TH AVE at TUALATIN RD, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

14 - 15 of 15 Crash records shown.

	S D M																		
SER#	P R J S W DATE	CLASS	CITY STREET		INT-TYPE					SPCL USE									
INVEST	E A U I C O DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			A S	3				
RD DPT	E L G N H R TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G I	LICNS	PED			
UNLOC?	D C S V L K LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVRTY	E 2	RES	LOC	ERROR	ACT EVENT	CAUSE
00497	N N N N N N 02/01/2022	16	SW TUALATIN RD	INTER	3-LEG	N	N	RAIN	O-1 L-TUR	N 01 NONE 9	STRGHT								02,04
CITY	TU	0	SW 124TH AVE	CN		TRF SIGNAL	N	WET	TURN	N/A	S -N							000	00
N N	6P 45 23 16.36	5 -122 48 15.23		04	0		N	DLIT	PDO	PSNGR CAR		01 DRVR	NONE	00 Ur	k UNK UNK		000	000	00
		15.23								02 NONE 9 N/A	TURN-L N -E							000	00
										PSNGR CAR	14 12	01 DRVR	NONE	00 Ur	ık UNK UNK		000	000	00
05431	N N N N N N 11/16/2022	16	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	O-1 L-TUR	N 01 NONE 0	STRGHT								02,04
CITY	WE	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	TURN	PRVTE	S -N							000	00
N N	5A 45 23 16.36	5 -122 48 15.23		04	0		N	DLIT	INJ	PSNGR CAR		01 DRVR	INJB	50 F	OR-Y OR<25		000	000	00
		13.43								02 NONE 0	TURN-L								
										PRVTE	N -E		-					000	00
										PSNGR CAR		01 DRVR	INJC	22 M	OR-Y OR<25		028,004,020	000	02,04

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY TUALATIN RD at 115TH AVE, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

1 - 1 of 1 Crash records shown.

S D M																				
SER# P R J S	W DATE	CLASS	CITY STREET		INT-TYPE					SPCL USE										
INVEST E A U I C	O DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			A	S					
RD DPT E L G N H	R TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED			
UNLOC? D C S V I	K LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVRTY	Y E	Х	RES	LOC	ERROR	ACT EVENT	CAUSE
00658 N N N N	02/06/2018	17	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	ANGL-STP	01 NONE 9	TURN-L									08
NONE	TU	0	SW 115TH AVE	N		STOP SIGN	N	DRY	TURN	N/A	W -N								000	00
N	2P			06	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000	00
N	45 23 23.1															UNK				
		43.4								02 NONE 9	STOP									
										N/A	N -S								011	00
										PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000	00
																UNK				

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

# TUALATIN RD at 108TH AVE, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

1 - 3 of 3 Crash records shown.

S D M												
SER# P R J	S W DATE	CLASS	CITY STREET		INT-TYPE					SPCL USE		
INVEST E A U I	C O DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE	A S
RD DPT E L G N	H R TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC INJ G E LICNS PED
UNLOC? D C S V	L K LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE SVRTY E X RES LOC ERROR ACT EVENT C.
01097 N N N N	N N 02/25/2020	17	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	ANGL-OTH	01 NONE 0	STRGHT	0
CITY	TU	0	SW 108TH AVE	CN		STOP SIGN	N	DRY	TURN	PRVTE	W -E	000 0
1	11P			04	0		N	DLIT	INJ	PSNGR CAR		01 DRVR NONE 55 M OR-Y 000 000 0
Г	45 23 23.1											OR<25
		15.82								02 NONE 0	TURN-L	
										PRVTE	S -W	015 0
										PSNGR CAR	5 W	01 DRVR INJC 22 M OR-Y 028 000 0
												OR<25
5023 N N N N	N N 11/17/2021	17	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	S-1TURN	01 NONE 0	STRGHT	0
!ITY	WE	0	SW 108TH AVE	CN		STOP SIGN	N	DRY	TURN	PRVTE	W -E	000 0
	10A			04	0		N	DAY	INJ	PSNGR CAR		01 DRVR INJB 16 M OR-Y 000 000 0
	45 23 23.1											OR<25
		15.82								02 NONE 0	U-TURN	
										02 NONE 0 PRVTE	W -W	000 0
										PSNGR CAR		01 DRVR NONE 92 M OR-Y 008 000 0
												OR<25
4259 N N N N	08/15/2022	17	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	ANGL-OTH	01 NONE 9	STRGHT	0
ONE	MO	0	SW 108TH AVE	CN		STOP SIGN	N	DRY	TURN	N/A	W -E	000 0
	8A			04	0		N	DAY	PDO	PSNGR CAR		01 DRVR NONE 00 Unk UNK 000 000 0
Ī	45 23 23.1											UNK
		15.82								02 NONE 9	TURN-L	
										N/A	S -W	000 0
										PSNGR CAR		01 DRVR NONE 00 Unk UNK 000 000 0
												IINK

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY 124TH AVE at LEVETON DR, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

1 - 5 of 7 Crash records shown.

S D M	1																	
SER# P R J	J S W DATE	CLASS	CITY STREET		INT-TYPE					SPCL USE								
INVEST E A U I	C O DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE		A	S				
RD DPT E L G N	1 H R TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC INJ	G	E LIC	IS PED			
UNLOC? D C S V		LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	ТО	P# TYPE SVR	ΓY Ε	X RES	LOC	ERROR	ACT EVENT	CAUSE
05935 N N N N	11/12/2019	16	SW LEVETON DR	INTER	CROSS	N	N	RAIN	S-1STOP	01 NONE 9	STRGHT							29
NONE	TU	0	124TH AVE	N		TRF SIGNAL	N	WET	REAR	N/A	N -S						000	00
N	8A			06	0		N	DAY	PDO	PSNGR CAR		01 DRVR NON	E 00	Unk UNK		000	000	00
N	45 23 5.63	-122 48 14.95												UNK				
		11.75								02 NONE 9	STOP							
										N/A	N -S						011	00
										PSNGR CAR		01 DRVR NON	Ξ 00			000	000	00
0.451.0	7 10/00/0000	1.0	ari i priperori po		g5.0.00				g 1 aman	0.1 370377	amp arm			UNK				
04719 N N N N	12/22/2020	16	SW LEVETON DR	INTER	CROSS	N	N	CLR	S-1STOP	01 NONE 9	STRGHT							29
NONE	TU	0	124TH AVE	N		TRF SIGNAL	N	DRY	REAR	N/A	N -S						000	00
N	12P			06	0		N	DAY	PDO	PSNGR CAR		01 DRVR NON	E 00	Unk UNK		000	000	00
N	45 23 5.63													UNK				
		14.95								02 NONE 9	STOP							
										N/A	N -S						011	00
										PSNGR CAR		01 DRVR NON	Ξ 00	Unk UNK		000	000	00
														UNK				
02597 N N N N	I N N 05/23/2018	16	SW LEVETON DR	INTER	CROSS	N	N	CLR	S-1STOP	01 NONE 9	STRGHT							27,07
CITY	WE	0	124TH AVE	E		TRF SIGNAL	N	DRY	REAR	N/A	E -W						000	00
N	5P			06	0		N	DAY	PDO	PSNGR CAR		01 DRVR NON	E 00	Unk UNK		000	000	00
N	45 23 5.63													UNK				
		14.95								02 NONE 9	STOP							
										N/A	E -W						011	00
										PSNGR CAR		01 DRVR NON	Ξ 00			000	000	00
														UNK				
04159 Y N N N	N N 08/16/2019	16	SW LEVETON DR	INTER	CROSS	N	N	CLR	OVERTURN	01 NONE 0	TURN-L							01
CITY	FR	0	124TH AVE	E		TRF SIGNAL	N	DRY	NCOL	PRVTE	N -E						000	00
N	6P			05	0		N	DAY	INJ	TRUCK		01 DRVR INJ	3 25	M OTH-	Y	047	000	01
N	45 23 5.63													N-RE	S			
05424 N N N N		14.95	SW LEVETON DR	INTER	CROSS	N	N	DATM	ANGL-OTH	01 NONE 0	STRGHT							04
NO RPT	FR	0	124TH AVE	CN	CKODD	TRF SIGNAL		WET	TURN	PRVTE	W -E						000	00
NO KFI		U	TZ-TIU WAR			IKE SIGNAL	IA	WEI	TOKN	FKVIL	νν — <u>Γ</u>							00
N N	11A 45 23 5.63			04	0		N	DAY	INJ	PSNGR CAR		01 DRVR INJ	C 57	M OR-Y		020	000	04
		14.95								02 NONE 0	TURN-L							
										PRVTE	S -W						000	00
										PSNGR CAR		01 DRVR INJ	C 63			000	000	00
														OR<2	5			

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

#### 124TH AVE at LEVETON DR, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

6 - 7 of 7 Crash records shown.

S D M																			
SER# P R J S	W DATE	CLASS	CITY STREET		INT-TYPE					SPCL USE									
INVEST E A U I C	O DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			A	S				
RD DPT E L G N H	R TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E LICNS	PED			
UNLOC? D C S V L	K LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVRT	Y E	X RES	LOC	ERROR	ACT EVENT	CAUSE
01884 N N N N	04/15/2019	16	SW LEVETON DR	INTER	CROSS	N	N	CLR	O-1 L-TUR	N 01 NONE 9	TURN-L								02
NO RPT	MO	0	124TH AVE	CN		TRF SIGNAL	N	DRY	TURN	N/A	N -E							000	00
N N	2P 45 23 5.63	-122 48 14.95		04	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk UNK UNK		000	000	00
		11.73								02 NONE 9	STRGHT								
										N/A	S -N							000	00
										PSNGR CAR		01 DRVR	NONE	00			000	000	00
															UNK				
01646 N N N N	04/14/2022	16	SW LEVETON DR	INTER	CROSS	N	N	CLR	ANGL-OTH	01 NONE 9	TURN-L								08
CITY	TH	0	124TH AVE	CN		TRF SIGNAL	N	DRY	TURN	N/A	E -S							000	00
N	9A			04	0		N	DAY	PDO	SEMI TOW		01 DRVR	NONE	00	Unk UNK		000	000	00
N	45 23 5.63														UNK				
		14.95								02 NONE 9	TURN-R								
										N/A	S -E							000	00
										PSNGR CAR		01 DRVR	NONE	00	Unk UNK		000	000	00
															UNK				

#### TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY LEVETON DR and Intersectional Crashes at LEVETON DR, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022 1 - 5 of 11 Crash records shown.

	S D M																			
SER#	P R J S W DATE	CLASS	CITY STREET		INT-TYPE					SPCL USE										
	E A U I C O DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)		OFFRD		CRASH	TRLR QTY	MOVE			A S						
	E L G N H R TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC		G E 1						
	D C S V L K LAT N N N N N N 11/15/2022	LONG 17	LRS SW LEVETON DR	LOCTN	(#LANES)	N	DRVWY	LIGHT		V# TYPE RN 01 NONE 9	TO STRGHT	P# TYPE	SVRTY	E X I	RES	LOC	ERROR	ACT EV	ENT/	CAUSE 02
ITY	TU	995	SW 108TH AVE	W	(NONE)	UNKNOWN	N	DRY	TURN	N/A	E -W							000		00
	5p 45 23 9.71	-122 47 29.92		07	(02)		N	DLIT	PDO	PSNGR CAR		01 DRVR	NONE	00 Unk (	INK		000	000		00
		23.32								02 NONE 9	TURN-L									
										N/A PSNGR CAR	M -N	01 DDVD	NONE	00 Unk t	INIV		000	019 000		00
										FSNGK CAR		OI DRVK	NONE		INK		000	000		00
242	N N N N N N 09/18/2022	17	SW LEVETON DR	ALLEY		N	Y	CLR	BIKE	01 NONE	TURN-R									02
TY	SU	1013	SW 108TH AVE	W	(NONE)	UNKNOWN	N	DRY	ANGL	PRVTE	N -M							018		0.0
	11A			07			Y	DAY	INJ	PSNGR CAR		01 חסנים	NONE	33 F (	1D_V		027	000		02
	45 23 9.72	-122 47 30.44		07	(02)		1	DAI	INO	PSNOR CAR		UI DAVA	MONE		)R>25		027	000		02
											_									
											STRGHT	01 BIKE	INJA	72 F		SIDEWK	000	000		0.0
											E. W									
844	N N N N N N 06/06/2018	17	SW LEVETON DR	STRGHT		N	Y	CLR	FIX OBJ	01 NONE 0	STRGHT							05	9,092	26
TY	WE	230	SW 118TH AVE	W	(NONE)	UNKNOWN	N	DRY	FIX	PRVTE	M -E							007 05	3,092	26
	10P			08			N	DLIT	INJ	PSNGR CAR		01 DRVR	INJB	28 M (	R-Y		081	000		26
	45 23 5.5	-122 48 .67			(02)									(	R<25					
.340	N N N N N N 03/16/2019		SW LEVETON DR	STRGHT		N	Y	CLR	FIX OBJ	01 NONE 9	STRGHT							05	59,003	10
TY	SA	240	SW 118TH AVE	W	(NONE)	UNKNOWN	N	DRY	FIX	N/A	W -E		_					000		0.0
	5P			08						PSNGR CAR		0.1	1101111	0.0 11-1-1	****		000	000		0.0
	45 23 5.51	-122 48 .59		08	(02)		N	DAY	PDO	PSNGR CAR		DRVR	NUNE	00 Unk t	INK		000	000		00
935	N N N N 11/12/2019	16	SW LEVETON DR	INTER	CROSS	N	N	RAIN	S-1STOP	01 NONE 9	STRGHT									29
NE	TU	0	124TH AVE	N		TRF SIGNAL	N	WET	REAR	N/A	N -S							000		00
	8A 45 23 5.63	-122 48 14.95		06	0		N	BAY	PDO	PSNGR CAR		01 DRVR	NONE	00 Unk t	INK INK		000	000		00
		17.20								02 NONE 9 N/A PSNGR CAR	STOP N -S	01 DRVR	NONE	00 Unk t	INK		000	011 000		00 00
4719	N N N N 12/22/2020	16	SW LEVETON DR	INTER	CROSS	N	N	CLR	S-1STOP	01 NONE 9	STRGHT									29
ONE	TU	0	124TH AVE	N			N	DRY	REAR	N/A	N -S							000		00
214111	12P			06	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00 Unk t	JNK		000	000		00
1	45 23 5.63	-122 48 14.95													INK					

Disclaimer: The information contained in this report is compiled from individual driver and police crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit is committed to providing the highest qualify crash data to customers. However, because submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest qualify crash data to customers. However, because submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest qualify crash data to customers. However, because submitted to providing the highest qualify crash data to customers. However, because submitted to providing the highest qualify crash data to customers. However, because submitted to providing the highest qualify crash data to customers. However, because submitted to providing the highest qualify crash data to customers. However, because submitted to providing the highest qualify crash data to customers. However, because submitted to providing the highest qualify crash at a customers. However, because submitted to providing the highest qualify crash at a customers. However, because submitted to providing the highest qualify crash at a customers. However, because submitted to providing the highest qualify crash at a customers. However, because submitted to providing the highest qualify crash at a customers. However, because submitted to providing the highest qualify crash at a customers. However, because submitted to providing the highest qualify crash at a customers. However, because submitted to providing the highest qualify crash at a customers. However, because submitted to providing the highest qualify crash at a customers. However, because submitted to providing the highest qualify crash at a customers. However, because submitted to providing the highest qualify crash at a customers. However, because submitted to

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

#### 108TH AVE at HERMAN RD, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

1 - 1 of 1 Crash records shown.

S	D M																			
SER# P	R J S W DA	ATE	CLASS	CITY STREET		INT-TYPE					SPCL USE									
INVEST E A	A U I C O DA	ΑY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			A	S				
RD DPT E L	G N H R TI	ME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E LICNS	PED			
UNLOC? D C	SVLKLA	ΑT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	ТО	P# TYPE	SVRTY	E	X RES	LOC	ERROR	ACT EVENT	CAUSE
00130 N N	I N N 01	1/07/2020	17	SW HERMAN RD	INTER	3-LEG	N	N	RAIN	S-1STOP	01 NONE 9	STRGHT								29
NONE	TU	J	0	SW 108TH AVE	NE		TRF SIGNAL	N	WET	REAR	N/A	NE-SW							000	00
N N	4P 45	5 23 1.12			06	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk UNK UNK		000	000	00
			15.52								02 NONE 9	STOP								
											N/A	NE-SW							011	00
											PSNGR CAR		01 DRVR	NONE	00	Unk UNK		000	000	00
																UNK				

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

#### TETON AVE at HERMAN RD, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

1 - 5 of 5 Crash records shown.

S D M																			
SER# P R J S	S W DATE	CLASS	CITY STREET		INT-TYPE					SPCL USE									
INVEST E A U I C		DIST	FIRST STREET	RD CHAR		INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			A 5	3				
RD DPT E L G N H		FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ		LICNS	PED			
UNLOC? D C S V L		LONG	LRS	LOCTN	(#LANES)		DRVWY	LIGHT		V# TYPE	TO	P# TYPE	SVRTY			LOC	ERROR	ACT EVENT	CAUSE
03890 N N N N N	N 08/01/2019	17	SW HERMAN RD	INTER	CROSS	N	N	CLR	S-OTHER	01 NONE 1	TURN-L								05
CITY	TH	0	SW TETON AVE	N		L-GRN-SIG	N	DRY	TURN	PRVTE	N -NE							000	00
N N	12P 45 23 5.35			06	2		N	DAY	INJ	SEMI TOW		01 DRVR	NONE	51 M	OR-Y OR<25		080	000	05
		1.5								02 NONE 0	STOP								
										PRVTE	N -S							011	00
										PSNGR CAR		01 DRVR	INJC	60 F	OR-Y OR<25		000	000	00
00751 Y N N N	02/16/2022	17	SW HERMAN RD	INTER	CROSS	N	N	FOG	S-1STOP	01 NONE	STRGHT							124,015	01,07
NONE	WE	0	SW TETON AVE	S		TRF SIGNAL	N	WET	REAR	PRVTE	S -N							001 124	00
N N	6A 45 23 5.37			06	0		N	DLIT	INJ	PSNGR CAR		01 DRVR	NONE	32 M	OR-Y OR<25		026	000	01,07
		1.51								02 NONE	STOP								
										PRVTE	S -N							011	00
										PSNGR CAR		01 DRVR	INJC	43 M	OR-Y OR>25		000	000	00
03558 Y Y N N N	N 09/01/2021	17	SW HERMAN RD	INTER	CROSS	N	Y	CLR	FIX OBJ	01 NONE 9	TURN-R							043	01,08
CITY	WE	0	SW TETON AVE	W		UNKNOWN	N	DRY	FIX	N/A	SW-S							000	00
N	8P			09	2		N	DLIT	PDO	PSNGR CAR		01 DRVR	NONE	00 Ur	ık UNK		000	000	00
N	45 23 5.35	-122 47 1.5													UNK				
05774 N N N N N	N 11/04/2019	17	SW HERMAN RD	INTER	CROSS	N	N	CLD	ANGL-OTH	01 NONE 0	STRGHT								27,04
CITY	MO	0	SW TETON AVE	CN		TRF SIGNAL	N	DRY	ANGL	PRVTE	N -S							000	00
N N	11A 45 23 5.35	-122 47		03	2		N	DAY	INJ	PSNGR CAR		01 DRVR	INJB	33 M	OR-Y OR<25		000	000	00
	15 25 5.55	1.5								00 NONE 0	CMD CHIM				010 -23				
										02 NONE 0 RENTL	STRGHT SW-NE							000	00
										PSNGR CAR	SW INE	01 DRVR	INJC	33 F	OR-Y		016,020	038	27,04
															OR>25				
		17	SW HERMAN RD	INTER	CROSS	N	N	RAIN	O-1 L-TURI	N 01 NONE 9	STRGHT								02
00417 N N N N	02/06/2021					L-GRN-SIG	N	WET	TURN	N/A	N -S							000	00
	02/06/2021 SA	0	SW TETON AVE	CN															
CITY	SA 1P 45 23 5.39	-122 47	SW TETON AVE	CN 01	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00 Ur	ık UNK UNK		000	000	00
CITY	SA 1P 45 23 5.39		SW TETON AVE		0		N	DAY	PDO	PSNGR CAR 02 NONE 9	TURN-L	01 DRVR	NONE	00 Ur			000	000	00
00417 N N N N N CITY N	SA 1P 45 23 5.39	-122 47	SW TETON AVE		0		N	DAY	PDO		TURN-L S -SW	01 DRVR	NONE	00 Ur			000	000 000 000	00 00 00

URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

#### TUALATIN RD at TETON AVE, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

1 - 3 of 3 Crash records shown.

	S D M																				
SER#	P RJS	W DATE	CLASS	CITY STREET		INT-TYPE					SPCL USE										
INVEST	E A U I C	O DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE				A S					
RD DPT	ELGNH	R TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ		G E	LICNS	S PED			
UNLOC?	DCSVL	K LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVRT	Ϋ́	E X	RES	LOC	ERROR	ACT EVENT	CAUSE
05073	N N N N N	N 10/05/2019	17	SW TUALATIN RD	INTER	3-LEG	N	Y	CLR	FIX OBJ	01 NONE 0	TURN-L								091	27,16,32
CITY		SA	0	SW TETON AVE	S		STOP SIGN	N	DRY	FIX	PRVTE	E -S								000 091	00
N N		3A 45 23 23.05	7 -122 47		05	0		N	DARK	INJ	PSNGR CAR		01 DRVR	INJO	3	0 M	OR-Y		016,081,052	2 038	27,16,32
IA		45 25 25.07	1.88														UK/Z	,			
04231	N N N N	08/15/2018	17	SW TUALATIN RD	INTER	3-LEG	N	N	CLR	ANGL-OTH	01 NONE 9	TURN-L									02
NONE		WE	0	SW TETON AVE	CN		STOP SIGN	N	DRY	TURN	N/A	S -W								000	00
N		5P			04	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	E 0	0 Unl			000	000	00
N		45 23 23.07	7 -122 47 1.88														UNK				
			1.00								02 NONE 9	STRGHT									
											N/A	W -E								000	00
											PSNGR CAR		01 DRVR	NONE	0	0 Unl			000	000	00
																	UNK				
00851	N N N N	N 02/19/2019	17	SW TUALATIN RD	INTER	3-LEG	N	N	CLD	ANGL-OTH	01 NONE 9	TURN-L									02
CITY		TU	0	SW TETON AVE	CN		STOP SIGN	N	DRY	TURN	N/A	S -W								015	00
N		4P			04	0		N	DUSK	PDO	PSNGR CAR		01 DRVR	NONE	G 0	0 Unl			000	000	00
N		45 23 23.07	7 -122 47 1.88														UNK				
			1.00								02 NONE 9	STRGHT									
											N/A	W -E								000	00
											PSNGR CAR		01 DRVR	NONE	E 0	0 Unl	c UNK		000	000	00
																	UNK				

of 5 Crash records shown.

URBAN NON-SYSTEM CRASH LISTING

1 - 5

CITY OF TUALATIN, WASHINGTON COUNTY HAZELBROOK RD at PACIFIC HY 99W, City of Tualatin, Washington County, 01/01/2018 to 12/31/2022

						Ι.	,	or 5 cras	ii iccords silowii.								
S D M																	
SER# P R J S	S W DATE CLASS	CITY STREET		INT-TYPE	:				SPCL USE								
INVEST E A U I (		FIRST STREET	RD CHAR		INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			А	S			
RD DPT E L G N H		SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT		COLL	OWNER	FROM	PRTC	INJ		E LICNS PI	ED		
UNLOC? D C S V I		LRS	LOCTN	(#LANES)		DRVWY			V# TYPE	TO	P# TYPE				OC ERROR	ACT EVENT	CAUSE
	N N 06/13/2019 14	SW HAZELBROOK RD	INTER	3-LEG	N	N	CLR	S-1STOP	01 NONE 9	TURN-R							07
CITY	ТН	SW PACIFIC HY 99W	E		STOP SIGN	N	DRY	REAR	N/A	E -N						000	00
N	7A		09	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	0.0	IInk IINK	000	000	00
N	45 23 33.16 -122 47	009100200S00	0,5	Ü		14	DAI	100	I BIVOIC CAIC		OI DRVR	NONE	00	UNK	000	000	00
	59.48								02 NONE 9	STOP							
									N/A	E -N						011	00
									PSNGR CAR		01 DRVR	NONE	00	Unk UNK	000	000	00
														UNK			
04451 N N N N N	N N 08/25/2018 18	SW HAZELBROOK RD	INTER	3-LEG	N	N	CLD	S-1STOP	01 NONE 9	STRGHT							27,07
COUNTY	SA 0	SW PACIFIC HY 99W	E		STOP SIGN	N	DRY	REAR	N/A	E -W						000	00
N	2P		06	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk UNK	000	000	00
N	45 23 33.45 -122 47													UNK			
	59.18								02 NONE 9	STOP							
									N/A	E -W						011	00
									PSNGR CAR		01 DRVR	NONE	00		000	000	00
														UNK			
04015 N N N N	09/05/2022 18	SW HAZELBROOK RD	INTER	3-LEG	N	N	CLR	S-1STOP	01 NONE	STRGHT							07
CITY	MO 0	SW PACIFIC HY 99W	E		STOP SIGN	N	DRY	REAR	PRVTE	E -W						000	00
N	3P		06	0		N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	21	M NONE	043	000	07
N	45 23 33.45 -122 47 59.22													OR>25			
	33.22								02 NONE	STOP							
									PRVTE	E -W						011	00
									PSNGR CAR		01 DRVR	INJB	49	F OR-Y OR<25	000	000	00
04025 N N N N N	N N 11/03/2020 14	SW HAZELBROOK RD	INTER	3-LEG	N	N	RAIN	ANGL-OTH	01 NONE 0	TURN-R				01(123			08
CITY	TU	SW PACIFIC HY 99W	CN		STOP SIGN		WET	TURN	PRVTE	E -N						000	00
		bw facific iii 99w			BIOI BION					E 14							
N N	8P 45 23 33.16 -122 47	009100200s00	02	0		N	DARK	INJ	PSNGR CAR		01 DRVR	INJC	23	F OR-Y OR<25	007	000	80
N	59.48	009100200300												OR<25			
									02 NONE 0	STRGHT							
									PRVTE	S -N	01 DD17D	TNIC	2.4	E OD V	0.00	000	00
									PSNGR CAR		UI DRVR	INJC	24	F OR-Y OR<25	000	000	00
05919 N N N N N	N N 12/13/2022 14	SW HAZELBROOK RD	INTER	3-LEG	N	N	CLR	ANGL-OTH	01 NONE 9	STRGHT							02
CITY	TU	SW PACIFIC HY 99W	CN		STOP SIGN	N	DRY	TURN	N/A	W -E						000	00
N	5A		02	1		N	DARK	PDO	PSNGR CAR		01 DRVR	М∪иг	0.0	IInk IINV	000	000	00
N	45 23 33.62 -122 47	009100200S00	U Z	т		TA	DAKK	FDO	FONGR CAR		OI DRVR	INOINE	00	UNK	000	000	00
	59.07								0.0 NONTE 0	mina p							
									02 NONE 9 N/A	TURN-R S -E						015	00
									PSNGR CAR	2 1	01 DRVR	NONE	00	Unk UNK	000	000	00

CONTINUOUS SYSTEM CRASH LISTING

091: PACIFIC HIGHWAY WEST Highway 091 MAINLINE, MP 11.91 to 11.93 01/01/2018 to 12/31/2022, Both Add and Non-Add mileage

> 1 - 6 of 17 Crash records shown.

S D M																				
SER# P R J S	W DATE	COUNTY	RD# FC CONN#	RD CHAR	INT-TYPE					SPCL USE										
INVEST E A U I C	O DAY	CITY	COMPNT FIRST STREET	DIRECT	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			i	A S					
RD DPT E L G N H	R TIME	URBAN AREA	MLG TYP SECOND STREET	LOCTN	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	(	3 E	LICNS	PED			
UNLOC? D C S V L	K LAT	LONG	MILEPNT LRS		(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVR	ry i	E X	RES	LOC	ERROR	ACT EVENT	CAUSE
01876 N N N N	05/20/2021	WASHINGTON	1 14	STRGHT		Y	N	CLR	S-1STOP	01 NONE 0	STRGHT									29
NONE	TH		MN 0	UN	(DIVMD)	R-GRN-SIG	N	DRY	REAR	PRVTE	N -S								000	00
N	4P	PORTLAND UA	11.91	03			N	DAY	INJ	PSNGR CAR		01 DRVR	INJ	39	F	OR-Y		026	000	29,07
N	45 23 53.26	-122 47 55.79	009100100S00		(04)											OR<25				
										02 NONE 0	STOP									
										PRVTE	N -S								011	00
										PSNGR CAR		01 DRVR	INJ	2 53	3 F			000	000	00
																OR<25				
04851 N N N N	09/20/2019	WASHINGTON	1 14	INTER	3-LEG	N	N	CLR	S-1STOP	01 NONE 0	STRGHT									29
NO RPT	FR		MN 0	N	•	TRF SIGNAL	N	DRY	REAR	PRVTE	N -S	0.4						205	000	00
N	2P	PORTLAND UA	11.92	06	0		N	DAY	INJ	PSNGR CAR		01 DRVR	NON	£ 23	3 F			026	000	29
N	45 23 52.73	-122 47 55.84	009100100800							02 NONE 0	CTOD					OR<25				
										02 NONE 0 PRVTE	STOP N -S								011	00
										PSNGR CAR	N -5	01 DRVR	TNLT	7 20	ਜ (	OR-V		000	000	00
										FBNGK CAR		OI DRVR	TIVO		, 1	OR<25		000	000	00
00252 N. N. N. N.	01/20/2010	WASHINGTON	1 14	INTER	3-LEG	N	N	UNK	PED	0.1 NONE 0	TURN-R					010 120				0.2
00352 N N N N COUNTY	01/20/2019 SU	WASHINGION	MN 0	S	3-TFG	TRF SIGNAL	N	WET	PED	01 NONE 0 PRVTE	W -S								000	02 00
N	6A	PORTLAND UA	11.92	05	1	IRF SIGNAL	N	DLIT	INJ	PSNGR CAR	W -5	01 DRVR	NONI	7 21	M	OR-V		000	000	00
N	45 23 52.73		009100100S00	0.5	<u> </u>		14	DLII	1110	1 BIVOIC CINC		OI DRVR	140141			OR>25		000	000	0.0
											-									
											STRGHT	01 PED	INJI	3 23	8 M		I XV	WLK 028	035	02
											W E									
04005 N N N N	09/04/2022	MA CHI NOTION	1 14	TMILED	apogg.	NT.	37	OI D	ETY ODT	01 NONE									002 07	70 26 40 00
04005 N N N N NONE	09/04/2022 SU	WASHINGTON	MN 0	INTER	CROSS	N TRF SIGNAL	Y N	CLR DRY	FIX OBJ FIX	01 NONE PRVTE	TURN-L E -S								000 092,07	79 26,40,08
N	9P	PORTLAND UA	11.92	05	0	IKI SIGNAL	N	DLIT	INJ	PSNGR CAR	ы -5	01 DRVR	TNJT	7 60	) M	OR-Y		080,081	027	26,40,08
N	45 23 52.73	-122 47 55.84	009100100S00	03	Ü		14	DLII	1110	1 BIVOIC CINC		OI DRVR	1110		, 11	OR>25		000,001	027	20,10,00
02462 N N N N	05/15/2019	WASHINGTON	1 14	INTER	CROSS	N	N	CLD	PED	01 NONE 0	TURN-L									04
COUNTY	WE	WASHINGTON	MN 0	S	CROSS	TRF SIGNAL	N	WET	PED	PRVTE	S -W								000	00
N	12P	PORTLAND UA	11.92	06	0	IIII DIGIVILL	N	DAY	INJ	PSNGR CAR	2 "	01 DRVR	NONI	s 75	5 F	OR-Y		000	000	00
N	45 23 52.73		009100100800													OR<25				
											_									
											STRGHT	01 CONV	INJ	7.	7 M		I XV	WLK 020	035	04
											E W									
OEO22 NI NI NI NI	11/12/2019	MA CHI INCRON	1 14	TNTED	2 1 EC	N	NT .	DATM	C 1CTOD	0.1 NONE 0										27,29
05923 N N N N NONE	TU	WASHINGTON	MN 0	INTER	3-LEG	TRF SIGNAL	N N	RAIN WET	S-1STOP REAR	01 NONE 0 PRVTE	STRGHT S -N								000	00
N	11A	PORTLAND UA	11.92	06	0	IKI SIGNAL	N	DAY	INJ	PSNGR CAR	S -N	01 DRVR	NONI	7 63	R M	OR-V		016,026	038	27,29
N		-122 47 55.84	009100100800	50	ŭ		-1			2011OIL CAIL		OT DIVIN	140141	_	. 1.1	OR>25		510,020	000	2.122
			212 20020000							02 NONE 0	STOP					23				
										PRVTE	S -N								011	00
										PSNGR CAR		01 DRVR	INJ	2 49	9 M	OR-Y		000	000	00
																OR<25				

CONTINUOUS SYSTEM CRASH LISTING

091: PACIFIC HIGHWAY WEST

Highway 091 MAINLINE, MP 11.91 to 11.93 01/01/2018 to 12/31/2022, Both Add and Non-Add mileage

7 - 12 of 17 Crash records shown.

S D M																				
SER# P R J S	W DATE	COUNTY	RD# FC CONN#	RD CHAR	INT-TYPE					SPCL USE										
INVEST E A U I C	O DAY	CITY	COMPNT FIRST STREET	DIRECT	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE				A 5	S				
RD DPT E L G N H	R TIME	URBAN AREA	MLG TYP SECOND STREET	LOCTN	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	Г	G I	E LICNS	PED			
UNLOC? D C S V L	K LAT	LONG	MILEPNT LRS		(#LANES)			LIGHT		V# TYPE	TO	P# TYPE					LOC	ERROR	ACT EVENT	CAUSE
03096 N N N N	08/04/2021	WASHINGTON	1 14	INTER	3-LEG	N	N	CLR	S-1STOP	01 NONE 9	STRGHT									29
NONE	WE		MN 0	S		TRF SIGNAL	N	DRY	REAR	N/A	S -N								000	00
N	6P	PORTLAND UA	11.92	06	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NON	1E (	00 Ur	nk UNK		000	000	00
N	45 23 52.73	-122 47 55.84	009100100S00													UNK				
										02 NONE 9	STOP								0.1.1	
										N/A	S -N	01 DRVR	NTON	(	) O TT	-1		000	011	0 0 0 0
										PSNGR CAR		UI DRVR	NON	IE (	10 01	UNK		000	000	00
00550 N Y N N N	N 02/04/2022	WASHINGTON	1 14	INTER	CROSS	N	N	CLR	S-1STOP	01 NONE	STRGHT									07,29
COUNTY	FR		MN 0	S		L-GRN-SIG	N	DRY	REAR	PRVTE	S -N								000	00
N	7P	PORTLAND UA	11.92	06	0		N	DLIT	INJ	PSNGR CAR		01 DRVR	NON	IE 3	36 M	NONE		043,026	000	07,29
N	45 23 52.75	-122 47 55.84	009100100S00													OR<25				
										02 NONE	STOP								0.1.0	
										PRVTE	S -N	0.1 DDIM	TATE		0 M	OD V		000	012	0 0 0 0
										PSNGR CAR		01 DRVR	TNU	10 2	40 IM	OR-1		000	000	00
										02 NONE	STOP					01(12)				
										PRVTE	S -N								012	00
										PSNGR CAR		02 PSNG	INJ	rc 2	29 F			000	000	00
01777 N N N N N	N 05/03/2020	WASHINGTON	1 14	INTER	3-LEG	N	Y	RAIN	FIX OBJ	01 NONE 9	TURN-R								100	27,08
COUNTY	SU	WASIIINGION	MN 0	W	3-1126	TRF SIGNAL	N	WET	FIX OBO	N/A	N -W								000	00
N	8A	PORTLAND UA	11.92	05	0	THE STOWER	N	DAY	PDO	PSNGR CAR	24 11	01 DRVR	NON	1E (	)0 Ur	nk UNK		000	000	00
N	45 23 52.74	-122 47 55.84	009100100800													UNK				
06495 N N N N	11/28/2018	WASHINGTON	1 14	INTER	3-LEG	N	N	CLD	0-1 L-TUF	RN 01 NONE 0	STRGHT									04
COUNTY	WE		MN 0	CN		TRF SIGNAL	N	WET	TURN	PRVTE	N -S								000	00
N	5P	PORTLAND UA	11.92	01	1		N	DLIT	INJ	PSNGR CAR		01 DRVR	NON	IE 4	12 M	OR-Y		020	000	04
N	45 23 52.73	-122 47 55.84	009100100S00													OR<25				
										02 NONE 0	TURN-L									
										PRVTE	S -W	01 227						000	000	00
										PSNGR CAR		01 DRVR	INU	IC 3	30 M	OR-Y		000	000	00
03527 N N N N N	N 08/07/2022	WASHINGTON	1 14	INTER	CROSS	N	N	CLR	0-1 L-TUF	RN 01 NONE 9	STRGHT					20				04,27
COUNTY	SU		MN 0	CN		TRF SIGNAL		DRY	TURN	N/A	N -S								000	00
N	9P	PORTLAND UA	11.92	01	0		N	DLIT	PDO	PSNGR CAR		01 DRVR	NON	1E (	00 Ur	nk UNK		000	000	00
N	45 23 52.73	-122 47 55.84	009100100S00													UNK				
										02 NONE 9	TURN-L									
										N/A	S -W			_					000	00
										PSNGR CAR		01 DRVR	NON	1E (	)0 Ur	ık UNK UNK		000	000	00
02689 N N N N	05/29/2019	WASHINGTON	1 14	INTER	CROSS	N	N	CLR	O-1 L-TUF	RN 01 NONE 0	STRGHT									04
COUNTY	WE		MN 0	CN		TRF SIGNAL	N	DRY	TURN	PRVTE	S -N								000	00
N	11P	PORTLAND UA	11.92	02	1		N	DLIT	INJ	PSNGR CAR		01 DRVR	NON	IE 4	15 M	OR-Y		020	000	04
N	45 23 52.73	-122 47 55.84	009100100800													OR<25				
										02 NONE 0	U-TURN									
										PRVTE	N -N	01 55				05. **		0.00	000	00
										PSNGR CAR		01 DRVR	ΙΝυ	10 2	м оъ	OR-Y OR<25		000	000	00
																UK<25				

CONTINUOUS SYSTEM CRASH LISTING

Page: 5

091: PACIFIC HIGHWAY WEST Highway 091 MAINLINE, MP 11.91 to 11.93 01/01/2018 to 12/31/2022, Both Add and Non-Add mileage

13 - 17 of 17 Crash records shown.

S D M																			
SER# P R J S	W DATE	COUNTY	RD# FC CONN#	RD CHAR	INT-TYPE					SPCL USE									
INVEST E A U I C	O DAY	CITY	COMPNT FIRST STREET	DIRECT	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			A	S				
RD DPT E L G N H	R TIME	URBAN AREA	MLG TYP SECOND STREET	LOCTN	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E LICNS	PED			
UNLOC? D C S V L	K LAT	LONG	MILEPNT LRS		(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVRTY	E	X RES	LOC	ERROR	ACT EVENT	CAUSE
02954 N N N N N	N 07/03/2022	WASHINGTON	1 14	INTER	CROSS	N	N	CLR	O-1 L-TUR	RN 01 NONE 9	STRGHT								02
COUNTY	SU		MN 0	CN		TRF SIGNAL	N	DRY	TURN	N/A	E -W							000	00
N	7P	PORTLAND UA	11.92	02	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	τ 00			000	000	00
N	45 23 52.73	-122 47 55.84	009100100S00							02 NONE 9	TURN-L				UNK				
										N/A	W -N							000	00
										PSNGR CAR	W 14	01 DRVR	NONE	00 τ	Jnk UNK		000	000	00
															UNK				
01353 N N N N	03/17/2019	WASHINGTON	1 14	INTER	3-LEG	N	N	CLR	ANGL-OTH	01 NONE 9	STRGHT								02
NONE	SU		MN 0	CN		TRF SIGNAL	N	DRY	TURN	N/A	N -S							000	00
N	12P	PORTLAND UA	11.92	03	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00 τ	Jnk UNK		000	000	00
N	45 23 52.73	-122 47 55.84	009100100500												UNK				
										02 NONE 9	TURN-R								
										N/A	W -S	01 DDIM	NONE	00 -	T 1- TTNTT		000	000	00
										PSNGR CAR		01 DRVR	NONE	00 (	UNK UNK		000	000	00
04228 N N N N	09/17/2022	WASHINGTON	1 14	INTER	CROSS	N	N	CLR	ANGL-OTH	01 NONE	TURN-R								04,02,27
COUNTY	SA		MN 0	CN		TRF SIGNAL	N	DRY	TURN	PRVTE	W -S							000	00
N	12P	PORTLAND UA	11.92	03	0		N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	19 N	M OR-Y		020	038	04,02,27
N	45 23 52.73	-122 47 55.84	009100100500												OR<25	1			
										02 NONE	STRGHT							222	0.0
										PRVTE MTRCYCLE	N -S	01 DRVR	T NT. T 7\	47 N	<b>√</b> ΩΤΉ_∇	7	000	000	00
										MIRCICHE		OI DRVK	INOA	- T / I	N-RES		000	000	00
03891 N N N N	N 10/01/2020	WASHINGTON	2 14	INTER	CROSS	N	N	CLD	S-STRGHT	01 NONE 9	STRGHT								27,29
COUNTY	TH		MN 0 SW FISCHER RD	S		UNKNOWN	N	DRY	REAR	N/A	S -N							000	00
N	8A	PORTLAND UA	11.92 SW PACIFIC HY 99W	06	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00 1	Ink IINK		000	000	00
	011	101121212	11.92 0.11.011.10 39.1		ŭ			2111	120	T DIVOIT GIAC		01 211111	110112		71111 01111				
N	45 23 52.71	-122 47 54.8	009100200S00												UNK				
										02 NONE 9	STRGHT							006	0.0
										N/A PSNGR CAR	S -N	01 DRVR	NONE	00 τ	Ink IINK		000	006 000	00
										I BNOK CAK		OI DRVR	NONE	00 (	UNK		000	000	00
05097 N N N N N	N 11/20/2021	WASHINGTON	2 14	INTER	CROSS	N	N	CLR	ANGL-OTH	01 NONE 0	STRGHT								02,04
COUNTY	SA		MN 0	CN		TRF SIGNAL	N	DRY	TURN	PRVTE	S -N							000	00
N	11A	PORTLAND UA	11.93	04	0		N	DAY	INJ	PSNGR CAR		01 DRVR	INJB	22 I	M OR-Y		000	000	00
N	45 23 52.75	-122 47 54.8	009100200S00												OR<25	ı			
										02 NONE 0	TURN-L								
										PRVTE	M -N	01 DDIE	T11.T.C	00 1			000 000	000	00
										PSNGR CAR		01 DRVR	TNJC	∠3 I	OR-Y OR<25		028,020	000	02,04
										02 NONE 0	TURN-L				OR < 25				
										PRVTE	W -N							000	00
										PSNGR CAR		02 PSNG	INJC	23 N	I.		000	000	00

CONTINUOUS SYSTEM CRASH LISTING

091: PACIFIC HIGHWAY WEST Highway 091 MAINLINE, MP 11.45 to 11.49 01/01/2018 to 12/31/2022, Both Add and Non-Add mileage

> 1 - 4 of 27 Crash records shown.

Page: 1

S D M																				
SER# P R J S	S W DATE	COUNTY	RD# FC CONN#	RD CHAR	INT-TYPE					SPCL USE										
INVEST E A U I	C O DAY	CITY	COMPNT FIRST STREET	DIRECT	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			i	A S	3				
RD DPT E L G N I	H R TIME	URBAN AREA	MLG TYP SECOND STREET	LOCTN	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	(	G E	LICNS	PED			
UNLOC? D C S V I	L K LAT	LONG	MILEPNT LRS		(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P# TYPE	SVR	TY I	E X	RES	LOC	ERROR	ACT EVENT	CAUSE
	N N 02/24/2021	WASHINGTON	1 14	INTER	CROSS	N	N	CLR	S-1STOP	01 NONE	STRGHT								013	07,27
CITY	WE	TIGARD	MN 0 SW PACIFIC HY 99W	NE		TRF SIGNAL	N	WET	REAR	PRVTE	NE-SW								000	00
N	7P	PORTLAND UA	11.46 SW 116TH AVE	05	0		N	DLIT	INJ	PSNGR CAR		01 DRVR	NON	E 31	1 M	OR-Y		026	000	07,27
N	45 24 16.39	-122 47 49.13	009100100s00													OR<25				
										02 NONE	STOP									
										PRVTE	NE-SW	0.1 DDITE	T. T. T. T	a 0.		OD 11		000	012 013	00
										PSNGR CAR		01 DRVR	INJ	C 8.	3 F	OR-Y OR<25		000	000	00
										03 NONE	STOP					UR<25				
										PRVTE	NE-SW								022	00
										PSNGR CAR		01 DRVR	NON	E 00	0 M	UNK UNK		000	000	00
01772	N N 04/11/0010	LIA GUITNOMON	1 14	TMEED	an o a a	NT.	3.7	GI D	g 1gmon	01 NONE 0	OMD GUM					OIVIE				20
01773 N N N N I	N N U4/11/2018 WE	WASHINGTON TIGARD	1 14 MN 0 SW PACIFIC HY 99W	INTER NE	CROSS	N TRF SIGNAL	N N	CLD WET	S-1STOP REAR	01 NONE 0 PRVTE	STRGHT NE-SW								000	29 00
COONTT	ME	TIGARD				IKI SIGNAL		MEI	KEAK		NE-2W									
N	4P	PORTLAND UA	11.46 SW 116TH AVE	06	0		N	DAY	INJ	PSNGR CAR		01 DRVR	NON	E 32	2 M	SUSP		026	000	29
N	45 24 16.38	-122 47 49.12	009100100S00													OR<25				
										02 NONE 0	STOP									
										PRVTE	NE-SW								011	00
										PSNGR CAR		01 DRVR	NON	E 34	4 M	OTH-Y OR<25		000	000	00
										02 NONE 0	STOP									
										PRVTE PSNGR CAR	NE-SW	02 PSNG	TNIT	a 20	ο π.			000	011 000	00
										PSNGR CAR		UZ PSNG	TINO	C 2:	9 F			000	000	00
07094 N N N N	12/21/2018	WASHINGTON	1 14	INTER	CROSS	N	N	FOG	S-1STOP	01 NONE 9	STRGHT									29
CITY	FR	TIGARD	MN 0 SW PACIFIC HY 99W	NE		TRF SIGNAL	N	WET	REAR	N/A	NE-SW								000	00
N	бA	PORTLAND UA	11.46 SW 116TH AVE	06	0		N	DLIT	PDO	PSNGR CAR		01 DRVR	NON	E 00	0 Un	k UNK		000	000	00
N	45 24 16.36	-122 47 49.12	009100100S00													UNK				
										02 NONE 9	STOP									
										N/A	NE-SW								011	00
										PSNGR CAR		01 DRVR	NON	E 00	0 Un	IK UNK UNK		000	000	00
03418 N N N N	07/03/2019	WASHINGTON	1 14	INTER	CROSS	N	N	CLR	S-1STOP	01 NONE 9	STRGHT									29
NONE	WE	TIGARD	MN 0 SW PACIFIC HY 99W	NE	010000	TRF SIGNAL	N	DRY	REAR	N/A	NE-SW								000	00
N	8A	PORTLAND UA	11.46 SW 116TH AVE	06	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NON	E 00	0 Un	k UNK		000	000	00
N		-122 47 49.12	009100100S00													UNK				
TA	40.30	-144 1/ 49.14	007100100200							02 NONE 9	STOP					OIM				
										N/A	NE-SW								012	00
										PSNGR CAR		01 DRVR	NON	E 00	0 Un	k UNK		000	000	00
																UNK				

CONTINUOUS SYSTEM CRASH LISTING

091: PACIFIC HIGHWAY WEST

Highway 091 MAINLINE, MP 11.45 to 11.49 01/01/2018 to 12/31/2022, Both Add and Non-Add mileage

5-8 of 27 Crash records shown.

S D M																					
SER# P R J S	W DATE	COUNTY	RD# FC CONN#	RD CHAR	INT-TYPE					SPCL USE											
INVEST E A U I C	O DAY	CITY	COMPNT FIRST STREET	DIRECT	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE				A	S					
RD DPT E L G N H	R TIME	URBAN AREA	MLG TYP SECOND STREET	LOCTN	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	ī	G	E LICI	NS !	PED			
UNLOC? D C S V L	K LAT	LONG	MILEPNT LRS		(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	ТО	P# TYPE	SVF	YTY	E	X RES		LOC	ERROR	ACT EVENT	CAUSE
05377 N N N N	12/06/2021	WASHINGTON	1 14	INTER	CROSS	N	N	RAIN	S-1STOP	01 NONE 0	STRGHT									013	29
CITY	MO	TIGARD	MN 0 SW DURHAM RD	NE		TRF SIGNAL	N	WET	REAR	UNKN	NE-SW									000	00
N	3P	PORTLAND UA	11.46 SW PACIFIC HY 99W	06	0		N	DAY	INJ	PSNGR CAR		01 DRVR	NON	IE C	)0 U	nk UNK			026	000	29
N	45 24 16.37	-122 47 49.13	009100100S00													UNK					
										02 NONE 0	STOP										
										PRVTE	NE-SW	0.1 DD17D	T.3.T.7	- a 4	10 10	OD 3	37		000	011 013	00
										PSNGR CAR		01 DRVR	INC	C 4	£9 M	OR-1			000	000	00
										03 NONE 0	STOP					010-2	23				
										UNKN	NE-SW									011	00
										PSNGR CAR		01 DRVR	NON	IE C	) 0 U				000	000	00
																UNK					
04966 N N N N	10/24/2022	WASHINGTON	1 14	INTER	CROSS	N	N	CLR	S-STRGHT		STRGHT										13
NONE	MO	TIGARD	MN 0 SW DURHAM RD	NE		TRF SIGNAL	N	DRY	SS-0	UNKN	NE-SW									022	00
И	4P	PORTLAND UA	11.46 SW PACIFIC HY 99W	06	0		N	DAY	INJ	UNKNOWN		01 DRVR	NON	IE C	) O U	nk UNK			045	000	13
N	45 24 16.38	-122 47 49.12	009100100S00													UNK					
										02 NONE 0	STRGHT										
										PRVTE	NE-SW	0.1 DDITE	T.1.			0.0			0.00	000	00
										PSNGR CAR		01 DRVR	INC	C 2	3 / I™I	OR-Y			000	000	00
										03 NONE 0	STOP					01012	23				
										PRVTE	NE-SW									011	00
										PSNGR CAR		01 DRVR	NON	IE 2	26 M	OR-Y			000	000	00
02404 N N N N	05/12/2018	WASHINGTON	1 14	INTER	CROSS	N	N	CLR	O-1 ITII	RN 01 NONE 0	TURN-L					OICC					02
NO RPT	SA	TIGARD	MN 0 SW PACIFIC HY 99W	CN	CITODD	TRF SIGNAL	N	DRY	TURN	PRVTE	SW-NW									000	00
N	8P	PORTLAND UA	11.46 SW 116TH AVE	01	0		N	DLIT	INJ	PSNGR CAR		01 DRVR	INJ	ъ 2	29 м	OR-S	Y		028,004	000	02
<b>17</b>	45 04 16 20	100 47 40 10	000100100000													OD -1	.0.5				
N	45 24 16.38	-122 47 49.12	009100100800							02 NONE 0	STRGHT					OR<2	25				
										PRVTE	NE-SW									000	00
										PSNGR CAR		01 DRVR	INJ	C 2	27 F	OR-S	Y		000	000	00
																OR<2	25				
01119 N N N N	03/11/2021	WASHINGTON	1 14	INTER	CROSS	N	N	CLR	S-1TURN	01 NONE 9	TURN-R										08,14
NONE	TH	TIGARD	MN 0 SW PACIFIC HY 99W	CN		R-GRN-SIG	N	DRY	TURN	N/A	NE-NW									000	00
N	8A	PORTLAND UA	11.46 SW 116TH AVE	03	0		N	DAY	PDO	SEMI TOW		01 DRVR	NON	IE C	)0 U	nk UNK			000	000	00
N	45 24 16.39	-122 47 49.12	009100100S00													UNK					
		<del>-</del>								02 NONE 9	TURN-R										
										N/A	NE-NW									000	00
										PSNGR CAR		01 DRVR	NON	IE C	) 0 U				000	000	00
																UNK					

CONTINUOUS SYSTEM CRASH LISTING

091: PACIFIC HIGHWAY WEST

Highway 091 MAINLINE, MP 11.45 to 11.49 01/01/2018 to 12/31/2022, Both Add and Non-Add mileage

9-12 of 27 Crash records shown.

Math	S D M																				
This is a section of the content o	SER# P R J S W	W DATE	COUNTY	RD# FC CONN#	RD CHAR	INT-TYPE					SPCL USE										
March   Marc	INVEST E A U I C C	D DAY	CITY	COMPNT FIRST STREET	DIRECT	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			А	A S					
March   Marc	RD DPT E L G N H F	R TIME	URBAN AREA	MLG TYP SECOND STREET	LOCTN	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	5 E	LICNS	PED			
Minimate	UNLOC? D C S V L K	K LAT	LONG	MILEPNT LRS		(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	ТО	P# TYPE	SVRT	Y E	X	RES	LOC	ERROR	ACT EVENT	CAUSE
The column   The	01916 N N N N	04/19/2018	WASHINGTON	1 14	STRGHT		N	N	CLR	S-1STOP	01 NONE 0	STRGHT									27,29
	NO RPT	TH	TIGARD	MN 0 SW PACIFIC HY 99W	SW	(DIVMD)	UNKNOWN	N	DRY	REAR	PRVTE	NE-SW								000	00
Californ	N	<b>4</b> P	PORTLAND UA	11.47 SW 116TH AVE	03			N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	30	М	OR-Y		026	000	29
Column   C	N	45 24 15.74	-122 47 49.46	009100100800		(04)											OR<25				
Column   C											02 NONE 0	STOP									
State   Stat												NE-SW									
State   Stat											PSNGR CAR		01 DRVR	INJA	31	M			000	000	00
State   Stat																	OR>25				
Mark			WASHINGTON																		
A   14   14   15   15   15   15   15   15			D0DET 111D 111			(DIVMD)	UNKNOWN					N -S	01 pprm		0.0	1			0.00		
Column   C					03	(04)		N	DPT.I.	PDO	PSNGR CAR		UI DRVR	NONE	00	Unk			000	000	00
The column	IV	13 21 11.32	-122 47 49.93	009100100300		(04)					0.2 NONE 9	STRGHT					ONK				
California																				000	00
No.											PSNGR CAR		01 DRVR	NONE	00	Unk	c UNK		000	000	00
Time																	UNK				
N	02017 N N N N N N	05/27/2020	WASHINGTON	2 14	INTER	CROSS	N	N	CLR	PED	01 NONE 0	TURN-L									02
State   12   14   14   14   14   14   14   14	CITY	WE	TIGARD	MN 0 SW DURHAM RD	NE		TRF SIGNAL	N	DRY	PED	PRVTE	NW-NE								000	00
Column   C	N	бA	PORTLAND UA	11.46 SW PACIFIC HY 99W	05	0		N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	37	М	OR-Y		029	026	02
1	N	45 24 16.02	-122 47 47.92	009100200800													OR<25				
1																					
1												_									
01396 N N N N N N N N N N N N N N N N N N N												STRGHT	01 PED	INJB	36	М		I XWL	K 000	035	00
CITY MO TIGARD MA 0 SN DURHAM RD SN CALLAND UA 11.46 SN PACIFIC HY 99W 06 0 0 00 00 00 00 00 00 00 00 00 00 00												SE NW									
CITY MO TIGARD WA 1 A SW DURHAW RD SW DURHAW RD SW DURHAW RD SW DURHAW RD SW	01396 N N N N	03/19/2018	WASHINGTON	2 14	INTER	CROSS	N	N	CLR	S-1STOP	01 NONE 0	STRGHT									07
N 45 24 16.02 -122 47 47.92 0910020800  1 45 24 16.02 -122 47 47.92 0910020800  1		MO	TIGARD	MN 0 SW DURHAM RD	SW		TRF SIGNAL	N	DRY	REAR	PRVTE	SW-NE								000	00
N 45 24 16.02 -122 47 47.92 0910020800  1 45 24 16.02 -122 47 47.92 0910020800  1	N	2.0	DODEL AND 114	11 46 OW DAGTETO IN 00W	0.6	0		NT.	DAM	TNIT	DOMOD GAD		01 DDIM	MONTE	0.2	M	OD 17		0.43	0.00	0.7
1   1   1   1   1   1   1   1   1   1	N	25	PORTLAND UA	11.46 SW PACIFIC HY 99W	06	U		N	DAY	INU	PSNGR CAR		UI DRVR	NONE	93	M	OR-Y		043	000	0 /
PRVTE   SW-NE   PRVTE   PRVT	N	45 24 16.02	-122 47 47.92	009100200S00													OR<25				
PSNGR CAR   PSNG																					
Count   Fight   Fight   Figh												SW-NE									
02 NONE 0 STOP PRVTE SW-NE  04075 N N N N N N 08/08/2018 WASHINGTON TIGARD  011 00 00 00 00 00 00 00 00 00 00 00 00											PSNGR CAR		01 DRVR	INJB	38	М			000	000	00
PRVTE PSNGR CAR SHOP PSNGR CAR SW-NE SW-											0.2 NONE 0	QTΩD					UR<25				
PSNGR CAR   D2 PSNG   NJC   41 F   D00																				011	0.0
COUNTY WE TIGARD MN 0 SW DURHAM RD SW TRF SIGNAL N DRY REAR PRVTE SW-NE 000 00  N 4P PORTLAND UA 11.46 SW PACIFIC HY 99W 06 0 N DAY INJ PSNGR CAR 01 DRVR NONE 70 M OR-Y 026 000 29												2	02 PSNG	INJC	41	F			000		
COUNTY WE TIGARD MN 0 SW DURHAM RD SW TRF SIGNAL N DRY REAR PRVTE SW-NE 000 00  N 4P PORTLAND UA 11.46 SW PACIFIC HY 99W 06 0 N DAY INJ PSNGR CAR 01 DRVR NONE 70 M OR-Y 026 000 29																					
COUNTY WE TIGARD MN 0 SW DURHAM RD SW TRF SIGNAL N DRY REAR PRVTE SW-NE 000 00  N 4P PORTLAND UA 11.46 SW PACIFIC HY 99W 06 0 N DAY INJ PSNGR CAR 01 DRVR NONE 70 M OR-Y 026 000 29	04075 N N N N N N	N 08/08/2018	WASHINGTON	2 14	INTER	CROSS	N	N	CLR	S-1STOP	01 NONE 0	STRGHT								013	29
	N	4P	PORTLAND UA	11.46 SW PACIFIC HY 99W	06	0		N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	70	М	OR-Y		026	000	29
N 45 24 16.02 -122 47 47.92 009100200S00	N	45 24 16.02	-122 47 47.92	009100200800													OR<25				

CONTINUOUS SYSTEM CRASH LISTING

091: PACIFIC HIGHWAY WEST

Highway 091 MAINLINE, MP 11.45 to 11.49 01/01/2018 to 12/31/2022, Both Add and Non-Add mileage

13 - 17 of 27 Crash records shown.

	S D M																			
SER#	P R J S	W DATE	COUNTY	RD# FC CONN#	RD CHAR	INT-TYPE					SPCL USE									
INVEST	E A U I C	O DAY	CITY	COMPNT FIRST STREET	DIRECT	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			A	S				
RD DPT	E L G N H	R TIME	URBAN AREA	MLG TYP SECOND STREET	LOCTN	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM		INJ			NS PED			
UNLOC?	DCSVL	K LAT	LONG	MILEPNT LRS		(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE 02 NONE 0	TO STOP	P# TYPE	SVRTY	E	X RES	LOC	ERROR	ACT EVENT	CAUSE
											PRVTE	SW-NE							011 013	00
											PSNGR CAR		01 DRVR	NONE	51	M OR-	Y	000	000	00
																OR<	25			
											03 NONE 0	STOP							022	0.0
											PRVTE PSNGR CAR	SW-NE	01 DRVR	INJC	21	M OR-	Y	000	022 000	00 00
																OR<				
02439	N N N N	05/14/2018	WASHINGTON	2 14	INTER	CROSS	N	N	CLR	S-1STOP	01 NONE 9	STRGHT								29
NONE		MO	TIGARD	MN 0 SW DURHAM RD	SW		TRF SIGNAL	N	DRY	REAR	N/A	SW-NE							000	00
N		2P	PORTLAND UA	11.46 SW PACIFIC HY 99W	06	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	0.0	Unk UNK		000	000	00
						-		=-		<del>-</del>			2		3.0					
N		45 24 16.02	-122 47 47.92	009100200800							O NONTE O	QTTO D				UNK				
											02 NONE 9 N/A	STOP SW-NE							011	00
											PSNGR CAR		01 DRVR	NONE	00	Unk UNK		000	000	00
																UNK				
	N N N N	08/14/2020	WASHINGTON	2 14	INTER	CROSS	N	N	CLR	S-STRGHT	01 NONE 9	STRGHT								13
NONE		FR	TIGARD	MN 0 SW DURHAM RD	SW		UNKNOWN	N	DRY	SS-0	N/A	SW-NE							000	00
N		12P	PORTLAND UA	11.46 SW PACIFIC HY 99W	06	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk UNK		000	000	00
N		45 24 16.04	-122 47 47.92	009100200800												UNK				
											02 NONE 9	STRGHT								
											N/A PSNGR CAR	SW-NE	01 DRVR	NONE	0.0	IInle IINV		000	000	00
											PSNGR CAR		UI DRVR	NONE	00	UNK		000	000	00
02345	NNNNN	N 06/29/2020	WASHINGTON	2 14	INTER	CROSS	N	N	CLD	ANGL-OTH	01 NONE 0	TURN-L								04
CITY		MO	TIGARD	MN 0 SW DURHAM RD	CN		TRF SIGNAL	N	DRY	TURN	PRVTE	SE-SW							000	00
N		9P	PORTLAND UA	11.46 SW PACIFIC HY 99W	02	0		N	DLIT	INJ	PSNGR CAR		01 DRVR	TNTC	28	M OR-	٧	097	000	00
					02	Ü		14	DELL	1110	I DIVOIT CITE		OI DIVIN	1110 C	20			0,57	000	00
N		45 24 16.02	-122 47 47.92	009100200S00							0.0 NONTE 0	CMD CLIM				OR<	25			
											02 NONE 0 PRVTE	STRGHT SW-NE							000	00
											PSNGR CAR		01 DRVR	NONE	18	M OR-	Y	097	000	00
																OR<	25			
											02 NONE 0	STRGHT							0.00	0.0
											PRVTE PSNGR CAR	SW-NE	02 PSNG	INTC	15	М		000	000	0 0 0 0
											I DIVOR CAR		02 10110	11V0 C	13			000		
03133	N N N N N	N 08/03/2021	WASHINGTON	2 14	INTER	CROSS	N	N	CLR	ANGL-OTH	01 NONE 0	STRGHT								04
CITY		TU	TIGARD	MN 0 SW DURHAM RD	CN		TRF SIGNAL	N	DRY	TURN	PRVTE	SW-NE							000	00
N		9A	PORTLAND UA	11.46 SW PACIFIC HY 99W	02	0		N	DAY	INJ	PSNGR CAR		01 DRVR	INJC	42	M SUSI	P	020	000	04
N		45 24 16 04	-122 47 47.93	009100200S00												OR>	25			
		15 21 10.01	122 1, 11.73	000100200000							02 NONE 0	TURN-L				01(2)				
											PRVTE	SE-SW							000	00
											PSNGR CAR		01 DRVR	INJC	42			000	000	00
																OR<	25			

091: PACIFIC HIGHWAY WEST

CONTINUOUS SYSTEM CRASH LISTING

Highway 091 MAINLINE, MP 11.45 to 11.49 01/01/2018 to 12/31/2022, Both Add and Non-Add mileage

18 - 21 of 27 Crash records shown.

S D M																				
SER# P R J S	W DATE	COUNTY	RD# FC CONN#	RD CHAR	INT-TYPE					SPCL USE										
INVEST E A U I C	O DAY	CITY	COMPNT FIRST STREET	DIRECT	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			A	S					
RD DPT E L G N H	R TIME	URBAN AREA	MLG TYP SECOND STREET	LOCTN	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED			
UNLOC? D C S V L		LONG	MILEPNT LRS		(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	ТО	P# TYPE	SVRT	Y E	X	RES	LOC	ERROR	ACT EVENT	
00175 N N N N	01/09/2020	WASHINGTON	2 14	INTER	CROSS	N STOWN	N	CLR	O-OTHER	01 NONE 9	TURN-L								000	02
NO RPT	TH	TIGARD	MN 0 SW PACIFIC HY 99W	CN		TRF SIGNAL	N	DRY	TURN	N/A	SE-SW								000	00
N	3P	PORTLAND UA	11.46 SW 116TH AVE	03	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	0.0	Unk	UNK		000	000	00
N	45 24 16.02	-122 47 47.92	009100200S00													UNK				
										02 NONE 9	TURN-R									
										N/A	NW-SW	01 DDIM	NONT		TT 1	- 113117		000	000	00 00
										PSNGR CAR		01 DRVR	NON	. 00	UIIF	UNK		000	000	00
01165 Y N N N	03/13/2022	WASHINGTON	2 14	INTER	CROSS	N	N	RAIN	0-1 L-TUR	N 01 NONE	STRGHT								040,05	3 01,04
CT TTV	GT.	ETG3DD	MI O GH DHDHAM DD	CDI		T CDM GTG	3.7		milon.	DDI WIII	CH NE								,100	- 2 00
CITY	SU	TIGARD	MN 0 SW DURHAM RD	CN		L-GRN-SIG	N	WET	TURN	PRVTE	SW-NE								000 040,05 ,100	53 00
N	4A	PORTLAND UA	11.46 SW PACIFIC HY 99W	04	0		N	DLIT	INJ	PSNGR CAR		01 DRVR	INJ	24	M	OR-Y		047,020	000	01,04
N	45 24 16.04	-122 47 47.93	009100200S00													OR<25				
										02 NONE	TURN-L									
										PRVTE	NE-SE	01 ppr			_	on		0.00	000	00
										PSNGR CAR		01 DRVR	INJE	3 ∠∪	F.	OR-Y OR<25		000	000	00
										02 NONE	TURN-L					011 123				
										PRVTE	NE-SE								000	00
										PSNGR CAR		02 PSNG	INJA	20	F			000	000	00
06804 N N N N N	N 12/11/2018	WASHINGTON	2 14	STRGHT		N	N	RAIN	S-STRGHT	01 NONE 0	STRGHT								013	07
CITY	TU	WIBITINGTON	MN 0	UN	(DIVMD)	UNKNOWN	N	WET	REAR	PRVTE	S -N								000	00
N	3P	PORTLAND UA	11.48	03			N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	29	M	OR-Y		043	000	07
N	45 24 15.05	-122 47 48.48	009100200S00		(04)					00 170177	COOR CLUM					OR<25				
										02 NONE 0 PRVTE	STRGHT S -N								006 013	00
										PSNGR CAR	2 1	01 DRVR	INJO	23	F	OTH-Y		000	000	00
																N-RES				
										03 NONE 0	STOP								000	0.0
										PRVTE PSNGR CAR	S -N	01 DRVR	INJO	1 19	М	OR-Y		000	022 000	00 00
																OR<25				
05669 N N N N	10/30/2019	WASHINGTON	2 14	STRGHT		N	N	CLR	S-STRGHT	01 NONE 9	STRGHT									13
NO RPT	WE		MN 0	UN	(DIVMD)	UNKNOWN	N	DRY	SS-0	N/A	S -N								000	00
N	3P	PORTLAND UA -122 47 48.46	11.48 009100200S00	03	(04)		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	0.0	Unk			000	000	00
N	45 24 15.04	-122 4/ 48.40	003100700200		(04)					02 NONE 9	STRGHT					UNK				
										N/A	S -N								000	00
										PSNGR CAR		01 DRVR	NONE	0.0	Unk			000	000	00
																UNK				
03354 N N N N	08/18/2021	WASHINGTON	2 14	STRGHT	/ DT[MID )	N	N	CLR	S-STRGHT	01 NONE 9									0.00	27,29
NONE N	WE 2P	PORTLAND UA	MN 0 11.48	UN 04	(DIVMD)	UNKNOWN	N N	DRY DAY	REAR PDO	N/A PSNGR CAR	S -N	01 DRVR	NONE	. იი	[Ink	c UNK		000	000	00 00
N		-122 47 48.47		V -	(04)					2 22.010 02110		0 1 DICVIC	740141		0111	_ 02				• •
	45 24 15.00	-122 4/ 40.4/	009100200S00		(04)											UNK				

CONTINUOUS SYSTEM CRASH LISTING

091: PACIFIC HIGHWAY WEST

Highway 091 MAINLINE, MP 11.45 to 11.49 01/01/2018 to 12/31/2022, Both Add and Non-Add mileage

22 - 26 of 27 Crash records shown.

S D M																				
SER# P R J S	W DATE	COUNTY	RD# FC CONN#	RD CHAR	INT-TYPE					SPCL USE										
INVEST E A U I C		CITY	COMPNT FIRST STREET	DIRECT		INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE			А	S					
RD DPT E L G N H		URBAN AREA	MLG TYP SECOND STREET	LOCTN	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ		E LIC	NS DE	'D			
UNLOC? D C S V L		LONG	MILEPNT LRS	LOCIN	(#LANES)			LIGHT	SVRTY	V# TYPE	TO	P# TYPE						OR	ACT EVENT	CAUSE
				,	<u> </u>					02 NONE 9	STRGHT									
										N/A	S -N								000	00
										PSNGR CAR		01 DRVR	NONE	00			000		000	00
															UNK					
01367 Y N N N	03/28/2022	WASHINGTON	2 14	STRGHT		Y	N	RAIN	S-1STOP	01 NONE 9	STRGHT									01,29
NONE	MO		MN 0	SW	(DIVMD)	TRF SIGNAL	N	WET	REAR	N/A	SW-NE								000	00
N N	3P 45 24 15.05	PORTLAND UA -122 47 48.48	11.48 009100200S00	03	(02)		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk UNK UNK		000		000	00
IN	45 24 15.05	-122 47 40.40	009100200500		(02)					02 NONE 9	STOP				UNN	•				
										N/A	SW-NE								011	00
										PSNGR CAR		01 DRVR	NONE	00	Unk UNK		000		000	00
															UNK					
03158 N N N N	08/05/2021	WASHINGTON	2 14	STRGHT		Y	N	CLR	S-1STOP	01 NONE 9	STRGHT									29
NO RPT	TH		MN 0	SW	(DIVMD)	TRF SIGNAL	N	DRY	REAR	N/A	SW-NE								000	00
N	12P	PORTLAND UA	11.48	04			N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk UNK		000		000	00
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06407 N N N N NO RPT	12/05/2019 TH	WASHINGTON	2 14 MN 0	STRGHT UN	(DIVMD)	N UNKNOWN	N N	CLR DRY	S-STRGHT SS-O	01 NONE 9 N/A	STRGHT S -N								000	00
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										02 NONE 9	STRGHT									
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															UNK					
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NONE	MO	DODET 11TD 111	MN 0	UN	(DIVMD)	UNKNOWN	N	DRY	REAR	N/A	S -N	01 227		0.0	1		000		000	00
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										N/A	S -N								011	00
										PSNGR CAR		01 DRVR	NONE	00	Unk UNK		000		000	00
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02096 N N N N	05/11/2022	WASHINGTON	2 14	STRGHT		Y	N	CLR	S-1STOP	01 NONE	STRGHT									29
COUNTY	WE		MN 0	UN	(DIVMD)	TRF SIGNAL	N	DRY	REAR	UNKN	S -N								000	00
N	4P	PORTLAND UA	11.49	04			N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	00	M UNK		026		000	29
N	45 24 14.56	-122 47 48.76	009100200S00		(02)										UNK	-				
										02 NONE	STOP								011	0.0
										PRVTE PSNGR CAR	S -N	01 DRVR	TM.TD	21	F OP-	v	000		011 000	00
										AAJ ADMGI		OI DKAK	TINOD	34	r OR-		000		000	50
										02 NONE	STOP				011	-				
										PRVTE	S -N								011	00
										PSNGR CAR		02 PSNG	INJB	12	F		000		000	00

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION CDS380 Page: 13 08/06/2024

TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT

CONTINUOUS SYSTEM CRASH LISTING

091: PACIFIC HIGHWAY WEST Highway 091 MAINLINE, MP 11.45 to 11.49 01/01/2018 to 12/31/2022, Both Add and Non-Add mileage

27 - 27 of 27 Crash records shown.

S D M								
SER# P R J S W DATE	COUNTY	RD# FC CONN#	RD CHAR	INT-TYPE		SPCL USE		
INVEST E A U I C O DAY	CITY	COMPNT FIRST STREET	DIRECT	(MEDIAN) INT-REL	OFFRD WTHR CRASH	TRLR QTY	MOVE	A S
RD DPT E L G N H R TIME	URBAN AREA	MLG TYP SECOND STREET	LOCTN	LEGS TRAF-	RNDBT SURF COLL	OWNER	FROM	PRTC INJ G E LICNS PED
UNLOC? D C S V L K LAT	LONG	MILEPNT LRS		(#LANES) CONTL	DRVWY LIGHT SVRTY	V# TYPE	TO	P# TYPE SVRTY E X RES LOC ERROR ACT EVENT CAUSE
						02 NONE	STOP	
						PRVTE	S -N	011 00
						PSNGR CAR		03 PSNG INJC 03 F 000 000 00

APPENDIX G.

IN-PROCESS DATA



## 124th Business Park

Transportation Impact Analysis

Tualatin, Oregon

Date:

April 18, 2023

Prepared for:

**VLMK Engineering & Design** 

Prepared by:

Myla Cross

Jennifer Danziger, PE



**RENEWS**: 12/31/2023

### **Site Trips**

## Trip Generation

To estimate trips that will be generated by the development, trip rates from the *Trip Generation Manual*<sup>1</sup> were used. Specifically, data from the land use code 110, *General Light Industrial*, was used based on the square footage of the development. The 124<sup>th</sup> Business Park proposes to develop the site with three industrial buildings enclosing a total of 199,170 SF of gross floor area.

The trip generation calculations show that the 124<sup>th</sup> Business Park site is projected to generate 147 trips during the morning peak hour, 129 trips during the evening peak hour, and 970 trips during the average weekday. Table 3 summarizes the estimated net trip generation of the site with the land use assumptions discussed above.

**Table 3: Trip Generation Summary** 

Land Use	ITE	Size	AN	1 Peak H	our	PIV	l Peak H	our	Weekday
Land Ose	Code	Size	ln	Out	Total	In	Out	Total	Total
General Light Industrial (All Vehicles)	110	199,170 SF	129	18	147	18	111	129	970
General Light Industrial (Trucks)	110	199,170 SF	1	1	2	1	1	2	50

## Trip Distribution and Assignment

The directional distribution of site trips to/from the project site is necessary to identify intersections to be included in the study area of the TIA. The following trip distribution was estimated based on the locations of likely trip destinations and locations of major transportation facilities in the site vicinity:

- Approximately 30 percent of site trips will travel to/from the south along SW 124th Avenue
- Approximately 20 percent of site trips will travel to/from the west along SW Tualatin-Sherwood Road
- Approximately 30 percent of site trips will travel to/from the east along SW Tualatin-Sherwood Road
- Approximately 20 percent of site trips will travel to/from the north along SW 124th Avenue

To address the right-in/right-out access on SW 124th Avenue, some of the traffic will not be able to travel along the most direct route to the site. Inbound traffic from the north will need to travel southward to SW Tualatin-Sherwood Road by another route and then turn northward on SW 124<sup>th</sup> Avenue. Outbound traffic destined for locations south, west, or east of the site will need to travel northward on SW 124<sup>th</sup> Avenue and then travel southward to SW Tualatin-Sherwood Road by an alternate route.

<sup>&</sup>lt;sup>1</sup> Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, 2022.

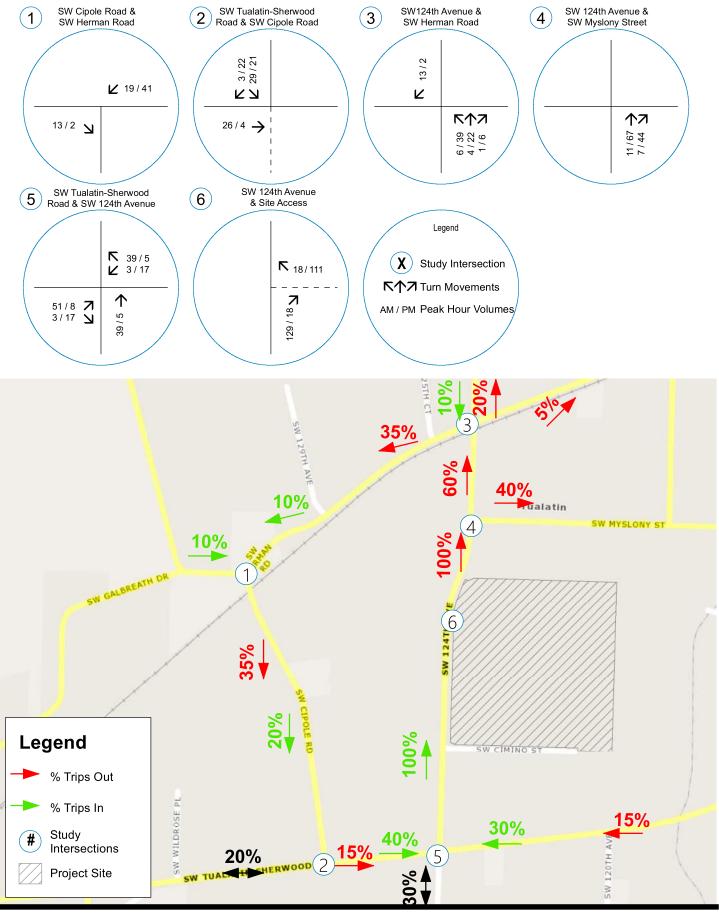


The following indirect routes are assumed:

- Approximately half, 10 percent, of the inbound traffic from the north is assumed to use to SW Cipole Road from OR 99E instead of SW 124<sup>th</sup> Avenue.
- The remaining 10 percent from the north is assumed to travel along SW 124<sup>th</sup> Avenue to SW Herman Road to SW Cipole Road.
- Approximately 40 percent of the outbound traffic is assumed to travel northward along SW 124th Avenue, turn right onto SW Myslony Street, and travel to SW Tualatin-Sherwood Road.
- Approximately 5 percent of the outbound traffic is assumed to travel northward on SW 124<sup>th</sup> Avenue and turn east on SW Herman Road to access SW Tualatin-Sherwood Road via SW Teton Avenue or other connecting roadways.
- Approximately 35 percent of the outbound traffic is assumed to travel northward on SW 124<sup>th</sup> Avenue and turn west on SW Herman Road and turn south on SW Cipole Road to SW Tualatin-Sherwood Road.

The resulting trip assignment is shown in Figure 3.











## MACKENZIE.

September 14, 2023 (Revised October 11, 2023)

City of Tualatin Attention: Tony Doran 18880 SW Martinazzi Avenue Tualatin, OR 97062

Re: Fujimi Facility Expansion

*Trip Generation and Distribution*Project Number 2210148.00

Dear Tony:

Mackenzie has prepared this trip generation letter for the proposed two-story, 70,000-square-foot (SF) expansion of the existing Fujimi facility located at 11200 SW Leveton Drive in Tualatin, Oregon.

#### PROJECT DESCRIPTION

The proposed building addition, located at the southeast corner of the existing Fujimi building, will be two stories with a gross floor area of up to 70,000 SF. The proposed addition will include manufacturing space, clean rooms, laboratories, and some office area. With the expansion, approximately 10-20 new employees will be added over time. This project will include associated site work, including approximately 30 additional parking spaces. The project will also add a new hammerhead fire turnaround at the southeast corner of the site. Per the City of Tualatin Traffic Study Requirements, a full Transportation Impact Analysis (TIA) is required for any development that generates 500 or more new daily trips. The proposed expansion is estimated to add approximately 333 new daily trips, so this letter presents the information required for a Trip Generation and Distribution Description letter.

#### TRIP GENERATION

Trip generation estimates were reviewed using trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual,* 11th Edition for the "General Light Industrial" (LUC 110) land use, as required by the "Tualatin Traffic Study Requirements" document (updated March 16, 2022). In addition, we surveyed the existing Fujimi site to better understand the site's actual trip generation compared with existing ITE data for not only the "General Light Industrial" use, but also the "Manufacturing" (LUC 140) use.

#### **Existing Site Trips**

The existing Fujimi site on SW Leveton Drive was surveyed for trip generation on Tuesday, October 3, 2023 during the AM and PM peak hours of the street. The generation summary for the existing 175,000 SF building is summarized in Table 1.



City of Tualatin
Fujimi Facility Expansion
Project Number 2210148.00
September 14, 2023 (Revised October 11, 2023)
Page 2

TA	BLE 1 – EXIS	TING T	RIP GEI	NERATI	ON SUI	ЛМARY	,	
Tuin Tour	C: (VCT)	AM	Peak H	our	PM	Peak H	our	Daile
Trip Type	Size (KSF)	In	Out	Total	In	Out	Total	Daily
Total		40	6	46	10	24	34	238ª
Trucks	175.0	2	0	2	0	0	0	24 <sup>b</sup>
Passenger Cars		38	6	44	10	24	34	214

As presented in Table 1, the site currently generates 46 AM peak hour and 34 PM peak hour. A total daily trip estimate of 238 was derived by assuming a 7x ratio to the PM peak hour trips comparable to ITE trip data for the "General Light Industrial" and "Manufacturing" uses. Fujimi notes they have on average 8-12 trucks per day for deliveries. Based on the trip data above, the site-specific trip rates for all vehicles are 0.26 AM trips/KSF, 0.19 PM trips/KSF, and 1.36 daily trips/KSF.

#### **Proposed Site Trips**

We reviewed the proposed building expansion's trip generation utilizing the site-specific trip rates noted above, as well as ITE trip rates for "General Light Industrial" and "Manufacturing" uses. The trip generation comparison is presented in Table 2 below.

, v	TABLE 2 – TOTAL TRIP	GENERATIO	N COM	1PARIS	ON FOR	EXPAN	ISION		
ITE Code	Lead Hea	S' (VSF)	AM	l Peak H	our	PM	l Peak H	our	D-1h
ITE Code	Land Use	Size (KSF)	In	Out	Total	In	Out	Total	Daily
N/A	Fujimi Site		16	2	18	4	9	13	91
110	General Light Industrial	70.0	45	6	51	6	40	46	341
140	Manufacturing		40	12	52	13	30	43	333

As presented in Table 2, the ITE trip rates for the "General Light Industrial" and "Manufacturing" uses likely overestimate the site's trip impact for the proposed expansion by a factor of 2-3 times. We note the ITE trip generation estimates grossly overestimate the expected trip generation with the expansion as only 10-20 employees will be added with the proposal; however, as a worst-case scenario, we propose estimating the site's trip generation using ITE trip data for the "Manufacturing" (LUC 140) use for purposes of calculating the proposed expansion's Transportation Development Tax (TDT) imposed by Washington County.

The existing site trip rates yield an expected impact of only 18 AM peak hour and 13 PM peak hour trips forecasted with the expansion. Therefore, a Transportation Impact Analysis (TIA) is not warranted with the approximately 70,000 SF addition.

<sup>&</sup>lt;sup>a</sup> Assumes total daily trips are 7x PM peak hour trips based on ITE data for "General Light Industrial" and "Manufacturing."

<sup>&</sup>lt;sup>b</sup> Based on existing Fujimi delivery activity consisting of 8-12 trucks per day, on average.

City of Tualatin
Fujimi Facility Expansion
Project Number 2210148.00
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Page 3

#### **Truck Trips**

Table 3 presents the truck trip generation estimates associated with the proposed expansion utilizing ITE "Manufacturing" truck trip rates.

	TABLE 3 – TRUCK TRIP	GENERATIO	ON COM	1PARIS	ON FOR	EXPAN	ISION		
ITE Code	Land Use	Si-a (VSF)	AM	l Peak H	our	PM	Peak H	our	Dailu
TTE Code	Land Ose	Size (KSF)	ln	Out	Total	In	Out	Total	Daily
110	General Light Industrial	70.0	0	1	1	0	1	1	18
140	Manufacturing	70.0	1	1	2	1	1	2	32

The additional truck trips associated with the expansion are estimated to be 2 AM peak hour, 2 PM peak hour, and 32 daily trips, per trip data for ITE's "Manufacturing" land use. Note these truck trip estimates are included in the total trip estimates presented in Table 2 and are not in addition to those estimates. The truck trip generation estimates for the "Manufacturing" use are significantly higher than those based on ITE's "General Light Industrial" use. Similar to the total site-specific trip estimates, ITE truck trip generation estimates grossly overestimate the expected growth in truck trips associated with the expansion. Therefore, we do not recommend further analysis based on truck trip generation.

#### Pedestrians, Bicycles, and Transit

Sidewalks are provided along the site's SW Leveton Drive frontage. Sidewalks continue along SW 108th Avenue which provides a pedestrian connection to the nearby Hazelbrook neighborhood located north of SW Tualatin Road, and to SW Herman Road which has a Tualatin Ride Connection Blue Line Shuttle stop east of SW 108th Avenue. Data provided by Fujimi shows that their current workforce has a 0% pedestrian mode share. This is not expected to change with the proposed expansion.

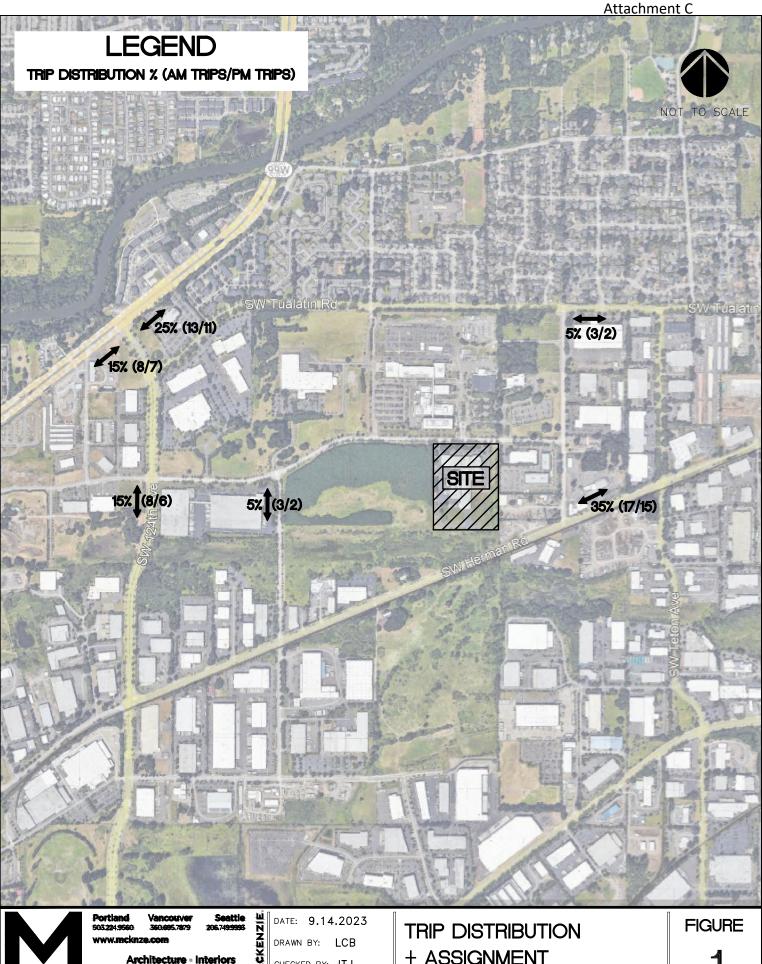
The Tualatin Ride Connection Blue Line Shuttle provides transit service to the site, with a stop along the site's SW Leveton Drive frontage. The Blue Line runs only during weekday peak hours, with a headway of approximately 45 minutes. Data provided by Fujimi shows that their current workforce has a 0% transit mode share. This is not expected to change with the proposed expansion.

Bike lanes are provided on all non-residential roads in the site vicinity. There is currently an outdoor 5-position bicycle rack on the site, in addition to available indoor bike parking. Data provided by Fujimi shows that their current workforce has a 5% bicycle mode share. This is not expected to change with the proposed expansion, which corresponds to a maximum of 2 additional daily bike trips with the addition of 20 employees. Based on this estimate, it is not expected the proposed expansion will have a significant impact on the bicycle infrastructure in the vicinity of the site.

#### TRIP DISTRIBUTION

Trip distribution for the new trips generated by the proposed expansion was estimated by reviewing the existing distribution from recent and existing counts at surrounding intersections in conjunction with review of previous trip





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Planning - Engineering

CHECKED BY: JTJ

JOB NO: 221014800 + ASSIGNMENT

**FUJIMI FACILITY EXPANSION** TUALATIN, OR



## 124th Business Park

Transportation Impact Analysis

Tualatin, Oregon

Date:

April 18, 2023

Prepared for:

**VLMK Engineering & Design** 

Prepared by:

Myla Cross

Jennifer Danziger, PE



RENEWS: 12/31/2023

### **Site Trips**

## Trip Generation

To estimate trips that will be generated by the development, trip rates from the *Trip Generation Manual*<sup>1</sup> were used. Specifically, data from the land use code 110, *General Light Industrial*, was used based on the square footage of the development. The 124<sup>th</sup> Business Park proposes to develop the site with three industrial buildings enclosing a total of 199,170 SF of gross floor area.

The trip generation calculations show that the 124<sup>th</sup> Business Park site is projected to generate 147 trips during the morning peak hour, 129 trips during the evening peak hour, and 970 trips during the average weekday. Table 3 summarizes the estimated net trip generation of the site with the land use assumptions discussed above.

**Table 3: Trip Generation Summary** 

l and l las	ITE	Ci	AN	1 Peak H	our	PIV	l Peak Ho	our	Weekday
Land Use	Code	Size	ln	Out	Total	In	Out	Total	Total
General Light Industrial (All Vehicles)	110	199,170 SF	129	18	147	18	111	129	970
General Light Industrial (Trucks)	110	199,170 SF	1	1	2	1	1	2	50

## Trip Distribution and Assignment

The directional distribution of site trips to/from the project site is necessary to identify intersections to be included in the study area of the TIA. The following trip distribution was estimated based on the locations of likely trip destinations and locations of major transportation facilities in the site vicinity:

- Approximately 30 percent of site trips will travel to/from the south along SW 124th Avenue
- Approximately 20 percent of site trips will travel to/from the west along SW Tualatin-Sherwood Road
- Approximately 30 percent of site trips will travel to/from the east along SW Tualatin-Sherwood Road
- Approximately 20 percent of site trips will travel to/from the north along SW 124th Avenue

To address the right-in/right-out access on SW 124th Avenue, some of the traffic will not be able to travel along the most direct route to the site. Inbound traffic from the north will need to travel southward to SW Tualatin-Sherwood Road by another route and then turn northward on SW 124<sup>th</sup> Avenue. Outbound traffic destined for locations south, west, or east of the site will need to travel northward on SW 124<sup>th</sup> Avenue and then travel southward to SW Tualatin-Sherwood Road by an alternate route.

<sup>&</sup>lt;sup>1</sup> Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, 2022.



The following indirect routes are assumed:

- Approximately half, 10 percent, of the inbound traffic from the north is assumed to use to SW Cipole Road from OR 99E instead of SW 124<sup>th</sup> Avenue.
- The remaining 10 percent from the north is assumed to travel along SW 124<sup>th</sup> Avenue to SW Herman Road to SW Cipole Road.
- Approximately 40 percent of the outbound traffic is assumed to travel northward along SW 124th Avenue, turn right onto SW Myslony Street, and travel to SW Tualatin-Sherwood Road.
- Approximately 5 percent of the outbound traffic is assumed to travel northward on SW 124<sup>th</sup> Avenue and turn east on SW Herman Road to access SW Tualatin-Sherwood Road via SW Teton Avenue or other connecting roadways.
- Approximately 35 percent of the outbound traffic is assumed to travel northward on SW 124<sup>th</sup> Avenue and turn west on SW Herman Road and turn south on SW Cipole Road to SW Tualatin-Sherwood Road.

The resulting trip assignment is shown in Figure 3.



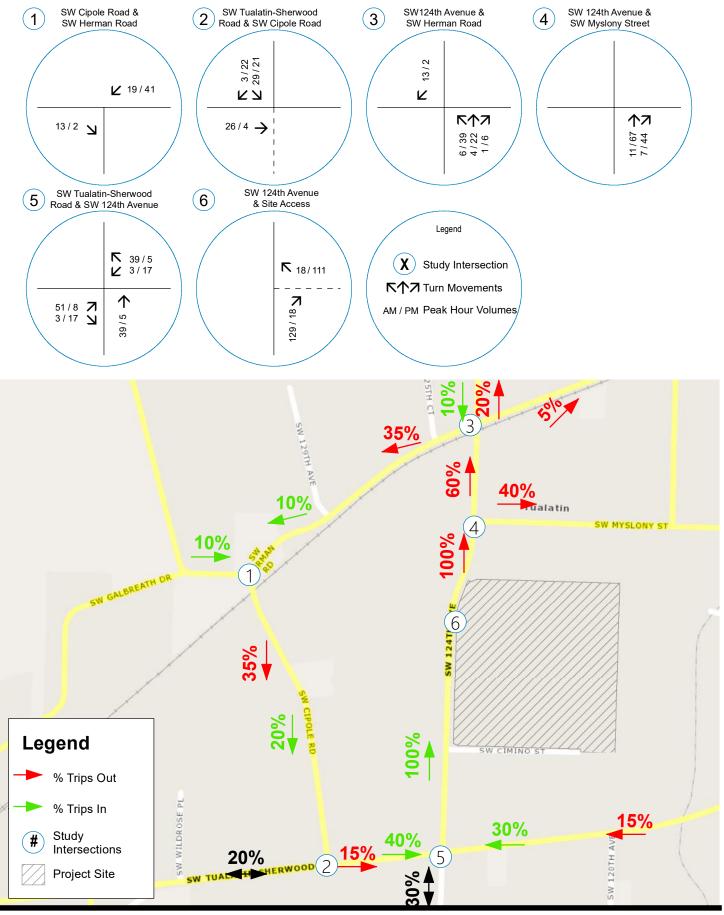








Figure 3 124th Business Park TIA 7/25/2022



# **Tualatin Logistics Park**

Transportation Impact Analysis

Tualatin, Oregon

Date:

December 15, 2021

Prepared for:

Peter Skei, Specht Development, Inc.

Prepared by:

Nick Mesler, EIT

Jennifer Danziger, PE

Table 4: Trip Generation Summary – Potential Industrial Land Uses

	ITE	AM	Peak H	lour	PM	Peak H	lour	Weekday	Employee
Land Use	Code	ln	Out	Total	ln	Out	Total	Total	Equivalent*
Total V	ehicle Trip	s based	d on 452	2,795 SF	- Indust	rial Buil	ding		
General Light Industrial	110	295	40	335	41	253	294	2,206	636
Manufacturing	140	234	74	308	104	231	335	2,150	1,022
Warehousing	150	59	18	77	23	59	82	774	125
High-Cube Transload and Short-Term Storage Warehouse	154	28	8	36	13	32	45	634	NA
High-Cube Fulfillment Center Warehouse - Non-Sort	155	55	13	68	28	44	72	820	487
High-Cube Parcel Hub Warehouse	156	159	158	317	197	93	290	2,096	NA
Tru	ck Trips b	ased on	452,79	5 SF Inc	dustrial	Building	)		
General Light Industrial	110	3	2	5	3	3	5	114	-
Manufacturing	140	8	6	14	6	8	14	204	-
Warehousing	150	5	4	9	7	7	14	272	-
High-Cube Transload and Short-Term Storage Warehouse	154	4	5	9	2	3	5	100	-
High-Cube Fulfillment Center Warehouse - Non-Sort	155	5	5	9	2	3	5	104	-
High-Cube Parcel Hub Warehouse	156	NA	NA	41	NA	NA	27	262	-

<sup>\*</sup> Estimated as average number of employees needed to generate the equivalent number of vehicle trips based on KSF

### **Total Site Trip Generation**

Table 5 summarizes the estimated net trip generation of the site with the assumptions discussed above.

Table 5: Trip Generation Summary (Warehousing)

l and l lea	Α	M Peak Ho	ur	Р	M Peak Ho	ur	Weekday
Land Use	ln	Out	Total	ln	Out	Total	Total
Existing Land Use	-8	-6	-14	-21	-27	-48	-516
Proposed Land Use	295	40	335	41	253	294	2,206
Net Increase	287	34	321	20	227	246	1,690

The trip generation calculations show that the Tualatin Logistics site assuming general light industrial for the site is projected to generate an additional 321 net trips during the morning peak hour, 246 net trips during the evening peak hour, and 1,690 net trips during the average weekday.



## Trip Distribution and Assignment

The directional distribution of site trips to/from the project site is necessary to identify intersections to be included in the study area of the TIA. The following trip distribution was estimated based on the locations of likely trip destinations and locations of major transportation facilities in the site vicinity:

- Approximately 30 percent of site trips will travel to/from the south along SW 124<sup>th</sup> Avenue
- Approximately 20 percent of site trips will travel to/from the west along SW Tualatin-Sherwood Road
- Approximately 30 percent of site trips will travel to/from the east along SW Tualatin-Sherwood Road
- Approximately 5 percent of site trips will travel to/from the north along SW Cipole Road
- Approximately 15 percent of site trips will travel to/from the north along SW 124<sup>th</sup> Avenue

Trip distribution at the site accesses will depend on the location and configuration of the accesses.

#### **Access Scenario 1**

With the first scenario assuming an access on SW 124th Avenue at the southeast corner of the site and an access on SW Cipole Road, the split of traffic between the two accesses is assumed to be 50 percent at each access. A detailed illustration of the distribution for this scenario was presented in the scoping memorandum, which has been included in Appendix A.

The resulting trip assignment is shown in Figure 2.

#### Access Scenario 2

With the second scenario assuming a limited access on SW 124<sup>th</sup> Avenue at the northeast corner of the site, the split of traffic is assumed to be 65 to 70 percent using the SW Cipole Road access while 30 to 35 percent using the limited access at SW 124<sup>th</sup> Avenue. A detailed illustration of the distribution for this scenario was presented in the scoping memorandum, which has been included in Appendix A.

The resulting trip assignment is shown in Figure 3.

#### Access Scenario 3

With the third scenario assuming a full access on SW 124<sup>th</sup> Avenue at the northeast corner of the site, the split of traffic is assumed to be approximately 65 percent using the SW Cipole Road access and 35 percent using the access on SW 124<sup>th</sup> Avenue.

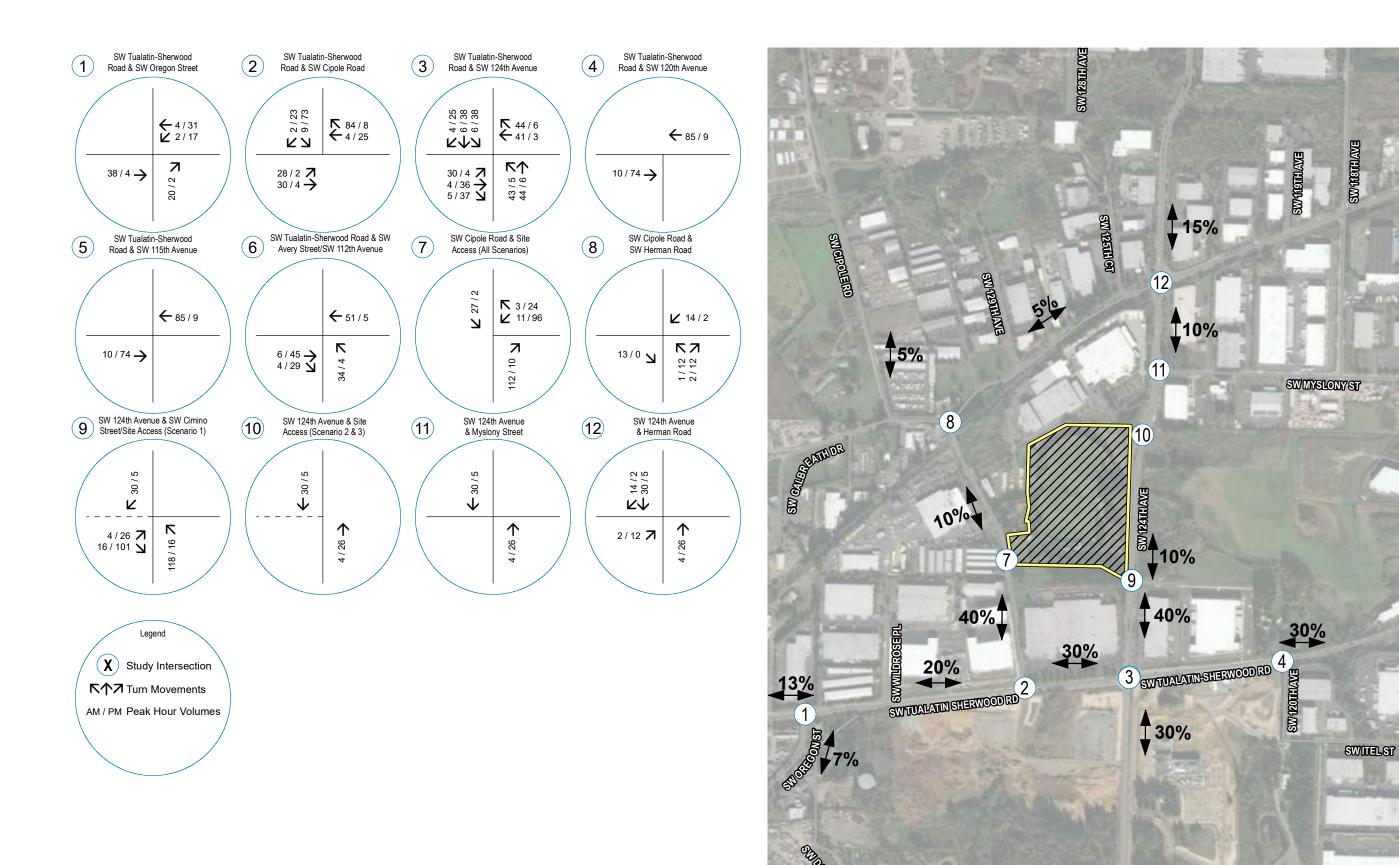
The resulting trip assignment is shown in Figure 4.

#### Access Scenario 4

The fourth scenario assumes a full access on SW 124th Avenue at the southeast corner of the site and a limited access on SW 124<sup>th</sup> Avenue at the northeast corner of the site. The split of traffic is assumed to be approximately 35 percent using the SW Cipole Road access, 35 percent using the access on SW 124<sup>th</sup> Avenue opposite SW Cimino Street, and 30 percent using the limited access at the northeast corner of the site.

The resulting trip assignment is shown in Figure 5.









SWIMYSLONYST

SWAMUST SWAMUST

5

Legend X%Percent of Project Trips

# Study

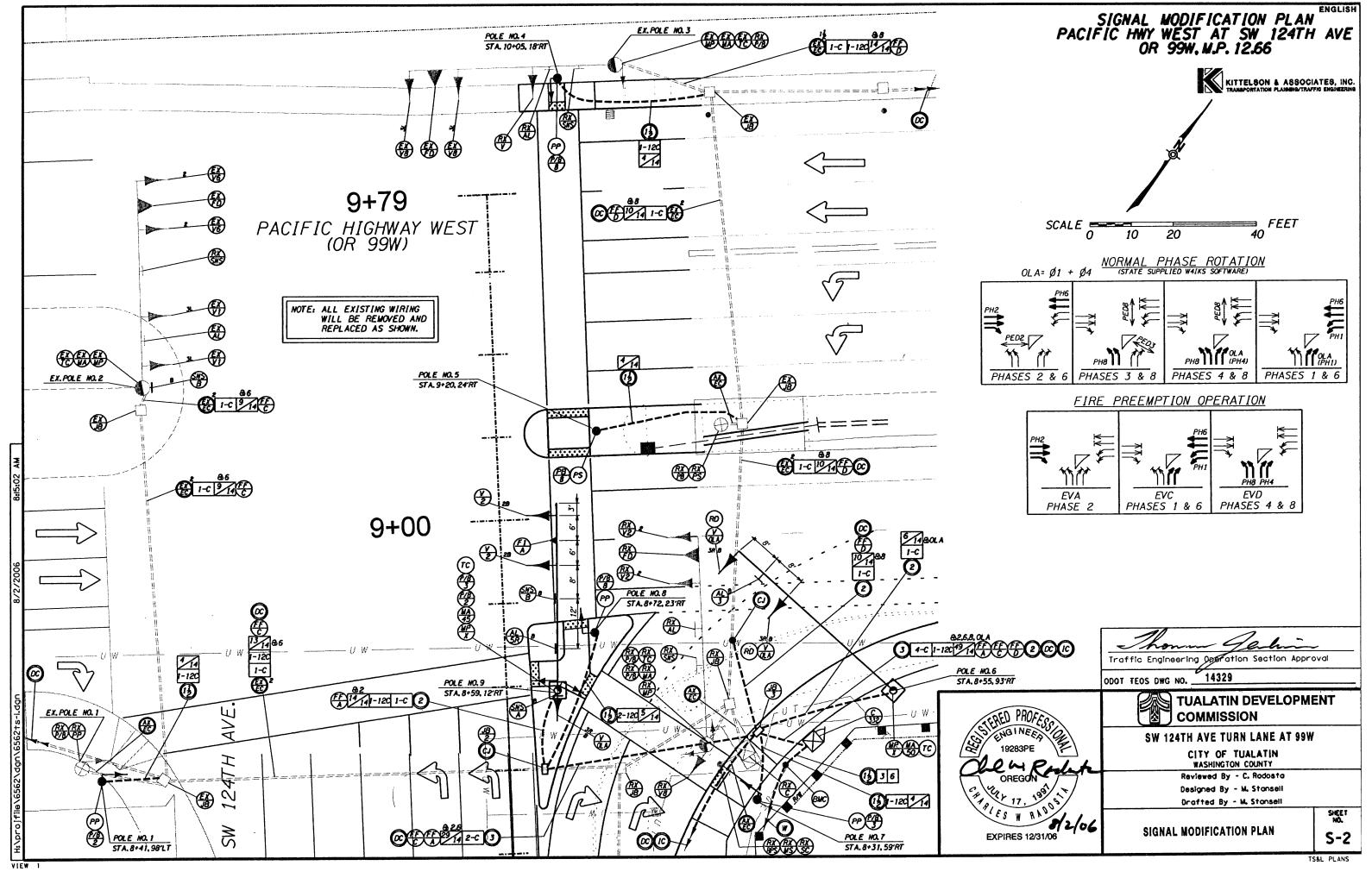
Project Site

— Road Network

Intersections

APPENDIX H.

SIGNAL INFORMATION



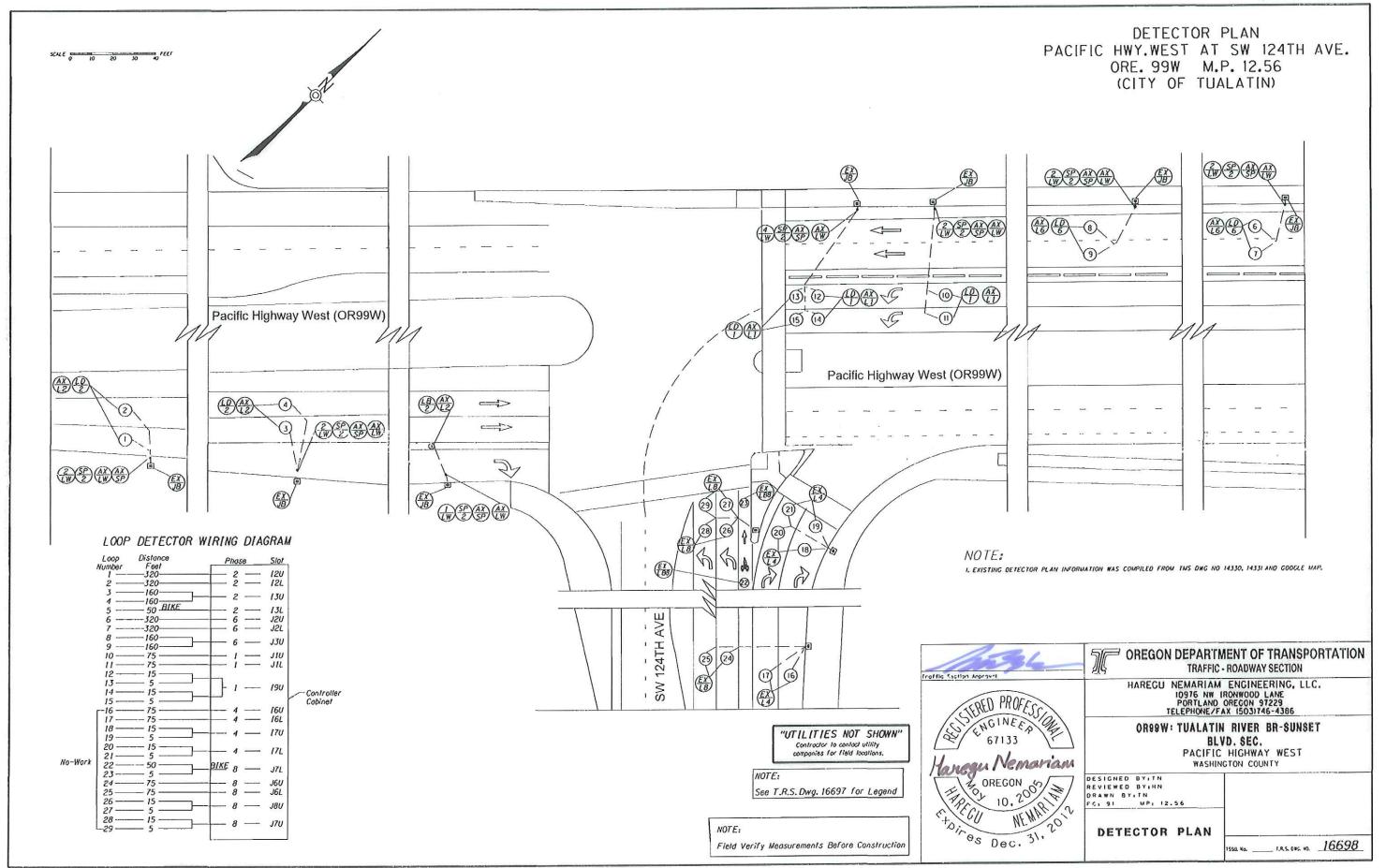


Table: Phase Timing Plans [Timing Plan: 1]

Phase	1	2	3	4	6	8
Walk	0	9	7	0	0	8
Ped Clear	0	22	6	0	0	27
Min Green	4	10	4	6	10	6
Passage	2.3	5.4	0.2	2.3	5.4	2.3
Max 1	30	50	10	20	50	20
Max 2	40	60	10	20	60	20
Max 3	0	0	0	0	0	0
Yellow Change	4.5	5	4	4	5	4
Red Clear	1.1	1	0	1	1	2
Added Initial	0	1.2	0	0	1.2	0
Maximum Initial	4	21	4	6	21	6
Time Before Reduction	8	10	0	8	10	8
Time To Reduce	3	20	0	3	20	3
Minimum Gap	0.5	3.4	0.2	0.5	3.4	0.5
Dynamic Max Limit	45	0	0	0	0	0
Dynamic Max Step	5	0	0	0	0	0

Table: Phase Options Plans [Phase Plan: 1]

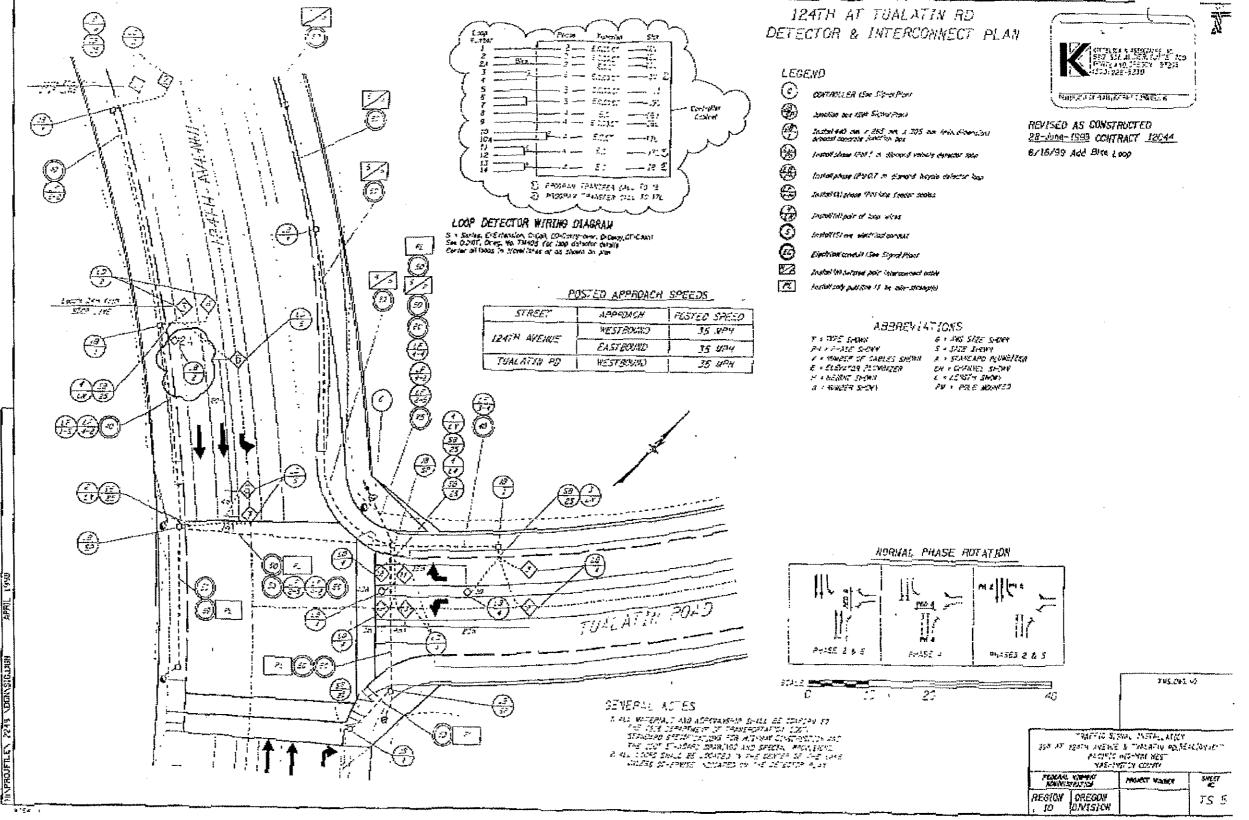
Phase	1	2	3	4	4 5	6	7	8
Enable	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE
Auto Flash Entry	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE
Auto Flash Exit	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE
Non Actuated 1	FALSE							
Non Actuated 2	FALSE							
Non Lock Detector	TRUE							
Min Vehicle Recall	FALSE							
Max Vehicle Recall	FALSE							
Ped Recall	FALSE							
Soft Vehicle Recall	FALSE							
Dual Entry	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE
Disable Simultaneous Gap	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
<b>Guaranteed Passage</b>	FALSE							
Actuated Rest in Walk	FALSE							
<b>Conditional Service Enable</b>	FALSE							
Add Initial Calculation	FALSE							

# Table: Global Phase Recalls

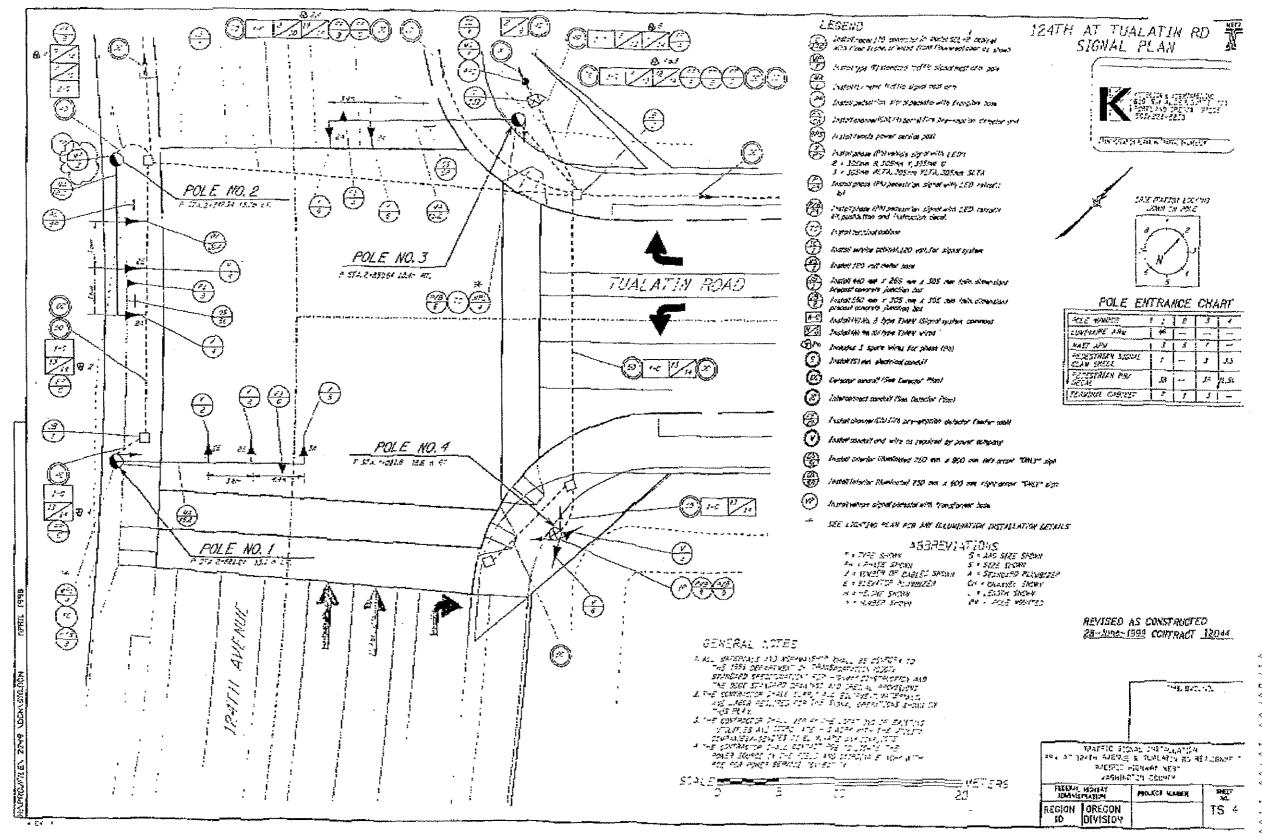
Phase		2		6
Min	TRUE		TRUE	
Max	FALSE		FALSE	
Ped	FALSE		FALSE	
Act. Walk Re	FALSE		FALSE	

# Table: Day Plan Events [Day Plan: 1]

Event	Hour	Minute	Action	Description
	1	0	0	21 Coord Free - Max 1
	2	5	45	22 Coord Free - Max 2
	3	8	0	21 Coord Free - Max 1
	4	15	0	22 Coord Free - Max 2
	5	18	0	21 Coord Free - Max 1



01/25/00 15:37 P.003/00



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## **Q-Free MAXTIME Database Print Out**

338 - 124th Avenue (PRE/PRI) & Tualatin Road

Agency Washington County

Database Description 332\_WashCo\_FYA-NotPed

## **Basic Timing Parameters - Phase Plan 1**

Timings Options

Timings Options																	
Phases	1	2	3	4	5	6	7	8	Phases	1	2	3	4	5	6	7	8
Enable		Х		Х	Х	Х		Х	Enable		Х		Х	Х	Х		Х
Walk Time	0	0	0	0	0	10	0	9	Auto Flash Ent.		Х				Х		
Clear Time	0	0	0	0	0	15	0	23	Auto Flash Exit		Х				Х		
Stdy Don't Walk	0	0	0	0	0	0	0	0	Non Actuated I								
Min Green	5	10	5	5	10	10	5	0	Non Actuated II								
Min Green 2	0	0	0	0	0	0	0	0	Non Lock Mem	Χ	Х	Х	Х	Х	Х	Х	Χ
Min B4 FO	0	0	0	0	0	0	0	0	Min Veh Recall		Х				Х		
Passage	1.5	4.5	1.5	4.0	4.0	4.5	1.5	2.0	Max Veh Recall								
Passage 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Ped Recall								
Max 1	15	50	15	15	40	50	15	30	Soft Veh Recall								
Max 2	15	50	15	15	40	50	15	30	Dual Entry		Х		Х		Х		Χ
Max 3	0	0	0	0	0	0	0	0	Sim Gap Dis	Χ		Х		Х		Х	
Conditional Max	0	0	0	0	0	0	0	0	Guaranteed Pass								
Yel Change	3.5	4.5	3.5	4.0	4.0	4.5	3.5	3.0	Act Rest Walk								
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	Cond Service								
Add Red Clear	0	0	0	0	0	0	0	0	Add Initial								
Red Revert	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	Ped Clr During Yel								
Added <b>I</b> nitial	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	Ped Clr During Red								
Max Initial	0	10	0	0	10	10	0	0	Cond Reservice								
Time B4 Reduce	0	0	0	0	0	0	0	0	Yel Min Override								
Cars B4 Reduce	0	0	0	0	0	0	0	0	No Startup Call								
Time To Reduce	0	0	0	0	0	0	0	0	Adv. Warn Flasher								
Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	No Ped Str Up Call								
Min Gap	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	Ped Clr OVTG								
Dyn Max Limit	0	0	0	0	0	0	0	0	Flash Exit Call								
Dyn Max Step	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	Flash Exit Ped Call								
Advance Walk	0	0	0	0	0	0	0	0	MinGreen2								
Delayed Walk	0	0	0	0	0	0	0	0	MaxGreen2								
Alt Walk	0	0	0	0	0	0	0	0	MaxGreen3								
Alt Ped Clr	0	0	0	0	0	0	0	0	Ped2								
Ped Service Limit	0	0	0	0	0	0	0	0	Ped Clear Pre Clear								
Pre Green	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Ped NA+ Mode								
Pre Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Red Rest								
Pre Clearance 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Serve Evy Oth Even								
Red Clear Ext Pass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Serve Evy Oth Odd								
Red Clear Ext Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Coord Ped Yield								
Queue Jump	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Ped Recycle								
Adv Warning Ext	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Coutdown								
Pri Walk	0	0	0	0	0	0	0	0	Simult Start								
Call Phases									Simult Ped Term								
Walk Ext	0	0	0	0	0	0	0	0									
Walk Max	0	0	0	0	0	0	0	0									
Wait Cars B4 Sev	0	0	0	0	0	0	0	0									
Ped Clear Thru	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									

## Phase Plan 1 (Extended Phases) Options

Illinings			•						- puene								
Phases	9	10	11	12	13	14	15	16	Phases	9	10	11	12	13	14	15	16
Enable									Enable								
Walk Time	0	0	0	0	0	0	0	0	Auto Flash Ent.								
Clear Time	0	0	0	0	0	0	0	0	Auto Flash Exit								
Stdy Don't Walk	0	0	0	0	0	0	0	0	Non Actuated I								
Min Green	5	1	1	1	1	1	1	1	Non Actuated II								
Min Green 2	0	0	0	0	0	0	0	0	Non Lock Mem								
Min B4 FO	0	0	0	0	0	0	0	0	Min Veh Recall								
Passage	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Max Veh Recall								
Passage 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Ped Recall								
Max 1	15	0	0	0	0	0	0	0	Soft Veh Recall								
Max 2	15	0	0	0	0	0	0	0	Dual Entry								
Max 3	0	0	0	0	0	0	0	0	Sim Gap Dis								
Conditional Max	0	0	0	0	0	0	0	0	Guaranteed Pass								
Yel Change	3.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	Act Rest Walk								
Red Clear	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Cond Service								
Add Red Clear	0	0	0	0	0	0	0	0	Add Initial								
Red Revert	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Ped Clr During Yel								
Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Ped Clr During Red								
Max Initial	0	0	0	0	0	0	0	0	Cond Reservice								
Time B4 Reduce	0	0	0	0	0	0	0	0	Yel Min Override								
Cars B4 Reduce	0	0	0	0	0	0	0	0	No Startup Call								
Time To Reduce	0	0	0	0	0	0	0	0	Adv. Warn Flasher								
Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	No Ped Str Up Call								
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Ped Clr OVTG								
Dyn Max Limit	0	0	0	0	0	0	0	0	Flash Exit Call								
Dyn Max Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Flash Exit Ped Call								
Advance Walk	0	0	0	0	0	0	0	0	MinGreen2								
Delayed Walk	0	0	0	0	0	0	0	0	MaxGreen2								
Alt Walk	0	0	0	0	0	0	0	0	MaxGreen3								
Alt Ped Clr	0	0	0	0	0	0	0	0	Ped2								
Ped Service Limit	0	0	0	0	0	0	0	0	Ped Clear Pre Clear								
Pre Green	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Ped NA+ Mode								
Pre Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Red Rest								
Pre Clearance 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Serve Evy Oth Even								
Red Clear Ext Pass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Serve Evy Oth Odd								
Red Clear Ext Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Coord Ped Yield								
Queue Jump	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Ped Recycle								
Adv Warning Ext	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Coutdown								
Pri Walk	0	0	0	0	0	0	0	0	Simult Start								
Call Phases									Simult Ped Term								
Walk Ext	0	0	0	0	0	0	0	0									
Walk Max	0	0	0	0	0	0	0	0									
Wait Cars B4 Sev	0	0	0	0	0	0	0	0									
Ped Clear Thru	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									

## **IP Settings**

00	90				
Adapter	IP Address	Subnet Mask	Default Gateway	ARP	Mode
1				Disable	Static
2				Disable	Static

## **Default Free Parameters**

	Phs	Det	Ped	Ovlp	Pri
Seq	Pln	Pln	Pln	Pln	Pln
1	1	1	1	1	1

## **Serial Ports**

Port	Description	Function	Address	Baud	Bits	Stop	Parity	Flow	CTS	RTS
1	Port 2/C21S	None	1	9600	8	1	None	None	0	0
2	Aux_P3/C22S	None	1	9600	8	1	None	None	0	0
3	SDLC Port 1	None	1	9600	8	1	None	None	0	0
4	Com A/C50S	None	1	9600	8	1	None	None	0	0
5	FIO	None	1	9600	8	1	None	None	0	0
6	DISPLAY/C60M	None	1	9600	8	1	None	None	0	0
7	SP7	None	1	9600	8	1	None	None	0	0
8	SP8/Com B	None	1	9600	8	1	None	None	0	0

## **Unit Parameters**

## **Startup Parameters**

Start Fls Mode	Cabinet
Start Fls Time	0
Clearce Hold	6
Start Yellow	0.0
Start Red	6.0

## Timing/Freq Parameters Flash Parameters

Backup Time	600
Red Revert	4.0
Master By TOD	Disable
Grn Flash Freq.	60
Yel Flash Freq.	60

i lacii i ai ai iloto	
All Red Entry	0
All Red Exit	8
Auto Flash CVM	Disable
AR Flsh Sense	Enable
Dk Flsh Sense	Disable

## **Other Parameters**

Other i didilicte	,13
Preempt Lock	0
3 Phs Dia Seq	
4 Phs Dia Seq	
Sep Dia Seq	

## Manual Control

MCE Enab	Enable
MCE Seq.	1
Auto Ped	Enable

## **Sequence Configuration**

## Sequence 1

Sequence i	
Ring	Phases
1	2,a,4,b
2	5,6,a,8,b
3	
4	

## Sequence 2

<u> </u>	quen	0C <u>E</u>
F	Ring	Phases
	1	2,a,4,b
	2	6,5,a,8,b
	3	
	Δ	

## Sequence 3

Sequence S	
Ring	Phases
1	1,2,a,3,4,b
2	6,5,a,8,7,b
3	

## Sequence 4

Ring	Phases
1	2,1,a,4,3,b
2	5,6,a,7,8,b
3	
4	

## Sequence 5

Ring	Phases
1	1,2,a,3,4,b
2	6,5,a,7,8,b
3	
4	

## Sequence 6

0044011	
Ring	Phases
1	2,1,a,4,b,8,c
2	6,5,a,b,c
3	
1	

## Sequence 7

ocquence 1	
Ring	Phases
1	1,2,a,4,3,b
2	6,5,a,7,8,b
3	
4	

## Sequence 8

Ocquen	CC 0
Ring	Phases
1	2,1,a,4,3,b
2	6,5,a,7,8,b
3	
1	

## Sequence 9

Ring	Phases
1	1,2,a,3,4,b
2	5,6,a,8,7,b
3	
4	

## Sequence 10

Ring	Phases
1	2,1,a,3,4,b
2	5,6,a,8,7,b
3	
4	

## Sequence 11

Sequence 11				
Ring	Phases			
1	1,2,a,4,3,b			
2	5,6,a,8,7,b			
3				

## Sequence 12

Ring	Phases
1	2,1,a,4,3,b
2	5,6,a,8,7,b
3	
4	

## Sequence 13

Ring	Phases
1	1,2,a,3,4,b
2	6,5,a,8,7,b
3	
4	

## Sequence 14

Sequence 14					
Ring	Phases				
1	2,1,a,3,4,b				
2	6,5,a,8,7,b				
3					
Л					

## Sequence 15

Sequence 13					
Ring	Phases				
1	1,2,a,4,3,b				
2	6,5,a,8,7,b				
3					
1					

## Sequence 16

Ring	Phases
1	2,1,a,4,3,b
2	6,5,a,8,7,b
3	
4	

## **Phase Configuration**

· · · · · · · · · · · · · · · · · · ·					
Ph.	Startup	Ring	Concurrent	Startup Min	Description
1	Phase Not On	0		0	NBL
2	Green No Walk	1	5,6	0	SB
3	Phase Not On	0		0	EBL
4	Phase Not On	1	8	0	WB
			· ·		

5	Phase Not On	2	2	0	SBL
6	Green No Walk	2	2	0	NB
7	Phase Not On	0		0	WBL
8	Phase Not On	2	4	0	EB

## **No Serve Phases**

Se	Sequence 1		Sequence 2		
P	No Srv P		Р	No Srv P	
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		

Se	Sequence 3				
Р	No Srv P				
1					
2					
3					
4					
5					
6					
7					
8					

Se	quence 4
Р	No Srv P
1	
2	
3	
4	
5	
6	
7	
8	

Sequence 5			Sequence 6		
Р	No Srv P		Ρ	No Srv P	
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		

Se	quence 7	Se	quence 8
Р	No Srv P	Ρ	No Srv P
1		1	
2		2	
3		3	
4		4	
5		5	
6		6	
7		7	
8		8	

## **Backup Prevent**

Sec	uend	e 1

Ocquerioc i										
		No	Ва	ckı	ıp l	Pha	se		Call	
	1	2	3	4	5	6	7	8	Can	
1										
2										
3										
4										
5										
6										
7										
8										
ΑI	ΙR	ed :	2 B	U		Ν				

Sequence 2
------------

		Sequence 2										
l L			Call									
	1	2	2 3 4 5 6 7 8						Call			
1												
2												
3												
4												
5												
6												
7												
8												
All	All Red 2BU No											

Seq	uence	3

Sequence 5											
	^	No	Ва	ckı	лb	Ph	ase	)	Call		
	1	2	3	4	5	6	7	8	Call		
1											
2											
3											
4											
5											
6											
7											
8											
Αl	ΙR	ed	2E	SU		N					

	eddaeilee i											
	١	No Backup Phase										
	1	2	3	4	5	6	7	8	Call			
1												
2												
3												
4												
5												
6												
7												
8												
ΑI	ΙR	ed	2E	U		N	0					

Glo	hal	Ph:	986	R۵	cal	ls
OIO	vai	1 116	33C		Cai	

Global Phase Recalls									1	1	1	1	1	1	1	1	1	1	2	
Phase	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
Min		Х				Х														
Max																				
Ped																				
Act Walk Rest																				

## **Global Veh Det Diagnostics**

Global No Activity	0
Global Max Presence	0
Global Erractic Count	0
Global Failed Recall	Max Recall
Detector Reset Enable	Enabled

## **Global Ped Det Diagnostics**

Global No Activity	0
Global Max Pres	60
Global Err Count	0

## Global Pri/Pre Det Diag

Global No Activity	0
Global Max Presence	0
Global Erractic Count	0

## **Data Collection**

Vehicle Coll. Period	0
Comb. Veh Periods	1
Vehicle Period V3	0
Ped Coll. Period	0

#### **Vehicle Detection Parameters** Plan 1

	Call	Call	Call	Add Call	Sw	+Call	Dly			Queue	Ext	No	Max	Errat	Fail	Fail	Fail	
Det.	Phs	Ped	Ovl	Phases	Phs	Ovl	Ovl	Delay	Extend	Limit	Hold	Act.	Pres	Coun	<b>T</b> ime	Reca	lLink	Description
1	1	0	0		0			0.0	0.0	0	0.0	0	0	0	0	None	0	I1U
2	2	0	0		0			0.0	0.0	0	0.0	0	0	0	0	None	0	I2U
3	2	0	0		0			0.0	0.0	0	0.0	0	0	0	0	None	0	I2L
4	2	0	0		0			0.0	0.0	0	0.0	0	0	0	0	None	0	I3U
5	2	0	0		0			0.0	0.0	0	0.0	0	0	0	0	None	0	I3L

<del>  6  </del>	2	0	<del>-0-</del>	<del></del>	0		0.0	0.0	<del>- 0 - 1</del>	0.0	<del>  0  </del>	0	<del>- 0 -</del>	<del></del>	None	0	I4U
<del>7</del>	3	ŏ	ŏ		Ö		0.0	0.0	ŏ	0.0	ŏ	ŏ	ŏ	ŏ	None	ŏ	15U
8	4	0	0		0		8.0	0.0	0	0.0	0	0	0	0	None	0	I6U
9	4	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	I6L
10	4	0	0		0		8.0	0.0	0	0.0	0	0	0	0	None	0	<b>I</b> 7U
11	4	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	I7L
12	4	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	I8U
13	1	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	I9U
14	3	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	I9L
15	5	0	0		0		10.0	0.0	0	0.0	0	0	0	0	None	0	J1U
16	6	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	J2U
17	6	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	J2L
18	6	0	0	<u> </u>	0		0.0	0.0	0	0.0	0	0	0	0	None	0	J3U
19	6	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	J3L
20	6	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	J4U
21	7	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	J5U
22	8	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None		J6U
23	8	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	J6L
24	8	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	J7U
25	8	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	J7L
26	8	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	J8U
27	5	0	0		0		10.0	0.0	0	0.0	0	0	0	0	None	0	J9U
28	7	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	J9L
29	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
30	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
31	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
32	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
33	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
34	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
35	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
36	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
37	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
38	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
39	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
40	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None		
41	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None		
42	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None		
43	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None		
44	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
45	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
46	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
47	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	
48	0	0	0		0		0.0	0.0	0	0.0	0	0	0	0	None	0	

Vehicle Detectors (Continued) Plan 1

			•••	(	<del>/</del>													
	Call	Call	Call	Add Call	Sw	+Call	Dly			Queue	Ext	No	Max	Errat	Fail	Fail	Fail	
Det.	Phs	Ped	Ovl	Phases	Phs	Ovl	Ovl	Delay	Extend	Limit	Hold	Act.	Pres	Coun	tTime	Reca	lLink	Description
49	0	0	0		0			0.0	0.0	0	0.0	0	0	0	0	None	0	
50	0	0	0		0			0.0	0.0	0	0.0	0	0	0	0	None	0	
51	0	0	0		0			0.0	0.0	0	0.0	0	0	0	0	None	0	
52	0	0	0		0			0.0	0.0	0	0.0	0	0	0	0	None	0	
53	0	0	0		0			0.0	0.0	0	0.0	0	0	0	0	None	0	
54	0	0	0		0			0.0	0.0	0	0.0	0	0	0	0	None	0	
55	0	0	0		0			0.0	0.0	0	0.0	0	0	0	0	None	0	
1		l	l	<u> </u>	I			1	1		1	l	I					

56	0	0	0	 0	lacksquare	0.0	0.0	0	0.0	0	0	<del>-0-</del>	0	None	0	ļ
57	Ö	Ö	⊢ŏ−	l ŏ		0.0	0.0	Ö	0.0	ŏ	ŏ	Ö	ŏ	None		
58	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None		
36	U	U	<u> </u>	Г -		0.0	0.0	0	0.0	<u> </u>	U	U	μ_	INOHE		-
59	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
60	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
61	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
62	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
63	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
64	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
65	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
66	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
67	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
68	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
69	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
70	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
71	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	
72	0	0	0	0		0.0	0.0	0	0.0	0	0	0	0	None	0	

Vehicle Detection Options Plan 1

Vehicle Detection	i Opti	ons	_		Plan	1		_	_							_				
Detector	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Volume Detector																				
Occupancy																				
Yellow Lock Call																				
Red Lock Call																				
Extend	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Added Initial																				
Queue																				
Call	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Terminate																				
Min Green 2																				
Protected Perm																				
Disable Dly Lead																				
Disable TS2 Diag																				
Disable Det Diag																				
Passage 2																				
Red Clear Ext																				
Ovl Add Int Delay																				
Ovl Gap Delay																				
Wait Car Count																				
Dly During Green																				

Vehicle Detection Options (Continued) Plan 1

Detector	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Volume Detector																				
Occupancy																				
Yellow Lock Call																				
Red Lock Call																				
Extend	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Х	Х	Х	Х	Х	Х	Х
Added Initial																				
Queue																				
Call	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Х	Х	Х	Х	Х	Х	Х
Terminate																				
Min Green 2																				
Protected Perm																				

Disable Dly Lead										
Disable TS2 Diag										
Disable Det Diag										
Passage 2										
Red Clear Ext										
Ovl Add Int Delay										
Ovl Gap Delay										
Wait Car Count										
Dly During Green										

Detector	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Volume Detector	Х	Х	Х	Х	Х	Χ	Х	Х												
Occupancy	Х	Х	Х	Х	Х	Χ	Χ	Х												
Yellow Lock Call																				
Red Lock Call																				
Extend									Х	Х	Х	Х	Χ	Х	Х	Х				
Added Initial																				
Queue																				
Call																				
Terminate																				
Min Green 2																				
Protected Perm																				
Disable Dly Lead																				
Disable TS2 Diag																				
Disable Det Diag																				
Passage 2																				
Red Clear Ext																				
Ovl Add Int Delay																				
Ovl Gap Delay																				
Wait Car Count																				
Dly During Green																				

Vehicle Detection Options (Continued) Plan 1

Detector	61	62	63	64	65	66	67	68	69	70	71	72
Volume Detector												
Occupancy												
Yellow Lock Call												
Red Lock Call												
Extend												
Added Initial												
Queue												
Call												
Terminate												
Min Green 2												
Protected Perm												
Disable Dly Lead												
Disable TS2 Diag												

Disable Det Diag						
Passage 2						
Red Clear Ext						
Ovl Add Int Delay						
Ovl Gap Delay						
Wait Car Count						
Dly During Green						

Spec	ed Detect	ors		Min	Max	Car	Det	Trail	Trap
Det	Enable	Type	Units	Log	Log	Length	Length	Det	Length
1		Single	Inches	5	80	0	0	0	0
2		Single	Inches	5	80	0	0	0	0
3		Single	Inches	5	80	0	0	0	0
4		Single	Inches	5	80	0	0	0	0
5		Single	Inches	5	80	0	0	0	0
6		Single	Inches	5	80	0	0	0	0
7		Single	Inches	5	80	0	0	0	0
8		Single	Inches	5	80	0	0	0	0

**Pedestrian Detectors** 

	Call	Call	Cancel	Add	Add	Walk	Clear	No	Max	Erratic	Walk
Det	Phs	Ovlp	Phs	Call Phs	Call Ovlp	2	2	Act	Pres	Count	Extension
									_	_	
1_	0	0				0	0	0	0	0	
2	2	0				0	0	0	0	0	
3	0	0				0	0	0	0	0	
4	4	0				0	0	0	0	0	
5	0	0				0	0	0	0	0	
6	6	0				0	0	0	0	0	
7	0	0				0	0	0	0	0	
8	8	0				0	0	0	0	0	
9	0	0				0	0	0	0	0	
10	0	0				0	0	0	0	0	
11	0	0				0	0	0	0	0	
12	0	0				0	0	0	0	0	
13	0	0				0	0	0	0	0	
14	0	0				0	0	0	0	0	

Overlaps Plan 1

OLP	Enabled	Type	Included Phs	Modifier Phs	Modifier Ovlps	Neg Phases	Description
1	Disabled	FYA - 4 Sec	2	1		- rrag r massa	FYA - 4 Section
2	Disabled	Thru FYA Ped	2		1		Thru FYA Ped
3	Disabled	Off					FYA - 4 Section
4	Disabled	Off					Thru FYA Ped
5	Enabled	FYA - 4 Sec	6	5			FYA - 4 Section
6	Enabled	Thru FYA Ped	6		5		Thru FYA Ped
7	Disabled	Off					
8	Disabled	Off					
9	Enabled	Normal	4,5				
10	Disabled	Off					
11	Disabled	Off					
12	Disabled	Off					

	1	2	3	4	5	6	7	8	9	10	11	12

Enabled	Disabled	Disabled	Disable	Disable	Enabled	Enabled	Disable	Disable	Enabled	Disable	Disable	Disable
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0
Add Trail Green	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trail Yellow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0	0	0	0	0
Delay	3.0	0.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Flash	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Inhibit Neg Phs												
Neg Ovlps												
TrG Omit Phs												
Negitive Peds	2				6		8		4			
Neg Ped Ovlps												
Grn Sup Phs												
N Ped Phs Calls												
Call Phases												
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0
Min Green	0	0	0	0	0	0	0	0	5	0	0	0
Max Green Ext	0	0	0	0	0	0	0	0	0	0	0	0
Red Revert	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LRT P2G Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FYA Ped Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Add Init Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gap Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Delay	0	0	0	0	0	0	0	0	0	0	0	0
Flash Inactive	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Flash Alt	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Grn Flash Freq	0	0	0	0	0	0	0	0	0	0	0	0
Ylw Flash Freq	0	0	0	0	0	0	0	0	0	0	0	0
Walk Rest	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off

Overlap Settings Plan 1

	1	2	3	4	5	6	7	8	9	10	11	
Startup Call												
Recall												
No Veh Reserv												
No Hold Trail Exit												
Ped Recycle		Х				Х						
No Yellow Protect												
No Bridging												
LRT Prepare Go												
Call for Service												
Trail Grn Bridge												
FYA Prot. Red Cl												
Phs Intvl Override												
Queue Jump												
No FYA Ped Wlk												
Term After Call												
FYA Ped No Prt Rtn												
Neg Ped Allow												
All Include Start												

1		 1			1	1	
Queue Jump Ext							
Disable Sim Gap							
Thru FYA Ped Term							

**Custom Overlap Rules** 

Rule	Custom Ovlp	Incl. State	Mod. Phase Stat	eMod. OL State	Neg. State	Output	Flash
1	Cust 1	Green	Any	Any	Any	Blank	Not Set
2	Disable	Any	Any	Any	Any	Not Set	Not Set
3	Disable	Any	Any	Any	Any	Not Set	Not Set
4	Disable	Any	Any	Any	Any	Not Set	Not Set
5	Disable	Any	Any	Any	Any	Not Set	Not Set
6	Disable	Any	Any	Any	Any	Not Set	Not Set
7	Disable	Any	Any	Any	Any	Not Set	Not Set
8	Disable	Any	Any	Any	Any	Not Set	Not Set
9	Disable	Any	Any	Any	Any	Not Set	Not Set
10	Disable	Any	Any	Any	Any	Not Set	Not Set

## **Coordination Parameters**

Operational Mode	Automatic
Coordination Mode	Auto Permissive
Correction Mode	Shortway (Auto)

Maximum Mode	Per Pattern
Force Mode	Fixed
Transition Cover Ped	Pattern

Max Cyc Limit %	20
Min Cyc Limit %	20
Max Dwell	0

Patt	erns		Offset				Ref	Coord	Force	Max	Trans	Min	Phs	Det	Ped	Ovlp	Pri		
Patt.	Cycle	1	2	3	Split	Seq	Col	Mode	Mode	Mode	Ped	Perm	Pln	Pln	Pln	Pln	Pln	Description	1
1	0	0	0	0	1	1	Grn	Auto	Fixed	Max1	None	Phs Only	1	1	1	1	1	Stgandard	Phasing
2	0	0	0	0	1	2	Grn	Auto	Fixed	Max1	None	Phs Only	1	1	1	1	1	Lag Ph5	
3	0	0	0	0	3	1	Grn	Auto	Fixed	Max1	None	Phs Only	1	1	1	1	1		
4	0	0	0	0	4	1	Grn	Auto	Fixed	Max1	None	Phs Only	1	1	1	1	1		
5	0	0	0	0	5	1	Grn	Auto	Fixed	Max1	None	Phs Only	1	1	1	1	1		
6	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1		
7	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1		
8	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1		
9	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1		
10	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1		
11	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1		
12	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1		
13	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1		
14	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1		
15	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1		

16	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1	
17	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1	
18	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1	
19	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1	
20	0	0	0	0	0	0	Yel	Auto	Fixed	Inh	Phase	Phs Only	1	1	1	1	1	Free Opera

**Split Parameters** 

Split	1			Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
1	0	0	0				Fix	None	0	0	Float
2	0	0	0	Х	Х		Fix	Min Rcl	0	0	Float
3	0	0	0				Fix	None	0	0	Float
4	0	0	0				Fix	None	0	0	Float
5	0	0	0				Fix	None	0	0	Float
6	0	0	0	Х	Х		Fix	Min Rcl	0	0	Float
7	0	0	0				Fix	None	0	0	Float
8	0	0	0				Fix	None	0	0	Float

Split	2			Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
1	0	0	0				Fix	None	0	0	Float
2	0	0	0				Fix	Min Rcl	0	0	Float
3	0	0	0				Fix	None	0	0	Float
4	0	0	0	Х	Х		Fix	None	0	0	Float
5	0	0	0				Fix	None	0	0	Float
6	0	0	0				Fix	Min Rcl	0	0	Float
7	0	0	0				Fix	None	0	0	Float
8	0	0	0	Х	Х		Fix	None	0	0	Float

Split Tables (continued)

Split	3			Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
1	0	0	0				Fix	None	0	0	Float
2	0	0	0	Х	Х		Fix	Min Rd	0	0	Float
3	0	0	0				Fix	None	0	0	Float
4	0	0	0				Fix	None	0	0	Float
5	0	0	0				Fix	None	0	0	Float
6	0	0	0	Х	Х		Fix	Min Rcl	0	0	Float
7	0	0	0				Fix	None	0	0	Float
8	0	0	0				Fix _	None	0	0	Float

Split	4			Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
1	0	0	0				Fix	None	0	0	Float
2	0	0	0				Fix	None	0	0	Float
3	0	0	0				Fix	None	0	0	Float
4	0	0	0	Х	Х		Fix	None	0	0	Float
5	0	0	0				Fix	None	0	0	Float
6	0	0	0				Fix	None	0	0	Float
7	0	0	0				Fix	None	0	0	Float
8	0	0	0	Х	Х		Fix	None	0	0	Float

Split 5	Coord	Ref	Cover	Force Off	Pri	Pri	Pri

PH.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
1	14	0	0				Fix	None	0	0	Float
2	38	0	0				Fix	None	0	0	Float
3	17	0	0				Fix	None	0	0	Float
4	31	0	0	Χ	Х		Fix	Min Rcl	0	0	Float
5	14	0	0				Fix	None	0	0	Float
6	38	0	0				Fix	None	0	0	Float
7	14	0	0				Fix	None	0	0	Float
8	34	0	0	Х	Х		Fix	Min Rcl	0	0	Float

Split	6			Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
1	0	0	0				Fix	None	0	0	Float
2	0	0	0				Fix	None	0	0	Float
3	0	0	0				Fix	None	0	0	Float
4	0	0	0				Fix	None	0	0	Float
5	0	0	0				Fix	None	0	0	Float
6	0	0	0				Fix	None	0	0	Float
7	0	0	0				Fix	None	0	0	Float
8	0	0	0				Fix	None	0	0	Float

Split Tables (continued)

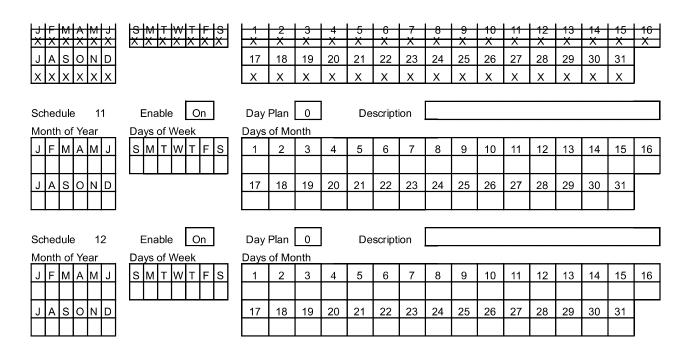
Split	7	_		Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
1	0	0	0				Fix	None	0	0	Float
2	0	0	0				Fix	None	0	0	Float
3	0	0	0				Fix	None	0	0	Float
4	0	0	0				Fix	None	0	0	Float
5	0	0	0				Fix	None	0	0	Float
6	0	0	0				Fix	None	0	0	Float
7	0	0	0				Fix	None	0	0	Float
8	0	0	0				Fix	None	0	0	Float

								-			
Split	8			Coord	Ref	Cover	Force Off		Pri	Pri	Pri
PH.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
1	0	0	0				Fix	None	0	0	Float
2	0	0	0				Fix	None	0	0	Float
3	0	0	0				Fix	None	0	0	Float
4	0	0	0				Fix	None	0	0	Float
5	0	0	0				Fix	None	0	0	Float
6	0	0	0				Fix	None	0	0	Float
7	0	0	0				Fix	None	0	0	Float
8	0	0	0				Fix	None	0	0	Float

5	Split	9			Coord	Ref	Cover	Force Off		Pri	Pri	Pri
E	PH.	Time	Min	Max	PH	PH	Ped	Mode	Mode	Min	Max	F. Off
	1	0	0	0				Fix	None	0	0	Float
Γ	2	0	0	0				Fix	None	0	0	Float

3	0	0	0						F	ix		N	lone		0	0	Float					
4	0	0	0						F	ix		Ν	lone		0	0	Float					
5	0	0	0		4				F	ix		N	lone		0	0	Float					
6	0	0	0		_					ix			lone		0	0	Float	_				
7	0	0	0		4					ix			lone		0	0	Float	1				
8	0	0	0						F	ix			lone		0	0	Float	]				
Split	10			Coor	٦.	Ref	C	over	Forc	e Off	Ī				Pri	Pri	Pri	1				
PH.	Time	Min	Max	PH		PH		ed	Mo			N.	lode		Min	Max	F. Off					
1	0	0	0		1	'''		eu		ix			lone		0	0	Float					
2	0	0	0						F				lone		10	0	Float	1				
3	0	0	0							ix			lone		0	0	Float	1				
4	0	0	0						F	ix		Ν	lone		0	0	Float					
5	0	0	0						F	ix		Ν	lone		0	0	Float					
6	0	0	0						F	ix		١	lone		0	0	Float					
7	0	0	0		_				F	ix		N	lone		0	0	Float	_				
8	0	0	0	4.					F	ix			lone		0	0	Float					
Patte	ern Adv					Τ.			_		Γ_											
			attern	1	2 1			<u>4</u> 1	5 1	6 0	7	8	9	10 0								
	Allow Spl		y Plan	X	X	_	$\dashv$	X	X		"		0	$\dashv$								
<u> </u>	Allow Spi				X	_	-	X	X													
	Allow N																					
		Coord																				
Plan	Early Cod	rd Ga		0	2 0	C	)	4 0 0		Plan Ea	arly Co		Ri Offs Gap C	et 0 out 5	2 0 5	3 0 0	4 0 0					
		y Coo	rd FO	0	0	C	) [	0				irly C	oord F	O 5	5	0	0					
Plan	3		<u> </u>			Τ.	. 1			Plan	4			1 .	Τ.	Τ.						
			Ring Offset	0	0		一	0					Ri Offs		0	0	0					
-	Early Coo				7		_	0		Fs	arly Ca	oord (	Gap C		5	0	0					
			rd FO		0			0					oord F		0	0	0					
		,		-					ı													
Sche	edules			i		_								_								
Sched	lule 1		Ena	ble	Or			Day	Plan	1		De	scripti	on <u>V</u>	V <u>eekd</u> a	ay Day	/ Plan					
	of Year	_	Days (				]	Days	of Mo	nth												
	M A M	$\Box$	S M		-	F S		1	2	3	4	5	6	7			0 11	12	13	14	15	16
		X	X	x x	X	х <u> </u>	-	Χ	Х	Х	Х	X	Х	Х		X		X	Х	Х	Χ	Х
	SON	$\Box$					ŀ	17	18	19	20	21	22			25 2		28	29	30	31	
IXIX	x x x	X					L	Χ	Х	Х	Х	Х	Χ	Х	X   2	x   >	( X	Х	Χ	Χ	Χ	1
Sched			Ena		Or	1			Plan		]	De	scripti	on [	V <u>eeke</u> ı	nd Day	/ Plan					
	of Year		Days			_ [_ [	_ [   Г		of Mo		Ι.				<u>, T</u>	<u>. T</u>			4.5		,_	
	M A M		S M	I W	H			1	2	3	4	5	6	7			0 11	12	13	14	15	16
	XXX	X	X L			Х	-	X 17	X 10	X 10	X 20	X 21	X	X 22		X X		X	X 20	X 20	X 21	Х
J A	S O N X X X	D x					ŀ	17 X	18 X	19 X	20 X	21 X	22 X	23 X		25 2 X X		28 X	29 X	30 X	31 X	İ
[^]^	1/1/1/						L	Λ	_^_		_ ^	_ ^	_ ^	^	<u>^                                    </u>	<u>^   /</u>	1.^_					1
Sched	lule 3		Ena	ble	Or	1		Day	Plan	3		De	scripti	on [								

Month of Year	Days of Week	Days	of Mc	nth													
J F M A M J	SMTWTFS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
$x \times x \times x \times x$	$\times \times \times \times \times \times$	Х	Х	Х	Х	Χ	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Χ	Х
JASOND		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
x x x x x x		Χ	Χ	Х	Χ	Χ	Х	Х	Χ	Х	Х	Χ	Χ	Χ	Χ	Χ	
	🗀	_		<u> </u>	1	_											
Schedule 4	Enable On	-	Plan	4	ļ	De	script	ion									
Month of Year  J F M A M J	Days of Week S M T W T F S	Days 1	2	ontn 3	4	5	6	7	8	9	10	11	12	13	14	15	16
X X X X X X	X X X X X X X	X	X	X	X	X	X	X	Х	X	X	X	X	X	X	X	X
JASOND		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
$x \times x \times x \times x$		Х	Х	Х	Х	Χ	Х	Х	Х	Х	Х	Х	Х	Х	Х	Χ	
					1				_								
Schedule 5	Enable On	-	Plan	5		De	script	ion									
Month of Year	Days of Week	Days			T .	_	Γ.	Γ_			1.0	<u> </u>	1.0	40	4.4	4-	10
J F M A M J	S M T W T F S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
JASOND	[X  X  X  X  X  X  X ]	17	18	19	20	21	22	23	X 24	25	26	X 27	X 28	X 29	X 30	X 31	Х
XXXXXX		X	Х	X	X	X	X	X	X	X	X	X	X	X	X	X	
			,,			,,		, , ,	, ,				,,,	,,	,,	,,	ı
Schedules (co	ntinued)				1												
Schedule 6	Enable On	Day		6	]	De	script	ion									
Month of Year	Days of Week	Days				_					10	144	10	40	4.4	45	40
J F M A M J X X X X X X	S M T W T F S	1 X	2 X	3 X	4 X	5 X	6 X	7 X	8 X	9 X	10 X	11 X	12 X	13 X	14 X	15 X	16 X
JASOND		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
XXXXXX		X	Х	Х	X	X	X	X	X	X	X	X	X	X	Х	X	
Schedule 7	Enable On	Day	Plan	7		De	script	ion									
Month of Year	Days of Week	Days	of Mo	nth			1	1		1		1					
J F M A M J	SMTWTFS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
XXXXXX	x  x  x  x  x  x  x	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Х
J A S O N D		17 X	18 X	19 X	20 X	21 X	22 X	23 X	24 X	25 X	26 X	27 X	28 X	29 X	30 X	31 X	
						^									^	^	J
Schedule 8	Enable On	Day	Plan	8		De	script	ion									
Month of Year	Days of Week	Days															
J F M A M J	SMTWTFS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
XXXXX	$\times \times \times \times \times \times \times$	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Χ	Х
JASOND		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
x x x x x x		Х	Χ	Х	Χ	Χ	Х	Х	Х	Х	Х	Х	Χ	Χ	Χ	Χ	
Schedule 9	Enable On	Dov	Plan	9	]	Da	script	ion									
Month of Year	Days of Week	Days			J	ьe	sui ipt	IUII	<u> </u>								
J F M A M J	S M T W T F S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
XXXXXX	$\times \times \times \times \times \times \times$	Х	X	Х	Х	Х	Х	X	Х	Х	Х	Х	X	Х	X	X	X
JASOND		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
$\times \times \times \times \times \times$		Х	Χ	Х	Χ	Χ	Х	Х	Х	Х	Х	Х	Х	Χ	Χ	Χ	
					1												
Schedule 10	Enable On	_	Plan		J	De	script	ion	<u> </u>								
Month of Year	Days of Week	Days	of Mo	nth I	1		1	<u> </u>		1	1	1	<u> </u>				
		•	•	•	•		•	•	•	•	•	•	•	•			



					1												
Da	y Pl	an	1			Day P	lan	2		Day F	Plan	3		Day F	Plan	4	
Ev	ent	Hour	Min.	Act		Event	Hour	Min.	Act	Even	Hour	Min.	Act	Even	Hour	Min.	Act
_1		6	0	20		1	6	0	2	1	0	0		1	0	0	
2		20	0	20		2	20	0	20	2	0	0		2	0	0	
3	,	0	0			3	0	0		3	0	0		3	0	0	
4		0	0			4	0	0		4	0	0		4	0	0	
5		0	0			5	0	0		5	0	0		5	0	0	
		Û	Û		J	6	0	0		6	0	0		6	0	0	
		0	0			7	0	0		7	0	0		7	0	0	Ш
_ 8		0	0			8	0	0		8	0	0		8	0	0	Ш
(5		0	0			9	0	0		9	0	0		9	0	0	
1	<u> </u>	0	0			10	0	0		10	0	0		10	0	0	Ш
Da	y Pl	an	5			Day P	lan	6		Day F	Plan	7		Day F	Plan	8	
Ev	ent	Hour	Min.	Act		Event	Hour	Min.	Act	Even	Hour	Min.	Act	Even	Hour	Min.	Act
		0	0			1	0	0		1	0	0		1	0	0	Ш
2		0	0			2	0	0		2	0	0		2	0	0	Ш
3		0	0			3	0	0		3	0	0		3	0	0	Ш
4		0	0			4	0	0		4	0	0		4	0	0	
_ 5		0	0			5	0	0		5	0	0		5	0	0	Ш
_ 6		0	0			6	0	0		6	0	0		6	0	0	Ш
		0	0			7	0	0		7	0	0		7	0	0	Ш
_ 8		0	0			8	0	0		8	0	0		8	0	0	Ш
<u> </u>		0	0			9	0	0		9	0	0		9	0	0	Ш
1	<u> </u>	0	0			10	0	0		10	0	0		10	0	0	
Da	y Pl	an	9			Day P	lan	10		Day F	Plan	11		Day F	lan	12	
Ev	ent	Hour	Min.	Act		Event	Hour	Min.	Act	Even	Hour	Min.	Act	Even	Hour	Min.	Act
		0	0			1	0	0		1	0	0		1	0	0	
2		0	0			2	0	0		2	0	0		2	0	0	
3		0	0			3	0	0		3	0	0		3	0	0	
4		0	0			4	0	0		4	0	0		4	0	0	
5		0	0			5	0	0		5	0	0		5	0	0	
6		0	0			6	0	0		6	0	0		6	0	0	
7		0	0			7	0	0		7	0	0		7	0	0	

8	0	0	
9	0	0	
10	0	0	

8	0	0	
9	0	0	
10	0	0	

8	0	0	
9	0	0	
10	0	0	

8	0	0	
9	0	0	
10	0	0	

Actio	ons	1	∖ux			Sp	ecia	al F	un	ctic	ุทธ	
Act	Pattern	1	2	3	1	2	3	4	5	6	7	8
1	Pattern 1											
2	Pattern 2											
3	Pattern 3											
4	Pattern 4											
5	Pattern 5											
6	Pattern 6											
7	Pattern 7											
8	Pattern 8											
9	Pattern 9											
10	Pattern 10											

Acti	Actions			ί.	,	Spe	ecia	al F	ur	cti	ons	s
Act	Pattern	1	2	3	1	2	3	4	5	6	7	8
11	None											
12	None											
13	Free											
14	None											
15	None											
16	None											
17	None											
18	None											
19	None											
20	Free	Х										

Acti	ons	1	∖ux			Sp	ecia	al F	un	ctic	ns	
Act	Pattern	1	2	3	1	2	3	4	5	6	7	8
21	None											
22	None											
23	None											
24	None											
25	None											
26	None											
27	None											
28	None											
29	None											
30	None											
31	None											
32	None											
33	None											
34	None											
35	None											

Acti	ons	1	∖ux	(.	,	Spe	ecia	al F	ur	oti	ons	3
Act	Pattern	1	2	3	1	2	3	4	5	6	7	8
36	None											
37	None											
38	None											
39	None											
40	None											
41	None											
42	None											
43	None											
44	None											
45	None											
46	None											
47	None											
48	None											
49	None											
50	None											

## **Action Commands**

## Action 1

Cmd	Command	Indexes
1	None	
2	None	
3	None	
4	None	
5	None	
6	None	
7	None	
8	None	

## Action 2

Cmd	Command	Indexes
1	None	
2	None	
3	None	
4	None	
5	None	
6	None	
7	None	
8	None	

## Action 3

Cmd	Command	Indexes
1	None	
2	None	
3	None	

## Action 4

Cmd	Command	Indexes
1	None	
2	None	
3	None	

4	None		None	
Action 5		 Action	6	

Cmd	Command	Indexes
1	None	
2	None	
3	None	
1	None	

7 (01,011 0							
	Cmd	Command	Indexes				
	1	None					
	2	None					
	3	None					
	4	None					

ctic	

Cmd	Command	Indexes
1	None	
2	None	
3	None	
4	None	

Action	on 8	
Cmd	Command	Indexes
1	None	
2	None	
3	None	
	Mana	

									1	
Master Sections B	у .	TC	D							1
Action	1	2	3	4	5	6	7	8	9	0
Master Section 1										
Master Section 2										
Master Section 3										
Master Section 4										
Master Section 5										
Master Section 6										
Master Section 7										
Master Section 8										
Master Section 9										
Master Section 10										
Master Section 11										
Master Section 12										
Master Section 13										
Master Section 14										
Master Section 15										
Master Section 16										

Queue Responsive By TOD							1			
Action	1	2	3	4	5	6	7	8	9	0
Queue Resp Plan 1										
Queue Resp Plan 2										
Queue Resp Plan 3										
Queue Resp Plan 4										
Queue Resp Plan 5										
Queue Resp Plan 6										
Queue Resp Plan 7										
Queue Resp Plan 8										
Queue Resp Plan 9										
Queue Resp Plan 10										
Queue Resp Plan 11										
Queue Resp Plan 12										
Queue Resp Plan 13										
Queue Resp Plan 14										
Queue Resp Plan 15										
Queue Resp Plan 16										

**Preemption Parameters** 

Preempt	1	2	3	4	5	6	7	8
Enabled	Disabled	Disabled	Enabled	Enabled	Enabled	Enabled	Disabled	Disabled
Туре	Rail Road	Rail Road	Emerg Veh	Emerg Veh	Emerg Veh	Emerg Veh	Emerg Veh	Emerg Veh
Description			Phases 2 & 5	Phase 4	Phases 6	Phase 8		
Gate Description								
Hold Delay Phases								
Entry Override Phs								
Track Phases								
Track Peds								
Track Overlaps								
Track 2 Phases								
Track 2 Peds								
Track 2 Overlaps								
Dwell Phase			2,5	4	6	8		
Dwell Ped								
Dwell Overlaps			2,5		5,6			
Cycling Phases								
Cycling Peds								

Cycling Overlaps								
Exit Phases			2,5	4	6	8		
Exit Overlaps					5,6			
Recovery Omit Phs								
Max Pres Action	255	255	255	255	255	255	0	0
Normal Input Fault	Flash							
Exit Type	Exit Phases							
Exit Max Mode	Disabled							
Exit Veh Calls								
Exit Ped Calls								

**Preemption Parameters (Continued)** 

Preemption Par	amet	ers (	Con	tinue	ed)	_		
Preempt	1	2	3	4	5	6	7	8
Link	0	0	0	0	0	0	0	0
Delay	0	0	0	0	0	0	0	0
Min Duration	1	1	1	1	1	1	0	0
Min Presence	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Presence	255	255	255	255	255	255	0	0
Reservice Lockout	0	0	0	0	0	0	0	0
Sequence	0	0	0	0	0	0	0	0
Enter Min Green	5	5	5	5	5	5	0	0
Enter Walk	1	1	1	1	1	1	0	0
Ent. Ped Clear	255	255	255	255	255	255	255	255
Enter Yellow	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Ent. Red Clear	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track Green	0	0	0	0	0	0	0	0
Max Track Grn	0	0	0	0	0	0	0	0
Track Walk	255	255	255	255	255	255	255	255
Track Ped Clr	255	255	255	255	255	255	255	255
Track Yellow	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track Red Clear	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5

Preempt	1	2	3	4	5	6	7	8
Hold Delay Time	0	0	0	0	0	0	0	0
Track 2 Green	0	0	0	0	0	0	0	0
Track 2 Walk	255	255	255	255	255	255	255	255
Track 2 Ped Clr	255	255	255	255	255	255	255	255
Track 2 Yellow	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track 2 Red	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track Ext Gate Dn	0	0	0	0	0	0	0	0
Dwell Green	5	5	5	5	5	5	0	0
Exit Min Green	255	255	255	255	255	255	255	255
Exit Walk	255	255	255	255	255	255	255	255
Exit Ped Clear	255	255	255	255	255	255	255	255
Exit Yellow	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Exit Red	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Dwell Ext Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exit Max Green	0	0	0	0	0	0	0	0
Exit Max Mode Time	0	0	0	0	0	0	0	0
Exit Free Time	0	0	0	0	0	0	0	0

**Preemption Options** 

Preempt	1	2	3	4	5	6	7	8
Non Lock Mem	Х	Х	Х	Х	Х	Х		
Not Overide Flash								
NotOverideNextPre	х	Х	х	х	х	Х		
Flash Dwell								
Ped Recycle in Dwell								
Imm Ped Clear							Х	х
Dwell Only Status								
All Red Flash Dwell								
Allow All Overlaps								
Req All Red Entry								
Req Gate Dwn Trck Exit								
Req Gate Up Dwl Exit								
Normal On/Off Input								
Track Clear Override								
Non-Locking Gate Down								
Ped Clear During Yellow								


Require CRC Disabled

Entry Override All-Red				
Sep Entry Phase/Ped				
Latching Flash Dwell				
Entry Omit OLTG				

Special Function 15					l
Special Function 16					

Channel Configuration

Channel	Control Type	Cntrl Src	Flash Ylw	Flash Red	Flash Alt	MMU Channe	Green Type	Grn Included
1	Phs Veh	1		Х	Х	1	Other	
2	Phs Veh	2		Х		2	Other	
3	Phs Veh	3		Х		3	Other	
4	Phs Veh	4		Х	Х	4	Other	
5	Olp	5		Х	Х	5	Other	
6	Olp	6		Х		6	Other	
7	Phs Veh	7		Х		7	Other	
8	Phs Veh	8		Х	Х	8	Other	
9	Olp	9		Х	Х	9	Other	
10	Olp	10		Х		10	Other	
11	Olp	11		Х	Х	11	Other	
12	Olp	12		Х		12	Other	
13	Phs Ped	2				13	Other	
14	Phs Ped	4				14	Other	
15	Phs Ped	6				15	Other	
16	Phs Ped	8				16	Other	

**Cabinet Configuration** 

IO Modul	Туре					
1	ODOT 332					
2	None					
3	None					
4	None					
5	None					
6	None					
7	None					
8	None					
9	None					
10	None					

## **Advanced Cabinet Options**

Advanced Cabinet Options			
ITS Cabinet on Port 1	No	Enable TS2/ATC St Time	
ITS Cabinet on Port C13S	No	Disable TS2 Startup Call	
33X Input Leading Edge Filter	5	Disable TS2 Fault Flash	
33X Input Trailing Edge Filter	5	Disable TS2 Cabinet Alarms	

Disable ATC Cabinet Alarms

## **Phase Intervals**

Interval	Description	Red	Yel	Grn	Туре
1	Not Act	On	Off	Off	Red
2	Adv Wlk	On	Off	Off	Red
3	Pre Grn	Off	Off	On	Green
4	Min Grn	Off	Off	On	Green
5	Grn Ext	Off	Off	On	Green
6	Grn Dwell	Off	Off	On	Green

Interval	Description	Red	Yel	Grn	Туре
7	Pre Clr	Off	Off	On	Green
8	Yel Change	Off	On	Off	Yellow
9	Red Clr	On	Off	Off	Red
10	Red Dwell	On	Off	Off	Red
11	Barrier	On	Off	Off	Red
12	Pre Clr 2	Off	Off	Off	Not Def

## Pedestrian Intervals

Interval	Description	DWK	CLR	Wlk	Type

Α	I	ar	'n	n	- (	$\mathbf{c}$	^	n	١f	ï	^
_		aı				·	v				u

Alarm	Name	Alarm	Name

1	Not Active	$\Box$	Off	Off	
- 1	140t Active	9	= ¥	58	Dont Walk
2	Diy waik	Oil	5	5	Dont walk
3	Walk	Off	Off	On	Walk
4	Walk Dwell	Off	Off	On	Walk
5	Flsh DWalk	Flash	On	Off	Ped Clear
6	DWalk	On	Off	Off	Dont Walk

L 4	
2	
3	
4	
5	

6	
0	
7	
8	
9	
10	

## **Manual Control Phase Groups**

						-									
Grp 1		Grp 2		Grp 3		Grp 4		Grp 5		Grp 6		Grp 7		Grp 8	
Ring	Ph	Ring	Ph	Ring	Ph	Ring	Ph	Ring	Ph	Ring	Ph	Ring	Ph	Ring	Ph
1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0
5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0
6	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0
7	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0
8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
9	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0
10	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0
11	0	11	0	11	0	11	0	11	0	11	0	11	0	11	0
12	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0
13	0	13	0	13	0	13	0	13	0	13	0	13	0	13	0
14	0	14	0	14	0	14	0	14	0	14	0	14	0	14	0
15	0	15	0	15	0	15	0	15	0	15	0	15	0	15	0
16	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0

**Prioritor Settings** 

Enabled	Lock Out Time	PRS Time to Live
Yes	0	300

Prioritor	Enabled	Priority	Priority Phs	Skipped Phs	Skip Peds	Dly Time	Arrv Time	Mx Presence	Flush/Veh	Max Flush
1	On	1	2,6	4,5,8	8	0	0	30	0.0	0
2	On	0				0	0	0	0.0	0
3	On	0				0	0	0	0.0	0
4	On	0				0	0	0	0.0	0
5	On	0				0	0	0	0.0	0
6	On	0				0	0	0	0.0	0
7	On	0				0	0	0	0.0	0
8	On	0				0	0	0	0.0	0

Prioritor	Res. Lockout	Free Pri Min	Free Pri Max	Description
1	0	Min Green	Max Green	
2	0	Min Green		
3	0			
4	0	Min Green	Max Green	
5	0	0 Min Green		
6	0	Min Green	Max Green	
7	0	Min Green	Max Green	
8	0	Min Green	Max Green	

Prioritor	1	2	3	4	5	6	7	8
Lock After First Serve								
Pres. Only Check-in	Х							
Extend Walk Rest								
Use Phase History								

PRS Reservice Times

1110110	OOI VIC	0 1111	100	30								
Class	1	2	3	4	5	6	7	8	9	10		
Time	0	0	0	0	0	0	0	0	0	0		

Peer Configuration

				IΡ	Http	Serial	Serial	Master	P2P	
Ctrl	Peer ID	Device Type	IP address	Port	Port	Port	Addr.	Sect.	TO	Description
1	0	Peer MaxTime		161	80	0	0	0	15	
2	0	Peer MaxTime		161	80	0	0	0	15	
3	0	Peer MaxTime		161	80	0	0	0	15	
4	0	Peer MaxTime		161	80	0	0	0	15	
5	0	Peer MaxTime		161	80	0	0	0	15	
6	0	Peer MaxTime		161	80	0	0	0	15	
7	0	Peer MaxTime		161	80	0	0	0	15	
8	0	Peer MaxTime		161	80	0	0	0	15	
9	0	Peer MaxTime		161	80	0	0	0	15	
10	0	Peer MaxTime		161	80	0	0	0	15	

**Master Section Configuration** 

	000000	· · · · · · ·				
Section	Control	Poll	Req#	Fail Time	Algorithm Period	Description
1	None	60	1	300	240	
2	None	60	1	300	240	
3	None	60	1	300	240	
4	None	60	1	300	240	
5	None	60	1	300	240	
6	None	60	1	300	240	
7	None	60	1	300	240	
8	None	60	1	300	240	
9	None	60	1	300	240	
10	None	60	1	300	240	
11	None	60	1	300	240	
12	None	60	1	300	240	
13	None	60	1	300	240	
14	None	60	1	300	240	
15	None	60	1	300	240	
16	None	60	1	300	240	

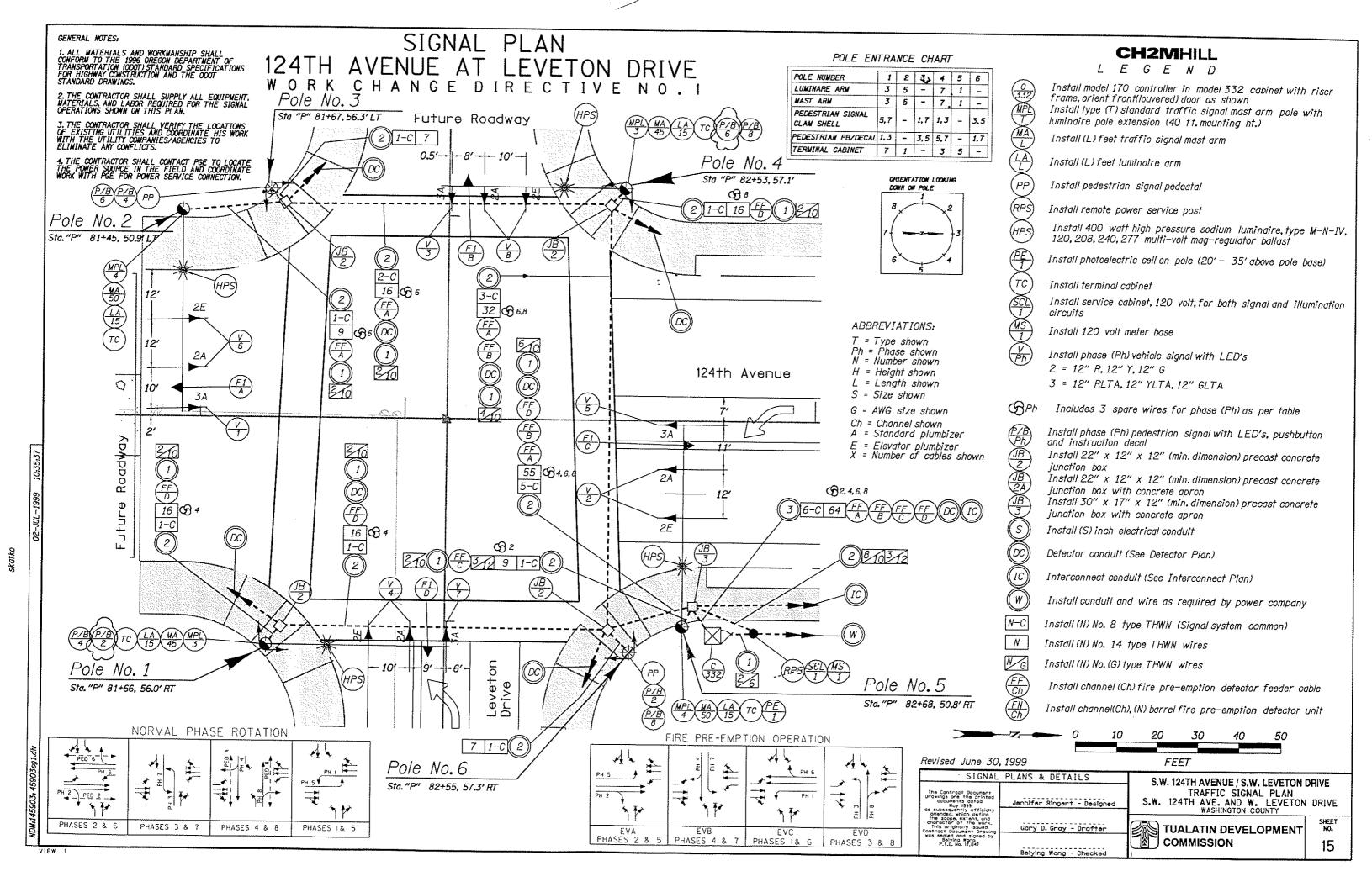
User Program Info

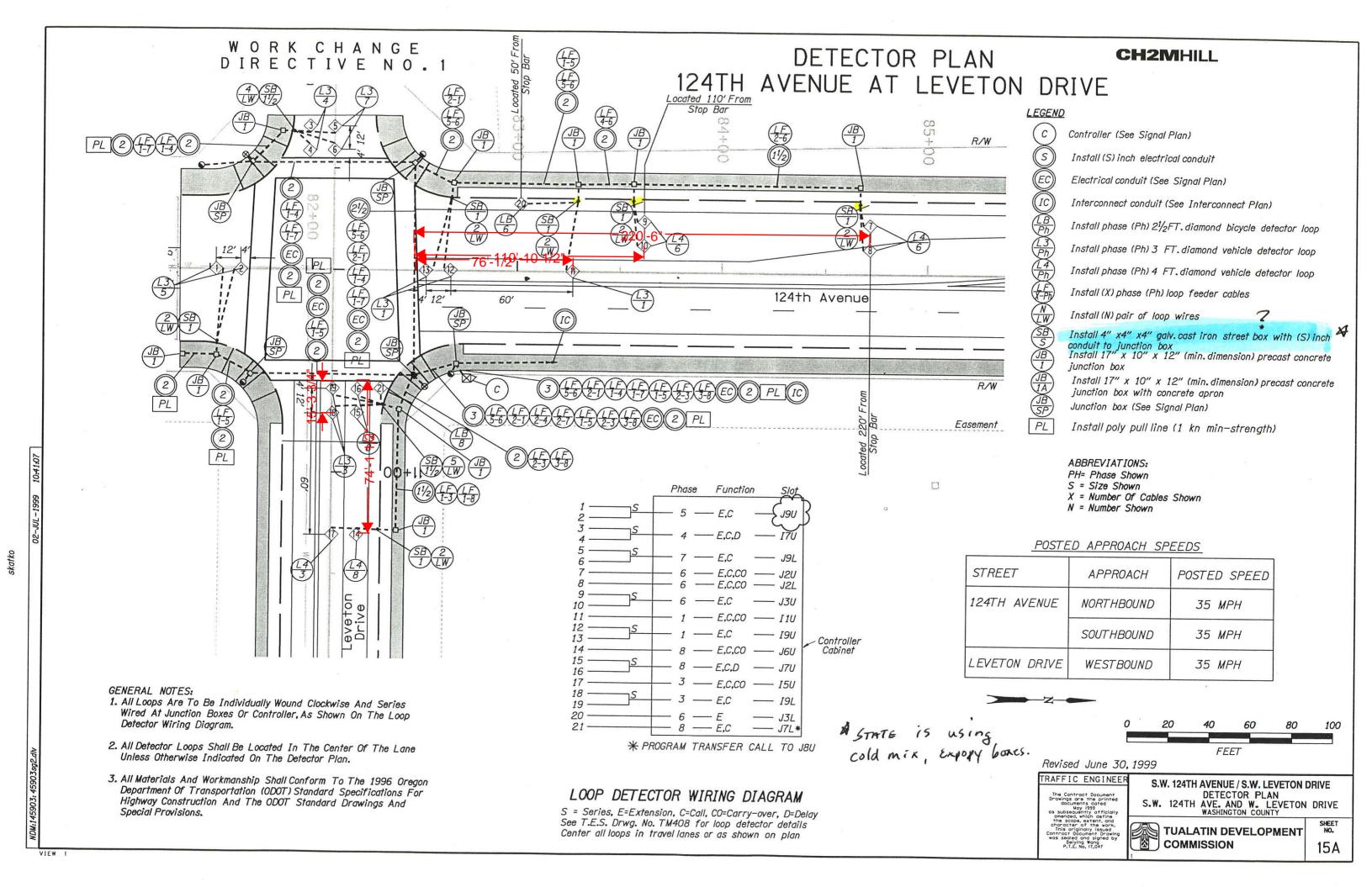
Pgrm	Description
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	

Pgrm	Description
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	_
27	
28	
29	

14	
15	
16	

30	
31	
32	





## **CH2MHILL**

## LEGEND

(W)

(SO 1-16) (SO 1-

35 MPH

35 MPH

35 MPH

TUALATIN ROAD

WESTBOUND

C Controller (See Signal Plan)

Install (S) inch electrical conduit

Interconnect conduit (See Interconnect Plan)

Install phase (Ph) 3 FT. diamond vehicle detector loop Ph

Install phase (Ph) 4 FT. diamond vehicle detector loop

Install (X) phase (Ph) loop feeder cables

Install (N) pair of loop wires

Install 4" x4" x4" galv. cast iron street box with (S) inch

conduit to junction box Install 17" x 10" x 12" (min. dimension) precast concrete junction box

Install 17" x 10" x 12" (min. dimension) precast concrete junction box with concrete apron

Junction box (See Signal Plan)

Retain and protect existing junction box

Retain and protect existing Model 170 controller and Model 332 cabinet

Retain and protect existing electrical conduit

Retain and protect existing detector conduit

Retain and protect existing interconnect conduit

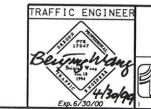
Retain and protect existing galv. cast iron street box with 1" conduit to junction box

	Phase	Function	Slot	
15 ————————————————————————————————————	6 — 6 — — 6 —	E,C,CO E,C,CO E,C E	- J2U - J2L - J3U - J3L	Controller Cabinet

## LOOP DETECTOR WIRING DIAGRAM

S = Series, E=Extension, C=Call, CO=Carry-over, D=Delay See T.E.S. Drwg. No. TM408 for loop detector details Center all loops in travel lanes or as shown on plan

Cold mix in Expory Boxes?



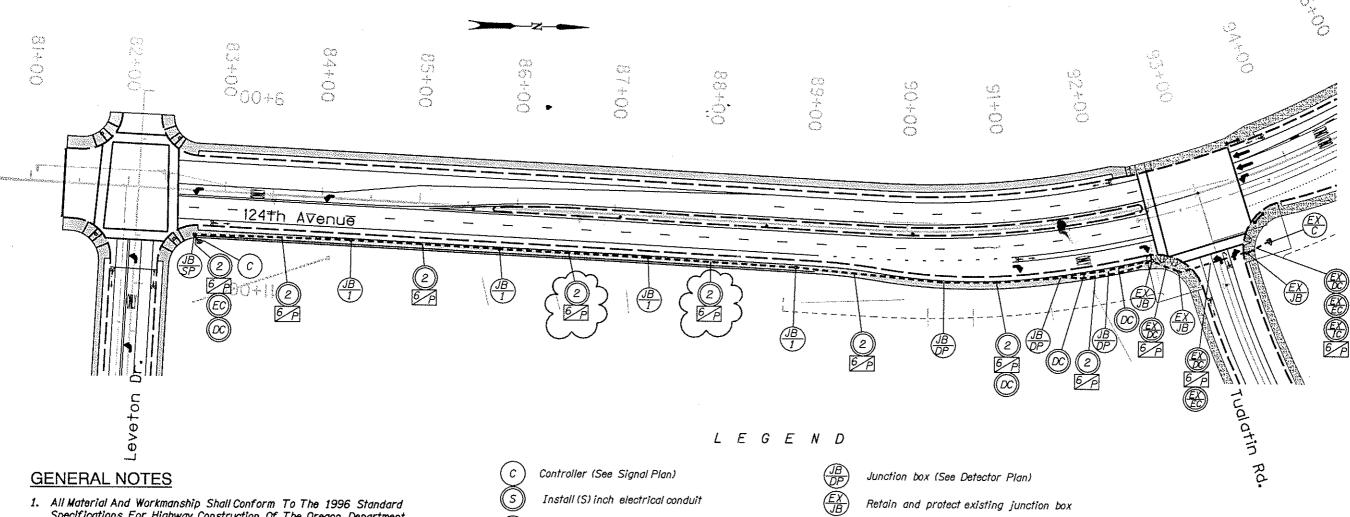
S.W. 124TH AVENUE / S.W. LEVETON DRIVE DETECTOR PLAN
S.W. 124TH AVE. AND TUALATIN ROAD
WASHINGTON COUNTY

TUALATIN DEVELOPMENT COMMISSION

15B

# INTERCONNECT PLAN 124TH AVENUE AT LEVETON DRIVE

WORK CHANGE DIRECTIVE NO. 1



- 1. All Material And Workmanship Shall Conform To The 1996 Standard Specifications For Highway Construction Of The Oregon Department Of Transportation And The Special Provisions.
- 2. All Electrical Equipment Shall Conform To The Current Standards Of the National Electrical Manufacturers Association (NEMA) And The Underwriters Laboratories, Inc. (U.L.). Wherever Applicable. In Addition To The Requirements Of All The Plans, Standars Specifications, And The Special Provisions, All Materials and Workmanship Shall Conform To The Current Requirements Of The National Electrical Code (NEC) The National Electrical Safety Code, Standards Of The American National Standards Institute (ANSI), And Any Local Ordinances Which May Apply.
- 3. Location Of Interconnect Conduits And Junction Boxes Are Approximate. Contractor Shall Coordinate With Other Utilities To Proper Installation.
- 4. Rigid Non-metallic Electrical Conduit Shall Be Acceptable For Interconnect Conduit

- Detector conduit (See Detector Plan)
- Electrical conduit (See Signal Plan)
- Install 17" x 10" x 12" (min. dimension) precast concrete junction box
  - Install 17" x 10" x 12" (min. dimension) precast concrete junction box with concrete apron
  - Junction box (See Signal Plan)

Retain and protect existing electrical conduit

Retain and protect existing detector conduit

Retain and protect existing interconnect conduit

Install (N) No. (G) type THWN wires

Retain and protect existing controller and cabinet

Revised June 30, 1999

# RAFFIC ENGINEER

S.W. 124TH AVENUE / S.W. LEVETON DRIVE SYSTEM INTERCONNECT PLAN 124th AVE. & LEVETON DR. WASHINGTON COUNTY



TUALATIN DEVELOPMENT COMMISSION

15C

skatko

357.801		2								/	1	
W4IKS Table 1 Page 0											/13	
Date: Wednesday, February 06, 2013 Time: 07:36 AM												
Intersection #139 124th @ Leviton											mi	119
W												
(0+KEY)			(PHASE+KEY)							(	1.0	A 805
FUNCTIONS	KEY	12345678	FUNCTIONS	KEY	PH1	PH2	рнз	PH4	PH5	PH6	PH7	Das
Veh Recall	0	2 6	Max I	NE I	25	25	10	30	20	40	15	30 30
Ped Recall	1	_2	Max II	1	25	25	10	30	20	40	15	30
Red Lock	2		Walk	7	0	25	10		0	7	12	
Yellow Lock	3		Flash DW	2		7.00	97.8	8 8	_	1000	<b>/</b>	87
Permit	4	12345678	Max Initial	3	0	17/	1	303		36/	, 0	23
Ped Phases				4	0	0	0	0	5	0	0	0
	5	_2_4_6_8	Min Green	5	8	12-1		6	5	121	0 4	6
Lead Phases	6	1_3_5_7_	TBR	6	0	0	0	0	0	0	0	0
Double Entry	7	4 8	TTR	7	0	0	0	0	0	0	0	0
Sequential Timing	8		Observe Gap	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Startup Green	9	_26	Passage	9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Overlap A	A	12	Min Gap	A	1.0	3.0	1.0	1.0	1.0	3.0	1.0	1.0
Overlap B	В		Added Actuation	В	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Overlap C	C	56	Yellow	C	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Overlap D	D		Red Clear	D	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Exclusive	D E		Red Revert	E	5.0	5.0	5.0	5.0	0.0	5.0	5.0	5.0
Simultaneous Gap	F	_26	Walk II	F	0	0	0	0	0	0	0	0

W4IKS Table 1 Page 1

Date: Wednesday, February 06, 2013 Time: 07:36 AM

Intersection #139 124th @ Leviton

#### (D+C+0+KEY)(D+C+PHASE+KEY)

FUNCTIONS	KEY	12345678	FUNCTIONS	KEY	PH1	PH2	рнз	PH4	PH5	PH6	PH7	PH8
Veh Recall	0		Max I	0	0	0	0	0	0	0	0	0
Ped Recall	1	5	Max II	1	0	0	0	0	0	0	0	0
Red Lock	2		Walk	2	0	0	0	0	0	0	0	0
Yellow Lock	3		Flash DW	3	0	0	0	0	0	0	0	0
Permit	4		Max Initial	4	0	0	0	0	0	0	0	0
Ped Phases	5		Min Green	5	0	0	0	0	0	0	0	0
Lead Phases	6		TBR	6	0	0	0	0	0	0	0	0
Double Entry	7		TTR	7	0	0	0	0	0	0	0	0
Sequential Timing	8		Observe Gap	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Startup Green	9	/ <del></del>	Passage	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap A	A	22 <u>-11-1-11-11-11-11-1</u>	Min Gap	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap B	В	100 - 110	Added Actuation	В	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap C	C	S	Yellow	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap D	D	0	Red Clear	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exclusive	E		Red Revert	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Simultaneous Gap	F	aleman construction of the files.	Walk II	F	0	0	0	0	0	0	0	0

W4IKS Table 1 Page 2
Date: Wednesday, February 06, 2013 Time: 07:36 AM

Intersection #139 124th @ Leviton

(D+D+0+KEY)	(D+D+PHASE+KEY)

FUNCTIONS	KEY	12345678	FUNCTIONS	KEY	PH1	PH2	PH3	PH4	PH5	PH6	PH7	PH8
Veh Recall	0		Max I	0	0	0	0	0	0	0	0	0
Ped Recall	1		Max II	1	0	0	0	0	0	0	0	0
Red Lock	2		Walk	2	0	0	0	0	0	0	0	0
Yellow Lock	3		Flash DW	3	0	0	0	0	0	0	0	0
Permit	4		Max Initial	4	0	0	0	0	0	0	0	0
Ped Phases	5		Min Green	5	0	0	0	0	0	0	0	0
Lead Phases	6		TBR	6	0	0	0	0	0	0	0	0
Double Entry	7		TTR	7	0	0	0	0	0	0	0	0
Sequential Timing	8		Observe Gap	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Startup Green	9		Passage	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap A	A		Min Gap	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap B	В		Added Actuation	В	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap C	C		Yellow	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap D	D		Red Clear	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exclusive	E		Red Revert	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Simultaneous Gap	F		Walk II	F	0	0	0	0	0	0	0	0

KITTELSON & ASSOCIATES, INC.

## CONTROLLERS

Retain and protect existing 332 cabinet

## POLES

Retain and protect existing traffic signal mast arm pole

Retain and protect existing traffic signal most arm pole with luminaire arm extension

Retain and protect existing traffic signal mast arm

Retain and protect existing luminaire arm

Remove and relocate existing pedestrian signal pedestal with frangible base

Remove and relocate existing pedestrian signal pedestal with frangible base

## SIGNALS

Retain and protect existing phase (Ph=phase) vehicle signal

Retain and protect existing pedestrian signal, pushbutton and instructions

(Fig.) Install phase (Ph=phase) vehicle signal

Remove and relocate existing phase (Ph=phase) vehicle signal

Remove and relocate existing pedestrian signal, pushbutton and instructions

Reinstall existing phase (Ph-phase) vehicle signal

Reinstall existing pedestrian signal, pushbutton and instructions

## SIGNS

Retain and protect existing aluminum sign

Retain and protect existing street name sign

## LEGEND CONTINUED

## CABINETS

Retain and protect existing remote power source

Retain and protect existing service cabinet

Retain and protect existing meter base

Retain and protect existing terminal cabinet

## JUNCTION BOXES

Retain and protect existing junction box

Remove existing junction box

 $\frac{B}{2}$ Install 22"x12"x12" (min. dimension) precast concrete junction box

Install 30"x17"x12" (min. dimension) precast concrete junction box with concrete apron

## VIDEO DETECTION

Video detection zone for phase (PH).

Retain and protect existing video detection camera

## WIRES

Retain and protect existing wiring

Remove existing wiring

Reinstall existing wiring

Install (N=number) No. 12 type THWN #-12C (Pedestrian signal system common)

Install (N=number) No. (G=AWG wire size) type THWN wires

## LEGEND CONTINUED

## CONDUITS

Retain and protect existing electrical conduit

Abandon existing electrical conduit

(5) Install (S=size) inch electrical conduit

(IC) Interconnect conduit (See Interconnect Plan)

Splice new electrical conduit to existing electrical conduit

## FIRE PREEMPTION

Retain and protect existing fire preemption detector

## MISCELLANEOUS

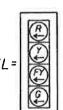
Retain and protect existing high pressure sodium luminaire

Retain and protect existing photoelectric control

Install crosswalk closure barricades with (cw) signs (both sides of barricade)

SIGNAL MOUNTING OPTIONS B = Adjustable bracket assembly w/rain cap(s)(install 1" metallic chase nipple in lieu of tenon when required for wiring)

SIGNAL HEAD TYPES 2 = 12" R, 12" Y, 12" G 6L = 12" GLTA, 12" YLTA, 12" FYLTA, 12" GLTA



## CONSTRUCTION NOTES:

(1) Remove existing wiring for existing pedestrian post, Retain all other existing wiring.

Install 4-#14 wires to operate the Eastbound left-turn signal.

1 Intercept existing conduit and install junction box, Relocate existing wiring into new conduit as shown. Abandon existing unused conduit.

• Replace existing controller unit with a new 2070L unit.

(3) Terminate phase 5 flashing yellow indication to phase 6 pedestrian yellow switchpack output. Terminate Conflict Monitor channel 11 (pin 5) wire to Output File terminal 120.

Re-establish telephone connection with local company after completion of utility pole relocation.

**EXPIRES 12/31/08** 

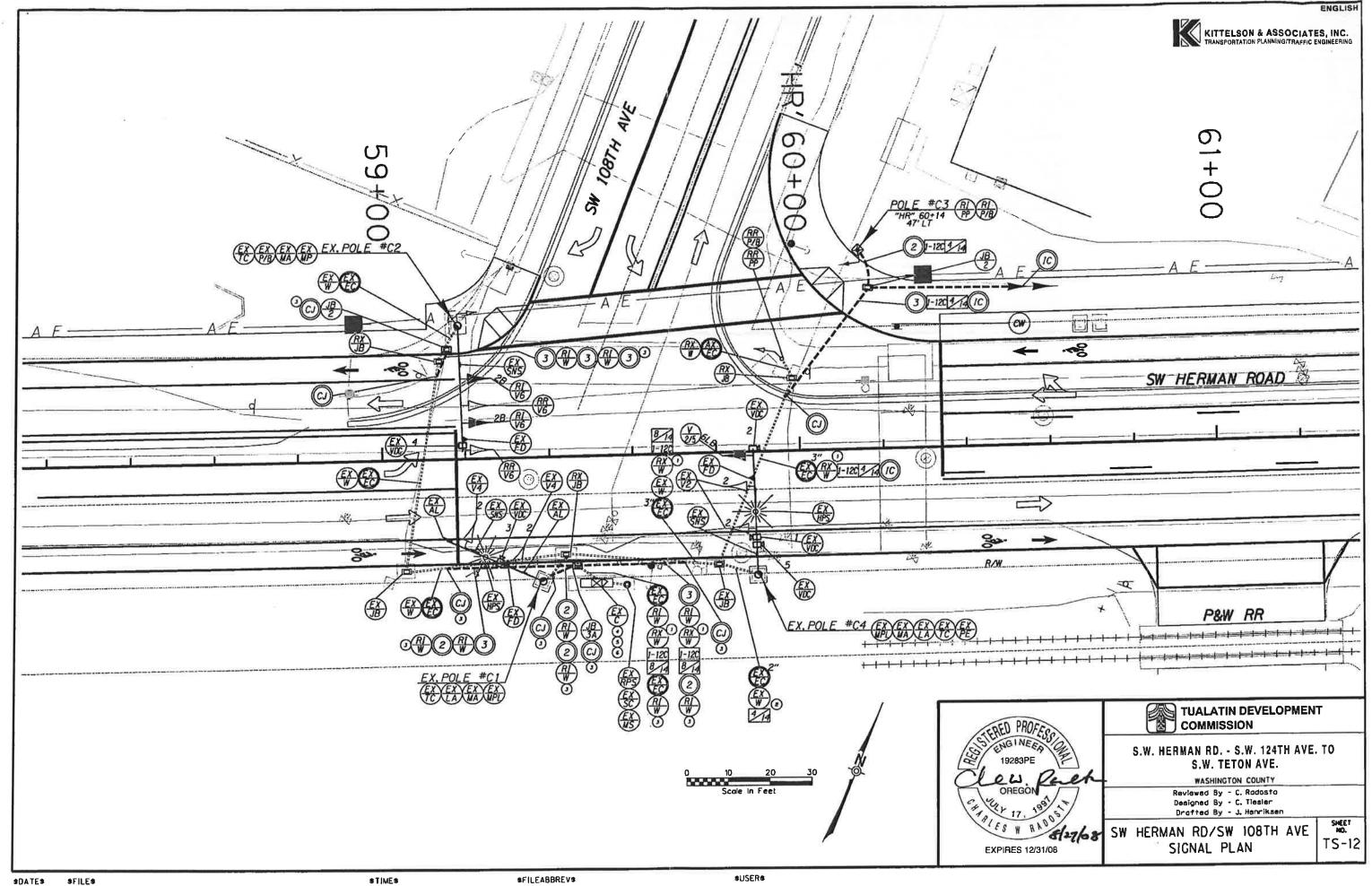
TUALATIN DEVELOPMENT COMMISSION

S.W. HERMAN RD. - S.W. 124TH AVE. TO S.W. TETON AVE. WASHINGTON COUNTY

> Reviewed By - C. Rodosto Designed By - C. Tiesler Drofted By - J. Henriksen

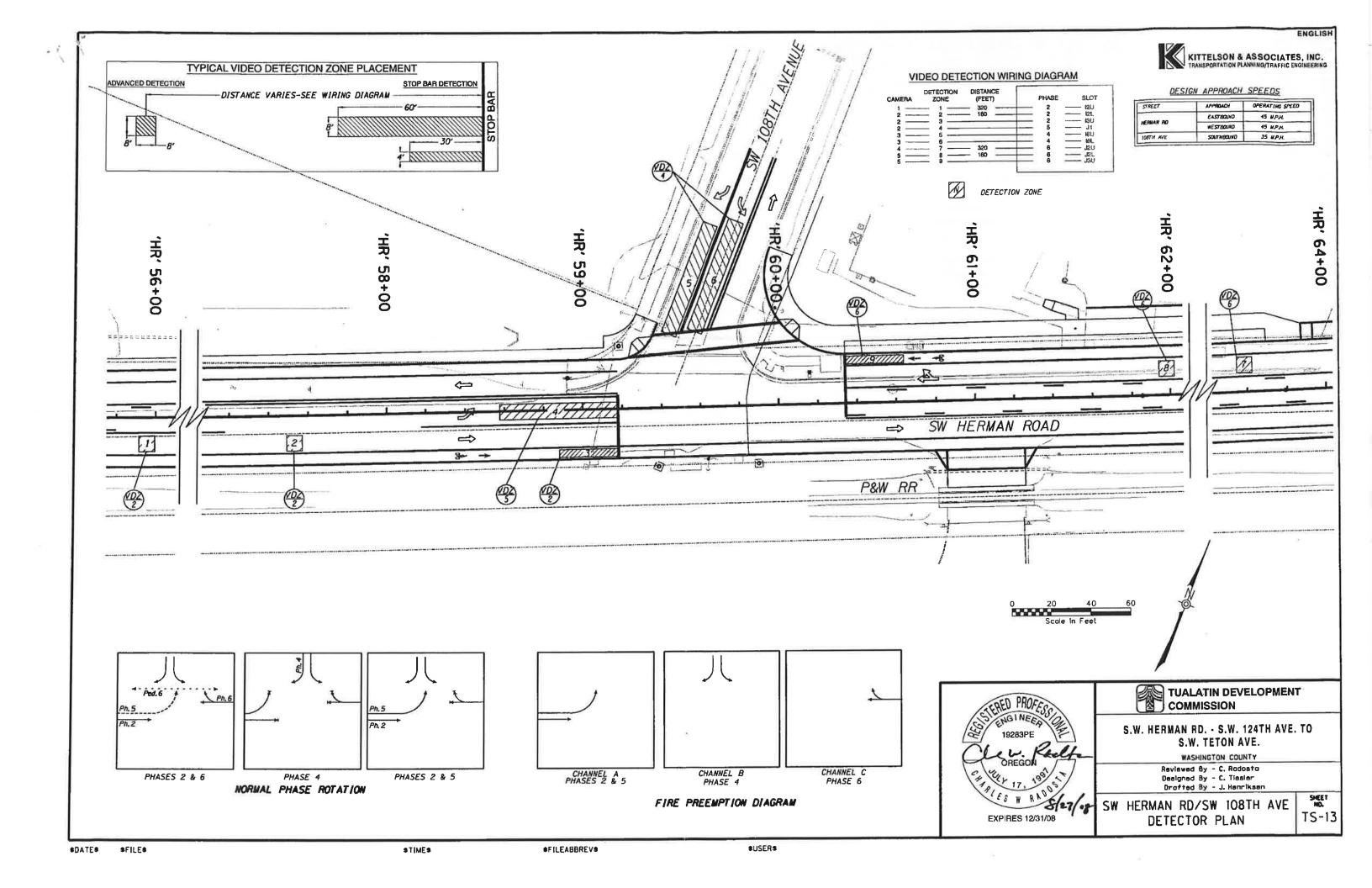
SW HERMAN RD/SW 108TH AVE LEGEND SHEET

SHEET NO. TS-11



\$FILE\$

STIMES



W41KS Table 1 Page 0

Date: Wednesday, July 25, 2012 Time: 09:52 AM Intersection #125 HERMAN RD @ 108TH

(0+KEY) (PHASE+KEY)

FUNCTIONS	KEY	12345678	FUNCTIONS	KEY	PH1	PH2	PH3	PH4	PH5	PH6	PH7	PH8
Veh Recall	0	2 6	Max I	0	0	45	0	30	10	45	0	0
Ped Recall	1		Max II	1	0	45	0	30	10	45	0	0
Red Lock	2		Walk	2	0	0	0	0	0	7	0	0
Yellow Lock	3		Flash DW	3	0	0	0	0	0	12	0	0
Permit	4	2 456	Max Initial	4	0	0	0	0	0	0	0	0
Ped Phases	5	6	Min Green	5	0	5	0	5	5	10	0	0
Lead Phases	6	2 4 6	TBR	6	0	10	0	5	5	10	0	0
Double Entry	7	2 6	TTR	7	0	15	0	10	5	15	0	0
Sequential Timing	8		Observe Gap	8	0.0	0,,0	0.0	0.0	0.0	0.0	0,0	0.0
Startup Green	9	2 6	Passage	9	0.0	3.1	0.0	2.6	2.0	3.1	0.0	0.0
Overlap A	A		Min Gap	A	0.0	$1_{\mathbb{R}}1$	0.0	1.0	1.1	1.1	0.0	0.0
Overlap B	В		Added Actuation	В	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap C	C	56	Yellow	C	0.0	4.0	0.0	4.0	4.0	4.0	0.0	0.0
Overlap D	D		Red Clear	D	0.0	1.4	0.0	2.5	1.4	1.4	0.0	0.0
Exclusive	E	/	Red Revert	E	0.0	5.0	0.0	5.0	5.0	5.0	0.0	0.0
Simultaneous Gap	F	2 6	Walk II	F	0	0	0	0	0	0	0	0

W4IKS Table 1 Page 1

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

(D+C+0+KEY) (D+C+PHASE+KEY)

FUNCTIONS	KEY	12345678	FUNCTIONS	KEY	PH1	PH2	рнз	PH4	PH5	PH6	PH7	PH8
Veh Recall	0		Max I	0	0	0	0	0	0	0	0	0
Ped Recall	1		Max II	1	0	0	0	0	0	0	0	0
Red Lock	2		Walk	2	0	0	0	0	0	0	0	0
Yellow Lock	3		Flash DW	3	0	0	0	0	0	0	0	0
Permit	4		Max Initial	4	0	0	0	0	0	0	0	0
Ped Phases	5		Min Green	5	0	0	0	0	0	0	0	0
Lead Phases	6		TBR	6	0	0	0	0	0	0	0	0
Double Entry	7		TTR	7	0	0	0	0	0	0	0	0
Sequential Timing	8		Observe Gap	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Startup Green	9		Passage	9	0,0	0.0	0,0	0.0	0,0	0.0	0.0	0.0
Overlap A	A		Min Gap	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap B	В		Added Actuation	В	0.0	0.0	0 . 0	0.0	0.0	0 . 0	0 0	0.0
Overlap C	C		Yellow	C	0.0	0 0	0.0	0.0	0.0	0 . 0	0 . 0	0.0
Overlap D	D		Red Clear	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exclusive	E		Red Revert	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Simultaneous Gap	F		Walk II	F	0	0	0	0	0	0	0	0

W4IKS Table 1 Page 2

Date: Wednesday, July 25, 2012 Time: 09:52 AM Intersection #125 HERMAN RD @ 108TH

(D+D+0+KEY)(D+D+PHASE+KEY)

FUNCTIONS	KEY	12345678	FUNCTIONS	KEY	PH1	PH2	рнз	PH4	PH5	РН6	PH7	PH8
Veh Recall	0		Max I	0	0	0	0	0	0	0	0	0
Ped Recall	1		Max II	1	0	0	0	0	0	0	0	0
Red Lock	2		Walk	2	0	Q	0	0	0	0	0	0
Yellow Lock	3		Flash DW	3	0	0	0	0	0	0	0	0
Permit	4		Max Initial	4	0	0	0	0	0	0	0	0
Ped Phases	5	VI	Min Green	5	0	0	0	0	0	0	0	0
Lead Phases	6		TBR	6	0	0	0	0	0	0	0	0
Double Entry	7		TTR	7	0	0	0	0	0	0	0	0
Sequential Timing	8		Observe Gap	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Startup Green	9		Passage	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap A	A		Min Gap	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap B	B		Added Actuation	В	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap C	C		Yellow	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap D	D		Red Clear	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exclusive	$\mathbf{E}$		Red Revert	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Simultaneous Gap	F		Walk II	F	0	0	0	0	0	0	0	0

W4IKS Table 2 Page 0

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

(9+KEY)	(C+F+KEY)

FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE
Short Power Down	0	0	Page ID	0	0
Long Power Down	1	0	Future	1	0
EVA Delay Type	2	1	Future	2	0
EVB Delay Type	3	1	Future	3	0
EVC Delay Type	4	1	OLA Red	4	0.0
EVD Delay Type	5	0	OLB Red	5	0.0
RR Delay Type	6	0	OLC Red	6	0.0
Ped Inhibit	7	0	OLD Red	7	0.0
OLA Green	8	0.0	Overlap E	8	
OLA Yellow	9	0.0	Overlap F	9	
OLB Green	A	0.0	Red Rest	A	
OLB Yellow	В	0.0	Max Recall	В	
OLC Green	C	0.0	Flash Green	C	
OLC Yellow	D	0.0	Flash Walk	D	
OLD Green	E	0.0	Advance Walk	E	
OLD Yellow	F	0.0	Restrictive Phase	F	

W4IKS Table 2 Page 1

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

#### (D+C+9+KEY) (D+C+B+KEY)

FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE
Short Power Down	0	0	Page ID	0	1
Long Power Down	1	0	Future	1	0
EVA Delay Type	2	0	Future	2	0
EVB Delay Type	3	0	Future	3	0
EVC Delay Type	4	0	OLA Red	4	0.0
EVD Delay Type	5	0	OLB Red	5	0.0
RR Delay Type	6	0	OLC Red	6	0.0
Ped Inhibit	7	0	OLD Red	7	00
OLA Green	8	0.0	Overlap E	8	
OLA Yellow	9	0.0	Overlap F	9	
OLB Green	A	0.0	Red Rest	A	
OLB Yellow	В	0.0	Max Recall	B	
OLC Green	C	0.0	Flash Green	C	
OLC Yellow	D	0.0	Flash Walk	D	
OLD Green	E	0.0	Advance Walk	E	
OLD Yellow	F	0.0	Restrictive Phase	F	

W4IKS Table 2 Page 2

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

#### (D+D+9+KEY) (D+D+B+KEY)

FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE
Short Power Down	0	0	Page ID	0	2
Long Power Down	1	0	Future	1	0
EVA Delay Type	2	0	Future	2	0
EVB Delay Type	3	0	Future	3	0
EVC Delay Type	4	0	OLA Red	4	0.0
EVD Delay Type	5	0	OLB Red	5	0.0
RR Delay Type	6	0	OLC Red	6	0.0
Ped Inhibit	7	0	OLD Red	7	0.0
OLA Green	8	0.0	Overlap E	8	
OLA Yellow	9	0.0	Overlap F	9	
OLB Green	A	0.0	Red Rest	A	
OLB Yellow	В	0.0	Max Recall	В	
OLC Green	C	0.0	Flash Green	C	
OLC Yellow	D	0.0	Flash Walk	D	
OLD Green	E	0.0	Advance Walk	E	
OLD Yellow	F	0.0	Restrictive Phase	F	

W4IKS Table 3

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

(C+KEY) (E+KEY)

FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE
Year	0	12	EVA Delay	0	0
Month	1	7	EVA Min	1	1
Day of Month	2	24	EVB Delay	2	0
Day of Week	3	4	EVB Min	3	1
Hour	4	9	EVC Delay	4	0
Minute	5	47	EVC Min	5	1
Second	6	13	EVD Delay	6	0
Reserved	7	4	EVD Min	7	1
Trigs On In Flash	8	0	OL Red Revert	8	5 0
Startup Yellow	9	.5	RR Delay	9	0
EVA Phases	A	2 5	RR Clear	A	0
EVB Phases	B	_ 4 7	RR Clear Phases	В	
EVC Phases	C	1 6	RR Permit	C	
EVD Phases	D	3 8	RR OL Permit	D	
Handicap Ped	E		NEMA Hold Phases	E	

W4IKS Table 4 Part 1

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

#### (D+COL+KEY)

DETECTOR TYPE				DI	ELAY		CARRYOVER			
	COLUMN	NUM		2		3		4		5
	FUNCTIO	DNSKEY	PH	TIME	PH	TIME	PH	TIME	PH	TIME
		(1)0	1	0.0	5	10.0	1	0.0	5	0.0
	Upper	(9)1	1	0.0	5	5.0	1	0.0	5	0.0
	Upper	(2)2	2	0.0	6	0.0	2	2.0	6	2.0
	Lower	(2)3	2	0.0	6	0.0	2	0.0	6	0.0
	Upper	(3)4	2	0.0	6	0.0	2	0.0	6	0.0
	Lower	(3)5		0.0		0.0	2	0.0	6	0.0
		(4)6	2	0.0	6	0.0	2*	0.0	6*	0.0
		(5)7	3	0.0	7	0.0	3	0.0	7	0.0
	Lower	(9)8	3	0.0	7	0.0	3	0.0	7	0.0
	Upper	(6)9	4	0.0	8	0.0	4	1.6	8	0.0
	Lower	(6)A	4	0.0	8	0 - 0	4	0.0	8	0.0
	Upper	(7)B	4	0.0	8	0.0	4	0.0	8	0.0
	Lower	(7)C		0.0		0.0	4	0.0	8	0.0
		(8)D	4	0.0	8	0.0	4*	0.0	8*	0.0
	CARINET	TITE '		Т		.T		т		.т

Note: () = Slot Number \* = Set Type 3 Detector

W4IKS Table 4 Part 2

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

(D+9+4+KEY) (D+9+5+KEY)

FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE
Detector Fail On	0	0	DF 01 Min	0	0
Detector Fail Off	1	0	DF 02 Min	1	0
Fail Det Backup	2	0	DF 03 Min	2	0
Max II In Delay	3	0	DF 04 Min	3	0
Max II In Carryover	4	0	DF 05 Min	4	0
Plan 9 In Delay	5	0	DF 06 Min	5	0
Plan 9 In Carryover	6	0	DF 07 Min	6	0
Plan 18 In Delay	7	0	DF 08 Min	7	0
Plan 18 In Carryover	8	0	DF 01 Max	8	0
TT Page 1 Delay	9	0	DF 02 Max	9	0
TT Page 1 Carryover	A	0	DF 03 Max	A	0
TT Page 2 Delay	В	0	DF 04 Max	В	0
TT Page 2 Carryover	C	0	DF 05 Max	C	0
NOVRAM	D	0	DF 06 Max	D	0
Computran	E	217	DF 07 Max	E	0
Release	F	0	DF 08 Max	F	0

W4IKS Table 5 Sheet 1

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

(A+CODE)

EVENT	1234567	HR	MIN	FUNC	CODE	EVENT	1234567	HR	MIN	FUNC	CODE
1		0	0	0	80-83	17		0	0	0	CO-C3
2		0	0	0	84-87	18		0	0	0	C4-C7
3		0	0	0	88-8B	19		0	0	0	C8-CB
4		0	0	0	8C-8F	20		0	0	0	CC-CF
5		0	0	0	90-93	21		0	0	0	D0-D3
6		0	0	0	94-97	22		0	0	0	D4-D7
7		0	0	0	98-9B	23		0	0	0	D8-DB
8		0	0	0	9C-9F	24		0	0	0	DC-DF
9		0	0	0	A0-A3	25		0	0	0	E0-E3
10		0	0	0	A4-A7	26		0	0	0	E4-E7
11	7.	0	0	0	A8-AB	27		0	0	0	E8-EB
12		0	0	0	AC-AF	28		0	0	0	EC-EF
13		0	0	0	B0-B3	29		0	0	0	F0-F3
14		0	0	0	B4-B7	30		0	0	0	F4-F7
15		0	0	0	B8-BB	31	S	0	0	0	F8-FB
16	-	0	0	0	BC-BF	32		0	0	0	FC-FF

W4IKS Table 5 Sheet 2

Date: Wednesday, July 25, 2012 Time: 09:52 AM Intersection #125 HERMAN RD @ 108TH

(D+8+CODE)

EVENT	1234567	HR	MIN	FUNC	CODE	EVENT	1234567	HR	MIN	FUNC	CODE
33		0	0	0	80-83	49		0	0	0	CO-C3
34		0	0	0	84-87	50		0	0	0	C4-C7
35		0	0	0	88-8B	51		0	0	0	C8-CB
36		0	0	0	8C-8F	52		0	0	0	CC-CF
37		0	0	0	90-93	53		0	0	0	D0-D3
38		0	0	0	94-97	54		0	0	0	D4-D7
39		0	0	0	98-9B	55		0	0	0	D8-DB
40		0	0	0	9C-9F	56		0	0	0	DC-DF
41		0	0	0	A0-A3	57		0	0	0	E0-E3
42		0	0	0	A4-A7	58		0	0	0	E4-E7
43		0	0	0	A8-AB	59		0	0	0	E8-EB
44		0	0	0	AC-AF	60		0	0	0	EC-EF
45		0	0	0	B0-B3	61		0	0	0	F0-F3
46		0	0	0	B4-B7	62		0	0	0	F4-F7
47		0	0	0	B8-BB	63		0	0	0	F8-FB
48		0	0	0	BC-BF	64		0	0	0	FC-FF

W4IKS Table 6

Date: Wednesday, July 25, 2012 Time: 09:52 AM Intersection #125 HERMAN RD @ 108TH

(B+0+KEY) (D+KEY1+KEY2)

FUNCTIONS	KEY	VALUE
Present Plan	0	0
TOD/DOW Plan	1	0
Hardwire Plan	2	0
Modem Plan	3	0
Mode (0-4)	4	0
Master (0-OFF)	5	0
Master Clock	6	0
Local Clock	7	0
Dwell Clock	8	0
Future	9	0
Future	A	0
Future	В	0
Future	C	
NEMA CNA Phases	D	
Adv Warning Phases	E	
MRI Phases	F _	2_4_6

FUNCTIONS	KEY	VALUE
Floating Ped	2E	0
ID Number	2 F	125
No Coord Ped Recall	3 E	0
Rest In Walk	3 F	0
Adv Warning EOG	4 E	0
Adv Warning SOG	4 F	0
RR Red Clear	5E	0
RR Clear Color	5F	0
Bus Delay	6D	0.0
Bus Free Tl	6E	0
Bus Free T3	6F	0
EV Min Aft Clear	7E	0
EV Indicators	7F	0
NEMA Inputs	66	0.0

W4IKS Table 7 Sheet 1

Date: Wednesday, July 25, 2012 Time: 09:52 AM Intersection #125 HERMAN RD @ 108TH

(B+PLAN+KEY)

FUNCTION	KEY	Plan :	. Pla	n 2	Plan	3	Plan	4	Plan	5	Plan	6	Plan	7	Plan	8	Plan	9
Cycle Length	0	(	)	0		0		0		0		0		0		0		0
Forceoff 01	1	(	)	0		0		0		0		0		0		0		0
Forceoff 02	2	(	)	0		0		0		0		0		0		0		0
Forceoff 03	3	(	)	0		0		0		0		0		0		0		0
Forceoff 04	4	(	)	0		0		0		0		0		0		0		0
Forceoff 05	5	(	)	0		0		0		0		0		0		0		0
Forceoff 06	6	(	)	0		0		0		0		0		0		0		0
Forceoff 07	7	(	)	0		0		0		0		0		0		0		0
Forceoff 08	8	(	)	0		0		0		0		0		0		0		0
Offset	9	(	)	0		0		0		0		0		0		0		0
Perm Length	A	(	)	0		0		0		0		0		0		0		0
Max Dwell	В	(	)	0		0		0		0		0		0		0		0
Lead Phases	C								-	_								
Coord Phases	D													_				
Perm 2 Phases	E		8 8			=					81					= 1		
Min Recall	F		. —		-		-		30-0									_

W4IKS Table 7 Sheet 2

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(B+D+KEY1+KEY2)

		KEY1	7	8	9	A	В	C	D	E	F
FUNCTION	KEY2	Plan	10	Plan 11	Plan 12	Plan 13	Plan 14	Plan 15	Plan 16	Plan 17	Plan 18
Cycle Length	0		0	0	0	0	0	0	0	0	0
Forceoff 01	1		0	0	0	0	0	0	0	0	0
Forceoff 02	2		0	0	0	0	0	0	0	0	0
Forceoff 03	3		0	0	0	0	0	0	0	0	0
Forceoff 04	4		0	0	0	0	0	0	0	0	0
Forceoff 05	5		0	0	0	0	0	0	0	0	0
Forceoff 06	6		0	0	0	0	0	0	0	0	0
Forceoff 07	7		0	0	0	0	0	0	0	0	0
Forceoff 08	8		0	0	0	0	0	0	0	0	0
Offset	9		0	0	0	0	0	0	0	0	0
Perm Length	A		0	0	0	0	0	0	0	0	0
Max Dwell	В		0	0	0	0	0	0	0	0	0
Lead Phases	C										
Coord Phases	D										
Perm 2 Phases	E										
Min Recall	F										

W4IKS Table 8

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

(B+A+KEY)			(B+B+KEY)			(B+C+KEY)		
FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE
Bus P1 T1	0	0	Bus P4 T1	0	0	Bus P7 T1	0	0
Bus P1 T2	1	0	Bus P4 T2	1	0	Bus P7 T2	1	0
Bus P1 T3	2	0	Bus P4 T3	2	0	Bus P7 T3	2	0
Bus P2 T1	3	0	Bus P5 T1	3	0	Bus P8 T1	3	0
Bus P2 T2	4	0	Bus P5 T2	4	0	Bus P8 T2	4	0
Bus P2 T3	5	0	Bus P5 T3	5	0	Bus P8 T3	5	0
Bus P3 T1	6	0	Bus P6 T1	6	0	Bus P9 T1	6	0
Bus P3 T2	7	0	Bus P6 T2	7	0	Bus P9 T2	7	0
Bus P3 T3	8	0	Bus P6 T3	8	0	Bus P9 T3	8	0
Perm 2 P1	9	0	Perm 2 P4	9	0	Perm 2 P7	9	0
Perm 2 P2	A	0	Perm 2 P5	A	0	Perm 2 P8	A	0
Perm 2 P3	В	0	Perm 2 P6	В	0	Perm 2 P9	В	0
Flash Yellow	C		OL Flash Yellow	C		Coord Max	C	
Flash Circuit	D		OL Flash Clear	D		TOD Red Rest	D	
TOD/DOW Max	$\mathbf{E}$		TOD/DOW Ped	E		OLA Switchpack	E	
OLB Switchpack	F		OLC Switchpack	F		OLD Switchpack	F	

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Intersection #125 HERMAN RD @ 108TH

(A+4+KE	Y)		(A+5+KEY	7)		(A+6+KE	(A+6+KEY)			
C1 PIN	KEY	CODE	C1 PIN	KEY	CODE	C1 PIN	KEY	CODE		
39	0	0	55	0	0	67	0	0		
40	1	0	56	1	0	68	1	0		
41	2	0	57	2	0	69	2	0		
42	3	0	58	3	0	70	3	0		
43	4	0	59	4	0	71	4	0		
44	5	0	60	5	0	72	5	0		
45	6	0	61	6	0	73	6	0		
46	7	0	62	7	0	74	7	0		
47	8	0		8	0	75	8	0		
48	9	0		9	0	76	9	0		
49	A	0		A	0	77	A	0		
50	В	0		В	0	78	В	0		
51	C	0	63	C	0	79	C	0		
52	D	0	64	D	0	80	D	0		
53	E	0	65	E	0	81	$\mathbf{E}$	0		
54	F	0	66	F	0	82	F	0		

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Date: Wednesday, July 25, 2012 Time: 09:52 AM Intersection #125 HERMAN RD @ 108TH

(D+A+4+	KEY)		(D+A+5+	KEY)		(D+A+6+	(D+A+6+KEY)				
C1 PIN	KEY	CODE	Cl PIN	KEY	CODE	C1 PIN	KEY	CODE			
39	0	0	55	0	0	67	0	0			
40	1	0	56	1	0	68	1	0			
41	2	0	57	2	0	69	2	0			
42	3	0	58	3	0	70	3	0			
43	4	0	59	4	0	71	4	0			
44	5	0	60	5	0	72	5	0			
45	6	0	61	6	0	73	6	0			
46	7	0	62	7	0	74	7	0			
47	8	0		8	0	75	8	0			
48	9	0		9	0	76	9	0			
49	A	0		A	0	77	A	0			
50	В	0		В	0	78	В	0			
51	C	0	63	C	0	79	C	0			
52	D	0	64	D	0	80	D	0			
53	E	0	65	E	0	81	E	0			
54	F	0	66	F	0	82	F	0			

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Date: Wednesday, July 25, 2012 Time: 09:52 AM Intersection #125 HERMAN RD @ 108TH

(D+A	+B+KEY)		(D+A+C+)	KEY)		(D+A+D+KEY)				
C1 P	IN KEY	CODE	C1 PIN	KEY	CODE	C1 PIN	KEY	CODE		
39	0	0	55	0	0	67	0	0		
40	1	0	56	1	0	68	1	0		
41	2	0	57	2	0	69	2	0		
42	3	0	58	3	0	70	3	0		
43	4	0	59	4	0	71	4	0		
44	5	0	60	5	0	72	5	0		
45	6	0	61	6	0	73	6	0		
46	7	0	62	7	0	74	7	0		
47	8	0		8	0	75	8	0		
48	9	0		9	0	76	9	0		
49	A	0		A	0	77	A	0		
50	В	0		В	0	78	В	0		
51	C	0	63	C	0	79	C	0		
52	D	0	64	D	0	80	D	0		
53	E	0	65	E	0	81	E	0		
54	F	0	66	F	0	82	F	0		

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Date: Wednesday, July 25, 2012 Time: 09:52 AM Intersection #125 HERMAN RD @ 108TH

(A+0+KEY)			(A+1+KEY)			(A+2+KEY)		(A+3+KEY)	
FUNCTION	KEY	CODE	FUNCTION	KEY	CODE	FUNCTION KE	Y CODE	FUNCTION KEY	CODE
04 D/W	0	0	08 D/W	0	0	02 Ped Y 0	0	01 D/W 0	0
04 Walk	1	0	08 Walk	1	0	06 Ped Y 1	. 99	01 Walk 1	0
04 Red	2	0	08 Red	2	0	04 Ped Y 2	. 0	OLB Red 2	0
04 Yellow	3	0	08 Yellow	3	0	08 Ped Y 3	0	OLB Yellow 3	0
04 Green	4	0	08 Green	4	0	03 Ped Y 4	0	OLB Green 4	0
03 Red	5	0	07 Red	5	0	01 Ped Y 5	0	QLA Red 5	0
03 Yellow	6	0	07 Yellow	6	0	Flash 6	0	OLA Yellow 6	0
03 Green	7	0	07 Green	7	0	Watchdog 7	0	OLA Green 7	0
02 D/W	8	0	06 D/W	8	0	03 D/W 8	0	8	0
02 Walk	9	0	06 Walk	9	0	03 Walk 9	0	SD 9	0
02 Red	A	0	06 Red	A	0	OLD Red A	. 0	LTT A	0
02 Yellow	В	0	06 Yellow	В	0	OLD Yellow E	0		
02 Green	C	0	06 Green	C	0	OLD Green C	. 0	High Byte IDC	0
01 Red	D	0	05 Red	D	99	OLC Red I	0		
01 Yellow	E	0	05 Yellow	E	99	OLC Yellow E	0		
01 Green	F	0	05 Green	F	99	OLC Green F	0		

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Intersection #125 HERMAN RD @ 108TH

(D+A+0+KEY)			(D+A+1+	KEY)		(D+A+2+KEY	(D+A+2+KEY)				(D+A+3+KEY)		
FUNCTION	KEY	CODE	FUNCTIO	N KEY	CODE	FUNCTION	KEY	CODE	FUNCTION	KEY	CODE		
04 D/W	0	0	08 D/W	0	0	02 Ped Y	0	0	01 D/W	0	0		
04 Walk	1	0	08 Walk	1	0	06 Ped Y	1	0	01 Walk	1	0		
04 Red	2	0	08 Red	2	0	04 Ped Y	2	0	OLB Red	2	0		
04 Yellow	3	0	08 Yell	ow 3	0	08 Ped Y	3	0	OLB Yellow	3	0		
04 Green	4	0	08 Gree	n 4	0	03 Ped Y	4	0	OLB Green	4	0		
03 Red	5	0	07 Red	5	0	01 Ped Y	5	0	OLA Red	5	0		
03 Yellow	6	0	07 Yell	ow 6	0	Flash	6	0	OLA Yellow	6	0		
03 Green	7	0	07 Gree	n 7	0	Watchdog	7	0	OLA Green	7	0		
02 D/W	8	0	06 D/W	8	0	03 D/W	8	0		8	0		
02 Walk	9	0	06 Walk	9	0	03 Walk	9	0	SD	9	0		
02 Red	A	0	06 Red	A	0	OLD Red	A	0	LTT	A	0		
02 Yellow	В	0	06 Yell	ow B	0	OLD Yellow	В	0					
02 Green	C	0	06 Gree	n C	0	OLD Green	C	0					
01 Red	D	0	05 Red	D	0	OLC Red	D	0					
01 Yellow	E	0	05 Yell	ow E	0	OLC Yellow	E	0					
01 Green	F	0	05 Gree	n F	0	OLC Green	F	0					

W4IKS Table 10 Page 2

Date: Wednesday, July 25, 2012 Time: 09:52 AM Intersection #125 HERMAN RD @ 108TH

(D+A+7+KEY)			(D+A+8	+KEY)		(D+A+9+KEY	(D+A+9+KEY)				(D+A+A+KEY)			
FUNCTION	KEY	CODE	FUNCTI	ON KEY	CODE	FUNCTION	KEY	CODE	FUNCTION	KEY	CODE			
04 D/W	0	0	08 D/W	0	0	02 Ped Y	0	0	01 D/W	0	0			
04 Walk	1	0	08 Wal	k 1	0	06 Ped Y	1	0	01 Walk	1	0			
04 Red	2	0	08 Red	2	0	04 Ped Y	2	0	OLB Red	2	0			
04 Yellow	3	0	08 Yel	low 3	0	08 Ped Y	3	0	OLB Yellow	3	0			
04 Green	4	0	08 Gre	en 4	0	03 Ped Y	4	0	OLB Green	4	0			
03 Red	5	0	07 Red	5	0	01 Ped Y	5	0	OLA Red	5	0			
03 Yellow	6	0	07 Yel	low 6	0	Flash	6	0	OLA Yellow	6	0			
03 Green	7	0	07 Gre	en 7	0	Watchdog	7	0	OLA Green	7	0			
02 D/W	8	0	06 D/W	8	0	03 D/W	8	0		8	0			
02 Walk	9	0	06 Wal	k 9	0	03 Walk	9	0	SD	9	0			
02 Red	A	0	06 Red	A	0	OLD Red	A	0	LTT	A	0			
02 Yellow	В	0	06 Yel	low B	0	OLD Yellow	т В	0						
02 Green	C	0	06 Gre	en C	0	OLD Green	C	0						
01 Red	D	0	05 Red	D	0	OLC Red	D	0						
01 Yellow	Ē	0	05 Yel	low E	0	OLC Yellow	E	0						
01 Green	F	0	05 Gre	en F	0	OLC Green	F	0						

W4IKS Table 11 Page 0

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

(D+B+0+KEY)			(D+B+1+KEY)			(D+B+2+KEY)		
FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE
05 D/W	0	0	OLE Green	0	0	Cycle 2	0	0
05 Walk	1	0	OLF Green	1	0	Cycle 3	1	0
OLL Red	2	0	OLE Yellow	2	0	Offset 1	2	0
OLL Yellow	3	0	OLF Yellow	3	0	Offset 2	3	0
OLL Green	4	0	Adv Warning	4	0	Offset 3	4	0
OLK Red	5	0	RR Fl Yellow	5	0		5	0
OLK Yellow	6	0	Det Reset	6	0	Free	6	0
OLK Green	7	0	RR On	7	0	Flash	7	0
07 D/W	8	0	EVA On	8	0	Coord Plan 1 2 3	8	0
07 Walk	9	0	EVB On	9	0	Coord Plan 4 5 6	9	0
OLJ Red	A	0	EVC On	A	0	Coord Plan 7 8 9	A	0
OLJ Yellow	В	0	EVD On	В	0	Coord Plan 10 11 12	В	0
OLJ Green	C	0	Ring 1 Bit B	C	0	Coord Plan 13 14 15	C	0
OLH Red	D	0	Ring 1 Bit C	D	0	Coord Plan 16 17 18	D	0
OLH Yellow	E	0	Ring 2 Bit B	E	0	Future	E	0
OLH Green	F	0	Ring 2 Bit C	F	0	Future	F	0

W4IKS Table 11 Page 1

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

(D+B+4+KEY)			(D+B+5+KEY)			(D+B+6+KEY)		
FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE
05 D/W	0	0	OLE Green	0	0	Cycle 2	0	0
05 Walk	1	0	OLF Green	1	0	Cycle 3	1	0
OLL Red	2	0	OLE Yellow	2	0	Offset 1	2	0
OLL Yellow	3	0	OLF Yellow	3	0	Offset 2	3	0
OLL Green	4	0	Adv Warning	4	0	Offset 3	4	0
OLK Red	5	0	RR Fl Yellow	5	0	***	5	0
OLK Yellow	6	0	Det Reset	6	0	Free	6	0
OLK Green	7	0	RR On	7	0	Flash	7	0
07 D/W	8	0	EVA On	8	0	Coord Plan 1 2 3	8	0
07 Walk	9	0	EVB On	9	0	Coord Plan 4 5 6	9	0
OLJ Red	A	0	EVC On	A	0	Coord Plan 7 8 9	A	0
OLJ Yellow	В	0	EVD On	В	0	Coord Plan 10 11	12 B	0
OLJ Green	C	0	Ring 1 Bit B	C	0	Coord Plan 13 14	15 C	0
OLH Red	D	0	Ring 1 Bit C	D	0	Coord Plan 16 17	18 D	0
OLH Yellow	E	0	Ring 2 Bit B	E	0	Future	Ē	0
OLH Green	F	0	Ring 2 Bit C	F	0	Future	F	0

W4IKS Table 11 Page 2

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

(D+B+8+KEY)			(D+B+9+KEY)			(D+B+A+KEY)		
FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE	FUNCTIONS	KEY	VALUE
05 D/W	0	0	OLE Green	0	0	Cycle 2	0	0
05 Walk	1	0	OLF Green	1	0	Cycle 3	1	0
OLL Red	2	0	OLE Yellow	2	0	Offset 1	2	0
OLL Yellow	3	0	OLF Yellow	3	0	Offset 2	3	0
OLL Green	4	0	Adv Warning	4	0	Offset 3	4	0
OLK Red	5	0	RR Fl Yellow	5	0	me e n me	5	0
OLK Yellow	6	0	Det Reset	6	0	Free	6	0
OLK Green	7	0	RR On	7	0	Flash	7	0
07 D/W	8	0	EVA On	8	0	Coord Plan 1 2 3	8	0
07 Walk	9	0	EVB On	9	0	Coord Plan 4 5 6	9	0
OLJ Red	A	0	EVC On	A	0	Coord Plan 7 8 9	A	0
OLJ Yellow	В	0	EVD On	В	0	Coord Plan 10 11	12 B	0
OLJ Green	C	0	Ring 1 Bit B	C	0	Coord Plan 13 14	15 C	0
OLH Red	D	0	Ring 1 Bit C	D	0	Coord Plan 16 17	18 D	0
OLH Yellow	E	0	Ring 2 Bit B	E	0	Future	E	0
OLH Green	F	0	Ring 2 Bit C	F	0	Future	F	0

W4IKS Table 12

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

(D+8+KEY1+KEY2)

KEY1 = 0			KEY1 = 1			KEY1 = 2			KEY1 = 3		
FUNCTION K	EY2 V	ALUE	FUNCTION K	EY2	VALUE	FUNCTION	KEY2	VALUE	FUNCTION	KEY2	VALUE
1/Month	0	0	3/Hour On	0	0	5/Hour Off	0	0	7/Plan	0	0
1/DOM	1	0	3/Min On	1	0	5/Min Off	1	0	8/Month	1	0
1/Hour On	2	0	3/Hour Off	2	0	5/Plan	2	0	8/DOM	2	0
1/Min On	3	0	3/Min Off	3	0	6/Month	3	0	8/Hour On	3	0
1/Hour Off	4	0	3/Plan	4	0	6/DOM	4	0	8/Min On	4	0
1/Min Off	5	0	4/Month	5	0	6/Hour On	5	0	8/Hour Off	5	0
1/Plan	6	0	4/DOM	6	0	6/Min On	6	0	8/Min Off	6	0
2/Month	7	0	4/Hour On	7	0	6/Hour Off	7	0	8/Plan	7	0
2/DOM	8	0	4/Min On	8	0	6/Min Off	8	0	9/Month	8	0
2/Hour On	9	0	4/Hour Off	9	0	6/Plan	9	0	9/DOM	9	0
2/Min On	A	0	4/Min Off	A	0	7/Month	A	0	9/Hour On	A	0
2/Hour Off	В	0	4/Plan	В	0	7/DOM	В	0	9/Min On	В	0
2/Min Off	C	0	5/Month	C	0	7/Hour On	C	0	9/Hour Off	E C	0
2/Plan	D	0	5/DOM	D	0	7/Min On	D	0	9/Min Off	D	61
3/Month	E	0	5/Hour On	$\mathbf{E}$	0	7/Hour Off	E	0	9/Plan	E	0
3/DOM	F	0	5/Min On	F	0	7/Min Off	F	0			

W4IKS Table 13

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

(D+9+0+KEY)	(D+9+3+KEY)	(E+F+KEY)
-------------	-------------	-----------

FUNCTION	KEY	VALUE	FUNCTION	KEY	VALUE	FUNCTION	KEY	VALUE
Overlap H	0 _		OLH Green	0	0.0	RR Max II	0	0
Overlap J	1		OLH Yellow	1	0.0	Ped Perm Pl 1	1	0
Overlap K	2		OLH Red	2	0.0	Ped Perm Pl 2	2	0
Overlap L	3		OLJ Green	3	0.0	Ped Perm Pl 3	3	0
OLH Switchpack	4		OLJ Yellow	4	0.0	Ped Perm Pl 4	4	0
OLJ Switchpack	5 _		OLJ Red	5	0.0	Ped Perm Pl 5	5	0
OLK Switchpack	6 _		OLK Green	б	0.0	Ped Perm Pl 6	6	0
OLL Switchpack	7		OLK Yellow	7	0.0	Ped Perm Pl 7	7	0
Reserved	8		OLK Red	8	0.0	Ped Perm Pl 8	8	0
Reserved	9 _		OLL Green	9	0.0	Ped Perm Pl 9	9	0
All Red Before EV	Α		OLL Yellow	A	0.0	# of Lng Pwrouts	A	0
			OLL Red	В	0.0	# pf Sht Pwrouts	В	0
						Failed Det	C	0
						Max II On	D	0
						No Daylite Save	E	0
						Revision Level	F	17

W4IKS Table 14 Sheet 1

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

#### (D+9+KEY1+KEY2)

KEY1 =	8	KEY1 =	9	KEY1 = 2	A	KEY1 =	В
KEY2	CODE	KEY2	CODE	KEY2	CODE	KEY	CODE
0	205	0	205	0	6	0	23
1	146	1	146	1	14	1	67
2	23	2	23	2	20	2	20
3	45	3	66	3	23	3	26
4	20	4	205	4	68	4	6
5	27	5	146	5	20	5	205
6	5	6	21	6	24	6	148
7	205	7	5	7	27	7	21
8	146	8	14	8	5	8	5
9	21	9	20	9	205	9	11
A	6	A	21	A	147	A	209
В	14	В	5	В	21	В	5
C	20	C	13	C	5	C	24
D	24	D	205	D	12	D	21
E	26	E	11	E	205	E	6
F	6	F	21	F	147	F	14

W4IKS Table 14 Sheet 2

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

#### (D+9+KEY1+KEY2)

KEY1 = C		KEY1 = 1	D	KEY1 = 1	E	KEY1 =	F
KEY2	CODE	KEY2	CODE	KEY2	CODE	KEY	CODE
0	209	0	29	0	0	0	0
1	6	1	7	1	0	1	0
2	24	2	20	2	0	2	0
3	27	3	24	3	0	3	0
4	5	4	25	4	0	4	0
5	208	5	6	5	0	5	0
6	5	6	210	6	0	6	0
7	30	7	6	7	0	7	0
8	26	8	24	8	0	8	0
9	5	9	21	9	0	9	0
A	210	A	6	A	0	A	0
В	5	В	14	В	0	В	0
C	23	C	0	C	0	C	0
D	45	D	0	D	0	D	0
E	20	E	0	E	0	E	0
F	24	F	0	F	0	F	0

W4IKS Table 14 Sheet 3

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

#### (D+E+KEY1+KEY2)

KEY1 =	0	KEY1 =	1	KEY1 =	2	KEY1 = 3	3
KEY2	CODE	KEY2	CODE	KEY2	CODE	KEY	CODE
0	0	0	0	0	0	0	0
1	0	1	0	1	0	1	0
2	0	2	0	2	0	2	0
3	0	3	0	3	0	3	0
4	0	4	0	4	0	4	0
5	0	5	0	5	0	5	0
6	0	6	0	6	0	6	0
7	0	7	0	7	0	7	0
8	0	8	0	8	0	8	0
9	0	9	0	9	0	9	0
A	0	A	0	A	0	A	0
В	0	В	0	В	0	В	0
C	0	C	0	C	0	C	0
D	0	D	0	D	0	D	0
E	0	E	0	E	0	E	0
F	0	F	0	F	0	E	0

W4IKS Table 14 Sheet 4

Date: Wednesday, July 25, 2012 Time: 09:52 AM Intersection #125 HERMAN RD @ 108TH

(D+E+KEY1+KEY2)

KEY1 = 4		KEY1 =	5	KEY1 = 6	5	KEY1 =	7
KEY2	CODE	KEY2	CODE	KEY2	CODE	KEY	CODE
0	0	0	0	0	0	0	0
1	0	1	0	1	0	1	0
2	0	2	0	2	0	2	0
3	0	3	0	3	0	3	0
4	0	4	0	4	0	4	0
5	0	5	0	5	0	5	0
6	0	6	0	6	0	6	0
7	0	7	0	7	0	7	0
8	0	8	0	8	0	8	0
9	0	9	0	9	0	9	0
A	0	A	0	A	0	A	0
В	0	В	0	В	0	В	0
C	0	C	0	C	0	C	0
D	0	D	0	D	0	D	0
E	0	E	0	E	0	E	0
F	0	F	0	F	0	F	0

W4IKS Table 14 Sheet 5

Date: Wednesday, July 25, 2012 Time: 09:52 AM

Intersection #125 HERMAN RD @ 108TH

(D+E+KEY1+KEY2)

KEY1 =	= 8	KEY1 =	9	KEY1 = 2	A	KEY1 = E	ŀ
KEY2	CODE	KEY2	CODE	KEY2	CODE	KEY	CODE
0	0	0	0	0	0	0	0
1	0	1	0	1	0	1	0
2	0	2	0	2	0	2	0
3	0	3	0	3	0	3	0
4	0	4	0	4	0	4	0
5	0	5	0	5	0	5	0
6	0	6	0	6	0	6	0
7	0	7	0	7	0	7	0
8	0	8	0	8	0	8	0
9	0	9	0	9	0	9	0
A	0	A	0	A	0	A	0
В	0	В	0	В	0	В	0
C	0	C	0	C	0	C	0
D	0	D	0	D	0	D	0
E	0	E	0	E	0	E	0
F	0	F	0	F	0	F	0

W4IKS Table 14 Sheet 6

Date: Wednesday, July 25, 2012 Time: 09:52 AM Intersection #125 HERMAN RD @ 108TH

(D+E+KEY1+KEY2)

KEY1 =	C	KEY1 = 1	D	KEY1 = 1	B	KEY1 =	F
KEY2	CODE	KEY2	CODE	KEY2	CODE	KEY	CODE
0	0	0	0	0	0	0	0
1	0	1	0	1	0	1	0
2	0	2	0	2	0	2	0
3	0	3	0	3	0	3	0
4	0	4	0	4	0	4	0
5	0	5	0	5	0	5	0
6	0	6	0	6	0	6	0
7	0	7	0	7	0	7	0
8	0	8	0	8	0	8	0
9	0	9	0	9	0	9	0
A	0	A	0	A	0	A	0
В	0	В	0	В	0	В	0
C	0	C	0	C	0	C	0
D	0	D	0	D	0	D	0
E	0	E	0	E	0	E	0
F	0	F	0	F	0	म	0

W4IKS Table 15
Date: Wednesday, July 25, 2012 Time: 09:52 AM
Intersection #125 HERMAN RD @ 108TH

(D+B+3+KEY)			(D+B+7+KEY)			(D+B+B+KEY)		
FUNCTION	KEY	VALUE	FUNCTION	KEY	VALUE	FUNCTION	KEY	VALUE
CB Output #1	0	0	CB Output #1	0	0	CB Output #1	0	0
CB Output #2	1	0	CB Output #2	1	0	CB Output #2	1	0
CB Output #3	2	0	CB Output #3	2	0	CB Output #3	2	0
CB Output #4	3	0	CB Output #4	3	0	CB Output #4	3	0
CB Output #5	4	0	CB Output #5	4	0	CB Output #5	4	0
CB Output #6	5	0	CB Output #6	5	0	CB Output #6	5	0
CB Output #7	6	0	CB Output #7	6	0	CB Output #7	6	0
CB Output #8	7	0	CB Output #8	7	0	CB Output #8	7	0
CB Flash Out #9	8	0	CB Flash Out #9	8	0	CB Flash Out #9	8	0
CB Flash Out #10	9	0	CB Flash Out #10	9	0	CB Flash Out #10	9	0
CB Flash Out #11	A	52	CB Flash Out #11	A	0	CB Flash Out #11	A	0
CB Flash Out #12	В	0	CB Flash Out #12	В	0	CB Flash Out #12	В	0
Page ID - 0			Page ID - 1			Page ID - 2		

KITTELSON & ASSOCIATES, INC.

#### L E G E N D

#### CONTROLLERS

Install model 2070L controller in model 332 cabinet & control equipment with riser frame, orient louvered door as shown

#### POLES

Install (L=length) foot most arm

Install special (X = non-standard) traffic signal mast arm pole with luminaire pole extension ( See, "Pole Entrance Chart)

Install (L=length) foot luminaire arm

(VP)

Install vehicle signal pedestal with transformer base Install pedestrian signal pedestal with frangible base

#### SIGNALS

Install phase (Ph=phase) vehicle signal

Install phase (Ph=phase) countdown pedestrian signal with clamshell mount and pushbutton with 'H' mount

#### SIGNS

Install aluminum (30"x36", type "W7") "NO TURN ON RED"

Install (30" x 36") "NO RIGHT TURN" part time restriction sign

 $\frac{\overline{PR}}{3}$ 

Install street name sign (N) on mast arm pole, use 12" 0.125mm flat blade aluminum blanks mounted to most arm with stainless steel bands and hardware (Diamond Grade Sheeting). 1 = SW Herman Rd 4 = SW Teton Ave

#### LEGEND CONTINUED

#### CABINETS

Install terminal cabinet

(BMCI)

Install base mounted service cabinet, 120/240 volt metered. for signal and signal pole mounted illumination systems

#### JUNCTION BOXES

Install 22"x12"x12" (min. dimension) precast concrete junction box

Install 22"x12"x12" (min. dimension) precast concrete junction box with concrete apron

Install 30"x17"x12" (min. dimension) precast concrete junction box

#### VIDEO DETECTION

Install video camera (N), mounting bracket and post

Install video camera feeder (N) Video detection zone for phase (PH).

#### WIRES

N-C

Install (N=number) No. 8 type THWN (Signal system common)

Install (N=number) No. 12 type THWN (Pedestrian signal system common)

Install (N=number) No.(G=AWG wire size) type THWN wires

Install (N=number) No. (G=AWG wire size) type XHHW wires

Ph Includes 3 spare wires for phase (Ph-phase) as per table

#### LEGEND CONTINUED

#### CONDUITS

(s)

Install (S=size) inch electrical conduit

Interconnect conduit (See Interconnect Plan)

#### FIRE PREEMPTION

Install channel (Ch=channel), (N=number) barrel fire preemption detector unit

Install channel (Ch=channel) fire preemption detector feeder cable

#### MISCELLANEOUS

Install photocontrol electronic relay on pole. as per T.M.S. Drg. No. TM465

Install 200 watt high pressure sodium luminaire, type M-C-III.

120/240 dual voltage ballast

SIGNAL MOUNTING OPTIONS B = Adjustable bracket assembly w/rain cap(s) (install 1" metallic chase nipple in lieu of tenon when required for wiring) P = Side pole mount T = Pole top mount

SIGNAL HEAD TYPES 2 = 12" R. 12" Y. 12" G 6L = 12" FLTA, 12" YLTA, 12" FYLTA, 12" GLTA

CAMERA MOUNTING OPTIONS LA = Luminaire arm mount MA = Mast arm mount



STRFFT NAME SIGNS

1. All signs shall be type "G2".

2. Contact Traffic Safety Supply Co. at (503)-235-8531 for size and layout information.



OREGON

EXPIRES 12/31/08

**TUALATIN DEVELOPMENT** COMMISSION

S.W. HERMAN RD. - S.W. 124TH AVE. TO S.W. TETON AVE.

WASHINGTON COUNTY

Reviewed By - C. Radosta Designed By - C. Tiesler Drafted By - J. Henriksen

S/27/88 SW HERMAN RD/SW TETON AVE LEGEND SHEET

TS-15

**\$USER\$** 

### CONSTRUCTION NOTE:

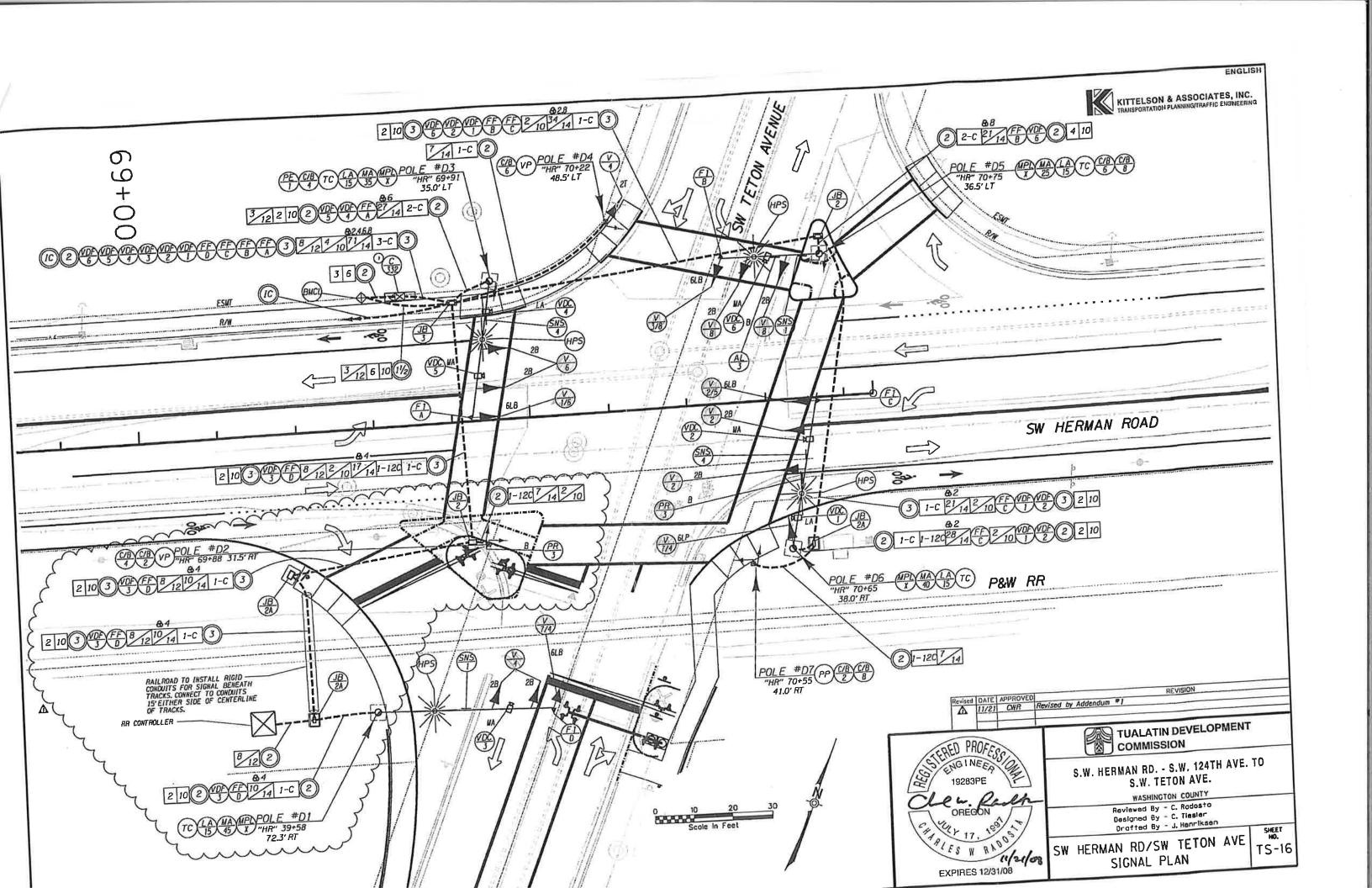
Terminate phase 1 flashing yellow indication to phase 2 pedestrian yellow switchpack output. Terminate Conflict Monitor channel 9 (pin 13) wire to Output File terminal 114.

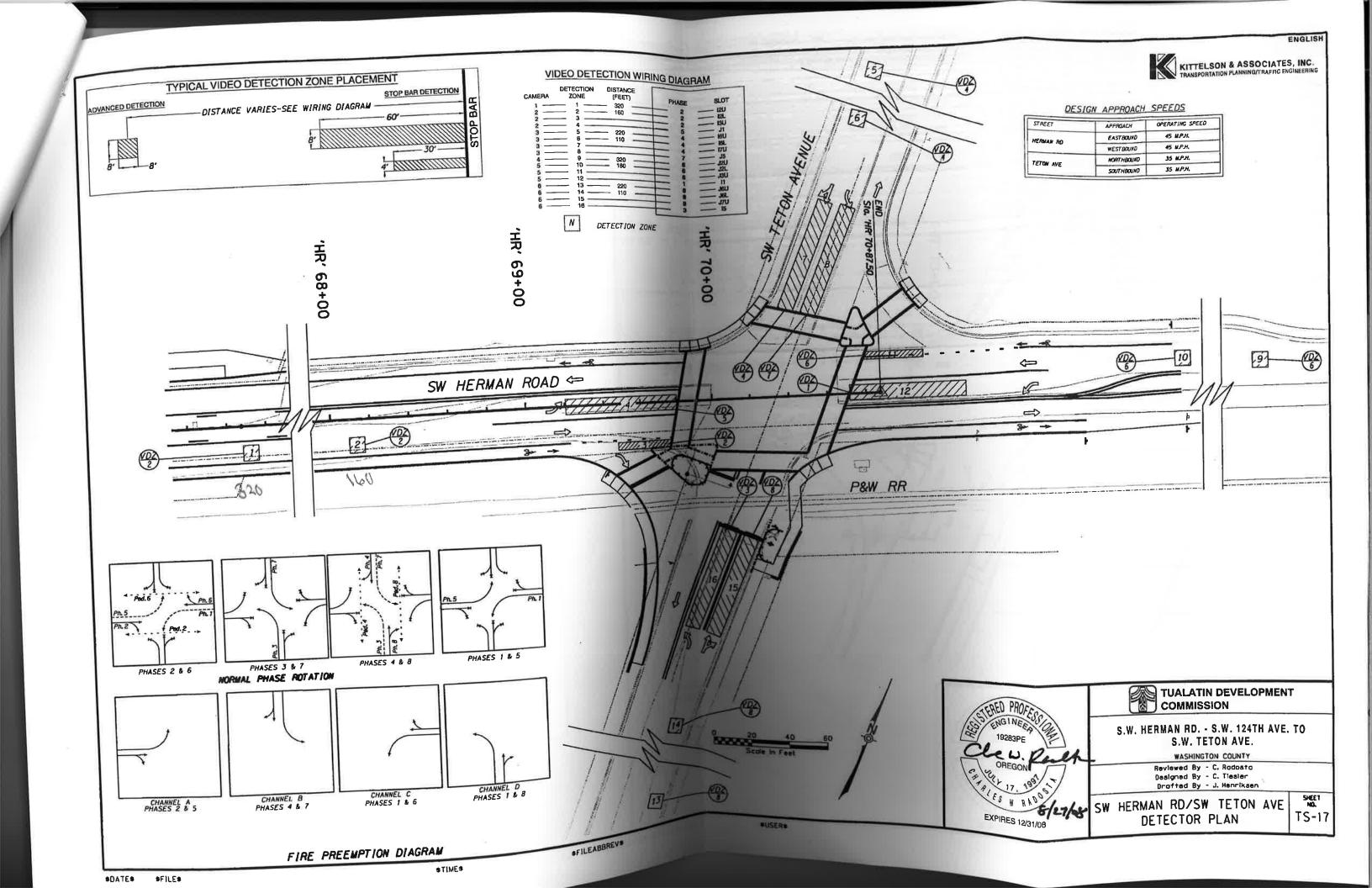
Terminate phase 3 flashing yellow indication to phase 4 pedestrian yellow switchpack output. Terminate Conflicting Monitor channel 10 (pin R) wire to Output File terminal 105.

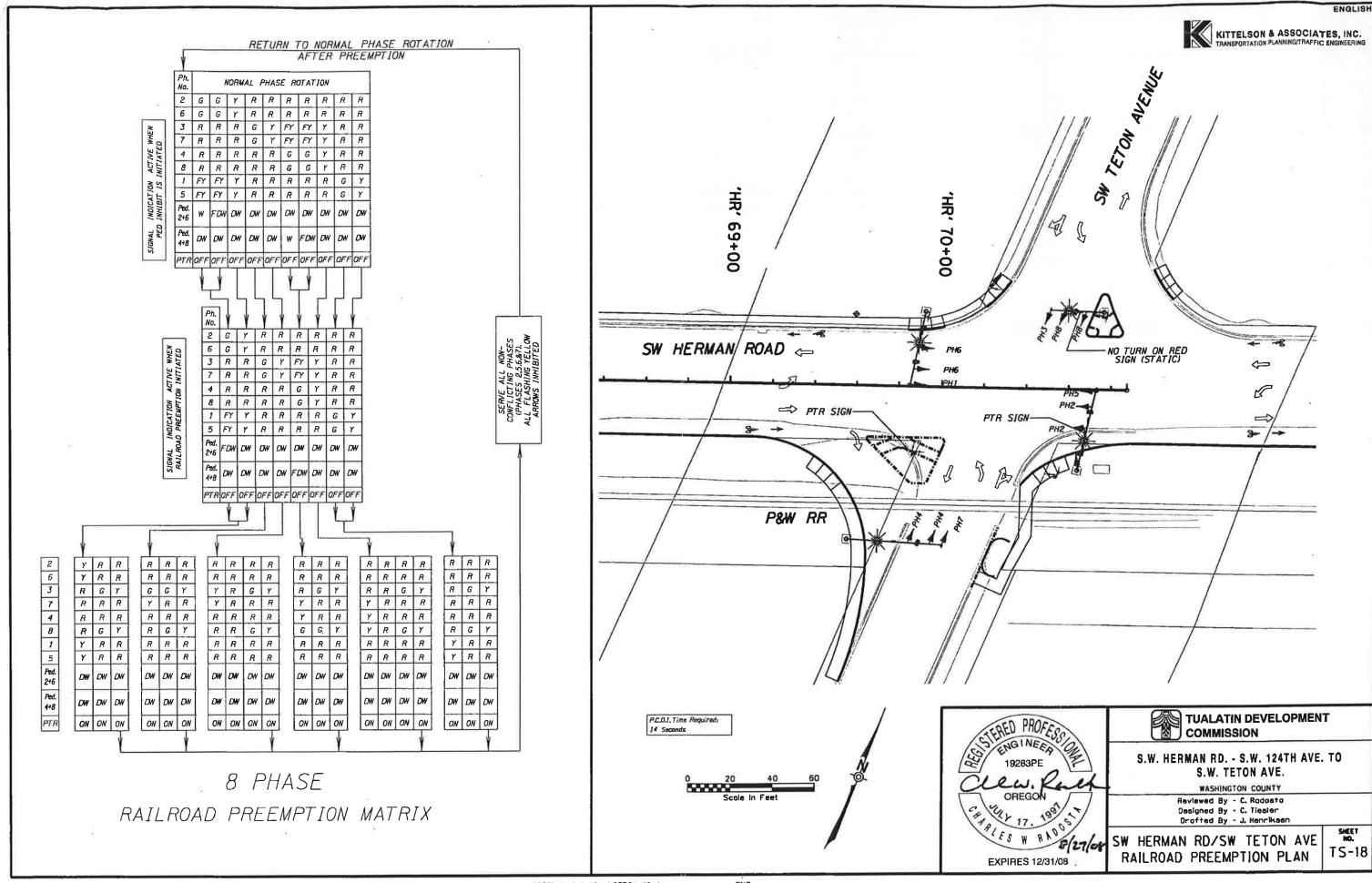
Terminate phase 5 flashing vellow indication to phase 6 pedestrian vellow switchpack output. Terminate Conflict Monitor channel 11 (pin S) wire to Output File terminal 120.

Terminate phase 7 flashing yellow indication to phase 8 pedestrian yellow switchpack output. Terminate Conflicting Monitor channel 12 (pin V) wire to Output File terminal 111.

**\$DATE**\$



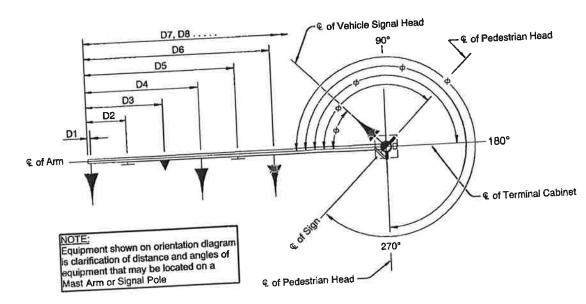




## POLE ENTRANCE CHART

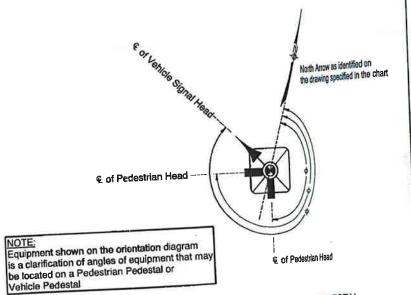
				_			EQU	IPME	NT C	N MA	ST A	RM			L	.טאואט	AIRE	S FIXT	URE
EQUIF	MEN <sup>-</sup>	r on	POLI	-				(Length i	n Feet and	Equipmen	t Type)		_	ARM	ARM	MOUNTING	TYPE	TYPE	WATTAGE
	TERM.		TRAFFIC	PHOTO	ARM	D1	D2	D3	D4	D5	D6	D7	D8	LENGTH	DEG.	HEIGHT			
PED. SIGNAL	CABINET DEG.	SIGN DEG.	SIGNAL DEG.	CELL	LÉNGTH	0.5	0.5	6.0	11.0	16.0	22.5 ST			15	0	35	HPS	M-C-III	200
DEG.	180				45	V6L	F	V2	C	V2	SI								
250 & 340	100	250						8.0	11.0	18.0	25.0 ST	27.5		15	0	35	HPS	M-C-III	200
20 & 340	-		-	180	35	0.5 V6L		- V2	C		ST	С	-	1					
270	180		-	1.00	1	VOL				I				11	-	-	11100	M-C-III	200
180			0	1		0.5	0.5	7.0	12.0	14.0	17.0	21.0 ST	1	- 15	0	35	HPS	1	
195 & 285	180				25	0.5 V6L	F 2.0	V2 9.0	C 12.0	SA 16.0	V2 19.0	22.0 PR	32.0 C	15	0	35	HPS	M-C-II	200
	180		345		40	0.5 F	V6L		С	ST	V2	PR	-						
90 & 345				1				V					4:						

. Dwg. TM465) I.S. Dwg. 00000) Sign (see Std. Dwg. TM465)

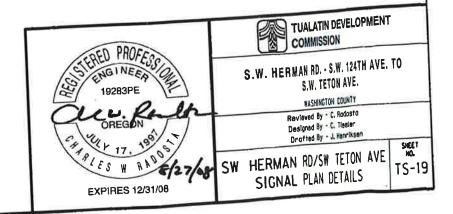


## MAST ARM POLE ORIENTATION DIAGRAM





# PEDESTRIAN PEDESTAL / VEHICLE PEDESTAL ORIENTATION DIAGRAM



							147							
					\/\_	dnesday	•	SHI	2013 1	5.53		-		
	Inters	ection	Name			inesuay `- Herm	•		2013 1	3.33		ocal ID	6	
Intersection			-			1101111	un_re	.011				ooui ib		
					10	2 City	of Tuo	latin			Cva	tom ID	102	
		ystem	Name			2 - City		aun			Sys	tem ID	102	
	Co	ntrolle	r Type	L	oyage/	- C1-C1	11							
Contr	oller S	erial N	lumber							Ins	tallatio	n Date		
	Pro	gramr	ned by							Prog	ramme	d Date		
	Graphi	с Мар	Backg	round							Phas	e Rota	tion Diagram	1
	<del>.</del>											:	<del>.</del>	
	<del></del>				Со	ntro	l Da	ta (n	ext/2	2/2)	:			
			Co	ontroll	ler Fu	nction	and '	Timin	g (nex	t/2/1,	next/2	/2)		
					ler Fu	nction irity, S	and <sup>·</sup> Seque	Timin	g (nex	t/2/1,	next/2	/2)		
Security			***	0 = dis	Secu	nction Irity, S or 1000	and ' eque	Timin nce, li	g (nex nitializ	t/2/1, cation				
	Code			0 = dis	Secu	nction irity, S	and ' eque	Timin nce, li	g (nex nitializ	t/2/1, ation	E, 7 = l€	ead lag		
			***	0 = dis	Secu	nction Irity, S or 1000 I, 1 = qu	and Geque	Timin nce, li turn, 2	g (nex nitializ	t/2/1, cation ecial A-	E, 7 = l∈ ad Lag	ead lag	2/2/3)	
			***	0 = dis	Secu	nction Irity, S or 1000 I, 1 = qu	and Geque 1-9999 Lad left	Timin nce, li turn, 2	g (nex nitializ	t/2/1, cation ecial A- Lea nases 3	E, 7 = l∈ ad Lag	ead lag	2/2/3) hases 5 - 6	Phases 7 - 8
			***	0 = dis	Secu	nction Irity, S or 1000 I, 1 = qu	and Geque	Timin nce, li turn, 2	g (nex nitializ -6 = spe	t/2/1, cation ecial A- Lea asses 3	E, 7 = le ad Lag - 4	ead lag	2/2/3) hases 5 - 6	0
			***	0 = dis 0 = se	Secu Secu abled, quentia	or 1000 l, 1 = qu	equelongo and representation of the second s	Timing nce, li turn, 2  - 2  0 = n	g (nex	t/2/1, zation ecial A- Lea nases 3 0 sal, 1 =	E, 7 = le ad Lag - 4 reversa	ead lag	2/2/3) hases 5 - 6	0
	uence		7	0 = dis 0 = se	Secu Secu abled, quentia	nction Irity, S or 1000 I, 1 = qu Ph	eque e-9999 uad left ases 1 0	Timing nce, li turn, 2  - 2  0 = n	g (nex	t/2/1, cation  ecial A-  Lea  nases 3  0  sal, 1 =	E, 7 = lead Lag - 4 reversa	ead lag	2/2/3) hases 5 - 6	0
Sequ	uence	Initiali	*** 7	0 = dis 0 = se	Secu Secu abled, quentia	nction Irity, S or 1000 I, 1 = qu Ph ization	eque 1-9999 uad left asses 1 0	Timing nce, li turn, 2  - 2  0 = n	g (nex	t/2/1,   ecial A- Lea asses 3 0 sal, 1 = /2/2/5	E, 7 = le ad Lag - 4 reversa	ead lag	t/2/3) hases 5 - 6  O by coord plan	0
Sequ Ring 1 Phase	uence	Initiali	ization	0 = dis 0 = se	Secu Secu abled, quentia	nction urity, S or 1000 I, 1 = qu Ph ization Flash	and sequences as a session of the sequences of the sequen	Timing nce, li turn, 2  - 2  0 = n	g (nex	t/2/1,   zation ecial A- Lea asses 3 0 sal, 1 = /2/2/5	E, 7 = le ad Lag - 4 reversa  h Exit	ead lag	phase 1-8	0
Sequ	uence	Initiali	*** 7	0 = dis 0 = se	Secu Secu abled, quentia	rity, S or 1000 I, 1 = qu Ph ization Flash	eque 1-9999 uad left asses 1 0	Timing nce, li turn, 2  - 2  0 = n	g (nex	t/2/1,   cation   Leanases 3	E, 7 = le ad Lag - 4 reversa	ead lag	phase 1-8 phase 1-8	0
Ring 1 Phase Ring 2 Phase	uence	Initiali	**** 7 ization 1 5	0 = dis 0 = see	Securabled, aduentia	rity, S or 1000 I, 1 = qu Ph ization Flash	and sequences as a sessing of the sequences of the sequen	Timing nce, li turn, 2  - 2  0 = n	g (nex nitializ -6 = spe Ph o revers	t/2/1,   cation   Leanases 3	E, 7 = le  ad Lag  - 4  reversa  h Exit  1  5	ead lag	phase 1-8 phase 1-8	or clock  yellow, 2 = green
Ring 1 Phase Ring 2 Phase Interval	uence	Initiali	****  7  ization 1 5 0	0 = dis 0 = see	Securabled, aduentia	rity, S or 1000 I, 1 = qu Ph ization Flash	and seque -9999 uad left asses 1 0 n and Entry	Timin nce, li turn, 2 -2 0 = n Flash	g (nex nitializ -6 = spe Ph o revers	t/2/1,   cation   Leanases 3	E, 7 = le  ad Lag  - 4  reversa  h Exit  1  5	ead lag (next/2 Pl	phase 1-8 phase 1-8 phase 1-8 phase 1-8	or clock  yellow, 2 = green
Ring 1 Phase Ring 2 Phase Interval Power up Flash	uence	Initiali (0	****  7  ization 1 5 0 0.0 - 25	0 = dis 0 = sec	Securabled, aduentia	rity, S or 1000 I, 1 = qu Ph ization Flash	and	Timin nce, li turn, 2 - 2 0 = n Flash	g (nex nitializ -6 = spe Ph o revers (next	t/2/1, cation  ecial A-  Lea asses 3  0 sal, 1 = //2/2/5  Flash	E, 7 = le  ad Lag  - 4  reversa  h Exit  5  0  6	ead lag (next/2 Pl al, 2 = b	phase 1-8 phase 1-8 phase 1-8 0 - red, 1 = y 0.0 - 25.5 se	or clock  yellow, 2 = green
Ring 1 Phase Ring 2 Phase Interval	uence	Initiali	****  7  ization 1 5 0	0 = dis 0 = see	Securabled, aquentia	rity, S or 1000 I, 1 = qu Ph ization Flash	and sequely specific	Timin nce, li turn, 2 -2 0 = n Flash	g (nex nitializ -6 = spe Ph o revers (next	t/2/1, cation  ecial A-  Lea asses 3  0 sal, 1 = //2/2/5  Flash	E, 7 = le  ad Lag  - 4  reversa  h Exit  5  0  ash yel	ead lag (next/2 Pl al, 2 = b	phase 1-8 phase 1-8 phase 1-8 0 - red, 1 = y 0.0 - 25.5 se	or clock  yellow, 2 = green
Ring 1 Phase Ring 2 Phase Interval Power up Flash Phase	0.1 1 3 A	Initiali	****  7  ization 1 5 0 0.0 - 25	0 = dis 0 = sec	Initial onds	rity, S or 1000 I, 1 = qu Ph ization Flash ( ( C Soft	and	Timin nce, li turn, 2 - 2 0 = n Flash	Phoreversion (next)  First A  2/2/5)  0 = dat 4 = flas	t/2/1, cation  ecial A-  Lea nases 3 0 sal, 1 = //2/2/5 Flasi	E, 7 = le  ad Lag  - 4  reversa  h Exit  5  0  ash yel	ead lag (next/2 Pl al, 2 = b	phase 1-8 phase 1-8 phase 1-8 0 - red, 1 = y 0.0 - 25.5 se	or clock  yellow, 2 = green
Ring 1 Phase Ring 2 Phase Interval Power up Flash	0.4 1 3	Initiali	****  7  ization 1 5 0 0.0 - 25	0 = dis 0 = sec 5.5 secc	Securabled, adjusted and a securation of the sec	rity, S or 1000 I, 1 = qu Ph ization Flash ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	and sequely specific	Timin nce, li turn, 2  - 2  0 = n  Flash  (next/2 8  4	g (nex nitializ -6 = spe Ph o revers (next	t/2/1, cation  Lecial A-  Lea  asses 3  0  sal, 1 =  1/2/2/5)  Flasi  All Red  rk, 1=flash red \	E, 7 = le  ad Lag  - 4  reverse  h Exit  5  0  6  wash yel  WAG	ead lag (next/2 PI PI S.0	phase 1-8 phase 1-8 phase 1-8 0 - red, 1 = y 0.0 - 25.5 se	or clock  yellow, 2 = green  conds  AG, 3 = flash red WIG,

			Per	Phase	Func	tions	(next/	2/2/3,	next/2	2/2/1)				
			1	2	3	4	5	6	7	8				
		Phases Used	Χ	X	X	Χ	X	Χ	Χ	X	X = on			
	Rest	ricted Phases									X = on (Sequential)	ence 2, 6, 7 o	nly)	
	Exc	lusive Phases									X = on (Seque	ence 7 only)		
		Yellow Lock												
		Min Recall		X				Χ						
		Max Recall												
		Ped Recall												
		Red Lock												
	Max Out	Recall Inhibit	Χ		X	Χ	X		Χ	Χ	X = on			
		Soft Recall									X = On			
	F	ree Walk Rest												
	Co	nditional Ped												
Disal	ole Inhibit Ma	x Termination												
	Ca	II to Non Act 1												
	Ca	II to Non Act 2												
					Dual E	ntry (	next/2	2/2/9/3	)					
	Mode	1  0 = off,	1 = on	, 2 = No	ot Used	3 = by	coord	plan, 4	= by tin	ne cloc	k circuit 61			
	Dual E	ntry Phase>	1	2	3	4	5	6	7	8				
		Phase	0	0	0	8	0	0	0	4	0 = none, 1-8 :	- nhase 1-8		
		1 11000							on He		0 - 110110, 1 0	- phase i s		
							•				ic (next/2/2/9/4)			
Condit	ional Service	(next/2/2/9/3)							Anti-	Trap		Yellow B	lanking	LT
	Mode	CS Max Ti	me	Х	Omits	Υ								
Phase 1	0	0		Х	: Y		Trap	Prote	cted Pl	nase	Next Phase	Phase		
Phase 3	0	0		6	: 1	0					< (5)	1		
Phase 5	0	0		8	: 3	0	3	3			< (7)	3		
Phase 7	0	0		2	: 5	0	į	5			< (1)	5		1
		on by TOD circ		4	: 7	0	7	7			< (3)	7		]
= N/A, 4 = C DD circuit 57		On, 5 = C.R. on	by		1=side						X = On		•	

		hase <sup>-</sup>		r <b>`</b>					T
	1	2	3	4	5	6	7	8	
Movement									
Minimum Green	5	10	5	10	5	10	5	10	0 - 255 sec
Passage	2.0	3.2	2.0	3.2	2.0	3.2	2.0		0.0 - 25.5 sec
Yellow	3.0	4.5	3.0	4.0	3.0	4.5	3.0		0.0 - 25.5 sec
Red Clearance	1.0	1.0	1.0	1.0	1.0	1.0	1.0		0.0 - 25.5 sec or 0 - 255 sec
Max 1	20	40	20	40	20	40	20		0 - 255 sec
Max 2	20	40	20	40	20	40	20		0 - 255 sec
Walk	0	5	0	5	0	5	0	5	0 - 255 sec
Ped Clear	0	8	0	9	0	7	0	12	0 - 255 sec
Seconds Per Actuation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec
Time Before Reduction	0	0	0	0	0	0	0	0	0 - 255 sec
Time to Reduce	0	0	0	0	0	0	0	0	0 - 255 sec
Minimum Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0 - 25.5 sec
Max Variable Initial	0	0	0	0	0	0	0	0	0 - 255 sec
Auto Max Adjust	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0 - 25.5 sec
Auto Max Limit	0	0	0	0	0	0	0	0	0 - 255 sec
Inhibit Min Yellow									X = On
Red Decimal Off							_		X = On
Advance Walk	0	0	0	0	0	0	0	0	0 - 255 sec
	O	ther C	ontrol	ler Fu	nctio	ns (ne	xt/2/2/	9)	
Phase>	1	2	3	4	5	6	7	8	
Inhibit Simultaneous Gap Out	X		Χ		Χ		X		X = On
Last Car Passage	2	0 = rec	all phas	se, 1 =	last car	passa	ge, 2 =	NOT r	ecall - Not last car passage
Red Revert (+2 seconds)	3.0	0 - 25.	5 sec						
Auto Ped Clear		X = On	l						
Flashing Don't Walk Into Yellow		X = On							
Soft Recall / Red Rest Delay	0.0	0 - 25.	5 sec						
Ped Pushbutton	0	0 - 5 se	ec, 0 = 0	disable					
Advance Flash Rate	0	0 = dis	able, 1	= 120 F	PM				
Change Sequence	•	X = On	(After a	a down	load wi	th a po	wer on -	off cyc	cle)
Phase>	1	2	3	4	5	6	7	8	
Red Clear Extension Detector	0	0	0	0	0	0	0	0	0 = none 1 - 32 = detector 1 - 32
Red Clear Extension Red Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 - 25.5 sec.

			Local Detecto	rs (next/2/2/4	)			
			Detect	or Data		1		
	Yellow Lock	Detector Inhibit	Call Phase	Extend Phase	Switch Phase	Delay Time	Stretch / Disconnect Time	Delay or Disconnect Mode
Detector 1 - I1			1	1	0	0	0.0	0
Detector 2 - I9U			1	1	0	0	0.0	0
Detector 3 - I5			3	3	0	0	0.0	0
Detector 4 - I9L			3	3	0	0	0.0	0
Detector 5 - J1			5	5	0	0	0.0	0
Detector 6 - J9U			5	5	0	0	0.0	0
Detector 7 - J5			7	7	0	0	0.0	0
Detector 8 - J9L			7	7	0	0	0.0	0
Detector 9 - I2U			2	2	0	0	0.0	0
Detector 10 - I2L			2	2	0	0	0.0	0
Detector 11 - I3U			2	2	0	0	0.0	0
Detector 12 - I3L			0	2	0	0	0.0	0
Detector 13 - I4			2	0	0	0	0.0	0
Detector 14 - I6U			4	4	0	5	0.0	0
Detector 15 - I6L			4	4	0	0	0.0	0
Detector 16 - I7U			4	4	0	0	0.0	0
Detector 17 - I7L			0	4	0	0	0.0	0
Detector 18 - I8			4	0	0	0	0.0	0
Detector 19 - J2U			6	6	0	0	0.0	0
Detector 20 - J2L			6	6	0	0	0.0	0
Detector 21 - J3U			6	6	0	0	0.0	0
Detector 22 - J3L			0	6	0	0	0.0	0
Detector 23 - J4			6	0	0	0	0.0	0
Detector 24 - J6U			8	8	0	5	0.0	0
Detector 25 - J6L			8	8	0	0	0.0	0
Detector 26 - J7U			8	8	0	0	0.0	0
Detector 27 - J7L			0	8	0	0	0.0	0
Detector 28 - J8			8	0	0	0	0.0	0
Detector 29 -			0	0	0	0	0.0	0
			1		<u> </u>	1		

yellow lock, detector inhibit, - X = On; call, extend, phase - 0 = none 1 - 8 = phase 1 - 8; delay time - 0 - 255 sec stretch / disconnect time - 0.0 - 25.5 sec.; delay or disconnect Mode - 0 - 13

0.0

0.0

0.0

			De	tector	Plans	s (nex	t/2/2/4	I/5)		
	Loop Number					(11011		,		
	Plan Detectors	0	0	0	0	0	0	0	0	0 - 32, 0 = none, 1 -3 2 = detectors 1 - 32
	Call Phase									
	Extend Phase	0	0	0	0	0	0	0	0	0 - 8, 0 = none, 1 - 8 = phase 1 - 8
Detector	Switch Phase	0	0	0	0	0	0	0	0	
Plan 1	Delay Time	0	0	0	0	0	0	0	0	0 - 255 sec
	Stretch/Disconnect Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec
	Delay/ Disconnect Mode	0	0	0	0	0	0	0	0	0 - 13
	Call Phase									
	Extend Phase	0	0	0	0	0	0	0	0	0 - 8, 0 = none, 1 - 8 = phase 1 - 8
Detector	Switch Phase	0	0	0	0	0	0	0	0	
Plan 2	Delay Time	0	0	0	0	0	0	0	0	0 - 255 sec
	Stretch/Disconnect Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec
	Delay/ Disconnect Mode	0	0	0	0	0	0	0	0	0 - 13
	Call Phase									
	Extend Phase	0	0	0	0	0	0	0	0	0 - 8, 0 = none, 1 - 8 = phase 1 - 8
Detector	Switch Phase	0	0	0	0	0	0	0	0	
Plan 3	Delay Time	0	0	0	0	0	0	0	0	0 - 255 sec
	Stretch/Disconnect Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec
	Delay/ Disconnect Mode	0	0	0	0	0	0	0	0	0 - 13

Detector 30 -

Detector 31 -

Detector 32 -

Detector	r Fail Moni	itor (n	ext/2/	2/4/3)				De	tectors 33-64 (ne	xt/2/2/4	(6)
F	ail Monitor Enable		call ase	Min Counts	Max Co	ounts			Call	Phase	Extend Phase
Detector 1 - I1			0	0	0		Detecto	or 33 -		0	0
Detector 2 - I9U		(	0	0	0		Detecto	or 34 -		0	0
Detector 3 - I5		(	0	0	0		Detecto	or 35 -		0	0
Detector 4 - I9L		(	0	0	0		Detecto	or 36 -		0	0
Detector 5 - J1		(	0	0	0		Detecto	or 37 -		0	0
Detector 6 - J9U		(	0	0	0		Detecto	or 38 -		0	0
Detector 7 - J5			0	0	0		Detecto	or 39 -		0	0
Detector 8 - J9L		(	0	0	0		Detecto	or 40 -		0	0
Detector 9 - I2U			0	0	0		Detecto	or 41 -		0	0
Detector 10 - I2L		(	0	0	0		Detecto	or 42 -		0	0
Detector 11 - I3U			0	0	0		Detecto	or 43 -		0	0
Detector 12 - I3L		(	0	0	0		Detecto	or 44 -		0	0
Detector 13 - I4		(	0	0	0		Detecto	or 45 -		0	0
Detector 14 - I6U		(	0	0	0		Detecto	or 46 -		0	0
Detector 15 - I6L			0	0	0		Detecto	or 47 -		0	0
Detector 16 - I7U			0	0	0		Detecto	or 48 -		0	0
Detector 17 - I7L			0	0	0		Detecto	or 49 -		0	0
Detector 18 - I8			0	0	0		Detecto	or 50 -		0	0
Detector 19 - J2U			0	0	0		Detecto	or 51 -		0	0
Detector 20 - J2L		(	0	0	0		Detecto	or 52 -		0	0
Detector 21 - J3U			0	0	0		Detecto	or 53 -		0	0
Detector 22 - J3L			0	0	0		Detecto	or 54 -		0	0
Detector 23 - J4		(	0	0	0		Detecto	or 55 -		0	0
Detector 24 - J6U		(	0	0	0		Detecto	or 56 -		0	0
Detector 25 - J6L			0	0	0		Detecto	or 57 -		0	0
Detector 26 - J7U			0	0	0		Detecto	or 58 -		0	0
Detector 27 - J7L		(	0	0	0		Detecto	or 59 -		0	0
Detector 28 - J8			0	0	0		Detecto			0	0
Detector 29 -			0	0	0		Detecto	or 61 -		0	0
Detector 30 -			0	0	0		Detecto			0	0
Detector 31 -			0	0	0		Detecto	-		0	0
Detector 32 -			0	0	0		Detecto			0	0
fail monitor enable - X = On, red	all phase - 0						_		hase - 0 = none 1 - 8	= phase	
Detector Fail Sam	<u> </u>			0	0 - 255						
Video Fail Inputs (next	/2/2/4/3)>	1	2	3 4	5	6	7	8			
Phas	e Recalled	0	0	0 0	0	0	0	0	0 = none, 1 - 8 = pha	ise 1 - 8	
			Syst	em Detect	ors (ne	kt/2/2	2/4/4)		1		
	etectors>	1	2	3 4	5	6	7	8	_		
Loc	al Detector	0	0	0 0	0	0	0	0	0 = none, 1 - 32 = ph	ase 1 - 3	2

V-L:-: 6						Ove	erlaps		.TA (n	ext/2/	2/8)					
Vehicle Ove	erlaps	Phas					Pha		ı	_		Extens		Clearan		A - D 0 = none
	•	Move	ment	1	2	3	4	5	6	7	8	Gree		ellow	Red	1 = overlap
	Α			0	0	0	0	0	0	0	0	0.0		0.0	0.0	2 = 60  FPM
	В			0	0	0	0	0	0	0	0	0.0		0.0	0.0	3 = Not ped
	С			0	0	0	0	0	0	0	0	0.0		0.0	0.0	4=Comp. P 5=Prevent.
	D			0	0	0	0	0	0	0	0	0.0		0.0	0.0	Ext.
	<u>E</u>			0	0	0	0	0	0	0	0	0.0		0.0	0.0	6=Not Veh.
Overlaps	F			0	0	0	0	0	0	0	0	0.0		0.0	0.0	7=Adv. FF
•	G			0	0	0	0	0	0	0	0	0.0		0.0	0.0	E-L
	H			0	0	0	0	0	0	0	0	0.0		0.0	0.0	0 = no
	<u> </u>			0	0	0	0	0	0	0	0	0.0		0.0	0.0	Overlap
	J			0	0	0	0	0	0	0	0	0.0		0.0	0.0	1 = Overlap
	K			0	0	0	0	0	0	0	0	0.0		0.0	0.0	Green, Yello
	L			0	0	0	0	0	0	0	0	0.0	)	0.0	0.0	Rad
										next/2/	2/8/5)					
Ped Over	laps ->	Α	В	С	D	Е	F	G	Н	_						
	Α									ļ						
Overlaps	В									X = Nc	r Ped F	ed Overl	ар			
•	С															
	D															
									ng (ne	xt/2/2/8						
					<u>E</u>	F	G	Н	I	J	K	L	P 11 1			
				Enable	0	0	0	0	0	0	0		= disabled,	1 = ena	bled	
				verlap	0	0	0	0	0	0	0	0 0	e none, 1 -	overlap	E, 2 = 0	overlap F, et
				verlap	0	0	0	0	0	0	0	0				
	Advance	Deact	ivation	Delay	0	0	0	0	0	0	0	0 0	99 secon	us		
							D 10									
	Dha	[		_						2/2/8/5)		-Ue	Dad Class	Dod	Danall	
	Pha	ise>	1	2	3	4	5	eriaps 6	7	2/2/8/5) 8	Wa	alk	Ped Clear	Ped I	Recall	Phase.
	Pha	Α	1	2	3						Wa	)	0	Ped I	Recall	Phase, Ped Recall:
	Pha	A B	1	2	3						Wa	0	0	Ped I	Recall	
	Pha	A B C	1	2	3						Wa	0	0 0 0	Ped I	Recall	Ped Recall: X = on
ed Overlap	Pha	A B C D	1	2	3						Wa	0 0	0 0 0 0	Ped I	Recall	Ped Recall: X = on Walk, Ped
ed Overlap	Pha	A B C D	1	2	3						Wa	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0	Ped I	Recall	Ped Recall: X = on
ed Overlap	Pha	A B C D E	1	2	3						W	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	Ped I	Recall	Ped Recall: X = on Walk, Ped Clear:
ed Overlap	Pha	A B C D E F	1	2	3						W:	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	Ped I	Recall	Ped Recall: X = on Walk, Ped Clear: 0 - 255
ed Overlap	Pha	A B C D E	1			4	5	6	7	8	W3	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	Ped I	Recall	Ped Recall: X = on Walk, Ped Clear: 0 - 255
ed Overlap	Pha	A B C D E F G		F	Flashir	4 og Yelld	5 ow Left	Turn	7	8	W3	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	Ped I	Recall	Ped Recall: X = on Walk, Ped Clear: 0 - 255
ed Overlap	Pha	A B C D E F G	nase P	F airs>	Flashir 1 - 2	g Yello 3 - 4	5 ow Left 5 - 6	Turn / 7 - 8	7 Arrow (	8 (FYLTA	Wa	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	0 0 0 0 0 0 0		Recall	Ped Recall: X = on Walk, Ped Clear: 0 - 255
ed Overlap	Pha	A B C D E F G H	nase P	Fairs>	Flashir 1 - 2 4	4 g Yello 3 - 4 4	5  ow Left  5 - 6  4	Turn 17 - 8	7 Arrow ( 0 = off	(FYLTA	Water the second of the second	2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3)	0 0 0 0 0 0 0 0	outputs	Recall	Ped Recall: X = on Walk, Ped Clear: 0 - 255
		A B C D E F G H	nase P	Fairs> Enable ts Odd	Flashin 1 - 2 4 1	4  2g Yello 3 - 4  4  1	5  bw Left  5 - 6  4  1	Turn 17 - 8 4 1	7 Arrow ( 0 = offf 0 = off	(FYLTA)	\( \text{Watter} \) \( \text{(a)} \) \( \text{(a)} \) \( \text{(a)} \) \( \text{(next)} \) \( \text{(next)} \) \( \text{(next)} \) \( \text{(next)} \)	2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3)	0 0 0 0 0 0 0 0 tputs, 5 = 5	outputs	Recall	Ped Recall: X = on Walk, Ped Clear: 0 - 255
	Pha	A B C D E F G H	nase P	Fairs> Enable ts Odd / Even	Flashir 1 - 2 4 1 X	4 3 - 4 4 1 X	5  bw Left  5 - 6  4  1  X	Turn 1 7 - 8 4 1 X	7 Arrow ( 0 = offf   X = on	(FYLTA , 3 = 3 ( , 1 = on	Wa ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3)	0 0 0 0 0 0 0 0 tputs, 5 = 5	outputs	Recall	Ped Recall: X = on Walk, Ped Clear: 0 - 255
		A B C D E F G H Pt Ever	nase P en Omi h Odd ed Tra	airs> Enable ts Odd / Even	Flashir 1 - 2 4 1 X 3.0	4  9 Yello 3 - 4  1  X  3.0	5  ow Left  5 - 6  4  1  X  3.0	Turn 1 7 - 8 4 1 X 3.0	0 = offf X = on 0.0 or	(FYLTA , 3 = 3 o , 1 = on , odd pl 2.0 - 25	() (next/ () (ne	2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3)	0 0 0 0 0 0 0 0 tputs, 5 = 5	outputs	Recall	Ped Recall: X = on Walk, Ped Clear: 0 - 255
Ped Overlap		A B C D E F G H Pt Ever	nase Pa en Omi eh Odd ed Tra ed Ext	Fairs> Enable ts Odd / Even	Flashir 1 - 2 4 1 X	4 3 - 4 4 1 X	5  bw Left  5 - 6  4  1  X	Turn 1 7 - 8 4 1 X 3.0	0 = offf X = on 0.0 or	(FYLTA) (3, 3 = 3 (3, 1 = on) (4, 0dd pl) (5, 25) (5, 5) (6, 25) (7, 1 = on) (7, 25) (8, 25) (9, 25) (	() () (next/ () () () (next/ () () () () () () () () () () () () () (	2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3) 3)	0 0 0 0 0 0 0 0 tputs, 5 = 5 all across ba	outputs	Recall	Ped Re X = on Walk, F Clear: 0 - 255

			S	ervice	Plan	s (nex	ct/2/2/	6)		
	Phase>	1	2	3	4	5	6	7	8	
	Call Mode	0	0	0	0	0	0	0	0	
										ecall, 7 = omit ped, 8 = red rest
	Minimum Green	0	0	0	0	0	0	0	0	0 - 255 sec.
Service Plan	Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0 - 25.5 sec.
1	Yellow	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0 - 25.5 or 3.0 - 25.5
	Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0 - 25.5 sec.
	Walk	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 - 255 sec.
	Pedestrian Clearance	0	0	0	0	0	0	0	0	0 - 255 sec.
						_				
	Phase>	1	2	3	4	5	6	7	8	
	Call Mode	0	0	0	0	0	0	0	0	
										ecall, 7 = omit ped, 8 = red rest 0 - 255 sec.
Comice Dies	Minimum Green	0	0	0	0	0	0	0	<u> </u>	0.0 - 25.5 sec.
Service Plan 2	Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 or 3.0 - 25.5
-	Yellow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec.
	Red Walk	0.0	0.0	0.0	0.0	0.0	0.0 0	0.0	0.0	0 - 255 sec.
	Pedestrian Clearance	0	0	0	0	0	0	0	U	0 - 255 sec.
						<u> </u>				1 200 000.
	Phase>	1	2	3	4	5	6	7	8	
	Call Mode	0	. 0	0	0	0	0	0	0	
										ecall, 7 = omit ped, 8 = red rest
	Minimum Green	0	0	0	0	0	0	0	0	0 - 255 Sec. 0.0 - 25.5 sec.
Service Plan 3	Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec. 0.0 - 25.5 or 3.0 - 25.5
3	Yellow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 or 3.0 - 25.5 0.0 - 25.5 sec.
	Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec. 0 - 255 sec.
	Walk	0	0	0	0	0	0	0	<u> </u>	0 - 255 sec.
	Pedestrian Clearance	0	0	0	0	0	0	0	0	0 - 255 Sec.
	Phase>	1	2	3	4	5	6	7	8	
	Call Mode	0	0	0	0	0	0	0	0	
										ecall, 7 = omit ped, 8 = red rest 0 - 255 sec.
Camilaa Dlan	Minimum Green	0	0	0	0	0	0	0		0.0 - 25.5 sec.
Service Plan 4	Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 or 3.0 - 25.5
•	Yellow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec.
	Red Walk	0.0	0.0	0.0	0.0	0.0 0	0.0 0	0.0	0.0	0 - 255 sec.
	Pedestrian Clearance	0	0	0	0	0	0	0		0 - 255 sec.
										1
	Phase>	1	2	3	4	5	6	7	8	
	Call Mode	0	0	0	0	0	0	0	0	
				·				i -		ecall, 7 = omit ped, 8 = red rest 0 - 255 sec.
Sarvica Blan	Minimum Green	0	0	0	0	0	0	0		0.0 - 25.5 sec.
Service Plan 5	Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec. 0.0 - 25.5 or 3.0 - 25.5
•	Yellow Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0 - 25.5 sec.
	Walk	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 - 255 sec.
	Pedestrian Clearance	0	0	0	0	0	0	0	0	0 - 255 sec.
			1							
	Phase>	1	2	3	4	5	6	7	8	
	Call Mode	0	0 min ro	0	0	0	0	0	0 nod r	ocall 7 amit and 9 and and
		_								ecall, 7 = omit ped, 8 = red rest 0 - 255 sec.
Com# 51	Minimum Green	0	0	0	0	0	0	0		0 - 255 Sec. 0.0 - 25.5 sec.
Service Plan 6	Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
U	Yellow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 or 3.0 - 25.5
	Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec.
	Walk	0	0	0	0	0	0	0		0 - 255 sec.
	Pedestrian Clearance		0	0	0	0	0	0	0	0 - 255 sec.

				Serv	rice P	lans C	ont			
	Phase>	1	2	3	4	5	6	7	8	
	Call Mode	0	0	0	0	0	0	0	0	
	0 = actuated, 1 = omit, 2 = CN	IA, 3 =	min red	all, 4 =	max re	ecall, 5	= soft re	ecall, 6	= ped r	ecall, 7 = omit ped, 8 = red rest
	Minimum Green	0	0	0	0	0	0	0	0	0 - 255 sec.
Service Plan	Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec.
7	Yellow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 or 3.0 - 25.5
	Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec.
	Walk	0	0	0	0	0	0	0		0 - 255 sec.
	Pedestrian Clearance	0	0	0	0	0	0	0	0	0 - 255 sec.
	Phase>	1	2	3	4	5	6	7	8	
	Call Mode	0	0	0	0	0	0	0	0	
	0 = actuated, 1 = omit, 2 = CN	IA, 3 =	min red	call, 4 =	max re	ecall, 5	= soft re	ecall, 6		ecall, 7 = omit ped, 8 = red rest
	Minimum Green	0	0	0	0	0	0	0		0 - 255 sec.
Service Plan	Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec.
8	Yellow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 or 3.0 - 25.5
	Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec.
	Walk	0	0	0	0	0	0	0	0	0 - 255 sec.
	Pedestrian Clearance	0	0	0	0	0	0	0	0	0 - 255 sec.
				Max F	Plans	(next/	2/2/7)			
	Phase>	1	2	3	4	5	6	7	8	
	Normal Max	0	0	0	0	0	0	0	0	0 - 255 sec
May Dlan 1	Fail Max	0	0	0	0	0	0	0	0	0 - 255 Sec
Max Plan 1	Auto Max Adjust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 - 25.5 sec
	Auto Max Limit	0	0	0	0	0	0	0	0	0 - 255 sec
	Normal Max	0	0	0	0	0	0	0	0	0. 255
May Dlan 2	Fail Max	0	0	0	0	0	0	0	0	0 - 255 sec
Max Plan 2	Auto Max Adjust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 - 25.5 sec
	Auto Max Limit	0	0	0	0	0	0	0	0	0 - 255 sec
	Normal Max	0	0	0	0	0	0	0	0	0. 255
Max Plan 3	Fail Max	0	0	0	0	0	0	0	0	0 - 255 sec
Wax Plan 3	Auto Max Adjust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 - 25.5 sec
	Auto Max Limit	0	0	0	0	0	0	0	0	0 - 255 sec
	Normal Max	0	0	0	0	0	0	0	0	0 - 255 sec
Max Plan 4	Fail Max	0	0	0	0	0	0	0	0	0 - 200 Sec
IVIAX FIAIT 4	Auto Max Adjust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 - 25.5 sec
	Auto Max Limit	0	0	0	0	0	0	0	0	0 - 255 sec
	Normal Max	0	0	0	0	0	0	0	0	0 - 255 sec
Max Plan 5	Fail Max	0	0	0	0	0	0	0	0	200 000
WILL I IUII J	Auto Max Adjust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 - 25.5 sec
	Auto Max Limit	0	0	0	0	0	0	0	0	0 - 255 sec
	Normal Max	0	0	0	0	0	0	0	0	0 - 255 sec
Max Plan 6	Fail Max	0	0	0	0	0	0	0	0	230 300
ax i iuii V	Auto Max Adjust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 - 25.5 sec
,	Auto Max Limit	0	0	0	0	0	0	0	0	0 - 255 sec
	Normal Max	0	0	0	0	0	0	0	0	0 - 255 sec
Max Plan 7	Fail Max	0	0	0	0	0	0	0	0	
a. i idii 1	Auto Max Adjust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 - 25.5 sec
	Auto Max Limit	0	0	0	0	0	0	0	0	0 - 255 sec
	Normal Max	0	0	0	0	0	0	0	0	0 - 255 sec
Max Plan 8	Fail Max	0	0	0	0	0	0	0	0	200 300
max i iaii 0	Auto Max Adjust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 - 25.5 sec
	Auto Max Limit	0	0	0	0	0	0	0	0	0 - 255 sec

		Coord	linat	ion	Data	(ne	xt/2/	3)				
	Coordinat	ion Mod	des (n	ext/2/	3/1, n	ext/2/3	3/4/1, r	next/2	/3/4/3)			
Flash Mode	33	0=off, 1	1=on, 3	3=time	clock,	34=con	nm, 35=	hardwii	re			
Coordination Plan Mode	33	0=free,	1-32 =	coord	plan 1-	32, 33=	time clo	ock, 34=	=comm	, 35=ha	ardwire	
Offset Seeking Mode	2	0=add	only, 1=	dwell,	2=fastv	vay						
Late Ped	0	0 = off,	1 = on									
Coord Walk Rest	0	0 = off,	1 = on	, 2 = by	/ TOD (	ircuit 1	60, 3 =	end of	walk, 4	= coor	d ped during perms	
Repeated Phase Service	0	0=off, 1	1=on (n	o coor	d ped),	2=on (b	eginnin	g greer	n coord	ped), 3	3=on (coord ped always)	
Zero Mode (TS2 only)	Zero Mode (TS2 only)  1 0=start of main street, 1=end of main street, 2=by TOD circuit 144											
		Phase>	1	2	2	1	5	6	7	Ω	0 = service allowed	

 Phase -->
 1
 2
 3
 4
 5
 6
 7
 8
 0 = service allowed 1 = service prevented

 Omit Phase During Repeated Phase Service
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Coordination Plans (next/2/3/2)

	Coordinati	on Phases			Min Cycle			
Coord Plan	Ring 1	Ring 2	Cycle Length	Offset Time	Length Dwell Time	Permissive	Service Plan	Max Plan
1 -	2	6	90	0	0	0	0	0
2-	2	6	100	0	0	0	0	0
3 -	2	6	110	0	0	0	0	0
4 -	0	0	0	0	0	0	0	0
5 -	0	0	0	0	0	0	0	0
6 -	0	0	0	0	0	0	0	0
7-	0	0	0	0	0	0	0	0
8 -	0	0	0	0	0	0	0	0
9-	0	0	0	0	0	0	0	0
10 -	0	0	0	0	0	0	0	0
11 -	0	0	0	0	0	0	0	0
12 -	0	0	0	0	0	0	0	0
13 -	0	0	0	0	0	0	0	0
14 -	0	0	0	0	0	0	0	0
15 -	0	0	0	0	0	0	0	0
16 -	0	0	0	0	0	0	0	0
17-	0	0	0	0	0	0	0	0
18 -	0	0	0	0	0	0	0	0
19 -	0	0	0	0	0	0	0	0
20 -	0	0	0	0	0	0	0	0
21 -	0	0	0	0	0	0	0	0
22 -	0	0	0	0	0	0	0	0
23 -	0	0	0	0	0	0	0	0
24 -	0	0	0	0	0	0	0	0
25 -	0	0	0	0	0	0	0	0
26 -	0	0	0	0	0	0	0	0
27 -	0	0	0	0	0	0	0	0
28 -	0	0	0	0	0	0	0	0
29 -	0	0	0	0	0	0	0	0
30 -	0	0	0	0	0	0	0	0
31 -	0	0	0	0	0	0	0	0
32 -	0	0	0	0	0	0	0	0
	0	- 8		0 - 25	55 sec.		0 -	8

				C	oordi	natio	n Plan	s cor	nt.	
		* =	Force		plit Tin				* = Yield Poir Times	
Coord Plan	1	2	3	4	5	6	7	8	Ring 1	Ring 2
1 -	12	32	19	27	12	32	19	27	0	0
2-	15	35	20	30	15	35	20	30	0	0
3 -	16	40	21	33	16	40	21	33	0	0
4 -	0	0	0	0	0	0	0	0	0	0
5 -	0	0	0	0	0	0	0	0	0	0
6 -	0	0	0	0	0	0	0	0	0	0
7-	0	0	0	0	0	0	0	0	0	0
<i>3</i> -	0	0	0	0	0	0	0	0	0	0
9 -	0	0	0	0	0	0	0	0	0	0
10 -	0	0	0	0	0	0	0	0	0	0
11 -	0	0	0	0	0	0	0	0	0	0
12 -	0	0	0	0	0	0	0	0	0	0
13 -	0	0	0	0	0	0	0	0	0	0
14 -	0	0	0	0	0	0	0	0	0	0
15 -	0	0	0	0	0	0	0	0	0	0
'6 -	0	0	0	0	0	0	0	0	0	0
17-	0	0	0	0	0	0	0	0	0	0
18 -	0	0	0	0	0	0	0	0	0	0
19 -	0	0	0	0	0	0	0	0	0	0
20 -	0	0	0	0	0	0	0	0	0	0
21 -	0	0	0	0	0	0	0	0	0	0
22 -	0	0	0	0	0	0	0	0	0	0
23 -	0	0	0	0	0	0	0	0	0	0
24 -	0	0	0	0	0	0	0	0	0	0
25 -	0	0	0	0	0	0	0	0	0	0
26 -	0	0	0	0	0	0	0	0	0	0
27 -	0	0	0	0	0	0	0	0	0	0
28 -	0	0	0	0	0	0	0	0	0	0
29 -	0	0	0	0	0	0	0	0	0	0
30 -	0	0	0	0	0	0	0	0	0	0
31 -	0	0	0	0	0	0	0	0	0	0
32 -	0	0	0	0	0	0	0	0	0	0
				0 - 255	sec *	= force	offs a	nd yield	d points	

Circuit Mapping (next/2/3/3)																	
Circuit Map	Coord Plan	1	Clock cuit		Clock cuit	Time (			Clock	_	Clock		Clock cuit	Time Cire		Time Circ	
1	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
2	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
3	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
4	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
5	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
6	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
7	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
8	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
9	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
10	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
11	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
12	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
13	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
14	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
15	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
16	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
17	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
18	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
19	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
20	34	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U	0	N/U
	= free, 1 - 32 = uits - 0 = not u					34 none	e selec	ted									

			Dyna	mic Ph	ase Le	ength (	next/2/	3/4/4)		
	Phase>	1	2	3	4	5	6	7	8	
В	Back Detector	0	0	0	0	0	0	0	0	0 = none, 1-32 = detector 1-32
	Lane Factor	0	0	0	0	0	0	0	0	0 = none, 1.0 - 5.0
Check	Out Detector	0	0	0	0	0	0	0	0	0 = none, 1-32 = detector 1-32
	Set A	0	0	0	0	0	0	0	0	
Coord Delta Force Off	Set B	0	0	0	0	0	0	0	0	
Coord Della Force Off	Set C	0	0	0	0	0	0	0	0	
	Set D	0	0	0	0	0	0	0	0	0 - 255 sec
	Set A	0	0	0	0	0	0	0	0	0 - 255 Sec
Free Delta Max	Set B	0	0	0	0	0	0	0	0	
riee Deita Max	Set C	0	0	0	0	0	0	0	0	
	Set D	0	0	0	0	0	0	0	0	

	Platoon Progression (next/2/3/4/5)												
Entry Lo	cal On	nly	Master L	ocal O	nly								
Platoon Max	0	0 - 255 sec	Smoothing Factor	0.0	0.0 - 1.0								
Min Platoon Green	0	0 - 255 sec											
Entry Detector Gap	0.0	0.0 - 25.5											
Min Platoon Cycle	0	0 - 255 sec											

Min Platoon Cycle	0	0 - 255	sec										,				
	Inbo	und						Outb	ound								
Only for Entry In	bound	Local	or Mas	ster Loc	al		Only for Entry Ou	ıtbour	d Loca	l or Ma	ster Lo	cal					
Entry IB Local also L	ast OE	B Local	0	0 - 50			Entry OB Local also	Last IE	Local	0	0 - 50						
		Speed	0	0 - 55	mph				Speed	0	0 - 55	mph					
Distance fror	n Entry	/ Local	0	0 - 650	000 feet		Distance fron	/ Local	0	0 - 650	000 feet						
Er	ntry Lo	cal Onl	у				Entry Local Only										
Distance from Entry L	ocal D	etector	0	0 - 999	feet		Distance from Entry Lo	etector	0	0 - 999	feet						
Entry L	ocal D	etector	0	0	0 - 32		Entry Lo	0	0	0 - 32							
	Master	Local						Maste	r Local								
Master Mid - Syste	m Criti	cal Det	ectors	0	0	0 - 16	Master Mid - Syste	m Crit	ical Det	ectors	0	0	0 - 16				
					Fo	rce Off	Percents										
Inbound	Inbound 1 3					8	Outbound	1	3	4	5	7	8				
Split 1	<b>Split 1</b> 0 0				0	0	Split 1	0	0	0	0	0	0				
Split 2	Split 2 0 0					0	Split 2	0	0	0	0	0	0				
1																	

0 - 100 %

0 - 100 %

		-		Т	ime			(t/2/4	.)				
	Day	Time	Coard Plan	Coord Plan		Day Program	n (next	Day	Time	Coord Dlan	Coord Pla		State On 10#
	Prog.	Time	Coord Plan	Circuit		Off	51	Prog.	Time	Coord Plan	Circuit	: 	State On/Off
2							52						
3							53						
							54						
5							55						
6							56						
7							57						
8							58						
9							59						
10							60						
11							61						
12							62						
13							63						
14							64						
15							65						
16							66						
17							67						
18							68						
19							69						
20							70						
21							71						
22							72						
23							73						
24							74						
25							75						
26							76						
27							77						
28							78						
29							79						
30							80						
31							81						
32							82						
33							83						
34							84						
35							85					-	
36							86					-	
37							87					-	
38							88					-	
39							89						
40 41							90 91						
41 42							91						
42							93						
44						+	93					<del>                                     </del>	
45							95						
46							96						
47							97						
48							98						
49							99						
50							100						
JU		 		000rd ml C	20		.00		 		000rd ml 0	20	
	1 - 15	hh : mm	X = on	coord plan 0 - circuit 1-1	96 96	X = on		1 - 15	hh : mm	X = on	coord plan 0 circuit 1-1	- 3∠ or 96	X = on

	Day			Coord Plan	or	State On /		Day			Coord Plar	ı or	State On
	Prog.	Time	Coord Plan	Circuit	· •.	Off		Prog.	Time	Coord Plan	Circuit		Off
101				-			151						
102				-			152						
103				-			153						
104							154						
105				_			155						
106				_			156						
107							157						
108							158						
109							159						
110							160						
111							161						
112				_			162						
113							163						
114							164						
115							165						
116							166						
117				-			167						
118				-			168						
119				-			169						
120				-			170						
121							171						
122							172						
123							173						
124							174						
125							175					L	
126							176					L	
127							177					L	
128							178						
129							179						
130							180						
131							181						
132							182						
133							183					ı	
134							184						
135							185						
136							186						
137							187						
138							188						
139							189						
140							190						
141							191						
142							192						
143							193						
144							194						
145							195						
146							196						
147							197						
148							198						
149							199						
150							200						
	_	hh :		coord plan 0 -					hh :		coord plan 0 -		1

		Week	Progra	m (nex	t/2/4/2\				Ye	ar Program (	next/2/4/3)
	Sun	Mon	Tue	Wed	Thu	Fri	Sat			Week	IIIOXUZI-40)
1	2	1	1	1	1	1	2	From Date	To Date	Program	
2	1	1	1	1	1	1	1	01/01/2013	12/31/2013	1	
3	1	1	1	1	1	1	1				
4	1	1	1	1	1	1	1				
5	1	1	1	1	1	1	1				
6	1	1	1	1	1	1	1				
7	1	1	1	1	1	1	1				
8	1	1	1	1	1	1	1				
9	1	1	1	1	1	1	1				
10	1	1	1	1 1	1	1	1				
		0 = no	ne, 1 -	15 = da	iy pian					-	
		Except	ion Da	vs (nex	t/2/4/6)						
				, - (	,		Day				
	D	ow.	w	MC	DOM	MOY	Prog.				
1											]
2											New Years Day - Date - January
3											
4											Martin Luther King Day - DOW
5							1				WOM - 3rd Monday of January
6											President's Day - DOW WOM -
7											3rd Monday February
8											]   Memorial Day - DOW WOM -
9 10											Last Monday May
11											Fourth of July Data July 4th
12											Fourth of July - Date - July 4th
13											Labor Day - DOW WOM -
14											1st Monday September
15											Columbus Day - DOW WOM -
16											2nd Monday October
17											Veteran's Day - Date - November
18											11th
19											Thenke six in a DOW WOM
20											Thanksgiving - DOW WOM - 4th Thursday November
21											-
22											Christmas - Date - December 25th
24											1
25											1
26											1
27											
28											
29											
30											
31							1				
32											-
33											-
34										-	1
35											1
	Λ.	10	n .	- 5	0-31	0-12	0 - 15				1
						1 0 12	10 10				
	Time Clock References (next/2/4/5)										
	Synch reference Mode 0 0 = time						,	Exception day	headings - D	OW = Day of Week, WOM = Week	
	Synch Reference Time 00:00 00:00 -						23:59	or iviontn, DON	ı = Day of Mo	nth, MOY = Month of Year	
	Daylight Savings Enable X X = on										
			Rese	t Time	L 00	:00	00:00	23:59			

			Overri	des (next/2/4/4)		_	
1 - Coord Line 1	CL1	TOD		51 - Ped Omit 3	PO3	TOD	4
2 - Coord Line 2	CL2	TOD		52 - Ped Omit 4	PO4	TOD	4
3 - Coord Line 4	CL4	TOD		53 - Ped Omit 5	PO5	TOD	1
4 - Coord Line 8	CL8	TOD		54 - Ped Omit 6	PO6	TOD	
5 - Coord Line 16	C16	TOD		55 - Ped Omit 7	PO7	TOD	1
6 - Coord Operation	CRD	TOD		56 - Ped Omit 8	PO8	TOD	
7 - Soft Flash	SFL	TOD		57 - Conditional Service	cvs	TOD	
8 - Enable System Relays	ESR	TOD		58 - Inhibit Simultaneous Gap Out	ISG	On	
9 - Call to Non Act 1	CN1	TOD		59 - Inhibit Hardwire	HWI	TOD	
10 - Call to Non Act 2	CN2	TOD		60 - Ped Override Mode	POM	On	
11 - Walk Rest Modifier	WRM	TOD		61 - Dual Entry	DLE	On	1 1
12 - Min Recall	MIN	TOD		62 - Exclusive Ped	EPD	TOD	1 1
13 - Max 2 Both Rings	MX2	TOD		63 - Call to Time Clock Mode	СТС	TOD	1 1
14 - Coord Inhibit Max Ring 1, 2	IMT	TOD		64 - Dual Enhanced Ped	DEP	TOD	]
15 - Not Used	N/U	TOD		65 - Service Plan 1	SP1	TOD	]
16 - Call to Free	CTF	TOD		66 - Service Plan 2	SP2	TOD	]
17 - TOD Output 1	TO1	TOD		67 - Service Plan 3	SP3	TOD	]
18 - TOD Output 2	TO2	TOD		68 - Service Plan 4	SP4	TOD	
19 - TOD Output 3	TO3	TOD		69 - Service Plan 5	SP5	TOD	
20 - TOD Output 4	TO4	TOD		70 - Service Plan 6	SP6	TOD	
21 - TOD Output 5	TO5	TOD		71 - Service Plan 7	SP7	TOD	
22 - TOD Output 6	TO6	TOD		72 - Service Plan 8	SP8	TOD	
23 - TOD Output 7	TO7	TOD		73 - Max Plan 1	MP1	TOD	
24 - TOD Output 8	TO8	TOD	,	74 - Max Plan 2	MP2	TOD	
25 - Vehicle Call Phase 1	VC1	TOD	On / Off /	75 - Max Plan 3	MP3	TOD	On / Off /
26 - Vehicle Call Phase 2	VC2	TOD	TOD	76 - Max Plan 4	MP4	TOD	TOD
27 - Vehicle Call Phase 3	VC3	TOD		77 - Max Plan 5	MP5	TOD	
28 - Vehicle Call Phase 4	VC4	TOD		78 - Max Plan 6	MP6	TOD	
29 - Vehicle Call Phase 5	VC5	TOD		79 - Max Plan 7	MP7	TOD	
30 - Vehicle Call Phase 6	VC6	TOD		80 - Max Plan 8	MP8	TOD	
31 - Vehicle Call Phase 7	VC7	TOD		81 - Transit Priority Max Group 1	TG1	TOD	
32 - Vehicle Call Phase 8	VC8	TOD		82 - Transit Priority Max Group 2	TG2	TOD	
33 - Ped Call Phase 1	PC1	TOD		83 - Transit Priority Max Group 3	TG3	TOD	
34 - Ped Call Phase 2	PC2	TOD		84 - Transit Priority Max Group 4	TG4	TOD	
35 - Ped Call Phase 3	PC3	TOD		85 - Transit Priority Max Group 5	TG5	TOD	
36 - Ped Call Phase 4	PC4	TOD		86 - Transit Priority Max Group 6	TG6	TOD	
37 - Ped Call Phase 5	PC5	TOD		87 - Transit Priority Max Group 7	TG7	TOD	
38 - Ped Call Phase 6	PC6	TOD		88 - Transit Priority Max Group 8	TG8	TOD	
39 - Ped Call Phase 7	PC7	TOD		89 - Inhibit Volume Density 1	IV1	TOD	
40 - Ped Call Phase 8	PC8	TOD		90 - Inhibit Volume Density 2	IV2	TOD	
41 - Vehicle Omit 1	VO1	TOD		91 - Inhibit Volume Density 3	lv3	TOD	
42 - Vehicle Omit 2	VO2	TOD		92 - Inhibit Volume Density 4	IV4	TOD	1
43 - Vehicle Omit 3	VO3	TOD		93 - Inhibit Volume Density 5	IV5	TOD	1
44 - Vehicle Omit 4	VO4	TOD		94 - Inhibit Volume Density 6	IV6	TOD	1
45 - Vehicle Omit 5	VO5	TOD		95 - Inhibit Volume Density 7	IV7	TOD	1
46 - Vehicle Omit 6	V06	TOD	1	96 - Inhibit Volume Density 8	IV8	TOD	1
47 - Vehicle Omit 7	V07	TOD	1	97 - Lag 1	LG1	TOD	1
48 - Vehicle Omit 8	VO8	TOD	1	98 - Lag 3	LG3	TOD	1
49 - Ped Omit 1	PO1	TOD		99 - Lag 5	LG5	TOD	1
50 - Ped Omit 2	PO2	TOD		100 - Lag 7	LG7	TOD	1
JU - 1 EU UIIIIL Z	PU2	וטטו	1	I I VV - Lay I	LUI	וטט	

		Circ	uit Ove	errides cont.			
101 - Inhibit Overlap A	OLA	TOD		151 - Coord Hold 7	HD7	TOD	
102 - Inhibit Overlap B	OLB	TOD	1	152 - Coord Hold 8	HD8	TOD	1
103 - Inhibit Overlap C	OLC	TOD	1	153 - PE Priority Return B	PRB	TOD	1
104 - Inhibit Overlap D	OLD	TOD	1	154 - PE Priority Return C	PRC	TOD	1
105 - Enable Schedule A Phone 1	AT1	TOD	1	155 - PE Priority Return D	PRD	TOD	1
106 - Enable Schedule A Phone 2	AT2	TOD	1		PRE	TOD	1
107 - Enable Schedule B Phone 1	BT1	TOD	-	156 - PE Priority Return E 157 - Platoon Inbound	PPI	TOD	1
	_						1
108 - Enable Schedule B Phone 2	BT2	TOD	-	158 - Platoon Outbound	PPO	TOD	1
109 - Enable Schedule C Phone 1	CT1	TOD	-	159 - Platoon Spl 2	PS2	TOD	1
110 - Enable Schedule C Phone 2	CT2	TOD	-	160 - Coord Walk Rest	CWR	TOD	4
111 - Enable Volume to Call Phone 1	VT1	TOD	-	161 - Dynamic Phase Length Short Inhibit 1	SI1	TOD	4
112 - Enable Volume to Call Phone 2	VT2	TOD		162 - Dynamic Phase Length Short Inhibit 2	SI2	TOD	-
113 - Enable Volume Logging	EVL	On	_	163 - Dynamic Phase Length Short Inhibit 3	SI3	TOD	4
114 - Enable MOE Logging	EML	On		164 - Dynamic Phase Length Short Inhibit 4	SI4	TOD	1
115 - Detector Low Threshold Inhibit	DLI	TOD	_	165 - Dynamic Phase Length Short Inhibit 5	SI5	TOD	1
116 - Detector Continue Presence Inhibit	DPI	TOD	1	166 - Dynamic Phase Length Short Inhibit 6	SI6	TOD	1
117 - Inhibit Detector Based on Programming	IND	TOD		167 - Dynamic Phase Length Short Inhibit 7	SI7	TOD	1
118 - Inhibit Detector Delay	IDD	TOD		168 - Dynamic Phase Length Short Inhibit 8	SI8	TOD	
119 - Inhibit Conditional Ped	ICP	TOD		169 - Coord Late Left Turn 1	CT1	TOD	
120 - Inhibit Transit Priority	ITP	TOD		170 - Coord Late Left Turn 3	CT3	TOD	
121 - Red Rest Ring 1,2	RRM	TOD		171 - Coord Late Left Turn 5	CT5	TOD	
122 - Not Used	N/U	TOD		172 - Coord Late Left Turn 7	CT7	TOD	
123 - Omit Red Clear Ring 1,2	ORC	TOD		173 - Dynamic Phase Length Enable A	DPA	TOD	1
124 - Not Used	N/U	TOD		174 - Dynamic Phase Length Enable B	DPB	TOD	1
125 - Ped Recycle Ring 1,2	PCY	TOD	On /	175 - Dynamic Phase Length Enable C	DPC	TOD	On .
126 - Not Used	N/U	TOD	Off /	176 - Dynamic Phase Length Enable D	DPD	TOD	Off
127 - Enable MOE Log to Call Phone 1	MT1	TOD	100	177 - Proactive Plan Select Average	PSA	TOD	101
128 - Enable MOE Log to Call Phone 2	MT2	TOD	1	178 - Proactive Plan Select Inbound	PSI	TOD	1
129 - Transit Inhibit Short Time 1	IS1	TOD	1	179 - Proactive Plan Select Outbound	PSO	TOD	1
130 - Transit Inhibit Short Time 2	IS2	TOD	1	180 - Split Variant Inbound	SVI	TOD	1
131 - Transit Inhibit Short Time 3	IS3	TOD	1	181 - Split Variant Outbound	SVO	TOD	1
132 - Transit Inhibit Short Time 4	IS4	TOD	1	182 - Disable Coord Walk Rest Ring 1	DW1	TOD	1
133 - Transit Inhibit Short Time 5	IS5		-	· · · · · · · · · · · · · · · · · · ·	DW1		1
		TOD		183 - Disable Coord Walk Rest Ring 2	_	TOD	1
134 - Transit Inhibit Short Time 6	IS6	TOD	-	184 - Proactive Plan Select New Look	NLK	TOD	-
135 - Transit Inhibit Short Time 7	IS7	TOD		185 - Disable Red Clearance Extension	DRX	TOD	-
136 - Transit Inhibit Short Time 8	IS8	TOD		186 - Detector Plan Line 1	DL1	TOD	-
137 - Enable Transit Priority Logging	ETL	TOD	-	187 - Detector Plan Line 2	DL2	TOD	-
138 - Disable Flashing Yellow Arrow 1	DF1	TOD		188 - Disable LRT 1 Vertical Flashing Bar	DV1	TOD	-
139 - Disable Flashing Yellow Arrow 3	DF3	TOD	_	189 - Disable LRT 2 Vertical Flashing Bar	DV2	TOD	4
140 - Disable Flashing Yellow Arrow 5	DF5	TOD	_	190 - Disable LRT 3 Vertical Flashing Bar	DV3	TOD	1
141 - Disable Flashing Yellow Arrow 7	DF7	TOD		191 - Disable LRT 4 Vertical Flashing Bar	DV4	TOD	
142 - Disable Auto Max	DAM	TOD		192 - Datakey Enable	DKE	On	1
143 - Disable Repeat Phase Service	DRS	TOD	]	193 - Dynamic Phase Reversal Enable 1	DR1	TOD	
144 - Coord End of Main Street	EMS	TOD	]	194 - Dynamic Phase Reversal Enable 3	DR3	TOD	
145 - Coord Hold 1	HD1	TOD		195 - Dynamic Phase Reversal Enable 5	DR5	TOD	
146 - Coord Hold 2	HD2	TOD		196 - Dynamic Phase Reversal Enable 7	DR7	TOD	
147 - Coord Hold 3	HD3	TOD		197 - Enable Coord Logging	ECL	On	
148 - Coord Hold 4	HD4	TOD		198 - Disable Gap FYLTA 1,3,5,7	DGF	TOD	
149 - Coord Hold 5	HD5	TOD	1	199 - Coordination Auto Walk	CAW	TOD	1
	+		⊣		1		+

				Pree	mption	Data (nex	(t/2/5)	
			Seque	ence (next/2/5	/1 - 8)			Instructions
Seque		Instruction	Phases Serviced	Interval Time	Hold On Input	Outputs On	Output Mode	0 - Service Phases 1-9 = Special Interval 1-9 10 - Preempt Sequence Allows FYLTA
	1	0	25	0	X	·	0	11 - Preempt Interval Disables FYLTA
	2	98		0			0	15 - Alternate Trap Protection
	3	0		0			0	90 - Go to all Red
	4	0	,	0			0	91 - Soft Flash On 92 - Soft Flash Off
_ [	5	0	,	0			0	93 - Enable Ped
1	6	0	,	0			0	94 - Disable Peds
	7	0	,	0			0	95 - Priority Return 96 - Enable Coordination with peds
	8	0	,	0			0	97 - Enable Coordination with peds
	9	0	,	0			0	98 - Return with NO Calls
	10	0		0			0	99 - Return with Vehicle Calls
	4	2	47					100 - jump to step in Interval Time 101 - Use Interval Time as Resetable Gap
-	1	0	47	0	X		0	Timer
-	2	98		0			0	196 - Coord Re-synch with Peds
-	3	0		0			0	197 - Coord Re-synch without Peds
-	4	0		0			0	200 - Light Rail Train phase without Peds 201 - Light Rail Train phase with Peds
2	5	0		0			0	202 - Return to highest queue/delay phase
F	6	0		0			0	(this uses the Dynamic Phase Length
-	7	0		0			0	Back Detectors)
-	8	0		0			0	216 - Light Rail Train Coord Re-synch with
-	9	0		0			0	217 - Light Rail Train Coord Re-synch
	10	0		0			0	without Peds
	1	0	16	0	Х		0	
	2	98		0			0	
	3	0		0			0	
	4	0		0			0	
آ ۾	5	0		0			0	
3	6	0		0			0	
	7	0		0			0	
	8	0		0			0	
	9	0		0			0	
	10	0		0			0	
	1	0	38	0	X		0	
Ī	2	98	<del>-</del>	0			0	1
Ī	3	0	,	0			0	
Ī	4	0		0			0	1
, [	5	0		0			0	1
4	6	0		0			0	Phonon Sondand shapes 4 0
ļ	7	0		0			0	Phases Serviced - phases 1 - 8 Interval Time - 0 - 255 sec or interval 1 -
ļ	8	0		0			0	10
ļ	9	0		0			0	Hold on Input - X = on
	10	0		0			0	Outputs On - output 1 - 8
	1	0	38	8			0	Output Modes -
Ī	2	0	256	0	Х		0	Output Modes -  0 = all steady on
Ī	3	98		0			0	1 = all flash together
Ī	4	0		0			0	2 = odd flashes WIG, even flashes WAG
ا ہ	5	0		0			0	3 = 1 - 4 steady on, 5 - 8 all flash together
5	6	0		0			0	
Ī	7	0	,	0			0	
Ī	8	0		0			0	1
Ī	9	0	,	0			0	
Ī	10	0		0			0	1
	10	U						<u> </u>

		Ι	S	equend	e con	t <u>.</u>		1						
Seque Inte	ences / rvals	Instruction	Phases Serviced	Inte Tir		Hold Inp		Outpu	ıts On	Output	t Mode			
	1	0	-	U	)					(	0			
	2	0		(	)						0			
	3	0		(	)						0			
	4	0		(	)						0			
6	5	0		(	)						0			
Ū	6	0		(	)						0			
	7	0		(	)						0			
	8	0		(	)						0			
	9	0		(	)						0			
	10	0		(	)						0			
	1	0		(	)					(	0			
	2	0		(	)						0			
	3	0		(							0			
	4	0		(							0			
7	5	0		(	)						0			
•	6	0		(							0			
	7	0		(							0			
	8	0		(							0			
	9	0		(	)						0			
	10	0		(	)						0			
	1	0		(	)						0			
	2	0		(	)						9			
	3	0		(	)						9			
	4	0		(	)						9			
0	5	0		(	)						9			
8	6	0		(	)						9			
	7	0		l	2						9			
	8	0		l	)						0			
	9	0		(	)						0			
	10	0		(	)						0			
					5	Sequen	ce Tim	ning (ne	ext/2/5/	0)				
			Sequen	rce >	1	2	3	4	5	6	7	8		
			Input M										X = on	
	_	T .	Input P		6	6	6	6	8	0	0	0	0 = lowest, - 8 =	= hig
			Min	Green	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec	
				Walk	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0 would time time	the r
				d Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	unie	
Er	ntry		Overlap '		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec	
(Tran	sition)		Overla	ap Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

		S	equen	ce Tim	ing (ne	xt/2/5/0	0)				
	Sequence >	1	2	3	4	5	6	7	8		
Input Memory										X = on	
	Input Priority	6	6	6	6	8	0	0	0	0 = lowest, - 8 = highest	
Entry (Transition) Parameters	Min Green	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 25.5 sec 0.0 would time the normal function time	
	Walk	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0		
	Ped Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	Overlap Yellow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0 - 25.5 sec	
	Overlap Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	Delay to Preempt	0	0	0	0	0	0	0	0	0 - 255 sec	
	Delay Ped Omit	0	0	0	0	0	0	0	0		
	Delay Phase Omit	0	0	0	0	0	0	0	0		
	Min Reservice	0	0	0	0	0	0	0	0	0 - 255 min	
Overlap Inhibits	Α									X = inhibit	
	В										
	С										
	D										
Exit Parameters	Exit to Coord Plan Offset by X	0	0	0	0	0	0	0	0	0 - 20	
	Exit Coord Plan Time	0	0	0	0	0	0	0	0	0 - 60 min	
	Exit to Max Plan	0	0	0	0	0	0	0	0	0 - 8	
	Exit Free Time	0	0	0	0	0	0	0	0	-0 - 60 min	
	Override Time	0	0	0	0	0	0	0	0		
	Fail Time	0	0	0	0	0	0	0	0	0 - 00 111111	
	Exit Mode Time	0	0	0	0	0	0	0	0		

			Pri	ority R	oturn a	nd Sne	cial In	torvale	(nevt/	2/5/0/6,	nevt/2/	5/9)						
Phase	/ Overlap>	1	2	3	4	5	6	7	8	A	B	,,,, C	D					
	Enable	0	0 = disa	abled, 1	l = enal	oled, 2 =	= enabl	led, ski	p preer	nption p	hases c	n exit						
	A (max)	0	0	0	0	0	0	0	0									
[	B (max)	0	0	0	0	0	0	0	0									
Priority Return	C (max)	0	0	0	0	0	0	0	0	0 - 100	% of cu	rrently	used n	nax				
Ketuiii	D (max)	0	0	0	0	0	0	0	0									
	E (max)	0	0	0	0	0	0	0	0									
	Ped Clear	0	0	0	0	0	0	0	0	0 - 100	% of cu	rrently	used p	ped clearance				
Queue De	lay Recovery	0	0	0	0	0	0	0	0	0 - 255	sec.							
	1	0	0	0	0	0	0	0	0	0	0	0	0	0 = Dark				
	2	0	0	0	0	0	0	0	0	0	0	0	0	1 = green don't walk				
	3	0	0	0	0	0	0	0	0	0	0	0	0	2 = green walk				
Special	4	0	0	0	0	0	0	0	0	0	0	0	0	3 = green flashing don't wall				
Intervals	5	0	0	0	0	0	0	0	0	0	0	0	0	4 = yellow 5 = red				
	6	0	0	0	0	0	0	0	0	0	0	0	0	6 = flashing yellow WIG				
	7	0	0	0	0	0	0	0	0	0	0	0	0	7 = flashing yellow WAG				
	8	0	0	0	0	0	0	0	0	0	0	0	0	8 = flashing red WIG				
	9	0	0	0	0	0	0	0	0	0 0 0 0 9 = flashing red WAG				10 = walk only				
											11=flashing don't walk only							
					L	ight Ra	ail Trai	n (nex	t/2/5/0/	7)								
		Ligh	t Rail Tr	ain>		2	3	4										
	Associated Preemp						0	0	0 = no	ne, pree	mpt 1 -	8						
		•	Time to	Green	0	0	0	0	0 - 25	5 sec								
	Horizo	ntal B	ar Flasi	n Time	0.0	0.0	0.0	0.0	00-2	5.5 sec								
	Ver	tical B	ar Flasi	n Time	0.0	0.0	0.0	0.0										
			Min Du	ration	0	0	0	0	0 - 25	5 sec								

		Cor	nmunicat	tion	s Data (	next/2/6)			
1st Central Phone Nun	nber					entral Phone Number			
Modem Setup St	ring					Intersection Name	Herm	nan and Teton	
Subnet N		0.0	0.0.0						
IP ( ethernet )	Port 0	)							
Central	Port 0	)							
System M	lode 0	)							
System	Port 1	,				Alternate System Port	0	)	
System ID 0	AB3418	Re Phy	sical Address		0	IP Add	dress		0.0.0.0
Local ID 0			roup Address		0	Gateway Add			0.0.0.0
Baud Rates		Flow Contr	rol		Port	Ise			
Port 1 (Slot	0	1	<u>.                                    </u>	Suggested L					
Port 2 (Slot	0	1		Suggested Use - Not Used					
Port 3 (Slot A1 Upper)			0		Suggested L	lse - Modem to Central			
Port 4 (Slot A1 Lower or C50S) 2			N\U		Suggested L	lse - RS232 to Laptop			
$0 = 1200, \ 1 = 2400, \ 2 = 9600$	), 3 = 19200	baud	0 = off, 1 =	on					
					orts				1
Volume	Log Period	15	0-255 min. or b			MOE Log P	eriod	15	below
		0 = 0	disabled, 1,2,3,4	1,5,6,1	0,12,15,20,30	0,60 minutes			
			Function Sche	edule	Mapping (ne				1
	Alarm 1	0	_			Soft		1	_
	Alarm 2	0	-			anual Control Enable (		4	_
	Alarm 3	0	1		Eme	rgency or Railroad Pre		1	-
	Alarm 4	0	0 = none				Used	0	0 = none
	Alarm 5	0	1 = none 1 = schedule A			Cycle Fa		2	1 = schedule A
	Not Used	0	2 = schedule B	,	17	Coordination Fa		<u>2</u> 3	2 = schedule B
	Not Used Not Used	0	3 = schedule C 4 = schedule R		K	eyboard use / Data Cha Coord Running /		<u>3</u>	3 = schedule C 4 = schedule R
Pau	ver On / Off	1				Coord Running /			4 = Scriedule R
Checks	4	-			Extended Ped Pushb		0	-	
Video / Deter		4	1			Monitor S		4	
Master to Local (		<del></del> 0	1			monitor o	Lucus	- <del>7</del>	1
mactor to Eddar t			l						

			M	lisce	llan	eous	s Da	ta		
						rity (ne				
		1	2	3	4	5	6	7	8	
	Phases									Phases 1 - 8 (max of 2 compatible phases)
PE Enable (6.	25Hz TP call on PE)									X = 6.25 Hz signal will activate TP
	Priority	0	0	0	0	0	0	0	0	0 - 8, 8 = highest
	Memory									X = on
	Delay Time	0	0	0	0	0	0	0	0	0 - 255 sec
Minimum Reserv	rice Time (per input)	0	0	0	0	0	0	0	0	0 - 255 min
	Override Time	0	0	0	0	0	0	0	0	0 - 255 sec
	Bus Extend	0	0	0	0	0	0	0	0	0 - 255 sec
Minimum Reserv	ice Time (all inputs)	0	0 - 255	min						
F	ree Operation Mode	0	0 = us	e shorte	est of n	nax 1 or	2, 1 -	8 = use	max tii	me of group 1 - 8, 9 = use time of day
			Transit	Priorit	v Alte	rnate F	orce Of	ff Plans		
	Current Coord Plan	1	2	3	4	5	6	7	8	
	te TP Force Off Plan	0	0	0	0	0	0	0	0	0 = none
	Current Coord Plan	9	10	11	12	13	14	15	16	17 - 32 = coord plan 17 - 32
	te TP Force Off Plan	0	0	0	0	0	0	0	0	1
						Timing				
	Phase>	1	2	3	4	5	6	7	8	
Group 1	Max Times	0	0	0	0	0	0	0	0	
	Walk Times	0	0	0	0	0	0	0	0	
Group 2	Max Times	0	0	0	0	0	0	0	0	
Group 2	Walk Times	0	0	0	0	0	0	0	0	
Grave 2	Max Times	0	0	0	0	0	0	0	0	
Group 3	Walk Times	0	0	0	0	0	0	0	0	
Grave 4	Max Times	0	0	0	0	0	0	0	0	]
Group 4	Walk Times	0	0	0	0	0	0	0	0	0 - 255 sec 0 would time the normal function time
0	Max Times	0	0	0	0	0	0	0	0	
Group 5	Walk Times	0	0	0	0	0	0	0	0	]
	Max Times	0	0	0	0	0	0	0	0	]
Group 6	Walk Times	0	0	0	0	0	0	0	0	]
	Max Times	0	0	0	0	0	0	0	0	]
Group 7	Walk Times	0	0	0	0	0	0	0	0	
0	Max Times	0	0	0	0	0	0	0	0	
Group 8	Walk Times	0	0	0	0	0	0	0	0	
				Truck	Priori	ty (next	/2/7/9\			
	Truck Priority>	1	2	3	4	iy (noxi	12/1/0)			
Associ	ated Transit Priority	0	0	0	0	0 = noi	ne 1 - 8	= trans	it priori	ity 1 - 8
	Leading Detector	0	0	0	0					
, , , , , , , , , , , , , , , , , , , ,	Trailing Detector	0	0	0	0	ηυ = noi	ne, 1 - 3	32 = det	ector 1	- 32
	Stop Bar Distance	0	0	0	0	0 - 999	feet			
	Trap Distance	0	0	0	0		9.9 feet			
	Minimum Speed	0	0	0	0	0 - 100				
	Minimum Length	0	0	0	0	0 - 255				
	Downhill Grade	0	0	0	0	0 - 20				
	Uphill Grade	0	0	0	0	0 - 20	/0 			
	Undersized Vehicle					X = En	abled			
	Change I/O		X = Or	n (After	a dow	nload wi	th a po	wer on -	off cy	cle)

	Inputs (Non Default I/O is offset to the right) (next/2/8/1)											
C1-39	101	VD9	C1-55	15	VD5	C1-67	22	PED2	C11-15	254	N/U	
C1-40	113	VD19	C1-56	11	VD1	C1-68	26	PED6	C11-16	254	N/U	
C1-41	106	VD14	C1-57	17	VD7	C1-69	24	PED4	C11-17	254	N/U	
C1-42	118	VD24	C1-58	13	VD3	C1-70	28	PED8	C11-18	254	N/U	
C1-43	102	VD10	C1-59	16	VD6	C1-71	151	PE1	C11-19	254	N/U	
C1-44	114	VD20	C1-60	12	VD2	C1-72	152	PE2	C11-20	254	N/U	
C1-45	107	VD15	C1-61	18	VD8	C1-73	153	PE3	C11-21	254	N/U	
C1-46	161	VD25	C1-62	14	VD4	C1-74	154	PE4	C11-22	254	N/U	
C1-47	105	VD13	C11-10	254	N/U	C1-75	254	N/U	C11-23	254	N/U	
C1-48	117	VD23	C11-11	254	N/U	C1-76	104	VD12	C11-24	254	N/U	
C1-49	112	VD18	C11-12	254	N/U	C1-77	116	VD22	C11-25	254	N/U	
C1-50	164	VD28	C11-13	254	N/U	C1-78	111	VD17	C11-26	254	N/U	
C1-51	199	PEDI	C1-63	103	VD11	C1-79	163	VD27	C11-27	254	N/U	
C1-52	155	PE5	C1-64	115	VD21	C1-80	82	IADV	C11-28	254	N/U	
C1-53	85	MCE	C1-65	108	VD16	C1-81	137	MONS	C11-29	254	N/U	
C1-54	254	N/U	C1-66	162	VD26	C1-82	62	ST1	C11-30	254	N/U	

	Outputs (Non Default I/O is offset to the right) (next/2/8/2)											
C1-2	44	4DWK	C1-19	48	8DWK	C1-35	215	FYA1	C1-91	41	1DWK	
C1-3	64	4WLK	C1-20	68	8WLK	C1-36	217	FYA5	C1-93	61	1WLK	
C1-4	14	4RED	C1-21	18	8RED	C1-37	216	FYA3	C1-94	106	OLBR	
C1-5	24	4YEL	C1-22	28	8YEL	C1-38	218	FYA7	C1-95	105	OLBY	
C1-6	34	4GRN	C1-23	38	8GRN	C1-100	53	3PCL	C1-96	104	OLBG	
C1-7	13	3RED	C1-24	17	7RED	C1-101	51	1PCL	C1-97	103	OLAR	
C1-8	222	FYC3	C1-25	224	FYC7	C1-102	187	SFL	C1-98	102	OLAY	
C1-9	33	3GRN	C1-26	<i>37</i>	7GRN	C1-103	147	WDOG	C1-99	101	OLAG	
C1-10	42	2DWK	C1-27	46	6DWK	C1-83	43	3DWK	C11-1	254	N/U	
C1-11	62	2WLK	C1-28	66	6WLK	C1-84	63	3WLK	C11-2	254	N/U	
C1-12	12	2RED	C1-29	16	6RED	C1-85	116	OLDR	C11-3	254	N/U	
C1-13	22	2YEL	C1-30	26	6YEL	C1-86	115	OLDY	C11-4	254	N/U	
C1-15	32	2GRN	C1-31	36	6GRN	C1-87	114	OLDG	C11-5	254	N/U	
C1-16	11	1RED	C1-32	15	5RED	C1-88	113	OLCR	C11-6	254	N/U	
C1-17	221	FYC1	C1-33	223	FYC5	C1-89	112	OLCY	C11-7	254	N/U	
C1-18	31	1GRN	C1-34	35	5GRN	C1-90	111	OLCG	C11-8	254	N/U	

		Internal Logic (nex	ct/2/9)
Step	Inst.	Description	Comment
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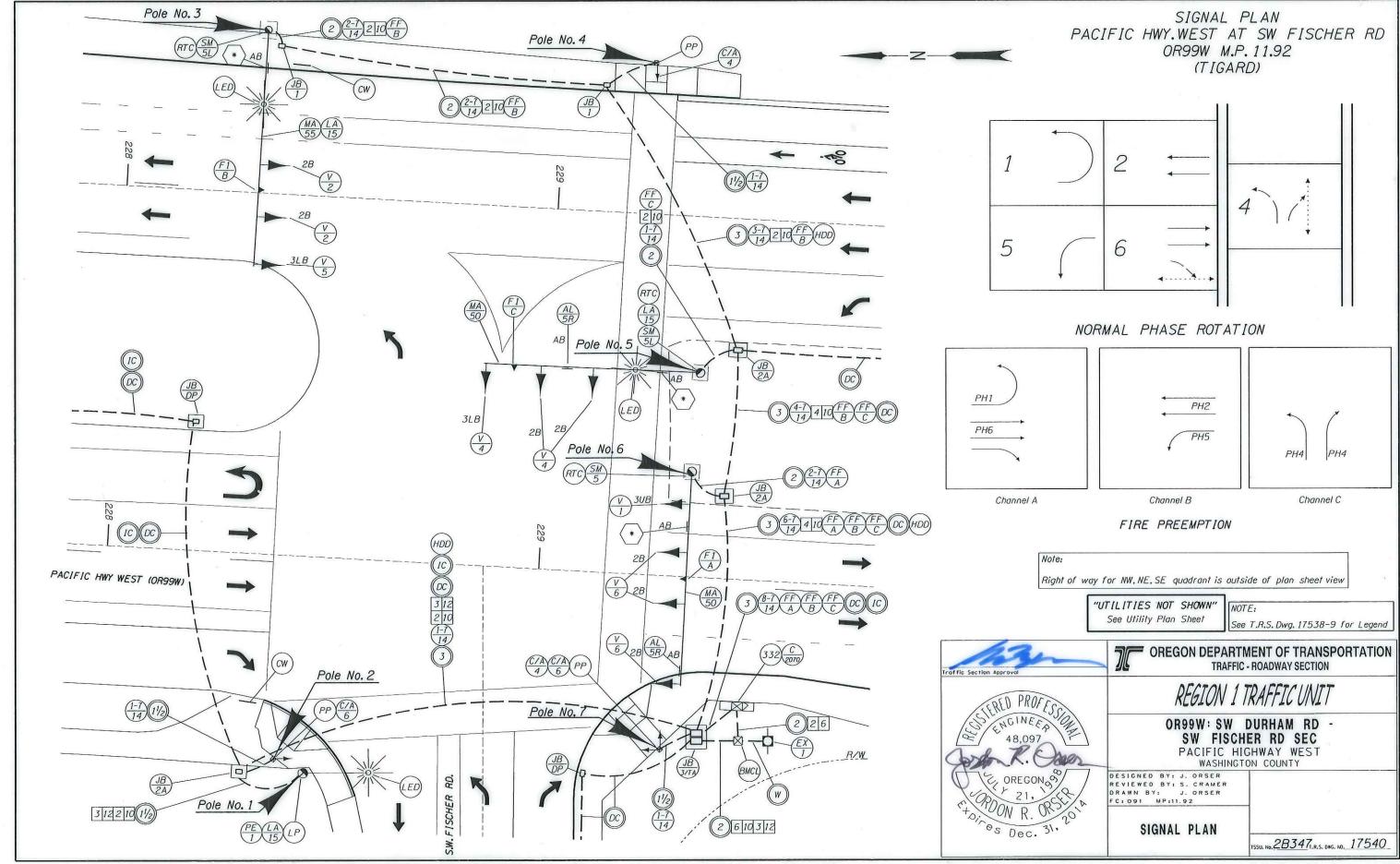
		Internal Logic co	ont.
Step	Inst.	Description	Comment
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		Internal Logic co	
Step	Inst.	Description	Comment
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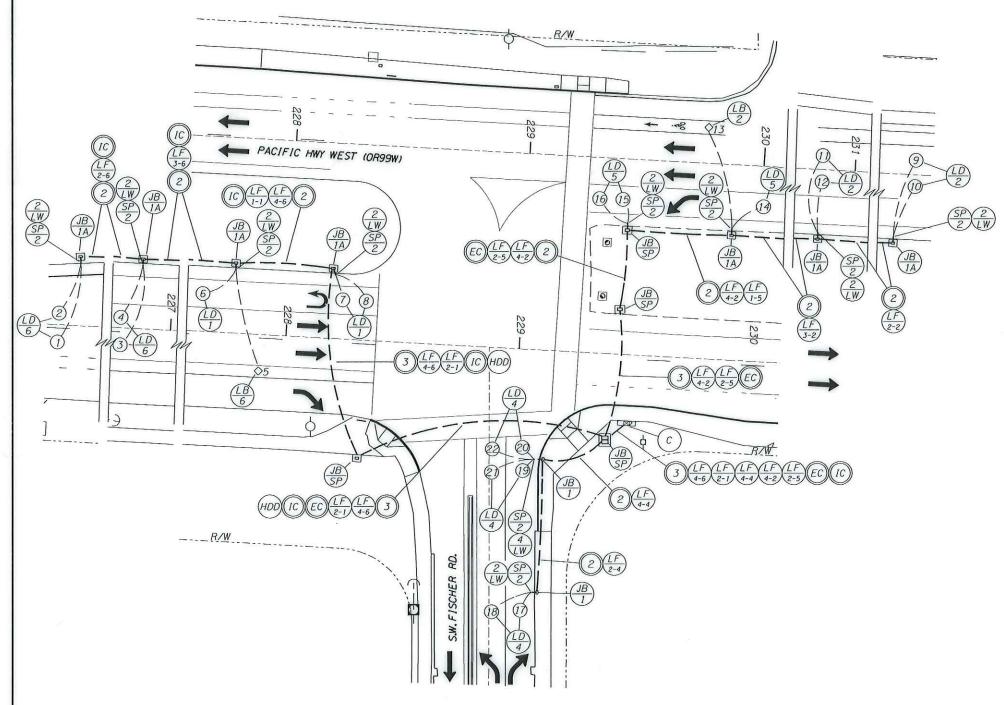
		Internal Logic co	
Step	Inst.	Description	Comment
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	ı			Inte	ernal L	ogic co	ont.	
Step	Inst.		Description					Comment
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252								
253								
254								
255								
256								
				LTA - C				8/6)
			Phase Pairs>	1 - 2	3 - 4	5 - 6	7 - 8	
			Detector Input	0	0	0	0	0 = disable, 1 - 64 detectors
Gan.	.Denen	dent FYLTA	Min Delay	0.0	0.0	0.0		0 - 255 sec
		(2/8/6-A)	Detector Gap		255	255		0 - 25.5 sec
,		,	Max Delay	3	3	3	3	0 - 255 sec
			Not Ped	4	4	4	4	0 - 255 sec
								tt/2/2/8/6)
			Phase Pairs>	1 - 2		5 - 6	7 - 8	
			Detector Input	0	0	0	0	0 = disable, 1 - 64 detectors
FYL1	ΓA Gan	-Dependent	Min Delay	0	0	0	0	0 - 255 sec
		n A	Detector Gap	0.0	0.0	0.0		0 - 25.5 sec
			Max Delay	0	0	0	0	0 - 255 sec
			Not Ped	0	0	0	0	0 - 255 sec
			Detector Input	0	0	0	0	0 = disable, 1 - 64 detectors
FYL		-Dependent	Min Delay Detector Gap	0.0	0.0	0.0	0.0	0 - 255 sec 0 - 25.5 sec
	Pla	n B	Max Delay	0.0	0.0	0.0	0.0	0 - 255 sec 0 - 255 sec
			Not Ped	0	0	0	0	0 - 255 sec
			Detector Input	0	0	0	0	0 = disable, 1 - 64 detectors
			Min Delay	0	0	0	0	0 = disable, 1 - 64 detectors 0 - 255 sec
FYL1	ΓΑ Gap	-Dependent	Detector Gap	0.0	0.0	0.0		
	Pla	n C	Max Delay	0.0	0.0	0.0	0.0	0 - 255 sec
Щ			ax Doluy					1

	Not Ped	0	0	0	0	0 - 255 sec
	Detector Input	0	0	0	0	0 = disable, 1 - 64 detectors
EVI TA Con Domondont	Min Delay	0	0	0	0	0 - 255 sec
FYLTA Gap-Dependent Plan D	Detector Gap	0.0	0.0	0.0	0.0	0 - 25.5 sec
i idii b	Max Delay	0	0	0	0	0 - 255 sec
	Not Ped	0	0	0	0	0 - 255 sec



DETECTOR PLAN
PACIFIC HWY.WEST AT SW FISCHER RD
OR99W M.P. 11.92
(TIGARD)

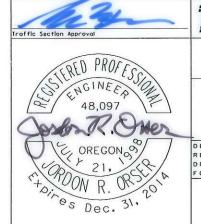


Loop Distance Number Feet	Phase	Slot	Voyage	
1 ——320——— 2 ——320———	6 -	J2U J2L	- 19 - 20	
3 ————————————————————————————————————	- 6 -	- J3U	- 21	
5 BIKE 50 ———————————————————————————————————	6 —	- J3L	- 22	
7 — 15 — —	1	- 19U —	- 2	
9 —— 320——— 10 —— 320———	2 —	- 12U - 12L	- 9 - 10	
11 ———————————————————————————————————	_ 2 _	130		
13 <u>BIKE</u> 50 14 75	2 — 5 —	- I3L - J1	- 12 - 5	Controller
15 ————————————————————————————————————	<del></del>	- J9U	- 6	Cabinet
17 ——— 75 ———— 18 ——— 75 ————	4 —	- 16U - 16L	- 14 - 15	
19 —— 15 ————	4 —	- <i>17U</i>		
21 —— 15 ———	4	- I7L	- 17	

LOOP DETECTOR WIRING DIAGRAM "Distance" is from Stop Line to center of loop in feet

"UTILITIES NOT SHOWN" See Utility Plan Sheet NOTE:

See T.R.S. Dwg. 17538-9 for Legend



OREGON DEPARTMENT OF TRANSPORTATION TRAFFIC - ROADWAY SECTION

# REGION 1 TRAFFIC UNIT

OR99W: SW DURHAM RD -SW FISCHER RD SEC PACIFIC HIGHWAY WEST WASHINGTON COUNTY

DESIGNED BY: J. ORSER REVIEWED BY: S. CRAMER DRAWN BY: J. ORSER FC: 091 MP:11.92

DETECTOR PLAN

SSU. No.2<u>B3</u>47<sub>t,r.s. dwg. no<u>.</u> 17542</sub>

Table: Phase Timing Plans [Timing Plan: 1]

		<u> </u>		•	
Phase	1	2	4	5	6
Walk	0	0	7	0	7
Ped Clear	0	0	43	0	16
Min Green	4	10	6	4	10
Passage	2.3	4.5	2.5	2.3	4.5
Max 1	25	90	35	25	90
Max 2	23	82	30	23	82
Max 3	25	92	33	40	86
Yellow Chang	3.5	5	3.5	4	5
Red Clear	1	1	1.5	1.5	1
<b>Added Initial</b>	0	1.2	0	0	1.2
Maximum Ini	4	17	6	4	17
Time Before	8	10	8	8	10
Time To Redu	3	20	3	3	20
Minimum Ga	0.5	2.5	0.5	0.5	2.5

## **Table: Sequence Parameters [Sequence: 1]**

Ring Sequence Data

**1** 1,2,a,4,b

**2** 5,6,a,b

## **Table: Sequence Parameters [Sequence: 5]**

Ring Sequence Data

**1** 1,2,a,4,b

**2** 6,5,a,b

# Table: Global Phase Recalls

Phase		2	6
Min	TRUE	TRUE	
Max	FALSE	FALS	Ξ
Ped	FALSE	FALS	Ξ
Act. Walk Re	FALSE	FALS	Ξ

## **Table: Pattern Parameters**

Pattern	Сус	le Time Offset :	1 Offset 2	Offset 3	Spl	lit Number Seq Nui	mber Ref Point	<b>Coord Mode Force Off</b>
	1	140	88	0	0	1	5 Green	Full Permissiv Phase
	2	120	1	0	0	2	1 Green	Full Permissiv Phase
	3	140	81	0	0	3	1 Green	Full Permissiv Phase
	4	120	85	0	0	4	1 Green	Full Permissiv Phase

Max Mode	Trans Ped	d McMin Permiss	si Correction M Singl	e Perm <sup>9</sup> Phase	e Plan Over	lap Plan Veh [	Detector Veh I	Detector Ped [	etector)
Max 1	Phase	Phase Only	Shortway (Au	0	1	1	1	1	1
Max 2	Phase	Phase Only	Shortway (Au	0	1	1	1	1	1
Max 3	Phase	Phase Only	Shortway (Au	0	1	1	1	1	1
Max 1	Phase	Phase Only	Shortway (Au	0	2	1	1	1	1

### Ped Detector Pri/Pre Detec Description

1 1 Coord Plan #1 1 1 Coord Plan #2 1 1 Coord Plan #3 1 1 Coord Plan #4 Table: Split Parameters [Split: 1]

Phase	e Time Min Max Coord Phase Ref Po		Ref Point	Trans	s Cover F Force Off	Mo Mode	Pri Min			
	1	20	0	0	0		0	0 Fixed	None	0
	2	90	0	0	TRUE	TRUE		0 Fixed	None	0
	4	30	0	0	0		0	0 Fixed	None	0
	5	20	0	0	0		0	0 Fixed	None	0
	6	90	0	0	TRUF		0	0 Fixed	None	0

### Pri Max Pri Force Off Mode

- 0 Float

Table: Split Parameters [Split: 3]

Phase	Time	Min	Max	С	oord Phase	Ref Point	Tran	s Cover Force Off	Mo Mode	Pri Min
	1	20	0	0	0		0	0 Fixed	None	0
	2	100	0	0	TRUE	TRUE		0 Fixed	None	0
	4	20	0	0	0		0	0 Fixed	None	0
	5	35	0	0	0		0	0 Fixed	None	0
	6	85	0	0	TRUE		0	0 Fixed	None	0

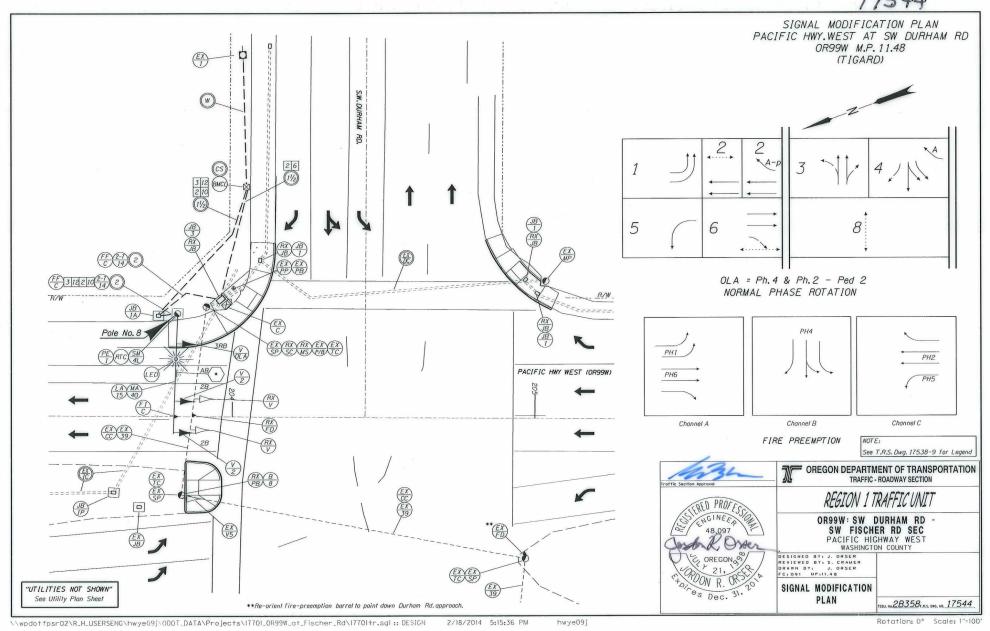
### Pri Max Pri Force Off Mode

- 0 Float

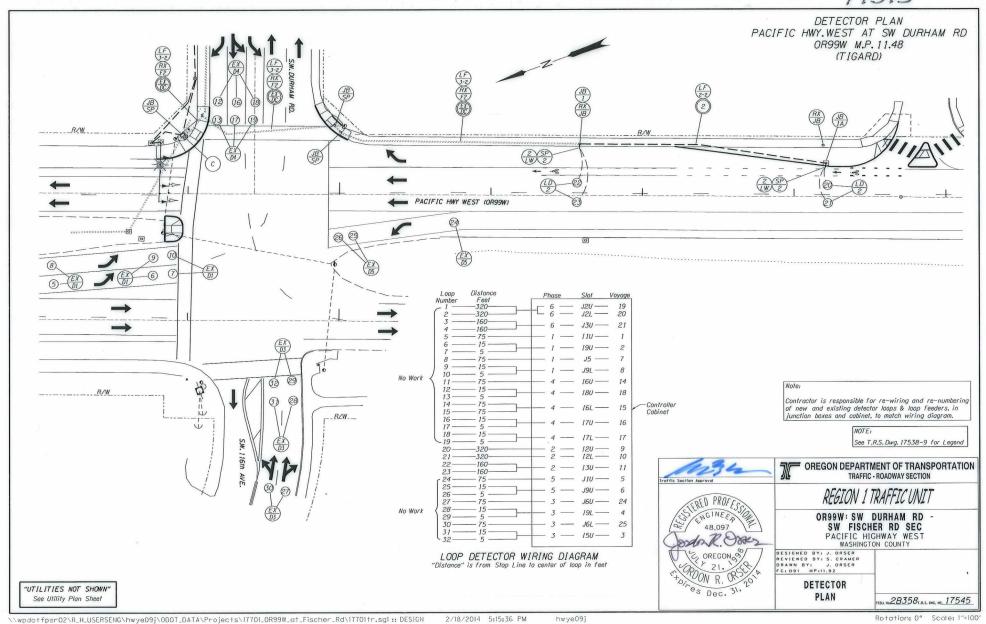
# Table: Day Plan Events [Day Plan: 1]

Event	Hour	Minute	Action	Description
	1	0	0	21 Coord Free
	2	5	30	1 Coord Plan #1
	3	10	0	2 Coord Plan #2
	4	14	30	3 Coord Plan #3
	5	18	30	2 Coord Plan #2
	6	22	0	21 Coord Free









**Table: Phase Timing Plans [Timing Plan: 1]** 

Phase	1	2	3	4	5	6	7	8
Walk	0	7	0	0	0	7	0	5
Ped Clear	0	22	0	0	0	16	0	35
Min Green	4	10	12	12	4	10	0	4
Passage	2.3	4.5	2.3	2.3	2.3	4.8	0	0.2
Max 1	29	72	17	26	17	84	0	42
Max 2	20	52	25	27	22	50	0	51
Max 3	29	60	16	45	18	71	0	54
Yellow Change	4	4.7	4	4	4.4	4.3	0	0
Red Clear	1.3	0.7	2	2	1	0.7	0	0
Added Initial	0	1.2	0	0	0	1.2	0	0
Maximum Initial	4	17	6	6	4	17	0	4
Time Before Reduction	8	10	8	8	8	10	0	1
Time To Reduce	3	20	3	3	3	20	0	1
Minimum Gap	0.5	2.5	1	0.5	1	2.8	0	0.2
Advance Walk	0	0	0	0	0	0	0	5
Walk 2	0	0	0	0	0	0	0	16

## **Table: Sequence Parameters [Sequence: 1]**

Ring Sequence Data

**1** 1,2,a,3,4,b

**2** 5,6,a,8,b

## **Table: Sequence Parameters [Sequence: 2]**

Ring Sequence Data

**1** 2,1,a,3,4,b

**2** 5,6,a,8,b

## **Table: Pattern Parameters**

Pattern		Cycle Time	Offset 1	Offset 2	Offset 3	Split Numb	er Seq Numbe	er Ref Point	<b>Coord Mode</b>	Force Off
	1	140	) 2	4	0	0	1	2 Green	Full Permissive	Phase
	2	120	) 8	3	0	0	2	2 Green	Full Permissive	Phase
	3	140	) 4	9	0	0	3	1 Green	Full Permissive	Phase
	4	120	) 11	7	0	0	Δ	2 Green	Full Permissive	Phase

Max Mode	Trans Ped	d McMin Permiss	si Correction M Singl	e Perm 9 Phase	e Plan Over	lap Plan Veh [	Detector Veh I	Detector Ped [	<b>Detector</b>
Max 1	Phase	Phase Only	Shortway (Au	0	1	1	1	1	1
Max 2	Phase	Phase Only	Shortway (Au	0	1	1	1	1	1
Max 3	Phase	Phase Only	Shortway (Au	0	1	1	1	1	1
Max 1	Phase	Phase Only	Shortway (Au	0	2	1	1	1	1

### Ped Detector Pri/Pre Detec Description

1 1 Coord Plan #1 1 1 Coord Plan #2 1 1 Coord Plan #3 1 1 Coord Plan #4 Table: Split Parameters [Split: 1]

Phase	Time	Min	Max	С	oord Phase Ref Point	Tran	s Cover F Force Off	Mo Mode	Pri Min
	1	28	0	0	0	0	0 Fixed	None	0
	2	68	0	0	TRUE	0	0 Fixed	None	0
	3	19	0	0	0	0	0 Fixed	None	0
	4	25	0	0	0	0	0 Fixed	None	0
	5	16	0	0	0	0	0 Fixed	None	0
	6	80	0	0	TRUE TRUE		0 Fixed	None	0
	8	44	0	0	0	0	0 Fixed	None	0

#### **Pri Force Off Mode** Pri Max 0 Float

- 0 Float
- 0 Float
- 0 Float
- 0 Float
- 0 Float
- 0 Float

Table: Split Parameters [Split: 2]

Phase	Time	Min	Max	С	oord Phase Ref Po	int Tran	ns Cover F Force Off	Mo Mode	Pri Min
	1	19	0	0	0	0	0 Fixed	None	0
	2	51	0	0	TRUE	0	0 Fixed	None	0
	3	24	0	0	0	0	0 Fixed	None	0
	4	26	0	0	0	0	0 Fixed	None	0
	5	21	0	0	0	0	0 Fixed	None	0
	6	49	0	0	TRUE TR	UE	0 Fixed	None	0
	8	50	0	0	0	0	0 Fixed	None	0

#### **Pri Force Off Mode** Pri Max 0 Float

- 0 Float
- 0 Float
- 0 Float
- 0 Float
- 0 Float
- 0 Float

# Table: Day Plan Events [Day Plan: 1]

Event	Hour	Minute	Action	Description
	1	0	0	21 Coord Free
	2	5	30	1 Coord Plan #1
	3	10	0	2 Coord Plan #2
	4	14	30	3 Coord Plan #3
	5	18	30	2 Coord Plan #2
	6	22	0	21 Coord Free

APPENDIX I.

OPERATIONS CALCULATIONS

## 1: SW 124th Avenue & OR 99W (Pacific Highway)

	-	•	•	•	1	~
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1008	477	974	759	158	352
v/c Ratio	0.86	0.59	0.70	0.28	0.33	0.26
Control Delay (s/veh)	45.5	8.6	34.4	5.1	24.5	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.5	8.6	34.4	5.1	24.5	15.2
Queue Length 50th (ft)	380	36	298	57	63	132
Queue Length 95th (ft)	470	136	#585	175	30	179
Internal Link Dist (ft)	1687			1822	503	
Turn Bay Length (ft)		225	550		300	275
Base Capacity (vph)	1174	804	1386	2691	990	1371
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.59	0.70	0.28	0.16	0.26
Intersection Summary						

Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Movement		-	•	•	•	4	~		
Lane Configurations	Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Traffic Volume (vph)   907   429   877   683   142   317     Future Volume (vph)   907   429   877   683   142   317     Ideal Flow (vphpl)   1900   1900   1900   1900   1900     Total Lost time (s)   4.0   4.0   4.0   4.0   4.0   5.6     Lane Util. Factor   0.95   1.00   0.97   0.95   0.97   0.88     Frpb, ped/bikes   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     Fit   1.00   0.85   1.00   1.00   1.00   1.00   0.85     Fit Protected   1.00   1.00   0.95   1.00   0.95   1.00     Satd. Flow (prot)   3438   1568   3400   3438   3213   2472     Fit Permitted   1.00   1.00   0.95   1.00   0.95   1.00     Satd. Flow (perm)   3438   1568   3400   3438   3213   2472     Fit Peak-hour factor, PHF   0.90   0.90   0.90   0.90   0.90     Adj. Flow (vph)   1008   477   974   759   158   352     RTOR Reduction (vph)   0   269   0   0   0   0     Lane Group Flow (vph)   1008   477   974   759   158   352     Confl. Peds. (#/hr)   1008   208   974   759   158   352     Confl. Peds. (#/hr)   410   208   974   759   158   352     Confl. Peds. (#/hr)   410   45.7   97.9   158   352     Catuated Green, G (s)   39.0   39.0   44.1   88.7   19.3   63.4     Effective Green, G (s)   39.0   39.0   44.1   88.7   19.3   63.4     Effective Green, G (s)   39.0   39.0   44.1   88.7   19.3   63.4     Effective Green, G (s)   39.0   39.0   44.1   88.7   19.3   63.4     Effective Green, G (s)   39.0   39.0   39.0   39.0   39.0   39.0     Vs Ratio Prot									
Future Volume (vph) 907 429 877 683 142 317   Ideal Flow (vphp) 1900 1900 1900 1900 1900 1900 1701   Total Lost time (s) 4.0 4.0 4.0 4.0 4.0 5.6   Lane Util. Factor 0.95 1.00 0.97 0.95 0.97 0.88   Frpb, ped/bikes 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   Flpb, ped/bikes 1.00 1.00 0.85 1.00 1.00 1.00 1.00   Flt Protected 1.00 1.00 0.95 1.00 0.95 1.00   Satd. Flow (prot) 3438 1568 3400 3438 3213 2472   Fit Permitted 1.00 1.00 0.95 1.00 0.95 1.00   Satd. Flow (perm) 3438 1568 3400 3438 3213 2472   Feak-hour factor, PHF 0.90 0.90 0.90 0.90 0.90 0.90 0.90   Adj. Flow (vph) 1008 477 974 759 158 352   TRTOR Reduction (vph) 0 269 0 0 0 0 0 0 0   Lane Group Flow (vph) 1008 208 974 759 158 352   Confl. Peds. (#hr)									
Ideal Flow (vphpl)									
Total Lost time (s)									
Lane Util. Factor   0.95   1.00   0.97   0.95   0.97   0.88   Frpb, ped/bikes   1.00   1.00   1.00   1.00   1.00   1.00   1.00   Frpb, ped/bikes   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   Frt   1.00   0.85   1.00   1.00   1.00   0.85   1.00   0.85   Fit Protected   1.00   1.00   0.95   1.00   0.95   1.00   0.95   1.00   Satd. Flow (prot)   3438   1568   3400   3438   3213   2472   Fit Permitted   1.00   1.00   0.95   1.00   0.95   1.00   0.95   1.00   Satd. Flow (perm)   3438   1568   3400   3438   3213   2472   Fit Permitted   1.00   1.00   0.95   1.00   0.95   1.00   Satd. Flow (perm)   3438   1568   3400   3438   3213   2472   Fit Permitted   1.00   1.00   0.95   1.00   0.9									
Frpb, ped/bikes         1.00         0.85         1.00         0.90         0.90									
Fipb, ped/bikes	Frpb, ped/bikes			1.00	1.00	1.00	1.00		
Fit Protected		1.00	1.00	1.00	1.00	1.00	1.00		
Satd. Flow (prot)         3438         1568         3400         3438         3213         2472           Fit Permitted         1.00         1.00         0.95         1.00         0.95         1.00           Satd. Flow (perm)         3438         1568         3400         3438         3213         2472           Peak-hour factor, PHF         0.90         0.90         0.90         0.90         0.90         0.90           Adj. Flow (yph)         1008         477         974         759         158         352           RTOR Reduction (vph)         0         269         0         0         0         0           Lane Group Flow (vph)         1008         208         974         759         158         352           Confl. Peds. (#/hr)         1008         208         974         759         158         352           Confl. Peds. (#/hr)         1009         39.0         38         5%         9%         15%           Heavy Vehicles (%)         5%         3%         3%         5%         9%         15%           Turm Type         NA         Perm         Prot         NA         Prot         Prot         pt+ov           Prote	Frt	1.00	0.85	1.00	1.00	1.00	0.85		
Fit Permitted	Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00		
Fit Permitted	Satd. Flow (prot)	3438	1568	3400	3438	3213	2472		
Peak-hour factor, PHF	,	1.00	1.00	0.95	1.00	0.95	1.00		
Adj. Flow (vph)         1008         477         974         759         158         352           RTOR Reduction (vph)         0         269         0         0         0         0           Lane Group Flow (vph)         1008         208         974         759         158         352           Confl. Peds. (#/hr)         3         3%         5%         9%         15%           Heavy Vehicles (%)         5%         3%         3%         5%         9%         15%           Turn Type         NA         Perm         Prot         NA         Prot pt+ov           Protected Phases         2         1         6         8         1.4           Permitted Phases         2         2         Actuated Green, G (s)         39.0         39.0         44.1         88.7         19.3         63.4           Effective Green, g (s)         41.0         41.0         45.7         90.7         21.3         58.4           Actuated g/C Ratio         0.34         0.34         0.38         0.76         0.18         0.49           Clearance Time (s)         6.0         6.0         5.6         6.0         6.0         6.0           Vehicle Extension (s) <td>Satd. Flow (perm)</td> <td>3438</td> <td>1568</td> <td>3400</td> <td>3438</td> <td>3213</td> <td>2472</td> <td></td> <td></td>	Satd. Flow (perm)	3438	1568	3400	3438	3213	2472		
RTOR Reduction (vph)         0         269         0         0         0         0           Lane Group Flow (vph)         1008         208         974         759         158         352           Confl. Peds. (#/hr)         3         3%         3%         5%         9%         15%           Turn Type         NA         Perm         Prot         NA         Prot         pt-vov           Protected Phases         2         1         6         8         14           Permitted Phases         2         2         Actuated Green, G (s)         39.0         39.0         44.1         88.7         19.3         63.4           Effective Green, g (s)         41.0         41.0         45.7         90.7         21.3         58.4           Actuated g/C Ratio         0.34         0.34         0.38         0.76         0.18         0.49           Clearance Time (s)         6.0         6.0         5.6         6.0 </td <td>Peak-hour factor, PHF</td> <td>0.90</td> <td>0.90</td> <td>0.90</td> <td>0.90</td> <td>0.90</td> <td>0.90</td> <td></td> <td></td>	Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
RTOR Reduction (vph)   0   269   0   0   0   0   0   0   0   1   1   1	Adj. Flow (vph)			974		158	352		
Confl. Peds. (#/hr)         3         3%         3%         3%         9%         15%           Turn Type         NA         Perm         Prot         NA         Prot         pt+ov           Protected Phases         2         1         6         8         1.4           Permitted Phases         2         1         6         8         1.4           Permitted Phases         2         2         Actuated Green, G (s)         39.0         39.0         44.1         88.7         19.3         63.4           Effective Green, g (s)         41.0         41.0         45.7         90.7         21.3         58.4           Actuated g/C Ratio         0.34         0.34         0.38         0.76         0.18         0.49           Clearance Time (s)         6.0         6.0         5.6         6.0         6.0         6.0           Vehicle Extension (s)         5.4         5.4         2.3         5.4         2.3           Lane Grp Cap (vph)         1174         535         1294         2598         570         1203           v/s Ratio Prot         c0.29         c0.29         0.22         c0.05         0.14           v/s Ratio Perm         0.13 <td></td> <td></td> <td>269</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td></td>			269	0	0	0	0		
Heavy Vehicles (%)	· · ·	1008	208	974	759	158	352		
Turn Type	Confl. Peds. (#/hr)								
Protected Phases 2 1 6 8 14  Permitted Phases 2  Actuated Green, G (s) 39.0 39.0 44.1 88.7 19.3 63.4  Effective Green, g (s) 41.0 41.0 45.7 90.7 21.3 58.4  Actuated g/C Ratio 0.34 0.34 0.38 0.76 0.18 0.49  Clearance Time (s) 6.0 6.0 5.6 6.0 6.0  Vehicle Extension (s) 5.4 5.4 2.3 5.4 2.3  Lane Grp Cap (vph) 1174 535 1294 2598 570 1203  v/s Ratio Prot c0.29 c0.29 0.22 c0.05 0.14  v/s Ratio Perm 0.13  v/c Ratio 0.86 0.39 0.75 0.29 0.28 0.29  Uniform Delay, d1 36.8 30.0 32.2 4.6 42.7 18.4  Progression Factor 1.00 1.00 1.00 1.00 0.52 0.99  Incremental Delay, d2 7.2 1.1 4.1 0.3 0.2 0.1  Delay (s) 44.0 31.1 36.3 4.9 22.4 18.4  Level of Service D C D A C B  Approach Delay (s/veh) 39.8 22.6 19.6  Approach LOS D C B  Intersection Summary  HCM 2000 Control Delay (s/veh) 29.0 HCM 2000 Level of Service C  HCM 2000 Volume to Capacity ratio Actuated Cycle Length (s) 120.0 Sum of lost time (s) 18.6	Heavy Vehicles (%)	5%	3%	3%	5%	9%	15%		
Protected Phases   2	Turn Type	NA	Perm	Prot	NA	Prot	pt+ov		
Actuated Green, G (s) 39.0 39.0 44.1 88.7 19.3 63.4  Effective Green, g (s) 41.0 41.0 45.7 90.7 21.3 58.4  Actuated g/C Ratio 0.34 0.34 0.38 0.76 0.18 0.49  Clearance Time (s) 6.0 6.0 5.6 6.0 6.0  Vehicle Extension (s) 5.4 5.4 2.3 5.4 2.3  Lane Grp Cap (vph) 1174 535 1294 2598 570 1203  v/s Ratio Prot c0.29 c0.29 0.22 c0.05 0.14  v/s Ratio Perm 0.13  v/c Ratio 0.86 0.39 0.75 0.29 0.28 0.29  Uniform Delay, d1 36.8 30.0 32.2 4.6 42.7 18.4  Progression Factor 1.00 1.00 1.00 1.00 0.52 0.99  Incremental Delay, d2 7.2 1.1 4.1 0.3 0.2 0.1  Delay (s) 44.0 31.1 36.3 4.9 22.4 18.4  Level of Service D C D A C B  Approach Delay (s/veh) 39.8 22.6 19.6  Approach LOS D C B  Intersection Summary  HCM 2000 Control Delay (s/veh) 29.0 HCM 2000 Level of Service C  HCM 2000 Volume to Capacity ratio 0.74  Actuated Cycle Length (s) 138.6 138.0 20.0 18.6		2		1	6	8			
Effective Green, g (s) 41.0 41.0 45.7 90.7 21.3 58.4  Actuated g/C Ratio 0.34 0.34 0.38 0.76 0.18 0.49  Clearance Time (s) 6.0 6.0 5.6 6.0 6.0  Vehicle Extension (s) 5.4 5.4 2.3 5.4 2.3  Lane Grp Cap (vph) 1174 535 1294 2598 570 1203  v/s Ratio Prot c0.29 c0.29 0.22 c0.05 0.14  v/s Ratio Perm 0.13  v/c Ratio 0.86 0.39 0.75 0.29 0.28 0.29  Uniform Delay, d1 36.8 30.0 32.2 4.6 42.7 18.4  Progression Factor 1.00 1.00 1.00 1.00 0.52 0.99  Incremental Delay, d2 7.2 1.1 4.1 0.3 0.2 0.1  Delay (s) 44.0 31.1 36.3 4.9 22.4 18.4  Level of Service D C D A C B  Approach Delay (s/veh) 39.8 22.6 19.6  Approach LOS D C B  Intersection Summary  HCM 2000 Control Delay (s/veh) 29.0 HCM 2000 Level of Service C  HCM 2000 Volume to Capacity ratio Actuated Cycle Length (s) 18.6	Permitted Phases		2						
Actuated g/C Ratio 0.34 0.34 0.38 0.76 0.18 0.49  Clearance Time (s) 6.0 6.0 5.6 6.0 6.0  Vehicle Extension (s) 5.4 5.4 2.3 5.4 2.3  Lane Grp Cap (vph) 1174 535 1294 2598 570 1203  v/s Ratio Prot c0.29 c0.29 0.22 c0.05 0.14  v/s Ratio Perm 0.13  v/c Ratio 0.86 0.39 0.75 0.29 0.28 0.29  Uniform Delay, d1 36.8 30.0 32.2 4.6 42.7 18.4  Progression Factor 1.00 1.00 1.00 1.00 0.52 0.99  Incremental Delay, d2 7.2 1.1 4.1 0.3 0.2 0.1  Delay (s) 44.0 31.1 36.3 4.9 22.4 18.4  Level of Service D C D A C B  Approach Delay (s/veh) 39.8 22.6 19.6  Approach LOS D C B  Intersection Summary  HCM 2000 Control Delay (s/veh) 29.0 HCM 2000 Level of Service C  HCM 2000 Volume to Capacity ratio 0.74  Actuated Cycle Length (s) 120.0 Sum of lost time (s) 18.6	Actuated Green, G (s)		39.0						
Clearance Time (s)         6.0         6.0         5.6         6.0         6.0           Vehicle Extension (s)         5.4         5.4         2.3         5.4         2.3           Lane Grp Cap (vph)         1174         535         1294         2598         570         1203           v/s Ratio Prot         c0.29         c0.29         0.22         c0.05         0.14           v/s Ratio Perm         0.13         c0.29         0.28         0.29           Uniform Delay, d1         36.8         30.0         32.2         4.6         42.7         18.4           Progression Factor         1.00         1.00         1.00         0.52         0.99           Incremental Delay, d2         7.2         1.1         4.1         0.3         0.2         0.1           Delay (s)         44.0         31.1         36.3         4.9         22.4         18.4           Level of Service         D         C         D         A         C         B           Approach LOS         D         C         B         B         22.6         19.6           Approach LOS         D         C         B         B         C         B           I	Effective Green, g (s)		41.0				58.4		
Vehicle Extension (s)         5.4         5.4         2.3         5.4         2.3           Lane Grp Cap (vph)         1174         535         1294         2598         570         1203           v/s Ratio Prot         c0.29         c0.29         0.22         c0.05         0.14           v/s Ratio Perm         0.13           v/c Ratio         0.86         0.39         0.75         0.29         0.28         0.29           Uniform Delay, d1         36.8         30.0         32.2         4.6         42.7         18.4           Progression Factor         1.00         1.00         1.00         0.52         0.99           Incremental Delay, d2         7.2         1.1         4.1         0.3         0.2         0.1           Delay (s)         44.0         31.1         36.3         4.9         22.4         18.4           Level of Service         D         C         D         A         C         B           Approach Delay (s/veh)         39.8         22.6         19.6           Approach LOS         D         C         B           Intersection Summary           HCM 2000 Control Delay (s/veh)         29.0         HCM 2000 Lev	Actuated g/C Ratio						0.49		
Lane Grp Cap (vph)         1174         535         1294         2598         570         1203           v/s Ratio Prot         c0.29         c0.29         0.22         c0.05         0.14           v/s Ratio Perm         0.13         0.13         0.29         0.28         0.29           Uniform Delay, d1         36.8         30.0         32.2         4.6         42.7         18.4           Progression Factor         1.00         1.00         1.00         0.52         0.99           Incremental Delay, d2         7.2         1.1         4.1         0.3         0.2         0.1           Delay (s)         44.0         31.1         36.3         4.9         22.4         18.4           Level of Service         D         C         D         A         C         B           Approach Delay (s/veh)         39.8         22.6         19.6           Approach LOS         D         C         B           Intersection Summary           HCM 2000 Control Delay (s/veh)         29.0         HCM 2000 Level of Service         C           HCM 2000 Volume to Capacity ratio         0.74           Actuated Cycle Length (s)         120.0         Sum of lost time (s)	Clearance Time (s)								
v/s Ratio Prot       c0.29       c0.29       0.22       c0.05       0.14         v/s Ratio Perm       0.13       0.75       0.29       0.28       0.29         Uniform Delay, d1       36.8       30.0       32.2       4.6       42.7       18.4         Progression Factor       1.00       1.00       1.00       0.52       0.99         Incremental Delay, d2       7.2       1.1       4.1       0.3       0.2       0.1         Delay (s)       44.0       31.1       36.3       4.9       22.4       18.4         Level of Service       D       C       D       A       C       B         Approach Delay (s/veh)       39.8       22.6       19.6         Approach LOS       D       C       B         Intersection Summary         HCM 2000 Control Delay (s/veh)       29.0       HCM 2000 Level of Service       C         HCM 2000 Volume to Capacity ratio       0.74         Actuated Cycle Length (s)       120.0       Sum of lost time (s)       18.6			5.4	2.3	5.4				
v/s Ratio Perm       0.13         v/c Ratio       0.86       0.39       0.75       0.29       0.28       0.29         Uniform Delay, d1       36.8       30.0       32.2       4.6       42.7       18.4         Progression Factor       1.00       1.00       1.00       0.52       0.99         Incremental Delay, d2       7.2       1.1       4.1       0.3       0.2       0.1         Delay (s)       44.0       31.1       36.3       4.9       22.4       18.4         Level of Service       D       C       D       A       C       B         Approach Delay (s/veh)       39.8       22.6       19.6         Approach LOS       D       C       B         Intersection Summary         HCM 2000 Control Delay (s/veh)       29.0       HCM 2000 Level of Service       C         HCM 2000 Volume to Capacity ratio       0.74         Actuated Cycle Length (s)       120.0       Sum of lost time (s)       18.6		1174	535						
v/c Ratio       0.86       0.39       0.75       0.29       0.28       0.29         Uniform Delay, d1       36.8       30.0       32.2       4.6       42.7       18.4         Progression Factor       1.00       1.00       1.00       0.52       0.99         Incremental Delay, d2       7.2       1.1       4.1       0.3       0.2       0.1         Delay (s)       44.0       31.1       36.3       4.9       22.4       18.4         Level of Service       D       C       D       A       C       B         Approach Delay (s/veh)       39.8       22.6       19.6         Approach LOS       D       C       B         Intersection Summary         HCM 2000 Control Delay (s/veh)       29.0       HCM 2000 Level of Service       C         HCM 2000 Volume to Capacity ratio       0.74         Actuated Cycle Length (s)       120.0       Sum of lost time (s)       18.6		c0.29		c0.29	0.22	c0.05	0.14		
Uniform Delay, d1       36.8       30.0       32.2       4.6       42.7       18.4         Progression Factor       1.00       1.00       1.00       0.52       0.99         Incremental Delay, d2       7.2       1.1       4.1       0.3       0.2       0.1         Delay (s)       44.0       31.1       36.3       4.9       22.4       18.4         Level of Service       D       C       D       A       C       B         Approach Delay (s/veh)       39.8       22.6       19.6         Approach LOS       D       C       B         Intersection Summary         HCM 2000 Control Delay (s/veh)       29.0       HCM 2000 Level of Service       C         HCM 2000 Volume to Capacity ratio       0.74         Actuated Cycle Length (s)       120.0       Sum of lost time (s)       18.6									
Progression Factor         1.00         1.00         1.00         0.52         0.99           Incremental Delay, d2         7.2         1.1         4.1         0.3         0.2         0.1           Delay (s)         44.0         31.1         36.3         4.9         22.4         18.4           Level of Service         D         C         D         A         C         B           Approach Delay (s/veh)         39.8         22.6         19.6           Approach LOS         D         C         B           Intersection Summary           HCM 2000 Control Delay (s/veh)         29.0         HCM 2000 Level of Service         C           HCM 2000 Volume to Capacity ratio         0.74           Actuated Cycle Length (s)         120.0         Sum of lost time (s)         18.6	v/c Ratio								
Incremental Delay, d2	•								
Delay (s)       44.0       31.1       36.3       4.9       22.4       18.4         Level of Service       D       C       D       A       C       B         Approach Delay (s/veh)       39.8       22.6       19.6         Approach LOS       D       C       B         Intersection Summary         HCM 2000 Control Delay (s/veh)       29.0       HCM 2000 Level of Service       C         HCM 2000 Volume to Capacity ratio       0.74         Actuated Cycle Length (s)       120.0       Sum of lost time (s)       18.6									
Level of Service         D         C         D         A         C         B           Approach Delay (s/veh)         39.8         22.6         19.6           Approach LOS         D         C         B           Intersection Summary           HCM 2000 Control Delay (s/veh)         29.0         HCM 2000 Level of Service         C           HCM 2000 Volume to Capacity ratio         0.74         C           Actuated Cycle Length (s)         120.0         Sum of lost time (s)         18.6									
Approach Delay (s/veh) 39.8 22.6 19.6 Approach LOS D C B  Intersection Summary  HCM 2000 Control Delay (s/veh) 29.0 HCM 2000 Level of Service C  HCM 2000 Volume to Capacity ratio 0.74  Actuated Cycle Length (s) 120.0 Sum of lost time (s) 18.6									
Approach LOS D C B  Intersection Summary  HCM 2000 Control Delay (s/veh) 29.0 HCM 2000 Level of Service C  HCM 2000 Volume to Capacity ratio 0.74  Actuated Cycle Length (s) 120.0 Sum of lost time (s) 18.6			С	D			В		
Intersection Summary  HCM 2000 Control Delay (s/veh) 29.0 HCM 2000 Level of Service C  HCM 2000 Volume to Capacity ratio 0.74  Actuated Cycle Length (s) 120.0 Sum of lost time (s) 18.6									
HCM 2000 Control Delay (s/veh)  29.0  HCM 2000 Level of Service  C  HCM 2000 Volume to Capacity ratio  0.74  Actuated Cycle Length (s)  120.0  Sum of lost time (s)  18.6	Approach LOS	D			С	В			
HCM 2000 Control Delay (s/veh) 29.0 HCM 2000 Level of Service C HCM 2000 Volume to Capacity ratio 0.74 Actuated Cycle Length (s) 120.0 Sum of lost time (s) 18.6	Intersection Summarv								
HCM 2000 Volume to Capacity ratio  0.74  Actuated Cycle Length (s)  120.0  Sum of lost time (s)  18.6		(s/veh)		29.0	Н	CM 2000	Level of Servi	ce	С
Actuated Cycle Length (s) 120.0 Sum of lost time (s) 18.6						J.II. 2000	_3.0. 0. 00IVI		•
		•			Si	um of lost	t time (s)	18	.6
Intersection Capacity Utilization 89.3% ICU Level of Service E	Intersection Capacity Utiliz			89.3%			. ,		E.
Analysis Period (min) 15						3 _3,01			_
c Critical Lane Group									

HCM 7th Edition methodology does not support exclusive ped or hold phases.

## 2: SW 124th Avenue & SW Tualatin Road

	•	*	<b>†</b>	~	-	<b>↓</b>
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	56	215	323	31	715	798
v/c Ratio	0.28	0.17	0.67	0.12	0.60	0.29
Control Delay (s/veh)	47.9	0.8	54.0	14.1	13.1	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.9	8.0	54.0	14.1	13.1	4.3
Queue Length 50th (ft)	41	0	126	0	73	41
Queue Length 95th (ft)	65	16	157	24	371	147
Internal Link Dist (ft)	1180		1024			503
Turn Bay Length (ft)	25	300		150	200	
Base Capacity (vph)	437	1424	1006	497	1191	2772
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.15	0.32	0.06	0.60	0.29
Intersection Summary						

	•	•	<b>†</b>	/	<b>&gt;</b>	<b>↓</b>		
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
ane Configurations	*	7	<b>^</b>	7	*	<b>^</b>		
Fraffic Volume (vph)	49	187	281	27	622	694		
Future Volume (vph)	49	187	281	27	622	694		
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
otal Lost time (s)	4.0	0.0	4.5	4.5	4.0	4.5		
ane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95		
Frpb, ped/bikes	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		
-rt	1.00	0.85	1.00	0.85	1.00	1.00		
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1641	1509	3059	1449	1752	3438		
Flt Permitted	0.95	1.00	1.00	1.00	0.38	1.00		
Satd. Flow (perm)	1641	1509	3059	1449	700	3438		
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87		
Adj. Flow (vph)	56	215	323	31	715	798		
RTOR Reduction (vph)	0	42	0	26	0	0		
_ane Group Flow (vph)	56	173	323	5	715	798		
Confl. Peds. (#/hr)	50	110	323	1	1	7.50		
Heavy Vehicles (%)	10%	7%	18%	9%	3%	5%		
Furn Type	Perm	pt+ov	NA	Perm	D.P+P	NA		
Protected Phases	i Gilli	4 5	6	I CIIII	D.F+F	2		
Permitted Phases	4	4 0	U	6	6	۷		
Actuated Green, G (s)	13.7	91.5	18.0	18.0	90.8	95.8		
Effective Green, g (s)	14.7	96.5	19.0	19.0	92.8	96.8		
Actuated g/C Ratio	0.12	0.80	0.16	0.16	92.6	0.81		
Clearance Time (s)	5.0	0.00	5.5	5.5	5.0	5.5		
Vehicle Extension (s)	4.0		4.5	4.5	4.0	4.5		
· · · · · · · · · · · · · · · · · · ·	201	1213	484		1188	2773		
Lane Grp Cap (vph) v/s Ratio Prot	201			229				
//s Ratio Prot //s Ratio Perm	on no	0.11	c0.11	0.00	c0.37	0.23		
	c0.03	0.14	0.67	0.00	0.10	0.20		
v/c Ratio	0.28	0.14	0.67	0.02	0.60	0.29		
Uniform Delay, d1	47.8	2.6	47.5	42.6	8.6	2.9		
Progression Factor	1.00	1.00	1.00	1.00	0.93	1.05		
Incremental Delay, d2	1.0	0.1	4.2	0.1	0.9	0.2		
Delay (s)	48.9	2.7	51.7	42.7	8.9	3.3		
Level of Service	D	Α	D	D	Α	A		
Approach Delay (s/veh)	12.2		50.9			5.9		
Approach LOS	В		D			А		
ntersection Summary								
HCM 2000 Control Delay (s/v	veh)		14.2	F	ICM 2000	Level of Service	e	В
HCM 2000 Volume to Capac	ity ratio		0.57					
Actuated Cycle Length (s)			120.0		Sum of los		1	2.5
Intersection Capacity Utilizati	ion		57.8%			of Service		В
Analysis Period (min)			15					
Critical Lane Group								

Lam TUX - Site 2024 Existing Conditions - AM Peak Hour HCM 7th Edition methodology does not support exclusive ped or hold phases.

	٠	<b>→</b>	•	•	+	•	•	<b>†</b>	<b>/</b>	<b>/</b>	<b>↓</b>	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ħ	ĵ»		7	ĵ»		7	ĵ»			4	
Traffic Volume (veh/h)	62	677	5	4	218	128	2	1	1	40	2	29
Future Volume (Veh/h)	62	677	5	4	218	128	2	1	1	40	2	29
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	67	736	5	4	237	139	2	1	1	43	2	32
Pedestrians								1			1	
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								3.5			3.5	
Percent Blockage								0			0	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	377			742			1152	1259	740	1187	1192	308
vC1, stage 1 conf vol							874	874		316	316	
vC2, stage 2 conf vol							278	385		872	876	
vCu, unblocked vol	377			742			1152	1259	740	1187	1192	308
tC, single (s)	4.1			4.6			8.1	6.5	7.2	7.2	6.5	6.3
tC, 2 stage (s)							7.1	5.5		6.2	5.5	
tF (s)	2.2			2.7			4.4	4.0	4.2	3.6	4.0	3.4
p0 queue free %	94			99			99	100	100	85	99	95
cM capacity (veh/h)	1175			683			209	313	291	292	320	705
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	67	741	4	376	2	2	77					
Volume Left	67	0	4	0	2	0	43					
Volume Right	0	5	0	139	0	1	32					
cSH	1175	1700	683	1700	209	302	387					
Volume to Capacity	0.06	0.44	0.01	0.22	0.01	0.01	0.20					
Queue Length 95th (ft)	5	0	0	0	1	1	18					
Control Delay (s/veh)	8.2	0.0	10.3	0.0	22.4	17.0	16.6					
Lane LOS	Α		В		С	С	С					
Approach Delay (s/veh)	0.7		0.1		19.7		16.6					
Approach LOS					С		С					
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Utiliza	ation		60.0%	IC	U Level	of Service			В			
Analysis Period (min)			15									
•												

Intersection
IIICIOCOUOTI
Int Delay, s/veh 2.4
Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR
Lane Configurations \$\f\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Traffic Vol, veh/h 62 677 5 4 218 128 2 1 1 40 2 29
Future Vol, veh/h 62 677 5 4 218 128 2 1 1 40 2 29
Conflicting Peds, #/hr 1 0 1 1 0 1 0 0 0 0 0
Sign Control Free Free Free Free Free Stop Stop Stop Stop Stop Stop
RT Channelized None None None
Storage Length 25 25 0
Veh in Median Storage, # - 0 0 0 0
Grade, % - 0 0 0 -
Peak Hour Factor 92 92 92 92 92 92 92 92 92 92 92 92 92
Heavy Vehicles, % 3 2 40 50 9 7 100 2 100 10 2 14
Mvmt Flow 67 736 5 4 237 139 2 1 1 43 2 32
20. 100 2 100 2 02
Major/Minor Major1 Major2 Minor1 Minor2
, , ,
Conflicting Flow All 377 0 0 742 0 0 1121 1260 740 1187 1193 308
Stage 1 874 874 - 316 316 -
Stage 2 247 386 - 871 877 -
Critical Hdwy 4.13 4.6 8.1 6.52 7.2 7.2 6.52 6.34
Critical Hdwy Stg 1 7.1 5.52 - 6.2 5.52 -
Critical Hdwy Stg 2 7.1 5.52 - 6.2 5.52 -
Follow-up Hdwy 2.227 2.65 4.4 4.018 4.2 3.59 4.018 3.426
Pot Cap-1 Maneuver 1176 683 121 170 291 159 187 705
Stage 1 237 367 - 678 655 -
Stage 2 583 610 - 335 366 -
Platoon blocked, %
Mov Cap-1 Maneuver 1175 682 107 159 291 147 175 705
Mov Cap-2 Maneuver 107 159 - 147 175 -
Stage 1 224 346 - 673 650 -
Stage 2 551 606 - 313 345 -
Approach EB WB NB SB
HCM Control Delay, s/v 0.69 0.12 31.08 30.09
HCM LOS DO D
Miner Lene/Major Mymt NIDL n1 NIDL n2 EDI EDT EDD WIDL WIDT WIDD CDL n1
Minor Lane/Major Mvmt NBLn1 NBLn2 EBL EBT EBR WBL WBT WBR SBLn1
Capacity (veh/h) 107 206 1175 682 219
HCM Lane V/C Ratio 0.02 0.011 0.057 0.006 0.352
HCM Control Delay (s/veh) 39.5 22.7 8.3 10.3 30.1
HCM Lane LOS E C A B D
HCM 95th %tile Q(veh) 0.1 0 0.2 0 1.5

	•	<b>→</b>	•	•	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<b></b>	<b>1</b>		¥	
Traffic Volume (veh/h)	5	688	330	10	18	7
Future Volume (Veh/h)	5	688	330	10	18	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	5	717	344	10	19	7
Pedestrians					6	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type		TWLTL	TWLTI			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	360				1082	355
vC1, stage 1 conf vol					355	
vC2, stage 2 conf vol					727	
vCu, unblocked vol	360				1082	355
tC, single (s)	4.3				6.5	6.2
tC, 2 stage (s)	1.0				5.5	V. <u>L</u>
tF(s)	2.4				3.6	3.3
p0 queue free %	100				96	99
cM capacity (veh/h)	1099				424	685
		ED 0	MD 4	00.4		
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	5	717	354	26		
Volume Left	5	0	0	19		
Volume Right	0	0	10	7		
cSH	1099	1700	1700	473		
Volume to Capacity	0.00	0.42	0.21	0.05		
Queue Length 95th (ft)	0	0	0	4		
Control Delay (s/veh)	8.3	0.0	0.0	13.1		
Lane LOS	A			В		
Approach Delay (s/veh)	0.1		0.0	13.1		
Approach LOS				В		
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utiliza	ation		46.2%	IC	U Level c	f Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	0.4					
		EDT	WDT	WDD	CDI	CDD
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ች	<b>†</b>	<b>↑</b>	40	**	7
Traffic Vol, veh/h	5	688	330	10	18	7
Future Vol, veh/h	5	688	330	10	18	7
Conflicting Peds, #/hr	- 6	_ 0	_ 0	_ 6	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage	, # -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	20	3	9	20	6	2
Mvmt Flow	5	717	344	10	19	7
Major/Minor I	Major1	N	//ajor2		Minor2	
						255
Conflicting Flow All	360	0	-	0	1082	355
Stage 1	-	-	-	-	355	-
Stage 2	-	-	-	-	727	-
Critical Hdwy	4.3	-	-	-	6.46	6.22
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.38	-	-	-	3.554	
Pot Cap-1 Maneuver	1106	-	-	-	237	689
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	471	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1099	-	-	-	233	685
Mov Cap-2 Maneuver	-	-	-	-	355	-
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	469	-
<b>U-</b> =						
A mana a a b	ED		MD		O.D.	
Approach	EB		WB		SB	
HCM Control Delay, s/v	v 0.06		0		14.37	
HCM LOS					В	
Minor Lane/Major Mvm	nt	EBL	EBT	WBT	WBR S	SBLn1
Capacity (veh/h)		1099	-	-	-	410
HCM Lane V/C Ratio		0.005		_		0.063
HCM Control Delay (s/	veh)	8.3	_	_	_	14.4
HCM Lane LOS	v Gii)	0.5 A			-	14.4 B
HCM 95th %tile Q(veh)	١	0	-	-	-	0.2
How som whe wiven	)	U	-	-	-	0.2

	<b>→</b>	•	•	<b>←</b>		~
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>1</b>		*	<b></b>	W	
Traffic Volume (veh/h)	742	20	35	341	3	3
Future Volume (Veh/h)	742	20	35	341	3	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	781	21	37	359	3	3
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				3.5	3.5	
Percent Blockage				0	0	
Right turn flare (veh)				-	-	
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	_			_		
pX, platoon unblocked						
vC, conflicting volume			804		1227	795
vC1, stage 1 conf vol					794	
vC2, stage 2 conf vol					433	
vCu, unblocked vol			804		1227	795
tC, single (s)			4.2		6.4	6.5
tC, 2 stage (s)					5.4	
tF (s)			2.3		3.5	3.6
p0 queue free %			95		99	99
cM capacity (veh/h)			789		389	342
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	802	37	359	6		
Volume Left	0	37	339	3		
Volume Right	21	0	0	3		
cSH	1700	789	1700	364		
Volume to Capacity	0.47	0.05	0.21	0.02		
	0.47	4	0.21	1		
Queue Length 95th (ft)	0.0	9.8	0.0	15.1		
Control Delay (s/veh) Lane LOS	0.0	9.0 A	0.0	15.1 C		
	0.0	0.9		15.1		
Approach Delay (s/veh) Approach LOS	0.0	0.9		15.1 C		
				U		
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utiliza	ation		50.6%	IC	U Level o	of Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	0.4					
	EBT	EDD	\\/DI	\\/DT	NDI	NDD
		EBR	WBL	WBT	NBL	NBR
Lane Configurations	740	00	<u>ች</u>	<b>↑</b>	Å	2
Traffic Vol, veh/h	742	20	35	341	3	3
Future Vol, veh/h	742	20	35	341	3	3
Conflicting Peds, #/hr	_ 0	_ 2	_ 2	_ 0	0	1
	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	25	-	-	-
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	15	9	9	2	33
Mvmt Flow	781	21	37	359	3	3
				_		
	ajor1		Major2		Minor1	
Conflicting Flow All	0	0	804	0	1226	795
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	433	-
Critical Hdwy	-	-	4.19	-	6.42	6.53
Critical Hdwy Stg 1	_	-	-	_	5.42	-
Critical Hdwy Stg 2	-	_	_	_	5.42	_
Follow-up Hdwy	_	_	2.281	_		3.597
Pot Cap-1 Maneuver	_	_	790	_	197	343
Stage 1	_	_	-	_	445	-
Stage 2				_	654	_
Platoon blocked, %	_	_	_	_	054	_
	-	-	700		100	240
Mov Cap-1 Maneuver	-	-	789	-	188	342
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	444	-
Stage 2	-	-	-	-	624	-
Approach	EB		WB		NB	
	0		0.91		16.12	
HCM LOS	U		0.91		16.12 C	
HCM LOS					U	
Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		330	_		789	_
HCM Lane V/C Ratio		0.019	_		0.047	_
HCM Control Delay (s/ve	eh)	16.1	_	_	9.8	-
HCM Lane LOS	) I I	C		_	9.0 A	_
HCM 95th %tile Q(veh)		0.1	-	_	0.1	-
HOW BOTH WITH MICHAEL		U. I	-	-	0.1	-

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	1>	
Traffic Volume (veh/h)	0	0	0	6	55	0
Future Volume (Veh/h)	0	0	0	6	55	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	7	60	0
Pedestrians				•		
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)				INOHE	INOLIC	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	67	60	60			
vC1, stage 1 conf vol	07	00	00			
vC2, stage 2 conf vol	C7	00	00			
vCu, unblocked vol	67	60	60			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)			2.0			
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	938	1005	1544			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	7	60			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1544	1700			
Volume to Capacity	0.00	0.00	0.04			
Queue Length 95th (ft)	0	0	0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	Α					
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utiliza	ntion		6.7%	IC	CU Level o	of Service
Analysis Period (min)	10011		15	IC.	JO LOVGI (	JI OUI VICE
Alialysis Fellou (IIIIII)			10			

Intersection						
Int Delay, s/veh	0					
-		ED5	ND	NDT	OPT	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	₽	
Traffic Vol, veh/h	0	0	0	6	55	0
Future Vol, veh/h	0	0	0	6	55	0
Conflicting Peds, #/hr	0	0	0	0	0	0
	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	10	10	2
Mvmt Flow	0	0	0	7	60	0
N.A' (N.A.:	ı: O					
	linor2		Major1		/lajor2	
Conflicting Flow All	66	60	60	0	-	0
Stage 1	60	-	-	-	-	-
Stage 2	7	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy 3	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	939	1006	1544	-	-	-
Stage 1	963	-	-	-	-	-
	1017	-	-	-	-	-
Platoon blocked, %				_	-	-
Mov Cap-1 Maneuver	939	1006	1544	-	-	-
Mov Cap-2 Maneuver	939	-		_	_	_
Stage 1	963	_	-	_	_	_
	1017	_	_	_	_	_
Olugo Z	1017					
Approach	EB		NB		SB	
HCM Control Delay, s/v	0		0		0	
HCM LOS	Α					
Minor Long/Major Mymt		MDI	MDT	EDI n1	CDT	CDD
Minor Lane/Major Mvmt		NBL		EBLn1	SBT	SBR
Capacity (veh/h)		1544	-	-	-	-
HCM Lane V/C Ratio		-	-	-	-	-
HCM Control Delay (s/ve	eh)	0	-	0	-	-
HCM Lane LOS		Α	-	Α	-	-
HCM 95th %tile Q(veh)		0	-	-	-	-

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	1>	
Traffic Volume (veh/h)	0	0	0	66	51	0
Future Volume (Veh/h)	0	0	0	66	51	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	72	55	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				1116		
pX, platoon unblocked				5		
vC, conflicting volume	127	55	55			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	127	55	55			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	0.4	0.2	7.1			
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	868	1012	1550			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	72	55			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1550	1700			
Volume to Capacity	0.00	0.00	0.03			
Queue Length 95th (ft)	0	0	0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	Α					
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilizat	ion		6.8%	IC	CU Level o	of Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	0					
	EDI	EDD	NDI	NDT	CDT	CDD
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			र्न	ĵ.	
Traffic Vol, veh/h	0	0	0	66	51	0
Future Vol, veh/h	0	0	0	66	51	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	10	10	2
Mymt Flow	0	0	0	72	55	0
IVIVIII I IOW	U	U	U	12	00	U
Major/Minor	Minor2	l l	Major1	<u> </u>	Major2	
Conflicting Flow All	127	55	55	0	-	0
Stage 1	55	-	-	-	-	-
Stage 2	72	-	_	-	-	-
Critical Hdwy	6.42	6.22	4.12	_	_	_
Critical Hdwy Stg 1	5.42	-		_	_	_
Critical Hdwy Stg 2	5.42	_	_		_	_
Follow-up Hdwy		3.318	2 218	<del>-</del>	_	_
Pot Cap-1 Maneuver	867	1011	1549	_	-	_
	967		1543	-	_	-
Stage 1		-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	867	1011	1549	-	-	-
Mov Cap-2 Maneuver	867	-	-	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	951	-	-	-	-	-
A			ND		OD.	
Approach	EB		NB		SB	
HCM Control Delay, s/			0		0	
HCM LOS	Α					
Minor Lane/Major Mvm	nt	NBL	NRT	EBLn1	SBT	SBR
	IL.		NDT	LDLIII	ושט	אומט
Capacity (veh/h)		1549	-		-	-
HCM Cartest Dates (a)	l l. \	-	-	-	-	-
HCM Control Delay (s/	ven)	0	-	0	-	-
HCM Lane LOS		A	-	Α	-	-
HCM 95th %tile Q(veh	)	0	-	-	-	-

## 10: SW 124th Avenue & SW Leveton Drive

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	6	144	6	43	29	339	225	663
v/c Ratio	0.02	0.36	0.03	0.12	0.06	0.40	0.37	0.40
Control Delay (s/veh)	29.4	19.5	29.4	9.5	9.0	19.2	10.9	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.4	19.5	29.4	9.5	9.0	19.2	10.9	14.0
Queue Length 50th (ft)	1	26	1	1	2	31	21	35
Queue Length 95th (ft)	15	98	15	24	24	125	128	223
Internal Link Dist (ft)		981		1223		1392		1024
Turn Bay Length (ft)	100		150		150		150	
Base Capacity (vph)	512	1348	264	1002	800	2317	992	2838
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.11	0.02	0.04	0.04	0.15	0.23	0.23
Intersection Summary								

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	ને		ሻ	ĵ»		ሻ	<b>↑</b> ↑		ሻ	<b>↑</b> 1≽	
Traffic Volume (vph)	5	90	32	5	6	31	25	239	49	191	541	23
Future Volume (vph)	5	90	32	5	6	31	25	239	49	191	541	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
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	0.96		1.00	0.87		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1504	1757		1128	1495		1612	3021		1767	3371	
Flt Permitted	0.95	1.00		0.95	1.00		0.35	1.00		0.53	1.00	
Satd. Flow (perm)	1504	1757		1128	1495		600	3021		988	3371	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	6	106	38	6	7	36	29	281	58	225	636	27
RTOR Reduction (vph)	0	12	0	0	29	0	0	14	0	0	2	0
Lane Group Flow (vph)	6	132	0	6	14	0	29	325	0	225	661	0
Confl. Peds. (#/hr)									3	3		
Heavy Vehicles (%)	20%	2%	9%	60%	17%	10%	12%	18%	6%	2%	6%	17%
Turn Type	Prot	NA		Prot	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							6			2		
Actuated Green, G (s)	0.8	10.7		0.8	10.7		28.0	17.4		28.0	25.8	
Effective Green, g (s)	1.8	11.7		1.8	11.7		30.0	18.4		28.0	25.8	
Actuated g/C Ratio	0.03	0.20		0.03	0.20		0.50	0.31		0.47	0.43	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	45	345		34	293		356	934		603	1461	
v/s Ratio Prot	0.00	c0.08		c0.01	0.01		0.00	0.11		c0.07	c0.20	
v/s Ratio Perm							0.04			0.11		
v/c Ratio	0.13	0.38		0.18	0.05		0.08	0.35		0.37	0.45	
Uniform Delay, d1	28.1	20.8		28.1	19.4		7.5	15.9		9.6	11.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	0.7		2.5	0.1		0.1	0.2		0.4	0.2	
Delay (s)	29.4	21.5		30.6	19.5		7.6	16.1		9.9	12.1	
Level of Service	С	С		С	В		А	В		Α	В	
Approach Delay (s/veh)	_	21.8		-	20.8			15.5			11.6	
Approach LOS		С			С			В			В	
Intersection Summary												
HCM 2000 Control Delay (s/	/veh)		13.9	H	CM 2000	Level of	Service		В			
HCM 2000 Volume to Capac	,		0.43	•	000	_5.5.5	2000					
Actuated Cycle Length (s)	,		59.5	Sı	um of lost	time (s)			17.0			
Intersection Capacity Utiliza	tion		37.4%		U Level		9		Α			
Analysis Period (min)			15	10	. 5 _5701 (	2. 30. 1100	_		,,			
c Critical Lane Group			10									

c Critical Lane Group

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	<b>f</b>		ሻ	1>		75	<b>↑</b> ↑		7	<b>↑</b> ↑	
Traffic Volume (veh/h)	5	90	32	5	6	31	25	239	49	191	541	23
Future Volume (veh/h)	5	90	32	5	6	31	25	239	49	191	541	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
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	1604	1870	1767	1011	1648	1752	1722	1633	1811	1870	1811	1648
Adj Flow Rate, veh/h	6	106	38	6	7	36	29	281	58	225	636	27
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	20	2	9	60	17	10	12	18	6	2	6	17
Cap, veh/h	52	210	75	33	37	191	426	649	132	606	1231	52
Arrive On Green	0.03	0.16	0.14	0.03	0.16	0.14	0.06	0.25	0.23	0.17	0.37	0.37
Sat Flow, veh/h	1527	1314	471	963	233	1199	1640	2566	521	1781	3363	143
Grp Volume(v), veh/h	6	0	144	6	0	43	29	168	171	225	325	338
Grp Sat Flow(s),veh/h/ln	1527	0	1786	963	0	1432	1640	1552	1535	1781	1721	1785
Q Serve(g_s), s	0.2	0.0	3.3	0.3	0.0	1.2	0.4	4.0	4.2	3.8	6.5	6.6
Cycle Q Clear(g_c), s	0.2	0.0	3.3	0.3	0.0	1.2	0.4	4.0	4.2	3.8	6.5	6.6
Prop In Lane	1.00		0.26	1.00		0.84	1.00		0.34	1.00		0.08
Lane Grp Cap(c), veh/h	52	0	285	33	0	228	426	393	389	606	630	653
V/C Ratio(X)	0.12	0.00	0.51	0.18	0.00	0.19	0.07	0.43	0.44	0.37	0.52	0.52
Avail Cap(c_a), veh/h	552	0	1251	239	0	1003	1112	1087	1075	1310	1555	1613
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	17.1	20.8	0.0	16.5	7.4	13.8	14.0	9.4	11.0	11.0
Incr Delay (d2), s/veh	1.0	0.0	1.4	2.7	0.0	0.4	0.1	0.7	8.0	0.4	0.7	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	0.1	0.0	1.2	0.1	0.0	0.3	0.1	1.1	1.2	1.0	1.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.7	0.0	18.5	23.5	0.0	16.9	7.5	14.6	14.8	9.7	11.6	11.6
LnGrp LOS	С		В	С		В	Α	В	В	Α	В	В
Approach Vol, veh/h		150			49			368			888	
Approach Delay, s/veh		18.6			17.7			14.1			11.1	
Approach LOS		В			В			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.5	15.2	5.5	11.1	6.5	21.2	5.5	11.1				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	25.0	30.0	10.0	30.0	20.0	40.0	15.0	30.0				
Max Q Clear Time (g_c+I1), s	5.8	6.2	2.3	5.3	2.4	8.6	2.2	3.2				
Green Ext Time (p_c), s	0.9	1.6	0.0	1.4	0.1	3.4	0.0	0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			12.9									
HCM 7th LOS			В									
Notes												
User approved pedestrian inter	rval to be	e less tha	n phase n	nax greer	າ.							

	•	<b>→</b>	•	•	•	•	•	<b>†</b>	<b>/</b>	<b>&gt;</b>	ļ	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	18	265	16	5	26	1	11	3	16	0	2	3
Future Volume (vph)	18	265	16	5	26	1	11	3	16	0	2	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	22	319	19	6	31	1	13	4	19	0	2	4
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	360	38	36	6								
Volume Left (vph)	22	6	13	0								
Volume Right (vph)	19	1	19	4								
Hadj (s)	0.03	0.23	-0.01	-0.01								
Departure Headway (s)	4.1	4.6	4.8	4.8								
Degree Utilization, x	0.41	0.05	0.05	0.01								
Capacity (veh/h)	872	755	694	680								
Control Delay (s/veh)	9.9	7.8	8.0	7.8								
Approach Delay (s/veh)	9.9	7.8	8.0	7.8								
Approach LOS	Α	Α	Α	Α								
Intersection Summary												
Delay			9.5									
Level of Service			Α									
Intersection Capacity Utilizat	tion		33.0%	IC	U Level o	of Service			Α			
Analysis Period (min)			15									

Intersection		
Intersection Delay, s/veh	9.5	
Intersection LOS	Α	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	18	265	16	5	26	1	11	3	16	0	2	3
Future Vol, veh/h	18	265	16	5	26	1	11	3	16	0	2	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	19	20	8	100	18	2	13	2	2	33
Mvmt Flow	22	319	19	6	31	1	13	4	19	0	2	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB				SB	
Opposing Approach	WB			EB			SB				NB	
Opposing Lanes	1			1			1				1	
Conflicting Approach Left	SB			NB			EB				WB	
Conflicting Lanes Left	1			1			1				1	
Conflicting Approach Right	NB			SB			WB				EB	
Conflicting Lanes Right	1			1			1				1	
HCM Control Delay, s/veh	9.8			8			8.1				7.5	
HCM LOS	Α			Α			Α				Α	

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	37%	6%	16%	0%	
Vol Thru, %	10%	89%	81%	40%	
Vol Right, %	53%	5%	3%	60%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	30	299	32	5	
LT Vol	11	18	5	0	
Through Vol	3	265	26	2	
RT Vol	16	16	1	3	
Lane Flow Rate	36	360	39	6	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.049	0.402	0.05	0.008	
Departure Headway (Hd)	4.837	4.015	4.704	4.491	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Сар	744	890	765	801	
Service Time	2.84	2.068	2.71	2.495	
HCM Lane V/C Ratio	0.048	0.404	0.051	0.007	
HCM Control Delay, s/veh	8.1	9.8	8	7.5	
HCM Lane LOS	Α	Α	Α	Α	
HCM 95th-tile Q	0.2	2	0.2	0	

	•	<b>→</b>	<b>←</b>	1	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	- ↑		ሻ	7
Traffic Volume (veh/h)	147	125	13	68	7	12
Future Volume (Veh/h)	147	125	13	68	7	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	186	158	16	86	9	15
Pedestrians					4	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	106				593	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	106				593	63
tC, single (s)	4.1				6.5	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.5
p0 queue free %	87				98	98
cM capacity (veh/h)	1479				391	957
Direction, Lane #	EB 1	WB 1	SB 1	SB 2		
Volume Total	344	102	9	15		
Volume Left	186	0	9	0		
Volume Right	0	86	0	15		
cSH	1479	1700	391	957		
Volume to Capacity	0.13	0.06	0.02	0.02		
Queue Length 95th (ft)	11	0	2	1		
Control Delay (s/veh)	4.7	0.0	14.4	8.8		
Lane LOS	A		В	A		
Approach Delay (s/veh)	4.7	0.0	10.9			
Approach LOS			В			
Intersection Summary						
Average Delay			4.0			
Intersection Capacity Utiliza	ation		31.4%	IC	ا ا ا معما د	of Service
	atiOH			iC	O LEVEL (	JI OEI VICE
Analysis Period (min)			15			

Intersection							
Int Delay, s/veh	3.6						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
	CDL			WDK			
Lane Configurations	4.47	41	<b>}</b>	.60	<b>\</b>	12	
Traffic Vol, veh/h	147	125	13	68	7	12	
Future Vol, veh/h	147	125	13	68	7	12	
Conflicting Peds, #/hr		0	0	4	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-		-	None	-	None	
Storage Length	-	-	-	-	-	0	
Veh in Median Storag		0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	79	79	79	79	79	79	
Heavy Vehicles, %	2	3	15	4	14	17	
Mvmt Flow	186	158	16	86	9	15	
Major/Minor	Major1	N	Majora		Minor2		
	Major1		Major2			60	
Conflicting Flow All	107	0	-	0	594	63	
Stage 1	-	-	-	-	63	-	
Stage 2	- 4.40	-	-	-	530	-	
Critical Hdwy	4.12	-	-	-	6.54	6.37	
Critical Hdwy Stg 1	-	-	-	-	5.54	-	
Critical Hdwy Stg 2	-	-	-	-	5.54	-	
Follow-up Hdwy	2.218	-	-	-	3.626		
Pot Cap-1 Maneuver	1484	-	-	-	448	960	
Stage 1	-	-	-	-	930	-	
Stage 2	-	-	-	-	567	-	
Platoon blocked, %		-	-	-			
Mov Cap-1 Maneuver		-	-	-	384	957	
Mov Cap-2 Maneuver	-	-	-	-	384	-	
Stage 1	-	-	-	-	798	-	
Stage 2	-	-	-	-	564	-	
Annragah	ED		WD		CD		
Approach	EB		WB		SB		
HCM Control Delay, s	/v 4.21		0		10.95		
HCM LOS					В		
Minor Lane/Major Mvr	nt	EBL	EBT	WBT	WRR	SBLn1 S	BI n2
Capacity (veh/h)		973	-		-	384	957
HCM Lane V/C Ratio		0.126	Ī			0.023 (	
HCM Control Delay (s	(veh)	7.8	0	-	_	14.6	8.8
HCM Lane LOS	/ VCII)	7.0 A	A		-	14.0 B	0.0 A
HCM 95th %tile Q(veh	2)	0.4	- -	-	-	0.1	0
HOW BOTH WITH MICHAEL	1)	0.4	-	-	-	U. I	U

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		ર્ન	₽		ሻ	7
Traffic Volume (veh/h)	19	117	82	25	2	3
Future Volume (Veh/h)	19	117	82	25	2	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	24	150	105	32	3	4
Pedestrians					15	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)		140110	140110			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	152				334	136
vC1, stage 1 conf vol	102				JJ-7	100
vC2, stage 2 conf vol						
vCu, unblocked vol	152				334	136
•	4.1				6.4	6.2
tC, single (s)	4.1				0.4	0.2
tC, 2 stage (s)	2.2				3.5	3.3
tF (s)						
p0 queue free %	98				100	100
cM capacity (veh/h)	1408				641	900
Direction, Lane #	EB 1	WB 1	SB 1	SB 2		
Volume Total	174	137	3	4		
Volume Left	24	0	3	0		
Volume Right	0	32	0	4		
cSH	1408	1700	641	900		
Volume to Capacity	0.02	0.08	0.00	0.00		
Queue Length 95th (ft)	1	0	0	0		
Control Delay (s/veh)	1.2	0.0	10.6	9.0		
Lane LOS	Α		В	Α		
Approach Delay (s/veh)	1.2	0.0	9.7			
Approach LOS			Α			
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utiliza	ation		23.9%	IC:	ULevelo	of Service
Analysis Period (min)			15	10	2 20101	501 1100
Alialysis i cliou (IIIIII)			10			

Intersection							
Int Delay, s/veh	0.8						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	\$	1,5,1	Ť	7	
Traffic Vol, veh/h	19	117	82	25	2	3	
Future Vol, veh/h	19	117	82	25	2	3	
Conflicting Peds, #/hr	15	0	0	15	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-		
Storage Length	-	-	-	-	-	0	
Veh in Median Storage	e,# -	0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	78	78	78	78	78	78	
Heavy Vehicles, %	2	4	7	4	2	2	
Mvmt Flow	24	150	105	32	3	4	
Major/Minor I	Major1	N	//ajor2	1	Minor2		
Conflicting Flow All	152	0	-	0	335	136	
Stage 1	-	-	-	-	136	-	
Stage 2	-	-	-	-	199	-	
Critical Hdwy	4.12	-	-	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	-	5.42	-	
Follow-up Hdwy	2.218	-	-	-			
Pot Cap-1 Maneuver	1429	-	-	-	660	912	
Stage 1	-	-	-	-	890	-	
Stage 2	-	-	-	-	835	-	
Platoon blocked, %	4.455	-	-	-	000	000	
Mov Cap-1 Maneuver	1408	-	-	-	630	899	
Mov Cap-2 Maneuver	-	-	-	-	630	-	
Stage 1	-	-	-	-	861	-	
Stage 2	-	-	-	-	823	-	
Approach	EB		WB		SB		
HCM Control Delay, s/	v 1.06		0		9.71		
HCM LOS					Α		
Minor Lane/Major Mvm	nt	EBL	EBT	WBT	WRR	SBLn1 S	SBI n2
Capacity (veh/h)		251	-	-	-	630	899
HCM Lane V/C Ratio		0.017		_		0.004	
HCM Control Delay (s/	veh)	7.6	0	_	_	10.7	9
HCM Lane LOS	,	Α.	A	_	_	В	A
HCM 95th %tile Q(veh	)	0.1	-	_	-	0	0
Jili ootii 70tiio Q(Voii	,	J. 1					

## 14: Calmax Technology Access/East Access & SW Leveton Drive

11: Gairriax Toorine	ology / te					-010101						
	•	-	$\rightarrow$	•	<b>←</b>	•	•	<b>†</b>	<b>/</b>	<b>&gt;</b>	ļ	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Volume (veh/h)	47	56	4	0	103	35	1	0	0	2	0	4
Future Volume (Veh/h)	47	56	4	0	103	35	1	0	0	2	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	53	64	5	0	117	40	1	0	0	2	0	5
Pedestrians											17	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											3.5	
Percent Blockage											2	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	174			69			315	347	67	327	329	154
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	174			69			315	347	67	327	329	154
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.6	6.5	6.7
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	4.0	4.0	3.8
p0 queue free %	96			100			100	100	100	100	100	99
cM capacity (veh/h)	1368			1532			608	545	997	513	558	767
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	122	157	1	7								
Volume Left	53	0	1	2								
Volume Right	5	40	0	5								
cSH	1368	1532	608	672								
Volume to Capacity	0.04	0.00	0.00	0.01								
Queue Length 95th (ft)	3	0	0	1								
Control Delay (s/veh)	3.5	0.0	10.9	10.4								
Lane LOS	Α		В	В								
Approach Delay (s/veh)	3.5	0.0	10.9	10.4								
Approach LOS			В	В								
Intersection Summary												
Average Delay			1.8									
Intersection Capacity Utiliza	ation		29.4%	IC	U Level	of Service			Α			
Analysis Period (min)			15									

Intersection												
Int Delay, s/veh	1.7											
Movement I	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	47	56	4	0	103	35	1	0	0	2	0	4
Future Vol, veh/h	47	56	4	0	103	35	1	0	0	2	0	4
Conflicting Peds, #/hr	17	0	0	0	0	17	0	0	0	0	0	0
	ree	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	_	_	None	_	_	None	_	_	None	_	-	None
Storage Length	-	_	_	-	_	-	-	_	-	-	-	_
Veh in Median Storage, #	t -	0	_	-	0	-	-	0	-	_	0	-
Grade, %	_	0	-	-	0	-	-	0	-	_	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	4	7	2	2	4	6	2	2	2	50	2	50
Mvmt Flow	53	64	5	0	117	40	1	0	0	2	0	5
Major/Minor Ma	ijor1			Major2			Minor1			Minor2		
	174	0	0	68	0	0	290	347	66	324	329	154
Stage 1	1/4	-	U	-	-	-	173	173	-	154	154	104
Stage 1	_		-	-	-	-	117	173	-	170	175	-
	4.14	-	-	4.12	-	-	7.12	6.52	6.22	7.6	6.52	6.7
Critical Hdwy Stg 1	7.14	_	-	4.12	-	-	6.12	5.52	0.22	6.6	5.52	0.1
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.6	5.52	-
	.236	-	_	2.218	_		3.518	4.018	3.318	3.95	4.018	3.75
	391	_	-	1533	-	-	662	577	998	546	590	780
Stage 1	- 1	_	_	1000	_	_	829	756	990	747	770	100
Stage 1	-	-	-	-	-	-	888	755	<u>-</u>	731	754	_
Platoon blocked, %	-	_	_	-	_	-	000	100	-	131	1 54	-
	368	-	-	1533	-	-	632	544	998	515	557	768
Mov Cap-1 Maneuver	-	_	_	1000	_	_	632	544	990	515	557	100
Stage 1	-	-	-	-	-	-	795	725	_	735	758	-
Stage 2		_	_		_		882	743	_	701	724	-
Olago Z	_	-					002	773		701	14	-
Annroach	ED			WD			ND			CD.		
Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	3.4			0			10.71			10.51		
HCM LOS							В			В		
		IDI 4	EDI	EDT	EDD	MAIDI	MOT	WDD	0DL 4			
Minor Lane/Major Mvmt	ſ	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :				
Capacity (veh/h)		632	780	-	-	1533	-	-	660			
HCM Lane V/C Ratio		0.002		-	-	-	-	-	0.01			
HCM Control Delay (s/vel	h)	10.7	7.7	0	-	0	-	-	10.5			
HCM Lane LOS HCM 95th %tile Q(veh)		B 0	0.1	Α	-	A 0	-	-	B 0			
I I A A OF the U/ tile ()/				_			_	_				

	۶	•	•	<b>†</b>	ļ	4
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	f.	
Traffic Volume (veh/h)	27	54	108	39	25	26
Future Volume (Veh/h)	27	54	108	39	25	26
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	31	61	123	44	28	30
Pedestrians	19			1	1	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			0.0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)				140110	110110	
Upstream signal (ft)				861		
pX, platoon unblocked				301		
vC, conflicting volume	353	63	77			
vC1, stage 1 conf vol	000	00	11			
vC2, stage 2 conf vol						
vCu, unblocked vol	353	63	77			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)	0.5	0.2	7.1			
tF (s)	3.6	3.3	2.2			
p0 queue free %	95	94	92			
cM capacity (veh/h)	571	983	1476			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	92	167	58			
Volume Left	31	123	0			
Volume Right	61	0	30			
cSH	790	1476	1700			
Volume to Capacity	0.12	0.08	0.03			
Queue Length 95th (ft)	10	7	0			
Control Delay (s/veh)	10.2	5.8	0.0			
Lane LOS	В	Α				
Approach Delay (s/veh)	10.2	5.8	0.0			
Approach LOS	В					
Intersection Summary						
Average Delay			6.0			
Intersection Capacity Utilizat	tion		26.5%	IC	U Level o	f Service
Analysis Period (min)			15			2220
ruialy old i ollod (Illill)			10			

Intersection						
Int Delay, s/veh	5.9					
		E55	NE	NET	057	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			- €	₽	
Traffic Vol, veh/h	27	54	108	39	25	26
Future Vol, veh/h	27	54	108	39	25	26
Conflicting Peds, #/hr	1	1	19	0	0	19
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	_
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	7	2	5	21	28	12
Mymt Flow	31	61	123	44	28	30
WWW	O1	<b>V</b> 1	120	• •	20	00
Major/Minor	Minor2		Major1	٨	/lajor2	
Conflicting Flow All	353	63	77	0	-	0
Stage 1	62	-	-	-	-	-
Stage 2	291	-	-	-	-	-
Critical Hdwy	6.47	6.22	4.15	-	-	-
Critical Hdwy Stg 1	5.47	-	-	_	_	-
Critical Hdwy Stg 2	5.47	_	_	_	_	_
Follow-up Hdwy		3.318	2 245	_	_	_
Pot Cap-1 Maneuver	635	1001	1503	_	_	_
Stage 1	948	-	-	_	_	_
Stage 2	747					_
Platoon blocked, %	741	_	_	-	_	_
	560	982	1476	-	-	-
Mov Cap-1 Maneuver		902	14/0	-	-	-
Mov Cap-2 Maneuver	560	-	-	-	-	-
Stage 1	851	-	-	-	-	-
Stage 2	734	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s/			5.63		0	
HCM LOS	В		0.00		U	
TIOW LOG	U					
Minor Lane/Major Mvn	nt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1322	-	785	-	-
HCM Lane V/C Ratio		0.083	-	0.117	-	-
HCM Control Delay (sa	/veh)	7.7	0	10.2	-	-
HCM Lane LOS	,	Α	A	В	-	-
HCM 95th %tile Q(veh	)	0.3	-	0.4	-	-
2000	,					

## 16: SW Herman Road & SW 108th Ave

	•	<b>→</b>	•	<b>\</b>	4
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	16	410	450	53	12
v/c Ratio	0.03	0.35	0.39	0.14	0.03
Control Delay (s/veh)	2.7	5.4	7.3	15.3	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	2.7	5.4	7.3	15.3	9.1
Queue Length 50th (ft)	1	45	44	10	0
Queue Length 95th (ft)	6	92	161	36	10
Internal Link Dist (ft)		877	1007	781	
Turn Bay Length (ft)	100			135	
Base Capacity (vph)	757	1557	1622	1263	1235
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.02	0.26	0.28	0.04	0.01
Intersection Summary					

	•	<b>→</b>	•	•	<b>\</b>	4		
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	ሻ	<b>^</b>	1>		ሻ	7		
Traffic Volume (vph)	14	353	235	152	46	10		
Future Volume (vph)	14	353	235	152	46	10		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00		
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		
Frt	1.00 0.95	1.00 1.00	0.95 1.00		1.00	0.85 1.00		
Fit Protected	1398	1557	1626		0.95 1504	1468		
Satd. Flow (prot) Flt Permitted	0.45	1.00	1.00		0.95	1.00		
Satd. Flow (perm)	655	1557	1626		1504	1468		
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86		
Adj. Flow (vph)	16	410	273	177	53	12		
RTOR Reduction (vph)	0	0	19	0	0	10		
Lane Group Flow (vph)	16	410	431	0	53	2		
Confl. Peds. (#/hr)	3	110	101	3	00			
Heavy Vehicles (%)	29%	22%	12%	6%	20%	10%		
Turn Type	D.P+P	NA	NA		Prot	Perm		
Protected Phases	5	2	6		4			
Permitted Phases	6					4		
Actuated Green, G (s)	25.2	30.6	24.5		4.3	4.3		
Effective Green, g (s)	28.0	32.0	25.9		6.8	6.8		
Actuated g/C Ratio	0.60	0.68	0.55		0.15	0.15		
Clearance Time (s)	5.4	5.4	5.4		6.5	6.5		
Vehicle Extension (s)	2.0	3.1	3.1		2.6	2.6		
Lane Grp Cap (vph)	425	1064	899		218	213		
v/s Ratio Prot	0.00	c0.26	c0.27		c0.04			
v/s Ratio Perm	0.02					0.00		
v/c Ratio	0.04	0.39	0.48		0.24	0.01		
Uniform Delay, d1	5.2	3.2	6.4		17.7	17.1		
Progression Factor	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.0	0.2	0.4		0.5	0.0		
Delay (s)	5.2	3.4	6.8		18.2	17.1		
Level of Service Approach Delay (s/veh)	Α	A 3.5	A 6.8		B 18.0	В		
Approach LOS		3.5 A	0.0 A		10.0 B			
• •		A	٨		Ь			
Intersection Summary	/ 1)		0.4		0110000			
HCM 2000 Control Delay (s	,		6.1	H	JM 2000	Level of Servi	ce	
HCM 2000 Volume to Capa	icity ratio		0.45 46.8	C.	ım of loct	time (c)		
Actuated Cycle Length (s) Intersection Capacity Utiliza	ation		32.6%		um of lost	of Service		
Analysis Period (min)	atiOH		15	iC	O Level (	DI SEI VICE		
Analysis Feliou (IIIII)			10					

Lam TUX - Site 2024 Existing Conditions - AM Peak Hour

c Critical Lane Group

	•	<b>→</b>	<b>—</b>	•	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<b>†</b>	1>		*	1
Traffic Volume (veh/h)	14	353	235	152	46	10
Future Volume (veh/h)	14	353	235	152	46	10
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1470	1574	1722	1811	1604	1752
Adj Flow Rate, veh/h	16	410	273	177	53	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	29	22	12	6	20	10
Cap, veh/h	511	1087	530	343	186	181
Arrive On Green	0.05	0.69	0.54	0.51	0.12	0.12
Sat Flow, veh/h	1400	1574	974	632	1527	1485
Grp Volume(v), veh/h	16	410	0	450	53	12
Grp Sat Flow(s), veh/h/ln	1400	1574	0	1606	1527	1485
Q Serve(g_s), s	0.0	4.6	0.0	7.7	1.3	0.3
Cycle Q Clear(g_c), s	0.0	4.6	0.0	7.7	1.3	0.3
Prop In Lane	1.00	4.0	0.0	0.39	1.00	1.00
•	511	1087	٥	873	186	181
Lane Grp Cap(c), veh/h			0			
V/C Ratio(X)	0.03	0.38	0.00	0.52	0.29	0.07
Avail Cap(c_a), veh/h	811	1714	0	2466	1165	1132
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	2.8	0.0	6.4	17.0	16.6
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.5	0.7	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/In	0.1	0.4	0.0	1.6	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	7.4	3.0	0.0	6.9	17.7	16.7
LnGrp LOS	Α	Α		Α	В	В
Approach Vol, veh/h		426	450		65	
Approach Delay, s/veh		3.2	6.9		17.5	
Approach LOS		Α	Α		В	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		33.4		9.2	6.3	27.2
Change Period (Y+Rc), s		5.4		6.5	5.4	5.4
Max Green Setting (Gmax), s		45.0		30.0	10.0	64.0
Max Q Clear Time (g_c+l1), s		6.6		3.3	2.0	9.7
Green Ext Time (p_c), s		9.5		0.1	0.0	12.1
		9.5		0.1	0.0	12.1
Intersection Summary						
HCM 7th Control Delay, s/veh			5.9			
HCM 7th LOS			Α			

	-	$\rightarrow$	•	•	•	~
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1→		ኻ	<b></b>	*	7
Traffic Volume (veh/h)	601	162	63	299	75	57
Future Volume (Veh/h)	601	162	63	299	75	57
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	633	171	66	315	79	60
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage veh)				2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			806		1168	721
vC1, stage 1 conf vol					721	
vC2, stage 2 conf vol					447	
vCu, unblocked vol			806		1168	721
tC, single (s)			4.1		6.6	6.4
tC, 2 stage (s)					5.6	•••
tF(s)			2.2		3.6	3.5
p0 queue free %			92		80	85
cM capacity (veh/h)			804		386	397
	ED 4	WD 4		ND 4		
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	
Volume Total	804	66	315	79 70	60	
Volume Left	0 171	66	0	79	0 60	
Volume Right		0	1700	0		
cSH	1700	804	1700	386	397	
Volume to Capacity	0.47	0.08	0.19	0.20	0.15	
Queue Length 95th (ft)	0	7	0	19	13	
Control Delay (s/veh)	0.0	9.9	0.0	16.7	15.7	
Lane LOS	0.0	Α		C	С	
Approach Delay (s/veh)	0.0	1.7		16.3		
Approach LOS				С		
Intersection Summary						
Average Delay			2.2			
Intersection Capacity Utiliza	ation		59.2%	IC	U Level o	f Service
Analysis Period (min)			15			

Intersection							
Int Delay, s/veh	3.5						
	EDT	EDD	WDI	WDT	NDI	NDD	J
	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ĵ.		<u>ነ</u>	<u></u>			
Traffic Vol, veh/h	601	162	63	299	75	57	
Future Vol, veh/h	601	162	63	299	75	57	
Conflicting Peds, #/hr	0	2	2	0	0	0	
	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	25	-	100	0	
Veh in Median Storage,	# 0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	2	3	5	7	15	21	
Mymt Flow	633	171	66	315	79	60	
	000	.,,,	- 00	3.0	, 0	- 00	
Major/Minor Major/Minor	ajor1		Major2		Minor1		
Conflicting Flow All	0	0	805	0	1167	720	
Stage 1	-	-	-	-	720	-	
Stage 2	-	-	-	-	447	-	
Critical Hdwy	-	-	4.15	-	6.55	6.41	
Critical Hdwy Stg 1	-	-	-	-	5.55	-	
Critical Hdwy Stg 2	-	-	-	-	5.55	-	
Follow-up Hdwy	-	-	2.245	-		3.489	
Pot Cap-1 Maneuver	-	-	806	-	202	398	
Stage 1	_	_	-	_	459	-	
Stage 2	-	-	-	-	618	-	
Platoon blocked, %	_	_		_	310		
Mov Cap-1 Maneuver	_		805	_	185	397	
Mov Cap-1 Maneuver	-	_	- 005	_	185	J91 -	
•		-					
Stage 1	-	-	-	-	458	-	
Stage 2	-	-	-	-	567	-	
Approach	EB		WB		NB		
HCM Control Delay, s/v	0		1.72		28.54		
HCM LOS	U		1.12		D		
TIOWI LOO					U		
Minor Lane/Major Mvmt	1	NBLn11	VBLn2	EBT	EBR	WBL	
Capacity (veh/h)		185	397	-	-	805	
HCM Lane V/C Ratio		0.428		-	-	0.082	
HCM Control Delay (s/ve	eh)	38.3	15.7	-	-	9.9	
HCM Lane LOS	,	E	С	-	_	A	
HCM 95th %tile Q(veh)		2	0.5	_	_	0.3	
3041 704110 4(1011)		_	0.0			0.0	

	-	$\rightarrow$	•	•		<b>/</b>	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	₽			4	*/		Ī
Traffic Volume (veh/h)	26	12	45	80	100	107	
Future Volume (Veh/h)	26	12	45	80	100	107	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64	
Hourly flow rate (vph)	41	19	70	125	156	167	
Pedestrians					37		
Lane Width (ft)					12.0		
Walking Speed (ft/s)					3.5		
Percent Blockage					4		
Right turn flare (veh)							
Median type	None			None			
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume			97		353	88	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			97		353	88	
tC, single (s)			4.2		6.4	6.2	
tC, 2 stage (s)					<b>V</b>	V. <u>–</u>	
tF(s)			2.3		3.5	3.3	
p0 queue free %			95		73	82	
cM capacity (veh/h)			1414		588	929	
	ED 4	M/D 4					
Direction, Lane #	EB 1	WB 1	NB 1				
Volume Total	60	195	323				
Volume Left	0	70	156				
Volume Right	19	0	167				
cSH	1700	1414	726				
Volume to Capacity	0.04	0.05	0.45				
Queue Length 95th (ft)	0	4	58				
Control Delay (s/veh)	0.0	3.0	13.9				
Lane LOS		Α	В				
Approach Delay (s/veh)	0.0	3.0	13.9				
Approach LOS			В				
Intersection Summary							
Average Delay			8.8				
Intersection Capacity Utiliza	tion		32.1%	IC	U Level o	f Service	
Analysis Period (min)			15				

Intersection						
Int Delay, s/veh	8.7					
		EDD	14/51	VA/D.T	ND	NDD
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽			र्स	¥	
Traffic Vol, veh/h	26	12	45	80	100	107
Future Vol, veh/h	26	12	45	80	100	107
Conflicting Peds, #/hr	0	37	37	0	0	0
	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	<del>4</del> 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	25	7	6	4	5
Mvmt Flow	41	19	70	125	156	167
	ajor1		Major2		Minor1	
Conflicting Flow All	0	0	96	0	353	87
Stage 1	-	-	-	-	87	-
Stage 2	-	-	-	-	266	-
Critical Hdwy	-	-	4.17	-	6.44	6.25
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.263	-	3.536	3.345
Pot Cap-1 Maneuver	-	-	1466	-	641	963
Stage 1	-	_	-	-	931	-
Stage 2	-	-	-	-	774	-
Platoon blocked, %	_	_		_		
Mov Cap-1 Maneuver	_	_	1415	_	585	929
Mov Cap-1 Maneuver	_		-	_	585	-
Stage 1	_	<u>-</u>	-	-	899	
•	-	-	_	-		
Stage 2	-	-	-	-	733	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		2.76		13.93	
HCM LOS	-				В	
Minor Lane/Major Mvmt	1	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		724	-	-	648	-
HCM Lane V/C Ratio		0.447	-	-	0.05	-
HCM Control Delay (s/ve	h)	13.9	-	-	7.7	0
HCM Lane LOS		В	-	-	Α	Α
HCM 95th %tile Q(veh)		2.3	-	-	0.2	-

	•	•	<b>†</b>	<b>/</b>	<b>/</b>	ļ	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		7	<b>†</b> †	7		<b>^</b>	_
Traffic Volume (veh/h)	0	184	1194	18	0	1536	
Future Volume (Veh/h)	0	184	1194	18	0	1536	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	
Hourly flow rate (vph)	0	209	1357	20	0	1745	
Pedestrians	1						
Lane Width (ft)	12.0						
Walking Speed (ft/s)	3.5						
Percent Blockage	0.0						
Right turn flare (veh)							
Median type			None			None	
Median storage veh)			113110			110110	
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	2231	680			1358		
vC1, stage 1 conf vol	LLU.	000			1000		
vC2, stage 2 conf vol							
vCu, unblocked vol	2231	680			1358		
tC, single (s)	6.8	*6.0			4.1		
tC, 2 stage (s)	0.0	0.0					
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	55			100		
cM capacity (veh/h)	36	468			502		
			ND 0	ND 2		CD 1	
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	
Volume Total	209	679	679	20	873	873	
Volume Left	0	0	0	0	0	0	
Volume Right	209	0	0	20	0	0	
cSH	468	1700	1700	1700	1700	1700	
Volume to Capacity	0.45	0.40	0.40	0.01	0.51	0.51	
Queue Length 95th (ft)	57	0	0	0	0	0	
Control Delay (s/veh)	18.8	0.0	0.0	0.0	0.0	0.0	
Lane LOS	С						
Approach Delay (s/veh)	18.8	0.0			0.0		
Approach LOS	С						
Intersection Summary							
Average Delay			1.2				
Intersection Capacity Utiliza	tion		51.1%	IC	U Level	of Service	
Analysis Period (min)			15				

User Entered Value

Intersection						
Int Delay, s/veh	1.5					
•		14/5-	NET		05:	05-
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		7	<b>^</b>	7		<b>^</b>
Traffic Vol, veh/h	0	184	1194	18	0	1536
Future Vol, veh/h	0	184	1194	18	0	1536
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	335	-	-
Veh in Median Storage	, # 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	4	8	3	2	10
Mvmt Flow	0	209	1357	20	0	1745
NA - 1 /NA1	M		1.1.4		4 - ' - 0	
	Minor1		//ajor1		/lajor2	
Conflicting Flow All	-	678	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.98	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.34	-	-	-	-
Pot Cap-1 Maneuver	0	390	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	_	390	-	-	-	-
Mov Cap-2 Maneuver	-	-	_	_	_	-
Stage 1	_	_	-	_	_	_
Stage 2	_	_	_	_	_	_
Clayo Z						
	10.00					
Approach	WB		NB		SB	
HCM Control Delay, s/v	v24.42		0		0	
HCM LOS	С					
Minor Lane/Major Mvm	ıt	NBTV	/RI n1	SBT		
Capacity (veh/h)		-	390	-		
HCM Control Polov (a/	uah)		0.536	-		
HCM Control Delay (s/	ven)	-	24.4	-		
HCM Lane LOS		-	C	-		
HCM 95th %tile Q(veh)		-	3.1	-		

	٠	<b>→</b>	•	•	4	<b>†</b>	<b>/</b>	Ţ	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Group Flow (vph)	6	350	20	251	280	122	26	168	
v/c Ratio	0.02	0.73	0.07	0.57	0.48	0.19	0.06	0.42	
Control Delay (s/veh)	14.4	30.7	14.7	25.0	16.3	19.1	14.4	29.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	14.4	30.7	14.7	25.0	16.3	19.1	14.4	29.8	
Queue Length 50th (ft)	1	97	5	71	57	23	5	50	
Queue Length 95th (ft)	10	279	20	207	177	102	24	156	
Internal Link Dist (ft)		1007		989		572		1708	
Turn Bay Length (ft)	100		100		60		50		
Base Capacity (vph)	440	1203	570	1066	695	1250	703	1429	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.01	0.29	0.04	0.24	0.40	0.10	0.04	0.12	
Intersection Summary									

	٠	<b>→</b>	•	•	<b>←</b>	•	•	<b>†</b>	<i>&gt;</i>	<b>\</b>	Ţ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	£		, j	<b>₽</b>		¥	ĵ.		7	f <sub>a</sub>	
Traffic Volume (vph)	5	172	140	18	201	22	249	83	26	23	126	23
Future Volume (vph)	5	172	140	18	201	22	249	83	26	23	126	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		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	0.93		1.00	0.99		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1128	1471		1543	1307		1656	1495		1594	1705	
Flt Permitted	0.54	1.00		0.35	1.00		0.52	1.00		0.68	1.00	
Satd. Flow (perm)	644	1471	2.22	568	1307	0.00	907	1495	2.22	1138	1705	0.00
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)	6	193	157	20	226	25	280	93	29	26	142	26
RTOR Reduction (vph)	0	17	0	0	2	0	0	0	0	0	4	0
Lane Group Flow (vph)	6	333	0	20	249	0	280	122	0	26	164	0
Confl. Peds. (#/hr)	CO0/	400/	000/	470/	450/	070/	00/	0.40/	2	2	<b>50</b> /	200/
Heavy Vehicles (%)	60%	16%	26%	17%	45%	27%	9%	24%	15%	13%	5%	30%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2	04.4		6	00.0		8	00.5		4	40.5	
Actuated Green, G (s)	22.2	21.4		24.0	22.3		34.5	28.5		20.5	18.5	
Effective Green, g (s)	22.2 0.31	21.9 0.30		24.0 0.33	22.8 0.31		34.5 0.48	29.0 0.40		20.5 0.28	19.0 0.26	
Actuated g/C Ratio	4.0	5.5		4.0	5.5		4.0	5.5		4.0	5.5	
Clearance Time (s) Vehicle Extension (s)	2.0	3.2		2.0	3.2		2.0	3.2		2.0	3.2	
	202	443		210	410		554	597			446	
Lane Grp Cap (vph) v/s Ratio Prot	0.00	c0.23		c0.00	0.19		c0.08	0.08		333 0.00	0.10	
v/s Ratio Prot v/s Ratio Perm	0.00	00.23		0.03	0.19		c0.06	0.06		0.00	0.10	
v/c Ratio	0.01	0.75		0.03	0.61		0.51	0.20		0.02	0.37	
Uniform Delay, d1	17.6	22.9		16.9	21.1		12.2	14.3		19.0	21.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		7.1		0.1	2.6		0.3	0.2		0.0	0.6	
Delay (s)	0.0 17.6	30.0		17.0	23.7		12.5	14.4		19.0	22.4	
Level of Service	17.0	00.0 C		17.0 B	23.7 C		12.3 B	В		13.0 B	C C	
Approach Delay (s/veh)	U	29.8		Ь	23.2		D	13.1		D	22.0	
Approach LOS		23.0 C			C			В			C	
					0							
Intersection Summary	,											
	HCM 2000 Control Delay (s/veh)		21.6	H	CM 2000	Level of	Service		С			
•	HCM 2000 Volume to Capacity ratio		0.62	^		C			40.0			
Actuated Cycle Length (s)	·		72.6		um of lost				18.0			
Intersection Capacity Utiliza	ation		51.4%	IC	U Level o	of Service	9		Α			
Analysis Period (min)			15									

Analysis Period (min)
c Critical Lane Group

	۶	<b>→</b>	•	•	<b>←</b>	•	1	<b>†</b>	~	<b>/</b>	<b></b>	<b>√</b>
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		, M	<b>₽</b>		7	ĵ.		7	f)	
Traffic Volume (veh/h)	5	172	140	18	201	22	249	83	26	23	126	23
Future Volume (veh/h)	5	172	140	18	201	22	249	83	26	23	126	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	0.99		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	1011	1663	1515	1648	1233	1500	1767	1544	1678	1707	1826	1455
Adj Flow Rate, veh/h	6	193	157	20	226	25	280	93	29	26	142	26
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	60	16	26	17	45	27	9	24	15	13	5	30
Cap, veh/h	241	297	242	289	399	44	481	346	108	352	257	47
Arrive On Green	0.01	0.35	0.34	0.02	0.37	0.36	0.16	0.31	0.30	0.03	0.17	0.16
Sat Flow, veh/h	963	848	690	1570	1091	121	1682	1128	352	1626	1500	275
Grp Volume(v), veh/h	6	0	350	20	0	251	280	0	122	26	0	168
Grp Sat Flow(s),veh/h/ln	963	0	1539	1570	0	1211	1682	0	1480	1626	0	1774
Q Serve(g_s), s	0.3	0.0	11.9	0.5	0.0	10.3	7.9	0.0	3.9	0.8	0.0	5.4
Cycle Q Clear(g_c), s	0.3	0.0	11.9	0.5	0.0	10.3	7.9	0.0	3.9	0.8	0.0	5.4
Prop In Lane	1.00		0.45	1.00		0.10	1.00		0.24	1.00		0.15
Lane Grp Cap(c), veh/h	241	0	538	289	0	443	481	0	454	352	0	304
V/C Ratio(X)	0.02	0.00	0.65	0.07	0.00	0.57	0.58	0.00	0.27	0.07	0.00	0.55
Avail Cap(c_a), veh/h	544	0	1355	760	0	1047	748	0	1375	830	0	1592
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	17.0	13.8	0.0	15.7	15.8	0.0	16.3	20.5	0.0	23.5
Incr Delay (d2), s/veh	0.0	0.0	1.4	0.0	0.0	1.2	0.4	0.0	0.3	0.0	0.0	1.7
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	0.0	0.0	3.7	0.2	0.0	2.6	2.7	0.0	1.2	0.3	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.9	0.0	18.5	13.8	0.0	17.0	16.2	0.0	16.6	20.5	0.0	25.2
LnGrp LOS	В		В	В		В	В		В	С		С
Approach Vol, veh/h		356			271			402			194	
Approach Delay, s/veh		18.4			16.7			16.3			24.6	
Approach LOS		В			В			В			С	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	26.7	14.2	15.6	4.5	27.6	5.8	24.0				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	20.0	54.0	20.0	55.0	20.0	53.0	20.0	57.0				
Max Q Clear Time (g_c+I1), s	2.5	13.9	9.9	7.4	2.3	12.3	2.8	5.9				
Green Ext Time (p_c), s	0.0	7.3	0.4	0.6	0.0	5.6	0.1	1.7				
Intersection Summary												
HCM 7th Control Delay, s/veh			18.3									
HCM 7th LOS			10.3 B									
HOW 7 til LOO			D									

### 21: OR 99W (Pacific Highway) & SW Fischer Road

	•	•	1	<b>†</b>	<b>↓</b>	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	240	426	134	1432	1284	140
v/c Ratio	0.80	0.95	0.76	0.56	0.60	0.14
Control Delay (s/veh)	74.9	59.0	86.7	7.7	23.3	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.9	59.0	86.7	7.7	23.3	4.0
Queue Length 50th (ft)	209	201	120	256	530	13
Queue Length 95th (ft)	#320	#404	#226	304	612	m25
Internal Link Dist (ft)	1134			1909	2372	
Turn Bay Length (ft)	275		435			200
Base Capacity (vph)	325	467	176	2577	2139	987
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.91	0.76	0.56	0.60	0.14

### Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	٠	•	•	<b>†</b>	L	ļ	✓	
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	
Lane Configurations	ሻ	7	ሻ	ተተ	Ð	<b>†</b> †	1	
Traffic Volume (vph)	216	383	121	1289	0	1156	126	
Future Volume (vph)	216	383	121	1289	0	1156	126	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95		0.95	1.00	
Frpb, ped/bikes	1.00	0.98	1.00	1.00		1.00	0.97	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.85	1.00	1.00		1.00	0.85	
Flt Protected	0.95	1.00	0.95	1.00		1.00	1.00	
Satd. Flow (prot)	1752	1555	1543	3343		3406	1499	
Flt Permitted	0.95	1.00	0.95	1.00		1.00	1.00	
Satd. Flow (perm)	1752	1555	1543	3343	0.00	3406	1499	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	240	426	134	1432	0	1284	140	
RTOR Reduction (vph)	0	181	124	1422	0	1204	46	
Lane Group Flow (vph)	240	245	134	1432	0	1284	94	
Confl. Peds. (#/hr)	20/	7	470/	00/	20/	C0/	5	
Heavy Vehicles (%)	3%	2%	17%	8%	2%	6%	4%	
Turn Type	Prot	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	4	1	5	2	1	6	6	
Permitted Phases	22.4	4	115	10E 0		0F 0	6 85.9	
Actuated Green, G (s)	23.1	23.1	14.5 16.0	105.9		85.9 87.9	85.9 87.9	
Effective Green, g (s)	24.1 0.17	24.1 0.17	0.11	107.9 0.77		0.63	0.63	
Actuated g/C Ratio	5.0	5.0	5.5	6.0		6.0	6.0	
Clearance Time (s) Vehicle Extension (s)	2.5	2.5	2.3	4.5		4.5	4.5	
Lane Grp Cap (vph)	301	267	176 c0.09	2576		2138	941	
v/s Ratio Prot	0.14	o0 16	CU.U9	0.43		c0.38	0.06	
v/s Ratio Perm	0.80	c0.16 0.92	0.76	0.56		0.60	0.06 0.10	
v/c Ratio Uniform Delay, d1	55.6	57.0	0.76 60.1	6.4		0.60 15.6	10.3	
Progression Factor	1.00	1.00	1.00	1.00		1.38	1.54	
	13.2	33.5	16.5	0.9		1.0	0.2	
Incremental Delay, d2	68.8	90.4	76.6	7.3		22.6	16.1	
Delay (s) Level of Service	00.0 E	90.4 F	70.0 E	7.3 A		22.0 C	10.1	
Approach Delay (s/veh)	82.7	Г		13.2		21.9	Ь	
Approach LOS	62. <i>1</i>			13.2 B		Z1.9		
				Ь		U		
Intersection Summary	, a b		20.2	1.17	OM 0000	Laurel - C	Damile -	
HCM 2000 Control Delay (s/ HCM 2000 Volume to Capac			29.3	П	JIVI 2000	Level of S	service	
•	aty ratio		0.68	C.	ım of loct	time (a)		
Actuated Cycle Length (s) Intersection Capacity Utilizat	ion		140.0 67.1%		um of lost	time (s) of Service		
	IUH		15	IU	O Level (	JI SELVICE		
Analysis Period (min)			13					

c Critical Lane Group

Movement         EBL         EBR         NBL         NBT         SBU         SBT         SBR           Lane Configurations         Traffic Volume (veh/h)         216         383         121         1289         0         1156         126           Future Volume (veh/h)         216         383         121         1289         0         1156         126           Initial Q (Qb), veh         0         <
Traffic Volume (veh/h)         216         383         121         1289         0         1156         126           Future Volume (veh/h)         216         383         121         1289         0         1156         126           Initial Q (Qb), veh         0         0         0         0         0         0         0           Lane Width Adj.         1.00         1.00         1.00         1.00         1.00         1.00           Ped-Bike Adj(A_pbT)         1.00         1.00         1.00         1.00         1.00         1.00           Parking Bus, Adj         1.00         1.00         1.00         1.00         1.00         1.00           Work Zone On Approach         No         No         No         No         No         No           Adj Sat Flow, veh/h/In         1856         1870         1648         1781         1811         1841           Adj Flow Rate, veh/h         240         426         134         1432         1284         140           Peak Hour Factor         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90
Traffic Volume (veh/h)         216         383         121         1289         0         1156         126           Future Volume (veh/h)         216         383         121         1289         0         1156         126           Initial Q (Qb), veh         0         0         0         0         0         0         0           Lane Width Adj.         1.00         1.00         1.00         1.00         1.00         1.00           Ped-Bike Adj(A_pbT)         1.00         1.00         1.00         1.00         1.00         1.00           Parking Bus, Adj         1.00         1.00         1.00         1.00         1.00         1.00           Work Zone On Approach         No         No         No         No         No         No           Adj Sat Flow, veh/h/In         1856         1870         1648         1781         1811         1841           Adj Flow Rate, veh/h         240         426         134         1432         1284         140           Peak Hour Factor         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90
Initial Q (Qb), veh
Lane Width Adj.       1.00       1.00       1.00       1.00       1.00       1.00         Ped-Bike Adj(A_pbT)       1.00       1.00       1.00       1.00       1.00       1.00         Parking Bus, Adj       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/In       1856       1870       1648       1781       1811       1841         Adj Flow Rate, veh/h       240       426       134       1432       1284       140         Peak Hour Factor       0.90
Ped-Bike Adj(A_pbT)         1.00         1.00         1.00         1.00           Parking Bus, Adj         1.00         1.00         1.00         1.00         1.00           Work Zone On Approach         No         No         No         No           Adj Sat Flow, veh/h/In         1856         1870         1648         1781         1811         1841           Adj Flow Rate, veh/h         240         426         134         1432         1284         140           Peak Hour Factor         0.90         0.90         0.90         0.90         0.90         0.90           Percent Heavy Veh, %         3         2         17         8         6         4           Cap, veh/h         328         294         174         2563         2114         954           Arrive On Green         0.19         0.19         0.11         0.76         0.82         0.82           Sat Flow, veh/h         1767         1585         1570         3474         3532         1554           Grp Volume(v), veh/h         240         426         134         1432         1284         140           Grp Sat Flow(s),veh/h/In         1767         1585         1570         1692
Parking Bus, Adj         1.00
Work Zone On Approach         No         No         No           Adj Sat Flow, veh/h/ln         1856         1870         1648         1781         1811         1841           Adj Flow Rate, veh/h         240         426         134         1432         1284         140           Peak Hour Factor         0.90         0.90         0.90         0.90         0.90         0.90           Percent Heavy Veh, %         3         2         17         8         6         4           Cap, veh/h         328         294         174         2563         2114         954           Arrive On Green         0.19         0.19         0.11         0.76         0.82         0.82           Sat Flow, veh/h         1767         1585         1570         3474         3532         1554           Grp Volume(v), veh/h         240         426         134         1432         1284         140           Grp Sat Flow(s),veh/h/ln         1767         1585         1570         1692         1721         1554           Q Serve(g_s), s         17.9         26.0         11.6         24.9         19.0         2.6           Cycle Q Clear(g_c), s         17.9         26.0
Adj Sat Flow, veh/h/ln       1856       1870       1648       1781       1811       1841         Adj Flow Rate, veh/h       240       426       134       1432       1284       140         Peak Hour Factor       0.90       0.90       0.90       0.90       0.90       0.90         Percent Heavy Veh, %       3       2       17       8       6       4         Cap, veh/h       328       294       174       2563       2114       954         Arrive On Green       0.19       0.19       0.11       0.76       0.82       0.82         Sat Flow, veh/h       1767       1585       1570       3474       3532       1554         Grp Volume(v), veh/h       240       426       134       1432       1284       140         Grp Sat Flow(s),veh/h/ln       1767       1585       1570       1692       1721       1554         Q Serve(g_s), s       17.9       26.0       11.6       24.9       19.0       2.6         Cycle Q Clear(g_c), s       17.9       26.0       11.6       24.9       19.0       2.6         Prop In Lane       1.00       1.00       1.00       1.00       1.00
Adj Flow Rate, veh/h       240       426       134       1432       1284       140         Peak Hour Factor       0.90       0.90       0.90       0.90       0.90       0.90         Percent Heavy Veh, %       3       2       17       8       6       4         Cap, veh/h       328       294       174       2563       2114       954         Arrive On Green       0.19       0.19       0.11       0.76       0.82       0.82         Sat Flow, veh/h       1767       1585       1570       3474       3532       1554         Grp Volume(v), veh/h       240       426       134       1432       1284       140         Grp Sat Flow(s),veh/h/In       1767       1585       1570       1692       1721       1554         Q Serve(g_s), s       17.9       26.0       11.6       24.9       19.0       2.6         Cycle Q Clear(g_c), s       17.9       26.0       11.6       24.9       19.0       2.6         Prop In Lane       1.00       1.00       1.00       1.00         Lane Grp Cap(c), veh/h       328       294       174       2563       2114       954
Peak Hour Factor         0.90         0.90         0.90         0.90         0.90         0.90           Percent Heavy Veh, %         3         2         17         8         6         4           Cap, veh/h         328         294         174         2563         2114         954           Arrive On Green         0.19         0.19         0.11         0.76         0.82         0.82           Sat Flow, veh/h         1767         1585         1570         3474         3532         1554           Grp Volume(v), veh/h         240         426         134         1432         1284         140           Grp Sat Flow(s),veh/h/In         1767         1585         1570         1692         1721         1554           Q Serve(g_s), s         17.9         26.0         11.6         24.9         19.0         2.6           Cycle Q Clear(g_c), s         17.9         26.0         11.6         24.9         19.0         2.6           Prop In Lane         1.00         1.00         1.00         1.00           Lane Grp Cap(c), veh/h         328         294         174         2563         2114         954
Percent Heavy Veh, %         3         2         17         8         6         4           Cap, veh/h         328         294         174         2563         2114         954           Arrive On Green         0.19         0.19         0.11         0.76         0.82         0.82           Sat Flow, veh/h         1767         1585         1570         3474         3532         1554           Grp Volume(v), veh/h         240         426         134         1432         1284         140           Grp Sat Flow(s),veh/h/ln         1767         1585         1570         1692         1721         1554           Q Serve(g_s), s         17.9         26.0         11.6         24.9         19.0         2.6           Cycle Q Clear(g_c), s         17.9         26.0         11.6         24.9         19.0         2.6           Prop In Lane         1.00         1.00         1.00         1.00         1.00           Lane Grp Cap(c), veh/h         328         294         174         2563         2114         954
Cap, veh/h         328         294         174         2563         2114         954           Arrive On Green         0.19         0.19         0.11         0.76         0.82         0.82           Sat Flow, veh/h         1767         1585         1570         3474         3532         1554           Grp Volume(v), veh/h         240         426         134         1432         1284         140           Grp Sat Flow(s),veh/h/In         1767         1585         1570         1692         1721         1554           Q Serve(g_s), s         17.9         26.0         11.6         24.9         19.0         2.6           Cycle Q Clear(g_c), s         17.9         26.0         11.6         24.9         19.0         2.6           Prop In Lane         1.00         1.00         1.00         1.00           Lane Grp Cap(c), veh/h         328         294         174         2563         2114         954
Arrive On Green       0.19       0.19       0.11       0.76       0.82       0.82         Sat Flow, veh/h       1767       1585       1570       3474       3532       1554         Grp Volume(v), veh/h       240       426       134       1432       1284       140         Grp Sat Flow(s), veh/h/ln       1767       1585       1570       1692       1721       1554         Q Serve(g_s), s       17.9       26.0       11.6       24.9       19.0       2.6         Cycle Q Clear(g_c), s       17.9       26.0       11.6       24.9       19.0       2.6         Prop In Lane       1.00       1.00       1.00       1.00         Lane Grp Cap(c), veh/h       328       294       174       2563       2114       954
Sat Flow, veh/h         1767         1585         1570         3474         3532         1554           Grp Volume(v), veh/h         240         426         134         1432         1284         140           Grp Sat Flow(s), veh/h/ln         1767         1585         1570         1692         1721         1554           Q Serve(g_s), s         17.9         26.0         11.6         24.9         19.0         2.6           Cycle Q Clear(g_c), s         17.9         26.0         11.6         24.9         19.0         2.6           Prop In Lane         1.00         1.00         1.00         1.00           Lane Grp Cap(c), veh/h         328         294         174         2563         2114         954
Grp Volume(v), veh/h         240         426         134         1432         1284         140           Grp Sat Flow(s),veh/h/ln         1767         1585         1570         1692         1721         1554           Q Serve(g_s), s         17.9         26.0         11.6         24.9         19.0         2.6           Cycle Q Clear(g_c), s         17.9         26.0         11.6         24.9         19.0         2.6           Prop In Lane         1.00         1.00         1.00         1.00           Lane Grp Cap(c), veh/h         328         294         174         2563         2114         954
Grp Sat Flow(s), veh/h/ln       1767       1585       1570       1692       1721       1554         Q Serve(g_s), s       17.9       26.0       11.6       24.9       19.0       2.6         Cycle Q Clear(g_c), s       17.9       26.0       11.6       24.9       19.0       2.6         Prop In Lane       1.00       1.00       1.00       1.00         Lane Grp Cap(c), veh/h       328       294       174       2563       2114       954
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Cycle Q Clear(g_c), s       17.9       26.0       11.6       24.9       19.0       2.6         Prop In Lane       1.00       1.00       1.00       1.00         Lane Grp Cap(c), veh/h       328       294       174       2563       2114       954
Prop In Lane       1.00       1.00       1.00       1.00         Lane Grp Cap(c), veh/h       328       294       174       2563       2114       954
Lane Grp Cap(c), veh/h 328 294 174 2563 2114 954
1 1 1 7
V/C Ratio(X) 0 /3 1.45 0 // 0.56 0.61 0.15
Avail Cap(c_a), veh/h 328 294 179 2563 2114 954
HCM Platoon Ratio 1.00 1.00 1.00 1.33 1.33
Upstream Filter(I) 1.00 1.00 1.00 0.80 0.80
Uniform Delay (d), s/veh 53.7 57.0 60.5 7.2 6.7 5.2
Incr Delay (d2), s/veh 7.7 219.4 16.8 0.9 1.0 0.3
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.
%ile BackOfQ(50%),veh/ln 8.8 38.7 5.4 7.7 4.5 0.9
Unsig. Movement Delay, s/veh LnGrp Delay(d), s/veh 61.4 276.4 77.3 8.0 7.7 5.4
1 717
Approach Vol, veh/h       666       1566       1424         Approach Delay, s/veh       198.9       14.0       7.5
11 2
Approach LOS F B A
Timer - Assigned Phs 2 4 5 6
Phs Duration (G+Y+Rc), s 110.0 30.0 20.0 90.0
Change Period (Y+Rc), s 6.0 5.0 6.0 * 6
Max Green Setting (Gmax), s 84.0 25.0 14.5 * 84
Max Q Clear Time (g_c+l1), s 26.9 28.0 13.6 21.0
Green Ext Time (p_c), s 48.9 0.0 0.0 47.5
Intersection Summary
HCM 7th Control Delay, s/veh 45.1
HCM 7th LOS D
Notes
User approved pedestrian interval to be less than phase max green.

User approved ignoring U-Turning movement.

09/20/2024

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

	-	•	•	•	1	<b>†</b>	<i>&gt;</i>	-	<b>↓</b>	4	
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	126	186	186	235	64	1177	375	449	1004	12	
v/c Ratio	0.39	0.86	0.84	0.58	0.57	0.77	0.40	0.81	0.52	0.01	
Control Delay (s/veh)	44.4	91.9	89.2	12.4	73.4	37.7	7.7	68.7	20.5	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	44.4	91.9	89.2	12.4	73.4	37.7	7.7	68.7	20.5	0.0	
Queue Length 50th (ft)	38	174	174	0	58	501	116	205	303	0	
Queue Length 95th (ft)	73	#305	#301	80	m103	590	174	#272	372	0	
Internal Link Dist (ft)	481		939			2372			1326		
Turn Bay Length (ft)		300		315	550		140	265		400	
Base Capacity (vph)	348	228	232	416	134	1526	955	556	1933	954	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.36	0.82	0.80	0.56	0.48	0.77	0.39	0.81	0.52	0.01	

### Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	•	<b>→</b>	•	•	•	•	•	<b>†</b>	<i>&gt;</i>	<b>\</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		47>		ሻ	र्स	7	ሻ	<b>^</b>	7	ሻሻ	<b>^</b>	7
Traffic Volume (vph)	8	70	38	306	36	216	59	1083	345	413	924	11
Future Volume (vph)	8	70	38	306	36	216	59	1083	345	413	924	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Lane Util. Factor		0.95		0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3354		1633	1664	1535	1770	3343	1506	3433	3374	1583
Flt Permitted		1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3354		1633	1664	1535	1770	3343	1506	3433	3374	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)	9	76	41	333	39	235	64	1177	375	449	1004	12
RTOR Reduction (vph)	0	37	0	0	0	204	0	0	64	0	0	5
Lane Group Flow (vph)	0	89	0	186	186	31	64	1177	311	449	1004	7
Confl. Peds. (#/hr)	4					4			2			
Heavy Vehicles (%)	2%	2%	2%	5%	2%	3%	2%	8%	6%	2%	7%	2%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	3	3		4	4		5	2	4	1	6	
Permitted Phases						4			2			6
Actuated Green, G (s)		12.0		18.7	18.7	18.7	7.8	62.8	81.5	23.8	79.1	79.1
Effective Green, g (s)		12.0		18.7	18.7	18.7	7.8	62.8	81.5	23.8	79.1	79.1
Actuated g/C Ratio		0.09		0.13	0.13	0.13	0.06	0.45	0.58	0.17	0.56	0.56
Clearance Time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Vehicle Extension (s)		2.3		2.3	2.3	2.3	2.3	4.5	2.3	2.3	4.8	4.8
Lane Grp Cap (vph)		287		218	222	205	98	1499	941	583	1906	894
v/s Ratio Prot		c0.03		c0.11	0.11		0.04	c0.35	0.04	c0.13	0.30	
v/s Ratio Perm						0.02			0.16			0.00
v/c Ratio		0.31		0.85	0.84	0.15	0.65	0.79	0.33	0.77	0.53	0.01
Uniform Delay, d1		60.1		59.3	59.2	53.6	64.8	32.9	15.1	55.5	18.9	13.3
Progression Factor		1.00		1.00	1.00	1.00	0.91	1.06	0.94	1.00	1.00	1.00
Incremental Delay, d2		0.4		25.7	22.6	0.2	10.2	3.5	0.1	5.9	1.0	0.0
Delay (s)		60.5		85.0	81.8	53.8	69.0	38.2	14.3	61.4	19.9	13.3
Level of Service		Е		F	F	D	Е	D	В	Е	В	В
Approach Delay (s/veh)		60.5			71.9			33.9			32.6	
Approach LOS		Е			Е			С			С	
Intersection Summary												
HCM 2000 Control Delay (s/			40.3	H	CM 2000	Level of S	Service		D			
HCM 2000 Volume to Capac	city ratio		0.74									
Actuated Cycle Length (s)			140.0		um of lost				22.7			
Intersection Capacity Utiliza	tion		71.7%	IC	U Level	of Service			С			
Analysis Period (min)			15									

Analysis Period (min)
c Critical Lane Group

HCM 7th Edition methodology does not support exclusive ped or hold phases.

# 1: SW 124th Avenue & OR 99W (Pacific Highway)

	-	•	•	•	1	~
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	837	210	719	1151	618	698
v/c Ratio	0.69	0.32	0.67	0.48	0.75	0.45
Control Delay (s/veh)	37.7	5.1	40.1	10.0	40.0	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.7	5.1	40.1	10.0	40.0	17.9
Queue Length 50th (ft)	292	0	246	192	235	218
Queue Length 95th (ft)	365	53	#357	302	238	292
Internal Link Dist (ft)	1687			1822	503	
Turn Bay Length (ft)		225	550		300	275
Base Capacity (vph)	1209	663	1080	2381	1058	1523
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.32	0.67	0.48	0.58	0.46
Intersection Summary						

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	-	•	•	•	4	<i>&gt;</i>		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	<b>†</b> †	1	ሻሻ	<b>^</b>	ሻሻ	77		
Traffic Volume (vph)	787	197	676	1082	581	656		
Future Volume (vph)	787	197	676	1082	581	656		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	5.6		
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88		
Frpb, ped/bikes	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		
Frt	1.00	0.85	1.00	1.00	1.00	0.85		
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00		
Satd. Flow (prot)	3539	1538	3400	3438	3433	2787		
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00		
Satd. Flow (perm)	3539	1538	3400	3438	3433	2787		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94		
Adj. Flow (vph)	837	210	719	1151	618	698		
RTOR Reduction (vph)	0	138	0	0	0	0		
Lane Group Flow (vph)	837	72	719	1151	618	698		
Confl. Peds. (#/hr)						1		
Heavy Vehicles (%)	2%	5%	3%	5%	2%	2%		
Turn Type	NA	Perm	Prot	NA	Prot	pt+ov		
Protected Phases	2		1	6	8	14		
Permitted Phases		2						
Actuated Green, G (s)	39.0	39.0	33.3	77.9	30.1	63.4		
Effective Green, g (s)	41.0	41.0	34.9	79.9	32.1	58.4		
Actuated g/C Ratio	0.34	0.34	0.29	0.67	0.27	0.49		
Clearance Time (s)	6.0	6.0	5.6	6.0	6.0			
Vehicle Extension (s)	5.4	5.4	2.3	5.4	2.3			
Lane Grp Cap (vph)	1209	525	988	2289	918	1356		
v/s Ratio Prot	c0.24		c0.21	0.33	c0.18	0.25		
v/s Ratio Perm		0.05						
v/c Ratio	0.69	0.14	0.73	0.50	0.67	0.51		
Uniform Delay, d1	34.1	27.3	38.3	10.1	39.3	21.1		
Progression Factor	1.00	1.00	1.00	1.00	0.82	1.00		
Incremental Delay, d2	2.4	0.3	4.7	0.8	1.7	0.2		
Delay (s)	36.4	27.6	43.0	10.9	33.7	21.4		
Level of Service	D	С	D	В	C	С		
Approach Delay (s/veh)	34.6			23.2	27.2			
Approach LOS	С			С	С			
Intersection Summary								
HCM 2000 Control Delay (s	s/veh)		27.3	Н	CM 2000	Level of Service	ce	С
HCM 2000 Volume to Capa			0.74					
Actuated Cycle Length (s)	·		120.0	S	um of lost	t time (s)	·	18.6
Intersection Capacity Utiliza	ation		80.2%			of Service		D
Analysis Period (min)			15					
c Critical Lane Group								

HCM 7th Edition methodology does not support exclusive ped or hold phases.

# 2: SW 124th Avenue & SW Tualatin Road

	✓	*	<b>†</b>	/	<b>&gt;</b>	ļ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	37	527	740	50	429	477
v/c Ratio	0.19	0.46	0.74	0.11	0.42	0.16
Control Delay (s/veh)	46.3	3.9	43.5	11.8	8.8	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.3	3.9	43.5	11.8	8.8	3.6
Queue Length 50th (ft)	27	4	272	6	26	15
Queue Length 95th (ft)	50	91	322	34	154	85
Internal Link Dist (ft)	1180		1024			503
Turn Bay Length (ft)	25	300		150	200	
Base Capacity (vph)	445	1134	1164	547	1027	2932
Starvation Cap Reductn	0	0	0	0	34	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.46	0.64	0.09	0.43	0.16
Intersection Summary						

	•	•	<b>†</b>	~	/	<b>↓</b>			
Movement	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations	ሻ	7	<b>†</b> †	7	ሻ	<b>^</b>			
Traffic Volume (vph)	35	495	696	47	403	448			
Future Volume (vph)	35	495	696	47	403	448			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Total Lost time (s)	4.0	0.0	4.5	4.5	4.0	4.5			
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95			
Frt	1.00	0.85	1.00	0.85	1.00	1.00			
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00			
Satd. Flow (prot)	1671	1599	3539	1583	1752	3374			
Flt Permitted	0.95	1.00	1.00	1.00	0.16	1.00			
Satd. Flow (perm)	1671	1599	3539	1583	295	3374			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94			
Adj. Flow (vph)	37	527	740	50	429	477			
RTOR Reduction (vph)	0	230	0	29	0	0			
Lane Group Flow (vph)	37	297	740	21	429	477			
Heavy Vehicles (%)	8%	1%	2%	2%	3%	7%			
Turn Type	Perm	Over	NA	Perm	D.P+P	NA			
Protected Phases		5	6		5	2			
Permitted Phases	4			6	6				
Actuated Green, G (s)	10.0	61.6	32.9	32.9	94.5	99.5			
Effective Green, g (s)	11.0	66.6	33.9	33.9	96.5	100.5			
Actuated g/C Ratio	0.09	0.55	0.28	0.28	0.80	0.84			
Clearance Time (s)	5.0	5.0	5.5	5.5	5.0	5.5			
Vehicle Extension (s)	4.0	4.0	4.5	4.5	4.0	4.5			
Lane Grp Cap (vph)	153	887	999	447	997	2825			
v/s Ratio Prot		0.19	c0.21		c0.22	0.14			
v/s Ratio Perm	c0.02			0.01	0.12				
v/c Ratio	0.24	0.34	0.74	0.05	0.43	0.17			
Uniform Delay, d1	50.6	14.6	39.1	31.3	11.9	1.8			
Progression Factor	1.00	1.00	1.00	1.00	0.53	1.16			
Incremental Delay, d2	1.1	1.0	3.4	0.1	0.4	0.1			
Delay (s)	51.7	15.6	42.4	31.4	6.7	2.3			
Level of Service	D	В	D	С	A	A			
Approach Delay (s/veh)	18.0		41.7			4.3			
Approach LOS	В		D			A			
Intersection Summary									
HCM 2000 Control Delay (sa	/veh)		20.8	H	ICM 2000	Level of Servic	9	С	
HCM 2000 Volume to Capa	,		0.51						
Actuated Cycle Length (s)			120.0	S	Sum of los	t time (s)		13.5	
Intersection Capacity Utiliza	tion		57.0%			of Service		В	
Analysis Period (min)			15						
c Critical Lane Group									

HCM 7th Edition methodology does not support exclusive ped or hold phases.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ħ	f)		Ĭ	ĵ»		ň	ĵ»			44	
Traffic Volume (veh/h)	48	370	1	4	600	243	0	4	5	20	2	22
Future Volume (Veh/h)	48	370	1	4	600	243	0	4	5	20	2	22
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	51	389	1	4	632	256	0	4	5	21	2	23
Pedestrians		1									4	
Lane Width (ft)		12.0									12.0	
Walking Speed (ft/s)		3.5									3.5	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	892			390			1157	1392	390	1270	1264	765
vC1, stage 1 conf vol							492	492		772	772	
vC2, stage 2 conf vol							665	900		498	492	
vCu, unblocked vol	892			390			1157	1392	390	1270	1264	765
tC, single (s)	4.1			4.1			7.1	6.5	6.3	7.2	6.5	6.4
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.4	3.5	4.0	3.5
p0 queue free %	93			100			100	99	99	93	99	94
cM capacity (veh/h)	757			1169			321	276	633	322	341	378
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	51	390	4	888	0	9	46					
Volume Left	51	0	4	0	0	0	21					
Volume Right	0	1	0	256	0	5	23					
cSH	757	1700	1169	1700	1700	402	349					
Volume to Capacity	0.07	0.23	0.00	0.52	0.00	0.02	0.13					
Queue Length 95th (ft)	5	0	0	0	0	2	11					
Control Delay (s/veh)	10.1	0.0	8.1	0.0	0.0	14.2	16.9					
Lane LOS	В		Α		Α	В	С					
Approach Delay (s/veh)	1.2		0.0		14.2	_	16.9					
Approach LOS					В		С					
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Utiliza	ation		62.6%	IC	U Level	of Service			В			
Analysis Period (min)			15									
,												

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	ĵ.		ሻ	1>		ሻ	ĵ.			4	
Traffic Vol, veh/h	48	370	1	4	600	243	0	4	5	20	2	22
Future Vol, veh/h	48	370	1	4	600	243	0	4	5	20	2	22
Conflicting Peds, #/hr	4	0	0	0	0	4	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	<u>-</u>	None
Storage Length	25	-	-	25	-	-	0	-	-	-	-	-
Veh in Median Storage	e,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	3	2	2	2	2	2	2	14	5	2	17
Mvmt Flow	51	389	1	4	632	256	0	4	5	21	2	23
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	891	0	0	391	0	0	1133	1391	390	1265	1263	764
Stage 1	-	_	_	_	_	-	491	491	-	772	772	_
Stage 2	_	-	_	-	_	-	642	900	_	493	492	_
Critical Hdwy	4.12	-	_	4.12	_	_	7.12	6.52	6.34	7.15	6.52	6.37
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Critical Hdwy Stg 2	-	-	_	_	_	_	6.12	5.52	-	6.15	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	_	-		4.018	3.426	3.545	4.018	3.453
Pot Cap-1 Maneuver	761	-	-	1168	-	-	180	142	633	144	170	380
Stage 1	-	-	-	-	-	-	559	548	-	388	409	-
Stage 2	-	-	-	-	-	-	463	357	-	552	548	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	758	-	-	1168	-	-	155	132	633	128	157	379
Mov Cap-2 Maneuver	-	-	-	-	-	-	155	132	-	128	157	-
Stage 1	-	-	-	-	-	-	522	512	-	385	406	-
Stage 2	-	-	-	-	-	-	430	355	-	507	511	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/	v 1.16			0.04			20.95			29.25		
HCM LOS							С			D		
Minor Lane/Major Mvn	nt N	NBLn1N	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR:	SBLn1		
Capacity (veh/h)		-	235	758	-	-	1168	_	_	194		
HCM Lane V/C Ratio		_		0.067	_	-	0.004	-	_	0.238		
HCM Control Delay (s/	/veh)	0	21	10.1	_	_	8.1	_	-	29.2		
HCM Lane LOS	,	A	C	В	_	_	A	-	-	D		
HCM 95th %tile Q(veh	)	-	0.1	0.2	-	_	0	-	-	0.9		
J 2221 / J 2 (1011	,		• • •				•					

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<b></b>	<b>†</b>		W	
Traffic Volume (veh/h)	12	391	895	14	8	2
Future Volume (Veh/h)	12	391	895	14	8	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	13	434	994	16	9	2
Pedestrians			2		3	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1013				1467	1005
vC1, stage 1 conf vol	, , , ,				1005	
vC2, stage 2 conf vol					462	
vCu, unblocked vol	1013				1467	1005
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)	•••				5.4	V. <u>–</u>
tF (s)	2.2				3.5	3.3
p0 queue free %	98				97	99
cM capacity (veh/h)	683				319	292
		ED 0	MD 4	CD 4	310	
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	13	434	1010	11		
Volume Left	13	0	0	9		
Volume Right	0	0	16	2		
cSH	683	1700	1700	314		
Volume to Capacity	0.02	0.26	0.59	0.04		
Queue Length 95th (ft)	1	0	0	3		
Control Delay (s/veh)	10.4	0.0	0.0	16.9		
Lane LOS	В			С		
Approach Delay (s/veh)	0.3		0.0	16.9		
Approach LOS				С		
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utiliza	ation		58.0%	IC	U Level o	of Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	0.2					
		EDT	MDT	WED	ODI	CDD
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	<b>*</b>	101	<b>^</b>	4.4	À	_
Traffic Vol, veh/h	12	391	895	14	8	2
Future Vol, veh/h	12	391	895	14	8	2
Conflicting Peds, #/hr	_ 3	_ 0	_ 0	_ 3	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage	e,# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	4	2	8	2	2
Mvmt Flow	13	434	994	16	9	2
Major/Minor	Majort		/oicr2		Minor	
	Major1		//ajor2		Minor2	4005
Conflicting Flow All	1013	0	-	0	1468	1005
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	463	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-		
Pot Cap-1 Maneuver	684	-	-	-	141	293
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	634	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	683	-	-	-	137	292
Mov Cap-2 Maneuver	-	-	-	-	259	-
Stage 1	-	_	-	-	346	-
Stage 2	_	_	_	_	632	_
			1675		0.5	
Approach	EB		WB		SB	
HCM Control Delay, s.	/v 0.31		0		19.17	
HCM LOS					С	
Minor Lane/Major Mvr	nt	EBL	EBT	WBT	WBR	SBI n1
Capacity (veh/h)		683	-	1101	-	265
HCM Lane V/C Ratio		0.02	-	-		0.042
HCM Control Delay (s	(voh)	10.4			-	
HCM Lane LOS	(Veii)	10.4 B	-	-		19.2 C
	, )	0.1	-	-	-	
HCM 95th %tile Q(veh	1)	U. I	-	-	-	0.1

	-	$\rightarrow$	•	•	•	~
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1>		ሻ	<b></b>	**	
Traffic Volume (veh/h)	386	4	9	852	28	22
Future Volume (Veh/h)	386	4	9	852	28	22
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	420	4	10	926	30	24
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	_			<del>-</del>		
pX, platoon unblocked						
vC, conflicting volume			425		1369	423
vC1, stage 1 conf vol					423	0
vC2, stage 2 conf vol					946	
vCu, unblocked vol			425		1369	423
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	V. <u>–</u>
tF (s)			2.2		3.5	3.3
p0 queue free %			99		91	96
cM capacity (veh/h)			1133		341	630
	ED 4	VA/D 4		ND 4	• • •	
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	424	10	926	54		
Volume Left	0	10	0	30		
Volume Right	4	0	0	24		
cSH	1700	1133	1700	429		
Volume to Capacity	0.25	0.01	0.54	0.13		
Queue Length 95th (ft)	0	1	0	11		
Control Delay (s/veh)	0.0	8.2	0.0	14.6		
Lane LOS		Α		В		
Approach Delay (s/veh)	0.0	0.1		14.6		
Approach LOS				В		
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utiliza	ation		54.8%	IC	U Level o	f Service
Analysis Period (min)			15			

Interception						
Intersection	0.7					
<u> </u>						
Movement E	ВТ	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽		- ħ		¥	
	386	4	9	852	28	22
Future Vol, veh/h	386	4	9	852	28	22
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control F	ree	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	25	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
	120	4	10	926	30	24
		•		0_0		
		_		_		
Major/Minor Maj			Major2		Minor1	
Conflicting Flow All	0	0	425	0	1368	423
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	946	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1134	-	162	631
Stage 1	-	-	-	-	661	-
Stage 2	-	_	_	_	378	_
Platoon blocked, %	_	_		_	0.0	
Mov Cap-1 Maneuver	_	_	1133	_	160	630
Mov Cap-2 Maneuver	_	_	-	_	283	-
Stage 1	_		_	_	660	_
Stage 2	-	_	_		374	-
Slaye Z	-	-	-	-	314	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0.09		16.27	
HCM LOS					С	
		151 4			14/51	\4/D.T
Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		374	-		1133	-
HCM Lane V/C Ratio		0.145	-	-	0.009	-
HCM Control Delay (s/veh	)	16.3	-	-	8.2	-
HCM Lane LOS		С	-	-	Α	-
HCM 95th %tile Q(veh)		0.5	-	-	0	-

	•	•	•	†	ļ	4
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	₽.	
Traffic Volume (veh/h)	0	0	0	46	13	0
Future Volume (Veh/h)	0	0	0	46	13	0
Sign Control	Stop		,	Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	50	14	0
Pedestrians						•
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)				140110	140110	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	64	14	14			
vC1, stage 1 conf vol	07	17	17			
vC2, stage 2 conf vol						
vCu, unblocked vol	64	14	14			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	0.4	0.2	4.1			
	3.5	3.3	2.2			
tF (s)	100	100	100			
p0 queue free %						
cM capacity (veh/h)	942	1066	1604			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	50	14			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1604	1700			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	Α					
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilizati	ion		6.7%	IC	U Level o	of Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	0					
			ND	NDT	ODT	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	À			4	- ∱	
Traffic Vol, veh/h	0	0	0	46	13	0
Future Vol, veh/h	0	0	0	46	13	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	50	14	0
		_				
	Minor2		Major1		/lajor2	
Conflicting Flow All	64	14	14	0	-	0
Stage 1	14	-	-	-	-	-
Stage 2	50	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	942	1066	1604	-	-	-
Stage 1	1009	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %				-	_	-
Mov Cap-1 Maneuver	942	1066	1604	_	_	_
Mov Cap-2 Maneuver	942	-	-	_	_	_
Stage 1	1009					
Stage 2	972	_	_		_	
Slaye 2	IJΙΖ	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s/	v 0		0		0	
HCM LOS	Α					
Minor Long/Major Mym	-1	MDI	NDT	EDL 51	CDT	CDD
Minor Lane/Major Mvm	IL	NBL		EBLn1	SBT	SBR
Capacity (veh/h)		1604	-	-	-	-
HCM Lane V/C Ratio		-	-	-	-	-
HCM Control Delay (s/	veh)	0	-	0	-	-
HCM Lane LOS		Α	-	Α	-	-
HCM 95th %tile Q(veh	)	0	-	-	-	-

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	ĵ.	
Traffic Volume (veh/h)	0	0	0	40	48	0
Future Volume (Veh/h)	0	0	0	40	48	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	43	52	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				1116		
pX, platoon unblocked				1113		
vC, conflicting volume	95	52	52			
vC1, stage 1 conf vol	00	02	02			
vC2, stage 2 conf vol						
vCu, unblocked vol	95	52	52			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	0.4	0.2	7.1			
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	905	1016	1554			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	43	52			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1554	1700			
Volume to Capacity	0.00	0.00	0.03			
Queue Length 95th (ft)	0	0	0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	Α					
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utiliza	ition		6.7%	IC	CU Level o	f Service
Analysis Period (min)			15	10	2 2 2 3 7 6 7 6	. 55.7100
raidiyolo i ollod (IIIIII)			10			

Intersection						
Int Delay, s/veh	0					
•			ND	NDT	OPT	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	M			- 4	- ∱	
Traffic Vol, veh/h	0	0	0	40	48	0
Future Vol, veh/h	0	0	0	40	48	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	43	52	0
Major/Minor	MinorO	,	Major1		10ior2	
	Minor2		Major1		/lajor2	
Conflicting Flow All	96	52	52	0	-	0
Stage 1	52	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy		3.318		-	-	-
Pot Cap-1 Maneuver	904	1015	1554	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	904	1015	1554	-	-	-
Mov Cap-2 Maneuver	904	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Approach	EB		NB		SB	
			0		0	
HCM Control Delay, s/ HCM LOS			U		U	
HCWI LOS	Α					
Minor Lane/Major Mvm	nt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1554	-	-	-	-
HCM Lane V/C Ratio		-	-	-	_	-
HCM Control Delay (s/	veh)	0	-	0	-	-
HCM Lane LOS		A	-	A	_	-
HCM 95th %tile Q(veh	)	0	-	-	-	-
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# 10: SW 124th Avenue & SW Leveton Drive

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	21	32	45	264	5	633	40	423
v/c Ratio	0.06	0.08	0.13	0.39	0.01	0.51	0.09	0.29
Control Delay (s/veh)	31.8	15.4	29.9	4.9	11.6	19.2	12.0	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.8	15.4	29.9	4.9	11.6	19.2	12.0	13.7
Queue Length 50th (ft)	6	4	14	1	1	95	6	38
Queue Length 95th (ft)	35	26	60	53	8	234	34	152
Internal Link Dist (ft)		981		1223		1392		1024
Turn Bay Length (ft)	100		150		150		150	
Base Capacity (vph)	687	1206	472	1159	642	2531	1050	2587
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.03	0.10	0.23	0.01	0.25	0.04	0.16
Intersection Summary								

	٠	<b>→</b>	•	•	•	•	•	<b>†</b>	~	-	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	f)		7	₽		¥	<b>↑</b> ↑		ሻ	ħβ	
Traffic Volume (vph)	19	13	16	41	2	238	5	563	13	36	379	6
Future Volume (vph)	19	13	16	41	2	238	5	563	13	36	379	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
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	0.92		1.00	0.85		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1669		1770	1580		1128	3516		1671	3423	
Flt Permitted	0.95	1.00		0.95	1.00		0.50	1.00		0.31	1.00	
Satd. Flow (perm)	1770	1669		1770	1580		595	3516		542	3423	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	21	14	18	45	2	262	5	619	14	40	416	7
RTOR Reduction (vph)	0	14	0	0	190	0	0	1	0	0	1	0
Lane Group Flow (vph)	21	18	0	45	74	0	5	632	0	40	422	0
Confl. Peds. (#/hr)									3	3		
Heavy Vehicles (%)	2%	2%	6%	2%	50%	2%	60%	2%	15%	8%	5%	17%
Turn Type	Prot	NA		Prot	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							6			2		
Actuated Green, G (s)	0.9	12.3		3.8	15.2		23.1	19.3		23.1	22.4	
Effective Green, g (s)	1.9	13.3		4.8	16.2		25.1	20.3		23.1	22.4	
Actuated g/C Ratio	0.03	0.22		0.08	0.27		0.42	0.34		0.39	0.38	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	56	374		143	432		267	1205		283	1295	
v/s Ratio Prot	0.01	0.01		c0.03	c0.05		0.00	c0.18		c0.01	c0.12	
v/s Ratio Perm							0.01			0.05		
v/c Ratio	0.38	0.05		0.31	0.17		0.02	0.52		0.14	0.33	
Uniform Delay, d1	28.1	18.0		25.6	16.4		9.9	15.6		11.5	13.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.2	0.1		1.3	0.2		0.0	0.4		0.2	0.1	
Delay (s)	32.2	18.0		26.9	16.6		9.9	16.0		11.7	13.2	
Level of Service	С	В		С	В		Α	В		В	В	
Approach Delay (s/veh)		23.7			18.1			15.9			13.1	
Approach LOS		С			В			В			В	
Intersection Summary												
HCM 2000 Control Delay (s/	,		15.8	H	CM 2000	Level of	Service		В			
HCM 2000 Volume to Capac	city ratio		0.36									
Actuated Cycle Length (s)			59.2		um of lost				17.0			
Intersection Capacity Utilizat	ion		49.4%	IC	U Level o	of Service	Э		Α			
Analysis Period (min)			15									

c Critical Lane Group

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	f)		ሻ	<b>₽</b>		7	<b>ተ</b> ኈ		ሻ	ħβ	
Traffic Volume (veh/h)	19	13	16	41	2	238	5	563	13	36	379	6
Future Volume (veh/h)	19	13	16	41	2	238	5	563	13	36	379	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
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	1811	1870	1159	1870	1011	1870	1678	1781	1826	1648
Adj Flow Rate, veh/h	21	14	18	45	2	262	5	619	14	40	416	7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	6	2	50	2	60	2	15	8	5	17
Cap, veh/h	92	229	294	141	2	327	261	920	21	298	1050	18
Arrive On Green	0.05	0.31	0.29	0.08	0.34	0.32	0.02	0.26	0.24	0.07	0.30	0.30
Sat Flow, veh/h	1781	743	955	1781	7	976	963	3552	80	1697	3491	59
Grp Volume(v), veh/h	21	0	32	45	0	264	5	310	323	40	207	216
Grp Sat Flow(s),veh/h/ln	1781	0	1698	1781	0	983	963	1777	1855	1697	1735	1815
Q Serve(g_s), s	0.7	0.0	8.0	1.4	0.0	14.5	0.2	9.2	9.2	1.0	5.6	5.6
Cycle Q Clear(g_c), s	0.7	0.0	8.0	1.4	0.0	14.5	0.2	9.2	9.2	1.0	5.6	5.6
Prop In Lane	1.00		0.56	1.00		0.99	1.00		0.04	1.00		0.03
Lane Grp Cap(c), veh/h	92	0	523	141	0	330	261	460	481	298	522	546
V/C Ratio(X)	0.23	0.00	0.06	0.32	0.00	0.80	0.02	0.67	0.67	0.13	0.40	0.40
Avail Cap(c_a), veh/h	484	0	894	333	0	518	581	935	977	907	1178	1233
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	14.6	25.6	0.0	18.3	13.1	19.6	19.6	15.2	16.3	16.4
Incr Delay (d2), s/veh	1.3	0.0	0.0	1.3	0.0	4.8	0.0	1.7	1.6	0.2	0.5	0.5
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	0.3	0.0	0.3	0.6	0.0	3.3	0.0	3.4	3.6	0.3	1.9	2.0
Unsig. Movement Delay, s/veh		2.0	440	00.0		00.4	40.4	24.0	04.0	4= 4	40.0	40.0
LnGrp Delay(d), s/veh	28.1	0.0	14.6	26.9	0.0	23.1	13.1	21.3	21.2	15.4	16.8	16.8
LnGrp LOS	С		В	С		С	В	С	С	В	В	В
Approach Vol, veh/h		53			309			638			463	
Approach Delay, s/veh		19.9			23.6			21.2			16.7	
Approach LOS		В			С			С			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	19.3	8.6	22.1	5.4	22.7	7.0	23.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	25.0	30.0	10.0	30.0	20.0	40.0	15.0	30.0				
Max Q Clear Time (g_c+I1), s	3.0	11.2	3.4	2.8	2.2	7.6	2.7	16.5				
Green Ext Time (p_c), s	0.1	2.9	0.0	0.2	0.0	2.0	0.0	2.4				
Intersection Summary												
HCM 7th Control Delay, s/veh			20.2									
HCM 7th LOS			С									
Notes												
User approved pedestrian inte	rval to be	less tha	n phase n	nax greer	۱.							

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	37	9	15	260	2	20	3	8	0	2	13
Future Volume (vph)	6	37	9	15	260	2	20	3	8	0	2	13
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	8	50	12	20	351	3	27	4	11	0	3	18
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	70	374	42	21								
Volume Left (vph)	8	20	27	0								
Volume Right (vph)	12	3	11	18								
Hadj (s)	0.02	0.04	0.14	-0.48								
Departure Headway (s)	4.5	4.2	5.1	4.5								
Degree Utilization, x	0.09	0.43	0.06	0.03								
Capacity (veh/h)	780	840	652	722								
Control Delay (s/veh)	7.9	10.3	8.4	7.6								
Approach Delay (s/veh)	7.9	10.3	8.4	7.6								
Approach LOS	Α	В	Α	Α								
Intersection Summary												
Delay			9.7									
Level of Service			Α									
Intersection Capacity Utilizat	ion		31.8%	IC	U Level	of Service			Α			
Analysis Period (min)			15									

Intersection		
Intersection Delay, s/veh	9.6	
Intersection LOS	Α	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	6	37	9	15	260	2	20	3	8	0	2	13
Future Vol, veh/h	6	37	9	15	260	2	20	3	8	0	2	13
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	2	5	11	2	2	2	5	2	25	2	2	2
Mvmt Flow	8	50	12	20	351	3	27	4	11	0	3	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB				SB	
Opposing Approach	WB			EB			SB				NB	
Opposing Lanes	1			1			1				1	
Conflicting Approach Left	SB			NB			EB				WB	
Conflicting Lanes Left	1			1			1				1	
Conflicting Approach Right	NB			SB			WB				EB	
Conflicting Lanes Right	1			1			1				1	
HCM Control Delay, s/veh	7.8			10.2			8.3				7.6	
HCM LOS	Α			В			Α				Α	

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	65%	12%	5%	0%
Vol Thru, %	10%	71%	94%	13%
Vol Right, %	26%	17%	1%	87%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	52	277	15
LT Vol	20	6	15	0
Through Vol	3	37	260	2
RT Vol	8	9	2	13
Lane Flow Rate	42	70	374	20
Geometry Grp	1	1	1	1
Degree of Util (X)	0.058	0.085	0.426	0.025
Departure Headway (Hd)	4.959	4.377	4.101	4.443
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	726	822	868	809
Service Time	2.964	2.385	2.176	2.449
HCM Lane V/C Ratio	0.058	0.085	0.431	0.025
HCM Control Delay, s/veh	8.3	7.8	10.2	7.6
HCM Lane LOS	Α	Α	В	Α
HCM 95th-tile Q	0.2	0.3	2.2	0.1

	•	<b>→</b>	•	•	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	1>		ች	7
Traffic Volume (veh/h)	11	33	141	14	75	139
Future Volume (Veh/h)	11	33	141	14	75	139
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	14	43	186	18	99	183
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	204				266	195
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	204				266	195
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)					0	V.E
tF(s)	2.3				3.5	3.3
p0 queue free %	99				86	78
cM capacity (veh/h)	1327				713	846
		MD 4	OD 4	00.0		0.10
Direction, Lane # Volume Total	EB 1 57	WB 1 204	SB 1 99	SB 2 183		
	14		99			
Volume Left		0		102		
Volume Right	1227	18	712	183		
CSH Valume to Canacity	1327	1700	713	846		
Volume to Capacity	0.01	0.12	0.14	0.22		
Queue Length 95th (ft)	1	0	12	20		
Control Delay (s/veh)	2.0	0.0	10.9	10.4		
Lane LOS	A	0.0	В	В		
Approach Delay (s/veh)	2.0	0.0	10.6			
Approach LOS			В			
Intersection Summary						
Average Delay			5.7			
Intersection Capacity Utiliza	tion		23.5%	IC	U Level c	f Service
Analysis Period (min)			15			

Intersection							
Int Delay, s/veh	5.7						
	EBL	EBT	WBT	WBR	SBL	SBR	
Movement  Lane Configurations	EBL	€¶.		WBK	SBL	SBR	
Traffic Vol, veh/h	11	33	<b>Љ</b> 141	14	<b>7</b> 5	139	
Future Vol, veh/h	11	33	141	14	75 75	139	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-		-	None	-		
Storage Length	_	-	_	-	_	0	
Veh in Median Storage		0	0	_	0	-	
Grade, %		0	0	_	0	<u>-</u>	
Peak Hour Factor	76	76	76	76	76	76	
Heavy Vehicles, %	9	9	2	2	3	2	
Mymt Flow	14	43	186	18	99	183	
	- 1 1	- 10	.00	1.5	- 00	.00	
	Major1		Major2		Minor2		
Conflicting Flow All	204	0	-	0	267	195	
Stage 1	-	-	-	-	195	-	
Stage 2	-	-	-	-	72	-	
Critical Hdwy	4.19	-	-	-	6.43	6.22	
Critical Hdwy Stg 1	-	-	-	-	5.43	-	
Critical Hdwy Stg 2	-	-	-	-	5.43	-	
Follow-up Hdwy	2.281	-	-	-	3.527		
Pot Cap-1 Maneuver	1327	-	-	-	720	847	
Stage 1	-	-	-	-	836	-	
Stage 2	-	-	-	-	948	-	
Platoon blocked, %	4007	-	-	-	740	0.47	
Mov Cap-1 Maneuver		-	-	-	712	847	
Mov Cap-2 Maneuver	-	-	-	-	712	-	
Stage 1	-	-	-	-	826	-	
Stage 2	-	-	-	-	948	-	
Approach	EB		WB		SB		
HCM Control Delay, s/	v 1.94		0		10.58		
HCM LOS					В		
Minor Lane/Major Mvn	nt	EBL	EBT	WBT	WRR	SBLn1 S	SRI n2
Capacity (veh/h)	ıı	450		VVDI	- VVDIC	712	847
HCM Lane V/C Ratio		0.011	-	-		0.139	
HCM Control Delay (s/	(veh)	7.7	0		-	10.9	10.4
HCM Lane LOS	ven)	Α	A	-	-	10.9 B	10.4 B
HCM 95th %tile Q(veh	)	0	-	-	_	0.5	0.8
HOW JOHN JOHN WINE WINE	1	U	_	_	_	0.0	0.0

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	1>		*	7
Traffic Volume (veh/h)	9	109	120	9	23	30
Future Volume (Veh/h)	9	109	120	9	23	30
Sign Control	-	Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	12	142	156	12	30	39
Pedestrians					15	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	183				343	177
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	183				343	177
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				95	95
cM capacity (veh/h)	1372				638	854
Direction, Lane #	EB 1	WB 1	SB 1	SB 2		
Volume Total	154	168	30	39		
Volume Left	12	0	30	0		
Volume Right	0	12	0	39		
cSH	1372	1700	638	854		
Volume to Capacity	0.01	0.10	0.05	0.05		
Queue Length 95th (ft)	1	0	4	4		
Control Delay (s/veh)	0.7	0.0	10.9	9.4		
Lane LOS	Α		В	Α		
Approach Delay (s/veh)	0.7	0.0	10.1			
Approach LOS			В			
Intersection Summary						
Average Delay			2.0			
Intersection Capacity Utilizati	ion		23.2%	IC	U Level o	of Service
Analysis Period (min)			15			

tersection           t Delay, s/veh         2           ovement         EBL         EBT         WBT         WBR         SBL         SBR           ane Configurations         Image: Configuration of the c
overment         EBL         EBT         WBT         WBR         SBL         SBR           ane Configurations         4         1
raffic Vol, veh/h 9 109 120 9 23 30 auture Vol, veh/h 9 109 120 9 23 30 auture Vol, veh/h 9 109 120 9 23 30 auture Peds, #/hr 15 0 0 15 0 0 auture Vol, veh/h 15 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5
raffic Vol, veh/h 9 109 120 9 23 30 uture Vol, veh/h 9 109 120 9 23 30 onflicting Peds, #/hr 15 0 0 15 0 0 ign Control Free Free Free Free Stop Stop
uture Vol, veh/h 9 109 120 9 23 30 onflicting Peds, #/hr 15 0 0 15 0 0 ign Control Free Free Free Stop Stop
onflicting Peds, #/hr 15 0 0 15 0 0 gn Control Free Free Free Stop Stop
gn Control Free Free Free Stop Stop
T Channelized - None - None
torage Length 0
eh in Median Storage, # - 0 0 - 0 -
rade, % - 0 0 - 0 -
eak Hour Factor 77 77 77 77 77 77
eavy Vehicles, % 2 5 2 2 2
vmt Flow 12 142 156 12 30 39
VIIILTIOW 12 172 100 12 00 03
ajor/Minor Major1 Major2 Minor2
onflicting Flow All 183 0 - 0 342 177
Stage 1 177 -
Stage 2 165 -
ritical Hdwy 4.12 6.42 6.22
ritical Hdwy Stg 1 5.42 -
ritical Hdwy Stg 2 5.42 -
ollow-up Hdwy 2.218 3.518 3.318
ot Cap-1 Maneuver 1393 654 866
Stage 1 854 -
Stage 2 864 -
atoon blocked, %
ov Cap-1 Maneuver 1373 630 854
ov Cap-2 Maneuver 630 -
Stage 1 834 -
Stage 2 852 -
pproach EB WB SB
CM Control Delay, s/v 0.58 0 10.1
CM LOS B
OWI LOO D
inor Lane/Major Mvmt EBL EBT WBT WBR SBLn1 SBLn2
apacity (veh/h) 137 630 854
CM Lane V/C Ratio 0.009 0.047 0.046
CM Control Delay (s/veh) 7.6 0 11 9.4
CM Lane LOS A A B A
CM 95th %tile Q(veh) 0 0.1 0.1

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Volume (veh/h)	0	134	0	0	73	2	4	0	1	33	0	33
Future Volume (Veh/h)	0	134	0	0	73	2	4	0	1	33	0	33
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	0	179	0	0	97	3	5	0	1	44	0	44
Pedestrians								4			15	
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								3.5			3.5	
Percent Blockage								0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	115			183			326	298	183	294	297	114
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	115			183			326	298	183	294	297	114
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	100	93	100	95
cM capacity (veh/h)	1453			1387			587	603	856	640	604	926
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	179	100	6	88								
Volume Left	0	0	5	44								
Volume Right	0	3	1	44								
cSH	1453	1387	620	757								
Volume to Capacity	0.00	0.00	0.01	0.12								
Queue Length 95th (ft)	0	0	1	10								
Control Delay (s/veh)	0.0	0.0	10.9	10.4								
Lane LOS			В	В								
Approach Delay (s/veh)	0.0	0.0	10.9	10.4								
Approach LOS			В	В								
Intersection Summary												
Average Delay			2.6									
Intersection Capacity Utiliza	tion		18.3%	IC	CU Level	of Service			Α			
Analysis Period (min)			15									

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	0	134	0	0	73	2	4	0	1	33	0	33
Future Vol, veh/h	0	134	0	0	73	2	4	0	1	33	0	33
Conflicting Peds, #/hr	15	0	4	4	0	15	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	_	_	-	_	_	-	_	_	-	_	_	-
Veh in Median Storage	e.# -	0	_	_	0	_	_	0	_	_	0	_
Grade, %	-, <i>11</i>	0	_	_	0	_	_	0	_	_	0	_
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	2	3	2	2	3	2	2	2	2	2	2	2
Mymt Flow	0	179	0	0	97	3	5	0	1	44	0	44
		.10			01		- 3	- 0	1			77
Major/Minor	Major1			Majora			Minor1			Minor2		
	Major1	0		Major2	0			000			000	444
Conflicting Flow All	115	0	0	183	0	0	280	298	183	292	296	114
Stage 1	-	-	-	-	-	-	183	183	-	114	114	-
Stage 2	4.40	-	-	4.40	-	-	97	115	- 00	179	183	- 00
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	_	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	- 0.040	-	-	0.040	-	-	6.12	5.52	-	6.12	5.52	2 240
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1474	-	-	1392	-	-	672	614	860	660	615	939
Stage 1	-	-	-	-	-	-	819	748	-	891	801	-
Stage 2	-	-	-	-	-	-	909	800	-	823	748	-
Platoon blocked, %	4450	-	-	4007	-	-	000	000	0.57	0.40	004	000
Mov Cap-1 Maneuver	1453	-	-	1387	-	-	638	603	857	649	604	926
Mov Cap-2 Maneuver	-	-	-	-	-	-	638	603	-	649	604	-
Stage 1	-	-	-	-	-	-	816	746	-	878	790	-
Stage 2	-	-	-	-	-	-	866	789	-	822	746	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/	v 0			0			10.41			10.33		
HCM LOS							В			В		
Minor Lane/Major Mvn	nt N	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)		672	1453	-	-	1387	-	-	763			
HCM Lane V/C Ratio		0.01	-	-	-	-	-	-	0.115			
HCM Control Delay (s/	/veh)	10.4	0	-	-	0	-	-	10.3			
HCM Lane LOS	,	В	Α	-	-	Α	-	-	В			
HCM 95th %tile Q(veh	)	0	0	-	-	0	-	-	0.4			

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			स	₽	
Traffic Volume (veh/h)	17	169	30	23	30	18
Future Volume (Veh/h)	17	169	30	23	30	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	22	219	39	30	39	23
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				861		
pX, platoon unblocked						
vC, conflicting volume	160	52	63			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	160	52	63			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	97	78	97			
cM capacity (veh/h)	801	1015	1532			
	EB 1	NB 1	SB 1			
Direction, Lane # Volume Total	241	69	62			
Volume Left	22	39	02			
	219	0	23			
Volume Right cSH	991	1532	1700			
	0.24	0.03	0.04			
Volume to Capacity	24	0.03				
Queue Length 95th (ft)			0			
Control Delay (s/veh)	9.8	4.3	0.0			
Lane LOS	A	A	0.0			
Approach LOS	9.8	4.3	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			7.1			
Intersection Capacity Utiliza	ition		27.6%	IC	CU Level c	of Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	7.1					
•		ED.	ND	NET	OPT	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	₽	
Traffic Vol, veh/h	17	169	30	23	30	18
Future Vol, veh/h	17	169	30	23	30	18
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	6	2	3	9	7	2
Mvmt Flow	22	219	39	30	39	23
M - 1 - / M - 1	N4: O		M. '. A		4 0	
	Minor2		Major1		/lajor2	
Conflicting Flow All	159	52	63	0	-	0
Stage 1	52	-	-	-	-	-
Stage 2	108	-	-	-	-	-
Critical Hdwy	6.46	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.318	2.227	-	-	-
Pot Cap-1 Maneuver	822	1016	1533	-	-	-
Stage 1	961	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	800	1015	1531	_	-	-
Mov Cap-2 Maneuver	800	-	-	-	_	-
Stage 1	935	_	-	_	-	-
Stage 2	906	_	_	_	_	_
Jugo 2	300					
Approach	EB		NB		SB	
HCM Control Delay, s/	v 9.8		4.2		0	
HCM LOS	Α					
Minor Lane/Major Mvn	nt	NBL	NRT	EBLn1	SBT	SBR
	IL	1019				
Capacity (veh/h) HCM Lane V/C Ratio		0.025	-	0.244	-	-
	(vob)				-	-
HCM Long LOS	ven)	7.4	0	9.8	-	-
HCM Lane LOS	\	A	Α	A	-	-
HCM 95th %tile Q(veh	)	0.1	-	1	-	-

# 16: SW Herman Road & SW 108th Ave

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Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	8	322	528	204	21
v/c Ratio	0.02	0.37	0.64	0.37	0.04
Control Delay (s/veh)	4.3	8.4	14.3	16.7	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	4.3	8.4	14.3	16.7	8.4
Queue Length 50th (ft)	1	41	77	31	0
Queue Length 95th (ft)	6	104	274	136	16
Internal Link Dist (ft)		877	1007	781	
Turn Bay Length (ft)	100			135	
Base Capacity (vph)	662	1776	1722	1371	1196
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.01	0.18	0.31	0.15	0.02
Intersection Summary					

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Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	ሻ	<b>1</b>	₽		ሻ	7		
Traffic Volume (vph)	7	296	438	48	188	19		
Future Volume (vph)	7	296	438	48	188	19		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		
Frt	1.00	1.00	0.99		1.00	0.85		
Flt Protected	0.95	1.00	1.00		0.95	1.00		
Satd. Flow (prot)	1583	1776	1769		1770	1538		
Flt Permitted	0.30	1.00	1.00		0.95	1.00		
Satd. Flow (perm)	496	1776	1769		1770	1538		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Adj. Flow (vph)	8	322	476	52	204	21		
RTOR Reduction (vph)	0	0	4	0	0	15		
Lane Group Flow (vph)	8	322	524	0	204	6		
Heavy Vehicles (%)	14%	7%	6%	6%	2%	5%		
Turn Type	D.P+P	NA	NA		Prot	Perm		
Protected Phases	5	2	6		4			
Permitted Phases	6					4		
Actuated Green, G (s)	20.4	25.8	19.8		11.7	11.7		
Effective Green, g (s)	23.2	27.2	21.2		14.2	14.2		
Actuated g/C Ratio	0.47	0.55	0.43		0.29	0.29		
Clearance Time (s)	5.4	5.4	5.4		6.5	6.5		
Vehicle Extension (s)	2.0	3.1	3.1		2.6	2.6		
Lane Grp Cap (vph)	276	977	759		508	442		
v/s Ratio Prot	0.00	c0.18	c0.30		c0.12			
v/s Ratio Perm	0.01					0.00		
v/c Ratio	0.03	0.33	0.69		0.40	0.01		
Uniform Delay, d1	11.8	6.1	11.4		14.2	12.6		
Progression Factor	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.0	0.2	2.7		0.4	0.0		
Delay (s)	11.8	6.3	14.2		14.6	12.6		
Level of Service	В	Α	В		В	В		
Approach Delay (s/veh)		6.4	14.2		14.4			
Approach LOS		Α	В		В			
Intersection Summary								
HCM 2000 Control Delay (s			11.9	H	CM 2000	Level of Service	е	
HCM 2000 Volume to Capa	city ratio		0.58					
Actuated Cycle Length (s)			49.4		um of lost			
Intersection Capacity Utiliza	ation		43.0%	IC	U Level of	of Service		
Analysis Period (min)			15					
c Critical Lane Group								

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<b></b>	₽		ሻ	7
Traffic Volume (veh/h)	7	296	438	48	188	19
Future Volume (veh/h)	7	296	438	48	188	19
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1693	1796	1811	1811	1870	1826
Adj Flow Rate, veh/h	8	322	476	52	204	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	14	7	6	6	2	5
Cap, veh/h	469	1171	862	94	347	301
Arrive On Green	0.04	0.65	0.54	0.51	0.19	0.19
Sat Flow, veh/h	1612	1796	1604	175	1781	1547
Grp Volume(v), veh/h	8	322	0	528	204	21
Grp Sat Flow(s), veh/h/ln	1612	1796	0	1780	1781	1547
Q Serve(g_s), s	0.0	4.0	0.0	10.2	5.4	0.6
Cycle Q Clear(g_c), s	0.0	4.0	0.0	10.2	5.4	0.6
Prop In Lane	1.00		3.0	0.10	1.00	1.00
Lane Grp Cap(c), veh/h	469	1171	0	957	347	301
V/C Ratio(X)	0.02	0.28	0.00	0.55	0.59	0.07
Avail Cap(c_a), veh/h	761	1600	0.00	2234	1111	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.1	3.9	0.00	8.0	19.1	17.1
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.5	1.3	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.0	2.8	2.1	0.0
Unsig. Movement Delay, s/veh		0.0	0.0	2.0	۷.۱	0.0
LnGrp Delay(d), s/veh	10.2	4.0	0.0	8.5	20.3	17.2
LnGrp LOS	10.2 B	4.0 A	0.0	6.5 A	20.3 C	17.2 B
•	D	330	E00	A		D
Approach Vol, veh/h			528		225	
Approach Delay, s/veh		4.1	8.5		20.1	
Approach LOS		Α	Α		С	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		38.0		14.2	5.9	32.0
Change Period (Y+Rc), s		5.4		6.5	5.4	5.4
Max Green Setting (Gmax), s		45.0		30.0	10.0	64.0
Max Q Clear Time (g_c+l1), s		6.0		7.4	2.0	12.2
Green Ext Time (p_c), s		7.0		0.5	0.0	14.4
Intersection Summary						
HCM 7th Control Delay, s/veh			9.6			
HCM 7th LOS			Α			
TION FUI LOO			_			

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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1>		ች	<b>†</b>	ኻ	7
Traffic Volume (veh/h)	338	78	43	709	149	66
Future Volume (Veh/h)	338	78	43	709	149	66
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	371	86	47	779	164	73
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage veh)				2		
Upstream signal (ft)				<del>-</del>		
pX, platoon unblocked						
vC, conflicting volume			458		1288	415
vC1, stage 1 conf vol			100		415	
vC2, stage 2 conf vol					873	
vCu, unblocked vol			458		1288	415
tC, single (s)			4.2		6.4	6.3
tC, 2 stage (s)			1.4		5.4	0.0
tF(s)			2.3		3.5	3.4
p0 queue free %			96		54	88
cM capacity (veh/h)			1076		355	628
						020
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	
Volume Total	457	47	779	164	73	
Volume Left	0	47	0	164	0	
Volume Right	86	0	0	0	73	
cSH	1700	1076	1700	355	628	
Volume to Capacity	0.27	0.04	0.46	0.46	0.12	
Queue Length 95th (ft)	0	3	0	59	10	
Control Delay (s/veh)	0.0	8.5	0.0	23.6	11.5	
Lane LOS		Α		С	В	
Approach Delay (s/veh)	0.0	0.5		19.9		
Approach LOS				С		
Intersection Summary						
Average Delay			3.4			
Intersection Capacity Utilizat	tion		52.2%	IC	U Level c	f Service
Analysis Period (min)			15			

Movement	Intersection						
Movement		12.8					
Lane Configurations			EDD	\\/DI	\\/DT	NDI	NIPD
Traffic Vol, veh/h         338         78         43         709         149         66           Future Vol, veh/h         338         78         43         709         149         66           Conflicting Peds, #/hr         0         1         1         0         0         0           Sign Control         Free         Free         Free         Free         Free         Free         Stop         Stop           RT Channelized         -         None         -         -         -         -         -         -         - <t< td=""><td></td><td></td><td>EBK</td><td></td><td></td><td></td><td></td></t<>			EBK				
Future Vol, veh/h         338         78         43         709         149         66           Conflicting Peds, #/hr         0         1         1         0         0         0           Sign Control         Free         Free         Free         Free         Free         Free         Stop         Stop           RT Channelized         -         None         -         -         -         -         -         -         -         -         -         -         -         - <td< td=""><td></td><td></td><td>70</td><td></td><td></td><td></td><td></td></td<>			70				
Conflicting Peds, #/hr         0         1         1         0         0         0           Sign Control         Free         Free         Free         Free         Free         Free         Stop         Stop           RT Channelized         -         None         -         None         -         None           Storage Length         -         -         25         -         100         0           Veh in Median Storage, #         0         -         -         0         0         -           Grade, %         0         -         -         0         0         -           Peak Hour Factor         91         91         91         91         91         91           Heavy Vehicles, %         3         5         7         2         3         6           Mymt Flow         371         86         47         779         164         73           Major/Minor         Major1         Major2         Minor1         Minor1           Conflicting Flow All         0         0         458         0         1289         415           Stage 1         -         -         -         -         874							
Sign Control         Free Row RT Channelized         Free None         Free None         Free None         Free None         RT Channelized         None         None <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
RT Channelized         - None         - None         - None           Storage Length         255         - 1000         0           Veh in Median Storage, # 0 - 0 0 0 - Grade, % 0 0 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			-				
Storage Length							
Veh in Median Storage, #         0         -         -         0         0         -           Grade, %         0         -         -         0         0         -           Peak Hour Factor         91		-					
Grade, %         0         -         -         0         0         -           Peak Hour Factor         91			-	25			0
Peak Hour Factor         91			-	-			-
Heavy Vehicles, % 3 5 7 2 3 6							
Mount Flow         371         86         47         779         164         73           Major/Minor         Major1         Major2         Minor1           Conflicting Flow All         0         0         458         0         1289         415           Stage 1         -         -         -         415         -           Stage 2         -         -         -         415         -           Critical Hdwy         -         -         4.17         -         6.43         6.26           Critical Hdwy Stg 1         -         -         -         5.43         -           Critical Hdwy Stg 2         -         -         5.43         -           Follow-up Hdwy         -         2.263         -         3.527         3.354           Pollow-up Hdwy         -         -         1077         -         180         629           Stage 1	Peak Hour Factor	91	91	91	91	91	91
Momental Flow         371         86         47         779         164         73           Major/Minor         Major1         Major2         Minor1           Conflicting Flow All         0         0         458         0         1289         415           Stage 1         -         -         -         415         -           Stage 2         -         -         -         874         -           Critical Hdwy         -         -         4.17         -         6.43         6.26           Critical Hdwy Stg 1         -         -         -         5.43         -           Critical Hdwy Stg 2         -         -         -         5.43         -           Follow-up Hdwy         -         -         2.263         -         3.527         3.354           Pot Cap-1 Maneuver         -         1077         -         180         629           Stage 1         -         -         -         664         -           Stage 2         -         -         -         172         628           Mov Cap-1 Maneuver         -         -         1076         -         172         628	Heavy Vehicles, %	3	5	7	2	3	6
Conflicting Flow All         0         0         458         0         1289         415           Stage 1         -         -         -         415         -           Stage 2         -         -         -         874         -           Critical Hdwy         -         4.17         -         6.43         6.26           Critical Hdwy Stg 1         -         -         -         5.43         -           Critical Hdwy Stg 2         -         -         -         5.43         -           Follow-up Hdwy         -         -         2.263         -         3.527         3.354           Pot Cap-1 Maneuver         -         1077         -         180         629           Stage 1         -         -         -         664         -           Stage 2         -         -         -         -         407         -           Public All Stage 2         -		371	86	47	779	164	73
Conflicting Flow All         0         0         458         0         1289         415           Stage 1         -         -         -         415         -           Stage 2         -         -         -         874         -           Critical Hdwy         -         4.17         -         6.43         6.26           Critical Hdwy Stg 1         -         -         -         5.43         -           Critical Hdwy Stg 2         -         -         -         5.43         -           Follow-up Hdwy         -         -         2.263         -         3.527         3.354           Pot Cap-1 Maneuver         -         1077         -         180         629           Stage 1         -         -         -         664         -           Stage 2         -         -         -         -         407         -           Public All Stage 2         -							
Conflicting Flow All         0         0         458         0         1289         415           Stage 1         -         -         -         415         -           Stage 2         -         -         -         874         -           Critical Hdwy         -         4.17         -         6.43         6.26           Critical Hdwy Stg 1         -         -         -         5.43         -           Critical Hdwy Stg 2         -         -         -         5.43         -           Follow-up Hdwy         -         -         2.263         -         3.527         3.354           Pot Cap-1 Maneuver         -         1077         -         180         629           Stage 1         -         -         -         664         -           Stage 2         -         -         -         -         407         -           Public All Stage 2         -	Mai/Mi	1-:4		M-:0		M: A	
Stage 1       -       -       -       415       -         Stage 2       -       -       -       874       -         Critical Hdwy       -       -       4.17       -       6.43       6.26         Critical Hdwy Stg 1       -       -       -       5.43       -         Critical Hdwy Stg 2       -       -       -       5.43       -         Follow-up Hdwy       -       -       2.263       -       3.527       3.354         Pot Cap-1 Maneuver       -       1077       -       180       629         Stage 1       -       -       -       664       -         Stage 2       -       -       -       407       -         Platoon blocked, %       -       -       -       -       -         Mov Cap-1 Maneuver       -       1076       -       172       628         Mov Cap-2 Maneuver       -       -       172       628         Mov Cap-2 Maneuver       -       -       389       -         Approach       EB       WB       NB         HCM Control Delay, s/v       0       0.49       80.36         HCM L	-						
Stage 2       -       -       -       874       -         Critical Hdwy       -       -       4.17       -       6.43       6.26         Critical Hdwy Stg 1       -       -       -       5.43       -         Critical Hdwy Stg 2       -       -       -       5.43       -         Follow-up Hdwy       -       -       2.263       -       3.527       3.354         Pot Cap-1 Maneuver       -       1077       -       180       629         Stage 1       -       -       -       664       -         Stage 2       -       -       -       407       -         Platoon blocked, %       -       -       -       -         Mov Cap-1 Maneuver       -       -       1076       -       172       628         Mov Cap-2 Maneuver       -       -       -       172       628         Mov Cap-2 Maneuver       -       -       -       663       -         Stage 2       -       -       -       389       -         Approach       EB       WB       NB         HCM Control Delay, s/v       0       0.49       80.36		0	0	458	0		415
Critical Hdwy       -       -       4.17       -       6.43       6.26         Critical Hdwy Stg 1       -       -       -       5.43       -         Critical Hdwy Stg 2       -       -       -       5.43       -         Follow-up Hdwy       -       -       2.263       -       3.527       3.354         Pot Cap-1 Maneuver       -       1077       -       180       629         Stage 1       -       -       -       664       -         Stage 2       -       -       -       407       -         Platoon blocked, %       -       -       -       -         Mov Cap-1 Maneuver       -       -       1076       -       172       628         Mov Cap-2 Maneuver       -       -       -       172       628         Mov Cap-2 Maneuver       -       -       -       663       -         Stage 1       -       -       -       663       -         Stage 2       -       -       -       389       -         Approach       EB       WB       NB         HCM Control Delay, s/v       0       0.49 <td< td=""><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td></td><td>-</td></td<>		-	-	-	-		-
Critical Hdwy Stg 1       -       -       -       5.43       -         Critical Hdwy Stg 2       -       -       -       5.43       -         Follow-up Hdwy       -       -       2.263       -       3.527       3.354         Pot Cap-1 Maneuver       -       1077       -       180       629         Stage 1       -       -       -       664       -         Stage 2       -       -       -       407       -         Platoon blocked, %       -       -       -       -       -         Mov Cap-1 Maneuver       -       -       1076       -       172       628         Mov Cap-2 Maneuver       -       -       -       172       -       -       2         Stage 1       -       -       -       663       -       -       389       -         Approach       EB       WB       NB       NB       NB       HCM LOS       F         Minor Lane/Major Mvmt       NBLn1 NBLn2       EBT       EBR       WBL         Capacity (veh/h)       172       628       -       -       1076         HCM Lane V/C Ratio       0.953 <t< td=""><td>•</td><td>-</td><td>-</td><td></td><td>-</td><td></td><td></td></t<>	•	-	-		-		
Critical Hdwy Stg 2       -       -       -       5.43       -         Follow-up Hdwy       -       -       2.263       -       3.527       3.354         Pot Cap-1 Maneuver       -       1077       -       180       629         Stage 1       -       -       -       664       -         Stage 2       -       -       -       -       -         Mov Cap-1 Maneuver       -       -       1076       -       172       628         Mov Cap-2 Maneuver       -       -       -       172       -	Critical Hdwy	-	-	4.17	-		6.26
Follow-up Hdwy - 2.263 - 3.527 3.354  Pot Cap-1 Maneuver - 1077 - 180 629     Stage 1 664 -     Stage 2 407 -  Platoon blocked, %  Mov Cap-1 Maneuver - 1076 - 172 628  Mov Cap-2 Maneuver 1076 - 172 - 628  Mov Cap-2 Maneuver 663 -     Stage 1 663 -     Stage 2 389 -  Approach EB WB NB  HCM Control Delay, s/v 0 0.49 80.36  HCM LOS F  Minor Lane/Major Mvmt NBLn1 NBLn2 EBT EBR WBL  Capacity (veh/h) 172 628 - 1076  HCM Lane V/C Ratio 0.953 0.115 - 0.044  HCM Control Delay (s/veh) 110.9 11.5 - 8.5  HCM Lane LOS F B - A	Critical Hdwy Stg 1	-	-	-	-		-
Pot Cap-1 Maneuver         -         -         1077         -         180         629           Stage 1         -         -         -         664         -           Stage 2         -         -         -         407         -           Platoon blocked, %         -         -         -         -           Mov Cap-1 Maneuver         -         1076         -         172         628           Mov Cap-2 Maneuver         -         -         -         172         -         -         663         -           Stage 1         -         -         -         663         -         -         389         -           Approach         EB         WB         NB         NB         NB         HCM LOS         F           Minor Lane/Major Mvmt         NBLn1 NBLn2         EBT         EBR         WBL           Capacity (veh/h)         172         628         -         -         1076           HCM Lane V/C Ratio         0.953         0.115         -         -         0.044           HCM Control Delay (s/veh)         110.9         11.5         -         -         8.5           HCM Lane LOS         F	Critical Hdwy Stg 2	-	-	-	-	5.43	-
Stage 1       -       -       -       664       -         Stage 2       -       -       -       407       -         Platoon blocked, %       -       -       -       -         Mov Cap-1 Maneuver       -       -       1076       -       172       628         Mov Cap-2 Maneuver       -       -       -       172       -       -       663       -       -       -       663       -       -       389       -       -         Approach       EB       WB       NB       NB       NB       HCM Control Delay, s/v       0       0.49       80.36       +       +       -       -       -       628       -       -       1076       +       -	Follow-up Hdwy	-	-	2.263	-	3.527	3.354
Stage 1       -       -       -       664       -         Stage 2       -       -       -       407       -         Platoon blocked, %       -       -       -       -         Mov Cap-1 Maneuver       -       -       1076       -       172       628         Mov Cap-2 Maneuver       -       -       -       172       -       -       663       -       -       -       663       -       -       389       -       -         Approach       EB       WB       NB       NB       NB       HCM Control Delay, s/v       0       0.49       80.36       -       F         Minor Lane/Major Mvmt       NBLn1 NBLn2       EBT       EBR       WBL         Capacity (veh/h)       172       628       -       -       1076         HCM Lane V/C Ratio       0.953       0.115       -       -       0.044         HCM Control Delay (s/veh)       110.9       11.5       -       -       8.5         HCM Lane LOS       F       B       -       -       A	Pot Cap-1 Maneuver	-	-	1077	_	180	629
Stage 2       -       -       -       407       -         Platoon blocked, %       -       -       -       -       -         Mov Cap-1 Maneuver       -       -       1076       -       172       628         Mov Cap-2 Maneuver       -       -       -       172       -       -       663       -       -       -       663       -       -       389       -       -       -       389       -       -       -       389       -       -       -       389       -       -       -       -       389       -       -       -       -       389       -       -       -       -       389       -       -       -       -       389       -       -       -       -       389       -       -       -       -       389       -       -       -       -       389       -       -       -       -       -       389       -       <	•	-	-	-	-		
Platoon blocked, %		-	-	-	-		-
Mov Cap-1 Maneuver         -         -         1076         -         172         628           Mov Cap-2 Maneuver         -         -         -         -         172         -           Stage 1         -         -         -         -         663         -           Stage 2         -         -         -         -         389         -           Approach         EB         WB         NB           HCM Control Delay, s/v         0         0.49         80.36           HCM LOS         F         F    Minor Lane/Major Mvmt  NBLn1 NBLn2  EBT  EBR  WBL  Capacity (veh/h)  172  628  - 1076  HCM Lane V/C Ratio  0.953  0.115  - 0.044  HCM Control Delay (s/veh)  110.9  11.5  - 8.5  HCM Lane LOS  F  B  - A	•	_	_		_		
Mov Cap-2 Maneuver         -         -         -         172         -           Stage 1         -         -         -         663         -           Stage 2         -         -         -         389         -           Approach         EB         WB         NB           HCM Control Delay, s/v         0         0.49         80.36           HCM LOS         F           Minor Lane/Major Mvmt         NBLn1 NBLn2         EBT         EBR         WBL           Capacity (veh/h)         172         628         -         -         1076           HCM Lane V/C Ratio         0.953         0.115         -         -         0.044           HCM Control Delay (s/veh)         110.9         11.5         -         -         8.5           HCM Lane LOS         F         B         -         -         A		_	-	1076	_	172	628
Stage 1         -         -         -         663         -           Stage 2         -         -         -         389         -           Approach         EB         WB         NB           HCM Control Delay, s/v         0         0.49         80.36           HCM LOS         F           Minor Lane/Major Mvmt         NBLn1 NBLn2         EBT         EBR         WBL           Capacity (veh/h)         172         628         -         -         1076           HCM Lane V/C Ratio         0.953         0.115         -         -         0.044           HCM Control Delay (s/veh)         110.9         11.5         -         -         8.5           HCM Lane LOS         F         B         -         -         A	•	_	_				
Stage 2         -         -         -         389         -           Approach         EB         WB         NB           HCM Control Delay, s/v         0         0.49         80.36           HCM LOS         F           Minor Lane/Major Mvmt         NBLn1 NBLn2         EBT         EBR         WBL           Capacity (veh/h)         172         628         -         -         1076           HCM Lane V/C Ratio         0.953         0.115         -         -         0.044           HCM Control Delay (s/veh)         110.9         11.5         -         -         8.5           HCM Lane LOS         F         B         -         -         A	•						
Approach         EB         WB         NB           HCM Control Delay, s/v         0         0.49         80.36           HCM LOS         F             Minor Lane/Major Mvmt         NBLn1 NBLn2         EBT         EBR         WBL           Capacity (veh/h)         172         628         -         -         1076           HCM Lane V/C Ratio         0.953         0.115         -         -         0.044           HCM Control Delay (s/veh)         110.9         11.5         -         -         8.5           HCM Lane LOS         F         B         -         A	-						
HCM Control Delay, s/v   0   0.49   80.36   HCM LOS   F	Slaye Z	_	-	-	-	203	-
HCM Control Delay, s/v   0   0.49   80.36   HCM LOS   F							
Minor Lane/Major Mvmt         NBLn1 NBLn2         EBT         EBR         WBL           Capacity (veh/h)         172         628         -         -         1076           HCM Lane V/C Ratio         0.953         0.115         -         -         0.044           HCM Control Delay (s/veh)         110.9         11.5         -         -         8.5           HCM Lane LOS         F         B         -         -         A	Approach	EB		WB		NB	
Minor Lane/Major Mvmt         NBLn1 NBLn2         EBT         EBR         WBL           Capacity (veh/h)         172         628         -         -         1076           HCM Lane V/C Ratio         0.953         0.115         -         -         0.044           HCM Control Delay (s/veh)         110.9         11.5         -         -         8.5           HCM Lane LOS         F         B         -         A	HCM Control Delay, s/v	0		0.49		80.36	
Capacity (veh/h)       172       628       -       -       1076         HCM Lane V/C Ratio       0.953       0.115       -       -       0.044         HCM Control Delay (s/veh)       110.9       11.5       -       -       8.5         HCM Lane LOS       F       B       -       A						F	
Capacity (veh/h)       172       628       -       -       1076         HCM Lane V/C Ratio       0.953       0.115       -       -       0.044         HCM Control Delay (s/veh)       110.9       11.5       -       -       8.5         HCM Lane LOS       F       B       -       A							
Capacity (veh/h)       172       628       -       -       1076         HCM Lane V/C Ratio       0.953       0.115       -       -       0.044         HCM Control Delay (s/veh)       110.9       11.5       -       -       8.5         HCM Lane LOS       F       B       -       A	Mineral and /Maria Maria		NIDL 4	UDI O	EDT	EDD	VV/DI
HCM Lane V/C Ratio       0.953       0.115       -       -       0.044         HCM Control Delay (s/veh)       110.9       11.5       -       -       8.5         HCM Lane LOS       F       B       -       A							
HCM Control Delay (s/veh)         110.9         11.5         -         -         8.5           HCM Lane LOS         F         B         -         -         A					-		
HCM Lane LOS F B A					-	-	
		eh)			-	-	
HCM 95th %tile Q(veh) 7.4 0.4 0.1					-	-	
,	HCM 95th %tile Q(veh)		7.4	0.4	-	-	0.1

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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽			4	W	
Traffic Volume (veh/h)	10	12	56	94	235	19
Future Volume (Veh/h)	10	12	56	94	235	19
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	16	19	88	147	367	30
Pedestrians					37	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					4	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			72		386	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			72		386	63
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			94		34	97
cM capacity (veh/h)			1444		556	959
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	35	235	397			
Volume Total Volume Left	აე 0	235 88	367			
	19	00	307			
Volume Right cSH	1700	1444	574			
Volume to Capacity	0.02	0.06	0.69			
	0.02	5	135			
Queue Length 95th (ft)		3.2	24.1			
Control Delay (s/veh)	0.0	_				
Lane LOS	0.0	A	C 24.1			
Approach LOS	0.0	3.2	24.1			
Approach LOS			С			
Intersection Summary						
Average Delay			15.5			
Intersection Capacity Utilizati	ion		35.6%	IC	U Level c	of Service
Analysis Period (min)			15			

Intersection						
	15.5					
		EDD	///DI	WDT	NDI	NDD
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>}</b>	40		4	M	40
Traffic Vol, veh/h	10	12	56	94	235	19
Future Vol, veh/h	10	12	56	94	235	19
Conflicting Peds, #/hr	0	37	37	0	0	0
3	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	<i>†</i> 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	25	7	6	4	5
Mvmt Flow	16	19	88	147	367	30
mvine ion			00		001	00
	ajor1		Major2		Minor1	
Conflicting Flow All	0	0	71	0	384	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	322	-
Critical Hdwy	-	-	4.17	-	6.44	6.25
Critical Hdwy Stg 1	-	_	_	-	5.44	-
Critical Hdwy Stg 2	_	_	_	_	5.44	_
Follow-up Hdwy	_	_	2.263	_	3.536	3 345
Pot Cap-1 Maneuver	_	_	1498	_	615	995
Stage 1	_	_	-	_	956	-
Stage 2	_	_	_	_	730	_
		-	_		730	-
Platoon blocked, %	-	-	4445	-	A	050
Mov Cap-1 Maneuver	-	-	1445	-	554	959
Mov Cap-2 Maneuver	-	-	-	-	554	-
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	682	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		2.86		24.3	
	U		2.00			
HCM LOS					С	
Minor Lane/Major Mvmt	1	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		572	_	-	672	-
HCM Lane V/C Ratio		0.694	-		0.061	-
HCM Control Delay (s/vel	h)	24.3	_	-	7.7	0
HCM Lane LOS	11/	C C	_	-	Α.	A
HCM 95th %tile Q(veh)		5.4		_	0.2	-
HOW JULI /OUIE Q(VEII)		5.4	-	_	0.2	

	•	•	1	<b>*</b>	<b>/</b>	<b>↓</b>
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		1	<b>^</b>	7		<b>^</b>
Traffic Volume (veh/h)	0	287	1459	28	0	1726
Future Volume (Veh/h)	0	287	1459	28	0	1726
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	312	1586	30	0	1876
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2525	794			1587	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2525	794			1587	
tC, single (s)	6.8	*6.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	23			100	
cM capacity (veh/h)	23	406			409	
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	312	793	793	30	938	938
Volume Left	0	0	0	0	0	0
Volume Right	312	0	0	30	0	0
cSH	406	1700	1700	1700	1700	1700
Volume to Capacity	0.77	0.47	0.47	0.02	0.55	0.55
Queue Length 95th (ft)	161	0	0.17	0	0	0
Control Delay (s/veh)	37.8	0.0	0.0	0.0	0.0	0.0
Lane LOS	E					
Approach Delay (s/veh)	37.8	0.0			0.0	
Approach LOS	E	0.0			3.0	
Intersection Summary						
Average Delay			3.1			
Intersection Capacity Utiliza	ation		64.8%	IC	U Level (	of Service
Analysis Period (min)	20011		15	10	O LOVOI (	J. 001 VIOC
raidiyələ i Gilou (IIIIII)			10			

User Entered Value

Intersection						
Int Delay, s/veh	6.1					
		MED	NET	NDD	05:	057
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		7	<b>^</b>	7		<b>^</b>
Traffic Vol, veh/h	0	287	1459	28	0	1726
Future Vol, veh/h	0	287	1459	28	0	1726
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	335	-	-
Veh in Median Storage	e, # 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	3	3	4	2	2
Mvmt Flow	0	312	1586	30	0	1876
		0,2	,000	- 00		10.0
	Minor1		Major1	N	/lajor2	
Conflicting Flow All	-	793	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	_	_
Follow-up Hdwy	_	3.33	_	_	_	_
Pot Cap-1 Maneuver	0	329	_	0	0	_
Stage 1	0	-	_	0	0	_
Stage 2	0	_	_	0	0	_
Platoon blocked, %	U		_	U	U	_
Mov Cap-1 Maneuver		329	-	_	_	-
	_	329	-	_	_	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s/			0		0	
HCM LOS	V70.00		- 0		- 0	
TOW LOO	'					
Minor Lane/Major Mvm	nt	NBTV	VBLn1	SBT		
Capacity (veh/h)		-	329	-		
HCM Lane V/C Ratio			0.947	_		
HCM Control Delay (s/	(veh)	_		_		
HCM Lane LOS	ven)		73.3 F	_		
HCM 95th %tile Q(veh	\	-	9.8			
HOW SOUL WILLE CALABO	)	-	9.0	-		

# 20: SW Teton Avenue & SW Herman Road

	ၨ	<b>→</b>	•	←	•	<b>†</b>	<b>&gt;</b>	<b>↓</b>	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Group Flow (vph)	8	503	48	332	170	219	20	185	
v/c Ratio	0.02	0.75	0.17	0.40	0.40	0.36	0.05	0.53	
Control Delay (s/veh)	12.5	30.5	13.5	17.7	23.3	27.6	20.6	39.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	12.5	30.5	13.5	17.7	23.3	27.6	20.6	39.5	
Queue Length 50th (ft)	2	216	12	103	61	83	7	86	
Queue Length 95th (ft)	9	352	33	214	123	181	23	173	
Internal Link Dist (ft)		1007		989		572		1708	
Turn Bay Length (ft)	100		100		60		50		
Base Capacity (vph)	600	1136	514	1217	526	1213	601	1133	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.01	0.44	0.09	0.27	0.32	0.18	0.03	0.16	
Intersection Summary									

	•	<b>→</b>	•	•	•	•	•	<b>†</b>	~	-	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		7	f)		ň	<b>₽</b>		7	ĵ.	
Traffic Volume (vph)	6	195	207	38	238	27	136	144	31	16	121	27
Future Volume (vph)	6	195	207	38	238	27	136	144	31	16	121	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	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	0.92		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1543	1668		1626	1802		1596	1733		1703	1617	
Flt Permitted	0.52	1.00		0.23	1.00		0.46	1.00		0.62	1.00	
Satd. Flow (perm)	841	1668		393	1802		774	1733		1114	1617	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	8	244	259	48	298	34	170	180	39	20	151	34
RTOR Reduction (vph)	0	20	0	0	2	0	0	0	0	0	5	0
Lane Group Flow (vph)	8	483	0	48	330	0	170	219	0	20	180	0
Confl. Peds. (#/hr)							1					1
Heavy Vehicles (%)	17%	2%	8%	11%	4%	2%	13%	6%	10%	6%	16%	4%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	35.8	35.0		43.6	38.9		35.8	29.8		22.7	20.7	
Effective Green, g (s)	35.8	35.5		43.6	39.4		35.8	30.3		22.7	21.2	
Actuated g/C Ratio	0.40	0.39		0.48	0.44		0.40	0.33		0.25	0.23	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	3.2		2.0	3.2		2.0	3.2		2.0	3.2	
Lane Grp Cap (vph)	338	654		253	784		406	580		292	378	
v/s Ratio Prot	0.00	c0.29		c0.01	c0.18		c0.05	0.13		0.00	c0.11	
v/s Ratio Perm	0.01			0.08			0.11			0.02		
v/c Ratio	0.02	0.74		0.19	0.42		0.42	0.38		0.07	0.48	
Uniform Delay, d1	16.7	23.5		14.9	17.7		18.8	22.9		25.7	29.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	4.4		0.1	0.4		0.3	0.4		0.0	1.0	
Delay (s)	16.7	27.9		15.1	18.1		19.1	23.4		25.7	30.9	
Level of Service	В	С		В	В		В	С		С	С	
Approach Delay (s/veh)		27.8			17.7			21.5			30.4	
Approach LOS		С			В			С			С	
Intersection Summary	·											
HCM 2000 Control Delay (s/veh) 23.9				Н	CM 2000	Level of	Service		С			
•	CM 2000 Volume to Capacity ratio 0.58											
Actuated Cycle Length (s)			90.5		um of lost				18.0			
Intersection Capacity Utiliza	ition		58.1%	IC	CU Level of	of Service	•		В			
Analysis Period (min)			15									

c Critical Lane Group

Movement   EBL   EBT   EBR   WBL   WBL   WBL   NBL   NBT   NBR   SBL   SBT   SBR   Lane Configurations   N		۶	<b>→</b>	•	•	<b>←</b>	•	1	<b>†</b>	<b>/</b>	<b>/</b>	<b>+</b>	<b>√</b>
Traffic Volume (veh/h)	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Future Volume (vehrh)	Lane Configurations	J.	f)		, M	<b>₽</b>		7	f)		ň	ĵ.	
Initial C (QD), veh	Traffic Volume (veh/h)	6	195	207	38		27	136	144	31	16	121	
Lane Writh Adj.   1.00   1.0	Future Volume (veh/h)	6	195	207	38	238	27	136	144	31	16	121	27
Ped-Bike Adji(A pbT)	Initial Q (Qb), veh	0	0		0		0		0	0	0		0
Parking Bus, Adj	Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Work Zöne On Approach	Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Adj Sat Flow, veh/huln Adj Flow Rate, veh/h Adj Flow Rate, veh/h Adj Flow Rate, veh/h B 244 259 48 298 34 170 180 397 20 151 34 Peak-Hour Factor 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.8	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
Adj Flow Rate, veh/h	Work Zone On Approach		No			No			No			No	
Peak Hour Factor   0.80   0.	Adj Sat Flow, veh/h/ln	1648	1870	1781	1737	1841	1870	1707	1811	1752	1811	1663	1841
Percent Heavy Veh, %	Adj Flow Rate, veh/h	8	244	259	48	298	34	170	180	39	20	151	34
Cap, veh/h         430         357         379         330         752         86         326         352         76         288         205         46           Arrive On Green         0.01         0.43         0.42         0.04         0.46         0.11         0.24         0.024         0.02         0.16         0.15           Sat Flow, veh/h         1570         830         881         1654         1622         185         1626         1442         312         1725         1313         296           Gry Sat Flow(s), veh/h         8         0         503         48         0         332         170         0         219         20         0         185           Gry Sat Flow(s), veh/h/h         1570         0         1712         1654         0         1807         1626         0         1754         1725         0         180           Gys Sat Flow(s), veh/h/h         430         0         175         1.1         0.0         8.4         5.8         0.0         7.5         0.7         0.0         7.6           Cycle Q Clear(g.c), veh/h         430         0         737         330         0         8.4         5.8         0.0	Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Arrive On Green 0.01 0.43 0.42 0.04 0.46 0.46 0.11 0.24 0.24 0.02 0.16 0.15 Sat Flow, veh/h 1570 830 881 1654 1622 185 1626 1442 312 1725 1313 296 Grp Volume(v), veh/h 8 0 503 48 0 332 170 0 219 20 0 185 Grp Sat Flow(s), veh/h 1570 0 1712 1654 0 1807 1626 0 1754 1725 0 1608 Q Serve(g. s), s 0.2 0.0 16.5 1.1 0.0 8.4 5.8 0.0 7.5 0.7 0.0 7.6 Cycle Q Clear(g. c), s 0.2 0.0 16.5 1.1 0.0 8.4 5.8 0.0 7.5 0.7 0.0 7.6 Cycle Q Clear(g. c), veh/h 430 0 737 330 0 838 326 0 428 288 0 252 V/C Ratio(X) 0.02 0.00 0.68 0.15 0.00 0.40 0.52 0.00 0.51 0.07 0.00 0.74 Avail Cap(c. a), veh/h 866 0 1343 734 0 1392 615 0 1452 745 0 1285 HCM Platon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Percent Heavy Veh, %	17	2	8	11	4	2	13	6	10	6	16	4
Arrive On Green         0.01         0.43         0.42         0.04         0.46         0.46         0.41         0.24         0.02         0.16         0.15           Sat Flow, veh/h         1570         830         881         1654         1622         185         1626         1442         312         1725         1313         296           Gry Volume(v), veh/h         8         0         503         48         0         332         170         0         219         20         0         185           Gry Sat Flow(s), veh/h/lin         1570         0         1712         1654         0         1807         1626         0         1754         1725         0         1808           Q Serve(g_s), s         0.2         0.0         16.5         1.1         0.0         8.4         5.8         0.0         7.5         0.7         0.0         7.6           Cycle Q Clear(g_c), s         0.2         0.0         16.5         1.1         0.0         8.4         5.8         0.0         7.5         0.7         0.0         7.6           Prop In Lane         1.00         0.0         1.0         0.0         0.1         0.0         0.0         0.0	Cap, veh/h	430	357	379	330	752	86	326	352	76	288	205	46
Sat Flow, veh/h		0.01	0.43	0.42	0.04	0.46	0.46	0.11	0.24	0.24	0.02	0.16	0.15
Grp Volume(v), veh/h         8         0         503         48         0         332         170         0         219         20         0         185           Grp Sat Flow(s), veh/h/ln         1570         0         1712         1664         0         1807         1626         0         1754         1725         0         1608           Q Serve(g_s), s         0.2         0.0         16.5         1.1         0.0         8.4         5.8         0.0         7.5         0.7         0.0         7.6           Cycle Q Clear(g_c), s         0.2         0.0         16.5         1.1         0.0         8.4         5.8         0.0         7.5         0.7         0.0         7.6           Prop In Lane         1.00         0.51         1.00         0.10         1.00         0.18         1.00         0.18           Lane Grp Cap(c), veh/h         430         0         737         330         0         838         326         0         428         288         0         252           V/C Ratio(X)         0.02         0.00         0.68         0.15         0.00         0.052         0.00         0.51         0.07         0.04 <t< td=""><td></td><td></td><td>830</td><td>881</td><td>1654</td><td>1622</td><td>185</td><td>1626</td><td>1442</td><td>312</td><td></td><td>1313</td><td></td></t<>			830	881	1654	1622	185	1626	1442	312		1313	
Grp Sat Flow(s), veh/h/ln 1570 0 1712 1654 0 1807 1626 0 1754 1725 0 1608 Q Serve(g_s), s 0.2 0.0 16.5 1.1 0.0 8.4 5.8 0.0 7.5 0.7 0.0 7.6 Cycle Q Clear(g_c), s 0.2 0.0 16.5 1.1 0.0 8.4 5.8 0.0 7.5 0.7 0.0 7.6 Cycle Q Clear(g_c), s 0.2 0.0 16.5 1.1 0.0 8.4 5.8 0.0 7.5 0.7 0.0 7.6 Cycle Q Clear(g_c), s 0.2 0.0 16.5 1.1 0.0 8.4 5.8 0.0 7.5 0.7 0.0 7.6 Cycle Q Clear(g_c), s 0.2 0.0 1.5 1.1 0.0 8.4 5.8 0.0 7.5 0.7 0.0 7.6 Cycle Q Clear(g_c), veh/h 430 0.51 1.00 0.51 1.00 0.10 1.00 0.18 1.00 0.18 1.00 0.18 Lane Grp Cap(c), veh/h 430 0 737 330 0 838 326 0 428 288 0 252 V/C Ratio(X) 0.02 0.00 0.68 0.15 0.00 0.40 0.52 0.00 0.51 0.07 0.00 0.74 Avail Cap(c_a), veh/h 866 0 1343 734 0 1392 615 0 1452 745 0 1285 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Grp Volume(v), veh/h	8		503	48		332	170		219			
QServe(g_s), s													
Cycle Q Clear(g_c), s         0.2         0.0         16.5         1.1         0.0         8.4         5.8         0.0         7.5         0.7         0.0         7.6           Prop In Lane         1.00         0.51         1.00         0.10         1.00         0.18         1.00         0.18           Lane Grp Cap(c), veh/h         430         0         737         330         0         838         326         0         428         288         0         252           V/C Ratio(X)         0.02         0.00         0.68         0.15         0.00         0.40         0.52         0.00         0.51         0.07         0.00         0.74           Avail Cap(c_a), veh/h         866         0         1343         734         0         1392         615         0         1452         745         0         1285           HCM Platoon Ratio         1.00         1.													
Prop In Lane 1.00 0.51 1.00 0.10 1.00 0.18 1.00 0.18 Lane Grp Cap(c), veh/h 430 0 737 330 0 838 326 0 428 288 0 252 V/C Ratio(X) 0.02 0.00 0.68 0.15 0.00 0.40 0.52 0.00 0.51 0.07 0.00 0.74 Avail Cap(c_a), veh/h 866 0 1343 734 0 1392 615 0 1452 745 0 1285 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
Lane Grp Cap(c), veh/h 430 0 737 330 0 838 326 0 428 288 0 252 V/C Ratio(X) 0.02 0.00 0.68 0.15 0.00 0.40 0.52 0.00 0.51 0.07 0.00 0.74 Avail Cap(c_a), veh/h 866 0 1343 734 0 1392 615 0 1452 745 0 1285 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	, , ,		0.0			0.0			0.0			0.0	
V/C Ratio(X)         0.02         0.00         0.68         0.15         0.00         0.40         0.52         0.00         0.51         0.07         0.00         0.74           Avail Cap(c_a), veh/h         866         0         1343         734         0         1392         615         0         1452         745         0         1285           HCM Platoon Ratio         1.00<	•		0			0			0			0	
Avail Cap(c_a), veh/h   866													
HCM Platoon Ratio   1.00   1													
Upstream Filter(I)													
Uniform Delay (d), s/veh													
Incr Delay (d2), s/veh													
Initial Q Delay(d3), s/veh													
%ile BackOfQ(50%), veh/ln       0.1       0.0       5.6       0.4       0.0       3.0       2.1       0.0       3.0       0.3       0.0       3.1         Unsig. Movement Delay, s/veh       11.5       0.0       17.3       12.2       0.0       12.6       20.9       0.0       23.8       24.1       0.0       32.5         LnGrp LOS       B       B       B       B       B       C       C       C       C       C         Approach Vol, veh/h       511       380       389       205         Approach Delay, s/veh       17.2       12.5       22.5       31.7         Approach LOS       B       B       B       C       C       C         Timer - Assigned Phs       1       2       3       4       5       6       7       8         Phs Duration (G+Y+Rc), s       7.0       34.9       11.7       15.9       4.7       37.2       5.6       21.9         Change Period (Y+Rc), s       4.0       5.5       4.0       5.5       4.0       5.5       4.0       5.5         Max Green Setting (Gmax), s       20.0       54.0       20.0       55.0       20.0       53.													
Unsig. Movement Delay, s/veh  LnGrp Delay(d), s/veh  11.5  0.0  17.3  12.2  0.0  12.6  20.9  0.0  23.8  24.1  0.0  32.5  LnGrp LOS  B  B  B  B  B  C  C  C  C  Approach Vol, veh/h  511  380  389  205  Approach Delay, s/veh  17.2  12.5  22.5  31.7  Approach LOS  B  B  C  C  C  C  Timer - Assigned Phs  1  2  3  4  5  6  7  8  Phs Duration (G+Y+Rc), s  7.0  34.9  11.7  15.9  4.7  37.2  5.6  21.9  Change Period (Y+Rc), s  4.0  5.5  4.0  5.5  4.0  5.5  4.0  5.5  Max Green Setting (Gmax), s  20.0  54.0  20.0  55.0  20.0  55.0  20.0  55.0  20.0  57.0  Max Q Clear Time (g_c+I1), s  3.1  18.5  7.8  9.6  2.2  10.4  2.7  9.5  Green Ext Time (p_c), s  0.0  10.9  0.2  0.7  0.0  7.7  0.1  3.2													
LnGrp Delay(d), s/veh         11.5         0.0         17.3         12.2         0.0         12.6         20.9         0.0         23.8         24.1         0.0         32.5           LnGrp LOS         B         B         B         B         B         C         C         C         C         C           Approach Vol, veh/h         511         380         389         205         Approach Vol, veh/h         17.2         12.5         22.5         31.7           Approach LOS         B         B         B         C         C         C           Timer - Assigned Phs         1         2         3         4         5         6         7         8           Phs Duration (G+Y+Rc), s         7.0         34.9         11.7         15.9         4.7         37.2         5.6         21.9           Change Period (Y+Rc), s         4.0         5.5         4.0         5.5         4.0         5.5         4.0         5.5           Max Green Setting (Gmax), s         20.0         54.0         20.0         55.0         20.0         53.0         20.0         57.0           Max Q Clear Time (g_c,), s         0.0         10.9         0.2         0.7         0			0.0	5.0	0.4	0.0	0.0	۷.۱	0.0	0.0	0.0	0.0	0.1
LnGrp LOS         B         B         B         B         B         C         C         C         C           Approach Vol, veh/h         511         380         389         205           Approach Delay, s/veh         17.2         12.5         22.5         31.7           Approach LOS         B         B         C         C         C           Timer - Assigned Phs         1         2         3         4         5         6         7         8           Phs Duration (G+Y+Rc), s         7.0         34.9         11.7         15.9         4.7         37.2         5.6         21.9           Change Period (Y+Rc), s         4.0         5.5         4.0         5.5         4.0         5.5           Max Green Setting (Gmax), s         20.0         54.0         20.0         55.0         20.0         53.0         20.0         57.0           Max Q Clear Time (g_c+l1), s         3.1         18.5         7.8         9.6         2.2         10.4         2.7         9.5           Green Ext Time (p_c), s         0.0         10.9         0.2         0.7         0.0         7.7         0.1         3.2           Intersection Summary         19.4<	•		0.0	17 3	12.2	0.0	12.6	20.9	0.0	23.8	24 1	0.0	32.5
Approach Vol, veh/h         511         380         389         205           Approach Delay, s/veh         17.2         12.5         22.5         31.7           Approach LOS         B         B         C         C           Timer - Assigned Phs         1         2         3         4         5         6         7         8           Phs Duration (G+Y+Rc), s         7.0         34.9         11.7         15.9         4.7         37.2         5.6         21.9           Change Period (Y+Rc), s         4.0         5.5         4.0         5.5         4.0         5.5         4.0         5.5           Max Green Setting (Gmax), s         20.0         54.0         20.0         55.0         20.0         57.0         57.0           Max Q Clear Time (g_c+l1), s         3.1         18.5         7.8         9.6         2.2         10.4         2.7         9.5           Green Ext Time (p_c), s         0.0         10.9         0.2         0.7         0.0         7.7         0.1         3.2           Intersection Summary           HCM 7th Control Delay, s/veh         19.4			0.0			0.0			0.0			0.0	
Approach Delay, s/veh  Approach LOS  B  B  C  C  Timer - Assigned Phs  1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 7.0 34.9 11.7 15.9 4.7 37.2 5.6 21.9 Change Period (Y+Rc), s 4.0 5.5 4.0 5.5 4.0 5.5 Max Green Setting (Gmax), s 20.0 54.0 20.0 55.0 20.0 53.0 20.0 57.0 Max Q Clear Time (g_c+l1), s 3.1 18.5 7.8 9.6 2.2 10.4 2.7 9.5 Green Ext Time (p_c), s 0.0 10.9 0.2 0.7 0.0 7.7 0.1 3.2  Intersection Summary HCM 7th Control Delay, s/veh			511			380			380			205	
Approach LOS B B C C  Timer - Assigned Phs 1 2 3 4 5 6 7 8  Phs Duration (G+Y+Rc), s 7.0 34.9 11.7 15.9 4.7 37.2 5.6 21.9  Change Period (Y+Rc), s 4.0 5.5 4.0 5.5 4.0 5.5  Max Green Setting (Gmax), s 20.0 54.0 20.0 55.0 20.0 53.0 20.0 57.0  Max Q Clear Time (g_c+I1), s 3.1 18.5 7.8 9.6 2.2 10.4 2.7 9.5  Green Ext Time (p_c), s 0.0 10.9 0.2 0.7 0.0 7.7 0.1 3.2  Intersection Summary  HCM 7th Control Delay, s/veh 19.4													
Timer - Assigned Phs         1         2         3         4         5         6         7         8           Phs Duration (G+Y+Rc), s         7.0         34.9         11.7         15.9         4.7         37.2         5.6         21.9           Change Period (Y+Rc), s         4.0         5.5         4.0         5.5         4.0         5.5           Max Green Setting (Gmax), s         20.0         54.0         20.0         55.0         20.0         53.0         20.0         57.0           Max Q Clear Time (g_c+I1), s         3.1         18.5         7.8         9.6         2.2         10.4         2.7         9.5           Green Ext Time (p_c), s         0.0         10.9         0.2         0.7         0.0         7.7         0.1         3.2           Intersection Summary           HCM 7th Control Delay, s/veh         19.4	• •												
Phs Duration (G+Y+Rc), s 7.0 34.9 11.7 15.9 4.7 37.2 5.6 21.9 Change Period (Y+Rc), s 4.0 5.5 4.0 5.5 4.0 5.5 Max Green Setting (Gmax), s 20.0 54.0 20.0 55.0 20.0 53.0 20.0 57.0 Max Q Clear Time (g_c+I1), s 3.1 18.5 7.8 9.6 2.2 10.4 2.7 9.5 Green Ext Time (p_c), s 0.0 10.9 0.2 0.7 0.0 7.7 0.1 3.2  Intersection Summary HCM 7th Control Delay, s/veh 19.4	Approach LOS		Ь			Ь			C			C	
Change Period (Y+Rc), s 4.0 5.5 4.0 5.5 4.0 5.5 4.0 5.5 Max Green Setting (Gmax), s 20.0 54.0 20.0 55.0 20.0 53.0 20.0 57.0 Max Q Clear Time (g_c+I1), s 3.1 18.5 7.8 9.6 2.2 10.4 2.7 9.5 Green Ext Time (p_c), s 0.0 10.9 0.2 0.7 0.0 7.7 0.1 3.2 Intersection Summary  HCM 7th Control Delay, s/veh 19.4	· · · · · · · · · · · · · · · · · · ·	1											
Max Green Setting (Gmax), s       20.0       54.0       20.0       55.0       20.0       53.0       20.0       57.0         Max Q Clear Time (g_c+l1), s       3.1       18.5       7.8       9.6       2.2       10.4       2.7       9.5         Green Ext Time (p_c), s       0.0       10.9       0.2       0.7       0.0       7.7       0.1       3.2         Intersection Summary         HCM 7th Control Delay, s/veh       19.4	, , , , , , , , , , , , , , , , , , , ,												
Max Q Clear Time (g_c+I1), s 3.1 18.5 7.8 9.6 2.2 10.4 2.7 9.5 Green Ext Time (p_c), s 0.0 10.9 0.2 0.7 0.0 7.7 0.1 3.2 Intersection Summary  HCM 7th Control Delay, s/veh 19.4	Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Green Ext Time (p_c), s 0.0 10.9 0.2 0.7 0.0 7.7 0.1 3.2  Intersection Summary  HCM 7th Control Delay, s/veh 19.4													
Intersection Summary HCM 7th Control Delay, s/veh 19.4							10.4						
HCM 7th Control Delay, s/veh 19.4	Green Ext Time (p_c), s	0.0	10.9	0.2	0.7	0.0	7.7	0.1	3.2				
HCM 7th Control Delay, s/veh 19.4	Intersection Summary												
				19.4									
	<b>3</b> ·												

### 21: OR 99W (Pacific Highway) & SW Fischer Road

	•	*	1	<b>†</b>	<b>↓</b>	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	193	340	365	1564	1552	327
v/c Ratio	0.96	0.81	0.95	0.53	0.78	0.34
Control Delay (s/veh)	113.7	27.6	87.7	4.5	32.1	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	113.7	27.6	87.7	4.5	32.1	7.3
Queue Length 50th (ft)	178	49	329	184	745	54
Queue Length 95th (ft)	#334	#200	#522	217	m834	m79
Internal Link Dist (ft)	1134			1909	2372	
Turn Bay Length (ft)	275		435			200
Base Capacity (vph)	202	421	391	2932	1999	969
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.81	0.93	0.53	0.78	0.34

### Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	۶	$\rightarrow$	•	<b>†</b>	L	ļ	✓			
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR			
Lane Configurations	7	7	ሻ	<b>^</b>	Ð	<b>^</b>	7			
Traffic Volume (vph)	178	313	336	1439	0	1428	301			
Future Volume (vph)	178	313	336	1439	0	1428	301			
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900			
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	1.00	1.00	0.95		0.95	1.00			
Frpb, ped/bikes	1.00	0.97	1.00	1.00		1.00	0.95			
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			
Frt	1.00	0.85	1.00	1.00		1.00	0.85			
Flt Protected	0.95	1.00	0.95	1.00		1.00	1.00			
Satd. Flow (prot)	1770	1493	1770	3539		3438	1509			
FIt Permitted	0.95	1.00	0.95	1.00		1.00	1.00			
Satd. Flow (perm)	1770	1493	1770	3539		3438	1509			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Adj. Flow (vph)	193	340	365	1564	0	1552	327			
RTOR Reduction (vph)	0	251	0	0	0	0	92			
Lane Group Flow (vph)	193	89	365	1564	0	1552	235			
Confl. Peds. (#/hr)	100	21	9	1001		1002	9			
Heavy Vehicles (%)	2%	5%	2%	2%	2%	5%	2%			
Turn Type	Prot	Perm	Prot	NA	Prot	NA	Perm			
Protected Phases	4	I CIIII	5	2	1	6	i Giiii			
Permitted Phases		4	J		1	U	6			
Actuated Green, G (s)	15.0	15.0	29.1	114.0		79.4	79.4			
Effective Green, g (s)	16.0	16.0	30.6	116.0		81.4	81.4			
Actuated g/C Ratio	0.11	0.11	0.22	0.83		0.58	0.58			
Clearance Time (s)	5.0	5.0	5.5	6.0		6.0	6.0			
Vehicle Extension (s)	2.5	2.5	2.3	4.5		4.5	4.5			
	202	170	386	2932		1998	877			
Lane Grp Cap (vph)		170					0//			
v/s Ratio Prot	c0.11	0.00	c0.21	0.44		c0.45	0.46			
v/s Ratio Perm	0.00	0.06	0.05	0.50		0.70	0.16			
v/c Ratio	0.96	0.53	0.95	0.53		0.78	0.27			
Uniform Delay, d1	61.6	58.4	53.9	3.7		22.4	14.5			
Progression Factor	1.00	1.00	1.00	1.00		1.32	1.39			
Incremental Delay, d2	50.2	2.2	31.7	0.7		2.0	0.5			
Delay (s)	111.8	60.7	85.6	4.4		31.5	20.7			
Level of Service	F	E	F	Α		C	С			
Approach Delay (s/veh)	79.2			19.8		29.6				
Approach LOS	Е			В		С				
ntersection Summary										
HCM 2000 Control Delay (s/	veh)		31.3	Н	CM 2000	Level of S	Service	C	)	
HCM 2000 Volume to Capac	city ratio		0.84							
Actuated Cycle Length (s)			140.0	Sı	um of lost	time (s)		12.0	)	
Intersection Capacity Utilizat	tion		94.0%	IC	U Level	of Service		F	=	
Analysis Period (min)			15							
c Critical Lane Group										

	۶	•	•	<b>†</b>	L.	<b>↓</b>	4
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations	ሻ	7	ሻ	<b>†</b> †	ħ	<b>^</b>	7
Traffic Volume (veh/h)	178	313	336	1439	0	1428	301
Future Volume (veh/h)	178	313	336	1439	0	1428	301
Initial Q (Qb), veh	0	0	0	0		0	0
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No	1.00	1.00	No		No	1.00
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870		1826	1870
Adj Flow Rate, veh/h	193	340	365	1564		1552	327
Peak Hour Factor	0.92	0.92	0.92	0.92		0.92	0.92
Percent Heavy Veh, %	2	5	2	2		5	2
Cap, veh/h	204	177	394	2944		2007	910
Arrive On Green	0.11	0.11	0.22	0.83		1.00	1.00
Sat Flow, veh/h	1781	1547	1781	3647		3561	1573
	193	340	365	1564		1552	327
Grp Volume(v), veh/h Grp Sat Flow(s),veh/h/ln	1781	340 1547	305 1781	1777		1735	1573
Q Serve(g_s), s	15.1	16.0	28.1	18.9		0.0	0.0
Cycle Q Clear(g_c), s	15.1	16.0	28.1	18.9		0.0	0.0
, ,,	1.00		1.00	10.9		0.0	1.00
Prop In Lane	204	1.00	394	2944		2007	910
Lane Grp Cap(c), veh/h		177					
V/C Ratio(X)	0.95	1.92	0.93	0.53		0.77	0.36
Avail Cap(c_a), veh/h	204	177	394	2944		2007	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00		2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		0.54	0.54
Uniform Delay (d), s/veh	61.6	62.0	53.4	3.7		0.0	0.0
Incr Delay (d2), s/veh	48.1	435.4	27.2	0.7		1.6	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	34.4	15.2	4.6		0.5	0.2
Unsig. Movement Delay, s/ve		407.4	00.0			4.0	0.0
LnGrp Delay(d), s/veh	109.7	497.4	80.6	4.4		1.6	0.6
LnGrp LOS	F	F	F	A		A	A
Approach Vol, veh/h	533			1929		1879	
Approach Delay, s/veh	357.0			18.8		1.4	
Approach LOS	F			В		Α	
Timer - Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		120.0		20.0	35.0	85.0	
Change Period (Y+Rc), s		6.0		5.0	5.5	6.0	
Max Green Setting (Gmax), s		94.0		15.0	29.5	79.0	
Max Q Clear Time (g_c+l1), s		20.9		18.0	30.1	2.0	
Green Ext Time (p_c), s		64.1		0.0	0.0	64.4	
Intersection Summary							
HCM 7th Control Delay, s/veh	1		52.8				
HCM 7th LOS	ı		52.6 D				
Notes	on (al 4- l-	a loca the	n nhass -	207 012 2			
User approved pedestrian inte			n pnase n	nax green			
User approved ignoring U-Tu	iiiiig mo\	rement.					

	<b>→</b>	•	←	•	•	<b>†</b>	<i>&gt;</i>	-	Ţ	4	
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	173	314	317	407	133	1191	236	469	1159	22	
v/c Ratio	0.50	0.92	0.92	0.68	0.82	0.86	0.24	0.88	0.74	0.03	
Control Delay (s/veh)	42.0	86.5	85.9	13.8	93.0	40.9	2.8	76.8	34.8	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	42.0	86.5	85.9	13.8	93.0	40.9	2.8	76.8	34.8	0.0	
Queue Length 50th (ft)	48	295	298	32	121	435	12	216	453	0	
Queue Length 95th (ft)	88	#490	#492	148	m#213	m514	m33	#298	542	0	
Internal Link Dist (ft)	481		939			2372			1326		
Turn Bay Length (ft)		300		315	550		140	265		400	
Base Capacity (vph)	390	342	346	601	171	1377	985	556	1573	768	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.44	0.92	0.92	0.68	0.78	0.86	0.24	0.84	0.74	0.03	

### Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	٠	<b>→</b>	•	•	•	•	•	<b>†</b>	<b>/</b>	<b>&gt;</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		€1}+		ሻ	र्स	7	75	<b>^</b>	7	ሻሻ	<b>^</b>	7
Traffic Volume (vph)	23	76	64	518	75	383	125	1120	222	441	1089	21
Future Volume (vph)	23	76	64	518	75	383	125	1120	222	441	1089	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Lane Util. Factor		0.95		0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3295		1681	1702	1533	1770	3505	1560	3433	3438	1547
FIt Permitted		0.99		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3295		1681	1702	1533	1770	3505	1560	3433	3438	1547
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	24	81	68	551	80	407	133	1191	236	469	1159	22
RTOR Reduction (vph)	0	62	0	0	0	290	0	0	60	0	0	12
Lane Group Flow (vph)	0	111	0	314	317	117	133	1191	176	469	1159	10
Confl. Peds. (#/hr)	7	00/	00/	00/	00/	7	1	00/	7	7	=0/	1
Heavy Vehicles (%)	2%	2%	3%	2%	3%	3%	2%	3%	2%	2%	5%	2%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	3	3		4	4		5	2	4	1	6	
Permitted Phases		40.0		00.5	00.5	4	40.0	0	2	04.0	04.0	6
Actuated Green, G (s)		12.2		28.5	28.5	28.5	12.9	55.0	83.5	21.6	64.0	64.0
Effective Green, g (s)		12.2		28.5	28.5	28.5	12.9	55.0	83.5	21.6	64.0	64.0
Actuated g/C Ratio		0.09		0.20	0.20	0.20	0.09	0.39	0.60	0.15	0.46	0.46
Clearance Time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Vehicle Extension (s)		2.3		2.3	2.3	2.3	2.3	4.5	2.3	2.3	4.8	4.8
Lane Grp Cap (vph)		287		342	346	312	163	1376	930	529	1571	707
v/s Ratio Prot		c0.03		c0.19	0.19	0.00	0.08	c0.34	0.04	c0.14	0.34	0.04
v/s Ratio Perm		0.00		0.00	0.00	0.08	0.00	0.07	0.07	0.00	0.74	0.01
v/c Ratio		0.39		0.92	0.92	0.38	0.82	0.87	0.19	0.89	0.74	0.01
Uniform Delay, d1		60.4		54.6	54.6	48.1	62.4	39.1	12.9	58.0	31.1	20.8
Progression Factor		1.00		1.00	1.00	1.00	1.01	0.87	0.88	1.00	1.00	1.00
Incremental Delay, d2		0.5		28.3	27.8	0.4	21.4	6.3	0.0	16.1	3.1	0.0
Delay (s)		60.9 E		82.9 F	82.4 F	48.5 D	84.2	40.3	11.4 B	74.1 E	34.3 C	20.8
Level of Service		60.9		Г		D	F	D 0	В	E		С
Approach LOS		60.9 E			69.3 E			39.6			45.4	
Approach LOS		E			E			D			D	
Intersection Summary			40.0		0110000							
HCM 2000 Control Delay (s/v	,		49.6	H	CM 2000	Level of S	Service		D			
HCM 2000 Volume to Capaci	• •								00.7			
Actuated Cycle Length (s)			140.0		um of lost	` '			22.7			
Intersection Capacity Utilizati	on		88.8%	IC	U Level	of Service			Е			
Analysis Period (min)			15									

c Critical Lane Group

HCM 7th Edition methodology does not support exclusive ped or hold phases.

# 1: SW 124th Avenue & OR 99W (Pacific Highway)

	-	•	•	•	1	~
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1038	550	1102	781	172	378
v/c Ratio	0.88	0.66	0.80	0.29	0.35	0.28
Control Delay (s/veh)	47.6	10.1	38.1	5.2	23.8	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.6	10.1	38.1	5.2	23.8	15.3
Queue Length 50th (ft)	396	49	361	62	68	144
Queue Length 95th (ft)	#502	170	#694	181	31	194
Internal Link Dist (ft)	1687			1822	503	
Turn Bay Length (ft)		225	550		300	275
Base Capacity (vph)	1174	837	1372	2676	990	1371
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.66	0.80	0.29	0.17	0.28
Intersection Summary						

Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Movement		-	•	•	•	4	~		
Lane Configurations   ↑↑	Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Traffic Volume (vph) 934 495 992 703 155 340   Future Volume (vph) 934 495 992 703 155 340   Ideal Flow (vphpl) 1900 1900 1900 1900 1900 1900   Total Lost time (s) 4.0 4.0 4.0 4.0 4.0 5.6   Lane Util. Factor 0.95 1.00 0.97 0.95 0.97 0.88   Frpb, ped/bikes 1.00 1.00 1.00 1.00 1.00 1.00   Frt 1.00 0.85 1.00 1.00 1.00 1.00 1.00 0.85   Filt Protected 1.00 1.00 0.95 1.00 0.95 1.00   Satd. Flow (prot) 3438 1568 3400 3438 3213 2472   Filt Permitted 1.00 1.00 0.95 1.00 0.95 1.00   Satd. Flow (perm) 3438 1568 3400 3438 3213 2472   Filt Permitted 1.00 1.00 0.95 1.00 0.95 1.00   Satd. Flow (perm) 3438 1568 3400 3438 3213 2472   Peak-hour factor, PHF 0.90 0.90 0.90 0.90 0.90 0.90   Adj. Flow (vph) 1038 550 1102 781 172 378   TROR Reduction (vph) 0 302 0 0 0 0 0 0 0   Lane Group Flow (vph) 1038 248 1102 781 172 378   Heavy Vehicles (%) 5% 3% 3% 5% 9% 15%   Turn Type NA Perm Prot NA Prot pt+ov Protected Phases 2 1 6 8 1 4   Permitted Phases 3 2 1 6 8 8 1 4   Permitted Phases 4 2 1 6 8 1 4   Permitted Phases 5 2 1 6 8 1 4   Permitted Phases 6 0 0.30 0.30 0.30 0.30 0.31   Using First Protected Phase 1 0.30 0.30 0.30 0.31   Using First Protected Phase 1 0.10 0.30 0.30 0.30 0.31   Using First Protected Phase 1 0.10 0.80 0.80 0.80 0.80 0.80 0.30 0.30 0.3									
Future Volume (vph)         934         495         992         703         155         340           Ideal Flow (vphpl)         1900         1900         1900         1900         1900           Total Lost time (s)         4.0         4.0         4.0         4.0         4.0         5.6           Lane Util, Factor         0.95         1.00         0.97         0.95         0.97         0.88           Frpb, ped/bikes         1.00         1.00         1.00         1.00         1.00         1.00           Filp ped/bikes         1.00         1.00         1.00         1.00         1.00         1.00           Fit Protected         1.00         1.00         0.95         1.00         0.95         1.00           Satd. Flow (prot)         3438         1568         3400         3438         3213         2472           Fit Permitted         1.00         1.00         0.95         1.00         0.95         1.00           Satd. Flow (prot)         3438         1568         3400         3438         3213         2472           Flee Pemitted         1.00         1.00         0.95         1.00         0.90         0.90         0.90         0.90 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
Ideal Flow (vphpl)									
Total Lost time (s)									
Lane Util. Factor         0.95         1.00 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Frpb, ped/bikes         1.00         0.85         1.00         0.85         1.00         0.085         1.00         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90									
Fliph	Frpb, ped/bikes			1.00	1.00	1.00	1.00		
Fit Protected         1.00         1.00         0.95         1.00         0.95         1.00           Satd. Flow (prot)         3438         1568         3400         3438         3213         2472           Fit Permitted         1.00         1.00         0.95         1.00         0.95         1.00           Satd. Flow (perm)         3438         1568         3400         3438         3213         2472           Peak-hour factor, PHF         0.90         0.90         0.90         0.90         0.90         0.90           Adj. Flow (vph)         1038         550         1102         781         172         378           RTOR Reduction (vph)         0         302         0         0         0         0           Lane Group Flow (vph)         1038         248         1102         781         172         378           RTOR Reduction (vph)         0         302         0         0         0         0           Lane Group Flow (vph)         1038         248         1102         781         172         378           Confl. Peds. (#/hr)         1038         34         1102         781         172         378           Lane Group Flow		1.00	1.00	1.00	1.00	1.00	1.00		
Satd. Flow (prot)         3438         1568         3400         3438         3213         2472           Flt Permitted         1.00         1.00         0.95         1.00         0.95         1.00           Satd. Flow (perm)         3438         1568         3400         3438         3213         2472           Peak-hour factor, PHF         0.90         0.90         0.90         0.90         0.90         0.90           Adj. Flow (vph)         1038         550         1102         781         172         378           RTOR Reduction (vph)         0         302         0         0         0         0           Lane Group Flow (vph)         1038         248         1102         781         172         378           Confl. Peds. (#/hr)         38         248         1102         781         172         378           Heavy Vehicles (%)         5%         3%         3%         5%         9%         15%           Turn Type         NA         Perm         Prot         NA         Prot         pt+ov           Protected Phases         2         1         6         8         1.4           Permitted Phases         2         2 <td>Frt</td> <td>1.00</td> <td>0.85</td> <td>1.00</td> <td>1.00</td> <td>1.00</td> <td>0.85</td> <td></td> <td></td>	Frt	1.00	0.85	1.00	1.00	1.00	0.85		
Fit Permitted 1.00 1.00 0.95 1.00 0.95 1.00 Satd. Flow (perm) 3438 1568 3400 3438 3213 2472  Peak-hour factor, PHF 0.90 0.90 0.90 0.90 0.90 0.90 Adj. Flow (vph) 1038 550 1102 781 172 378  RTOR Reduction (vph) 0 302 0 0 0 0 0 Lane Group Flow (vph) 1038 248 1102 781 172 378  Confl. Peds. (#/hr) 34 38 38 38 58 38 58 38 58 58 58 58 58 58 58 58 58 58 58 58 58	Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00		
Satd. Flow (perm)         3438         1568         3400         3438         3213         2472           Peak-hour factor, PHF         0.90         0.90         0.90         0.90         0.90         0.90           Adj. Flow (vph)         1038         550         1102         781         172         378           RTOR Reduction (vph)         0         302         0         0         0         0           Lane Group Flow (vph)         1038         248         1102         781         172         378           Confl. Peds. (#/hr)         3         248         1102         781         172         378           Confl. Peds. (#/hr)         3         3%         3%         5%         9%         15%           Heavy Vehicles (%)         5%         3%         3%         5%         9%         15%           Turn Type         NA         Perm         Prot         NA         Prot         pt-ov           Protected Phases         2         1         6         8         1.4           Permitted Phases         2         2         1         6         8.2         19.8         63.4           Effective Green, G (s)         39.0	Satd. Flow (prot)	3438	1568	3400	3438	3213	2472		
Peak-hour factor, PHF         0.90         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.00         0.00         0.00         0.00         0.00	.,	1.00	1.00	0.95	1.00	0.95	1.00		
Adj. Flow (vph)       1038       550       1102       781       172       378         RTOR Reduction (vph)       0       302       0       0       0       0         Lane Group Flow (vph)       1038       248       1102       781       172       378         Confl. Peds. (#/hr)       3       1102       781       172       378         Confl. Peds. (#/hr)       3       3%       3%       5%       9%       15%         Turn Type       NA       Perm       Prot       NA       Prot       pt+ov         Protected Phases       2       1       6       8       14         Permitted Phases       2       1       6       8       14         Permitted Phases       2       2       4       6       8       14         Permitted Phases       2       2       4       6       8       14         Permitted Phases       2       2       1       6       8       14         Permitted Phases       2       2       1       6       8       2       19.8       63.4         Effective Green, g (s)       41.0       45.2       90.2       21.8	Satd. Flow (perm)	3438	1568	3400	3438	3213	2472		
Adj. Flow (vph)       1038       550       1102       781       172       378         RTOR Reduction (vph)       0       302       0       0       0       0         Lane Group Flow (vph)       1038       248       1102       781       172       378         Confl. Peds. (#/hr)       3       1102       781       172       378         Confl. Peds. (#/hr)       3       3%       3%       5%       9%       15%         Turn Type       NA       Perm       Prot       NA       Prot       ph+ov         Protected Phases       2       1       6       8       14         Permitted Phases       2       1       6       8       14         Permitted Phases       2       2       4       6       8       14         Permitted Phases       2       2       4       6       8       14         Permitted Phases       2       2       1       6       8       14         Permitted Phases       2       2       1       6       8       2       19.8       63.4         Effective Green, g (s)       41.0       45.2       90.2       21.8	Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
RTOR Reduction (vph) 1038 248 1102 781 172 378  Confl. Peds. (#/hr) 3  Heavy Vehicles (%) 5% 3% 3% 5% 9% 15%  Turn Type NA Perm Prot NA Prot pt+ov  Protected Phases 2 1 6 8 1 4  Permitted Phases 2  Actuated Green, G (s) 39.0 39.0 43.6 88.2 19.8 63.4  Effective Green, g (s) 41.0 41.0 45.2 90.2 21.8 58.4  Actuated g/C Ratio 0.34 0.34 0.38 0.75 0.18 0.49  Clearance Time (s) 6.0 6.0 5.6 6.0 6.0  Vehicle Extension (s) 5.4 5.4 2.3 5.4 2.3  Lane Grp Cap (vph) 1174 535 1280 2584 583 1203  v/s Ratio Prot c0.30 c0.32 0.23 c0.05 0.15  v/s Ratio Perm v/c Ratio 0.88 0.46 0.86 0.30 0.30 0.31  Uniform Delay, d1 37.3 30.9 34.5 4.8 42.5 18.7  Progression Factor 1.00 1.00 1.00 1.00 0.51 0.98  Incremental Delay, d2 8.9 1.5 7.7 0.3 0.2 0.1  Delay (s) 46.2 32.4 42.2 5.1 21.7 18.4  Level of Service D C D A C B  Approach Delay (s/veh) 41.4	The state of the s			1102		172	378		
Confl. Peds. (#/hr)         3           Heavy Vehicles (%)         5%         3%         3%         5%         9%         15%           Turn Type         NA         Perm         Prot         NA         Prot pt+ov           Protected Phases         2         1         6         8         1 4           Permitted Phases         2         43.6         88.2         19.8         63.4           Effective Green, g (s)         41.0         41.0         45.2         90.2         21.8         58.4           Actuated g/C Ratio         0.34         0.34         0.38         0.75         0.18         0.49           Clearance Time (s)         6.0         6.0         5.6         6.0         6.0         Vehicle Extension (s)         5.4         5.4         2.3         5.4         2.3           Lane Grp Cap (vph)         1174         535         1280         2584         583         1203         v/s Ratio Prot         c0.30         c0.32         0.23         c0.05         0.15         v/s Ratio Prot         0.16         0.6         0.86         0.30         0.30         0.31         Uniform Delay, d1         37.3         30.9         34.5         4.8         42.5         18.7		0	302	0	0	0	0		
Heavy Vehicles (%)         5%         3%         3%         5%         9%         15%           Turn Type         NA         Perm         Prot         NA         Prot         pt+ov           Protected Phases         2         1         6         8         14           Permitted Phases         2         2         41.0         41.0         45.2         90.2         21.8         63.4           Effective Green, g (s)         41.0         41.0         45.2         90.2         21.8         58.4           Actuated g/C Ratio         0.34         0.34         0.38         0.75         0.18         0.49           Clearance Time (s)         6.0         6.0         5.6         6.0         6.0           Vehicle Extension (s)         5.4         5.4         2.3         5.4         2.3           Lane Grp Cap (vph)         1174         535         1280         2584         583         1203           v/s Ratio Prot         c0.30         c0.32         0.23         c0.05         0.15           v/s Ratio Perm         0.16         0.86         0.30         0.30         0.31           Uniform Delay, d1         37.3         30.9         34.5	,	1038	248	1102	781	172	378		
Turn Type									
Protected Phases       2       1       6       8       1 4         Permitted Phases       2       2       43.6       88.2       19.8       63.4         Effective Green, g (s)       41.0       41.0       45.2       90.2       21.8       58.4         Actuated g/C Ratio       0.34       0.34       0.38       0.75       0.18       0.49         Clearance Time (s)       6.0       6.0       5.6       6.0       6.0       6.0         Vehicle Extension (s)       5.4       5.4       2.3       5.4       2.3         Lane Grp Cap (vph)       1174       535       1280       2584       583       1203         v/s Ratio Prot       c0.30       c0.32       0.23       c0.05       0.15         v/s Ratio Perm       0.16       0.16       0.00       0.00       0.30       0.30       0.31         Uniform Delay, d1       37.3       30.9       34.5       4.8       42.5       18.7         Progression Factor       1.00       1.00       1.00       0.01       0.00       0.51       0.98         Incremental Delay, d2       8.9       1.5       7.7       0.3       0.2       0.1 <t< td=""><td>Heavy Vehicles (%)</td><td>5%</td><td>3%</td><td>3%</td><td>5%</td><td>9%</td><td>15%</td><td></td><td></td></t<>	Heavy Vehicles (%)	5%	3%	3%	5%	9%	15%		
Protected Phases       2       1       6       8       1 4         Permitted Phases       2       2       4       4       4       6       8       1 4         Actuated Green, G (s)       39.0       39.0       43.6       88.2       19.8       63.4         Effective Green, g (s)       41.0       41.0       45.2       90.2       21.8       58.4         Actuated g/C Ratio       0.34       0.34       0.38       0.75       0.18       0.49         Clearance Time (s)       6.0       6.0       5.6       6.0       6.0       6.0         Vehicle Extension (s)       5.4       5.4       2.3       5.4       2.3         Lane Grp Cap (vph)       1174       535       1280       2584       583       1203         v/s Ratio Prot       c0.30       c0.32       0.23       c0.05       0.15         v/s Ratio Perm       0.16       0.16       0.16       0.23       0.23       0.05       0.15         v/s Ratio Perm       0.16       0.8       0.46       0.86       0.30       0.30       0.31         Uniform Delay, d1       37.3       30.9       34.5       4.8       42.5       18.7	Turn Type	NA	Perm	Prot	NA	Prot	pt+ov		
Actuated Green, G (s) 39.0 39.0 43.6 88.2 19.8 63.4 Effective Green, g (s) 41.0 41.0 45.2 90.2 21.8 58.4 Actuated g/C Ratio 0.34 0.34 0.38 0.75 0.18 0.49 Clearance Time (s) 6.0 6.0 5.6 6.0 6.0 Vehicle Extension (s) 5.4 5.4 2.3 5.4 2.3 Lane Grp Cap (vph) 1174 535 1280 2584 583 1203 v/s Ratio Prot c0.30 c0.32 0.23 c0.05 0.15 v/s Ratio Perm 0.16 v/c Ratio 0.88 0.46 0.86 0.30 0.30 0.31 Uniform Delay, d1 37.3 30.9 34.5 4.8 42.5 18.7 Progression Factor 1.00 1.00 1.00 1.00 0.51 0.98 Incremental Delay, d2 8.9 1.5 7.7 0.3 0.2 0.1 Delay (s) 46.2 32.4 42.2 5.1 21.7 18.4 Level of Service D C D A C B Approach Delay (s/veh) 41.4 26.8 19.4		2		1	6	8			
Effective Green, g (s) 41.0 41.0 45.2 90.2 21.8 58.4  Actuated g/C Ratio 0.34 0.34 0.38 0.75 0.18 0.49  Clearance Time (s) 6.0 6.0 5.6 6.0 6.0  Vehicle Extension (s) 5.4 5.4 2.3 5.4 2.3  Lane Grp Cap (vph) 1174 535 1280 2584 583 1203  v/s Ratio Prot c0.30 c0.32 0.23 c0.05 0.15  v/s Ratio Perm 0.16  v/c Ratio 0.88 0.46 0.86 0.30 0.30 0.31  Uniform Delay, d1 37.3 30.9 34.5 4.8 42.5 18.7  Progression Factor 1.00 1.00 1.00 0.51 0.98  Incremental Delay, d2 8.9 1.5 7.7 0.3 0.2 0.1  Delay (s) 46.2 32.4 42.2 5.1 21.7 18.4  Level of Service D C D A C B  Approach Delay (s/veh) 41.4	Permitted Phases		2						
Actuated g/C Ratio 0.34 0.34 0.38 0.75 0.18 0.49 Clearance Time (s) 6.0 6.0 5.6 6.0 6.0 Vehicle Extension (s) 5.4 5.4 2.3 5.4 2.3  Lane Grp Cap (vph) 1174 535 1280 2584 583 1203 v/s Ratio Prot c0.30 c0.32 0.23 c0.05 0.15 v/s Ratio Perm 0.16 v/c Ratio 0.88 0.46 0.86 0.30 0.30 0.31 Uniform Delay, d1 37.3 30.9 34.5 4.8 42.5 18.7 Progression Factor 1.00 1.00 1.00 1.00 0.51 0.98 Incremental Delay, d2 8.9 1.5 7.7 0.3 0.2 0.1 Delay (s) 46.2 32.4 42.2 5.1 21.7 18.4 Level of Service D C D A C B Approach Delay (s/veh) 41.4	Actuated Green, G (s)		39.0						
Clearance Time (s)         6.0         6.0         5.6         6.0         6.0           Vehicle Extension (s)         5.4         5.4         2.3         5.4         2.3           Lane Grp Cap (vph)         1174         535         1280         2584         583         1203           v/s Ratio Prot         c0.30         c0.32         0.23         c0.05         0.15           v/s Ratio Perm         0.16         0.86         0.30         0.30         0.31           Uniform Delay, d1         37.3         30.9         34.5         4.8         42.5         18.7           Progression Factor         1.00         1.00         1.00         0.51         0.98           Incremental Delay, d2         8.9         1.5         7.7         0.3         0.2         0.1           Delay (s)         46.2         32.4         42.2         5.1         21.7         18.4           Level of Service         D         C         D         A         C         B           Approach Delay (s/veh)         41.4         26.8         19.4	Effective Green, g (s)		41.0		90.2		58.4		
Vehicle Extension (s)         5.4         5.4         2.3         5.4         2.3           Lane Grp Cap (vph)         1174         535         1280         2584         583         1203           v/s Ratio Prot         c0.30         c0.32         0.23         c0.05         0.15           v/s Ratio Perm         0.16         0.86         0.30         0.30         0.31           Uniform Delay, d1         37.3         30.9         34.5         4.8         42.5         18.7           Progression Factor         1.00         1.00         1.00         0.51         0.98           Incremental Delay, d2         8.9         1.5         7.7         0.3         0.2         0.1           Delay (s)         46.2         32.4         42.2         5.1         21.7         18.4           Level of Service         D         C         D         A         C         B           Approach Delay (s/veh)         41.4         26.8         19.4	Actuated g/C Ratio						0.49		
Lane Grp Cap (vph) 1174 535 1280 2584 583 1203  v/s Ratio Prot c0.30 c0.32 0.23 c0.05 0.15  v/s Ratio Perm 0.16  v/c Ratio 0.88 0.46 0.86 0.30 0.30 0.31  Uniform Delay, d1 37.3 30.9 34.5 4.8 42.5 18.7  Progression Factor 1.00 1.00 1.00 1.00 0.51 0.98  Incremental Delay, d2 8.9 1.5 7.7 0.3 0.2 0.1  Delay (s) 46.2 32.4 42.2 5.1 21.7 18.4  Level of Service D C D A C B  Approach Delay (s/veh) 41.4 26.8 19.4	Clearance Time (s)								
v/s Ratio Prot       c0.30       c0.32       0.23       c0.05       0.15         v/s Ratio Perm       0.16       0.16       0.26       0.30       0.30       0.30       0.31         V/c Ratio       0.88       0.46       0.86       0.30       0.30       0.31         Uniform Delay, d1       37.3       30.9       34.5       4.8       42.5       18.7         Progression Factor       1.00       1.00       1.00       0.51       0.98         Incremental Delay, d2       8.9       1.5       7.7       0.3       0.2       0.1         Delay (s)       46.2       32.4       42.2       5.1       21.7       18.4         Level of Service       D       C       D       A       C       B         Approach Delay (s/veh)       41.4       26.8       19.4			5.4	2.3	5.4				
v/s Ratio Prot       c0.30       c0.32       0.23       c0.05       0.15         v/s Ratio Perm       0.16       0.16       0.20       0.30       0.30       0.31         V/c Ratio       0.88       0.46       0.86       0.30       0.30       0.31         Uniform Delay, d1       37.3       30.9       34.5       4.8       42.5       18.7         Progression Factor       1.00       1.00       1.00       0.51       0.98         Incremental Delay, d2       8.9       1.5       7.7       0.3       0.2       0.1         Delay (s)       46.2       32.4       42.2       5.1       21.7       18.4         Level of Service       D       C       D       A       C       B         Approach Delay (s/veh)       41.4       26.8       19.4		1174	535	1280	2584	583	1203		
v/c Ratio       0.88       0.46       0.86       0.30       0.30       0.31         Uniform Delay, d1       37.3       30.9       34.5       4.8       42.5       18.7         Progression Factor       1.00       1.00       1.00       0.51       0.98         Incremental Delay, d2       8.9       1.5       7.7       0.3       0.2       0.1         Delay (s)       46.2       32.4       42.2       5.1       21.7       18.4         Level of Service       D       C       D       A       C       B         Approach Delay (s/veh)       41.4       26.8       19.4		c0.30		c0.32	0.23	c0.05	0.15		
Uniform Delay, d1       37.3       30.9       34.5       4.8       42.5       18.7         Progression Factor       1.00       1.00       1.00       0.51       0.98         Incremental Delay, d2       8.9       1.5       7.7       0.3       0.2       0.1         Delay (s)       46.2       32.4       42.2       5.1       21.7       18.4         Level of Service       D       C       D       A       C       B         Approach Delay (s/veh)       41.4       26.8       19.4									
Progression Factor       1.00       1.00       1.00       0.51       0.98         Incremental Delay, d2       8.9       1.5       7.7       0.3       0.2       0.1         Delay (s)       46.2       32.4       42.2       5.1       21.7       18.4         Level of Service       D       C       D       A       C       B         Approach Delay (s/veh)       41.4       26.8       19.4	v/c Ratio								
Incremental Delay, d2	•								
Delay (s)       46.2       32.4       42.2       5.1       21.7       18.4         Level of Service       D       C       D       A       C       B         Approach Delay (s/veh)       41.4       26.8       19.4									
Level of Service D C D A C B Approach Delay (s/veh) 41.4 26.8 19.4									
Approach Delay (s/veh) 41.4 26.8 19.4									
			С	D			В		
Approach LOS D C B									
	Approach LOS	D			С	В			
Intersection Summary	Intersection Summarv								
HCM 2000 Control Delay (s/veh) 31.6 HCM 2000 Level of Service C		(s/veh)		31.6	Н	CM 2000	Level of Servi	ce	С
HCM 2000 Volume to Capacity ratio  0.80						J.II. 2000	_3,0,0,00,0		
Actuated Cycle Length (s) 120.0 Sum of lost time (s) 18.6		•			S	um of lost	t time (s)	18	3.6
Intersection Capacity Utilization 93.3% ICU Level of Service F							. ,		
Analysis Period (min) 15						, = 3.01			
c Critical Lane Group									

HCM 7th Edition methodology does not support exclusive ped or hold phases.

# 2: SW 124th Avenue & SW Tualatin Road

	•	*	<b>†</b>	~	-	<b>↓</b>
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	57	223	356	32	747	975
v/c Ratio	0.28	0.18	0.69	0.12	0.64	0.35
Control Delay (s/veh)	48.0	8.0	53.8	13.7	13.4	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)	48.0	8.0	53.8	13.7	13.4	4.6
Queue Length 50th (ft)	42	0	137	0	80	52
Queue Length 95th (ft)	67	16	173	25	399	180
Internal Link Dist (ft)	1180		1024			503
Turn Bay Length (ft)	25	300		150	200	
Base Capacity (vph)	437	1416	1006	498	1170	2771
Starvation Cap Reductn	0	0	0	0	0	749
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.16	0.35	0.06	0.64	0.48
Intersection Summary						

	•	•	<b>†</b>	~	<b>\</b>	<b>↓</b>		
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	*	7	<b>†</b> †	1	*	<b>†</b> †		
Traffic Volume (vph)	50	194	310	28	650	848		
Future Volume (vph)	50	194	310	28	650	848		
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	0.0	4.5	4.5	4.0	4.5		
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95		
Frpb, ped/bikes	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		
Frt	1.00	0.85	1.00	0.85	1.00	1.00		
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1641	1509	3059	1449	1752	3438		
Flt Permitted	0.95	1.00	1.00	1.00	0.35	1.00		
Satd. Flow (perm)	1641	1509	3059	1449	645	3438		
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87		
Adj. Flow (vph)	57	223	356	32	747	975		
RTOR Reduction (vph)	0	46	0	27	0	0		
Lane Group Flow (vph)	57	177	356	5	747	975		
Confl. Peds. (#/hr)	01	111	300	1	1	0.0		
Heavy Vehicles (%)	10%	7%	18%	9%	3%	5%		
Turn Type	Perm	pt+ov	NA	Perm	D.P+P	NA		
Protected Phases	1 01111	4 5	6	1 31111	5	2		
Permitted Phases	4	, 0		6	6	<u>-</u>		
Actuated Green, G (s)	13.8	90.3	19.2	19.2	90.7	95.7		
Effective Green, g (s)	14.8	95.3	20.2	20.2	92.7	96.7		
Actuated g/C Ratio	0.12	0.79	0.17	0.17	0.77	0.81		
Clearance Time (s)	5.0	0.70	5.5	5.5	5.0	5.5		
Vehicle Extension (s)	4.0		4.5	4.5	4.0	4.5		
Lane Grp Cap (vph)	202	1198	514	243	1167	2770		
v/s Ratio Prot	202	0.12	c0.12	2-10	c0.39	0.28		
v/s Ratio Perm	c0.03	V. 12	00.12	0.00	0.11	0.20		
v/c Ratio	0.28	0.15	0.69	0.00	0.64	0.35		
Uniform Delay, d1	47.8	2.9	47.0	41.7	9.7	3.2		
Progression Factor	1.00	1.00	1.00	1.00	0.85	1.00		
Incremental Delay, d2	1.0	0.1	4.6	0.1	1.0	0.2		
Delay (s)	48.8	3.0	51.6	41.7	9.2	3.4		
Level of Service	70.0 D	Α	D D	D	Α	A		
Approach Delay (s/veh)	12.3		50.8			5.9		
Approach LOS	В		D			A		
Intersection Summary								
HCM 2000 Control Delay (	s/veh)		14.0	F	ICM 2000	Level of Service	e	В
HCM 2000 Volume to Cap	,		0.60		10W 2000	_5V01 01 001 VIC	•	J
Actuated Cycle Length (s)	asily ratio		120.0	Ç	Sum of lost	t time (s)	10	2.5
Intersection Capacity Utiliz	ation		59.6%			of Service		В
Analysis Period (min)			15					_
o Critical Lana Group								

c Critical Lane Group

HCM 7th Edition methodology does not support exclusive ped or hold phases.

	٠	<b>→</b>	•	•	+	•	1	<b>†</b>	<b>/</b>	<b>/</b>	<b></b>	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		ሻ	1>		ሻ	₽			4	
Traffic Volume (veh/h)	64	706	5	4	226	132	2	1	1	41	2	30
Future Volume (Veh/h)	64	706	5	4	226	132	2	1	1	41	2	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	70	767	5	4	246	143	2	1	1	45	2	33
Pedestrians								1			1	
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								3.5			3.5	
Percent Blockage								0			0	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	390			773			1199	1309	771	1235	1240	319
vC1, stage 1 conf vol							911	911		327	327	
vC2, stage 2 conf vol							288	398		909	913	
vCu, unblocked vol	390			773			1199	1309	771	1235	1240	319
tC, single (s)	4.1			4.6			8.1	6.5	7.2	7.2	6.5	6.3
tC, 2 stage (s)							7.1	5.5		6.2	5.5	
tF (s)	2.2			2.7			4.4	4.0	4.2	3.6	4.0	3.4
p0 queue free %	94			99			99	100	100	84	99	95
cM capacity (veh/h)	1162			663			198	300	278	277	306	694
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	70	772	4	389	2	2	80					
Volume Left	70	0	4	0	2	0	45					
Volume Right	0	5	0	143	0	1	33					
cSH	1162	1700	663	1700	198	288	370					
Volume to Capacity	0.06	0.45	0.01	0.23	0.01	0.01	0.22					
Queue Length 95th (ft)	5	0	0	0	1	1	20					
Control Delay (s/veh)	8.3	0.0	10.5	0.0	23.4	17.6	17.4					
Lane LOS	Α		В		С	С	С					
Approach Delay (s/veh)	0.7		0.1		20.5		17.4					
Approach LOS					С		С					
Intersection Summary												
Average Delay			1.6									
Intersection Capacity Utiliza	ation		61.7%	IC	CU Level	of Service			В			
Analysis Period (min)			15									
. , ,												

Intersection Int Delay, s/veh  2.6  Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR Lane Configurations
Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR Lane Configurations 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Lane Configurations \$\bar{\bar{\bar{\bar{\bar{\bar{\bar{
Lane Configurations \$\bar{\bar{\bar{\bar{\bar{\bar{\bar{
Traffic Vol, veh/h 64 706 5 4 226 132 2 1 1 41 2 30
Future Vol, veh/h 64 706 5 4 226 132 2 1 1 41 2 30
Conflicting Peds, #/hr 1 0 1 1 0 1 0 0 0 0 0
Sign Control Free Free Free Free Free Free Stop Stop Stop Stop Stop Stop
RT Channelized None None None
Storage Length 25 25 0
Veh in Median Storage, # - 0 0 0 0
Grade, % - 0 0 0 -
Peak Hour Factor 92 92 92 92 92 92 92 92 92 92 92 92
Heavy Vehicles, % 3 2 40 50 9 7 100 2 100 10 2 14
Mvmt Flow 70 767 5 4 246 143 2 1 1 45 2 33
Major/Minor Major1 Major2 Minor1 Minor2
Conflicting Flow All 390 0 0 774 0 0 1166 1309 771 1234 1240 318
Stage 1 910 910 - 327 327 -
Stage 2 255 399 - 907 913 -
Critical Hdwy 4.13 4.6 8.1 6.52 7.2 7.2 6.52 6.34
Critical Hdwy Stg 1 7.1 5.52 - 6.2 5.52 -
Critical Hdwy Stg 2 7.1 5.52 - 6.2 5.52 -
Follow-up Hdwy 2.227 2.65 4.4 4.018 4.2 3.59 4.018 3.426
Pot Cap-1 Maneuver 1163 663 111 159 278 148 175 695
Stage 1 225 353 - 669 648 -
Stage 2 576 602 - 320 352 -
Platoon blocked, %
Mov Cap-1 Maneuver 1162 662 98 148 278 136 163 695
Mov Cap-2 Maneuver 98 148 - 136 163 -
Stage 1 212 332 - 664 643 -
Stage 2 543 598 - 298 331 -
Approach EB WB NB SB
HCM Control Delay, s/v 0.69 0.12 33.22 33.24
HCM LOS D D
Mineral and Marian Marian M.
Minor Lane/Major Mvmt NBLn1 NBLn2 EBL EBT EBR WBL WBT WBR SBLn1
Capacity (veh/h) 98 193 1162 662 205
HCM Lane V/C Ratio 0.022 0.011 0.06 0.007 0.387
HCM Control Delay (s/veh) 42.6 23.8 8.3 10.5 33.2
HCM Lane LOS E C A B D
HCM 95th %tile Q(veh) 0.1 0 0.2 0 1.7

	•	-	•	•	<b>/</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<b>1</b>	<b>1</b>		W	
Traffic Volume (veh/h)	5	718	341	10	19	7
Future Volume (Veh/h)	5	718	341	10	19	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	5	748	355	10	20	7
Pedestrians					6	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		_	_			
pX, platoon unblocked						
vC, conflicting volume	371				1124	366
vC1, stage 1 conf vol					366	
vC2, stage 2 conf vol					758	
vCu, unblocked vol	371				1124	366
tC, single (s)	4.3				6.5	6.2
tC, 2 stage (s)					5.5	0.2
tF(s)	2.4				3.6	3.3
p0 queue free %	100				95	99
cM capacity (veh/h)	1089				411	675
		ED 0	MD 4	OD 4		0.0
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	5	748	365	27		
Volume Left	5	0	0	20		
Volume Right	0	0	10	7		
cSH	1089	1700	1700	457		
Volume to Capacity	0.00	0.44	0.21	0.06		
Queue Length 95th (ft)	0	0	0	5		
Control Delay (s/veh)	8.3	0.0	0.0	13.4		
Lane LOS	Α			В		
Approach Delay (s/veh)	0.1		0.0	13.4		
Approach LOS				В		
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utiliza	ation		47.8%	IC	U Level o	f Service
Analysis Period (min)			15			
			10			

Intersection						
Int Delay, s/veh	0.4					
		EDT	WDT	WDD	CDI	CDD
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ዃ	710	<b>↑</b>	40	<b>Y</b>	-
Traffic Vol, veh/h	5	718	341	10	19	7
Future Vol, veh/h	5	718	341	10	19	7
Conflicting Peds, #/hr	6	_ 0	_ 0	_ 6	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage	e, # -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	20	3	9	20	6	2
Mvmt Flow	5	748	355	10	20	7
Major/Minor	Major1		/aior2		Minor?	
	Major1		//ajor2		Minor2	200
Conflicting Flow All	372	0	-	0	1125	366
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	758	-
Critical Hdwy	4.3	-	-	-	6.46	6.22
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.38	-	-	-	3.554	
Pot Cap-1 Maneuver	1094	-	-	-	223	679
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	456	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1088	-	-	-	219	675
Mov Cap-2 Maneuver	-	-	-	-	342	-
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	_	453	-
<u> </u>						
Δ			1645		0.5	
Approach	EB		WB		SB	
HCM Control Delay, s/	v 0.06		0		14.79	
HCM LOS					В	
Minor Lane/Major Mvm	nt	EBL	EBT	WBT	WBR S	SBI n1
Capacity (veh/h)		1088	-	1101	-	395
HCM Lane V/C Ratio		0.005		-		0.069
HCM Control Delay (s/	\/ah\	8.3			_	14.8
HCM Lane LOS	ven)		-	-		
	١	A	-	-	-	0.2
HCM 95th %tile Q(veh)	)	0	-	-	-	U.Z

	-	$\rightarrow$	•	•	•	<b>/</b>
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1>		ሻ	<b></b>	*/*	
Traffic Volume (veh/h)	764	30	47	351	4	5
Future Volume (Veh/h)	764	30	47	351	4	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	804	32	49	369	4	5
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				3.5	3.5	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			838		1289	823
vC1, stage 1 conf vol					822	
vC2, stage 2 conf vol					467	
vCu, unblocked vol			838		1289	823
tC, single (s)			4.2		6.4	6.5
tC, 2 stage (s)					5.4	
tF (s)			2.3		3.5	3.6
p0 queue free %			94		99	98
cM capacity (veh/h)			766		372	329
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	836	49	369	9		
Volume Left	0	49	0	4		
Volume Right	32	0	0	5		
cSH	1700	766	1700	347		
Volume to Capacity	0.49	0.06	0.22	0.03		
Queue Length 95th (ft)	0.49	5	0.22	2		
Control Delay (s/veh)	0.0	10.0	0.0	15.7		
	0.0	_	0.0			
Lane LOS Approach Delay (s/veh)	0.0	1.2		15.7		
Approach LOS	0.0	1.2		15.7 C		
				U		
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utiliza	ation		52.4%	IC	U Level o	of Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	0.5					
	EBT	EDD	\//DI	\\/DT	NDI	NDD
Movement		EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>}</b>	20	<b>\</b>	<b>↑</b>	¥	_
Traffic Vol, veh/h	764	30	47	351	4	5
Future Vol, veh/h	764	30	47	351	4	5
Conflicting Peds, #/hr	_ 0	_ 2	_ 2	_ 0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	25	-	-	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	15	9	9	2	33
Mvmt Flow	804	32	49	369	4	5
NA = : = =/NA:= = =	1-!4		4-1-0		A: 4	
	lajor1		Major2		Minor1	205
Conflicting Flow All	0	0	838	0	1290	823
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	-	-	4.19	-	6.42	6.53
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.281	-	3.518	3.597
Pot Cap-1 Maneuver	-	-	767	-	180	330
Stage 1	_	_	-	-	432	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %	_	_		_		
Mov Cap-1 Maneuver	_	_	766	_	168	329
Mov Cap-2 Maneuver	_	_	-	_	301	-
Stage 1	_				431	_
•	_	-	-	-	589	-
Stage 2	-	-	-	-	509	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		1.18		16.74	
HCM LOS					С	
		.n			14/=-	
Minor Lane/Major Mvmt	N	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		316	-	-	766	-
HCM Lane V/C Ratio		0.03	-	-	0.065	-
HCM Control Delay (s/v	eh)	16.7	-	-	10	-
HCM Lane LOS		С	-	-	В	-
HCM 95th %tile Q(veh)		0.1	-	-	0.2	-
. ,						

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	1>	
Traffic Volume (veh/h)	1	16	112	8	68	9
Future Volume (Veh/h)	1	16	112	8	68	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	17	122	9	74	10
Pedestrians	'	.,				
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)				140116	140116	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	332	79	84			
vC1, stage 1 conf vol	332	19	04			
vC2, stage 2 conf vol	220	70	0.4			
vCu, unblocked vol	332	79	84			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)			2.0			
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	92			
cM capacity (veh/h)	609	981	1513			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	18	131	84			
Volume Left	1	122	0			
Volume Right	17	0	10			
cSH	949	1513	1700			
Volume to Capacity	0.02	0.08	0.05			
Queue Length 95th (ft)	1	7	0			
Control Delay (s/veh)	8.9	7.1	0.0			
Lane LOS	Α	Α				
Approach Delay (s/veh)	8.9	7.1	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			4.7			
Intersection Capacity Utiliza	ition		23.3%	ır	CU Level o	of Service
Analysis Period (min)	iuOii		15	IC	O LUVUI (	JI OCI VICE
Alialysis Pellou (IIIIII)			10			

Intersection						
Int Delay, s/veh	4.7					
		EDD	ND	NDT	ODT	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	₽	
Traffic Vol, veh/h	1	16	112	8	68	9
Future Vol, veh/h	1	16	112	8	68	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e,# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	10	10	2
Mymt Flow	1	17	122	9	74	10
IVIVIII LI IOVV	1	- 11	122	3	17	10
Major/Minor	Minor2		Major1		/lajor2	
Conflicting Flow All	331	79	84	0	-	0
Stage 1	79	-	-	-	-	-
Stage 2	252	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	_	-	_	_	-
Critical Hdwy Stg 2	5.42	_	_	_	_	_
Follow-up Hdwy		3.318	2.218	_	_	_
Pot Cap-1 Maneuver	664	982	1513	_	_	_
Stage 1	944	- 502	1010	_	_	
Stage 2	790	_	-	-		_
	790	_	-			-
Platoon blocked, %	040	000	4540	-	-	-
Mov Cap-1 Maneuver	610	982	1513	-	-	-
Mov Cap-2 Maneuver	610	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	790	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, sa			7.08		0	
HCM LOS	Α		1.00		U	
I IOIVI LOS	А					
Minor Lane/Major Mvn	nt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1506	-	948	-	-
HCM Lane V/C Ratio		0.08	_	0.019	_	-
HCM Control Delay (s.	/veh)	7.6	0	8.9	-	-
HCM Lane LOS	. 5.1.)	Α	A	Α	_	_
HCM 95th %tile Q(veh	1)	0.3	-	0.1	_	_
HOW SOUT WHILE COVER	1)	0.5	-	0.1	-	_

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	f.	
Traffic Volume (veh/h)	1	5	34	181	71	9
Future Volume (Veh/h)	1	5	34	181	71	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	5	37	197	77	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				1116		
pX, platoon unblocked						
vC, conflicting volume	353	82	87			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	353	82	87			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF(s)	3.5	3.3	2.2			
p0 queue free %	100	99	98			
cM capacity (veh/h)	629	978	1509			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	6	234	87			
Volume Left	1	37	0			
Volume Right	5	0	10			
cSH	895	1509	1700			
Volume to Capacity	0.01	0.02	0.05			
Queue Length 95th (ft)	1	2	0			
Control Delay (s/veh)	9.0	1.4	0.0			
Lane LOS	Α	Α				
Approach Delay (s/veh)	9.0	1.4	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utiliza	ation		28.1%	IC	CU Level o	f Service
Analysis Period (min)			15			
			. •			

Intersection						
Int Delay, s/veh	1					
	•					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	N/			र्स	₽	
Traffic Vol, veh/h	1	5	34	181	71	9
Future Vol, veh/h	1	5	34	181	71	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	10	10	2
Mvmt Flow	1	5	37	197	77	10
	•		σ.		• •	. •
	Minor2		Major1		/lajor2	
Conflicting Flow All	353	82	87	0	-	0
Stage 1	82	-	-	-	-	-
Stage 2	271	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	645	978	1509	-	-	-
Stage 1	941	-	_	-	-	-
Stage 2	775	_	_	-	_	-
Platoon blocked, %				_	_	_
Mov Cap-1 Maneuver	627	978	1509	_	_	_
Mov Cap-1 Maneuver	627	- 310	1000	_	_	_
Stage 1	915	-	_	-	<u>-</u>	_
•	775	-	-	-	-	-
Stage 2	110	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s/v	v 9.05		1.18		0	
HCM LOS	Α					
NA:	.1	NDI	NDT	EDL 4	ODT	CDD
Minor Lane/Major Mvm	ΙŢ	NBL		EBLn1	SBT	SBR
Capacity (veh/h)		285	-		-	-
HCM Lane V/C Ratio		0.024		0.007	-	-
HCM Control Delay (s/	veh)	7.4	0	9.1	-	-
HCM Lane LOS		Α	Α	Α	-	-
HCM 95th %tile Q(veh)		0.1		0		

## 10: SW 124th Avenue & SW Leveton Drive

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Group Flow (vph)	6	148	13	60	31	395	321	750	
v/c Ratio	0.03	0.38	0.07	0.16	0.07	0.47	0.52	0.43	
Control Delay (s/veh)	34.0	23.0	33.4	9.6	8.7	21.2	12.2	13.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	34.0	23.0	33.4	9.6	8.7	21.2	12.2	13.8	
Queue Length 50th (ft)	1	31	3	2	3	39	33	42	
Queue Length 95th (ft)	16	115	26	30	25	154	187	260	
Internal Link Dist (ft)		981		1223		1392		1024	
Turn Bay Length (ft)	100		150		150		150		
Base Capacity (vph)	474	1250	244	937	765	2141	953	2643	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.01	0.12	0.05	0.06	0.04	0.18	0.34	0.28	
Intersection Summary									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		, M	<b>₽</b>		¥	Φ₽		7	ħβ	
Traffic Volume (vph)	5	93	33	11	6	45	26	254	82	273	614	24
Future Volume (vph)	5	93	33	11	6	45	26	254	82	273	614	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		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	0.96		1.00	0.87		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1504	1757		1128	1487		1612	3004		1768	3374	
Flt Permitted	0.95	1.00		0.95	1.00		0.31	1.00		0.47	1.00	
Satd. Flow (perm)	1504	1757		1128	1487		528	3004		873	3374	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	6	109	39	13	7	53	31	299	96	321	722	28
RTOR Reduction (vph)	0	11	0	0	43	0	0	24	0	0	2	0
Lane Group Flow (vph)	6	137	0	13	17	0	31	371	0	321	748	0
Confl. Peds. (#/hr)									3	3		
Heavy Vehicles (%)	20%	2%	9%	60%	17%	10%	12%	18%	6%	2%	6%	17%
Turn Type	Prot	NA		Prot	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							6			2		
Actuated Green, G (s)	8.0	11.4		1.0	11.6		32.2	19.0		32.2	30.0	
Effective Green, g (s)	1.8	12.4		2.0	12.6		34.2	20.0		32.2	30.0	
Actuated g/C Ratio	0.03	0.19		0.03	0.20		0.53	0.31		0.50	0.46	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	41	337		34	290		333	930		618	1566	
v/s Ratio Prot	0.00	c0.08		c0.01	0.01		0.00	0.12		c0.11	c0.22	
v/s Ratio Perm							0.04			0.15		
v/c Ratio	0.15	0.41		0.38	0.06		0.09	0.40		0.52	0.48	
Uniform Delay, d1	30.7	22.9		30.7	21.2		7.5	17.6		10.0	11.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	8.0		7.0	0.1		0.1	0.3		0.7	0.2	
Delay (s)	32.3	23.7		37.7	21.3		7.6	17.8		10.7	12.1	
Level of Service	С	С		D	С		Α	В		В	В	
Approach Delay (s/veh)		24.0			24.2			17.1			11.7	
Approach LOS		С			С			В			В	
Intersection Summary												
HCM 2000 Control Delay (s/	,		14.7	H	CM 2000	Level of	Service		В			
HCM 2000 Volume to Capac	city ratio		0.48									
Actuated Cycle Length (s)			64.6		um of lost				17.0			
Intersection Capacity Utilizat	tion		45.6%	IC	U Level o	of Service	Э		Α			
Analysis Period (min)			15									

c Critical Lane Group

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	f.		ሻ	₽		ሻ	<b>∱</b> Љ		ሻ	<b>↑</b> ↑	
Traffic Volume (veh/h)	5	93	33	11	6	45	26	254	82	273	614	24
Future Volume (veh/h)	5	93	33	11	6	45	26	254	82	273	614	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
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	1604	1870	1767	1011	1648	1752	1722	1633	1811	1870	1811	1648
Adj Flow Rate, veh/h	6	109	39	13	7	53	31	299	96	321	722	28
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	20	2	9	60	17	10	12	18	6	2	6	17
Cap, veh/h	49	212	76	43	29	218	396	550	173	602	1277	49
Arrive On Green	0.03	0.16	0.14	0.04	0.17	0.15	0.06	0.24	0.22	0.20	0.38	0.38
Sat Flow, veh/h	1527	1315	471	963	166	1256	1640	2318	729	1781	3377	131
Grp Volume(v), veh/h	6	0	148	13	0	60	31	198	197	321	368	382
Grp Sat Flow(s),veh/h/ln	1527	0	1786	963	0	1422	1640	1552	1496	1781	1721	1787
Q Serve(g_s), s	0.2	0.0	3.6	0.6	0.0	1.8	0.5	5.3	5.5	6.1	8.0	8.0
Cycle Q Clear(g_c), s	0.2	0.0	3.6	0.6	0.0	1.8	0.5	5.3	5.5	6.1	8.0	8.0
Prop In Lane	1.00	^	0.26	1.00	•	0.88	1.00	000	0.49	1.00	054	0.07
Lane Grp Cap(c), veh/h	49	0	288	43	0	246	396	368	355	602	651	676
V/C Ratio(X)	0.12	0.00	0.51	0.30	0.00	0.24	0.08	0.54	0.55	0.53	0.57	0.57
Avail Cap(c_a), veh/h	517	1.00	1171	224 1.00	0 1.00	933 1.00	1032	1018	981	1193	1456 1.00	1512
HCM Platoon Ratio Upstream Filter(I)	1.00 1.00	1.00 0.00	1.00 1.00	1.00	0.00	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	22.2	0.00	18.3	21.9	0.00	17.3	7.8	15.8	16.1	10.4	11.6	11.6
Incr Delay (d2), s/veh	1.1	0.0	1.4	3.9	0.0	0.5	0.1	1.2	1.4	0.7	0.8	0.7
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	0.0	0.0	1.4	0.0	0.0	0.5	0.0	1.6	1.6	1.7	2.3	2.4
Unsig. Movement Delay, s/veh		0.0	1.7	0.2	0.0	0.5	0.1	1.0	1.0	1.1	2.0	۷.٦
LnGrp Delay(d), s/veh	23.3	0.0	19.7	25.8	0.0	17.8	7.9	17.0	17.4	11.1	12.4	12.4
LnGrp LOS	C C	0.0	В	C	0.0	В	Α.	В	В	В	В	В
Approach Vol, veh/h		154			73		7.1	426			1071	
Approach Delay, s/veh		19.8			19.2			16.5			12.0	
Approach LOS		13.0 B			13.2 B			10.5 B			12.0 B	
	1		2	4		•	7					
Timer - Assigned Phs	1 1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.3	15.2	6.1	11.6	6.7	22.9	5.5	12.2				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	25.0	30.0	10.0	30.0	20.0	40.0	15.0	30.0				
Max Q Clear Time (g_c+l1), s	8.1	7.5	2.6	5.6	2.5	10.0	2.2	3.8				
Green Ext Time (p_c), s	1.4	1.8	0.0	1.4	0.1	3.9	0.0	0.5				
Intersection Summary												
HCM 7th Control Delay, s/veh			14.1									
HCM 7th LOS			В									
Notes												
110100												

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	19	381	16	8	46	1	11	3	27	0	2	3
Future Volume (vph)	19	381	16	8	46	1	11	3	27	0	2	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	23	459	19	10	55	1	13	4	33	0	2	4
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	501	66	50	6								
Volume Left (vph)	23	10	13	0								
Volume Right (vph)	19	1	33	4								
Hadj (s)	0.03	0.21	-0.12	-0.01								
Departure Headway (s)	4.2	4.8	5.0	5.2								
Degree Utilization, x	0.58	0.09	0.07	0.01								
Capacity (veh/h)	856	723	640	609								
Control Delay (s/veh)	12.7	8.2	8.4	8.3								
Approach Delay (s/veh)	12.7	8.2	8.4	8.3								
Approach LOS	В	Α	Α	Α								
Intersection Summary												
Delay			11.8									
Level of Service			В									
Intersection Capacity Utilizat	tion		40.0%	IC	U Level o	of Service			Α			
Analysis Period (min)			15									

Intersection			
Intersection Delay, s/veh	11.6		
Intersection LOS	В		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	19	381	16	8	46	1	11	3	27	0	2	3
Future Vol, veh/h	19	381	16	8	46	1	11	3	27	0	2	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	19	20	8	100	18	2	13	2	2	33
Mvmt Flow	23	459	19	10	55	1	13	4	33	0	2	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB				SB	
Opposing Approach	WB			EB			SB				NB	
Opposing Lanes	1			1			1				1	
Conflicting Approach Left	SB			NB			EB				WB	
Conflicting Lanes Left	1			1			1				1	
Conflicting Approach Right	NB			SB			WB				EB	
Conflicting Lanes Right	1			1			1				1	
HCM Control Delay, s/veh	12.4			8.4			8.5				7.9	
HCM LOS	В			Α			Α				Α	

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	5%	15%	0%
Vol Thru, %	7%	92%	84%	40%
Vol Right, %	66%	4%	2%	60%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	41	416	55	5
LT Vol	11	19	8	0
Through Vol	3	381	46	2
RT Vol	27	16	1	3
Lane Flow Rate	49	501	66	6
Geometry Grp	1	1	1	1
Degree of Util (X)	0.07	0.566	0.09	0.008
Departure Headway (Hd)	5.119	4.066	4.895	4.893
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	703	877	735	734
Service Time	3.124	2.151	2.904	2.902
HCM Lane V/C Ratio	0.07	0.571	0.09	0.008
HCM Control Delay, s/veh	8.5	12.4	8.4	7.9
HCM Lane LOS	Α	В	Α	Α
HCM 95th-tile Q	0.2	3.6	0.3	0

	•	<b>→</b>	<b>←</b>	•	<b>\</b>	✓
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	₽		ሻ	7
Traffic Volume (veh/h)	147	248	35	68	7	12
Future Volume (Veh/h)	147	248	35	68	7	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	186	314	44	86	9	15
Pedestrians					4	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	134				777	91
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	134				777	91
tC, single (s)	4.1				6.5	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.5
p0 queue free %	87				97	98
cM capacity (veh/h)	1445				303	923
Direction, Lane #	EB 1	WB 1	SB 1	SB 2		
Volume Total	500	130	9	15		
Volume Left	186	0	9	0		
Volume Right	0	86	0	15		
cSH	1445	1700	303	923		
Volume to Capacity	0.13	0.08	0.03	0.02		
Queue Length 95th (ft)	11	0.08	2	1		
Control Delay (s/veh)	3.7	0.0	17.2	9.0		
Lane LOS		0.0	17.2 C	9.0 A		
Approach Delay (s/veh)	A 3.7	0.0	12.1	А		
Approach LOS	3.1	0.0	12.1 B			
Approach LOS			Б			
Intersection Summary						
Average Delay			3.3			
Intersection Capacity Utilizat	tion		37.9%	IC	U Level c	of Service
Analysis Period (min)			15			

Intersection							
Int Delay, s/veh	2.7						
	EBL	EBT	WDT	WPD	CDI	SBR	
Movement	ERF		WBT	WBR	SBL		
Lane Configurations	117	<b>€</b>	<b>}</b>	00	<b>\</b>	<b>7</b>	
Traffic Vol, veh/h	147	248	35	68	7	12	
Future Vol, veh/h	147	248	35	68	7	12	
Conflicting Peds, #/hr	4	0	0	4	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-		
Storage Length	-	-	-	-	-	0	
Veh in Median Storage		0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	79	79	79	79	79	79	
Heavy Vehicles, %	2	3	15	4	14	17	
Mvmt Flow	186	314	44	86	9	15	
Major/Minor	Major1	N	Major2		Minor2		
Conflicting Flow All	134	0	- viajoiz	0	777	91	
Stage 1	134	Ū	-	-	91	-	
Stage 2	_	_	_	-	686	_	
Critical Hdwy	4.12	-	-	-	6.54	6.37	
Critical Hdwy Stg 1	4.12	-	_	-	5.54	0.37	
Critical Hdwy Stg 2	-	-	-	-	5.54	-	
Follow-up Hdwy	2.218	-	-	-	3.626	3.453	
Pot Cap-1 Maneuver	1450	-	-	-	349	926	
· · · · · · · · · · · · · · · · · · ·	1450	-	-	-	903	920	
Stage 1	-	-	-		478	-	
Stage 2	_	_	-	-	4/0	_	
Platoon blocked, %	1115	-	-	-	202	വാ	
Mov Cap-1 Maneuver	1445	-	-	-	292	923	
Mov Cap-2 Maneuver	-	-	-	-	292	-	
Stage 1	-	-	-	-	759	-	
Stage 2	-	-	-	-	477	-	
Approach	EB		WB		SB		
HCM Control Delay, s/			0		12.19		
HCM LOS					В		
NA:		EDI	- CDT	MOT	WDD	201 4	)DI 0
Minor Lane/Major Mvm	nt	EBL	EBT	WBT	WBR S	SBLn1 S	
Capacity (veh/h)		670	-	-	-	292	923
HCM Lane V/C Ratio		0.129	-	-	-		0.016
HCM Control Delay (s/	veh)	7.9	0	-	-	17.7	9
HCM Lane LOS		Α	Α	-	-	С	Α
HCM 95th %tile Q(veh	)	0.4	-	-	-	0.1	0.1

Intersection							
Int Delay, s/veh	0.7						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	LDL	4	1∌	WDI	ODL T	JDIN T	
Traffic Vol, veh/h	28	231	105	25	2	4	
Future Vol, veh/h	28	231	105	25	2	4	
Conflicting Peds, #/hr	15	0	0	15	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-			None	-	None	
Storage Length	_	-	-	-	-	0	
Veh in Median Storage,	,# -	0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	78	78	78	78	78	78	
Heavy Vehicles, %	2	4	7	4	2	2	
Mvmt Flow	36	296	135	32	3	5	
Major/Minor	laier1		Majora		Minor		
	Major1		Major2		Minor2	100	
Conflicting Flow All	182	0	-	0	534	166	
Stage 1	-	-	-	-	166	-	
Stage 2	- 4.40	-	-	-	368	-	
Critical Hdwy	4.12	-	-	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	-	5.42	-	
Critical Hdwy Stg 2	- 040	-	-	-	5.42	2 240	
	2.218	-	-	-		3.318	
Pot Cap-1 Maneuver	1394	-	-	-	507	879	
Stage 1	-	-	-	-	864	-	
Stage 2	-	-	-	-	700	-	
Platoon blocked, %	1271	-	-	-	177	966	
Mov Cap-1 Maneuver	1374	-	-	-	477	866	
Mov Cap-2 Maneuver	-	-	-	-	477	-	
Stage 1	-	-	-	-	825	-	
Stage 2	-	-	-	-	690	-	
Approach	EB		WB		SB		
HCM Control Delay, s/v	0.83		0		10.32		
HCM LOS					В		
Minor Lane/Major Mvmt	t	EBL	EBT	WBT	WRR	SBLn1 S	\I
Capacity (veh/h)		195	-	-	- 1001		-1
HCM Lane V/C Ratio		0.026	-	-		0.005	0
HCM Control Delay (s/v	/eh)	7.7	0	-	-		J
HCM Lane LOS	311)	Α	A	_	_	12.0 B	
HCM 95th %tile Q(veh)		0.1	-	_	_	0	
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Volume (veh/h)	2	189	28	16	120	2	10	0	5	1	0	2
Future Volume (Veh/h)	2	189	28	16	120	2	10	0	5	1	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	2	215	32	18	136	2	11	0	6	1	0	2
Pedestrians											17	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											3.5	
Percent Blockage											2	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	155			247			410	426	231	431	441	154
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	155			247			410	426	231	431	441	154
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.6	6.5	6.7
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	4.0	4.0	3.8
p0 queue free %	100			99			98	100	99	100	100	100
cM capacity (veh/h)	1390			1319			538	504	808	439	495	767
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	249	156	17	3								
Volume Left	2	18	11	1								
Volume Right	32	2	6	2								
cSH	1390	1319	610	614								
Volume to Capacity	0.00	0.01	0.03	0.00								
Queue Length 95th (ft)	0	1	2	0								
Control Delay (s/veh)	0.1	1.0	11.1	10.9								
Lane LOS	Α	Α	В	В								
Approach Delay (s/veh)	0.1	1.0	11.1	10.9								
Approach LOS			В	В								
Intersection Summary												
Average Delay			0.9									
Intersection Capacity Utiliza	tion		27.3%	IC	U Level o	of Service			Α			
Analysis Period (min)			15									

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	2	189	28	16	120	2	10	0	5	1	0	2
Future Vol, veh/h	2	189	28	16	120	2	10	0	5	1	0	2
Conflicting Peds, #/hr	17	0	0	0	0	17	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	_	None	_	_	None	-	-	None	-	-	None
Storage Length	_	-	_	_	_	_	-	-	-	-	-	_
Veh in Median Storage	e,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	4	7	2	2	4	6	2	2	2	50	2	50
Mvmt Flow	2	215	32	18	136	2	11	0	6	1	0	2
Major/Minor	Major1			Major?			liner1			Minor		
	Major1	0		Major2	^		Minor1	407		Minor2	440	155
Conflicting Flow All	156	0	0	247	0	0	408	427	231	410	442	155
Stage 1	-	-	-	-	-	-	235	235	-	191	191	-
Stage 2	111	-	-	1 10	-	-	173	192	- 6 22	219 7.6	251 6.52	- 67
Critical Hdwy	4.14	-	-	4.12	-	-	7.12	6.52	6.22	6.6	5.52	6.7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12 6.12	5.52 5.52	-	6.6		-
Critical Hdwy Stg 2	2.236	-	-	2.218	-	-	3.518	4.018	2 210		5.52 4.018	2 75
Follow-up Hdwy	1412	-	-	1319	-	-	554	520	809	3.95 476	510	3.75 780
Pot Cap-1 Maneuver	1412	-	-	1319	-	-	768	710	509	712	742	700
Stage 1 Stage 2	-	-	_	-		-	829	710		686	699	
Platoon blocked, %	-	-	-	-	-	-	029	142	-	000	099	-
Mov Cap-1 Maneuver	1389	-	-	1319	-	-	543	503	809	457	493	767
Mov Cap-1 Maneuver	1309	-	-	1313	-	-	543	503	009	457	493	101
Stage 1	-	-	-	-	-		766	709	-	690	719	-
Stage 1	-	-	-	-	-	-	814	719	-	680	698	-
Staye 2	-	-	-	-	<u>-</u>	-	014	113	-	000	030	<u>-</u>
Approach	EB			WB			NB			SB		
HCM Control Delay, s/	v 0.07			0.9			11.08			10.78		
HCM LOS							В			В		
Minor Lane/Major Mvm	nt I	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	SBI n1			
Capacity (veh/h)	. 1	610	16	-	-	208	-	-	626			
HCM Lane V/C Ratio			0.002			0.014			0.005			
HCM Control Delay (s/	(veh)	11.1	7.6	0		7.8	0	_	10.8			
HCM Lane LOS	von)	В	Α.	A		Α.	A		В			
HCM 95th %tile Q(veh	)	0.1	0	-	_	0	-	_	0			
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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	ĵ»	
Traffic Volume (veh/h)	160	59	96	129	35	39
Future Volume (Veh/h)	160	59	96	129	35	39
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	182	67	109	147	40	44
Pedestrians	19			1	1	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			0.0	0	
Right turn flare (veh)	_					
Median type				None	None	
Median storage veh)				113110	110110	
Upstream signal (ft)				861		
pX, platoon unblocked				001		
vC, conflicting volume	447	82	103			
vC1, stage 1 conf vol	777	02	100			
vC2, stage 2 conf vol						
vCu, unblocked vol	447	82	103			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)	0.5	0.2	7.1			
tF (s)	3.6	3.3	2.2			
p0 queue free %	64	93	92			
cM capacity (veh/h)	508	959	1444			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	249	256	84			
Volume Left	182	109	0			
Volume Right	67	0	44			
cSH	581	1444	1700			
Volume to Capacity	0.43	0.08	0.05			
Queue Length 95th (ft)	53	6	0			
Control Delay (s/veh)	15.7	3.6	0.0			
Lane LOS	С	Α				
Approach Delay (s/veh)	15.7	3.6	0.0			
Approach LOS	С					
Intersection Summary						
Average Delay			8.2			
Intersection Capacity Utilizat	tion		38.0%	IC	U Level o	f Service
Analysis Period (min)			15			
			10			

Intersection						
Int Delay, s/veh	8.2					
		ED.	ND	NET	ODT	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			च		
Traffic Vol, veh/h	160	59	96	129	35	39
Future Vol, veh/h	160	59	96	129	35	39
Conflicting Peds, #/hr	1	1	19	0	0	19
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e,# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	7	2	5	21	28	12
Mvmt Flow	182	67	109	147	40	44
	Minor2		Major1		/lajor2	
Conflicting Flow All	447	82	103	0	-	0
Stage 1	81	-	-	-	-	-
Stage 2	366	-	-	-	-	-
Critical Hdwy	6.47	6.22	4.15	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.318	2.245	-	-	-
Pot Cap-1 Maneuver	560	978	1470	-	-	-
Stage 1	930	-	-	-	_	-
Stage 2	691	_	-	_	-	-
Platoon blocked, %	30 7			_	_	_
Mov Cap-1 Maneuver	496	959	1444	_	_	_
Mov Cap-1 Maneuver	496	JJJ			_	_
Stage 1	838	_	_	-	<u>-</u>	_
_	678	-	-	-	-	-
Stage 2	0/0	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, sa	/v16.13		3.28		0	
HCM LOS	С					
Minor Lane/Major Mvn	nt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		768	-	• • •	-	-
HCM Lane V/C Ratio		0.076	-	0.437	-	-
HCM Control Delay (s.	/veh)	7.7	0	16.1	-	-
HCM Lane LOS		Α	Α	С	-	-
HCM 95th %tile Q(veh	1)	0.2	-	2.2	-	-

## 16: SW Herman Road & SW 108th Ave

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Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	16	424	550	69	12
v/c Ratio	0.03	0.40	0.52	0.19	0.03
Control Delay (s/veh)	2.9	6.4	9.0	18.1	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	2.9	6.4	9.0	18.1	10.5
Queue Length 50th (ft)	1	49	59	12	0
Queue Length 95th (ft)	7	105	215	51	11
Internal Link Dist (ft)		877	1007	781	
Turn Bay Length (ft)	100			135	
Base Capacity (vph)	661	1557	1602	1125	1102
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.02	0.27	0.34	0.06	0.01
Intersection Summary					

	•	-	•	•	-	✓		
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	*	<b>†</b>	1>		7	#		
Traffic Volume (vph)	14	365	242	231	59	10		
Future Volume (vph)	14	365	242	231	59	10		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	4.0	4.0	1000	4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00		
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		
Frt	1.00	1.00	0.93		1.00	0.85		
Flt Protected	0.95	1.00	1.00		0.95	1.00		
Satd. Flow (prot)	1399	1557	1608		1504	1468		
Flt Permitted	0.36	1.00	1.00		0.95	1.00		
Satd. Flow (perm)	527	1557	1608		1504	1468		
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86		
Adj. Flow (vph)	16	424	281	269	69	12		
RTOR Reduction (vph)	0	424	28	209	09	10		
Lane Group Flow (vph)	16	424	522	0	69	2		
Confl. Peds. (#/hr)	3	424	522	3	09	2		
Heavy Vehicles (%)	29%	22%	12%	6%	20%	10%		
	D.P+P			0 /0				
Turn Type Protected Phases		NA 2	NA		Prot	Perm		
	5	2	6		4	4		
Permitted Phases	6	20.0	20.7		C E	4		
Actuated Green, G (s)	27.4	32.8	26.7		6.5	6.5		
Effective Green, g (s)	30.2	34.2	28.1		9.0	9.0		
Actuated g/C Ratio	0.59	0.67	0.55		0.18	0.18		
Clearance Time (s)	5.4	5.4	5.4		6.5	6.5		
Vehicle Extension (s)	2.0	3.1	3.1		2.6	2.6		
Lane Grp Cap (vph)	346	1040	882		264	258		
v/s Ratio Prot	0.00	c0.27	c0.32		c0.05	2 22		
v/s Ratio Perm	0.03		0		0.00	0.00		
v/c Ratio	0.05	0.41	0.59		0.26	0.01		
Uniform Delay, d1	7.4	3.9	7.7		18.2	17.4		
Progression Factor	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.0	0.3	1.1		0.4	0.0		
Delay (s)	7.4	4.1	8.8		18.6	17.4		
Level of Service	Α	A	Α		В	В		
Approach Delay (s/veh)		4.3	8.8		18.5			
Approach LOS		Α	Α		В			
Intersection Summary								
HCM 2000 Control Delay (s			7.7	H	CM 2000	Level of Servic	е	Α
HCM 2000 Volume to Capa	acity ratio		0.53					
Actuated Cycle Length (s)			51.2		um of lost		12	2.0
Intersection Capacity Utiliza	ation		37.9%	IC	U Level o	of Service		Α
Analysis Period (min)			15					

c Critical Lane Group

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	*	<b>†</b>	1≽		*	1
Traffic Volume (veh/h)	14	365	242	231	59	10
Future Volume (veh/h)	14	365	242	231	59	10
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1470	1574	1722	1811	1604	1752
Adj Flow Rate, veh/h	16	424	281	269	69	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	29	22	12	6	20	10
Cap, veh/h	464	1140	483	462	178	173
Arrive On Green	0.05	0.72	0.60	0.57	0.12	0.12
Sat Flow, veh/h	1400	1574	808	773	1527	1485
Grp Volume(v), veh/h	16	424	0	550	69	12
Grp Sat Flow(s), veh/h/ln	1400	1574	0	1581	1527	1485
Q Serve(g_s), s	0.0	5.1	0.0	11.1	2.1	0.4
Cycle Q Clear(g_c), s	0.0	5.1	0.0	11.1	2.1	0.4
		ე. I	0.0			1.00
Prop In Lane	1.00	1110	0	0.49	1.00	
Lane Grp Cap(c), veh/h	464	1140	0	944	178	173
V/C Ratio(X)	0.03	0.37	0.00	0.58	0.39	0.07
Avail Cap(c_a), veh/h	714	1448	0	2050	984	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.5	2.6	0.0	6.5	20.6	19.8
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.6	1.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	0.0	2.4	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	8.5	2.8	0.0	7.1	21.7	20.0
LnGrp LOS	Α	Α		Α	С	В
Approach Vol, veh/h		440	550		81	
Approach Delay, s/veh		3.0	7.1		21.4	
Approach LOS		Α	Α		С	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		40.5		9.9	6.4	34.1
Change Period (Y+Rc), s		5.4		6.5	5.4	5.4
Max Green Setting (Gmax), s		45.0		30.0	10.0	64.0
					2.0	
Max Q Clear Time (g_c+l1), s		7.1		4.1		13.1
Green Ext Time (p_c), s		9.8		0.2	0.0	15.7
Intersection Summary						
HCM 7th Control Delay, s/veh			6.5			
HCM 7th LOS			Α			

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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1>		ሻ	<b></b>	ሻ	7
Traffic Volume (veh/h)	621	167	65	319	77	59
Future Volume (Veh/h)	621	167	65	319	77	59
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	654	176	68	336	81	62
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage veh)				2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			832		1216	744
vC1, stage 1 conf vol					744	
vC2, stage 2 conf vol					472	
vCu, unblocked vol			832		1216	744
tC, single (s)			4.1		6.6	6.4
tC, 2 stage (s)					5.6	
tF (s)			2.2		3.6	3.5
p0 queue free %			91		78	84
cM capacity (veh/h)			786		373	384
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	
Volume Total	830	68	336	81	62	
Volume Left	0	68	0	81	0	
Volume Right	176	0	0	0	62	
cSH	1700	786	1700	373	384	
Volume to Capacity	0.49	0.09	0.20	0.22	0.16	
Queue Length 95th (ft)	0	7	0	20	14	
Control Delay (s/veh)	0.0	10.0	0.0	17.3	16.2	
Lane LOS		В		С	C	
Approach Delay (s/veh)	0.0	1.7		16.8		
Approach LOS				С		
Intersection Summary						
Average Delay			2.2			
Intersection Capacity Utiliza	ation		60.7%	IC	U Level c	f Service
Analysis Period (min)			15			

Intersection							
Int Delay, s/veh	3.8						
	EBT	EBR	WBL	WBT	NBL	NBR	
Movement		FRK					
Lane Configurations	<b>\$</b>	407	<b>\</b>	110	77	7	
Traffic Vol, veh/h	621	167	65	319	77	59	
Future Vol, veh/h	621	167	65	319	77	59	
Conflicting Peds, #/hr	_ 0	_ 2	_ 2	_ 0	0	0	
	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	25	-	100	0	
Veh in Median Storage,	# 0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	2	3	5	7	15	21	
Mvmt Flow	654	176	68	336	81	62	
		_		_			
	ajor1		Major2		Minor1		
Conflicting Flow All	0	0	831	0	1216	744	
Stage 1	-	-	-	-	744	-	
Stage 2	-	-	-	-	473	-	
Critical Hdwy	-	-	4.15	-	6.55	6.41	
Critical Hdwy Stg 1	-	-	-	-	5.55	-	
Critical Hdwy Stg 2	-	-	-	-	5.55	-	
Follow-up Hdwy	-	-	2.245	-		3.489	
Pot Cap-1 Maneuver	-	-	788	_	188	385	
Stage 1	_	_	-	_	448	-	
Stage 2	_	-	_	-	601	-	
Platoon blocked, %	_	_		_	301		
Mov Cap-1 Maneuver			787	_	171	385	
Mov Cap-1 Maneuver	_	_	101	_	171	303	
•	-	-	-	-	447		
Stage 1	-	-	-	-		-	
Stage 2	-	-	-	-	549	-	
Approach	EB		WB		NB		
HCM Control Delay, s/v	0		1.69		31.65		
HCM LOS	U		1.03		D D		
I IOIVI LOS					U		
Minor Lane/Major Mvmt		NBLn11	VBLn2	EBT	EBR	WBL	
Capacity (veh/h)		171	385	-	_	787	
HCM Lane V/C Ratio		0.473		_	_	0.087	
HCM Control Delay (s/ve	eh)	43.5	16.2	-	_	10	
HCM Lane LOS	,	E	C	_	_	В	
HCM 95th %tile Q(veh)		2.2	0.6	_	_	0.3	
HOW JOHN JOHN (VEII)		۷.۷	0.0			0.0	

	-	•	•	•		~
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽			4	W	
Traffic Volume (veh/h)	27	12	46	82	103	110
Future Volume (Veh/h)	27	12	46	82	103	110
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	42	19	72	128	161	172
Pedestrians					37	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					4	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			98		361	89
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			98		361	89
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)					<b>V</b>	V. <u>L</u>
tF (s)			2.3		3.5	3.3
p0 queue free %			95		72	81
cM capacity (veh/h)			1413		581	928
	<b>-</b> 5 4	14/D 4			001	020
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	61	200	333			
Volume Left	0	72	161			
Volume Right	19	0	172			
cSH	1700	1413	720			
Volume to Capacity	0.04	0.05	0.46			
Queue Length 95th (ft)	0	4	61			
Control Delay (s/veh)	0.0	3.0	14.2			
Lane LOS		Α	В			
Approach Delay (s/veh)	0.0	3.0	14.2			
Approach LOS			В			
Intersection Summary						
Average Delay			9.0			
Intersection Capacity Utiliza	ition		32.6%	IC	U Level c	f Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	8.9					
		EDD	WDI	MOT	NDI	NDD
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽			4	À	
Traffic Vol, veh/h	27	12	46	82	103	110
Future Vol, veh/h	27	12	46	82	103	110
Conflicting Peds, #/hr	0	37	37	0	0	0
<u> </u>	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	25	7	6	4	5
Mvmt Flow	42	19	72	128	161	172
in thing i low				120	101	
	ajor1		Major2		Minor1	
Conflicting Flow All	0	0	98	0	360	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	272	-
Critical Hdwy	-	-	4.17	-	6.44	6.25
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	_	2.263	-	3.536	3.345
Pot Cap-1 Maneuver	_	_	1464	_	634	961
Stage 1	_	_		_	930	-
Stage 2	_	_	_	_	769	_
Platoon blocked, %	-			_	100	_
		<u>-</u>	1413		579	927
Mov Cap-1 Maneuver	-	-	1413	-		
Mov Cap-2 Maneuver	-	-	-	-	579	-
Stage 1	-	-	-	-	897	-
Stage 2	-	-	-	-	727	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		2.76		14.27	
HCM LOS	U		2.70		В	
TIOW LOO						
Minor Lane/Major Mvmt	1	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		718	-	-	647	-
HCM Lane V/C Ratio		0.463	-	-	0.051	-
HCM Control Delay (s/ve	eh)	14.3	-	_	7.7	0
HCM Lane LOS	-,	В	_	_	Α	A
HCM 95th %tile Q(veh)		2.5	_	_	0.2	-
HOW SOUL TOUTE CONTROL		2.5	_	_	U.Z	_

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Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		7	<b>^</b>	7		<b>^</b>	
Traffic Volume (veh/h)	0	190	1243	19	0	1582	
Future Volume (Veh/h)	0	190	1243	19	0	1582	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	
Hourly flow rate (vph)	0	216	1412	22	0	1798	
Pedestrians	1						
Lane Width (ft)	12.0						
Walking Speed (ft/s)	3.5						
Percent Blockage	0						
Right turn flare (veh)							
Median type			None			None	
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	2312	707			1413		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	2312	707			1413		
tC, single (s)	6.8	*6.0			4.1		
tC, 2 stage (s)							
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	52			100		
cM capacity (veh/h)	32	452			478		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	
Volume Total	216	706	706	22	899	899	
Volume Left	0	0	0	0	099	099	
Volume Right	216	0	0	22	0	0	
cSH	452	1700	1700	1700	1700	1700	
Volume to Capacity	0.48	0.42	0.42	0.01	0.53	0.53	
Queue Length 95th (ft)	63	0.42	0.42	0.01	0.53	0.55	
• ,	20.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (s/veh) Lane LOS	20.0 C	0.0	0.0	0.0	0.0	0.0	
	20.0	0.0			0.0		
Approach LOS	20.0 C	0.0			0.0		
Approach LOS	U						
Intersection Summary							
Average Delay			1.3				
Intersection Capacity Utilizat	tion		52.8%	IC	U Level	of Service	)
Analysis Period (min)			15				
,							
<ul> <li>User Entered Value</li> </ul>							

Intersection						
Int Delay, s/veh	1.7					
		MED	NET	NDD	051	ODT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		7	<b>^</b>	7		<b>^</b>
Traffic Vol, veh/h	0	190	1243	19	0	1582
Future Vol, veh/h	0	190	1243	19	0	1582
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	335	-	-
Veh in Median Storage	e, # 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	4	8	3	2	10
Mvmt Flow	0	216	1413	22	0	1798
	- 0	210	10	LL	- 0	1100
	Minor1		//ajor1	N	/lajor2	
Conflicting Flow All	-	706	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	_	6.98	_	-	_	-
Critical Hdwy Stg 1	_	_	-	-	_	-
Critical Hdwy Stg 2	_	_	_	_	_	_
Follow-up Hdwy	_	3.34	_	_	_	_
Pot Cap-1 Maneuver	0	374	_	0	0	_
Stage 1	0	-	_	0	0	_
Stage 2	0	_	-	0	0	_
	U	-	-	U	U	
Platoon blocked, %		274	-			-
Mov Cap-1 Maneuver	-	374	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2		-	-	-	-	-
Approach	WB		NB		SB	
			0		0	
HCM Control Delay, s/v	v27.02 D		U		U	
I IOIVI LOG	U					
Minor Long/Major Myss		NDTA	/DL n.4	CDT		
Minor Lane/Major Mvm	IL	NBTV		SBT		
Capacity (veh/h)		-	• • •	-		
HCM Lane V/C Ratio		-	0.578	-		
HCM Control Delay (s/	veh)	-	27	-		
HCM Lane LOS		-	D	-		
HCM 95th %tile Q(veh)	)	-	3.5	-		

# 20: SW Teton Avenue & SW Herman Road

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	6	375	21	308	321	126	27	173
v/c Ratio	0.02	0.75	0.07	0.67	0.56	0.21	0.07	0.44
Control Delay (s/veh)	14.8	32.3	15.0	29.0	18.6	21.5	15.5	32.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.8	32.3	15.0	29.0	18.6	21.5	15.5	32.1
Queue Length 50th (ft)	2	116	5	100	76	36	5	58
Queue Length 95th (ft)	9	305	21	264	219	109	26	166
Internal Link Dist (ft)		1007		989		572		1708
Turn Bay Length (ft)	100		100		60		50	
Base Capacity (vph)	416	1160	545	1028	673	1204	687	1377
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.32	0.04	0.30	0.48	0.10	0.04	0.13
Intersection Summary								

	•	-	•	•	<b>←</b>	•	•	<b>†</b>	~	<b>\</b>	<b></b>	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	<del>(</del> Î		ሻ	<b>₽</b>		7	ĵ»		ሻ	ĵ»	
Traffic Volume (vph)	5	182	152	19	251	23	286	85	27	24	130	24
Future Volume (vph)	5	182	152	19	251	23	286	85	27	24	130	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		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	0.93		1.00	0.99		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1128	1468		1543	1307		1656	1495		1593	1704	
Flt Permitted	0.46	1.00		0.33	1.00		0.50	1.00		0.68	1.00	
Satd. Flow (perm)	548	1468		536	1307		870	1495		1134	1704	
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)	6	204	171	21	282	26	321	96	30	27	146	27
RTOR Reduction (vph)	0	18	0	0	2	0	0	0	0	0	5	0
Lane Group Flow (vph)	6	357	0	21	306	0	321	126	0	27	168	0
Confl. Peds. (#/hr)									2	2		
Heavy Vehicles (%)	60%	16%	26%	17%	45%	27%	9%	24%	15%	13%	5%	30%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	24.5	23.7		26.3	24.6		35.6	28.4		21.4	18.2	
Effective Green, g (s)	24.5	24.2		26.3	25.1		35.6	28.9		21.4	18.7	
Actuated g/C Ratio	0.32	0.32		0.35	0.33		0.47	0.38		0.28	0.25	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	3.2		2.0	3.2		2.0	3.2		2.0	3.2	
Lane Grp Cap (vph)	182	467		208	431		546	568		338	419	
v/s Ratio Prot	0.00	c0.24		c0.00	0.23		c0.10	0.08		0.00	0.10	
v/s Ratio Perm	0.01			0.03	<b>^</b>		c0.17			0.02		
v/c Ratio	0.03	0.77		0.10	0.71		0.59	0.22		0.08	0.40	
Uniform Delay, d1	17.7	23.3		17.1	22.3		13.6	15.9		20.0	24.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	7.4		0.1	5.4		1.0	0.2		0.0	0.7	
Delay (s)	17.7	30.8		17.2	27.6		14.6	16.2		20.0	24.7	
Level of Service	В	C		В	C		В	B		В	C	
Approach Delay (s/veh)		30.5			27.0			15.0			24.0	
Approach LOS		С			С			В			С	
Intersection Summary												
HCM 2000 Control Delay (s			23.6	H	CM 2000	Level of	Service		С			
•	HCM 2000 Volume to Capacity ratio		0.68									
Actuated Cycle Length (s)		76.0		um of lost				18.0				
Intersection Capacity Utiliza	ation		54.7%	IC	U Level o	of Service	•		Α			
Analysis Period (min)			15									

Analysis Period (min)
c Critical Lane Group

	۶	<b>→</b>	•	•	•	•	•	<b>†</b>	<b>/</b>	<b>/</b>	Ţ	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	-î		ሻ	f)		7	f <sub>a</sub>		7	ĵ₃	
Traffic Volume (veh/h)	5	182	152	19	251	23	286	85	27	24	130	24
Future Volume (veh/h)	5	182	152	19	251	23	286	85	27	24	130	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	0.99		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	1011	1663	1515	1648	1233	1500	1767	1544	1678	1707	1826	1455
Adj Flow Rate, veh/h	6	204	171	21	282	26	321	96	30	27	146	27
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	60	16	26	17	45	27	9	24	15	13	5	30
Cap, veh/h	208	302	253	277	420	39	488	355	111	331	239	44
Arrive On Green	0.01	0.36	0.35	0.02	0.38	0.37	0.18	0.31	0.31	0.03	0.16	0.15
Sat Flow, veh/h	963	836	701	1570	1112	103	1682	1127	352	1626	1497	277
Grp Volume(v), veh/h	6	0	375	21	0	308	321	0	126	27	0	173
Grp Sat Flow(s),veh/h/ln	963	0	1537	1570	0	1215	1682	0	1480	1626	0	1774
Q Serve(g_s), s	0.3	0.0	13.8	0.6	0.0	14.1	9.9	0.0	4.3	0.9	0.0	6.1
Cycle Q Clear(g_c), s	0.3	0.0	13.8	0.6	0.0	14.1	9.9	0.0	4.3	0.9	0.0	6.1
Prop In Lane	1.00	0.0	0.46	1.00	0.0	0.08	1.00	0.0	0.24	1.00	0.0	0.16
Lane Grp Cap(c), veh/h	208	0	555	277	0	459	488	0	465	331	0	283
V/C Ratio(X)	0.03	0.00	0.68	0.08	0.00	0.67	0.66	0.00	0.27	0.08	0.00	0.61
Avail Cap(c_a), veh/h	489	0	1258	710	0	976	683	0	1278	771	0	1479
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.9	0.0	18.1	14.5	0.0	17.3	17.2	0.0	17.1	22.7	0.0	26.1
Incr Delay (d2), s/veh	0.0	0.0	1.6	0.0	0.0	1.9	0.6	0.0	0.3	0.0	0.0	2.3
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	0.0	0.0	4.4	0.0	0.0	3.7	3.5	0.0	1.4	0.0	0.0	2.6
Unsig. Movement Delay, s/veh		0.0	4.4	0.2	0.0	3.7	3.5	0.0	1.4	0.5	0.0	2.0
•	14.9	0.0	19.6	14.6	0.0	19.1	17.7	0.0	17.5	22.7	0.0	28.4
LnGrp Delay(d), s/veh LnGrp LOS	14.9 B	0.0	19.0 B	14.0 B	0.0	19.1 B	17.7 B	0.0	17.5 B	22.1 C	0.0	20.4 C
	D	204	D	D	220	D	Б	447	D	U	200	U
Approach Vol, veh/h		381			329			447			200	
Approach Delay, s/veh		19.6			18.9			17.7			27.6	
Approach LOS		В			В			В			С	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	29.1	16.3	15.6	4.5	30.1	6.0	25.9				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	20.0	54.0	20.0	55.0	20.0	53.0	20.0	57.0				
Max Q Clear Time (g_c+I1), s	2.6	15.8	11.9	8.1	2.3	16.1	2.9	6.3				
Green Ext Time (p_c), s	0.0	7.8	0.4	0.6	0.0	6.9	0.1	1.8				
Intersection Summary												
HCM 7th Control Delay, s/veh			20.0									
HCM 7th LOS			В									

#### 21: OR 99W (Pacific Highway) & SW Fischer Road

	•	•	1	<b>†</b>	<b>↓</b>	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	247	438	139	1490	1323	144
v/c Ratio	0.79	0.97	0.79	0.58	0.63	0.15
Control Delay (s/veh)	73.4	63.4	89.9	8.3	24.2	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	73.4	63.4	89.9	8.3	24.2	4.1
Queue Length 50th (ft)	216	222	125	275	553	14
Queue Length 95th (ft)	#335	#439	#236	325	637	m26
Internal Link Dist (ft)	1134			1909	2372	
Turn Bay Length (ft)	275		435			200
Base Capacity (vph)	325	463	176	2555	2116	978
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.95	0.79	0.58	0.63	0.15

Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	۶	$\rightarrow$	•	<b>†</b>	L	ļ	4			
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR			
Lane Configurations	ሻ	7	ሻ	<b>^</b>	Ð	<b>^</b>	7			
Traffic Volume (vph)	222	394	125	1341	0	1191	130			
Future Volume (vph)	222	394	125	1341	0	1191	130			
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900			
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	1.00	1.00	0.95		0.95	1.00			
Frpb, ped/bikes	1.00	0.98	1.00	1.00		1.00	0.97			
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			
Frt	1.00	0.85	1.00	1.00		1.00	0.85			
Flt Protected	0.95	1.00	0.95	1.00		1.00	1.00			
Satd. Flow (prot)	1752	1555	1543	3343		3406	1499			
Flt Permitted	0.95	1.00	0.95	1.00		1.00	1.00			
Satd. Flow (perm)	1752	1555	1543	3343		3406	1499			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Adj. Flow (vph)	247	438	139	1490	0.00	1323	144			
RTOR Reduction (vph)	0	176	0	0	0	0	47			
Lane Group Flow (vph)	247	262	139	1490	0	1323	97			
Confl. Peds. (#/hr)	<u> </u>	7	100	1 100		1020	5			
Heavy Vehicles (%)	3%	2%	17%	8%	2%	6%	4%			
Turn Type	Prot	Perm	Prot	NA	Prot	NA	Perm			
Protected Phases	4	I CIIII	5	2	1	6	i Giiii			
Permitted Phases		4	J		'	U	6			
Actuated Green, G (s)	24.0	24.0	14.5	105.0		85.0	85.0			
Effective Green, g (s)	25.0	25.0	16.0	107.0		87.0	87.0			
Actuated g/C Ratio	0.18	0.18	0.11	0.76		0.62	0.62			
Clearance Time (s)	5.0	5.0	5.5	6.0		6.0	6.0			
Vehicle Extension (s)	2.5	2.5	2.3	4.5		4.5	4.5			
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	312		176							
Lane Grp Cap (vph)		277		2555		2116	931			
v/s Ratio Prot	0.14	-0.17	c0.09	0.45		c0.39	0.00			
v/s Ratio Perm	0.70	c0.17	0.70	0.50		0.00	0.06			
v/c Ratio	0.79	0.95	0.79	0.58		0.63	0.10			
Uniform Delay, d1	55.0	56.8	60.4	7.0		16.4	10.7			
Progression Factor	1.00	1.00	1.00	1.00		1.37	1.48			
Incremental Delay, d2	12.5	39.4	19.6	1.0		1.2	0.2			
Delay (s)	67.5	96.3	80.0	8.0		23.6	16.0			
Level of Service	E	F	E	A		С	В			
Approach Delay (s/veh)	85.9			14.1		22.9				
Approach LOS	F			В		С				
Intersection Summary										
HCM 2000 Control Delay (s/v	eh)		30.5	Н	CM 2000	Level of S	Service	(	0	
HCM 2000 Volume to Capaci			0.71							
Actuated Cycle Length (s)			140.0	Sı	ım of lost	time (s)		12.	0	
Intersection Capacity Utilization	on		68.8%			of Service		(	2	
Analysis Period (min)			15							
c Critical Lane Group										

	<b>≯</b>	•	•	<b>†</b>	L	<b>↓</b>	<b>√</b>	
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	
Lane Configurations	ች	1	*	<b>†</b> †	Ð	<b>†</b> †	1	
Traffic Volume (veh/h)	222	394	125	1341	0	1191	130	
Future Volume (veh/h)	222	394	125	1341	0	1191	130	
Initial Q (Qb), veh	0	0	0	0		0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00	
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00				1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00	
Work Zone On Approach	No			No		No		
Adj Sat Flow, veh/h/ln	1856	1870	1648	1781		1811	1841	
Adj Flow Rate, veh/h	247	438	139	1490		1323	144	
Peak Hour Factor	0.90	0.90	0.90	0.90		0.90	0.90	
Percent Heavy Veh, %	3	2	17	8		6	4	
Cap, veh/h	328	294	179	2575		2114	954	
Arrive On Green	0.19	0.19	0.11	0.76		0.82	0.82	
Sat Flow, veh/h	1767	1585	1570	3474		3532	1554	
Grp Volume(v), veh/h	247	438	139	1490		1323	144	
Grp Sat Flow(s), veh/h/ln	1767	1585	1570	1692		1721	1554	
Q Serve(g_s), s	18.5	26.0	12.0	26.3		20.2	2.7	
Cycle Q Clear(g_c), s	18.5	26.0	12.0	26.3		20.2	2.7	
Prop In Lane	1.00	1.00	1.00				1.00	
Lane Grp Cap(c), veh/h	328	294	179	2575		2114	954	
V/C Ratio(X)	0.75	1.49	0.77	0.58		0.63	0.15	
Avail Cap(c_a), veh/h	328	294	179	2575		2114	954	
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.33	1.33	
Upstream Filter(I)	1.00	1.00	1.00	1.00		0.78	0.78	
Uniform Delay (d), s/veh	54.0	57.0	60.3	7.2		6.8	5.2	
Incr Delay (d2), s/veh	9.0	236.9	17.9	1.0		1.1	0.3	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0	
%ile BackOfQ(50%),veh/ln	9.1	40.1	5.6	8.0		4.7	0.9	
Unsig. Movement Delay, s/veh								
LnGrp Delay(d), s/veh	63.0	293.9	78.1	8.1		7.9	5.5	
LnGrp LOS	Е	F	Е	Α		Α	Α	
Approach Vol, veh/h	685			1629		1467		
Approach Delay, s/veh	210.6			14.1		7.7		
Approach LOS	F			В		Α		
••		2		1_	5	6		
Timer - Assigned Phs		2		20.0	5	6		
Phs Duration (G+Y+Rc), s		110.5		30.0	20.5	90.0		
Change Period (Y+Rc), s		6.0		5.0	6.0	* 6		
Max Green Setting (Gmax), s		84.0		25.0	14.5	* 84		
Max Q Clear Time (g_c+l1), s		28.3		28.0	14.0	22.2		
Green Ext Time (p_c), s		49.0		0.0	0.0	48.1		
Intersection Summary								
HCM 7th Control Delay, s/veh			47.2					
HCM 7th LOS			D					
Notes								
User approved pedestrian inter	rval to be	e less thai	n phase n	nax green				
User approved ignoring U-Turr								

09/20/2024

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

	-	•	•	•	1	<b>†</b>	~	-	<b>↓</b>	4	
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	129	192	190	241	66	1226	386	462	1035	12	
v/c Ratio	0.40	0.87	0.84	0.58	0.58	0.81	0.41	0.83	0.54	0.01	
Control Delay (s/veh)	44.5	93.2	89.2	12.2	73.3	38.9	7.7	70.5	21.0	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	44.5	93.2	89.2	12.2	73.3	38.9	7.7	70.5	21.0	0.0	
Queue Length 50th (ft)	40	181	178	0	60	531	120	212	318	0	
Queue Length 95th (ft)	74	#318	#310	80	m101	624	177	#290	387	0	
Internal Link Dist (ft)	481		939			2372			1326		
Turn Bay Length (ft)		300		315	550		140	265		400	
Base Capacity (vph)	349	230	234	423	134	1518	950	556	1924	951	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.83	0.81	0.57	0.49	0.81	0.41	0.83	0.54	0.01	

#### Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	۶	<b>→</b>	•	•	•	•	•	<b>†</b>	<b>/</b>	<b>&gt;</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4 P		ሻ	र्स	7	7	<b>^</b>	7	777	<b>^</b>	7
Traffic Volume (vph)	8	72	39	315	37	222	61	1128	355	425	952	11
Future Volume (vph)	8	72	39	315	37	222	61	1128	355	425	952	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Lane Util. Factor		0.95		0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Fit Protected		1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3355		1633	1664	1536	1770	3343	1506	3433	3374	1583
Flt Permitted		1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	0.00	3355	0.00	1633	1664	1536	1770	3343	1506	3433	3374	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)	9	78 38	42	342	40	241	66 0	1226	386 62	462	1035	12
RTOR Reduction (vph)	0	36 91	0	102	0 190	208 33	66	1226		460	1025	5 7
Lane Group Flow (vph)	0	91	U	192	190		00	1226	324 2	462	1035	1
Confl. Peds. (#/hr)	4 2%	2%	2%	5%	2%	4 3%	2%	8%	6%	2%	7%	2%
Heavy Vehicles (%)			Z70									
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases Permitted Phases	3	3		4	4	4	5	2	4 2	ı	6	G
		12.0		19.0	19.0	19.0	7.9	62.5	81.5	23.8	78.7	6 78.7
Actuated Green, G (s) Effective Green, g (s)		12.0		19.0	19.0	19.0	7.9	62.5	81.5	23.8	78.7	78.7
Actuated g/C Ratio		0.09		0.14	0.14	0.14	0.06	02.5	0.58	0.17	0.56	0.56
Clearance Time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Vehicle Extension (s)		2.3		2.3	2.3	2.3	2.3	4.5	2.3	2.3	4.8	4.8
Lane Grp Cap (vph)		287		221	225	208	99	1492	941	583	1896	889
v/s Ratio Prot		c0.03		c0.12	0.11	200	0.04	c0.37	0.05	c0.13	0.31	009
v/s Ratio Prot v/s Ratio Perm		CU.U3		60.12	0.11	0.02	0.04	60.57	0.03	60.13	0.51	0.00
v/c Ratio		0.32		0.87	0.84	0.02	0.67	0.82	0.17	0.79	0.55	0.00
Uniform Delay, d1		60.1		59.3	59.1	53.4	64.8	33.9	15.3	55.7	19.4	13.5
Progression Factor		1.00		1.00	1.00	1.00	0.90	1.04	0.88	1.00	1.00	1.00
Incremental Delay, d2		0.4		27.8	23.5	0.2	10.9	4.2	0.1	7.0	1.1	0.0
Delay (s)		60.5		87.1	82.6	53.6	69.3	39.5	13.6	62.7	20.5	13.5
Level of Service		E		F	62.6 F	D	E	D	В	E	C	В
Approach Delay (s/veh)		60.5		•	72.8		_	34.7		_	33.4	
Approach LOS		E			. E			C			C	
•								Ū				
Intersection Summary HCM 2000 Control Delay (s/veh)			41.1	HCM 2000 Level of Service D								
HCM 2000 Volume to Capacity ratio			0.77	11	CIVI 2000	Level Of C	OCI VICE		U			
Actuated Cycle Length (s)		140.0	Sum of lost time (s) 22.7									
Intersection Capacity Utilization			73.6%	ICU Level of Service D								
Analysis Period (min)			15	10	. S E 5 V 01 (	J. COI VIOC						
raidiyolo i oriod (iliili)			10									

c Critical Lane Group

HCM 7th Edition methodology does not support exclusive ped or hold phases.

# 1: SW 124th Avenue & OR 99W (Pacific Highway)

	-	•	•	•	1	~
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	863	228	757	1185	693	802
v/c Ratio	0.71	0.34	0.74	0.51	0.78	0.52
Control Delay (s/veh)	38.4	5.0	43.8	11.1	38.8	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.4	5.0	43.8	11.1	38.8	18.4
Queue Length 50th (ft)	304	0	271	217	250	245
Queue Length 95th (ft)	379	54	#398	315	261	342
Internal Link Dist (ft)	1687			1822	503	
Turn Bay Length (ft)		225	550		300	275
Base Capacity (vph)	1209	675	1023	2324	1058	1546
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.34	0.74	0.51	0.66	0.52
Intersection Cummery						

Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Movement         EBT         EBR         WBL         WBT         NBL         NBR           Lane Configurations         1
Lane Configurations         ††         †         †         †
Traffic Volume (vph)       811       214       712       1114       651       754         Future Volume (vph)       811       214       712       1114       651       754         Ideal Flow (vphpl)       1900       1900       1900       1900       1900         Total Lost time (s)       4.0       4.0       4.0       4.0       5.6         Lane Util. Factor       0.95       1.00       0.97       0.95       0.97       0.88         Frpb, ped/bikes       1.00       1.00       1.00       1.00       1.00       1.00
Future Volume (vph)         811         214         712         1114         651         754           Ideal Flow (vphpl)         1900         1900         1900         1900         1900         1900           Total Lost time (s)         4.0         4.0         4.0         4.0         5.6           Lane Util. Factor         0.95         1.00         0.97         0.95         0.97         0.88           Frpb, ped/bikes         1.00         1.00         1.00         1.00         1.00         1.00
Ideal Flow (vphpl)       1900       1900       1900       1900       1900       1900         Total Lost time (s)       4.0       4.0       4.0       4.0       5.6         Lane Util. Factor       0.95       1.00       0.97       0.95       0.97       0.88         Frpb, ped/bikes       1.00       1.00       1.00       1.00       1.00       1.00
Total Lost time (s)       4.0       4.0       4.0       4.0       5.6         Lane Util. Factor       0.95       1.00       0.97       0.95       0.97       0.88         Frpb, ped/bikes       1.00       1.00       1.00       1.00       1.00       1.00
Lane Util. Factor       0.95       1.00       0.97       0.95       0.97       0.88         Frpb, ped/bikes       1.00       1.00       1.00       1.00       1.00
Frpb, ped/bikes 1.00 1.00 1.00 1.00 1.00
_ · · · ·
Frt 1.00 0.85 1.00 1.00 0.85
Flt Protected 1.00 1.00 0.95 1.00 0.95 1.00
Satd. Flow (prot) 3539 1538 3400 3438 3433 2787
Flt Permitted 1.00 1.00 0.95 1.00 0.95 1.00
Satd. Flow (perm) 3539 1538 3400 3438 3433 2787
Peak-hour factor, PHF 0.94 0.94 0.94 0.94 0.94
Adj. Flow (vph) 863 228 757 1185 693 802
RTOR Reduction (vph) 0 150 0 0 0
Lane Group Flow (vph) 863 78 757 1185 693 802
Confl. Peds. (#/hr)
Heavy Vehicles (%) 2% 5% 3% 5% 2% 2%
Turn Type NA Perm Prot NA Prot pt+ov
Protected Phases 2 1 6 8 14
Permitted Phases 2
Actuated Green, G (s) 39.0 39.0 31.3 75.9 32.1 63.4
Effective Green, g (s) 41.0 41.0 32.9 77.9 34.1 58.4
Actuated g/C Ratio 0.34 0.34 0.27 0.65 0.28 0.49
Clearance Time (s) 6.0 6.0 5.6 6.0 6.0
Vehicle Extension (s)         5.4         5.4         2.3         5.4         2.3
Lane Grp Cap (vph) 1209 525 932 2231 975 1356
v/s Ratio Prot c0.24 c0.22 0.34 c0.20 0.29
v/s Ratio Perm 0.05
v/c Ratio 0.71 0.15 0.81 0.53 0.71 0.59
Uniform Delay, d1 34.4 27.4 40.7 11.3 38.5 22.2
Progression Factor 1.00 1.00 1.00 0.78 0.96
Incremental Delay, d2 2.7 0.3 7.7 0.9 2.1 0.5
Delay (s) 37.1 27.7 48.3 12.2 32.2 21.9
Level of Service D C D B C C
Approach Delay (s/veh) 35.1 26.3 26.7
Approach LOS D C C
Intersection Summary
HCM 2000 Control Delay (s/veh) 28.5 HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio 0.79
Actuated Cycle Length (s) 120.0 Sum of lost time (s) 18.6
Intersection Capacity Utilization 81.9% ICU Level of Service D
Analysis Period (min) 15
c Critical Lane Group

HCM 7th Edition methodology does not support exclusive ped or hold phases.

# 2: SW 124th Avenue & SW Tualatin Road

	•	*	<b>†</b>	~	<b>/</b>	ļ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	38	551	887	51	444	517
v/c Ratio	0.20	0.51	0.78	0.10	0.47	0.18
Control Delay (s/veh)	46.4	5.4	41.8	13.2	11.0	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.4	5.4	41.8	13.2	11.0	3.8
Queue Length 50th (ft)	28	19	316	9	28	17
Queue Length 95th (ft)	51	130	401	38	168	91
Internal Link Dist (ft)	1180		1024			503
Turn Bay Length (ft)	25	300		150	200	
Base Capacity (vph)	445	1084	1201	559	945	2931
Starvation Cap Reductn	0	0	0	0	13	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.51	0.74	0.09	0.48	0.18
Intersection Summary						

	•	•	<b>†</b>	~	<b>/</b>	<b>↓</b>			
Movement	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations	ሻ	7	<b>^</b>	7	ሻ	<b>^</b>			
Traffic Volume (vph)	36	518	834	48	417	486			
Future Volume (vph)	36	518	834	48	417	486			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Total Lost time (s)	4.0	0.0	4.5	4.5	4.0	4.5			
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95			
Frt	1.00	0.85	1.00	0.85	1.00	1.00			
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00			
Satd. Flow (prot)	1671	1599	3539	1583	1752	3374			
Flt Permitted	0.95	1.00	1.00	1.00	0.12	1.00			
Satd. Flow (perm)	1671	1599	3539	1583	225	3374			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94			
Adj. Flow (vph)	38	551	887	51	444	517			
RTOR Reduction (vph)	0	244	0	23	0	0			
Lane Group Flow (vph)	38	307	887	28	444	517			
Heavy Vehicles (%)	8%	1%	2%	2%	3%	7%			
Turn Type	Perm	Over	NA	Perm	D.P+P	NA			
Protected Phases		5	6		5	2			
Permitted Phases	4			6	6				
Actuated Green, G (s)	10.1	56.7	37.7	37.7	94.4	99.4			
Effective Green, g (s)	11.1	61.7	38.7	38.7	96.4	100.4			
Actuated g/C Ratio	0.09	0.51	0.32	0.32	0.80	0.84			
Clearance Time (s)	5.0	5.0	5.5	5.5	5.0	5.5			
Vehicle Extension (s)	4.0	4.0	4.5	4.5	4.0	4.5			
Lane Grp Cap (vph)	154	822	1141	510	914	2822			
v/s Ratio Prot		0.19	c0.25		c0.23	0.15			
v/s Ratio Perm	c0.02			0.02	0.16				
v/c Ratio	0.25	0.37	0.78	0.05	0.49	0.18			
Uniform Delay, d1	50.6	17.5	36.8	28.0	15.0	1.9			
Progression Factor	1.00	1.00	1.00	1.00	0.53	1.23			
Incremental Delay, d2	1.1	1.3	3.8	0.1	0.5	0.1			
Delay (s)	51.7	18.8	40.6	28.1	8.5	2.4			
Level of Service	D	В	D	C	A	A			
Approach Delay (s/veh)	21.0		39.9			5.2			
Approach LOS	С		D			A			
Intersection Summary									
HCM 2000 Control Delay (s.	/veh)		22.0	F	ICM 2000	Level of Servic	e	С	
HCM 2000 Volume to Capa	city ratio		0.57						
Actuated Cycle Length (s)			120.0	S	Sum of los	t time (s)		13.5	
Intersection Capacity Utiliza	ition		62.2%			of Service		В	
Analysis Period (min)			15						
c Critical Lane Group									

HCM 7th Edition methodology does not support exclusive ped or hold phases.

	٠	<b>→</b>	•	•	<b>←</b>	•	•	<b>†</b>	<b>/</b>	<b>/</b>	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	f)		75	₽		ሻ	<b>₽</b>			€	
Traffic Volume (veh/h)	49	383	1	4	626	250	0	4	5	21	2	23
Future Volume (Veh/h)	49	383	1	4	626	250	0	4	5	21	2	23
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	52	403	1	4	659	263	0	4	5	22	2	24
Pedestrians		1									4	
Lane Width (ft)		12.0									12.0	
Walking Speed (ft/s)		3.5									3.5	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	926			404			1201	1442	404	1317	1311	796
vC1, stage 1 conf vol							508	508		803	803	
vC2, stage 2 conf vol							693	934		514	508	
vCu, unblocked vol	926			404			1201	1442	404	1317	1311	796
tC, single (s)	4.1			4.1			7.1	6.5	6.3	7.2	6.5	6.4
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.4	3.5	4.0	3.5
p0 queue free %	93			100			100	98	99	93	99	93
cM capacity (veh/h)	735			1155			306	263	622	309	330	363
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	52	404	4	922	0	9	48					
Volume Left	52	0	4	0	0	0	22					
Volume Right	0	1	0	263	0	5	24					
cSH	735	1700	1155	1700	1700	388	335					
Volume to Capacity	0.07	0.24	0.00	0.54	0.00	0.02	0.14					
Queue Length 95th (ft)	6	0	0	0	0	2	12					
Control Delay (s/veh)	10.3	0.0	8.1	0.0	0.0	14.5	17.5					
Lane LOS	В		Α		Α	В	С					
Approach Delay (s/veh)	1.2		0.0		14.5		17.5					
Approach LOS					В		С					
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilizati	on		64.5%	10	CU Level	of Service			С			
Analysis Period (min)			15									

# 4: Site Access/SW 115th Avenue & SW Tualatin Road

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		¥	ĵ.		Ĭ	ĵ.			4	
Traffic Vol, veh/h	49	383	1	4	626	250	0	4	5	21	2	23
Future Vol, veh/h	49	383	1	4	626	250	0	4	5	21	2	23
Conflicting Peds, #/hr	4	0	0	0	0	4	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	<u>-</u>	None	<u>-</u>	-	None
Storage Length	25	-	-	25	-	-	0	-	-	-	-	-
Veh in Median Storage	e,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	3	2	2	2	2	2	2	14	5	2	17
Mvmt Flow	52	403	1	4	659	263	0	4	5	22	2	24
Major/Minor I	Major1		1	Major2		l	Minor1		ı	Minor2		
Conflicting Flow All	926	0	0	404	0	0	1176	1441	404	1311	1310	796
Stage 1	-	-	-	-	-	-	507	507	-	803	803	-
Stage 2	-	-	-	-	-	-	669	935	-	508	507	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.34	7.15	6.52	6.37
Critical Hdwy Stg 1	_	-	_	-	-	-	6.12	5.52	-	6.15	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	_	6.12	5.52	-	6.15	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-		4.018	3.426	3.545	4.018	3.453
Pot Cap-1 Maneuver	738	_	-	1155	_	-	168	132	622	134	159	365
Stage 1	-	-	_	-	-	-	548	539	-	373	396	-
Stage 2	-	-	-	-	-	-	447	344	-	542	539	-
Platoon blocked, %		-	_		-	-						
Mov Cap-1 Maneuver	735	-	-	1155	-	-	143	122	622	118	147	363
Mov Cap-2 Maneuver	-	-	-	-	-	-	143	122	-	118	147	-
Stage 1	-	-	-	-	-	-	510	501	-	370	393	-
Stage 2	_	_	_	_	-	-	413	342	-	495	501	-
<b>3</b> -												
Approach	EB			WB			NB			SB		
HCM Control Delay, s/	v 1.16			0.04			22.04			32.02		
HCM LOS							С			D		
Minor Lane/Major Mvm	nt N	NBLn11	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR S	SBLn1		
Capacity (veh/h)		-	221	735	-	-	1155	-	-	181		
HCM Lane V/C Ratio		-	0.043	0.07	-	-	0.004	-	-	0.268		
HCM Control Delay (s/	veh)	0	22	10.3	-	-	8.1	-	-	32		
HCM Lane LOS		A	С	В	-	-	Α	-	-	D		
HCM 95th %tile Q(veh	)	-	0.1	0.2	-	-	0	-	-	1		

	۶	<b>→</b>	•	•	<b>&gt;</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<b></b>	<b>1</b>		W	
Traffic Volume (veh/h)	12	405	930	14	8	2
Future Volume (Veh/h)	12	405	930	14	8	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	13	450	1033	16	9	2
Pedestrians			2		3	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		0	
Right turn flare (veh)			-		-	
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1052				1522	1044
vC1, stage 1 conf vol	.002				1044	1011
vC2, stage 2 conf vol					478	
vCu, unblocked vol	1052				1522	1044
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)	7.1				5.4	0.2
tF (s)	2.2				3.5	3.3
p0 queue free %	98				97	99
cM capacity (veh/h)	660				306	277
					300	211
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	13	450	1049	11		
Volume Left	13	0	0	9		
Volume Right	0	0	16	2		
cSH	660	1700	1700	300		
Volume to Capacity	0.02	0.26	0.62	0.04		
Queue Length 95th (ft)	2	0	0	3		
Control Delay (s/veh)	10.6	0.0	0.0	17.4		
Lane LOS	В			С		
Approach Delay (s/veh)	0.3		0.0	17.4		
Approach LOS				С		
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utiliza	ition		59.8%	IC	Ulevelo	of Service
Analysis Period (min)			15	.0		

Interception						
Intersection	0.2					
Int Delay, s/veh						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	7	<b>1</b>			¥	
Traffic Vol, veh/h	12	405	930	14	8	2
Future Vol, veh/h	12	405	930	14	8	2
Conflicting Peds, #/hr	3	0	0	3	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage,	,# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	4	2	8	2	2
Mvmt Flow	13	450	1033	16	9	2
	/lajor1		//ajor2		Minor2	
Conflicting Flow All	1052	0	-	0	1523	1044
Stage 1	-	-	-	-	1044	-
Stage 2	-	-	-	-	479	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	662	-	-	-	130	278
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	623	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	660	-	_	-	127	277
Mov Cap-2 Maneuver	-	_	_	_	248	
Stage 1	_	_	_	_	331	_
Stage 2	_	_	_	_	621	_
Olugo Z					021	
Approach	EB		WB		SB	
HCM Control Delay, s/v	0.3		0		19.87	
HCM LOS					С	
Minor Long/Major Myrad	1	EDI	EDT	WDT	WDD	CDL1
Minor Lane/Major Mymi		EBL	EBT	WBT	WBR :	
Capacity (veh/h)		660	-	-	-	253
HCM Lane V/C Ratio		0.02	-	-		0.044
HCM Control Delay (s/v	/en)	10.6	-	-	-	19.9
HCM Lane LOS		В	-	-	-	С
HCM 95th %tile Q(veh)		0.1	-	-	-	0.1

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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1>		ሻ	<b></b>	¥	
Traffic Volume (veh/h)	398	6	12	878	37	33
Future Volume (Veh/h)	398	6	12	878	37	33
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	433	7	13	954	40	36
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			441		1418	438
vC1, stage 1 conf vol					438	
vC2, stage 2 conf vol					980	
vCu, unblocked vol			441		1418	438
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			99		88	94
cM capacity (veh/h)			1118		328	619
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	440	13	954	76		
Volume Left	0	13	0	40		
Volume Right	7	0	0	36		
cSH	1700	1118	1700	422		
Volume to Capacity	0.26	0.01	0.56	0.18		
Queue Length 95th (ft)	0.20	1	0.00	16		
Control Delay (s/veh)	0.0	8.3	0.0	15.4		
Lane LOS	0.0	A	0.0	C		
Approach Delay (s/veh)	0.0	0.1		15.4		
Approach LOS	0.0	0.1		C		
Intersection Summary						
			0.0			
Average Delay	otion		0.9	10	- امدرها ا	of Comiles
Intersection Capacity Utiliza	ation		56.9%	IC	U Level C	f Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1					
		EDE	MIDI	MOT	ND	NDD
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽		ሻ		¥	
•	398	6	12	878	37	33
	398	6	12	878	37	33
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control F	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	25	-	-	-
Veh in Median Storage, #	<i>‡</i> 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
	433	7	13	954	40	36
minici ion	100	•	.0	00.		00
Major/Minor Ma	ajor1	1	Major2		Minor1	
Conflicting Flow All	0	0	440	0	1417	437
Stage 1	-	-	-	-	437	-
Stage 2	-	-	-	-	980	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	_	-	_	_	5.42	-
Critical Hdwy Stg 2	_	_	_	_	5.42	_
Follow-up Hdwy	_	_	2.218	_	3.518	3 318
Pot Cap-1 Maneuver	_	_	1120	_	151	620
Stage 1	_		-	_	651	- 020
		_			364	
Stage 2	-	-	-	-	304	-
Platoon blocked, %	-	-	1110	-	4.40	0.40
Mov Cap-1 Maneuver	-	-	1119	-	149	619
Mov Cap-2 Maneuver	-	-	-	-	271	-
Stage 1	-	-	-	-	651	-
Stage 2	-	-	-	-	359	-
Approach	EB		WB		NB	
	0		0.11		17.27	
HCM Control Delay, s/v	U		0.11			
HCM LOS					С	
Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		369	-		1119	_
HCM Lane V/C Ratio		0.206	-		0.012	-
HCM Control Delay (s/vel	h)	17.3	_	-	8.3	-
HCM Lane LOS	,	C	_	_	Α	_
HCM 95th %tile Q(veh)		0.8	_	_	0	_
HOW JOHN JOHN (VEII)		0.0	_	_	U	_

	۶	*	•	<u>†</u>	<b>+</b>	4
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	1>	
Traffic Volume (veh/h)	8	104	21	57	16	2
Future Volume (Veh/h)	8	104	21	57	16	2
Sign Control	Stop			Free	Free	_
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	113	23	62	17	2
Pedestrians	J	110	20	02		
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
				Mono	Mono	
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked	100	40	10			
vC, conflicting volume	126	18	19			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	100		4.0			
vCu, unblocked vol	126	18	19			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	89	99			
cM capacity (veh/h)	856	1061	1597			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	122	85	19			
Volume Left	9	23	0			
Volume Right	113	0	2			
cSH	1042	1597	1700			
Volume to Capacity	0.12	0.01	0.01			
Queue Length 95th (ft)	10	1	0			
Control Delay (s/veh)	8.9	2.1	0.0			
Lane LOS	Α	Α				
Approach Delay (s/veh)	8.9	2.1	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			5.6			
Intersection Capacity Utiliza	ation		24.4%	IC	CU Level	of Service
Analysis Period (min)			15		20 201010	J. 301 1100
Analysis i chod (iiiii)			10			

Intersection						
Int Delay, s/veh	5.5					
•		EDD	ND	NET	ODT	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	₽	
Traffic Vol, veh/h	8	104	21	57	16	2
Future Vol, veh/h	8	104	21	57	16	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e,# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	113	23	62	17	2
IVIVIII I IOW	J	110	20	02	17	
Major/Minor	Minor2		Major1	٨	/lajor2	
Conflicting Flow All	126	18	20	0	-	0
Stage 1	18	-	-	-	-	-
Stage 2	108	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	_	-
Critical Hdwy Stg 1	5.42	_	_	_	_	_
Critical Hdwy Stg 2	5.42	_	_	_	_	_
Follow-up Hdwy		3.318	2 218	_	_	_
Pot Cap-1 Maneuver	869	1060	1597			_
Stage 1	1004	1000	1331	-	_	_
	917	-		-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %	050	4000	4507	-	-	-
Mov Cap-1 Maneuver	856	1060	1597	-	-	-
Mov Cap-2 Maneuver	856	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s			1.96		0	
HCM LOS	Α					
Minor Lane/Major Mvr	nt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		485		1042	-	
HCM Lane V/C Ratio		0.014		0.117	_	_
HCM Control Delay (s	(veh)	7.3	0	8.9	-	_
HCM Lane LOS	(Veil)					
	, \	A	Α	Α	-	-
HCM 95th %tile Q(veh	1)	0	-	0.4	-	-

	•	•	•	<b>†</b>	<b>+</b>	4
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	f.	
Traffic Volume (veh/h)	8	32	7	64	154	2
Future Volume (Veh/h)	8	32	7	64	154	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	35	8	70	167	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)				140110	140110	
Upstream signal (ft)				1116		
pX, platoon unblocked				1110		
vC, conflicting volume	254	168	169			
vC1, stage 1 conf vol	234	100	103			
vC2, stage 2 conf vol						
vCu, unblocked vol	254	168	169			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	0.4	0.2	4.1			
	3.5	3.3	2.2			
tF (s)	99	96	99			
p0 queue free %	730	876	1409			
cM capacity (veh/h)						
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	44	78	169			
Volume Left	9	8	0			
Volume Right	35	0	2			
cSH	842	1409	1700			
Volume to Capacity	0.05	0.01	0.10			
Queue Length 95th (ft)	4	0	0			
Control Delay (s/veh)	9.5	0.8	0.0			
Lane LOS	Α	Α				
Approach Delay (s/veh)	9.5	0.8	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilizat	tion		19.2%	ıc	CU Level c	of Convios
	lion			IC	o Level C	i Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1.6					
Ma	EDI	EDD	NDI	NDT	CDT	CDD
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		_	4	ĵ.	
Traffic Vol, veh/h	8	32	7	64	154	2
Future Vol, veh/h	8	32	7	64	154	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mymt Flow	9	35	8	70	167	2
IVIVIII( I IOW	3	55	U	70	101	Z
Major/Minor I	Minor2		Major1	N	Major2	
Conflicting Flow All	253	168	170	0	-	0
Stage 1	168	-	-	-	-	-
Stage 2	85	-	_	-	_	_
Critical Hdwy	6.42	6.22	4.12	_	_	_
Critical Hdwy Stg 1	5.42	-		_	_	_
Critical Hdwy Stg 2	5.42	_	_	_	_	_
Follow-up Hdwy		3.318	2.218			
Pot Cap-1 Maneuver	735	876	1408	_	-	_
•		0/0	1400	-	-	-
Stage 1	861	-	-	-	-	-
Stage 2	939	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	731	876	1408	-	-	-
Mov Cap-2 Maneuver	731	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	939	-	-	-	-	-
Annuarah	ED		ND		CD	
Approach	EB		NB		SB	
HCM Control Delay, s/			0.75		0	
HCM LOS	Α					
Minor Lane/Major Mvm	nt	NBL	NRT	EBLn1	SBT	SBR
Capacity (veh/h)	n.	177	-			ODIN
					-	_
HCM Cantrol Dalay (a)	ا ما ما	0.005		0.052	-	-
HCM Control Delay (s/	ven)	7.6	0	9.5	-	-
HCM Lane LOS		A	Α	A	-	-
HCM 95th %tile Q(veh)	)	0	-	0.2	-	-

# 10: SW 124th Avenue & SW Leveton Drive

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	32	78	347	5	712	58	445
v/c Ratio	0.07	0.09	0.22	0.48	0.01	0.54	0.14	0.30
Control Delay (s/veh)	33.5	16.5	31.2	5.2	11.6	19.8	12.1	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.5	16.5	31.2	5.2	11.6	19.8	12.1	13.6
Queue Length 50th (ft)	7	5	26	1	1	115	10	43
Queue Length 95th (ft)	37	27	94	61	8	270	45	158
Internal Link Dist (ft)		981		1223		1392		1024
Turn Bay Length (ft)	100		150		150		150	
Base Capacity (vph)	638	1179	438	1167	606	2466	980	2524
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.03	0.18	0.30	0.01	0.29	0.06	0.18
Intersection Summary								

	٠	<b>→</b>	•	•	•	•	•	<b>†</b>	~	<b>/</b>	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	<b>₽</b>		ሻ	₽		7	<b>∱</b> ⊅		ሻ	<b>∱</b> ⊅	
Traffic Volume (vph)	20	13	16	71	2	314	5	628	20	53	399	6
Future Volume (vph)	20	13	16	71	2	314	5	628	20	53	399	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
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	0.92		1.00	0.85		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1669		1770	1581		1128	3506		1671	3424	
Flt Permitted	0.95	1.00		0.95	1.00		0.48	1.00		0.27	1.00	
Satd. Flow (perm)	1770	1669		1770	1581		573	3506		467	3424	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	22	14	18	78	2	345	5	690	22	58	438	7
RTOR Reduction (vph)	0	15	0	0	251	0	0	2	0	0	1	0
Lane Group Flow (vph)	22	17	0	78	96	0	5	710	0	58	444	0
Confl. Peds. (#/hr)									3	3		
Heavy Vehicles (%)	2%	2%	6%	2%	50%	2%	60%	2%	15%	8%	5%	17%
Turn Type	Prot	NA		Prot	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							6			2		
Actuated Green, G (s)	0.9	10.0		7.0	16.1		25.5	21.5		25.5	24.8	
Effective Green, g (s)	1.9	11.0		8.0	17.1		27.5	22.5		25.5	24.8	
Actuated g/C Ratio	0.03	0.18		0.13	0.27		0.44	0.36		0.41	0.40	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	53	293		226	432		267	1262		267	1358	
v/s Ratio Prot	0.01	0.01		c0.04	c0.06		0.00	c0.20		c0.01	c0.13	
v/s Ratio Perm							0.01			0.07		
v/c Ratio	0.42	0.06		0.35	0.22		0.02	0.56		0.22	0.33	
Uniform Delay, d1	29.8	21.4		24.9	17.6		9.8	16.1		11.7	13.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.2	0.1		0.9	0.3		0.0	0.6		0.4	0.1	
Delay (s)	35.0	21.5		25.8	17.8		9.9	16.6		12.1	13.2	
Level of Service	С	С		С	В		Α	В		В	В	
Approach Delay (s/veh)		27.0			19.3			16.6			13.1	
Approach LOS		С			В			В			В	
Intersection Summary												
HCM 2000 Control Delay (s/	,		16.6	H	CM 2000	Level of	Service		В			
HCM 2000 Volume to Capac	city ratio		0.43									
Actuated Cycle Length (s)			62.5	Sı	um of lost	time (s)			17.0			
Intersection Capacity Utilizat	tion		55.1%	IC	U Level o	of Service	е		В			
Analysis Period (min)			15									

c Critical Lane Group

	۶	<b>→</b>	•	•	<b>←</b>	•	•	<b>†</b>	<b>/</b>	<b>/</b>	<b>+</b>	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Ť	f)		ሻ	ĵ∍		ሻ	ተኈ		ሻ	<b>↑</b> ↑	
Traffic Volume (veh/h)	20	13	16	71	2	314	5	628	20	53	399	6
Future Volume (veh/h)	20	13	16	71	2	314	5	628	20	53	399	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
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	1811	1870	1159	1870	1011	1870	1678	1781	1826	1648
Adj Flow Rate, veh/h	22	14	18	78	2	345	5	690	22	58	438	7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	6	2	50	2	60	2	15	8	5	17
Cap, veh/h	85	258	332	158	2	379	234	921	29	271	1108	18
Arrive On Green	0.05	0.35	0.33	0.09	0.39	0.37	0.02	0.26	0.25	0.07	0.32	0.32
Sat Flow, veh/h	1781	743	955	1781	6	977	963	3514	112	1697	3494	56
Grp Volume(v), veh/h	22	0	32	78	0	347	5	349	363	58	217	228
Grp Sat Flow(s),veh/h/ln	1781	0	1698	1781	0	983	963	1777	1849	1697	1735	1816
Q Serve(g_s), s	0.9	0.0	0.9	3.1	0.0	25.0	0.3	13.5	13.5	1.8	7.3	7.3
Cycle Q Clear(g_c), s	0.9	0.0	0.9	3.1	0.0	25.0	0.3	13.5	13.5	1.8	7.3	7.3
Prop In Lane	1.00		0.56	1.00		0.99	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	85	0	590	158	0	381	234	466	485	271	550	575
V/C Ratio(X)	0.26	0.00	0.05	0.49	0.00	0.91	0.02	0.75	0.75	0.21	0.40	0.40
Avail Cap(c_a), veh/h	381	0	704	262	0	408	485	737	767	711	928	971
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	0.0	16.4	32.5	0.0	22.1	16.2	25.3	25.4	19.0	19.9	19.9
Incr Delay (d2), s/veh	1.6	0.0	0.0	2.4	0.0	23.2	0.0	2.4	2.4	0.4	0.5	0.4
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	0.4	0.0	0.3	1.4	0.0	7.6	0.1	5.4	5.6	0.7	2.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.9	0.0	16.5	34.9	0.0	45.3	16.3	27.8	27.7	19.4	20.4	20.4
LnGrp LOS	D		В	С		D	В	С	С	В	С	С
Approach Vol, veh/h		54			425			717			503	
Approach Delay, s/veh		24.4			43.4			27.7			20.3	
Approach LOS		С			D			С			С	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.6	23.6	10.6	30.0	5.5	28.7	7.6	33.0				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	25.0	30.0	10.0	30.0	20.0	40.0	15.0	30.0				
Max Q Clear Time (g_c+I1), s	3.8	15.5	5.1	2.9	2.3	9.3	2.9	27.0				
Green Ext Time (p_c), s	0.2	3.0	0.1	0.2	0.0	2.1	0.0	1.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			29.3									
HCM 7th LOS			С									
Notes												
User approved pedestrian inter	rval to be	e less thai	n phase n	nax greer	۱.							

	۶	<b>→</b>	•	•	•	•	•	<b>†</b>	<b>/</b>	<b>&gt;</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	61	9	28	366	2	21	3	11	0	2	13
Future Volume (vph)	6	61	9	28	366	2	21	3	11	0	2	13
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	8	82	12	38	495	3	28	4	15	0	3	18
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	102	536	47	21								
Volume Left (vph)	8	38	28	0								
Volume Right (vph)	12	3	15	18								
Hadj (s)	0.04	0.04	0.12	-0.48								
Departure Headway (s)	4.7	4.3	5.5	4.9								
Degree Utilization, x	0.13	0.63	0.07	0.03								
Capacity (veh/h)	738	831	586	635								
Control Delay (s/veh)	8.4	14.3	8.9	8.1								
Approach Delay (s/veh)	8.4	14.3	8.9	8.1								
Approach LOS	Α	В	Α	Α								
Intersection Summary												
Delay			12.9									
Level of Service			В									
Intersection Capacity Utilizat	ion		41.9%	IC	U Level o	of Service			Α			
Analysis Period (min)			15									

Intersection			
Intersection Delay, s/veh	12.9		
Intersection LOS	В		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	6	61	9	28	366	2	21	3	11	0	2	13
Future Vol, veh/h	6	61	9	28	366	2	21	3	11	0	2	13
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	2	5	11	2	2	2	5	2	25	2	2	2
Mvmt Flow	8	82	12	38	495	3	28	4	15	0	3	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB				SB	
Opposing Approach	WB			EB			SB				NB	
Opposing Lanes	1			1			1				1	
Conflicting Approach Left	SB			NB			EB				WB	
Conflicting Lanes Left	1			1			1				1	
Conflicting Approach Right	NB			SB			WB				EB	
Conflicting Lanes Right	1			1			1				1	
HCM Control Delay, s/veh	8.3			14.3			8.8				8.1	
HCM LOS	Α			В			Α				Α	

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	60%	8%	7%	0%	
Vol Thru, %	9%	80%	92%	13%	
Vol Right, %	31%	12%	1%	87%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	35	76	396	15	
LT Vol	21	6	28	0	
Through Vol	3	61	366	2	
RT Vol	11	9	2	13	
Lane Flow Rate	47	103	535	20	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.07	0.131	0.632	0.028	
Departure Headway (Hd)	5.347	4.595	4.251	4.887	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	669	781	856	730	
Service Time	3.39	2.624	2.251	2.933	
HCM Lane V/C Ratio	0.07	0.132	0.625	0.027	
HCM Control Delay, s/veh	8.8	8.3	14.3	8.1	
HCM Lane LOS	Α	Α	В	Α	
HCM 95th-tile Q	0.2	0.4	4.6	0.1	

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Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	<b>^</b>		ሻ	#	
Traffic Volume (veh/h)	11	60	256	14	75	139	
Future Volume (Veh/h)	11	60	256	14	75	139	
Sign Control	• • •	Free	Free		Stop	100	
Grade		0%	0%		0%		
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	
Hourly flow rate (vph)	14	79	337	18	99	183	
Pedestrians			00.			100	
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type		None	None				
Median storage veh)		110110	110110				
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	355				453	346	
vC1, stage 1 conf vol	000				.00	0.10	
vC2, stage 2 conf vol							
vCu, unblocked vol	355				453	346	
tC, single (s)	4.2				6.4	6.2	
tC, 2 stage (s)					0	0.2	
tF (s)	2.3				3.5	3.3	
p0 queue free %	99				82	74	
cM capacity (veh/h)	1166				556	697	
			27.1			001	
Direction, Lane #	EB 1	WB 1	SB 1	SB 2			
Volume Total	93	355	99	183			
Volume Left	14	0	99	0			
Volume Right	0	18	0	183			
cSH	1166	1700	556	697			
Volume to Capacity	0.01	0.21	0.18	0.26			
Queue Length 95th (ft)	1	0	16	26			
Control Delay (s/veh)	1.3	0.0	12.9	12.0			
Lane LOS	Α		В	В			
Approach Delay (s/veh)	1.3	0.0	12.3				
Approach LOS			В				
Intersection Summary							 _
Average Delay			4.9				
Intersection Capacity Utilizati	on		29.6%	IC	U Level c	of Service	
Analysis Period (min)			15				

Intersection							
Int Delay, s/veh	4.9						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	LDL	<u>-EBI</u>	vvb1 }	WDR	SDL	SDR 7	
Traffic Vol, veh/h	11	<b>6</b> 0	256	14	75	139	
Future Vol, veh/h	11	60	256	14	75	139	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-		-	None	-	None	
Storage Length	-	-	-	_	-	0	
Veh in Median Storage	, # -	0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	76	76	76	76	76	76	
Heavy Vehicles, %	9	9	2	2	3	2	
Mvmt Flow	14	79	337	18	99	183	
Major/Minor	Major1	N	Major2		Minor2		
	355	0		0		346	
Conflicting Flow All	355	U	-		454 346	340	
Stage 1 Stage 2	-	_	-	-	108	-	
Critical Hdwy	4.19	-	-	-	6.43	6.22	
Critical Hdwy Stg 1	4.13	_	-	-	5.43	0.22	
Critical Hdwy Stg 2	-	_	_	-	5.43	-	
Follow-up Hdwy	2.281		_		3.527	3 318	
Pot Cap-1 Maneuver	1166	_	_	_	562	697	
Stage 1		_	_	_	714	-	
Stage 2	-	-	_	-	914	-	
Platoon blocked, %		-	-	-	V 1 1		
Mov Cap-1 Maneuver	1166	-	_	-	555	697	
Mov Cap-2 Maneuver	-	-	_	-	555	-	
Stage 1	-	-	-	-	705	-	
Stage 2	-	_	_	-	914	-	
<b></b> _							
Annroach	EB		WB		SB		
Approach			0		12.31		
HCM Control Delay, s/v	v 1.20		U		12.31 B		
I IOIVI LUO					Б		
Minor Lane/Major Mvm	nt	EBL	EBT	WBT	WBR S	SBLn1 SI	
Capacity (veh/h)		279	-	-	-	555	697
HCM Lane V/C Ratio		0.012	-	-	-	0.178	
HCM Control Delay (s/	veh)	8.1	0	-	-	12.9	12
HCM Lane LOS		Α	Α	-	-	В	В
HCM 95th %tile Q(veh)	)	0	-	-	-	0.6	1.1

	•	-	•	•	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	<b>1</b> >		*	7
Traffic Volume (veh/h)	11	136	227	9	23	38
Future Volume (Veh/h)	11	136	227	9	23	38
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	14	177	295	12	30	49
Pedestrians					15	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	322				521	316
vC1, stage 1 conf vol	V				Ų <u>,</u>	
vC2, stage 2 conf vol						
vCu, unblocked vol	322				521	316
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					0	V.E
tF(s)	2.2				3.5	3.3
p0 queue free %	99				94	93
cM capacity (veh/h)	1220				502	714
		MD 4	OD 4	00.0	002	, , ,
Direction, Lane # Volume Total	EB 1 191	WB 1 307	SB 1 30	SB 2		
				49		
Volume Left	14	0	30	0		
Volume Right	0	12	0	49		
cSH	1220	1700	502	714		
Volume to Capacity	0.01	0.18	0.06	0.07		
Queue Length 95th (ft)	1	0	5	6		
Control Delay (s/veh)	0.7	0.0	12.6	10.4		
Lane LOS	A		В	В		
Approach Delay (s/veh)	0.7	0.0	11.3			
Approach LOS			В			
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utiliza	ation		26.2%	IC	U Level c	of Service
Analysis Period (min)			15			

Intersection							
Int Delay, s/veh	1.7						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	LDL	<u>€</u>	WB1	MOIX	SBL T	JDK 7	
Traffic Vol, veh/h	11	136	227	9	23	38	
Future Vol, veh/h	11	136	227	9	23	38	
Conflicting Peds, #/hr	15	0	0	15	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-		-	None	Stop -	None	
Storage Length	_	-	_	-	_	0	
Veh in Median Storage		0	0	_	0	-	
Grade, %	ε, <del>π</del> - -	0	0	_	0	_	
Peak Hour Factor	77	77	77	77	77	77	
	2	5	2	2	2	2	
Heavy Vehicles, %							
Mvmt Flow	14	177	295	12	30	49	
Major/Minor I	Major1	N	Major2		Minor2		ı
Conflicting Flow All	321	0	-	0	521	316	
Stage 1	-	-	-	-	316	-	
Stage 2	-	-	-	-	205	-	
Critical Hdwy	4.12	-	-	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	-	5.42	-	
Follow-up Hdwy	2.218	-	-	-	3.518	3.318	
Pot Cap-1 Maneuver	1238	-	-	_	516	725	
Stage 1	-	_	-	-	739	-	
Stage 2	-	-	_	-	829	-	
Platoon blocked, %		_	_	_			
Mov Cap-1 Maneuver	1221	-	_	_	495	714	
Mov Cap-2 Maneuver	-	_	_	_	495	-	
Stage 1	_	_	_	_	719	_	
Stage 2	_	_	_	_	817	_	
Olage 2		_			017		
Approach	EB		WB		SB		
HCM Control Delay, s/	v 0.6		0		11.29		
HCM LOS					В		
Minor Lane/Major Mvm	nt	EBL	EBT	WBT	WBR S	SBLn1 S	;
Capacity (veh/h)		135		-	-	495	
HCM Lane V/C Ratio		0.012	-	_	_	0.06	
HCM Control Delay (s/	veh)	8	0	-	_	12.7	Ĭ
HCM Lane LOS	. 511)	A	A	_	_	В	
HCM 95th %tile Q(veh)	)	0	-	_	_	0.2	
TOW JOHN JUNE Q VEIN	/	U				0.2	0

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Volume (veh/h)	0	154	8	6	188	0	27	0	14	0	0	0
Future Volume (Veh/h)	0	154	8	6	188	0	27	0	14	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	0	205	11	8	251	0	36	0	19	0	0	0
Pedestrians								4			15	
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								3.5			3.5	
Percent Blockage								0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	266			220			482	497	215	512	502	266
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	266			220			482	497	215	512	502	266
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			93	100	98	100	100	100
cM capacity (veh/h)	1279			1344			484	464	822	447	460	762
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	216	259	55	0								
Volume Left	0	8	36	0								
Volume Right	11	0	19	0								
cSH	1279	1344	564	1700								
Volume to Capacity	0.00	0.01	0.10	0.00								
Queue Length 95th (ft)	0	0	8	0								
Control Delay (s/veh)	0.0	0.3	12.1	0.0								
Lane LOS		Α	В	Α								
Approach Delay (s/veh)	0.0	0.3	12.1	0.0								
Approach LOS			В	Α								
Intersection Summary												
Average Delay			1.4									
Intersection Capacity Utiliza	tion		24.7%	IC	U Level o	of Service			Α			
Analysis Period (min)			15									

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	0	154	8	6	188	0	27	0	14	0	0	0
Future Vol, veh/h	0	154	8	6	188	0	27	0	14	0	0	0
Conflicting Peds, #/hr	15	0	4	4	0	15	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	_	None	-	_	None	_	-	None	-	-	None
Storage Length	_	_	_	_	_	_	-	-	-	-	-	-
Veh in Median Storage	e,# -	0	-	-	0	-	_	0	-	-	0	-
Grade, %	-,	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	2	3	2	2	3	2	2	2	2	2	2	2
Mvmt Flow	0	205	11	8	251	0	36	0	19	0	0	0
Major/Miner	Maia =4			/oicr0			Mineral			Minero		
	Major1	^		Major2	^		Minor1	400		Minor2	F00	000
Conflicting Flow All	266	0	0	220	0	0	481	496	215	487	502	266
Stage 1	-	-	-	-	-	-	215	215	-	282	282	-
Stage 2	- 4.40	-	-	- 4.40	-	-	267	282	-	205	220	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				3.518	4.018	3.318
Pot Cap-1 Maneuver	1298	-	-	1349	-	-	495	475	825	491	472	773
Stage 1	-	-	-	-	-	-	788	725	-	725	678	-
Stage 2	-	-	-	-	-	-	739	678	-	797	721	-
Platoon blocked, %	4000	-	-	40.44	-	-	400	400	000	470	400	700
Mov Cap-1 Maneuver	1280	-	-	1344	-	-	490	463	822	470	460	762
Mov Cap-2 Maneuver	-	-	-	-	-	-	490	463	-	470	460	-
Stage 1	-	-	-	-	-	-	785	722	-	710	664	-
Stage 2	-	-	-	-	-	-	734	664	-	779	718	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/				0.24			12.01			0		
HCM LOS							В			A		
3 <u></u>												
Minor Lane/Major Mvm	nt 1	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)		568	1280	-	-	56	-	-	-			
HCM Lane V/C Ratio		0.096	-	-	-	0.006	-	-	-			
HCM Control Delay (s/	veh)	12	0	-	-	7.7	0	-	0			
HCM Lane LOS		В	Α	-	-	Α	Α	-	Α			
HCM 95th %tile Q(veh	)	0.3	0	-	-	0	-	-	-			
	,											

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	₽.	
Traffic Volume (veh/h)	32	156	34	38	116	133
Future Volume (Veh/h)	32	156	34	38	116	133
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	42	203	44	49	151	173
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				861		
pX, platoon unblocked						
vC, conflicting volume	376	239	325			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	376	239	325			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	93	75	96			
cM capacity (veh/h)	595	800	1228			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	245	93	324			
Volume Left	42	44	0			
Volume Right	203	0	173			
cSH	755	1228	1700			
Volume to Capacity	0.32	0.04	0.19			
Queue Length 95th (ft)	35	3	0			
Control Delay (s/veh)	12.0	4.0	0.0			
Lane LOS	В	A	0.0			
Approach Delay (s/veh)	12.0	4.0	0.0			
Approach LOS	В	1.0	0.0			
Intersection Summary						
·			5.0			
Average Delay Intersection Capacity Utilizat	tion		39.6%	10	CU Level o	f Convinc
	liUiT			IC	o Level C	i Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	5					
-						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	₽	
Traffic Vol, veh/h	32	156	34	38	116	133
Future Vol, veh/h	32	156	34	38	116	133
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	6	2	3	9	7	2
Mymt Flow	42	203	44	49	151	173
	12	_00		- 10	.01	.10
	Minor2		Major1		/lajor2	
Conflicting Flow All	376	238	324	0	-	0
Stage 1	238	-	-	-	-	-
Stage 2	138	-	-	-	-	-
Critical Hdwy	6.46	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy		3.318	2.227	-	-	-
Pot Cap-1 Maneuver	618	801	1230	-	-	-
Stage 1	792	-	-	-	_	_
Stage 2	879	_	_	_	_	-
Platoon blocked, %	310			_	_	_
Mov Cap-1 Maneuver	594	800	1229			
Mov Cap-1 Maneuver	594	000	1223	-	_	-
•	762	-	-	-	<u>-</u>	-
Stage 1		_	-	-	-	-
Stage 2	878	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s/	v12.02		3.8		0	
HCM LOS	В					
NA' 1 /NA - ' NA	. 1	NDI	NDT	EDL 4	ODT	ODD
Minor Lane/Major Mvm	าเ	NBL		EBLn1	SBT	SBR
Capacity (veh/h)		850	-		-	-
		0.000	_	0.323	-	-
HCM Lane V/C Ratio		0.036				
HCM Lane V/C Ratio HCM Control Delay (s/	veh)	8	0	12	-	-
HCM Lane V/C Ratio	,				- -	-

# 16: SW Herman Road & SW 108th Ave

	•	<b>→</b>	•	<b>\</b>	1
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	8	338	562	284	22
v/c Ratio	0.02	0.40	0.70	0.46	0.04
Control Delay (s/veh)	5.6	9.9	17.3	19.1	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	5.6	9.9	17.3	19.1	8.6
Queue Length 50th (ft)	1	52	101	54	0
Queue Length 95th (ft)	7	136	344	208	17
Internal Link Dist (ft)		877	1007	781	
Turn Bay Length (ft)	100			135	
Base Capacity (vph)	588	1741	1667	1246	1089
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.01	0.19	0.34	0.23	0.02
Intersection Summary					

	•	<b>→</b>	•	•	<b>/</b>	4		
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	ሻ	<b>1</b>	1≽		ሻ	7		
Traffic Volume (vph)	7	311	451	66	261	20		
Future Volume (vph)	7	311	451	66	261	20		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		
Frt	1.00	1.00	0.98		1.00	0.85		
Flt Protected	0.95	1.00	1.00		0.95	1.00		
Satd. Flow (prot)	1583	1776	1761		1770	1538		
Flt Permitted	0.25	1.00	1.00		0.95	1.00		
Satd. Flow (perm)	422	1776	1761		1770	1538		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Adj. Flow (vph)	8	338	490	72	284	22		
RTOR Reduction (vph)	0	0	5	0	0	15		
Lane Group Flow (vph)	8	338	557	0	284	7		
Heavy Vehicles (%)	14%	7%	6%	6%	2%	5%		
Turn Type	D.P+P	NA	NA		Prot	Perm		
Protected Phases	5	2	6		4			
Permitted Phases	6					4		
Actuated Green, G (s)	22.6	28.0	22.0		15.1	15.1		
Effective Green, g (s)	25.4	29.4	23.4		17.6	17.6		
Actuated g/C Ratio	0.46	0.53	0.43		0.32	0.32		
Clearance Time (s)	5.4	5.4	5.4		6.5	6.5		
Vehicle Extension (s)	2.0	3.1	3.1		2.6	2.6		
Lane Grp Cap (vph)	237	949	749		566	492		
v/s Ratio Prot	0.00	c0.19	c0.32		c0.16			
v/s Ratio Perm	0.01					0.00		
v/c Ratio	0.03	0.36	0.74		0.50	0.01		
Uniform Delay, d1	14.7	7.4	13.3		15.1	12.8		
Progression Factor	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.0	0.2	4.0		0.5	0.0		
Delay (s)	14.7	7.6	17.3		15.7	12.8		
Level of Service	В	Α	В		В	В		
Approach Delay (s/veh)		7.8	17.3		15.5			
Approach LOS		Α	В		В			
Intersection Summary								
HCM 2000 Control Delay (s	/veh)		14.1	H	CM 2000	Level of Serv	ce	В
HCM 2000 Volume to Capa	city ratio		0.65					
Actuated Cycle Length (s)			55.0		um of lost			12.0
Intersection Capacity Utiliza	ition		48.9%	IC	CU Level of	of Service		Α
Analysis Period (min)			15					
c Critical Lane Group								

	٠	<b>→</b>	<b>←</b>	•	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		<b>1</b>	₽		ሻ	1
Traffic Volume (veh/h)	7	311	451	66	261	20
Future Volume (veh/h)	7	311	451	66	261	20
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1693	1796	1811	1811	1870	1826
Adj Flow Rate, veh/h	8	338	490	72	284	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	14	7	6	6	2	5
Cap, veh/h	417	1139	823	121	413	359
Arrive On Green	0.03	0.63	0.53	0.51	0.23	0.23
Sat Flow, veh/h	1612	1796	1543	227	1781	1547
Grp Volume(v), veh/h	8	338	0	562	284	22
Grp Sat Flow(s), veh/h/ln	1612	1796	0	1770	1781	1547
Q Serve(g_s), s	0.0	5.1	0.0	13.0	8.7	0.7
Cycle Q Clear(g_c), s	0.0	5.1	0.0	13.0	8.7	0.7
Prop In Lane	1.00	<b>5</b>		0.13	1.00	1.00
Lane Grp Cap(c), veh/h	417	1139	0	944	413	359
V/C Ratio(X)	0.02	0.30	0.00	0.60	0.69	0.06
Avail Cap(c_a), veh/h	670	1394	0.00	1937	968	841
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	4.9	0.0	9.6	21.0	17.9
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.6	1.6	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.3	0.0	4.0	3.5	0.7
Unsig. Movement Delay, s/veh		1.0	0.0	7.∪	0.0	0.1
LnGrp Delay(d), s/veh	12.8	5.1	0.0	10.2	22.6	17.9
LnGrp LOS	12.0 B	3.1 A	0.0	10.2 B	22.0 C	17.9 B
	Б	346	562	Б	306	Б
Approach Vol, veh/h						
Approach Delay, s/veh		5.3	10.2		22.3	
Approach LOS		Α	В		С	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		41.9		17.9	6.0	35.9
Change Period (Y+Rc), s		5.4		6.5	5.4	5.4
Max Green Setting (Gmax), s		45.0		30.0	10.0	64.0
Max Q Clear Time (g_c+l1), s		7.1		10.7	2.0	15.0
Green Ext Time (p_c), s		7.4		0.7	0.0	15.5
Intersection Summary						
HCM 7th Control Delay, s/veh			11.9			
HCM 7th LOS			В			

	-	$\rightarrow$	•	•		~
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1>		ሻ	<b>†</b>	ሻ	7
Traffic Volume (veh/h)	358	80	44	733	153	68
Future Volume (Veh/h)	358	80	44	733	153	68
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	393	88	48	805	168	75
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage veh)				2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			482		1339	438
vC1, stage 1 conf vol					438	
vC2, stage 2 conf vol					901	
vCu, unblocked vol			482		1339	438
tC, single (s)			4.2		6.4	6.3
tC, 2 stage (s)					5.4	0.0
tF (s)			2.3		3.5	3.4
p0 queue free %			95		51	88
cM capacity (veh/h)			1054		342	610
	ED 4	MD 4		ND 4		
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	
Volume Total	481	48	805	168	75	
Volume Left	0	48	0	168	0	
Volume Right	88	0	0	0	75	
cSH	1700	1054	1700	342	610	
Volume to Capacity	0.28	0.05	0.47	0.49	0.12	
Queue Length 95th (ft)	0	4	0	65	10	
Control Delay (s/veh)	0.0	8.6	0.0	25.2	11.7	
Lane LOS		Α		D	В	
Approach Delay (s/veh)	0.0	0.5		21.1		
Approach LOS				С		
Intersection Summary						
Average Delay			3.5			
Intersection Capacity Utilizat	tion		53.7%	IC	U Level c	f Service
Analysis Period (min)			15			

Intersection								
Int Delay, s/veh	16.2							
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	<b>1</b>		ሻ	<b></b>	ሻ	7		
Traffic Vol, veh/h	358	80	44	733	153	68		
Future Vol, veh/h	358	80	44	733	153	68		
Conflicting Peds, #/hr	0	1	1	0	0	0		
Sign Control	Free	Free	Free	Free	Stop	Stop		
RT Channelized	-			None	-			
Storage Length	_	-	25	-	100	0		
Veh in Median Storage	, # 0	_	-	0	0	-		
Grade, %	0	_	_	0	0	_		
Peak Hour Factor	91	91	91	91	91	91		
Heavy Vehicles, %	3	5	7	2	3	6		
Mvmt Flow	393	88	48	805	168	75		
	500	- 55		- 500				
NA - ' - /NA'			M					
	Major1		Major2		Minor1			
Conflicting Flow All	0	0	482	0	1341	438		
Stage 1	-	-	-	-	438	-		
Stage 2	-	-	-	-	902	-		
Critical Hdwy	-	-	4.17	-	6.43	6.26		
Critical Hdwy Stg 1	-	-	-	-	5.43	-		
Critical Hdwy Stg 2	-	-	-	-	5.43	-		
Follow-up Hdwy	-	-	2.263	-	3.527			
Pot Cap-1 Maneuver	-	-	1055	-	~ 167	610		
Stage 1	-	-	-	-	648	-		
Stage 2	-	-	-	-	394	-		
Platoon blocked, %	-	-		-				
Mov Cap-1 Maneuver	-	-	1054	-	~ 159	609		
Mov Cap-2 Maneuver	-	-	-	-	~ 159	-		
Stage 1	-	-	-	-	648	-		
Stage 2	-	-	-	-	376	-		
Approach	EB		WB		NB			
HCM Control Delay, s/v			0.49		103.33			
HCM LOS			J. 10		F			
Minor Long /M. C. M.		NIDL 4	NIDL C	EDT	EDD	MDI	WDT	
Minor Lane/Major Mvm	τ	NBLn11		EBT	EBR	WBL	WBT	
Capacity (veh/h)		159	609	-		1054	-	
HCM Lane V/C Ratio			0.123	-		0.046	-	
HCM Control Delay (s/\	veh)	144	11.7	-	-	8.6	-	
HCM Lane LOS		F	В	-	-	A	-	
HCM 95th %tile Q(veh)		8.5	0.4	-	-	0.1	-	
Notes								
~: Volume exceeds cap	acity	\$: De	elay exc	eeds 3	00s	+: Com	putation Not Defined	*: All major volume in platoon
	-,		,					,

	-	$\rightarrow$	•	•	•	~
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽			4	*/	
Traffic Volume (veh/h)	10	12	58	97	242	20
Future Volume (Veh/h)	10	12	58	97	242	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	16	19	91	152	378	31
Pedestrians					37	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					4	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			72		397	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			72		397	63
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			94		31	97
cM capacity (veh/h)			1444		547	959
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	35	243	409			
Volume Left	0	91	378			
Volume Right	19	0	31			
cSH	1700	1444	565			
Volume to Capacity	0.02	0.06	0.72			
Queue Length 95th (ft)	0	5	150			
Control Delay (s/veh)	0.0	3.2	26.3			
Lane LOS		Α	D			
Approach Delay (s/veh)	0.0	3.2	26.3			
Approach LOS			D			
Intersection Summary						
Average Delay			16.8			
Intersection Capacity Utilization	on		36.3%	IC	U Level o	f Service
Analysis Period (min)			15			

Intersection						
	16.8					
		EDD	///DI	WDT	NDI	NDD
	EBT_	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>1</b>	40		<b>€</b>	<b>\</b>	00
Traffic Vol, veh/h	10	12	58	97	242	20
Future Vol, veh/h	10	12	58	97	242	20
Conflicting Peds, #/hr	0	_ 37	_ 37	_ 0	0	0
	Free	Free	Free	Free	Stop	Stop
RT Channelized	-		-		-	None
Storage Length		-	-	-	0	-
Veh in Median Storage, #		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	25	7	6	4	5
Mvmt Flow	16	19	91	152	378	31
Mai au/Minau	.:1		M-:0		\ A: A	
	ajor1		Major2		Minor1	
Conflicting Flow All	0	0	71	0	395	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	333	-
Critical Hdwy	-	-	4.17	-	6.44	6.25
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.263	-	3.536	3.345
Pot Cap-1 Maneuver	-	-	1498	-	606	995
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	-	722	-
Platoon blocked, %	_	-		-		
Mov Cap-1 Maneuver	-	-	1445	-	545	959
Mov Cap-2 Maneuver	_	_	-	_	545	-
Stage 1	_	_	_	_	922	_
Stage 2	_		_	_	672	_
Stage 2	_	_	_	_	012	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		2.87		26.53	
HCM LOS					D	
Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT
				LDIX	674	
Capacity (veh/h)		563	-	-		-
HCM Lane V/C Ratio	LA	0.727	-		0.063	-
HCM Control Delay (s/ve	n)	26.5	-	-	7.7	0
HCM Lane LOS		D	-	-	A	Α
HCM 95th %tile Q(veh)		6.1	-	-	0.2	-

	•	•	<b>†</b>	~	<b>&gt;</b>	<b>↓</b>	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		7	ተተ	7		<b>^</b>	
Traffic Volume (veh/h)	0	293	1573	29	0	1772	
Future Volume (Veh/h)	0	293	1573	29	0	1772	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	318	1710	32	0	1926	
Pedestrians	1						
Lane Width (ft)	12.0						
Walking Speed (ft/s)	3.5						
Percent Blockage	0						
Right turn flare (veh)							
Median type			None			None	
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	2674	856			1711		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	2674	856			1711		
tC, single (s)	6.8	*6.0			4.1		
tC, 2 stage (s)							
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	15			100		
cM capacity (veh/h)	18	375			367		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	
Volume Total	318	855	855	32	963	963	
Volume Left	0	0	0	0	0	0	
Volume Right	318	0	0	32	0	0	
cSH	375	1700	1700	1700	1700	1700	
Volume to Capacity	0.85	0.50	0.50	0.02	0.57	0.57	
Queue Length 95th (ft)	198	0	0.00	0	0	0	
Control Delay (s/veh)	49.7	0.0	0.0	0.0	0.0	0.0	
Lane LOS	E	0.0	0.0	0.0	0.0	0.0	
Approach Delay (s/veh)	49.7	0.0			0.0		
Approach LOS	E	0.0			0.0		
Intersection Summary							
Average Delay			4.0				
Intersection Capacity Utilizat	tion		68.3%	IC	U Level of	of Service	
Analysis Period (min)			15				

User Entered Value

Intersection						
Int Delay, s/veh	8.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		7	<b>^</b>	7		<b>^</b>
Traffic Vol, veh/h	0	293	1573	29	0	1772
Future Vol, veh/h	0	293	1573	29	0	1772
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	335	-	-
Veh in Median Storage	e,# 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	3	3	4	2	2
Mvmt Flow	0	318	1710	32	0	1926
Major/Minor	Minor1	N	Major1	N	1ajor2	
Conflicting Flow All	-	855	0		-	
Stage 1	_	-	-	-	-	-
Stage 2	_	_	_	_	_	_
Critical Hdwy	_	6.96	_	_	_	_
Critical Hdwy Stg 1	_	-	_	_	_	_
Critical Hdwy Stg 2	_	_	_	_	_	_
Follow-up Hdwy	_	3.33	_	_	_	_
Pot Cap-1 Maneuver	0	~ 300	_	0	0	_
Stage 1	0	-	_	0	0	_
Stage 2	0	_	_	0	0	_
Platoon blocked, %	U		_	U	U	_
Mov Cap-1 Maneuver		~ 300	_	_	_	_
Mov Cap-1 Maneuver		300	_	_		_
Stage 1		-		-	-	-
Stage 2	-	_	-	-	-	-
Stage 2		_	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s/			0		0	
HCM LOS	F					
Minor Lane/Major Mvn	nt	NRTV	VBLn1	SBT		
Capacity (veh/h)	III	NUIV	300			
HCM Lane V/C Ratio		-	1.063	-		
	/vob)		108.3	-		
HCM Long LOS	/ven)	-		-		
HCM Of the % tills O(yeah	.)	-	F	-		
HCM 95th %tile Q(veh	1)	-	12.2	-		
Notes						
~: Volume exceeds ca	nacity	¢. De	lav ovo	eeds 30	nne	+: Com

	•			•	•	<b>†</b>	<b>\</b>	1
	_	-	•		`	1	-	•
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	8	605	49	353	188	223	21	191
v/c Ratio	0.02	0.71	0.16	0.35	0.55	0.43	0.07	0.68
Control Delay (s/veh)	12.8	28.6	13.3	16.7	33.5	35.2	25.2	55.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.8	28.6	13.3	16.7	33.5	35.2	25.2	55.6
Queue Length 50th (ft)	2	315	14	124	100	122	10	125
Queue Length 95th (ft)	10	475	35	238	141	191	24	188
Internal Link Dist (ft)		1007		989		572		1708
Turn Bay Length (ft)	100		100		60		50	
Base Capacity (vph)	614	851	457	1009	393	916	482	858
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.71	0.11	0.35	0.48	0.24	0.04	0.22
Intersection Summary								

	٠	<b>→</b>	•	•	<b>←</b>	•	•	<b>†</b>	~	<b>&gt;</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	₽		ሻ	1•		ሻ	1>		*	1>	
Traffic Volume (vph)	6	228	256	39	254	28	150	146	32	17	125	28
Future Volume (vph)	6	228	256	39	254	28	150	146	32	17	125	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	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	0.92		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1543	1663		1626	1803		1596	1732		1703	1617	
Flt Permitted	0.51	1.00		0.23	1.00		0.37	1.00		0.62	1.00	
Satd. Flow (perm)	826	1663		398	1803		628	1732		1110	1617	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	8	285	320	49	318	35	188	182	40	21	156	35
RTOR Reduction (vph)	0	18	0	0	1	0	0	0	0	0	6	0
Lane Group Flow (vph)	8	587	0	49	352	0	188	223	0	21	185	0
Confl. Peds. (#/hr)							1					1
Heavy Vehicles (%)	17%	2%	8%	11%	4%	2%	13%	6%	10%	6%	16%	4%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	58.2	57.2		66.2	61.2		38.9	32.6		23.1	20.8	
Effective Green, g (s)	58.2	57.7		66.2	61.7		38.9	33.1		23.1	21.3	
Actuated g/C Ratio	0.50	0.50		0.57	0.53		0.34	0.29		0.20	0.18	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	3.2		2.0	3.2		2.0	3.2		2.0	3.2	
Lane Grp Cap (vph)	420	826		279	958		327	493		232	296	
v/s Ratio Prot	0.00	c0.35		c0.01	c0.19		c0.07	0.13		0.00	0.11	
v/s Ratio Perm	0.01			0.09			c0.12			0.02		
v/c Ratio	0.02	0.71		0.18	0.37		0.57	0.45		0.09	0.63	
Uniform Delay, d1	14.6	22.7		14.8	15.8		29.6	34.1		37.7	43.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	2.9		0.1	0.3		1.5	0.7		0.1	4.2	
Delay (s)	14.6	25.7		14.9	16.1		31.2	34.8		37.8	47.9	
Level of Service	В	С		В	В		С	С		D	D	
Approach Delay (s/veh)		25.5			15.9			33.1			46.9	
Approach LOS		С			В			С			D	
Intersection Summary												
HCM 2000 Control Delay (s	s/veh)		27.8	Н	CM 2000	Level of	Service		С			
HCM 2000 Volume to Capa	,		0.65									
Actuated Cycle Length (s)	•		116.1	S	um of lost	time (s)			18.0			
Intersection Capacity Utiliza	ation		60.8%		CU Level		)		В			
Analysis Period (min)			15									

	۶	<b>→</b>	•	•	•	•	•	<b>†</b>	<b>/</b>	<b>/</b>	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	<b>⊕</b>		Ť	ĵ∌		7	<b>₽</b>		7	ĵ₃	
Traffic Volume (veh/h)	6	228	256	39	254	28	150	146	32	17	125	28
Future Volume (veh/h)	6	228	256	39	254	28	150	146	32	17	125	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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	1648	1870	1781	1737	1841	1870	1707	1811	1752	1811	1663	1841
Adj Flow Rate, veh/h	8	285	320	49	318	35	188	182	40	21	156	35
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	17	2	8	11	4	2	13	6	10	6	16	4
Cap, veh/h	441	378	424	285	815	90	315	357	78	276	202	45
Arrive On Green	0.01	0.47	0.46	0.04	0.50	0.49	0.12	0.25	0.24	0.02	0.15	0.15
Sat Flow, veh/h	1570	804	903	1654	1629	179	1626	1438	316	1725	1314	295
Grp Volume(v), veh/h	8	0	605	49	0	353	188	0	222	21	0	191
Grp Sat Flow(s),veh/h/ln	1570	0	1708	1654	0	1808	1626	0	1753	1725	0	1609
Q Serve(g_s), s	0.2	0.0	24.1	1.2	0.0	10.0	7.7	0.0	9.0	0.8	0.0	9.4
Cycle Q Clear(g_c), s	0.2	0.0	24.1	1.2	0.0	10.0	7.7	0.0	9.0	0.8	0.0	9.4
Prop In Lane	1.00		0.53	1.00		0.10	1.00		0.18	1.00		0.18
Lane Grp Cap(c), veh/h	441	0	802	285	0	905	315	0	435	276	0	247
V/C Ratio(X)	0.02	0.00	0.75	0.17	0.00	0.39	0.60	0.00	0.51	0.08	0.00	0.77
Avail Cap(c_a), veh/h	805	0	1127	618	0	1172	517	0	1221	654	0	1081
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.8	0.0	18.1	14.1	0.0	12.8	24.5	0.0	26.8	28.8	0.0	33.6
Incr Delay (d2), s/veh	0.0	0.0	2.0	0.1	0.0	0.3	0.7	0.0	1.0	0.0	0.0	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	0.1	0.0	8.6	0.4	0.0	3.7	2.9	0.0	3.7	0.3	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	11.8	0.0	20.1	14.2	0.0	13.1	25.2	0.0	27.8	28.8	0.0	39.2
LnGrp LOS	В		С	В		В	С		С	С		D
Approach Vol, veh/h		613			402			410			212	
Approach Delay, s/veh		20.0			13.3			26.6			38.2	
Approach LOS		В			В			C			D	
	1		2	1		c	7					
Timer - Assigned Phs  Phy Duration (C - Y - Ps) - s	7.4	12.0	12.7	17.7	5 4.8	46.3	<u>7</u>	25.5				
Phs Duration (G+Y+Rc), s	7.4 4.0	43.8	13.7 4.0	17.7	4.0		5.9					
Change Period (Y+Rc), s		5.5		5.5		5.5	4.0	5.5				
Max Green Setting (Gmax), s	20.0	54.0	20.0	55.0	20.0	53.0	20.0	57.0				
Max Q Clear Time (g_c+I1), s	3.2	26.1	9.7	11.4	2.2	12.0	2.8	11.0				
Green Ext Time (p_c), s	0.0	12.2	0.2	0.7	0.0	8.2	0.1	3.2				
Intersection Summary			0.00									
HCM 7th Control Delay, s/veh			22.3									
HCM 7th LOS			С									

## 21: OR 99W (Pacific Highway) & SW Fischer Road

	•	•	•	<b>†</b>	ļ	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	200	352	370	1691	1590	332
v/c Ratio	0.99	0.84	0.95	0.58	0.80	0.34
Control Delay (s/veh)	121.9	32.0	89.1	4.9	32.7	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	121.9	32.0	89.1	4.9	32.7	7.4
Queue Length 50th (ft)	185	61	335	213	772	56
Queue Length 95th (ft)	#349	#228	#531	250	m854	m81
Internal Link Dist (ft)	1134			1909	2372	
Turn Bay Length (ft)	275		435			200
Base Capacity (vph)	202	419	391	2932	1995	966
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.84	0.95	0.58	0.80	0.34

### Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	۶	$\rightarrow$	•	<b>†</b>	L	ļ	∢	
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	
Lane Configurations	ሻ	7	ሻ	<b>^</b>	Ð	<b>^</b>	7	
Traffic Volume (vph)	184	324	340	1556	0	1463	305	
Future Volume (vph)	184	324	340	1556	0	1463	305	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95		0.95	1.00	
Frpb, ped/bikes	1.00	0.97	1.00	1.00		1.00	0.95	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.85	1.00	1.00		1.00	0.85	
Flt Protected	0.95	1.00	0.95	1.00		1.00	1.00	
Satd. Flow (prot)	1770	1493	1770	3539		3438	1509	
Flt Permitted	0.95	1.00	0.95	1.00		1.00	1.00	
Satd. Flow (perm)	1770	1493	1770	3539	0.00	3438	1509	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	200	352	370	1691	0	1590	332	
RTOR Reduction (vph)	0	249	0	0	0	0	92	
Lane Group Flow (vph)	200	103	370	1691	0	1590	240	
Confl. Peds. (#/hr)	00/	21	9	00/	00/	<b>50</b> /	9	
Heavy Vehicles (%)	2%	5%	2%	2%	2%	5%	2%	
Turn Type	Prot	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	4	4	5	2	1	6	0	
Permitted Phases	45.0	4 - 4	00.0	444.0		70.0	6	
Actuated Green, G (s)	15.0	15.0	29.3	114.0		79.2	79.2	
Effective Green, g (s)	16.0	16.0	30.8	116.0		81.2	81.2	
Actuated g/C Ratio	0.11	0.11	0.22	0.83		0.58	0.58	
Clearance Time (s)	5.0	5.0	5.5	6.0		6.0	6.0	
Vehicle Extension (s)	2.5	2.5	2.3	4.5		4.5	4.5	
Lane Grp Cap (vph)	202	170	389	2932		1994	875	
v/s Ratio Prot	c0.11	0.07	c0.21	0.48		c0.46	0.40	
v/s Ratio Perm	0.00	0.07	0.05	0.50		0.00	0.16	
v/c Ratio	0.99	0.61	0.95	0.58		0.80	0.27	
Uniform Delay, d1	61.9 1.00	59.0	53.9 1.00	3.9		23.0 1.30	14.7 1.36	
Progression Factor	60.3	1.00 5.1	33.0	1.00 0.8		2.2	0.5	
Incremental Delay, d2	122.2	64.1	33.0 86.9	4.8		32.0	20.4	
Delay (s) Level of Service	122.2 F	04.1 E	66.9 F			32.0 C	20.4 C	
	85.2	E	Г	A 19.5		30.0	C	
Approach Delay (s/veh) Approach LOS	65.2 F			19.5 B		30.0 C		
	Г			D		U		
Intersection Summary	/ la \		20.0	11/	DNA 0000	L L - C -	3 d	
HCM 2000 Control Delay (s.			32.0	H(	JIVI ∠UUÜ	Level of S	service	
HCM 2000 Volume to Capa	city ratio		0.86	C.	ım of last	time (a)		
Actuated Cycle Length (s)	tion		140.0 95.3%		ım of lost	time (s) of Service		
Intersection Capacity Utiliza	IUUII			IU	O Level C	n service		
Analysis Period (min)			15					

	٠	•	•	<b>†</b>	L.	ļ	4
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations	ኻ	7	ች	<b>^</b>	Ð	<b>^</b>	7
Traffic Volume (veh/h)	184	324	340	1556	0	1463	305
Future Volume (veh/h)	184	324	340	1556	0	1463	305
Initial Q (Qb), veh	0	0	0	0		0	0
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00				0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No			No		No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870		1826	1870
Adj Flow Rate, veh/h	200	352	370	1691		1590	332
Peak Hour Factor	0.92	0.92	0.92	0.92		0.92	0.92
Percent Heavy Veh, %	2	5	2	2		5	2
Cap, veh/h	204	177	394	2944		2007	910
Arrive On Green	0.11	0.11	0.22	0.83		1.00	1.00
Sat Flow, veh/h	1781	1547	1781	3647		3561	1573
Grp Volume(v), veh/h	200	352	370	1691		1590	332
Grp Sat Flow(s),veh/h/ln	1781	1547	1781	1777		1735	1573
Q Serve(g_s), s	15.7	16.0	28.6	21.8		0.0	0.0
Cycle Q Clear(g_c), s	15.7	16.0	28.6	21.8		0.0	0.0
Prop In Lane	1.00	1.00	1.00				1.00
Lane Grp Cap(c), veh/h	204	177	394	2944		2007	910
V/C Ratio(X)	0.98	1.99	0.94	0.57		0.79	0.36
Avail Cap(c_a), veh/h	204	177	394	2944		2007	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00		2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		0.51	0.51
Uniform Delay (d), s/veh	61.9	62.0	53.6	3.9		0.0	0.0
Incr Delay (d2), s/veh	57.8	465.3	29.8	0.8		1.7	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	35.8	15.7	5.3		0.5	0.1
Unsig. Movement Delay, s/ve							
LnGrp Delay(d), s/veh	119.6	527.3	83.4	4.7		1.7	0.6
LnGrp LOS	F	F	F	Α		Α	Α
Approach Vol, veh/h	552			2061		1922	
Approach Delay, s/veh	379.6			18.9		1.5	
Approach LOS	F			В		Α	
Timer - Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		120.0		20.0	35.0	85.0	
Change Period (Y+Rc), s		6.0		5.0	5.5	6.0	
Max Green Setting (Gmax), s		94.0		15.0	29.5	79.0	
Max Q Clear Time (g_c+l1), s	3	23.8		18.0	30.6	2.0	
Green Ext Time (p_c), s		64.5		0.0	0.0	65.6	
Intersection Summary							
HCM 7th Control Delay, s/veh	1		55.4				
HCM 7th LOS			E				
Notes							
User approved pedestrian inte	erval to b	e less thai	n phase n	nax green			

User approved ignoring U-Turning movement.

	-	•	•	*	•	<b>†</b>	/	-	<b>↓</b>	4	
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	176	320	322	414	135	1309	247	482	1188	22	
v/c Ratio	0.50	0.92	0.92	0.69	0.83	0.96	0.25	0.90	0.76	0.03	
Control Delay (s/veh)	42.1	87.2	86.1	14.7	92.4	52.3	3.5	78.3	35.9	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	42.1	87.2	86.1	14.7	92.4	52.3	3.5	78.3	35.9	0.0	
Queue Length 50th (ft)	49	303	305	40	124	496	16	223	471	0	
Queue Length 95th (ft)	88	#504	#505	162	m#219	m#751	m42	#312	562	0	
Internal Link Dist (ft)	481		939			2372			1326		
Turn Bay Length (ft)		300		315	550		140	265		400	
Base Capacity (vph)	391	346	350	602	171	1361	979	556	1563	764	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.45	0.92	0.92	0.69	0.79	0.96	0.25	0.87	0.76	0.03	

### Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	•	<b>→</b>	$\rightarrow$	•	<b>—</b>	•	•	<b>†</b>	/	<b>\</b>	<b>↓</b>	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4Te		ሻ	4	7	ሻ	<b>^</b>	7	ሻሻ	<b>†</b> †	7
Traffic Volume (vph)	23	78	65	527	76	389	127	1230	232	453	1117	21
Future Volume (vph)	23	78	65	527	76	389	127	1230	232	453	1117	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Lane Util. Factor		0.95		0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3296		1681	1702	1533	1770	3505	1561	3433	3438	1547
Flt Permitted		0.99		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3296		1681	1702	1533	1770	3505	1561	3433	3438	1547
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	24	83	69	561	81	414	135	1309	247	482	1188	22
RTOR Reduction (vph)	0	63	0	0	0	287	0	0	58	0	0	12
Lane Group Flow (vph)	0	113	0	320	322	127	135	1309	189	482	1188	10
Confl. Peds. (#/hr)	7					7	1		7	7		1
Heavy Vehicles (%)	2%	2%	3%	2%	3%	3%	2%	3%	2%	2%	5%	2%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	3	3		4	4		5	2	4	1	6	
Permitted Phases						4			2			6
Actuated Green, G (s)		12.2		28.8	28.8	28.8	12.9	54.4	83.2	21.9	63.7	63.7
Effective Green, g (s)		12.2		28.8	28.8	28.8	12.9	54.4	83.2	21.9	63.7	63.7
Actuated g/C Ratio		0.09		0.21	0.21	0.21	0.09	0.39	0.59	0.16	0.46	0.46
Clearance Time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Vehicle Extension (s)		2.3		2.3	2.3	2.3	2.3	4.5	2.3	2.3	4.8	4.8
Lane Grp Cap (vph)		287		345	350	315	163	1361	927	537	1564	703
v/s Ratio Prot		c0.03		c0.19	0.19		0.08	c0.37	0.04	c0.14	0.35	
v/s Ratio Perm						0.08			0.08			0.01
v/c Ratio		0.39		0.93	0.92	0.40	0.83	0.96	0.20	0.90	0.76	0.01
Uniform Delay, d1		60.4		54.6	54.5	48.2	62.5	41.8	13.1	57.9	31.8	20.9
Progression Factor		1.00		1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.5		30.1	28.6	0.5	22.3	14.3	0.1	17.4	3.5	0.0
Delay (s)		60.9		84.6	83.0	48.7	84.8	51.9	13.2	75.3	35.3	21.0
Level of Service		Е		F	F	D	F	D	В	Е	D	С
Approach Delay (s/veh)		60.9			70.0			48.9			46.5	
Approach LOS		Е			Е			D			D	
Intersection Summary												
·	/vab)		E2 2	Ш	CM 2000	Laval of C	`omioo		D			
HCM 2000 Control Delay (s	,		53.3	H	CIVI ZUUU	Level of S	bei vice		U			
HCM 2000 Volume to Capa	city ratio		0.88	O.	ım of local	t time (a)			22.7			
Actuated Cycle Length (s)	tion		140.0		um of lost				22.7			
Intersection Capacity Utiliza	uon		92.4%	IC	U Level (	of Service			F			
Analysis Period (min)			15									

Analysis Period (min)
c Critical Lane Group

HCM 7th Edition methodology does not support exclusive ped or hold phases.

# 1: SW 124th Avenue & OR 99W (Pacific Highway)

	-	•	•	•	1	~
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1038	574	1136	781	179	381
v/c Ratio	0.88	0.67	0.83	0.29	0.36	0.28
Control Delay (s/veh)	47.6	10.3	39.4	5.2	25.0	15.3
Queue Delay	0.0	0.0	0.4	0.0	0.0	0.0
Total Delay (s/veh)	47.6	10.4	39.8	5.2	25.0	15.3
Queue Length 50th (ft)	396	51	378	63	71	143
Queue Length 95th (ft)	#502	179	#723	181	35	193
Internal Link Dist (ft)	1687			1822	503	
Turn Bay Length (ft)		225	550		300	275
Base Capacity (vph)	1174	851	1369	2674	990	1371
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	5	35	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.68	0.85	0.29	0.18	0.28
Intersection Summary						

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	-	•	•	<b>←</b>	•	<b>/</b>		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	<b>^</b>	1	ሻሻ	<b>^</b>	ሻሻ	77		
Traffic Volume (vph)	934	517	1022	703	161	343		
Future Volume (vph)	934	517	1022	703	161	343		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	5.6		
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88		
Frpb, ped/bikes	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		
Frt	1.00	0.85	1.00	1.00	1.00	0.85		
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00		
Satd. Flow (prot)	3438	1568	3400	3438	3213	2472		
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00		
Satd. Flow (perm)	3438	1568	3400	3438	3213	2472		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Adj. Flow (vph)	1038	574	1136	781	179	381		
RTOR Reduction (vph)	0	315	0	0	0	0		
Lane Group Flow (vph)	1038	259	1136	781	179	381		
Confl. Peds. (#/hr)						3		
Heavy Vehicles (%)	5%	3%	3%	5%	9%	15%		
Turn Type	NA	Perm	Prot	NA	Prot	pt+ov		
Protected Phases	2		1	6	8	1 4		
Permitted Phases		2						
Actuated Green, G (s)	39.0	39.0	43.5	88.1	19.9	63.4		
Effective Green, g (s)	41.0	41.0	45.1	90.1	21.9	58.4		
Actuated g/C Ratio	0.34	0.34	0.38	0.75	0.18	0.49		
Clearance Time (s)	6.0	6.0	5.6	6.0	6.0			
Vehicle Extension (s)	5.4	5.4	2.3	5.4	2.3			
Lane Grp Cap (vph)	1174	535	1277	2581	586	1203		
v/s Ratio Prot	c0.30		c0.33	0.23	c0.06	0.15		
v/s Ratio Perm		0.16						
v/c Ratio	0.88	0.48	0.89	0.30	0.31	0.32		
Uniform Delay, d1	37.3	31.1	35.1	4.8	42.5	18.7		
Progression Factor	1.00	1.00	1.00	1.00	0.53	0.98		
Incremental Delay, d2	8.9	1.6	9.5	0.3	0.2	0.1		
Delay (s)	46.2	32.8	44.6	5.1	22.7	18.4		
Level of Service	D	С	D	A	С	В		
Approach Delay (s/veh)	41.4			28.5	19.8			
Approach LOS	D			С	В			
Intersection Summary								
HCM 2000 Control Delay (s/	/veh)		32.4	H	CM 2000	Level of Service	е	С
HCM 2000 Volume to Capaci			0.82		_,_,	20.710		-
Actuated Cycle Length (s)	.,		120.0	Sı	um of lost	time (s)		18.6
Intersection Capacity Utiliza	tion		94.1%			of Service		F
Analysis Period (min)			15					
c Critical Lane Group								

HCM 7th Edition methodology does not support exclusive ped or hold phases.

## 2: SW 124th Avenue & SW Tualatin Road

	•	•	<b>†</b>	-	<b>/</b>	ļ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	59	239	349	53	947	834
v/c Ratio	0.29	0.19	0.68	0.18	0.81	0.30
Control Delay (s/veh)	48.1	0.9	53.0	11.8	19.9	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.1	0.9	53.0	11.8	19.9	4.3
Queue Length 50th (ft)	44	0	135	0	133	42
Queue Length 95th (ft)	68	17	168	32	#847	155
Internal Link Dist (ft)	1180		1024			503
Turn Bay Length (ft)	25	300		150	200	
Base Capacity (vph)	437	1415	1006	512	1170	2768
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.17	0.35	0.10	0.81	0.30
Internación Comercia						

Intersection Summary
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	•	•	<b>†</b>	~	<b>\</b>	<b>↓</b>		
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	*	7	<b>^</b>	1	ሻ	<b>†</b> †		
Traffic Volume (vph)	51	208	304	46	824	726		
Future Volume (vph)	51	208	304	46	824	726		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	0.0	4.5	4.5	4.0	4.5		
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95		
Frpb, ped/bikes	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		
Frt	1.00	0.85	1.00	0.85	1.00	1.00		
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1641	1509	3059	1449	1752	3438		
Flt Permitted	0.95	1.00	1.00	1.00	0.36	1.00		
Satd. Flow (perm)	1641	1509	3059	1449	664	3438		
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87		
Adj. Flow (vph)	59	239	349	53	947	834		
RTOR Reduction (vph)	0	49	0	44	0	0		
Lane Group Flow (vph)	59	190	349	9	947	834		
Confl. Peds. (#/hr)				1	1			
Heavy Vehicles (%)	10%	7%	18%	9%	3%	5%		
Turn Type	Perm	pt+ov	NA	Perm	D.P+P	NA		
Protected Phases		4 5	6		5	2		
Permitted Phases	4			6	6			
Actuated Green, G (s)	13.9	90.2	19.3	19.3	90.6	95.6		
Effective Green, g (s)	14.9	95.2	20.3	20.3	92.6	96.6		
Actuated g/C Ratio	0.12	0.79	0.17	0.17	0.77	0.81		
Clearance Time (s)	5.0		5.5	5.5	5.0	5.5		
Vehicle Extension (s)	4.0		4.5	4.5	4.0	4.5		
Lane Grp Cap (vph)	203	1197	517	245	1167	2767		
v/s Ratio Prot		0.13	0.11		c0.49	0.24		
v/s Ratio Perm	c0.04			0.01	c0.14			
v/c Ratio	0.29	0.16	0.68	0.04	0.81	0.30		
Uniform Delay, d1	47.7	2.9	46.8	41.7	12.4	3.0		
Progression Factor	1.00	1.00	1.00	1.00	0.95	1.03		
Incremental Delay, d2	1.1	0.1	4.1	0.1	3.2	0.2		
Delay (s)	48.8	3.0	50.9	41.8	15.0	3.3		
Level of Service	D	Α	D	D	В	Α		
Approach Delay (s/veh)	12.1		49.7			9.5		
Approach LOS	В		D			Α		
Intersection Summary								
HCM 2000 Control Delay (sa	/veh)		16.3	H	ICM 2000	Level of Service	)	
HCM 2000 Volume to Capa			0.74					
Actuated Cycle Length (s)			120.0	S	Sum of lost	t time (s)		
Intersection Capacity Utiliza	tion		69.0%		CU Level o			
Analysis Period (min)			15					
o Critical Lang Group								

HCM 7th Edition methodology does not support exclusive ped or hold phases.

	٠	<b>→</b>	•	•	+	•	•	<b>†</b>	<b>/</b>	<b>/</b>	<b>+</b>	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		ሻ	₽		ሻ	ĵ₃			4	
Traffic Volume (veh/h)	64	706	185	72	226	132	17	4	10	41	2	30
Future Volume (Veh/h)	64	706	185	72	226	132	17	4	10	41	2	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	70	767	201	78	246	143	18	4	11	45	2	33
Pedestrians								1			1	
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								3.5			3.5	
Percent Blockage								0			0	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	390			969			1445	1555	869	1395	1584	319
vC1, stage 1 conf vol							1009	1009		475	475	
vC2, stage 2 conf vol							436	546		920	1109	
vCu, unblocked vol	390			969			1445	1555	869	1395	1584	319
tC, single (s)	4.1			4.6			8.1	6.5	7.2	7.2	6.5	6.3
tC, 2 stage (s)							7.1	5.5		6.2	5.5	
tF (s)	2.2			2.7			4.4	4.0	4.2	3.6	4.0	3.4
p0 queue free %	94			86			89	98	95	76	99	95
cM capacity (veh/h)	1162			550			159	244	240	189	180	694
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	70	968	78	389	18	15	80					
Volume Left	70	0	78	0	18	0	45					
Volume Right	0	201	0	143	0	11	33					
cSH	1162	1700	550	1700	159	241	270					
Volume to Capacity	0.06	0.57	0.14	0.23	0.11	0.06	0.30					
Queue Length 95th (ft)	5	0	12	0	9	5	30					
Control Delay (s/veh)	8.3	0.0	12.6	0.0	30.6	20.9	23.9					
Lane LOS	Α		В		D	С	С					
Approach Delay (s/veh)	0.6		2.1		26.2	•	23.9					
Approach LOS					D		С					
Intersection Summary												
Average Delay			2.7									
Intersection Capacity Utiliza	ation		73.3%	IC	U Level	of Service			D			
Analysis Period (min)			15									
•												

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ĵ.		ሻ	ĵ.		ሻ	1→			4	
Traffic Vol, veh/h	64	706	185	72	226	132	17	4	10	41	2	30
Future Vol, veh/h	64	706	185	72	226	132	17	4	10	41	2	30
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	<u>-</u>	None	-	-	None
Storage Length	25	_	-	25	_	-	0	_	_	-	-	_
Veh in Median Storage	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	2	40	50	9	7	100	2	100	10	2	14
Mvmt Flow	70	767	201	78	246	143	18	4	11	45	2	33
Major/Minor	Majort			/oier2		_N	Minor1			Minor?		
	Major1	0		Major2	0		Minor1	1555		Minor2	4504	240
Conflicting Flow All	390	0	0	969	0	0	1411	1555	869	1384	1584	318
Stage 1	-	-	-	-	-	-	1008	1008	-	475	475	-
Stage 2	4.40	-	-	-	-	-	403	547	7.0	909	1109	-
Critical Hdwy	4.13	-	-	4.6	-	-	8.1	6.52	7.2	7.2	6.52	6.34
Critical Hdwy Stg 1	-	-	-	-	-	-	7.1	5.52	-	6.2	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.1	5.52	-	6.2	5.52	- 400
Follow-up Hdwy	2.227	-	-	2.65	-	-		4.018	4.2	3.59	4.018	3.426
Pot Cap-1 Maneuver	1163	-	-	551	-	-	72	113	240	116	108	695
Stage 1	-	-	-	-	-	-	195	318	-	556	557	-
Stage 2	-	-	-	-	-	-	468	518	-	319	285	-
Platoon blocked, %	4 / 2 2	-	-		-	-	- /					
Mov Cap-1 Maneuver	1162	-	-	550	-	-	54	91	240	86	87	695
Mov Cap-2 Maneuver	-	-	-	-	-	-	54	91	-	86	87	-
Stage 1	-	-	-	-	-	-	183	299	-	476	478	-
Stage 2	-	-	-	-	-	-	381	444	-	282	268	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/				2.11			69.77			64.65		
HCM LOS	. 0.00						F			F		
							•			•		
Minor Long/Major Mare	.4	NIDI ~1 N	UDI ~2	EDI	EDT	EDD	///DI	WDT	W/DD (	CDI n1		
Minor Lane/Major Mvm	IL I	NBLn11		EBL	EBT	EBR	WBL	WBT	WBR			
Capacity (veh/h)		54	163	1162	-	-	550	-	-	134		
HCM Lane V/C Ratio		0.342		0.06	-	-	0.142	-		0.591		
HCM Control Delay (s/	veh)	103.1	29.3	8.3	-	-	12.6	-	-	64.7		
HCM Lane LOS		F	D	A	-	-	В	-	-	F		
HCM 95th %tile Q(veh)	)	1.2	0.3	0.2	-	-	0.5	-	-	3		

	•	<b>→</b>	•	•	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<b>†</b>	<b></b>		*/*	
Traffic Volume (veh/h)	5	727	409	10	19	7
Future Volume (Veh/h)	5	727	409	10	19	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	5	757	426	10	20	7
Pedestrians					6	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)					•	
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		_				
pX, platoon unblocked						
vC, conflicting volume	442				1204	437
vC1, stage 1 conf vol	774				437	101
vC2, stage 2 conf vol					767	
vCu, unblocked vol	442				1204	437
tC, single (s)	4.3				6.5	6.2
tC, 2 stage (s)	7.0				5.5	٥.٢
tF (s)	2.4				3.6	3.3
p0 queue free %	100				95	99
cM capacity (veh/h)	1023				396	616
		E5.4	14/5 4	05.4	J30	010
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	5	757	436	27		
Volume Left	5	0	0	20		
Volume Right	0	0	10	7		
cSH	1023	1700	1700	437		
Volume to Capacity	0.00	0.45	0.26	0.06		
Queue Length 95th (ft)	0	0	0	5		
Control Delay (s/veh)	8.5	0.0	0.0	13.8		
Lane LOS	Α			В		
Approach Delay (s/veh)	0.1		0.0	13.8		
Approach LOS				В		
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilizat	tion		48.3%	IC	U Level o	of Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	0.4					
-		EDT	MPT	WED	ODI	CDD
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	Ţ	<b>†</b>	100	40	<b>Y</b>	-
Traffic Vol, veh/h	5	727	409	10	19	7
Future Vol, veh/h	5	727	409	10	19	7
Conflicting Peds, #/hr	_ 6	_ 0	_ 0	_ 6	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage,	,# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	20	3	9	20	6	2
Mvmt Flow	5	757	426	10	20	7
Mai/Mi	A - ! - A		4-1- 0		A:	
	Major1		//ajor2		Minor2	40-
Conflicting Flow All	442	0	-	0	1205	437
Stage 1	-	-	-	-	437	-
Stage 2	-	-	-	-	768	-
Critical Hdwy	4.3	-	-	-	6.46	6.22
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.38	-	-	-	3.554	3.318
Pot Cap-1 Maneuver	1028	-	-	-	199	619
Stage 1	-	-	-	-	643	-
Stage 2	-	-	-	-	451	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1023	-	-	-	196	616
Mov Cap-2 Maneuver	-	-	_	-	325	-
Stage 1	-	-	-	_	636	-
Stage 2	_	_	_	_	448	_
Olago Z					i-10	
Approach	EB		WB		SB	
HCM Control Delay, s/v	0.06		0		15.42	
HCM LOS					С	
Minor Long/Major Myrad	L	EDI	EDT	WDT	W/DD (	ODL =4
Minor Lane/Major Mvm	l e	EBL	EBT	WBT	WBR	
Capacity (veh/h)		1023	-	-	-	373
HCM Lane V/C Ratio		0.005	-	-		0.073
HCM Control Delay (s/v	/eh)	8.5	-	-	-	
HCM Lane LOS		Α	-	-	-	С
HCM 95th %tile Q(veh)		0	-	-	-	0.2

	-	•	•	•		~
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>1</b>		ች	<b></b>	W	
Traffic Volume (veh/h)	765	38	39	364	59	5
Future Volume (Veh/h)	765	38	39	364	59	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	805	40	41	383	62	5
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				3.5	3.5	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	_			_		
pX, platoon unblocked						
vC, conflicting volume			847		1292	828
vC1, stage 1 conf vol			017		827	020
vC2, stage 2 conf vol					465	
vCu, unblocked vol			847		1292	828
tC, single (s)			4.2		6.4	6.5
tC, 2 stage (s)					5.4	3.0
tF (s)			2.3		3.5	3.6
p0 queue free %			95		83	98
cM capacity (veh/h)			760		372	327
	ED 1	NA/D /		ND 4	V. Z	V-1
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	845	41	383	67		
Volume Left	0	41	0	62		
Volume Right	40	0	0	5		
cSH	1700	760	1700	368		
Volume to Capacity	0.50	0.05	0.23	0.18		
Queue Length 95th (ft)	0	4	0	16		
Control Delay (s/veh)	0.0	10.0	0.0	17.0		
Lane LOS		В		С		
Approach Delay (s/veh)	0.0	1.0		17.0		
Approach LOS				С		
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utiliza	ation		53.1%	IC	U Level o	of Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1.3					
		===		14/5-		
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽		7		À	
•	765	38	39	364	59	5
	765	38	39	364	59	5
Conflicting Peds, #/hr	0	2	2	0	0	1
	ree	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	25	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	15	9	9	2	33
	805	40	41	383	62	5
		_				
	jor1		Major2		Minor1	
Conflicting Flow All	0	0	847	0	1293	828
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	465	-
Critical Hdwy	-	-	4.19	-	6.42	6.53
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.281	-	3.518	3.597
Pot Cap-1 Maneuver	-	-	761	-	180	328
Stage 1	-	-	-	-	429	-
Stage 2	-	-	-	-	632	-
Platoon blocked, %	_	-		-		
Mov Cap-1 Maneuver	_	_	759	_	170	327
Mov Cap-2 Maneuver	_	_	-	_	302	-
Stage 1	_	_	_	_	429	_
Stage 2	_	_			598	-
Olaye Z	_	<u>-</u>	-	-	330	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0.97		20.18	
HCM LOS					С	
Min = n 1 = n = /M = i = n M = m = f		UDL 4	EDT	EDD	WDI	WDT
Minor Lane/Major Mvmt	ſ	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		304	-	-	759	-
HCM Lane V/C Ratio		0.222	-	-	0.054	-
HCM Control Delay (s/vel	h)	20.2	-	-	10	-
HCM Lane LOS		С	-	-	В	-
HCM 95th %tile Q(veh)		0.8	-	-	0.2	-

	•	•	•	†	ļ	4
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	1>	
Traffic Volume (veh/h)	1	16	112	63	68	9
Future Volume (Veh/h)	1	16	112	63	68	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	17	122	68	74	10
Pedestrians	•					
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)				140116	140116	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	391	79	84			
vC1, stage 1 conf vol	331	19	04			
vC1, stage 1 conf vol						
vCu, unblocked vol	391	79	84			
tC, single (s)	6.4	6.2	4.1			
	0.4	0.2	4.1			
tC, 2 stage (s)	3.5	3.3	2.2			
tF (s)						
p0 queue free %	100	98	92			
cM capacity (veh/h)	564	981	1513			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	18	190	84			
Volume Left	1	122	0			
Volume Right	17	0	10			
cSH	943	1513	1700			
Volume to Capacity	0.02	0.08	0.05			
Queue Length 95th (ft)	1	7	0			
Control Delay (s/veh)	8.9	5.1	0.0			
Lane LOS	Α	Α				
Approach Delay (s/veh)	8.9	5.1	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			3.9			
Intersection Capacity Utilizati	ion		26.2%	IC	U Level o	of Service
Analysis Period (min)			15		3.37	

Intersection						
Int Delay, s/veh	3.7					
		EDE	ND	NET	OPT	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	₽	
Traffic Vol, veh/h	1	16	112	63	68	9
Future Vol, veh/h	1	16	112	63	68	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	10	10	2
Mvmt Flow	1	17	122	68	74	10
	Minor2		Major1		/lajor2	
Conflicting Flow All	391	79	84	0	-	0
Stage 1	79	-	-	-	-	-
Stage 2	312	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy		3.318	2.218	-	-	-
Pot Cap-1 Maneuver	613	982	1513	-	-	-
Stage 1	944	-	_	_	_	_
Stage 2	742	-	-	_	-	-
Platoon blocked, %				_	_	_
Mov Cap-1 Maneuver	562	982	1513	_	_	_
Mov Cap-1 Maneuver	562	- 502	1010	_	_	_
Stage 1	865	_	_	-	-	-
_	742	-	-	_	-	-
Stage 2	142	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s/	v 8.91		4.86		0	
HCM LOS	A					
Minor Long /Main M		NDI	NDT	EDL 4	CDT	CDD
Minor Lane/Major Mvm	π	NBL		EBLn1	SBT	SBR
Capacity (veh/h)		1152	-		-	-
HCM Lane V/C Ratio		0.08	-	0.02	-	-
HCM Control Delay (s/	veh)	7.6	0	8.9	-	-
	,					
HCM Lane LOS HCM 95th %tile Q(veh)		A 0.3	Α	A 0.1	-	-

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	ĵ»	
Traffic Volume (veh/h)	1	5	34	236	71	9
Future Volume (Veh/h)	1	5	34	236	71	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	5	37	257	77	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				1116		
pX, platoon unblocked						
vC, conflicting volume	413	82	87			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	413	82	87			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	98			
cM capacity (veh/h)	581	978	1509			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	6	294	87			
Volume Left	1	37	0			
Volume Right	5	0	10			
cSH	878	1509	1700			
Volume to Capacity	0.01	0.02	0.05			
Queue Length 95th (ft)	1	2	0			
Control Delay (s/veh)	9.1	1.1	0.0			
Lane LOS	Α	Α				
Approach Delay (s/veh)	9.1	1.1	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utiliza	ation		31.0%	IC	CU Level o	f Service
Analysis Period (min)	-		15			

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			- €	₽	
Traffic Vol, veh/h	1	5	34	236	71	9
Future Vol, veh/h	1	5	34	236	71	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	10	10	2
Mvmt Flow	1	5	37	257	77	10
			0.	201	• •	.0
	Minor2		Major1		/lajor2	
Conflicting Flow All	413	82	87	0	-	0
Stage 1	82	-	-	-	-	-
Stage 2	330	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	596	978	1509	-	-	-
Stage 1	941	_	-	-	_	-
Stage 2	728	_	_	_	_	-
Platoon blocked, %	. 20			_	_	_
Mov Cap-1 Maneuver	579	978	1509	_	_	_
Mov Cap-1 Maneuver	579	310	1000	_	_	-
Stage 1	914	-	-	-	<u>-</u>	-
_	728	-	-	-	_	-
Stage 2	120	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s/	v 9.14		0.94		0	
HCM LOS						
HOW LOS	Α					
ncivi Los	A					
		MDI	NOT	EDL 4	ODT	000
Minor Lane/Major Mvm		NBL		EBLn1	SBT	SBR
Minor Lane/Major Mvm Capacity (veh/h)		227	-	877	SBT -	SBR -
Minor Lane/Major Mvm Capacity (veh/h) HCM Lane V/C Ratio	nt	227 0.024	-	877 0.007		
Minor Lane/Major Mvm Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s/	nt	227 0.024 7.4	-	877	-	-
Minor Lane/Major Mvm Capacity (veh/h) HCM Lane V/C Ratio	nt veh)	227 0.024	-	877 0.007	- -	-

# 10: SW 124th Avenue & SW Leveton Drive

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Group Flow (vph)	6	161	14	53	31	409	178	752	
v/c Ratio	0.02	0.39	0.07	0.14	0.07	0.45	0.31	0.45	
Control Delay (s/veh)	33.2	22.0	32.2	9.4	9.2	18.7	10.6	14.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	33.2	22.0	32.2	9.4	9.2	18.7	10.6	14.5	
Queue Length 50th (ft)	1	31	3	1	3	39	18	44	
Queue Length 95th (ft)	16	119	27	27	25	146	105	263	
Internal Link Dist (ft)		981		1223		1392		1024	
Turn Bay Length (ft)	100		150		150		150		
Base Capacity (vph)	485	1284	250	956	765	2188	963	2696	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.01	0.13	0.06	0.06	0.04	0.19	0.18	0.28	
Intersection Summary									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	ĵ.		, M	₽		¥	<b>∱</b> }		7	ħβ	
Traffic Volume (vph)	5	104	33	12	6	39	26	272	76	151	615	24
Future Volume (vph)	5	104	33	12	6	39	26	272	76	151	615	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		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	0.96		1.00	0.87		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1504	1766		1128	1490		1612	3010		1768	3374	
Flt Permitted	0.95	1.00		0.95	1.00		0.31	1.00		0.47	1.00	
Satd. Flow (perm)	1504	1766		1128	1490		519	3010		870	3374	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	6	122	39	14	7	46	31	320	89	178	724	28
RTOR Reduction (vph)	0	10	0	0	37	0	0	19	0	0	2	0
Lane Group Flow (vph)	6	151	0	14	16	0	31	390	0	178	750	0
Confl. Peds. (#/hr)									3	3		
Heavy Vehicles (%)	20%	2%	9%	60%	17%	10%	12%	18%	6%	2%	6%	17%
Turn Type	Prot	NA		Prot	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							6			2		
Actuated Green, G (s)	8.0	11.7		1.0	11.9		30.6	20.1		30.6	28.4	
Effective Green, g (s)	1.8	12.7		2.0	12.9		32.6	21.1		30.6	28.4	
Actuated g/C Ratio	0.03	0.20		0.03	0.20		0.52	0.33		0.48	0.45	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	42	354		35	303		322	1003		569	1513	
v/s Ratio Prot	0.00	c0.09		c0.01	0.01		0.00	0.13		c0.05	c0.22	
v/s Ratio Perm							0.04			0.10		
v/c Ratio	0.14	0.43		0.40	0.05		0.10	0.39		0.31	0.50	
Uniform Delay, d1	30.0	22.1		30.1	20.3		7.8	16.2		9.4	12.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.8		7.3	0.1		0.1	0.3		0.3	0.3	
Delay (s)	31.6	22.9		37.4	20.4		7.9	16.4		9.7	12.6	
Level of Service	С	С		D	С		Α	В		Α	В	
Approach Delay (s/veh)		23.2			23.9			15.8			12.1	
Approach LOS		С			С			В			В	
Intersection Summary												
HCM 2000 Control Delay (s/v	eh)		14.8	H	CM 2000	Level of	Service		В			
HCM 2000 Volume to Capaci	ty ratio		0.47									
Actuated Cycle Length (s)			63.3	Sı	um of lost	time (s)			17.0			
Intersection Capacity Utilization	on		42.7%	IC	U Level o	of Service	Э		Α			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	<b>4</b>		ሻ	1>		7	<b>ተ</b> ኈ		ሻ	<b>↑</b> ↑	
Traffic Volume (veh/h)	5	104	33	12	6	39	26	272	76	151	615	24
Future Volume (veh/h)	5	104	33	12	6	39	26	272	76	151	615	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
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	1604	1870	1767	1011	1648	1752	1722	1633	1811	1870	1811	1648
Adj Flow Rate, veh/h	6	122	39	14	7	46	31	320	89	178	724	28
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	20	2	9	60	17	10	12	18	6	2	6	17
Cap, veh/h	51	235	75	45	35	231	378	594	163	543	1172	45
Arrive On Green	0.03	0.17	0.15	0.05	0.19	0.16	0.06	0.25	0.23	0.16	0.35	0.35
Sat Flow, veh/h	1527	1358	434	963	188	1237	1640	2404	658	1781	3377	131
Grp Volume(v), veh/h	6	0	161	14	0	53	31	205	204	178	369	383
Grp Sat Flow(s),veh/h/ln	1527	0	1792	963	0	1425	1640	1552	1510	1781	1721	1787
Q Serve(g_s), s	0.2	0.0	3.7	0.6	0.0	1.5	0.5	5.2	5.4	3.1	8.1	8.1
Cycle Q Clear(g_c), s	0.2	0.0	3.7	0.6	0.0	1.5	0.5	5.2	5.4	3.1	8.1	8.1
Prop In Lane	1.00		0.24	1.00		0.87	1.00		0.44	1.00		0.07
Lane Grp Cap(c), veh/h	51	0	310	45	0	266	378	384	373	543	597	620
V/C Ratio(X)	0.12	0.00	0.52	0.31	0.00	0.20	0.08	0.53	0.55	0.33	0.62	0.62
Avail Cap(c_a), veh/h	539	0	1225	234	0	974	1043	1061	1032	1245	1518	1576
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	0.0	17.1	20.9	0.0	15.9	8.3	14.8	15.1	10.0	12.3	12.3
Incr Delay (d2), s/veh	1.0	0.0	1.3	3.8	0.0	0.4	0.1	1.2	1.3	0.3	1.0	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/In	0.1	0.0	1.4	0.2	0.0	0.4	0.1	1.5	1.5	0.9	2.4	2.5
Unsig. Movement Delay, s/veh									40.0			40.0
LnGrp Delay(d), s/veh	22.3	0.0	18.5	24.7	0.0	16.3	8.4	16.0	16.3	10.3	13.3	13.3
LnGrp LOS	С		В	С		В	А	В	В	В	В	В
Approach Vol, veh/h		167			67			440			930	
Approach Delay, s/veh		18.6			18.1			15.6			12.8	
Approach LOS		В			В			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	15.2	6.1	11.9	6.6	20.7	5.5	12.5				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	25.0	30.0	10.0	30.0	20.0	40.0	15.0	30.0				
Max Q Clear Time (g_c+l1), s	5.1	7.4	2.6	5.7	2.5	10.1	2.2	3.5				
Green Ext Time (p_c), s	0.7	1.9	0.0	1.6	0.1	3.9	0.0	0.4				
Intersection Summary												
HCM 7th Control Delay, s/veh			14.4									
HCM 7th LOS			В									
Notes												
User approved pedestrian inter	rval to be	e less tha	n phase n	nax greer	٦.							

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	19	276	16	8	40	3	11	3	33	0	2	3
Future Volume (vph)	19	276	16	8	40	3	11	3	33	0	2	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	23	333	19	10	48	4	13	4	40	0	2	4
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	375	62	57	6								
Volume Left (vph)	23	10	13	0								
Volume Right (vph)	19	4	40	4								
Hadj (s)	0.03	0.26	-0.15	-0.01								
Departure Headway (s)	4.2	4.7	4.7	4.9								
Degree Utilization, x	0.43	0.08	0.07	0.01								
Capacity (veh/h)	852	733	696	657								
Control Delay (s/veh)	10.3	8.1	8.1	8.0								
Approach Delay (s/veh)	10.3	8.1	8.1	8.0								
Approach LOS	В	Α	Α	Α								
Intersection Summary												
Delay			9.8									
Level of Service			Α									
Intersection Capacity Utilizat	tion		34.7%	IC	U Level o	of Service			Α			
Analysis Period (min)			15									

Intersection		
Intersection Delay, s/veh	9.7	
Intersection LOS	Α	

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	- €			4			4			4	
19	276	16	8	40	3	11	3	33	0	2	3
19	276	16	8	40	3	11	3	33	0	2	3
0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
2	2	19	20	8	100	18	2	13	2	2	33
23	333	19	10	48	4	13	4	40	0	2	4
0	1	0	0	1	0	0	1	0	0	1	0
EB			WB			NB				SB	
WB			EB			SB				NB	
1			1			1				1	
SB			NB			EB				WB	
1			1			1				1	
NB			SB			WB				EB	
1			1			1				1	
10.2			8.2			8.2				7.7	
В			Α			Α				Α	
	19 19 0.83 2 23 0 EB WB 1 SB 1 NB 1	19 276 19 276 0.83 0.83 2 2 23 333 0 1 EB WB 1 SB 1 NB 1 10.2	19 276 16 19 276 16 0.83 0.83 0.83 2 2 19 23 333 19 0 1 0  EB  WB 1 SB 1 NB 1 10.2	19 276 16 8 19 276 16 8 0.83 0.83 0.83 0.83 2 2 19 20 23 333 19 10 0 1 0 0  EB WB WB BB T T SB NB T NB SB SB T NB SB SB T SB	19 276 16 8 40 19 276 16 8 40 0.83 0.83 0.83 0.83 2 2 19 20 8 23 333 19 10 48 0 1 0 0 1  EB WB  WB  WB  SB  1 1 1  NB  NB  1 1 1  NB  SB   19 276 16 8 40 3 19 276 16 8 40 3 0.83 0.83 0.83 0.83 0.83 0.83 2 2 19 20 8 100 23 333 19 10 48 4 0 1 0 0 1 0  EB WB  WB  WB  EB  1 1 1 SB  NB 1 1 1 NB SB 1 1 1 10.2 8.2	19 276 16 8 40 3 11 19 276 16 8 40 3 11 0.83 0.83 0.83 0.83 0.83 0.83 2 2 19 20 8 100 18 23 333 19 10 48 4 13 0 1 0 0 1 0 0 1 0 0  EB WB NB WB EB SB 1 1 1 1 1 SB NB EB 1 1 1 1 1 NB SB NB EB 1 1 8	19 276 16 8 40 3 11 3 19 276 16 8 40 3 11 3 3 0.83 0.83 0.83 0.83 0.83 0.83 0.83	19 276 16 8 40 3 11 3 33 19 276 16 8 40 3 11 3 33 33 0.83 0.83 0.83 0.83 0.83 0.83 0	19 276 16 8 40 3 11 3 33 0 19 276 16 8 40 3 11 3 33 0 0.83 0.83 0.83 0.83 0.83 0.83 0.83 0.83	19 276 16 8 40 3 11 3 33 0 2 19 276 16 8 40 3 11 3 33 0 2 0.83 0.83 0.83 0.83 0.83 0.83 0.83 0.83	

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	23%	6%	16%	0%	
Vol Thru, %	6%	89%	78%	40%	
Vol Right, %	70%	5%	6%	60%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	47	311	51	5	
LT Vol	11	19	8	0	
Through Vol	3	276	40	2	
RT Vol	33	16	3	3	
Lane Flow Rate	57	375	61	6	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.076	0.424	0.081	0.008	
Departure Headway (Hd)	4.801	4.07	4.76	4.612	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Сар	750	873	756	779	
Service Time	2.806	2.15	2.771	2.619	
HCM Lane V/C Ratio	0.076	0.43	0.081	0.008	
HCM Control Delay, s/veh	8.2	10.2	8.2	7.7	
HCM Lane LOS	Α	В	Α	Α	
HCM 95th-tile Q	0.2	2.1	0.3	0	

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		ની	₽		ሻ	7
Traffic Volume (veh/h)	1	295	41	3	1	2
Future Volume (Veh/h)	1	295	41	3	1	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	1	373	52	4	1	3
Pedestrians					4	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	60				433	58
vC1, stage 1 conf vol					.00	
vC2, stage 2 conf vol						
vCu, unblocked vol	60				433	58
tC, single (s)	4.1				6.5	6.4
tC, 2 stage (s)					3.0	J. 1
tF (s)	2.2				3.6	3.5
p0 queue free %	100				100	100
cM capacity (veh/h)	1538				555	964
		WD 4	00.4	00.0	000	JO-1
Direction, Lane # Volume Total	EB 1 374	WB 1 56	SB 1	SB 2		
			1	3		
Volume Left	1	0	1	0		
Volume Right	0	4	0	3		
cSH	1538	1700	555	964		
Volume to Capacity	0.00	0.03	0.00	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s/veh)	0.0	0.0	11.5	8.7		
Lane LOS	А		В	Α		
Approach Delay (s/veh)	0.0	0.0	9.4			
Approach LOS			Α			
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utiliza	tion		26.3%	IC	U Level c	f Service
Analysis Period (min)			15			

0.1						
	EDT	MET	MDD	051	000	
FBL			WBR			
4			2			
-						
	313	IJΖ	4		3	
Major1	N	//ajor2		Minor2		
60	0	-	0	434	58	
-	-	-	-	58	-	
-	-	-	-	376	-	
4.12	-	-	-	6.54	6.37	
-	-	-	-	5.54	-	
-	-	-	-	5.54	-	
2.218	-	-	-	3.626	3.453	
1544	-	-	-	557	968	
-	-	-	-	935	-	
-	-	-	-	669	-	
	-	-	-			
1538	-	-	-	552	964	
-	-	-	-	552	-	
-	-	-	-	931	-	
-	-	-	-	666	-	
FR		W/R		SB		
v 0.02		U				
				А		
nt	EBL	EBT	WBT	WBR :	SBLn1	SBI
	6	-	-	-	552	Ć
	0.001	-	-	-	0.002	0.0
veh)	7.3	0	-	-	11.5	8
	Α	Α	-	-	В	,
)	0	-	-	-	0	0
	60 - 4.12 - 2.218 1544 - - 1538 - - - EB v 0.02	EBL   EBT	EBL EBT WBT  1 295 41 1 295 41 4 0 0 Free Free Free - None 8,# - 0 0 79 79 79 2 3 15 1 373 52  Major1 Major2 60 0 4.12 2.218 1538 1538 1538 1538  1538	EBL EBT WBT WBR  1 295 41 3 1 295 41 3 4 0 0 4 Free Free Free Free - None - Non	EBL         EBT         WBT         WBR         SBL           1         295         41         3         1           1         295         41         3         1           4         0         0         4         0           Free         Free         Free         Stop           None         -         None         -           -         0         0         -         0           -         0         0         -         0           79         79         79         79         79           2         3         15         4         14           1         373         52         4         1           Major1         Major2         Minor2           60         0         -         0         434           -         -         -         58           -         -         -         58           -         -         -         554           4.12         -         -         6.54           2.218         -         -         557           -         -         -         552 <td>  EBL   EBT   WBT   WBR   SBL   SBR    </td>	EBL   EBT   WBT   WBR   SBL   SBR

	•	<b>→</b>	+	•	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	1≽		*	7
Traffic Volume (veh/h)	75	225	40	65	7	10
Future Volume (Veh/h)	75	225	40	65	7	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	96	288	51	83	9	13
Pedestrians			<u> </u>		15	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)		140110	140110			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	149				588	108
vC1, stage 1 conf vol	173				000	100
vC2, stage 2 conf vol						
vCu, unblocked vol	149				588	108
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)	7.1				0.4	0.2
tF (s)	2.2				3.5	3.3
p0 queue free %	93				98	99
cM capacity (veh/h)	1412				433	933
					700	300
Direction, Lane #	EB 1	WB 1	SB 1	SB 2		
Volume Total	384	134	9	13		
Volume Left	96	0	9	0		
Volume Right	0	83	0	13		
cSH	1412	1700	433	933		
Volume to Capacity	0.07	0.08	0.02	0.01		
Queue Length 95th (ft)	5	0	2	1		
Control Delay (s/veh)	2.4	0.0	13.5	8.9		
Lane LOS	Α		В	Α		
Approach Delay (s/veh)	2.4	0.0	10.8			
Approach LOS			В			
Intersection Summary						
Average Delay			2.2			
Intersection Capacity Utilization	on		32.7%	IC	U Level o	of Service
Analysis Period (min)			15			

Intersection							
Int Delay, s/veh	1.8						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
	EDL	€Î		WDK	SBL	SBR	
Lane Configurations Traffic Vol, veh/h	75	225	<b>1</b> →	65	<b>"1</b> 7	<b>1</b> 0	
Future Vol, veh/h	75	225	40	65	7	10	
Conflicting Peds, #/hr	15	0	0	15	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-		-	None	-		
Storage Length	-	-	-	-	_	0	
Veh in Median Storage	e,# -	0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	78	78	78	78	78	78	
Heavy Vehicles, %	2	4	7	4	2	2	
Mvmt Flow	96	288	51	83	9	13	
Major/Minor	Major1	N	Major2		Minor2		
Conflicting Flow All	150	0	viajuiz -	0	589	108	
Stage 1	150	-	-	-	108	100	
Stage 2	_		_	-	481	_	
Critical Hdwy	4.12	_			6.42	6.22	
Critical Hdwy Stg 1	7.12	_	_	_	5.42	-	
Critical Hdwy Stg 2	_	_	_	_	5.42	_	
Follow-up Hdwy	2.218	-	_	-		3.318	
Pot Cap-1 Maneuver	1432	-	_	-	471	946	
Stage 1	-	-	-	-	916	-	
Stage 2	-	-	-	-	622	-	
Platoon blocked, %		-	-	-			
Mov Cap-1 Maneuver	1411	-	-	-	420	932	
Mov Cap-2 Maneuver	-	-	-	-	420	-	
Stage 1	-	-	-	-	830	-	
Stage 2	-	-	-	-	613	-	
Approach	EB		WB		SB		
HCM Control Delay, s/			0		10.9		
HCM LOS	. 1.00				В		
Minor Long/Maigrand	-1	EDI	EDT	WDT	WDD	ODL 4 C	ייי וחי
Minor Lane/Major Mvn	nt	EBL	EBT	WBT		SBLn1 S	
Capacity (veh/h)		450	-	-	-	420	932
HCM Central Delay (a)	/vob	0.068	-	-		0.021	
HCM Control Delay (s/ HCM Lane LOS	(ven)	7.7	0	-	-	13.7	8.9
HCM 95th %tile Q(veh	1	A 0.2	Α	-	-	B 0.1	A 0
HOW SOUT WHILE CA (VEN	)	U.Z	-	-	-	0.1	U

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Volume (veh/h)	2	188	28	16	95	2	10	0	5	1	0	2
Future Volume (Veh/h)	2	188	28	16	95	2	10	0	5	1	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	2	214	32	18	108	2	11	0	6	1	0	2
Pedestrians											17	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											3.5	
Percent Blockage											2	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	127			246			381	397	230	402	412	126
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	127			246			381	397	230	402	412	126
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.6	6.5	6.7
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	4.0	4.0	3.8
p0 queue free %	100			99			98	100	99	100	100	100
cM capacity (veh/h)	1423			1320			562	524	809	460	514	797
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	248	128	17	3								
Volume Left	2	18	11	1								
Volume Right	32	2	6	2								
cSH	1423	1320	630	641								
Volume to Capacity	0.00	0.01	0.03	0.00								
Queue Length 95th (ft)	0	1	2	0								
Control Delay (s/veh)	0.1	1.2	10.9	10.6								
Lane LOS	Α	Α	В	В								
Approach Delay (s/veh)	0.1	1.2	10.9	10.6								
Approach LOS			В	В								
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Utiliza	tion		26.1%	IC	U Level o	of Service			Α			
Analysis Period (min)			15									

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	2	188	28	16	95	2	10	0	5	1	0	2
Future Vol, veh/h	2	188	28	16	95	2	10	0	5	1	0	2
Conflicting Peds, #/hr	17	0	0	0	0	17	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	_	_	-	_	_	-	_	_	-	_	_	-
Veh in Median Storage	e.# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	_	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	4	7	2	2	4	6	2	2	2	50	2	50
Mvmt Flow	2	214	32	18	108	2	11	0	6	1	0	2
N 4 - i /N 4i	NA-: 4			M-:- 0			M: 4			A: C		
	Major1			Major2			Minor1	000		Minor2	440	400
Conflicting Flow All	127	0	0	245	0	0	378	398	230	381	412	126
Stage 1	-	-	-	-	-	-	234	234	-	162	162	-
Stage 2	-	-	-	4.40	-	-	144	164	-	218	250	-
Critical Hdwy	4.14	-	-	4.12	-	-	7.12	6.52	6.22	7.6	6.52	6.7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.6	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.6	5.52	- 25
Follow-up Hdwy	2.236	-	-	2.218	-	-	3.518	4.018	3.318	3.95	4.018	3.75
Pot Cap-1 Maneuver	1447	-	-	1321	-	-	579	540	810	499	530	810
Stage 1	-	-	-	-	-	-	769	711	-	739	764	-
Stage 2	-	-	-	-	-	-	858	763	-	687	700	-
Platoon blocked, %	4.600	-	-	1001	-	-	F00	F00	0.40	400	E 4.0	70-
Mov Cap-1 Maneuver	1423	-	-	1321	-	-	568	522	810	480	513	797
Mov Cap-2 Maneuver	-	-	-	-	-	-	568	522	-	480	513	-
Stage 1	-	-	-	-	-	-	768	710	-	716	740	-
Stage 2	-	-	-	-	-	-	843	739	-	681	699	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/	v 0.07			1.1			10.87			10.54		
HCM LOS							В			В		
Minor Lane/Major Mvm	nt I	NBLn1	EBL	EBT	EBR	WBL	WBT	WRR	SBLn1			
Capacity (veh/h)	IK .	631	16		LDIX	254		VVDIX	653			
HCM Lane V/C Ratio		0.027		-		0.014	-		0.005			
HCM Control Delay (s/	(voh)	10.9	7.5	0	-	7.8	0	-	10.5			
HCM Lane LOS	veii)	10.9 B	7.5 A	A	-	7.0 A	-	-	10.5 B			
HCM 95th %tile Q(veh	\	0.1	0	- A	-	0	A -	-	0			
HOW SOUL WILLE CALABOT	)	0.1	U	-	-	U	-	-	U			

	۶	*	1	<b>†</b>	<del> </del>	4
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	1>	
Traffic Volume (veh/h)	160	58	79	184	43	31
Future Volume (Veh/h)	160	58	79	184	43	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	182	66	90	209	49	35
Pedestrians	19			1	1	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			0.0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)				140110	140110	
Upstream signal (ft)				861		
pX, platoon unblocked				301		
vC, conflicting volume	476	87	103			
vC1, stage 1 conf vol	770	01	100			
vC2, stage 2 conf vol						
vCu, unblocked vol	476	87	103			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)	0.5	0.2	7.1			
tF (s)	3.6	3.3	2.2			
p0 queue free %	63	93	94			
cM capacity (veh/h)	496	954	1444			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	248	299	84			
Volume Left	182	90	0			
Volume Right	66	0	35			
cSH	568	1444	1700			
Volume to Capacity	0.44	0.06	0.05			
Queue Length 95th (ft)	55	5	0			
Control Delay (s/veh)	16.1	2.7	0.0			
Lane LOS	С	Α				
Approach Delay (s/veh)	16.1	2.7	0.0			
Approach LOS	С					
Intersection Summary						
Average Delay			7.6			
Intersection Capacity Utilizat	tion		39.9%	IC	U Level o	f Service
Analysis Period (min)			15			
ilialysis Fellou (Illili)			10			

Intersection						
Int Delay, s/veh	7.6					
•					057	055
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	₽	
Traffic Vol, veh/h	160	58	79	184	43	31
Future Vol, veh/h	160	58	79	184	43	31
Conflicting Peds, #/hr	1	1	19	0	0	19
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	7	2	5	21	28	12
Mvmt Flow	182	66	90	209	49	35
Majay/Minay	Min a nO	,	14-:1		1-:0	
	Minor2		Major1		/lajor2	
Conflicting Flow All	475	86	103	0	-	0
Stage 1	85	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Critical Hdwy	6.47	6.22	4.15	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-		-	-	-
Follow-up Hdwy		3.318		-	-	-
Pot Cap-1 Maneuver	539	972	1470	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	483	954	1444	-	-	-
Mov Cap-2 Maneuver	483	-	-	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s/			2.3		0.0	
HCM LOS	V 10.50		2.3		U	
TICIVI LOS	U					
Minor Lane/Major Mvn	nt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		541	-	556	-	-
HCM Lane V/C Ratio		0.062	-	0.445	-	-
HCM Control Delay (s/	veh)	7.7	0	16.6	-	-
HCM Lane LOS	,	Α	Α	С	-	-
HCM 95th %tile Q(veh	)	0.2	-	2.3	-	-
TOW JOHN JUNE Q(VEI)	1	0.2		2.0		

# 16: SW Herman Road & SW 108th Ave

	•	-	•	<b>\</b>	4
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	16	424	594	77	12
v/c Ratio	0.03	0.40	0.55	0.22	0.03
Control Delay (s/veh)	2.9	6.4	9.4	19.5	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	2.9	6.4	9.4	19.5	11.3
Queue Length 50th (ft)	1	51	68	14	0
Queue Length 95th (ft)	7	109	245	60	12
Internal Link Dist (ft)		877	1007	781	
Turn Bay Length (ft)	100			135	
Base Capacity (vph)	628	1557	1572	1083	1060
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.03	0.27	0.38	0.07	0.01
Intersection Summary					

	•	<b>→</b>	•	•	<b>\</b>	4		
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	*	<b>†</b>	1→		ች	7		
Traffic Volume (vph)	14	365	242	269	66	10		
Future Volume (vph)	14	365	242	269	66	10		
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00		
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		
Frt	1.00	1.00	0.93		1.00	0.85		
Flt Protected	0.95	1.00	1.00		0.95	1.00		
Satd. Flow (prot)	1399	1557	1601		1504	1468		
Flt Permitted	0.33	1.00	1.00		0.95	1.00		
Satd. Flow (perm)	483	1557	1601		1504	1468		
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86		
Adj. Flow (vph)	16	424	281	313	77	12		
RTOR Reduction (vph)	0	0	32	0	0	10		
Lane Group Flow (vph)	16	424	562	0	77	2		
Confl. Peds. (#/hr)	3			3				
Heavy Vehicles (%)	29%	22%	12%	6%	20%	10%		
Turn Type	D.P+P	NA	NA		Prot	Perm		
Protected Phases	5	2	6		4			
Permitted Phases	6					4		
Actuated Green, G (s)	29.3	34.7	28.6		7.0	7.0		
Effective Green, g (s)	32.1	36.1	30.0		9.5	9.5		
Actuated g/C Ratio	0.60	0.67	0.56		0.18	0.18		
Clearance Time (s)	5.4	5.4	5.4		6.5	6.5		
Vehicle Extension (s)	2.0	3.1	3.1		2.6	2.6		
Lane Grp Cap (vph)	325	1048	896		266	260		
v/s Ratio Prot	0.00	c0.27	c0.35		c0.05			
v/s Ratio Perm	0.03					0.00		
v/c Ratio	0.05	0.40	0.63		0.29	0.01		
Uniform Delay, d1	8.1	3.9	8.0		19.1	18.2		
Progression Factor	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.0	0.3	1.4		0.5	0.0		
Delay (s)	8.1	4.2	9.4		19.6	18.2		
Level of Service	Α	Α	Α		В	В		
Approach Delay (s/veh)		4.3	9.4		19.4			
Approach LOS		Α	Α		В			
Intersection Summary								
HCM 2000 Control Delay (s	s/veh)		8.2	Н	CM 2000	Level of Service	<u> </u>	Α
HCM 2000 Control Delay (S	,		0.56	110	CIVI 2000	LOVE OF OUR		7.
Actuated Cycle Length (s)	acity ratio		53.6	Sı.	um of lost	time (s)	19	2.0
Intersection Capacity Utilization	ation		40.2%			of Service	12	Α
Analysis Period (min)	uu011		15	10	O LOVOI (	J. 301 VI00		, <b>,</b>
raidiyolo i Gilou (iliili)			10					

c Critical Lane Group

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	*	<b></b>	1≽		ች	7
Traffic Volume (veh/h)	14	365	242	269	66	10
Future Volume (veh/h)	14	365	242	269	66	10
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1470	1574	1722	1811	1604	1752
Adj Flow Rate, veh/h	16	424	281	313	77	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	29	22	12	6	20	10
Cap, veh/h	444	1162	460	512	174	170
Arrive On Green	0.05	0.74	0.62	0.59	0.11	0.11
Sat Flow, veh/h	1400	1574	743	828	1527	1485
Grp Volume(v), veh/h	16	424	0	594	77	12
Grp Sat Flow(s), veh/h/ln	1400	1574	0	1571	1527	1485
Q Serve(g_s), s	0.0	5.2	0.0	12.8	2.5	0.4
Cycle Q Clear(g_c), s	0.0	5.2	0.0	12.8	2.5	0.4
		5.2	0.0	0.53	1.00	1.00
Prop In Lane	1.00	1100	0			
Lane Grp Cap(c), veh/h	444	1162	0	972	174	170
V/C Ratio(X)	0.04	0.36	0.00	0.61	0.44	0.07
Avail Cap(c_a), veh/h	674	1348	0	1896	916	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.1	2.5	0.0	6.6	22.4	21.4
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.7	1.4	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	0.0	2.8	0.9	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	9.1	2.7	0.0	7.3	23.8	21.6
LnGrp LOS	Α	Α		Α	С	С
Approach Vol, veh/h		440	594		89	
Approach Delay, s/veh		3.0	7.3		23.5	
Approach LOS		A	А		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		44.0		10.2	6.5	37.5
Change Period (Y+Rc), s		5.4		6.5	5.4	5.4
Max Green Setting (Gmax), s		45.0		30.0	10.0	64.0
		7.2		4.5	2.0	14.8
Max Q Clear Time (g_c+l1), s				4.5 0.2	0.0	17.3
Green Ext Time (p_c), s		9.8		0.2	0.0	11.3
Intersection Summary						
HCM 7th Control Delay, s/veh			6.9			
HCM 7th LOS			Α			

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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1>		ች	<b></b>	*	7
Traffic Volume (veh/h)	622	167	65	324	77	59
Future Volume (Veh/h)	622	167	65	324	77	59
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	655	176	68	341	81	62
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage veh)				2		
Upstream signal (ft)				<del>-</del>		
pX, platoon unblocked						
vC, conflicting volume			833		1222	745
vC1, stage 1 conf vol			000		745	7 10
vC2, stage 2 conf vol					477	
vCu, unblocked vol			833		1222	745
tC, single (s)			4.1		6.6	6.4
tC, 2 stage (s)					5.6	<b>V.</b> 1
tF (s)			2.2		3.6	3.5
p0 queue free %			91		78	84
cM capacity (veh/h)			786		372	384
						001
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	
Volume Total	831	68	341	81	62	
Volume Left	0	68	0	81	0	
Volume Right	176	0	0	0	62	
cSH	1700	786	1700	372	384	
Volume to Capacity	0.49	0.09	0.20	0.22	0.16	
Queue Length 95th (ft)	0	7	0	20	14	
Control Delay (s/veh)	0.0	10.0	0.0	17.4	16.2	
Lane LOS		В		С	С	
Approach Delay (s/veh)	0.0	1.7		16.9		
Approach LOS				С		
Intersection Summary						
Average Delay			2.2			
Intersection Capacity Utiliza	tion		60.8%	IC	U Level c	f Service
Analysis Period (min)			15			

Intersection							Į
Int Delay, s/veh	3.8						
-	EDT	EDD	WDI	WDT	NDI	NDD	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	<b>1</b>	40-	<u>ነ</u>	<b>^</b>	<b>\</b>	7	
Traffic Vol, veh/h	622	167	65	324	77	59	
Future Vol, veh/h	622	167	65	324	77	59	
Conflicting Peds, #/hr	_ 0	_ 2	_ 2	_ 0	0	0	
0	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	110110	-	None	-	None	
Storage Length	-	-	25	-	100	0	
Veh in Median Storage,		-	-	0	0	-	
Grade, %	0		-	0	0	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	2	3	5	7	15	21	
Mvmt Flow	655	176	68	341	81	62	
NA = : = =/NA:== = =	-!4		\4-!- C		A: 4		
	lajor1		Major2		Minor1	- 4-	
Conflicting Flow All	0	0	833	0	1223	745	
Stage 1	-	-	-	-	745	-	
Stage 2	-	-	-	-	478	-	
Critical Hdwy	-	-	4.15	-	6.55	6.41	
Critical Hdwy Stg 1	-	-	-	-	5.55	-	
Critical Hdwy Stg 2	-	-	-	-	5.55	-	
Follow-up Hdwy	-	-	2.245	-	3.635	3.489	
Pot Cap-1 Maneuver	-	-	787	-	186	385	
Stage 1	-	-	-	-	447	-	
Stage 2	-	_	-	-	598	-	
Platoon blocked, %	_	_		-			
Mov Cap-1 Maneuver	-	-	786	_	170	384	
Mov Cap-2 Maneuver	_	_	-	_	170	-	
Stage 1	_	_	_	_	446	_	
Stage 2	_				546	_	
olaye z	<u>-</u>	_	-	-	J40	<u>-</u>	
Approach	EB		WB		NB		
HCM Control Delay, s/v	0		1.67		32.01		
HCM LOS					D		
Minor Long/Major Maret		NIDI11	VIDI0	EDT	EDD	WDI	
Minor Lane/Major Mvmt		NBLn11		EBT	EBR	WBL	
Capacity (veh/h)		170	384	-	-	786	
HCM Lane V/C Ratio		0.477		-		0.087	
HCM Control Delay (s/ve	eh)	44.1	16.2	-	-	10	
HCM Lane LOS		Е	С	-	-	В	
HCM 95th %tile Q(veh)		2.3	0.6	-	_	0.3	

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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽			4	W	
Traffic Volume (veh/h)	27	12	46	82	106	110
Future Volume (Veh/h)	27	12	46	82	106	110
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	42	19	72	128	166	172
Pedestrians					37	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					4	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			98		361	89
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			98		361	89
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			95		71	81
cM capacity (veh/h)			1413		581	928
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	61	200	338			
Volume Left	0	72	166			
Volume Right	19	0	172			
cSH	1700	1413	717			
Volume to Capacity	0.04	0.05	0.47			
Queue Length 95th (ft)	0	4	63			
Control Delay (s/veh)	0.0	3.0	14.4			
Lane LOS		Α	В			
Approach Delay (s/veh)	0.0	3.0	14.4			
Approach LOS			В			
Intersection Summary						
Average Delay			9.1			
Intersection Capacity Utilizat	ion		32.8%	IC	U Level o	f Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	9.1					
	EBT	EDD	\\/DI	\\/DT	NDI	NDD
		EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>∱</b>	40	40	4	100	440
Traffic Vol, veh/h	27	12	46	82	106	110
Future Vol, veh/h	27	12	46	82	106	110
Conflicting Peds, #/hr	0	_ 37	_ 37	_ 0	0	0
3	ree	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	25	7	6	4	5
Mvmt Flow	42	19	72	128	166	172
Major/Minor Ma	ior1		Mais -0		Minard	
	ijor1		Major2		Minor1	
Conflicting Flow All	0	0	98	0	360	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	272	-
Critical Hdwy	-	-	4.17	-	6.44	6.25
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.263	-	3.536	3.345
Pot Cap-1 Maneuver	-	-	1464	-	634	961
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	769	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1413	-	579	927
Mov Cap-2 Maneuver	_	_	-	_	579	-
Stage 1	-	-	_	_	897	-
Stage 2	_	_	_	_	727	_
Olugo Z	_				121	
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		2.76		14.44	
HCM LOS					В	
Minor Long/Major Maret		MDI1	EDT	EDD	WDI	WDT
Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		716	-	-	647	-
HCM Lane V/C Ratio		0.472	-		0.051	-
HCM Control Delay (s/ve	h)	14.4	-	-	7.7	0
HCM Lane LOS		В	-	-	Α	Α
HCM 95th %tile Q(veh)		2.5	-	-	0.2	-

	•	•	<b>†</b>	<b>/</b>	<b>&gt;</b>	ţ	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		7	<b>^</b>	7		<b>^</b>	
Traffic Volume (veh/h)	0	192	1247	19	0	1612	
Future Volume (Veh/h)	0	192	1247	19	0	1612	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	
Hourly flow rate (vph)	0	218	1417	22	0	1832	
Pedestrians	1						
Lane Width (ft)	12.0						
Walking Speed (ft/s)	3.5						
Percent Blockage	0						
Right turn flare (veh)							
Median type			None			None	
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	2334	710			1418		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	2334	710			1418		
tC, single (s)	6.8	*6.0			4.1		
tC, 2 stage (s)							
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	52			100		
cM capacity (veh/h)	31	451			476		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	
Volume Total	218	709	709	22	916	916	
Volume Left	0 218	0	0	0 22	0	0	
Volume Right cSH	451	1700	1700	1700	0 1700	1700	
		1700	0.42				
Volume to Capacity	0.48	0.42		0.01	0.54	0.54	
Queue Length 95th (ft)	65	0	0	0	0	0	
Control Delay (s/veh)	20.3	0.0	0.0	0.0	0.0	0.0	
Lane LOS	C 20.3	0.0			0.0		
Approach Delay (s/veh)	20.3	0.0			0.0		
Approach LOS	С						
Intersection Summary							
Average Delay			1.3				
Intersection Capacity Utiliza	tion		53.0%	IC	U Level of	of Service	
Analysis Period (min)			15				

User Entered Value

Intersection						
Int Delay, s/veh	1.7					
•		WED	NDT	NDD	ODI	ODT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	•	7	<b>^</b>	7	_	<b>^</b>
Traffic Vol, veh/h	0	192	1247	19	0	1612
Future Vol, veh/h	0	192	1247	19	0	1612
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	335	-	-
Veh in Median Storage	, # 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	4	8	3	2	10
Mvmt Flow	0	218	1417	22	0	1832
N.A ' /N.A'	1'		1.1.4		4	
	Minor1		//ajor1		/lajor2	
Conflicting Flow All	-	709	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.98	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.34	-	-	-	-
Pot Cap-1 Maneuver	0	372	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	372	-	-	-	-
Mov Cap-2 Maneuver	-	-	_	_	_	-
Stage 1	_	_	-	-	-	-
Stage 2	_	_	_	_	_	_
Olugo Z						
Approach	WB		NB		SB	
HCM Control Delay, s/\	/27.48		0		0	
HCM LOS	D					
Minor Lane/Major Mvm	t	NBTV	/RI n1	SBT		
	ı					
Capacity (veh/h)		-	372	-		
HCM Control Dolay (a)	(ab)		0.586	-		
HCM Control Delay (s/v	ven)	-	27.5	-		
HCM Lane LOS		-	D	-		
HCM 95th %tile Q(veh)		-	3.6	-		

	٠	<b>→</b>	•	•	4	<b>†</b>	<b>\</b>	ļ
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	6	383	21	322	354	126	27	173
v/c Ratio	0.02	0.76	0.07	0.69	0.61	0.21	0.07	0.45
Control Delay (s/veh)	15.0	32.7	15.3	30.2	20.3	21.8	15.8	33.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.0	32.7	15.3	30.2	20.3	21.8	15.8	33.3
Queue Length 50th (ft)	2	125	5	111	90	38	5	61
Queue Length 95th (ft)	9	312	21	278	249	110	27	168
Internal Link Dist (ft)		1007		989		572		1708
Turn Bay Length (ft)	100		100		60		50	
Base Capacity (vph)	404	1141	529	1012	662	1185	678	1355
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.34	0.04	0.32	0.53	0.11	0.04	0.13
Intersection Summary								

	•	-	•	•	<b>←</b>	•	•	<b>†</b>	<i>&gt;</i>	<b>\</b>	<b></b>	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		ሻ	<b>₽</b>		7	ĵ»		ሻ	ĵ»	
Traffic Volume (vph)	5	184	157	19	263	23	315	85	27	24	130	24
Future Volume (vph)	5	184	157	19	263	23	315	85	27	24	130	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		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	0.93		1.00	0.99		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1128	1467		1543	1308		1656	1495		1593	1704	
Flt Permitted	0.44	1.00		0.32	1.00		0.49	1.00		0.68	1.00	
Satd. Flow (perm)	525	1467	0.00	524	1308	0.00	860	1495	0.00	1134	1704	0.00
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)	6	207	176	21	296	26	354	96	30	27	146	27
RTOR Reduction (vph)	0	18	0	0	2	0	0	0	0	0	5	0
Lane Group Flow (vph)	6	365	0	21	320	0	354	126	0	27	168	0
Confl. Peds. (#/hr)	CO0/	100/	000/	470/	450/	070/	00/	0.40/	2 450/	2	E0/	200/
Heavy Vehicles (%)	60%	16%	26%	17%	45%	27%	9%	24%	15%	13%	5%	30%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2	04.0		6	05.7		8	20.5		4	10.2	
Actuated Green, G (s)	25.6	24.8		27.4	25.7		36.7	29.5		21.5	18.3	
Effective Green, g (s)	25.6 0.33	25.3 0.32		27.4 0.35	26.2 0.34		36.7	30.0 0.38		21.5 0.27	18.8 0.24	
Actuated g/C Ratio	4.0	5.5		4.0	5.5		0.47 4.0	5.5		4.0	5.5	
Clearance Time (s) Vehicle Extension (s)	2.0	3.2		2.0	3.2		2.0	3.2		2.0	3.2	
		474		205	438		550	573		330	409	
Lane Grp Cap (vph) v/s Ratio Prot	178 0.00	c0.25		c0.00	0.24		c0.12	0.08		0.00	0.10	
v/s Ratio Perm	0.00	00.25		0.03	0.24		c0.12	0.00		0.00	0.10	
v/c Ratio	0.01	0.77		0.03	0.73		0.64	0.22		0.02	0.41	
Uniform Delay, d1	18.0	23.8		17.4	22.9		14.3	16.2		20.9	25.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	7.5		0.1	6.3		1.00	0.2		0.0	0.7	
Delay (s)	18.0	31.3		17.5	29.1		16.2	16.4		20.9	25.8	
Level of Service	В	C C		17.3 B	C C		10.2 B	В		20.3 C	23.0 C	
Approach Delay (s/veh)	U	31.1		Ь	28.4		D	16.3		U	25.1	
Approach LOS		C			C			В			C C	
• •					0							
Intersection Summary	,											
HCM 2000 Control Delay (s			24.6	H	CM 2000	Level of	Service		С			
HCM 2000 Volume to Capa	acity ratio		0.71	^		C			40.0			
Actuated Cycle Length (s)	·		78.2		um of lost				18.0			
Intersection Capacity Utiliza	ation		56.7%	IC	U Level o	of Service	9		В			
Analysis Period (min)			15									

Analysis Period (min)
c Critical Lane Group

Movement   Care   Car		۶	<b>→</b>	•	•	•	•	•	<b>†</b>	<b>/</b>	<b>/</b>	Ţ	-√
Traffic Volume (vehih) 5 184 157 19 263 23 315 85 27 24 130 24 Initial Q (Obl), veh 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Future Volume (vehhh)													
Initial O(Db), veh													
Lane Writth Adj.   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   0.99   0.													
Ped-Bike Adji(A pbT)													
Parking Bus, Adj	•		1.00			1.00			1.00			1.00	
Work Zone On Approach	Ped-Bike Adj(A_pbT)												
Adj Sat Flow, veh/n/In         1011         1663         1515         1648         1233         1500         1767         1544         1678         1707         1826         1455           Adj Flow Rate, veh/h         6         207         176         21         296         26         354         96         30         27         146         27           Peach Hour Factor         0.89	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
Adj Flow Rate, veh/h         6         207         176         21         296         26         354         96         30         27         146         27           Peak Hour Factor         0.89	Work Zone On Approach												
Peak Hour Factor   0.89   0.00   0.05   0.15   0.	Adj Sat Flow, veh/h/ln	1011	1663	1515	1648	1233	1500	1767	1544	1678	1707	1826	1455
Percent Heavy Veh, %   60	Adj Flow Rate, veh/h	6	207	176	21	296	26	354	96	30	27	146	27
Cap, veh/h         196         301         256         268         423         37         503         366         114         319         230         42           Arrive On Green         0.01         0.36         0.02         0.38         0.27         0.20         0.32         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.0         147         0.0         0.0         322         354         0         126         27         0         173         Grp Sat Flow(s), veh/h/ln         963         0         1536         1570         0         1215         1682         0         1480         1626         0         1774         QServe(g.s), s         0.3         0.0         14.7         0.6         0.0         15.5         11.5         0.0         4.4         1.0         0.0         6.4         Prop In Lane         1.00         0.46         1.00         0.08         1.00         0.046         1.00         0.08         1.00         0.024         1.00         0.0         6.6 <t< td=""><td>Peak Hour Factor</td><td>0.89</td><td>0.89</td><td>0.89</td><td>0.89</td><td>0.89</td><td>0.89</td><td>0.89</td><td>0.89</td><td>0.89</td><td>0.89</td><td>0.89</td><td>0.89</td></t<>	Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Arrive On Green 0.01 0.36 0.36 0.02 0.38 0.37 0.20 0.32 0.32 0.03 0.15 0.15 Sat Flow, veh/h 963 830 706 1570 1117 98 1682 1127 352 1626 1497 277 Grp Volume(v), veh/h 6 0 383 21 0 322 354 0 126 27 0 173 Grp Sat Flow(s), veh/h/n 963 0 1536 1570 0 1215 1682 0 1480 1626 0 1774 Q Serve(g_s), s 0.3 0.0 14.7 0.6 0.0 15.5 11.5 10.0 4.4 1.0 0.0 6.4 Cycle Q Clear(g_c), s 0.3 0.0 14.7 0.6 0.0 15.5 11.5 0.0 4.4 1.0 0.0 6.4 Cycle Q Clear(g_c), s 0.3 0.0 14.7 0.6 0.0 15.5 11.5 0.0 4.4 1.0 0.0 6.4 Cycle Q Clear(g_c), s 0.3 0.0 14.7 0.6 10.0 10.0 10.0 0.00 1.00 0.00 0.00	Percent Heavy Veh, %	60	16	26	17	45	27	9	24	15	13	5	30
Sat Flow, veh/h   963   830   706   1570   1117   98   1682   1127   352   1626   1497   277	Cap, veh/h	196	301	256	268	423	37	503	366	114	319	230	42
Grp Volume(v), veh/h   6	Arrive On Green	0.01	0.36	0.36	0.02	0.38	0.37	0.20	0.32	0.32	0.03	0.15	0.15
Grp Sat Flow(s), veh/h/ln 963 0 1536 1570 0 1215 1682 0 1480 1626 0 1774 Q Serve(g_s), s 0.3 0.0 14.7 0.6 0.0 15.5 11.5 0.0 4.4 1.0 0.0 6.4 Cycle Q Clear(g_c), s 0.3 0.0 14.7 0.6 0.0 15.5 11.5 0.0 4.4 1.0 0.0 6.4 Cycle Q Clear(g_c), s 0.3 0.0 14.7 0.6 0.0 15.5 11.5 0.0 4.4 1.0 0.0 6.4 Cycle Q Clear(g_c), s 0.3 0.0 14.7 0.6 0.0 15.5 11.5 0.0 4.4 1.0 0.0 6.4 Cycle Q Clear(g_c), veh/h 196 0 557 268 0 460 503 0 480 319 0 272 V/C Ratio(X) 0.03 0.00 0.69 0.08 0.00 0.70 0.70 0.00 0.26 0.08 0.00 0.64 Avail Cap(c_a), veh/h 466 0 1207 683 0 937 651 0 1226 740 0 1419 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Sat Flow, veh/h	963	830	706	1570	1117	98	1682	1127	352	1626	1497	277
Grp Sat Flow(s), veh/h/ln 963 0 1536 1570 0 1215 1682 0 1480 1626 0 1774 Q Serve(g_s), s 0.3 0.0 14.7 0.6 0.0 15.5 11.5 0.0 4.4 1.0 0.0 6.4 Cycle Q Clear(g_c), s 0.3 0.0 14.7 0.6 0.0 15.5 11.5 0.0 4.4 1.0 0.0 6.4 Cycle Q Clear(g_c), s 0.3 0.0 14.7 0.6 0.0 15.5 11.5 0.0 4.4 1.0 0.0 6.4 Cycle Q Clear(g_c), s 0.3 0.0 14.7 0.6 0.0 15.5 11.5 0.0 4.4 1.0 0.0 6.4 Cycle Q Clear(g_c), veh/h 196 0 557 268 0 460 503 0 480 319 0 272 V/C Ratio(X) 0.03 0.00 0.69 0.08 0.00 0.70 0.70 0.00 0.26 0.08 0.00 0.64 Avail Cap(c_a), veh/h 466 0 1207 683 0 937 651 0 1226 740 0 1419 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Grp Volume(v), veh/h	6	0	383	21	0	322	354	0	126	27	0	173
Q Serve(g_s), s													
Cycle Q Clear(g_c), s         0.3         0.0         14.7         0.6         0.0         15.5         11.5         0.0         4.4         1.0         0.0         6.4           Prop In Lane         1.00         0.46         1.00         0.08         1.00         0.24         1.00         0.16           Lane Grp Cap(c), veh/h         196         0         557         268         0         460         503         0         480         319         0         272           V/C Ratio(X)         0.03         0.00         0.69         0.08         0.00         0.70         0.70         0.00         0.26         0.08         0.00         0.64           Avail Cap(c_a), veh/h         466         0         1207         683         0         937         651         0         1226         740         0         1419           HCM Platoan Ratio         1.00         1													
Prop In Lane 1.00 0.46 1.00 0.08 1.00 0.24 1.00 0.16 Lane Grp Cap(c), veh/h 196 0 557 268 0 460 503 0 480 319 0 272 V/C Ratio(X) 0.03 0.00 0.69 0.08 0.00 0.70 0.70 0.70 0.00 0.26 0.08 0.00 0.64 Avail Cap(c_a), veh/h 466 0 1207 683 0 937 651 0 1226 740 0 1419 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
Lane Grp Cap(c), veh/h 196 0 557 268 0 460 503 0 480 319 0 272 V/C Ratio(X) 0.03 0.00 0.69 0.08 0.00 0.70 0.70 0.00 0.26 0.08 0.00 0.64 Avail Cap(c_a), veh/h 466 0 1207 683 0 937 651 0 1226 740 0 1419 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
V/C Ratio(X)         0.03         0.00         0.69         0.08         0.00         0.70         0.70         0.00         0.26         0.08         0.00         0.64           Avail Cap(c_a), veh/h         466         0         1207         683         0         937         651         0         1226         740         0         1419           HCM Platoon Ratio         1.00 </td <td></td> <td></td> <td>0</td> <td></td> <td></td> <td>0</td> <td></td> <td></td> <td>0</td> <td></td> <td></td> <td>0</td> <td></td>			0			0			0			0	
Avail Cap(c_a), veh/h													
HCM Platoon Ratio													
Upstream Filter(I)													
Uniform Delay (d), s/veh 15.7 0.0 18.9 15.1 0.0 18.2 17.9 0.0 17.3 24.0 0.0 27.6 Incr Delay (d2), s/veh 0.0 0.0 1.6 0.0 0.0 0.0 2.1 1.3 0.0 0.3 0.0 0.0 2.7 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.													
Incr Delay (d2), s/veh													
Initial Q Delay(d3), s/veh													
%ile BackOfQ(50%),veh/ln       0.1       0.0       4.7       0.2       0.0       4.2       4.2       0.0       1.4       0.4       0.0       2.7         Unsig. Movement Delay, s/veh       15.7       0.0       20.5       15.2       0.0       20.3       19.2       0.0       17.7       24.0       0.0       30.3         LnGrp LOS       B       C       B       C       B       C       C         Approach Vol, veh/h       389       343       480       200         Approach Delay, s/veh       20.4       20.0       18.8       29.4         Approach LOS       C       C       C       B       C         Timer - Assigned Phs       1       2       3       4       5       6       7       8         Phs Duration (G+Y+Rc), s       5.7       30.2       17.9       15.6       4.5       31.3       6.0       27.5         Change Period (Y+Rc), s       4.0       5.5       4.0       5.5       4.0       5.5       4.0       5.5         Max Green Setting (Gmax), s       20.0       54.0       20.0       55.0       20.0       53.0       20.0       57.0         Max Q Clear Time													
Unsig. Movement Delay, s/veh LnGrp Delay(d), s/veh 15.7 0.0 20.5 15.2 0.0 20.3 19.2 0.0 17.7 24.0 0.0 30.3 1.6Grp LOS B C B C B B C C C Approach Vol, veh/h 389 Approach Delay, s/veh 20.4 20.0 Approach LOS C C C C Timer - Assigned Phs 1 2 3 4 5 6 7 8 Phs Duration (G+Y+Rc), s 5.7 30.2 17.9 15.6 4.5 31.3 6.0 27.5 Change Period (Y+Rc), s 4.0 5.5 4.0 5.5 4.0 5.5 4.0 5.5 Max Green Setting (Gmax), s 20.0 54.0 20.0 55.0 20.0 55.0 20.0 55.0 20.0 57.0 Max Q Clear Time (g_c+I1), s 2.6 16.7 13.5 8.4 2.3 17.5 3.0 6.4 Green Ext Time (p_c), s 0.0 7.9 0.4 0.6 0.0 7.2 0.1 1.8													
LnGrp Delay(d), s/veh         15.7         0.0         20.5         15.2         0.0         20.3         19.2         0.0         17.7         24.0         0.0         30.3           LnGrp LOS         B         C         B         C         B         C         C           Approach Vol, veh/h         389         343         480         200           Approach Delay, s/veh         20.4         20.0         18.8         29.4           Approach LOS         C         C         B         C           Timer - Assigned Phs         1         2         3         4         5         6         7         8           Phs Duration (G+Y+Rc), s         5.7         30.2         17.9         15.6         4.5         31.3         6.0         27.5           Change Period (Y+Rc), s         4.0         5.5         4.0         5.5         4.0         5.5           Max Green Setting (Gmax), s         20.0         54.0         20.0         55.0         20.0         53.0         20.0         57.0           Max Q Clear Time (g_c+l1), s         2.6         16.7         13.5         8.4         2.3         17.5         3.0         6.4           Green Ext	, , ,		0.0	1.7	0.2	0.0	1.4	1.6	0.0		0.1	0.0	2.7
LnGrp LOS         B         C         B         C         B         C         C           Approach Vol, veh/h         389         343         480         200           Approach Delay, s/veh         20.4         20.0         18.8         29.4           Approach LOS         C         C         B         C           Timer - Assigned Phs         1         2         3         4         5         6         7         8           Phs Duration (G+Y+Rc), s         5.7         30.2         17.9         15.6         4.5         31.3         6.0         27.5           Change Period (Y+Rc), s         4.0         5.5         4.0         5.5         4.0         5.5           Max Green Setting (Gmax), s         20.0         54.0         20.0         55.0         20.0         53.0         20.0         57.0           Max Q Clear Time (g_c+l1), s         2.6         16.7         13.5         8.4         2.3         17.5         3.0         6.4           Green Ext Time (p_c), s         0.0         7.9         0.4         0.6         0.0         7.2         0.1         1.8    Intersection Summary  HCM 7th Control Delay, s/veh			0.0	20.5	15.2	0.0	20.3	19.2	0.0	17 7	24 0	0.0	30.3
Approach Vol, veh/h Approach Delay, s/veh Approach Delay, s/veh Approach LOS C C C B C C C C C C C C C C C C C C C			0.0			0.0			0.0			0.0	
Approach Delay, s/veh Approach LOS C C B C C C B C C C C C C C C C C C C			380			3/13			480			200	
Approach LOS C C B C  Timer - Assigned Phs 1 2 3 4 5 6 7 8  Phs Duration (G+Y+Rc), s 5.7 30.2 17.9 15.6 4.5 31.3 6.0 27.5  Change Period (Y+Rc), s 4.0 5.5 4.0 5.5 4.0 5.5  Max Green Setting (Gmax), s 20.0 54.0 20.0 55.0 20.0 53.0 20.0 57.0  Max Q Clear Time (g_c+I1), s 2.6 16.7 13.5 8.4 2.3 17.5 3.0 6.4  Green Ext Time (p_c), s 0.0 7.9 0.4 0.6 0.0 7.2 0.1 1.8  Intersection Summary  HCM 7th Control Delay, s/veh 21.1													
Timer - Assigned Phs         1         2         3         4         5         6         7         8           Phs Duration (G+Y+Rc), s         5.7         30.2         17.9         15.6         4.5         31.3         6.0         27.5           Change Period (Y+Rc), s         4.0         5.5         4.0         5.5         4.0         5.5           Max Green Setting (Gmax), s         20.0         54.0         20.0         53.0         20.0         57.0           Max Q Clear Time (g_c+I1), s         2.6         16.7         13.5         8.4         2.3         17.5         3.0         6.4           Green Ext Time (p_c), s         0.0         7.9         0.4         0.6         0.0         7.2         0.1         1.8           Intersection Summary           HCM 7th Control Delay, s/veh         21.1													
Phs Duration (G+Y+Rc), s 5.7 30.2 17.9 15.6 4.5 31.3 6.0 27.5  Change Period (Y+Rc), s 4.0 5.5 4.0 5.5 4.0 5.5  Max Green Setting (Gmax), s 20.0 54.0 20.0 55.0 20.0 53.0 20.0 57.0  Max Q Clear Time (g_c+I1), s 2.6 16.7 13.5 8.4 2.3 17.5 3.0 6.4  Green Ext Time (p_c), s 0.0 7.9 0.4 0.6 0.0 7.2 0.1 1.8  Intersection Summary  HCM 7th Control Delay, s/veh 21.1	Approach LOS		C			C			Ь			C	
Change Period (Y+Rc), s 4.0 5.5 4.0 5.5 4.0 5.5 4.0 5.5  Max Green Setting (Gmax), s 20.0 54.0 20.0 55.0 20.0 53.0 20.0 57.0  Max Q Clear Time (g_c+l1), s 2.6 16.7 13.5 8.4 2.3 17.5 3.0 6.4  Green Ext Time (p_c), s 0.0 7.9 0.4 0.6 0.0 7.2 0.1 1.8  Intersection Summary  HCM 7th Control Delay, s/veh 21.1	The state of the s												
Max Green Setting (Gmax), s       20.0       54.0       20.0       55.0       20.0       53.0       20.0       57.0         Max Q Clear Time (g_c+l1), s       2.6       16.7       13.5       8.4       2.3       17.5       3.0       6.4         Green Ext Time (p_c), s       0.0       7.9       0.4       0.6       0.0       7.2       0.1       1.8         Intersection Summary         HCM 7th Control Delay, s/veh       21.1													
Max Q Clear Time (g_c+l1), s 2.6 16.7 13.5 8.4 2.3 17.5 3.0 6.4  Green Ext Time (p_c), s 0.0 7.9 0.4 0.6 0.0 7.2 0.1 1.8  Intersection Summary  HCM 7th Control Delay, s/veh 21.1	` ,												
Green Ext Time (p_c), s 0.0 7.9 0.4 0.6 0.0 7.2 0.1 1.8  Intersection Summary  HCM 7th Control Delay, s/veh 21.1		20.0					53.0						
Intersection Summary HCM 7th Control Delay, s/veh 21.1		2.6	16.7	13.5	8.4	2.3	17.5		6.4				
HCM 7th Control Delay, s/veh 21.1	Green Ext Time (p_c), s	0.0	7.9	0.4	0.6	0.0	7.2	0.1	1.8				
	Intersection Summary												
	HCM 7th Control Delay, s/veh			21.1									
	HCM 7th LOS			С									

## 21: OR 99W (Pacific Highway) & SW Fischer Road

	•	•	1	<b>†</b>	<b>↓</b>	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	247	440	143	1496	1356	144
v/c Ratio	0.78	0.97	0.81	0.59	0.64	0.15
Control Delay (s/veh)	72.4	65.0	92.8	8.4	24.7	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.4	65.0	92.8	8.4	24.7	4.2
Queue Length 50th (ft)	216	228	129	277	573	14
Queue Length 95th (ft)	#335	#447	#247	328	660	m26
Internal Link Dist (ft)	1134			1909	2372	
Turn Bay Length (ft)	275		435			200
Base Capacity (vph)	325	460	176	2549	2110	974
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.96	0.81	0.59	0.64	0.15

Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

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

	•	•	•	<b>†</b>	L	ļ	4	
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	
Lane Configurations	ሻ	7	ሻ	ተተ	Ð	<b>^</b>	7	
Traffic Volume (vph)	222	396	129	1346	0	1220	130	
Future Volume (vph)	222	396	129	1346	0	1220	130	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95		0.95	1.00	
Frpb, ped/bikes	1.00	0.98	1.00	1.00		1.00	0.97	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.85	1.00	1.00		1.00	0.85	
Flt Protected	0.95	1.00	0.95	1.00		1.00	1.00	
Satd. Flow (prot)	1752	1555	1543	3343		3406	1499	
Flt Permitted	0.95	1.00	0.95	1.00		1.00	1.00	
Satd. Flow (perm)	1752	1555	1543	3343	0.00	3406	1499	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	247	440	143	1496	0	1356	144	
RTOR Reduction (vph)	0	173	142	1406	0	1256	46	
Lane Group Flow (vph)	247	267	143	1496	0	1356	98	
Confl. Peds. (#/hr)	20/	7	170/	00/	20/	60/	5 40/	
Heavy Vehicles (%)	3%	2%	17%	8%	2%	6%	4%	
Turn Type	Prot	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	4	4	5	2	1	6	6	
Permitted Phases	24.2	4 24.3	115	104.7		0/17	6 84.7	
Actuated Green, G (s)	24.3		14.5	104.7		84.7	84.7	
Effective Green, g (s)	25.3	25.3	16.0	106.7		86.7		
Actuated g/C Ratio	0.18	0.18	0.11 5.5	0.76 6.0		0.62 6.0	0.62	
Clearance Time (s)	5.0 2.5	5.0 2.5	2.3	6.0 4.5		4.5	6.0 4.5	
Vehicle Extension (s)								
Lane Grp Cap (vph)	316	281	176	2547		2109	928	
v/s Ratio Prot	0.14	o0 17	c0.09	0.45		c0.40	0.07	
v/s Ratio Perm	0.70	c0.17	0.81	0.50		0.64	0.07	
v/c Ratio	0.78 54.7	0.95 56.7	60.5	0.59 7.2		0.64 16.9	10.9	
Uniform Delay, d1 Progression Factor	1.00	1.00	1.00	1.00		1.36	1.42	
	11.5	40.3	23.3	1.00		1.2	0.2	
Incremental Delay, d2	66.2	97.1	83.8	8.2		24.2	15.7	
Delay (s) Level of Service	00.2 E	97.1 F	03.0 F	0.2 A		24.2 C	15.7 B	
Approach Delay (s/veh)	86.0	Г	Г	14.8		23.4	Б	
Approach LOS	66.0 F			14.0 B		23.4 C		
	Г			Б		C		
Intersection Summary								
HCM 2000 Control Delay (s/v			30.9	H(	JM 2000	Level of S	Service	
HCM 2000 Volume to Capac	ity ratio		0.72					
Actuated Cycle Length (s)			140.0		ım of lost			
Intersection Capacity Utilizat	ion		69.3%	IC	U Level o	of Service		
Analysis Period (min)			15					

c Critical Lane Group

	۶	$\rightarrow$	•	<b>†</b>	L.	<b>↓</b>	✓
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations	ሻ	7	*	<b>†</b> †	Ð	<b>^</b>	7
Traffic Volume (veh/h)	222	396	129	1346	0	1220	130
Future Volume (veh/h)	222	396	129	1346	0	1220	130
Initial Q (Qb), veh	0	0	0	0		0	0
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00				1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No			No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1648	1781		1811	1841
Adj Flow Rate, veh/h	247	440	143	1496		1356	144
Peak Hour Factor	0.90	0.90	0.90	0.90		0.90	0.90
Percent Heavy Veh, %	3	2	17	8		6	4
Cap, veh/h	328	294	222	2666		2114	954
Arrive On Green	0.19	0.19	0.14	0.79		0.82	0.82
Sat Flow, veh/h	1767	1585	1570	3474		3532	1554
Grp Volume(v), veh/h	247	440	143	1496		1356	144
Grp Sat Flow(s), veh/h/ln	1767	1585	1570	1692		1721	1554
Q Serve(g_s), s	18.5	26.0	12.1	23.5		21.2	2.7
Cycle Q Clear(g_c), s	18.5	26.0	12.1	23.5		21.2	2.7
Prop In Lane	1.00	1.00	1.00	20.0		<i>-</i> 1. <i>-</i>	1.00
Lane Grp Cap(c), veh/h	328	294	222	2666		2114	954
V/C Ratio(X)	0.75	1.49	0.65	0.56		0.64	0.15
Avail Cap(c_a), veh/h	328	294	222	2666		2114	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00		0.77	0.77
Uniform Delay (d), s/veh	54.0	57.0	56.8	5.7		6.9	5.2
Incr Delay (d2), s/veh	9.0	239.8	5.5	0.9		1.2	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	40.4	5.0	6.6		4.9	0.9
Unsig. Movement Delay, s/ver		70.7	0.0	0.0		7.5	0.0
LnGrp Delay(d), s/veh	63.0	296.8	62.3	6.5		8.0	5.4
LnGrp LOS	03.0 E	230.0 F	02.5 E	0.5 A		Α	J.4 A
Approach Vol, veh/h	687		L	1639		1500	Α
Approach Delay, s/veh	212.7			11.4		7.8	
Approach LOS	212.7 F			11.4 B			
				D		Α	
Timer - Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		114.3		30.0	24.3	90.0	
Change Period (Y+Rc), s		6.0		5.0	6.0	* 6	
Max Green Setting (Gmax), s		84.0		25.0	14.5	* 84	
Max Q Clear Time (g_c+l1), s		25.5		28.0	14.1	23.2	
Green Ext Time (p_c), s		51.3		0.0	0.0	48.5	
Intersection Summary							
HCM 7th Control Delay, s/veh			46.1				
HCM 7th LOS			D				
Notes							
User approved pedestrian inte	rval to b	e less that	n nhase n	nax green			
User approved ignoring U-Tur			i pridoc II	iux green	•		
acci approvou ignoring o-run		onion.					

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

	-	•	•	•	•	<b>†</b>	~	-	<b>↓</b>	4	
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	129	192	197	241	72	1230	387	462	1060	12	
v/c Ratio	0.40	0.86	0.87	0.58	0.62	0.81	0.41	0.83	0.55	0.01	
Control Delay (s/veh)	44.5	92.3	92.9	12.2	75.0	38.9	7.6	70.5	21.4	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	44.5	92.3	92.9	12.2	75.0	38.9	7.6	70.5	21.4	0.0	
Queue Length 50th (ft)	40	181	186	0	65	533	120	212	332	0	
Queue Length 95th (ft)	74	#318	#326	80	m109	627	176	#290	401	0	
Internal Link Dist (ft)	481		939			2372			1326		
Turn Bay Length (ft)		300		315	550		140	265		400	
Base Capacity (vph)	349	230	234	424	134	1516	950	556	1917	948	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.83	0.84	0.57	0.54	0.81	0.41	0.83	0.55	0.01	

### Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	•	<b>→</b>	$\rightarrow$	•	<b>—</b>	•	•	<b>†</b>	<i>&gt;</i>	-	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		414		ሻ	4	7	ሻ	<b>^</b>	7	ሻሻ	<b>^</b>	7
Traffic Volume (vph)	8	72	39	321	37	222	66	1132	356	425	975	11
Future Volume (vph)	8	72	39	321	37	222	66	1132	356	425	975	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Lane Util. Factor		0.95		0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3355		1633	1663	1536	1770	3343	1506	3433	3374	1583
Flt Permitted		1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3355		1633	1663	1536	1770	3343	1506	3433	3374	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)	9	78	42	349	40	241	72	1230	387	462	1060	12
RTOR Reduction (vph)	0	38	0	0	0	208	0	0	62	0	0	5
Lane Group Flow (vph)	0	91	0	192	197	33	72	1230	325	462	1060	7
Confl. Peds. (#/hr)	4					4			2			
Heavy Vehicles (%)	2%	2%	2%	5%	2%	3%	2%	8%	6%	2%	7%	2%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	3	3		4	4		5	2	4	1	6	
Permitted Phases						4			2			6
Actuated Green, G (s)		12.0		19.1	19.1	19.1	8.0	62.4	81.5	23.8	78.5	78.5
Effective Green, g (s)		12.0		19.1	19.1	19.1	8.0	62.4	81.5	23.8	78.5	78.5
Actuated g/C Ratio		0.09		0.14	0.14	0.14	0.06	0.45	0.58	0.17	0.56	0.56
Clearance Time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Vehicle Extension (s)		2.3		2.3	2.3	2.3	2.3	4.5	2.3	2.3	4.8	4.8
Lane Grp Cap (vph)		287		222	226	209	101	1490	941	583	1891	887
v/s Ratio Prot		c0.03		0.12	c0.12		0.04	c0.37	0.05	c0.13	0.31	
v/s Ratio Perm						0.02			0.17			0.00
v/c Ratio		0.32		0.86	0.87	0.16	0.71	0.83	0.35	0.79	0.56	0.01
Uniform Delay, d1		60.1		59.2	59.2	53.3	64.9	34.0	15.3	55.7	19.7	13.6
Progression Factor		1.00		1.00	1.00	1.00	0.90	1.04	0.87	1.00	1.00	1.00
Incremental Delay, d2		0.4		27.2	28.3	0.2	15.5	4.3	0.1	7.0	1.2	0.0
Delay (s)		60.5		86.4	87.5	53.6	73.8	39.6	13.5	62.7	20.9	13.6
Level of Service		Е		F	F	D	Е	D	В	Е	С	В
Approach Delay (s/veh)		60.5			74.2			35.1			33.4	
Approach LOS		Е			Е			D			С	
Intersection Summary												
HCM 2000 Control Delay (s/			41.5	H	CM 2000	Level of S	Service		D			
HCM 2000 Volume to Capac	city ratio		0.77									
Actuated Cycle Length (s)			140.0		um of lost				22.7			
Intersection Capacity Utiliza	tion		73.9%	IC	U Level	of Service			D			
Analysis Period (min)			15									

Analysis Period (min)
c Critical Lane Group

HCM 7th Edition methodology does not support exclusive ped or hold phases.

# 1: SW 124th Avenue & OR 99W (Pacific Highway)

	-	•	•	•	1	~
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	863	231	762	1185	728	801
v/c Ratio	0.71	0.34	0.76	0.52	0.80	0.52
Control Delay (s/veh)	38.4	5.0	45.4	11.6	41.6	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.4	5.0	45.4	11.6	41.6	18.2
Queue Length 50th (ft)	304	0	278	225	260	232
Queue Length 95th (ft)	379	54	#403	315	328	327
Internal Link Dist (ft)	1687			1822	503	
Turn Bay Length (ft)		225	550		300	275
Base Capacity (vph)	1209	677	998	2298	1058	1546
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.34	0.76	0.52	0.69	0.52
Intersection Summary						

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	-	•	•	•	4	~		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	<b>†</b> †	7	ሻሻ	<b>^</b>	ሻሻ	77		
Traffic Volume (vph)	811	217	716	1114	684	753		
Future Volume (vph)	811	217	716	1114	684	753		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	5.6		
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88		
Frpb, ped/bikes	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		
Frt	1.00	0.85	1.00	1.00	1.00	0.85		
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00		
Satd. Flow (prot)	3539	1538	3400	3438	3433	2787		
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00		
Satd. Flow (perm)	3539	1538	3400	3438	3433	2787		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94		
Adj. Flow (vph)	863	231	762	1185	728	801		
RTOR Reduction (vph)	0	152	0	0	0	0		
Lane Group Flow (vph)	863	79	762	1185	728	801		
Confl. Peds. (#/hr)						1		
Heavy Vehicles (%)	2%	5%	3%	5%	2%	2%		
Turn Type	NA	Perm	Prot	NA	Prot	pt+ov		
Protected Phases	2		1	6	8	1 4		
Permitted Phases		2						
Actuated Green, G (s)	39.0	39.0	30.4	75.0	33.0	63.4		
Effective Green, g (s)	41.0	41.0	32.0	77.0	35.0	58.4		
Actuated g/C Ratio	0.34	0.34	0.27	0.64	0.29	0.49		
Clearance Time (s)	6.0	6.0	5.6	6.0	6.0			
Vehicle Extension (s)	5.4	5.4	2.3	5.4	2.3			
Lane Grp Cap (vph)	1209	525	906	2206	1001	1356		
v/s Ratio Prot	c0.24		c0.22	0.34	c0.21	0.29		
v/s Ratio Perm		0.05						
v/c Ratio	0.71	0.15	0.84	0.54	0.73	0.59		
Uniform Delay, d1	34.4	27.4	41.6	11.8	38.2	22.2		
Progression Factor	1.00	1.00	1.00	1.00	0.85	0.95		
Incremental Delay, d2	2.7	0.3	9.3	0.9	2.3	0.5		
Delay (s)	37.1	27.7	50.9	12.7	34.6	21.7		
Level of Service	D	С	D	В	С	С		
Approach Delay (s/veh)	35.1			27.6	27.8			
Approach LOS	D			С	С			
Intersection Summary								
HCM 2000 Control Delay (			29.5	H	CM 2000	Level of Service	ce	С
HCM 2000 Volume to Cap	acity ratio		0.80					
Actuated Cycle Length (s)			120.0		um of lost		18	3.6
Intersection Capacity Utiliz	ation		82.0%	IC	U Level	of Service		Е
Analysis Period (min)			15					
c Critical Lane Group								

Lam TUX - Site 2027 Post-Development - PM Peak Hour

HCM 7th Edition methodology does not support exclusive ped or hold phases.

# 2: SW 124th Avenue & SW Tualatin Road

	•	*	<b>†</b>	~	<b>/</b>	ļ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	50	687	785	53	457	511
v/c Ratio	0.25	0.63	0.75	0.11	0.48	0.18
Control Delay (s/veh)	47.3	9.6	42.9	12.1	11.6	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.3	9.6	42.9	12.1	11.6	4.2
Queue Length 50th (ft)	37	70	285	7	29	17
Queue Length 95th (ft)	63	299	345	36	179	91
Internal Link Dist (ft)	1180		1024			503
Turn Bay Length (ft)	25	300		150	200	
Base Capacity (vph)	445	1091	1169	549	956	2820
Starvation Cap Reductn	0	0	0	0	24	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.63	0.67	0.10	0.49	0.18
Intersection Summary						

	€	4	<b>†</b>	~	-	<b></b>			
Movement	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations	7	7	<b>†</b> †	7	*	<b>†</b> †			
Traffic Volume (vph)	47	646	738	50	430	480			
Future Volume (vph)	47	646	738	50	430	480			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Total Lost time (s)	4.0	0.0	4.5	4.5	4.0	4.5			
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95			
Frt	1.00	0.85	1.00	0.85	1.00	1.00			
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00			
Satd. Flow (prot)	1671	1599	3539	1583	1752	3374			
Flt Permitted	0.95	1.00	1.00	1.00	0.15	1.00			
Satd. Flow (perm)	1671	1599	3539	1583	272	3374			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94			
Adj. Flow (vph)	50	687	785	53	457	511			
RTOR Reduction (vph)	0	243	0	28	0	0			
Lane Group Flow (vph)	50	444	785	25	457	511			
Heavy Vehicles (%)	8%	1%	2%	2%	3%	7%			
Turn Type	Perm	Over	NA	Perm	D.P+P	NA			
Protected Phases		5	6		5	2			
Permitted Phases	4			6	6				
Actuated Green, G (s)	12.1	58.0	34.4	34.4	92.4	97.4			
Effective Green, g (s)	13.1	63.0	35.4	35.4	94.4	98.4			
Actuated g/C Ratio	0.11	0.53	0.30	0.30	0.79	0.82			
Clearance Time (s)	5.0	5.0	5.5	5.5	5.0	5.5			
Vehicle Extension (s)	4.0	4.0	4.5	4.5	4.0	4.5			
Lane Grp Cap (vph)	182	839	1044	466	941	2766			
v/s Ratio Prot		c0.28	c0.22		0.24	0.15			
v/s Ratio Perm	c0.03			0.02	0.14				
v/c Ratio	0.27	0.53	0.75	0.05	0.49	0.18			
Uniform Delay, d1	49.1	18.8	38.3	30.3	14.2	2.3			
Progression Factor	1.00	1.00	1.00	1.00	0.58	1.22			
Incremental Delay, d2	1.1	2.4	3.5	0.1	0.5	0.1			
Delay (s)	50.2	21.1	41.8	30.4	8.8	2.9			
Level of Service	D	С	D	С	Α	A			
Approach Delay (s/veh)	23.1		41.1			5.7			
Approach LOS	С		D			Α			
Intersection Summary									
HCM 2000 Control Delay (s.	/veh)		22.4	H	ICM 2000	Level of Service	e	С	
HCM 2000 Volume to Capa			0.58						
Actuated Cycle Length (s)			120.0	S	Sum of los	t time (s)		13.5	
Intersection Capacity Utiliza	ition		67.5%			of Service		С	
Analysis Period (min)			15						
c Critical Lane Group									

HCM 7th Edition methodology does not support exclusive ped or hold phases.

	٠	<b>→</b>	•	•	<b>←</b>	•	1	<b>†</b>	<i>&gt;</i>	<b>/</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	f)		ሻ	ĵ»		7	- 1>			4	
Traffic Volume (veh/h)	49	383	16	18	626	250	139	35	73	21	2	23
Future Volume (Veh/h)	49	383	16	18	626	250	139	35	73	21	2	23
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	52	403	17	19	659	263	146	37	77	22	2	24
Pedestrians		1									4	
Lane Width (ft)		12.0									12.0	
Walking Speed (ft/s)		3.5									3.5	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	926			420			1239	1480	412	1435	1357	796
vC1, stage 1 conf vol							516	516		833	833	
vC2, stage 2 conf vol							723	964		603	524	
vCu, unblocked vol	926			420			1239	1480	412	1435	1357	796
tC, single (s)	4.1			4.1			7.1	6.5	6.3	7.2	6.5	6.4
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.4	3.5	4.0	3.5
p0 queue free %	93			98			50	85	87	91	99	93
cM capacity (veh/h)	735			1139			291	251	615	252	314	363
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	52	420	19	922	146	114	48					
Volume Left	52	0	19	0	146	0	22					
Volume Right	0	17	0	263	0	77	24					
cSH	735	1700	1139	1700	291	418	300					
Volume to Capacity	0.07	0.25	0.02	0.54	0.50	0.27	0.16					
Queue Length 95th (ft)	6	0	1	0	66	27	14					
Control Delay (s/veh)	10.3	0.0	8.2	0.0	29.2	16.8	19.3					
Lane LOS	В		Α		D	С	С					
Approach Delay (s/veh)	1.1		0.2		23.7		19.3					
Approach LOS					С		С					
Intersection Summary												
Average Delay			4.5									
Intersection Capacity Utiliza	ition		69.3%	IC	U Level	of Service			С			
Analysis Period (min)			15									
. ,												

Intersection													
Int Delay, s/veh	18.5												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	7	ĵ.			ĵ.			ĵ.			4		
Traffic Vol, veh/h	49		16	18	626	250	139	35	73	21	2	23	
Future Vol, veh/h	49		16	18	626	250	139	35	73	21	2	23	
Conflicting Peds, #/hr	4		0	0	0	4	1	0	0	0	0	1	
Sign Control	Free		Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-		None	-	-	None	- Olop	- Olop	None	- Olop	- Olop	None	
Storage Length	25		-	25	_	INOITE	0	_	-	_	_	INOITE	
Veh in Median Storage		_	_	-	0	_	-	0	_	_	0	_	
Grade, %	, <del>//</del> -	_	_	_	0	_	_	0	_	_	0	_	
Peak Hour Factor	95	-	95	95	95	95	95	95	95	95	95	95	
	2		2	2	2	2	2	2	14	5	2	17	
Heavy Vehicles, %	52		17	19	659	263	146	37	77	22	2	24	
Mvmt Flow	52	403	17	19	059	203	140	31	11	22		24	
Major/Minor I	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	926	0	0	420	0	0	1214	1479	412	1357	1356	796	
Stage 1	-	_	-	_	-	-	515	515	-	832	832	_	
Stage 2	-	_	-	-	-	-	699	964	-	525	523	-	
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.34	7.15	6.52	6.37	
Critical Hdwy Stg 1	-	_	-	-	-	-	6.12	5.52	-	6.15	5.52	-	
Critical Hdwy Stg 2	-	_	-	-	-	-	6.12	5.52	-	6.15	5.52	-	
Follow-up Hdwy	2.218	-	_	2.218	_	-	3.518	4.018	3.426	3.545	4.018	3.453	
Pot Cap-1 Maneuver	738		-	1139	-	-	158	126	615	124	149	365	
Stage 1	-	_	-	-	-	-	543	535	-	359	384	-	
Stage 2	_	_	-	_	_	-	430	334	_	531	530	-	
Platoon blocked, %		-	_		_	-							
Mov Cap-1 Maneuver	735	-	-	1139	_	-	~ 133	115	615	69	136	363	
Mov Cap-2 Maneuver	_		-	-	_	-	~ 133	115	_	69	136	-	
Stage 1	-	_	-	-	-	-	505	497	-	352	376	-	
Stage 2	-	-	-	-	-	-	392	327	_	400	493	_	
0													
A				MA			NE			0.5			
Approach	EB			WB			NB			SB			
HCM Control Delay, s/	v 1.12			0.17		,	109.89			53.69			
HCM LOS							F			F			
Minor Lane/Major Mvm	nt	NBLn11	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)		133	255	735	_		1139	_	_	120			
HCM Lane V/C Ratio		1.099		0.07	_		0.017	_	_	0.402			
HCM Control Delay (s/	veh)	171.9	30.1	10.3	_	_	8.2	_	_	53.7			
HCM Lane LOS	. 5.11)	17 1.5	D	В	_	_	Α	_	_	55.7			
HCM 95th %tile Q(veh)	)	8.3	2.2	0.2	_	_	0.1	_	_	1.7			
· ·	,	0.0	۷.۲	J.L			0.1			1.7			
Notes													
~: Volume exceeds cap	pacity	\$: De	elay exc	eeds 30	00s	+: Com	putatior	Not D	efined	*: All	major v	olume i	in platoon

	٠	<b>→</b>	•	•	<b>/</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ች	<b>†</b>	<b>†</b>		¥	
Traffic Volume (veh/h)	12	473	944	14	8	2
Future Volume (Veh/h)	12	473	944	14	8	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	13	526	1049	16	9	2
Pedestrians			2		3	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1068				1614	1060
vC1, stage 1 conf vol					1060	
vC2, stage 2 conf vol					554	
vCu, unblocked vol	1068				1614	1060
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	V. <u> </u>
tF (s)	2.2				3.5	3.3
p0 queue free %	98				97	99
cM capacity (veh/h)	651				294	272
		ED 0	WD 4	CD 4		
Direction, Lane # Volume Total	EB 1	EB 2 526	WB 1 1065	SB 1 11		
Volume Left	13		0			
	0	0	16	9		
Volume Right						
valume to Conneitu	651	1700	1700	290		
Volume to Capacity	0.02	0.31	0.63	0.04		
Queue Length 95th (ft)	2	0	0	3		
Control Delay (s/veh)	10.6	0.0	0.0	17.9		
Lane LOS	В		2.2	C		
Approach Delay (s/veh)	0.3		0.0	17.9		
Approach LOS				С		
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utiliza	ation		60.5%	IC	U Level of	of Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	0.2					
		EDT	WDT	WDD	ODI	CDD
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	<b>*</b>	470	<b>↑</b>		À	_
Traffic Vol, veh/h	12	473	944	14	8	2
Future Vol, veh/h	12	473	944	14	8	2
Conflicting Peds, #/hr	_ 3	_ 0	_ 0	_ 3	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage	э,# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	4	2	8	2	2
Mvmt Flow	13	526	1049	16	9	2
Major/Minor	Majort		/loior?	, n	Minor	
	Major1		Major2		Minor2	4000
Conflicting Flow All	1067	0	-	0	1614	1060
Stage 1	-	-	-	-	1060	-
Stage 2	- 4.40	-	-	-	554	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-		3.318
Pot Cap-1 Maneuver	653	-	-	-	114	272
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	575	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	651	-	-	-	111	272
Mov Cap-2 Maneuver	-	-	-	-	235	-
Stage 1	-	-	-	-	325	-
Stage 2	-	_	_	_	574	-
Annraach	ΓР		WD		CD	
Approach	EB		WB		SB	
HCM Control Delay, s	v 0.26		0		20.61	
HCM LOS					С	
Minor Lane/Major Mvn	nt	EBL	EBT	WBT	WBR S	SBLn1
Capacity (veh/h)		651			-	242
HCM Lane V/C Ratio		0.02	_	_		0.046
HCM Control Delay (s.	/veh)	10.6	_	-	_	
HCM Lane LOS	,	В	_	_	_	20.0 C
HCM 95th %tile Q(veh	)	0.1	_	_	_	0.1
HOW JOHN JOHN Q(VEN	')	0.1	_	_	_	0.1

	-	$\rightarrow$	•	←	•	~
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>1</b> 2		ች	<b></b>	W	
Traffic Volume (veh/h)	437	36	10	881	48	23
Future Volume (Veh/h)	437	36	10	881	48	23
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	475	39	11	958	52	25
Pedestrians			• •		1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0.0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	L			2		
pX, platoon unblocked						
vC, conflicting volume			515		1476	496
vC1, stage 1 conf vol			313		496	730
vC2, stage 2 conf vol					980	
vCu, unblocked vol			515		1476	496
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)			4.1		5.4	0.2
			2.2		3.5	3.3
tF (s) p0 queue free %			99		84	96
			1050		323	574
cM capacity (veh/h)			1030		323	374
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	514	11	958	77		
Volume Left	0	11	0	52		
Volume Right	39	0	0	25		
cSH	1700	1050	1700	376		
Volume to Capacity	0.30	0.01	0.56	0.20		
Queue Length 95th (ft)	0	1	0	19		
Control Delay (s/veh)	0.0	8.5	0.0	17.0		
Lane LOS		Α		С		
Approach Delay (s/veh)	0.0	0.1		17.0		
Approach LOS				С		
Intersection Summary						
			0.9			
Average Delay Intersection Capacity Utiliza	ation		57.1%	IO	Hlovola	of Service
	111011			IC	O Level (	JI SELVICE
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1					
-						
Movement I	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽		7		¥	
Traffic Vol, veh/h	437	36	10	881	48	23
Future Vol, veh/h	437	36	10	881	48	23
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control F	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	25	-	-	-
Veh in Median Storage, #	<i>‡</i> 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
	475	39	11	958	52	25
WWW.CTIOW	110	00	• • •	000	02	20
	ajor1	N	Major2		Minor1	
Conflicting Flow All	0	0	515	0	1475	496
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	979	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	_	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	_	_	1051	_	139	574
Stage 1	_	_	-	_	612	-
Stage 2	_	_	_	_	364	_
Platoon blocked, %	_	_		_	001	
Mov Cap-1 Maneuver			1050	_	138	574
Mov Cap-1 Maneuver	_	-	1030	_	264	-
•	-	-	-	-	612	
Stage 1	-	_	-	-		-
Stage 2	-	-	-	_	360	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0.1		19.8	
HCM LOS	-		• • •		С	
Minor Lane/Major Mvmt	1	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		320	-	-	1050	-
HCM Lane V/C Ratio		0.241	-	-	0.01	-
HCM Control Delay (s/ve	h)	19.8	-	-	8.5	-
HCM Lane LOS		С	-	-	Α	-
HCM 95th %tile Q(veh)		0.9	-	-	0	-

	•	•	•	<b>†</b>	<b>↓</b>	4
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	f.	
Traffic Volume (veh/h)	8	104	21	58	44	2
Future Volume (Veh/h)	8	104	21	58	44	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	113	23	63	48	2
Pedestrians		110				_
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)				INOLIC	INOHE	
Upstream signal (ft)						
pX, platoon unblocked vC, conflicting volume	158	49	50			
vC1, stage 1 conf vol	100	49	50			
vC2, stage 2 conf vol	450	40				
vCu, unblocked vol	158	49	50			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	89	99			
cM capacity (veh/h)	821	1020	1557			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	122	86	50			
Volume Left	9	23	0			
Volume Right	113	0	2			
cSH	1002	1557	1700			
Volume to Capacity	0.12	0.01	0.03			
Queue Length 95th (ft)	10	1	0			
Control Delay (s/veh)	9.1	2.0	0.0			
Lane LOS	Α	Α				
Approach Delay (s/veh)	9.1	2.0	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			5.0			
Intersection Capacity Utilizat	ion		24.4%	IC	U Level c	f Service
Analysis Period (min)			15		3 23.07 0	

Intersection						
Int Delay, s/veh	4.9					
<u> </u>		EDE	ND	NDT	007	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	À			- €	₽	
Traffic Vol, veh/h	8	104	21	58	44	2
Future Vol, veh/h	8	104	21	58	44	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	113	23	63	48	2
IVIVIII( I IOW	3	113	20	00	40	2
Major/Minor	Minor2		Major1	N	/lajor2	
Conflicting Flow All	158	49	50	0	-	0
Stage 1	49	-	-	-	-	-
Stage 2	109	-	_	-	_	-
Critical Hdwy	6.42	6.22	4.12	_	_	_
Critical Hdwy Stg 1	5.42	-		_	_	_
Critical Hdwy Stg 2	5.42	_	_	_	_	_
Follow-up Hdwy		3.318	2 218	_	_	_
Pot Cap-1 Maneuver	834	1020	1557	-	-	-
•		1020	1557	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	821	1020	1557	-	-	-
Mov Cap-2 Maneuver	821	-	-	-	-	-
Stage 1	959	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Annroach	EB		NB		SB	
Approach						
HCM Control Delay, s/			1.95		0	
HCM LOS	Α					
Minor Lane/Major Mvm	nt	NBL	NRT	EBLn1	SBT	SBR
Capacity (veh/h)		478		1002	-	ODIT
HCM Lane V/C Ratio		0.015		0.121	-	-
	(voh)					-
HCM Lang LOS	ven)	7.3	0	9.1	-	-
HCM Lane LOS	\	A	Α	Α	-	-
HCM 95th %tile Q(veh	)	0	-	0.4	-	-

	•	•	•	<b>†</b>	Į.	4	
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations	W			4	<b>∱</b>		
Traffic Volume (veh/h)	8	32	7	65	182	2	
Future Volume (Veh/h)	8	32	7	65	182	2	
Sign Control	Stop			Free	Free		
Grade	0%			0%	0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	9	35	8	71	198	2	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type				None	None		
Median storage veh)				113110	110110		
Upstream signal (ft)				1116			
pX, platoon unblocked				1110			
vC, conflicting volume	286	199	200				
vC1, stage 1 conf vol	200	100	200				
vC2, stage 2 conf vol							
vCu, unblocked vol	286	199	200				
tC, single (s)	6.4	6.2	4.1				
tC, 2 stage (s)	0.4	0.2	7.1				
tF (s)	3.5	3.3	2.2				
p0 queue free %	99	96	99				
cM capacity (veh/h)	700	842	1372				
Direction, Lane #	EB 1	NB 1	SB 1				
Volume Total	44	79	200				
Volume Left	9	8	0				
Volume Right	35	0	2				
cSH	809	1372	1700				
Volume to Capacity	0.05	0.01	0.12				
Queue Length 95th (ft)	4	0	0				
Control Delay (s/veh)	9.7	8.0	0.0				
Lane LOS	Α	Α					
Approach Delay (s/veh)	9.7	8.0	0.0				
Approach LOS	Α						
Intersection Summary							
Average Delay			1.5				
Intersection Capacity Utilizati	on		19.7%	IC	CU Level o	of Service	
Analysis Period (min)			15				

Intersection						
Int Delay, s/veh	1.5					
•			ND	NET	OPT	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	₽	
Traffic Vol, veh/h	8	32	7	65	182	2
Future Vol, veh/h	8	32	7	65	182	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	35	8	71	198	2
M - 1 - / M - 1	N4: O		M. '. A		4	
	Minor2		Major1		/lajor2	
Conflicting Flow All	285	199	200	0	-	0
Stage 1	199	-	-	-	-	-
Stage 2	86	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	705	842	1372	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	701	842	1372	-	-	-
Mov Cap-2 Maneuver	701	-	-	-	_	-
Stage 1	830	-	-	_	-	-
Stage 2	937	-	_	_	_	_
Jugo 2	301					
Approach	EB		NB		SB	
HCM Control Delay, s/	v 9.7		0.74		0	
HCM LOS	Α					
Minor Lane/Major Mvn	nt	NBL	NRT	EBLn1	SBT	SBR
	IL					
Capacity (veh/h) HCM Lane V/C Ratio		175 0.006	-	810 0.054	-	-
	(voh)	7.6		9.7		-
HCM Long LOS	ven)		0		-	-
HCM Lane LOS	\	A	Α	A	-	-
HCM 95th %tile Q(veh	)	0	-	0.2	-	-

# 10: SW 124th Avenue & SW Leveton Drive

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	34	79	242	5	714	52	458
v/c Ratio	0.07	0.09	0.22	0.37	0.01	0.55	0.13	0.30
Control Delay (s/veh)	33.4	16.8	31.1	5.1	11.6	19.8	12.1	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.4	16.8	31.1	5.1	11.6	19.8	12.1	13.7
Queue Length 50th (ft)	7	5	26	1	1	116	9	45
Queue Length 95th (ft)	37	29	95	53	8	270	41	163
Internal Link Dist (ft)		981		1223		1392		1024
Turn Bay Length (ft)	100		150		150		150	
Base Capacity (vph)	638	1188	438	1130	604	2466	980	2524
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.03	0.18	0.21	0.01	0.29	0.05	0.18
Intersection Summary								

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	f)		, j	<b>₽</b>		, j	<b>∱</b> ∱		ሻ	<b>ተ</b> ኈ	
Traffic Volume (vph)	20	15	16	72	2	218	5	630	20	47	410	6
Future Volume (vph)	20	15	16	72	2	218	5	630	20	47	410	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
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	0.92		1.00	0.85		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1680		1770	1579		1128	3506		1671	3424	
Flt Permitted	0.95	1.00		0.95	1.00		0.47	1.00		0.27	1.00	
Satd. Flow (perm)	1770	1680		1770	1579		561	3506		467	3424	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	22	16	18	79	2	240	5	692	22	52	451	7
RTOR Reduction (vph)	0	15	0	0	174	0	0	2	0	0	1	0
Lane Group Flow (vph)	22	19	0	79	68	0	5	712	0	52	457	0
Confl. Peds. (#/hr)	00/	00/	00/	00/	=00/	00/	000/	00/	3	3	=0/	470/
Heavy Vehicles (%)	2%	2%	6%	2%	50%	2%	60%	2%	15%	8%	5%	17%
Turn Type	Prot	NA		Prot	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							6			2		
Actuated Green, G (s)	0.9	10.0		7.0	16.1		25.5	21.6		25.5	24.8	
Effective Green, g (s)	1.9	11.0		8.0	17.1		27.5	22.6		25.5	24.8	
Actuated g/C Ratio	0.03	0.18		0.13	0.27		0.44	0.36		0.41	0.40	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	53	295		226	432		262	1267		265	1358	
v/s Ratio Prot	0.01	0.01		c0.04	c0.04		0.00	c0.20		c0.01	c0.13	
v/s Ratio Perm							0.01			0.07		
v/c Ratio	0.42	0.06		0.35	0.16		0.02	0.56		0.20	0.34	
Uniform Delay, d1	29.8	21.5		24.9	17.2		9.8	16.0		11.7	13.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.2	0.1		0.9	0.2		0.0	0.6		0.4	0.1	
Delay (s)	35.0	21.6		25.8	17.4		9.9	16.6		12.0	13.3	
Level of Service	С	С		С	В		Α	В		В	В	
Approach Delay (s/veh)		26.8			19.5			16.5			13.1	
Approach LOS		С			В			В			В	
Intersection Summary												
HCM 2000 Control Delay (s/			16.4	Н	CM 2000	Level of	Service		В			
HCM 2000 Volume to Capac	city ratio		0.41									
Actuated Cycle Length (s)			62.5		um of lost				17.0			
Intersection Capacity Utilizat	tion		52.2%	IC	U Level o	of Service	9		Α			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	ĵ»		ሻ	<b>₽</b>		ሻ	<b>∱</b> Ъ		ሻ	<b>↑</b> ↑	
Traffic Volume (veh/h)	20	15	16	72	2	218	5	630	20	47	410	6
Future Volume (veh/h)	20	15	16	72	2	218	5	630	20	47	410	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
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	1811	1870	1159	1870	1011	1870	1678	1781	1826	1648
Adj Flow Rate, veh/h	22	16	18	79	2	240	5	692	22	52	451	7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	6	2	50	2	60	2	15	8	5	17
Cap, veh/h	93	210	237	180	3	303	268	987	31	310	1170	18
Arrive On Green	0.05	0.26	0.25	0.10	0.31	0.29	0.02	0.28	0.26	0.08	0.33	0.33
Sat Flow, veh/h	1781	804	904	1781	8	975	963	3515	112	1697	3496	54
Grp Volume(v), veh/h	22	0	34	79	0	242	5	350	364	52	224	234
Grp Sat Flow(s),veh/h/ln	1781	0	1708	1781	0	983	963	1777	1850	1697	1735	1816
Q Serve(g_s), s	0.7	0.0	0.9	2.5	0.0	13.8	0.2	10.7	10.7	1.3	6.0	6.0
Cycle Q Clear(g_c), s	0.7	0.0	0.9	2.5	0.0	13.8	0.2	10.7	10.7	1.3	6.0	6.0
Prop In Lane	1.00		0.53	1.00		0.99	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	93	0	447	180	0	306	268	499	519	310	580	608
V/C Ratio(X)	0.24	0.00	0.08	0.44	0.00	0.79	0.02	0.70	0.70	0.17	0.39	0.39
Avail Cap(c_a), veh/h	468	0	869	322	0	501	577	905	942	876	1139	1193
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	0.0	17.1	25.7	0.0	19.7	12.3	19.6	19.6	14.7	15.5	15.5
Incr Delay (d2), s/veh	1.3	0.0	0.1	1.7	0.0	4.6	0.0	1.8	1.7	0.3	0.4	0.4
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	0.3	0.0	0.3	1.1	0.0	3.1	0.0	4.0	4.2	0.4	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.0	0.0	17.2	27.4	0.0	24.3	12.3	21.4	21.4	14.9	15.9	15.9
LnGrp LOS	С		В	С		С	В	С	С	В	В	В
Approach Vol, veh/h		56			321			719			510	
Approach Delay, s/veh		21.8			25.0			21.3			15.8	
Approach LOS		С			С			С			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	21.1	10.2	20.0	5.4	25.4	7.2	22.9				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	25.0	30.0	10.0	30.0	20.0	40.0	15.0	30.0				
Max Q Clear Time (g_c+I1), s	3.3	12.7	4.5	2.9	2.2	8.0	2.7	15.8				
Green Ext Time (p_c), s	0.1	3.2	0.1	0.2	0.0	2.2	0.0	2.2				
Intersection Summary												
HCM 7th Control Delay, s/veh			20.3									
HCM 7th LOS			С									
Notes												
User approved pedestrian inte	rval to be	e less tha	n phase n	nax greer	۱.							

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	56	9	28	265	14	21	3	12	0	2	13
Future Volume (vph)	6	56	9	28	265	14	21	3	12	0	2	13
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	8	76	12	38	358	19	28	4	16	0	3	18
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	96	415	48	21								
Volume Left (vph)	8	38	28	0								
Volume Right (vph)	12	19	16	18								
Hadj (s)	0.04	0.02	0.11	-0.48								
Departure Headway (s)	4.5	4.2	5.2	4.6								
Degree Utilization, x	0.12	0.49	0.07	0.03								
Capacity (veh/h)	764	834	629	687								
Control Delay (s/veh)	8.2	11.1	8.6	7.8								
Approach Delay (s/veh)	8.2	11.1	8.6	7.8								
Approach LOS	Α	В	Α	Α								
Intersection Summary												
Delay			10.3									_
Level of Service			В									
Intersection Capacity Utiliza	tion		37.3%	IC	U Level	of Service			Α			
Analysis Period (min)			15									

Intersection			
Intersection Delay, s/veh	10.1		
Intersection LOS	В		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	6	56	9	28	265	14	21	3	12	0	2	13
Future Vol, veh/h	6	56	9	28	265	14	21	3	12	0	2	13
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	2	5	11	2	2	2	5	2	25	2	2	2
Mvmt Flow	8	76	12	38	358	19	28	4	16	0	3	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB				SB	
Opposing Approach	WB			EB			SB				NB	
Opposing Lanes	1			1			1				1	
Conflicting Approach Left	SB			NB			EB				WB	
Conflicting Lanes Left	1			1			1				1	
Conflicting Approach Right	NB			SB			WB				EB	
Conflicting Lanes Right	1			1			1				1	
HCM Control Delay, s/veh	8.1			10.9			8.4				7.7	
HCM LOS	Α			В			Α				Α	

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	58%	8%	9%	0%	
Vol Thru, %	8%	79%	86%	13%	
Vol Right, %	33%	13%	5%	87%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	36	71	307	15	
LT Vol	21	6	28	0	
Through Vol	3	56	265	2	
RT Vol	12	9	14	13	
Lane Flow Rate	49	96	415	20	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.068	0.119	0.474	0.026	
Departure Headway (Hd)	5.046	4.462	4.117	4.6	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Сар	713	806	863	781	
Service Time	3.055	2.473	2.212	2.61	
HCM Lane V/C Ratio	0.069	0.119	0.481	0.026	
HCM Control Delay, s/veh	8.4	8.1	10.9	7.7	
HCM Lane LOS	Α	Α	В	Α	
HCM 95th-tile Q	0.2	0.4	2.6	0.1	

	۶	<b>→</b>	<b>—</b>	4	<b>\</b>	1
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	1→		ች	7
Traffic Volume (veh/h)	1	66	306	0	2	0
Future Volume (Veh/h)	1	66	306	0	2	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	1	87	403	0	3	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	403				492	403
vC1, stage 1 conf vol	100				102	100
vC2, stage 2 conf vol						
vCu, unblocked vol	403				492	403
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)	1.4				0.1	0.2
tF (s)	2.3				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1119				534	647
		MD 4	0D 4	00.0	004	047
Direction, Lane #	EB 1	WB 1	SB 1	SB 2		
Volume Total	88	403	3	0		
Volume Left	1	0	3	0		
Volume Right	0	0	0	0		
cSH	1119	1700	534	1700		
Volume to Capacity	0.00	0.24	0.01	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s/veh)	0.1	0.0	11.8	0.0		
Lane LOS	Α		В	Α		
Approach Delay (s/veh)	0.1	0.0	11.8			
Approach LOS			В			
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilizati	ion		26.1%	IC	U Level c	f Service
Analysis Period (min)			15			

0.1
EBL
1
1
Free
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76
9
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Major1
Major1
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4.19
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2.281
1119
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1119
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- -
- - -
- - - EB
- - -
- - - EB
EB 6/v 0.12
- - - EB
EB 6/v 0.12
EB 6/v 0.12
EB 6/v 0.12
EB 8/v 0.12

	•	<b>→</b>	<b>—</b>	•	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		ની	₽		ሻ	7
Traffic Volume (veh/h)	17	63	213	15	70	88
Future Volume (Veh/h)	17	63	213	15	70	88
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	22	82	277	19	91	114
Pedestrians					15	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	311				428	302
vC1, stage 1 conf vol	311				120	00L
vC2, stage 2 conf vol						
vCu, unblocked vol	311				428	302
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)	7.1				0.4	0.2
tF (s)	2.2				3.5	3.3
p0 queue free %	98				84	84
cM capacity (veh/h)	1232				565	728
					505	120
Direction, Lane #	EB 1	WB 1	SB 1	SB 2		
Volume Total	104	296	91	114		
Volume Left	22	0	91	0		
Volume Right	0	19	0	114		
cSH	1232	1700	565	728		
Volume to Capacity	0.02	0.17	0.16	0.16		
Queue Length 95th (ft)	1	0	14	14		
Control Delay (s/veh)	1.8	0.0	12.6	10.9		
Lane LOS	Α		В	В		
Approach Delay (s/veh)	1.8	0.0	11.6			
Approach LOS			В			
Intersection Summary						
Average Delay			4.3			
Intersection Capacity Utilization	on		28.6%	IC	U Level o	of Service
Analysis Period (min)			15			

Intersection							
Int Delay, s/veh	4.3						
-		EST	MOT	14/00	051	055	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	47	<b>€</b>	<b>∱</b>	4.5	<b>أ</b>	7	
Traffic Vol, veh/h	17	63	213	15	70	88	
Future Vol, veh/h	17	63	213	15	70	88	
Conflicting Peds, #/hr		0 Eroo	0 Eroo	15 Eroo	0 Stop	0 Stop	
Sign Control RT Channelized	Free	Free	Free	Free	Stop	Stop	
	-	None	-	None	-		
Storage Length	- #	-	-	-	-	0	
Veh in Median Storag		0	0	-	0	-	
Grade, %	- 77	0	0	- 77	0	- 77	
Peak Hour Factor	77	77 5	77	77	77 2	77 2	
Heavy Vehicles, % Mvmt Flow	2 22	5 82	2 277	2 19	91	114	
IVIVIIIL FIOW	22	δZ	211	19	91	114	
Major/Minor	Major1	N	Major2		Minor2		
Conflicting Flow All	311	0	-	0	427	301	
Stage 1	-	-	-	-	301	-	
Stage 2	-	-	-	-	126	-	
Critical Hdwy	4.12	-	-	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	-	5.42	-	
Follow-up Hdwy	2.218	-	-	-		3.318	
Pot Cap-1 Maneuver	1249	-	-	-	584	738	
Stage 1	-	-	-	-	750	-	
Stage 2	-	-	-	-	900	-	
Platoon blocked, %		-	-	-			
Mov Cap-1 Maneuver		-	-	-	557	728	
Mov Cap-2 Maneuver	-	-	-	-	557	-	
Stage 1	-	-	-	-	726	-	
Stage 2	-	-	-	-	887	-	
Approach	EB		WB		SB		
HCM Control Delay, s			0		11.69		
HCM LOS	/V 1./		U		В		
					U		
N. 1 (0.1 )		E5.		14/5-	14/55	0DL (	201 2
Minor Lane/Major Mvr	nt	EBL	EBT	WBT		SBLn1	
Capacity (veh/h)		383	-	-	-	557	728
HCM Lane V/C Ratio		0.018	-	-		0.163	
HCM Control Delay (s	/veh)	8	0	-	-	12.7	10.9
HCM Lane LOS		Α	Α	-	-	В	В
HCM 95th %tile Q(veh	1)	0.1	-	-	-	0.6	0.6

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Volume (veh/h)	0	128	8	6	180	0	27	0	14	0	0	0
Future Volume (Veh/h)	0	128	8	6	180	0	27	0	14	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	0	171	11	8	240	0	36	0	19	0	0	0
Pedestrians								4			15	
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								3.5			3.5	
Percent Blockage								0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	255			186			437	452	181	467	457	255
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	255			186			437	452	181	467	457	255
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF(s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			93	100	98	100	100	100
cM capacity (veh/h)	1291			1383			519	492	859	479	488	772
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	182	248	55	0								
Volume Left	0	8	36	0								
Volume Right	11	0	19	0								
cSH	1291	1383	601	1700								
Volume to Capacity	0.00	0.01	0.09	0.00								
Queue Length 95th (ft)	0	0	8	0								
Control Delay (s/veh)	0.0	0.3	11.6	0.0								
Lane LOS		Α	В	Α								
Approach Delay (s/veh)	0.0	0.3	11.6	0.0								
Approach LOS			В	Α								
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Utiliza	tion		24.3%	IC	U Level o	of Service			Α			
Analysis Period (min)			15									

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			Ф			4	
Traffic Vol, veh/h	0	128	8	6	180	0	27	0	14	0	0	0
Future Vol, veh/h	0	128	8	6	180	0	27	0	14	0	0	0
Conflicting Peds, #/hr	15	0	4	4	0	15	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	_
Veh in Median Storage	e,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	2	3	2	2	3	2	2	2	2	2	2	2
Mvmt Flow	0	171	11	8	240	0	36	0	19	0	0	0
Major/Minor	Major1		1	Major2		1	Minor1			Minor2		
Conflicting Flow All	255	0	0	185	0	0	436	451	180	442	456	255
Stage 1	-	-	-	-	-	-	180	180	-	271	271	
Stage 2	-	-	-	-	-	-	256	271	-	171	185	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518		3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1310	-	-	1389	-	-	531	504	863	526	500	784
Stage 1	-	-	-	-	-	-	822	750	-	735	685	-
Stage 2	-	-	-	-	-	-	749	685	-	831	746	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1291	-	-	1384	-	-	525	491	859	504	488	772
Mov Cap-2 Maneuver		-	-	-	-	-	525	491	-	504	488	-
Stage 1	-	-	-	-	-	-	819	748	-	719	671	-
Stage 2	-	-	-	-	-	-	744	671	-	813	744	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/	/v 0			0.25			11.53			0		
HCM LOS							В			A		
Minor Lane/Major Mvn	nt N	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)		605	1291	-	-	58	-	-	-			
HCM Lane V/C Ratio		0.09	-	-	-	0.006	-	-	_			
HCM Control Delay (s	/veh)	11.5	0	-	-	7.6	0	-	0			
HCM Lane LOS	,	В	A	-	-	Α	A	-	A			
HCM 95th %tile Q(veh	1)	0.3	0	-	-	0	-	-	-			
	,											

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥#			4	1>	
Traffic Volume (veh/h)	22	140	28	49	146	131
Future Volume (Veh/h)	22	140	28	49	146	131
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	29	182	36	64	190	170
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)				113110	110110	
Upstream signal (ft)				861		
pX, platoon unblocked				301		
vC, conflicting volume	412	276	361			
vC1, stage 1 conf vol	712	210	001			
vC2, stage 2 conf vol						
vCu, unblocked vol	412	276	361			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)	0.0	0.2	7.1			
tF (s)	3.6	3.3	2.2			
p0 queue free %	95	76	97			
cM capacity (veh/h)	570	762	1191			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	211	100	360			
Volume Left	29	36	0			
Volume Right	182	0	170			
cSH	728	1191	1700			
Volume to Capacity	0.29	0.03	0.21			
Queue Length 95th (ft)	30	2	0			
Control Delay (s/veh)	11.9	3.1	0.0			
Lane LOS	В	Α				
Approach Delay (s/veh)	11.9	3.1	0.0			
Approach LOS	В					
Intersection Summary						
Average Delay			4.2			
Intersection Capacity Utilization	on		39.7%	IC	CU Level o	of Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	4.2					
•						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			र्न	₽	
Traffic Vol, veh/h	22	140	28	49	146	131
Future Vol, veh/h	22	140	28	49	146	131
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	6	2	3	9	7	2
Mvmt Flow	29	182	36	64	190	170
				•		
		-				
	Minor2		Major1		/lajor2	
Conflicting Flow All	412	276	361	0	-	0
Stage 1	276	-	-	-	-	-
Stage 2	136	-	-	-	-	-
Critical Hdwy	6.46	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy		3.318		-	-	-
Pot Cap-1 Maneuver	589	763	1192	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	880	-	-	-	-	
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	569	762	1191	-	-	-
Mov Cap-2 Maneuver	569	-	-	-	_	-
Stage 1	737	-	-	-	-	-
Stage 2	880	-	_	_	_	_
Jugo 2	300					
Approach	EB		NB		SB	
HCM Control Delay, s/	v11.93		2.95		0	
HCM LOS	В					
Minor Lane/Major Mvn	nt	NBL	NRT	EBLn1	SBT	SBR
	ıı					
Capacity (veh/h) HCM Lane V/C Ratio		655 0.031	-	0.289	-	-
	(voh)	8.1		11.9		-
HCM Long LOS	ven)		0		-	-
HCM Lane LOS	١	Α	Α	B	-	-
HCM 95th %tile Q(veh	)	0.1	-	1.2	-	-

# 16: SW Herman Road & SW 108th Ave

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Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	8	338	567	299	22
v/c Ratio	0.02	0.40	0.70	0.48	0.04
Control Delay (s/veh)	5.9	10.2	17.7	19.6	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	5.9	10.2	17.7	19.6	8.6
Queue Length 50th (ft)	1	55	108	62	0
Queue Length 95th (ft)	7	141	358	220	16
Internal Link Dist (ft)		877	1007	781	
Turn Bay Length (ft)	100			135	
Base Capacity (vph)	573	1735	1661	1216	1063
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.01	0.19	0.34	0.25	0.02
Intersection Summary					

	•	<b>→</b>	•	•	<b>/</b>	4		
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	ሻ	<b>1</b>	₽		ሻ	7		
Traffic Volume (vph)	7	311	451	71	275	20		
Future Volume (vph)	7	311	451	71	275	20		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		
Frt	1.00	1.00	0.98		1.00	0.85		
Flt Protected	0.95	1.00	1.00		0.95	1.00		
Satd. Flow (prot)	1583	1776	1760		1770	1538		
Flt Permitted	0.25	1.00	1.00		0.95	1.00		
Satd. Flow (perm)	415	1776	1760		1770	1538		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Adj. Flow (vph)	8	338	490	77	299	22		
RTOR Reduction (vph)	0	0	6	0	0	15		
Lane Group Flow (vph)	8	338	561	0	299	7		
Heavy Vehicles (%)	14%	7%	6%	6%	2%	5%		
Turn Type	D.P+P	NA	NA		Prot	Perm		
Protected Phases	5	2	6		4			
Permitted Phases	6					4		
Actuated Green, G (s)	23.4	28.8	22.8		15.8	15.8		
Effective Green, g (s)	26.2	30.2	24.2		18.3	18.3		
Actuated g/C Ratio	0.46	0.53	0.43		0.32	0.32		
Clearance Time (s)	5.4	5.4	5.4		6.5	6.5		
Vehicle Extension (s)	2.0	3.1	3.1		2.6	2.6		
Lane Grp Cap (vph)	233	949	753		573	498		
v/s Ratio Prot	0.00	c0.19	c0.32		c0.17			
v/s Ratio Perm	0.01					0.00		
v/c Ratio	0.03	0.36	0.75		0.52	0.01		
Uniform Delay, d1	15.1	7.6	13.6		15.5	13.0		
Progression Factor	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.0	0.2	4.1		0.7	0.0		
Delay (s)	15.2	7.8	17.6		16.2	13.0		
Level of Service	В	Α	В		В	В		
Approach Delay (s/veh)		8.0	17.6		16.0			
Approach LOS		Α	В		В			
Intersection Summary								
HCM 2000 Control Delay (s.	/veh)		14.5	H	CM 2000	Level of Serv	ce	В
HCM 2000 Volume to Capa	city ratio		0.66					
Actuated Cycle Length (s)			56.5	Sı	um of lost	t time (s)		12.0
Intersection Capacity Utiliza	ation		49.9%	IC	CU Level	of Service		Α
Analysis Period (min)			15					
c Critical Lane Group								

	ၨ	<b>→</b>	<b>—</b>	•	<b>/</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<b>†</b>	1>		ች	1
Traffic Volume (veh/h)	7	311	451	71	275	20
Future Volume (veh/h)	7	311	451	71	275	20
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1693	1796	1811	1811	1870	1826
Adj Flow Rate, veh/h	8	338	490	77	299	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	14	7	6	6	2	5
Cap, veh/h	408	1133	813	128	425	369
Arrive On Green	0.03	0.63	0.53	0.51	0.24	0.24
Sat Flow, veh/h	1612	1796	1528	240	1781	1547
Grp Volume(v), veh/h	8	338	0	567	299	22
Grp Sat Flow(s), veh/h/ln	1612	1796	0	1768	1781	1547
Q Serve(g_s), s	0.0	5.2	0.0	13.6	9.4	0.7
	0.0	5.2	0.0	13.6	9.4	0.7
Cycle Q Clear(g_c), s		5.2	0.0	0.14		1.00
Prop In Lane	1.00	1122	0		1.00	
Lane Grp Cap(c), veh/h	408	1133	0	941	425	369
V/C Ratio(X)	0.02	0.30	0.00	0.60	0.70	0.06
Avail Cap(c_a), veh/h	655	1361	0	1888	945	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	5.1	0.0	10.0	21.3	18.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.7	1.7	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.4	0.0	4.3	3.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	13.3	5.3	0.0	10.6	23.0	18.1
LnGrp LOS	В	Α		В	С	В
Approach Vol, veh/h		346	567		321	
Approach Delay, s/veh		5.5	10.6		22.7	
Approach LOS		Α	В		С	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		42.6		18.6	6.0	36.6
Change Period (Y+Rc), s		5.4		6.5	5.4	5.4
Max Green Setting (Gmax), s		45.0		30.0	10.0	64.0
					2.0	
Max Q Clear Time (g_c+l1), s		7.2		11.4		15.6
Green Ext Time (p_c), s		7.4		0.8	0.0	15.6
Intersection Summary						
HCM 7th Control Delay, s/veh			12.3			
HCM 7th LOS			В			

	-	•	•	•		~
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>1</b> 2		*	<b></b>	*	1
Traffic Volume (veh/h)	363	104	44	734	153	68
Future Volume (Veh/h)	363	104	44	734	153	68
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	399	114	48	807	168	75
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage veh)				2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			514		1360	457
vC1, stage 1 conf vol					457	
vC2, stage 2 conf vol					903	
vCu, unblocked vol			514		1360	457
tC, single (s)			4.2		6.4	6.3
tC, 2 stage (s)					5.4	
tF (s)			2.3		3.5	3.4
p0 queue free %			95		50	87
cM capacity (veh/h)			1025		339	595
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	
Volume Total	513	48	807	168	75	
Volume Left	0	48	0	168	0	
Volume Right	114	0	0	0	75	
cSH	1700	1025	1700	339	595	
Volume to Capacity	0.30	0.05	0.47	0.50	0.13	
Queue Length 95th (ft)	0	4	0	66	11	
Control Delay (s/veh)	0.0	8.7	0.0	25.6	11.9	
Lane LOS		Α		D	В	
Approach Delay (s/veh)	0.0	0.5		21.4		
Approach LOS				С		
Intersection Summary						
Average Delay			3.5			
Intersection Capacity Utiliza	tion		53.8%	IC	U Level o	of Service
Analysis Period (min)			15			

Intersection								
Int Delay, s/veh	17.1							
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	ĵ.		ሻ	<b>↑</b>	ሻ	7		
Traffic Vol, veh/h	363	104	44	734	153	68		
Future Vol, veh/h	363	104	44	734	153	68		
Conflicting Peds, #/hr	0	1	1	0	0	0		
Sign Control	Free	Free	Free	Free	Stop	Stop		
RT Channelized	-			None	-			
Storage Length	_	-	25	-	100	0		
Veh in Median Storage,	# 0	_	-	0	0	_		
Grade, %	0		_	0	0	_		
Peak Hour Factor	91	91	91	91	91	91		
Heavy Vehicles, %	3	5	7	2	3	6		
Mvmt Flow	399	114	48	807	168	75		
	000			301	.00	, 0		
				_				
-	lajor1		Major2		Minor1			
Conflicting Flow All	0	0	514	0	1360	457		
Stage 1	-	-	-	-	457	-		
Stage 2	-	-	-	-	903	-		
Critical Hdwy	-	-	4.17	-	6.43	6.26		
Critical Hdwy Stg 1	-	-	-	-	5.43	-		
Critical Hdwy Stg 2	-	-	-	-	5.43	-		
Follow-up Hdwy	-	-	2.263	-	3.527	3.354		
Pot Cap-1 Maneuver	-	-	1026	-	~ 163	595		
Stage 1	-	-	-	-	636	-		
Stage 2	-	-	-	-	394	-		
Platoon blocked, %	-	-		-				
Mov Cap-1 Maneuver	-	-	1025	-	~ 155	595		
Mov Cap-2 Maneuver	-	-	-	-	~ 155	-		
Stage 1	-	-	-	-	635	-		
Stage 2	-	-	-	-	375	-		
Approach	EB		WB		NB			
HCM Control Delay, s/v			0.49		111.5			
HCM LOS	U		0.40		F			
TIOW LOO					'			
Minor Lane/Major Mvmt		NBLn11		EBT	EBR	WBL	WBT	
Capacity (veh/h)		155	595	-		1025	-	
HCM Lane V/C Ratio			0.126	-	-	0.047	-	
HCM Control Delay (s/v	eh)	155.8	11.9	-	-	8.7	-	
HCM Lane LOS		F	В	-	-	Α	-	
HCM 95th %tile Q(veh)		8.8	0.4	-	-	0.1	-	
Notes								
~: Volume exceeds capa	acity	\$· D4	elay exc	eeds 3	00s	+. Com	putation Not Defined	*: All major volume in platoon
. Volumo oxocous cap	auity	ψ. υ	July CAC	0000			patation Not Domicu	. 7 ai major volumo in piatoon

	-	$\rightarrow$	•	•		/
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1>			4	W	
Traffic Volume (veh/h)	10	12	58	97	273	20
Future Volume (Veh/h)	10	12	58	97	273	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	16	19	91	152	427	31
Pedestrians	10	10	31	102	37	01
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					4	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)	140116			INOLIC		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			72		397	63
vC1, stage 1 conf vol			12		001	00
vC2, stage 2 conf vol						
vCu, unblocked vol			72		397	63
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)			٦.८		0.7	V.Z
tF (s)			2.3		3.5	3.3
p0 queue free %			94		22	97
cM capacity (veh/h)			1444		547	959
					J+1	303
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	35	243	458			
Volume Left	0	91	427			
Volume Right	19	0	31			
cSH	1700	1444	563			
Volume to Capacity	0.02	0.06	0.81			
Queue Length 95th (ft)	0	5	202			
Control Delay (s/veh)	0.0	3.2	33.5			
Lane LOS		Α	D			
Approach Delay (s/veh)	0.0	3.2	33.5			
Approach LOS			D			
Intersection Summary						
Average Delay			21.9			
Intersection Capacity Utilization	on		38.0%	IC	ULevelo	of Service
Analysis Period (min)			15	10	2 20.010	50, 1,00

Intersection						
Int Delay, s/veh	22					
			11/	14/==		
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽			्र	M	
Traffic Vol, veh/h	10	12	58	97	273	20
Future Vol, veh/h	10	12	58	97	273	20
Conflicting Peds, #/hr	0	37	37	0	0	0
0	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	<i>†</i> 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	25	7	6	4	5
Mvmt Flow	16	19	91	152	427	31
		_				
	ajor1		Major2		Minor1	
Conflicting Flow All	0	0	71	0	395	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	333	-
Critical Hdwy	-	-	4.17	-	6.44	6.25
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.263	-	3.536	3.345
Pot Cap-1 Maneuver	-	-	1498	-	606	995
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	_	722	-
Platoon blocked, %	_	_		_		
Mov Cap-1 Maneuver	_	_	1445	_	545	959
Mov Cap-2 Maneuver	_	_	-	_	545	-
Stage 1	_	_	_	_	922	_
Stage 2	_	_	_	_	672	_
Olage 2					012	
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		2.87		33.77	
HCM LOS					D	
NA: 1 /NA: NA (		NDL 4	EDT	EDD	)A/DI	MOT
Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		561	-	-	• • •	-
HCM Lane V/C Ratio		0.816	-	-	0.063	-
HCM Control Delay (s/ve	h)	33.8	-	-		0
HCM Lane LOS		D	-	-	Α	Α
HCM 95th %tile Q(veh)		8.1	-	-	0.2	-

	•	•	<b>†</b>	<i>&gt;</i>	<b>/</b>	ļ.
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		7	<b>^</b>	7		<b>†</b> †
Traffic Volume (veh/h)	0	303	1593	29	0	1776
Future Volume (Veh/h)	0	303	1593	29	0	1776
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	329	1732	32	0	1930
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)			2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2698	867			1733	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2698	867			1733	
tC, single (s)	6.8	*6.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	11			100	
cM capacity (veh/h)	17	370			359	
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	329	866	866	32	965	965
Volume Left	0	0	0	0	0	0
Volume Right	329	0	0	32	0	0
cSH	370	1700	1700	1700	1700	1700
Volume to Capacity	0.89	0.51	0.51	0.02	0.57	0.57
Queue Length 95th (ft)	221	0.01	0.01	0.02	0.07	0.07
Control Delay (s/veh)	56.9	0.0	0.0	0.0	0.0	0.0
Lane LOS	50.5 F	0.0	0.0	0.0	0.0	0.0
Approach Delay (s/veh)	56.9	0.0			0.0	
Approach LOS	50.5 F	0.0			0.0	
	'					
Intersection Summary						
Average Delay			4.7			
Intersection Capacity Utilizat	tion		69.5%	IC	U Level	of Service
Analysis Period (min)			15			
<ul> <li>User Entered Value</li> </ul>						

Intersection								
Int Delay, s/veh	10.4							
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations		7	<b>^</b>	7		<b>^</b>		
Traffic Vol, veh/h	0	303	1593	29	0	1776		
-uture Vol, veh/h	0	303	1593	29	0	1776		
Conflicting Peds, #/hr		0	0	1	1	0		
Sign Control	Stop	Stop	Free	Free	Free	Free		
RT Channelized	-	Stop	-	Free	-			
Storage Length	_	0	_	335	_	-		
/eh in Median Storag	je,# 0	-	0	-	_	0		
Grade, %	0	_	0	_	_	0		
Peak Hour Factor	92	92	92	92	92	92		
Heavy Vehicles, %	2	3	3	4	2	2		
Mymt Flow	0	329	1732	32	0	1930		
	- 3	ULU	1102	J.L	J	1000		
Major/Minor	Minor1		//ajor1	N	lajor2			
Conflicting Flow All	-	866	0	-	-	-		
Stage 1	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-		
Critical Hdwy	-	6.96	-	-	-	-		
Critical Hdwy Stg 1	-	-	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-	-	-		
Follow-up Hdwy	-	3.33	-	-	-	-		
Pot Cap-1 Maneuver	0	~ 295	-	0	0	-		
Stage 1	0	-	-	0	0	-		
Stage 2	0	-	-	0	0	-		
Platoon blocked, %			-			-		
Mov Cap-1 Maneuver	r -	~ 295	-	-	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-		
Approach	WB		NB		SB			
HCM Control Delay, s			0		0			
HCM LOS	F							
110W 200								
4		NDT:	/DL 4	ODT				
Minor Lane/Major Mv	mt		/BLn1	SBT				
Capacity (veh/h)		-	295	-				
ICM Lane V/C Ratio			1.118	-				
HCM Control Delay (s	s/veh)	-	126.5	-				
HCM Lane LOS		-	F	-				
HCM 95th %tile Q(ve	h)	-	13.5	-				
Notes								
: Volume exceeds ca	anacity	\$: De	lav exc	eeds 30	0s	+. Com	putation Not Defined	*: All major volume in platoon
. Volumo execedo e	apaonty	ψ. D	ay one			· . Oom	patation Not Delined	. 7 ai major volumo in piatoon

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	8	653	49	355	221	223	21	191
v/c Ratio	0.02	0.78	0.19	0.36	0.62	0.42	0.07	0.69
Control Delay (s/veh)	13.2	32.7	14.3	17.5	35.3	34.5	25.1	56.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.2	32.7	14.3	17.5	35.3	34.5	25.1	56.5
Queue Length 50th (ft)	2	374	15	132	120	122	10	128
Queue Length 95th (ft)	10	534	35	240	165	190	24	188
Internal Link Dist (ft)		1007		989		572		1708
Turn Bay Length (ft)	100		100		60		50	
Base Capacity (vph)	600	837	422	993	396	901	486	845
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.78	0.12	0.36	0.56	0.25	0.04	0.23
Intersection Summary								

	٠	<b>→</b>	•	•	•	•	•	<b>†</b>	/	<b>&gt;</b>	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		Ť	ĵ»		¥	₽		, Y	ĵ»	
Traffic Volume (vph)	6	240	282	39	256	28	177	146	32	17	125	28
Future Volume (vph)	6	240	282	39	256	28	177	146	32	17	125	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	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	0.92		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1543	1659		1626	1803		1596	1732		1703	1617	
Flt Permitted	0.50	1.00		0.19	1.00		0.37	1.00		0.62	1.00	
Satd. Flow (perm)	816	1659		326	1803		625	1732		1110	1617	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	8	300	352	49	320	35	221	182	40	21	156	35
RTOR Reduction (vph)	0	19	0	0	1	0	0	0	0	0	6	0
Lane Group Flow (vph)	8	634	0	49	354	0	221	223	0	21	185	0
Confl. Peds. (#/hr)							1					1
Heavy Vehicles (%)	17%	2%	8%	11%	4%	2%	13%	6%	10%	6%	16%	4%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	58.1	57.1		66.1	61.1		40.6	34.3		23.3	21.0	
Effective Green, g (s)	58.1	57.6		66.1	61.6		40.6	34.8		23.3	21.5	
Actuated g/C Ratio	0.49	0.49		0.56	0.52		0.34	0.30		0.20	0.18	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	3.2		2.0	3.2		2.0	3.2		2.0	3.2	
Lane Grp Cap (vph)	408	811		238	943		344	512		231	295	
v/s Ratio Prot	0.00	c0.38		c0.01	0.20		c0.09	0.13		0.00	0.11	
v/s Ratio Perm	0.01			0.11			c0.14			0.02		
v/c Ratio	0.02	0.78		0.21	0.37		0.64	0.44		0.09	0.63	
Uniform Delay, d1	15.3	24.9		16.7	16.6		29.9	33.5		38.3	44.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	5.0		0.2	0.3		3.1	0.6		0.1	4.2	
Delay (s)	15.3	29.9		16.9	16.9		33.0	34.1		38.4	48.6	
Level of Service	В	С		В	В		С	С		D	D	
Approach Delay (s/veh)		29.7			16.9			33.6			47.6	
Approach LOS		С			В			С			D	
Intersection Summary												
HCM 2000 Control Delay (s/veh)				H	CM 2000	Level of	Service		С			
HCM 2000 Volume to Capacity ratio			0.72									
,			117.7	Sı	um of lost	time (s)		18.0				
Intersection Capacity Utiliza	ition		62.3%						В			
Analysis Period (min)			15									

	۶	<b>→</b>	•	•	<b>←</b>	•	1	<b>†</b>	~	<b>/</b>	<b>↓</b>	<b>√</b>
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	<b>₽</b>		ሻ	-î		7	f)		7	<b>₽</b>	
Traffic Volume (veh/h)	6	240	282	39	256	28	177	146	32	17	125	28
Future Volume (veh/h)	6	240	282	39	256	28	177	146	32	17	125	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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	1648	1870	1781	1737	1841	1870	1707	1811	1752	1811	1663	1841
Adj Flow Rate, veh/h	8	300	352	49	320	35	221	182	40	21	156	35
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	17	2	8	11	4	2	13	6	10	6	16	4
Cap, veh/h	441	376	441	253	828	91	330	376	83	280	197	44
Arrive On Green	0.01	0.48	0.47	0.04	0.51	0.50	0.13	0.26	0.26	0.02	0.15	0.14
Sat Flow, veh/h	1570	784	920	1654	1630	178	1626	1438	316	1725	1314	295
Grp Volume(v), veh/h	8	0	652	49	0	355	221	0	222	21	0	191
Grp Sat Flow(s),veh/h/ln	1570	0	1705	1654	0	1809	1626	0	1753	1725	0	1609
Q Serve(g_s), s	0.2	0.0	29.4	1.3	0.0	10.9	10.0	0.0	9.8	0.9	0.0	10.4
Cycle Q Clear(g_c), s	0.2	0.0	29.4	1.3	0.0	10.9	10.0	0.0	9.8	0.9	0.0	10.4
Prop In Lane	1.00		0.54	1.00		0.10	1.00		0.18	1.00		0.18
Lane Grp Cap(c), veh/h	441	0	817	253	0	919	330	0	458	280	0	241
V/C Ratio(X)	0.02	0.00	0.80	0.19	0.00	0.39	0.67	0.00	0.48	0.08	0.00	0.79
Avail Cap(c_a), veh/h	770	0	1021	552	0	1063	469	0	1108	620	0	981
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.6	0.0	20.1	16.1	0.0	13.7	26.8	0.0	28.5	32.0	0.0	37.4
Incr Delay (d2), s/veh	0.0	0.0	3.7	0.1	0.0	0.3	0.9	0.0	0.9	0.0	0.0	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	0.1	0.0	11.0	0.5	0.0	4.2	3.8	0.0	4.1	0.4	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.6	0.0	23.9	16.3	0.0	14.0	27.7	0.0	29.3	32.0	0.0	43.6
LnGrp LOS	В		С	В		В	С		С	С		D
Approach Vol, veh/h		660	-		404		-	443			212	
Approach Delay, s/veh		23.7			14.3			28.5			42.4	
Approach LOS		C			В			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	48.6	16.2	18.6	4.9	51.3	6.1	28.8				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	20.0	54.0	20.0	55.0	20.0	53.0	20.0	57.0				
Max Q Clear Time (g_c+l1), s	3.3	31.4	12.0	12.4	2.2	12.9	2.9	11.8				
Green Ext Time (p_c), s	0.0	11.7	0.2	0.7	0.0	8.2	0.1	3.2				
	0.0	11.7	0.2	0.7	0.0	0.2	0.1	3.2				
Intersection Summary			05.0									
HCM 7th Control Delay, s/veh			25.0									
HCM 7th LOS			С									

## 21: OR 99W (Pacific Highway) & SW Fischer Road

	•	•	1	<b>†</b>	<b>↓</b>	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	200	352	398	1722	1595	332
v/c Ratio	0.99	0.84	1.02	0.59	0.80	0.34
Control Delay (s/veh)	121.9	32.0	103.3	5.0	32.7	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	121.9	32.0	103.3	5.0	32.7	7.4
Queue Length 50th (ft)	185	61	~382	221	776	56
Queue Length 95th (ft)	#349	#228	#590	258	m855	m80
Internal Link Dist (ft)	1134			1909	2372	
Turn Bay Length (ft)	275		435			200
Base Capacity (vph)	202	419	391	2932	1989	964
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.84	1.02	0.59	0.80	0.34

## Intersection Summary

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

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

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

	۶	•	4	<b>†</b>	L.	<b>↓</b>	✓		
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR		
Lane Configurations	ሻ	7	ሻ	<b>^</b>	Ð	<b>†</b> †	7		
Traffic Volume (vph)	184	324	366	1584	0	1467	305		
Future Volume (vph)	184	324	366	1584	0	1467	305		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00	0.95		0.95	1.00		
Frpb, ped/bikes	1.00	0.97	1.00	1.00		1.00	0.95		
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00		
Frt	1.00	0.85	1.00	1.00		1.00	0.85		
Flt Protected	0.95	1.00	0.95	1.00		1.00	1.00		
Satd. Flow (prot)	1770	1493	1770	3539		3438	1509		
Flt Permitted	0.95	1.00	0.95	1.00		1.00	1.00		
Satd. Flow (perm)	1770	1493	1770	3539	0.00	3438	1509		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Adj. Flow (vph)	200	352	398	1722	0	1595	332		
RTOR Reduction (vph)	0	249	0	0	0	0	91		
Lane Group Flow (vph)	200	103	398	1722	0	1595	241		
Confl. Peds. (#/hr)	00/	21	9	00/	00/	E0/	9		
Heavy Vehicles (%)	2%	5%	2%	2%	2%	5%	2%		
Turn Type	Prot	Perm	Prot	NA	Prot	NA	Perm		
Protected Phases	4	1	5	2	1	6	6		
Permitted Phases	15.0	4 15.0	20.5	114.0		70.0	6 79.0		
Actuated Green, G (s)	15.0	15.0 16.0	29.5	114.0 116.0		79.0 81.0	79.0 81.0		
Effective Green, g (s)	16.0 0.11	0.11	31.0 0.22	0.83		0.58	0.58		
Actuated g/C Ratio Clearance Time (s)	5.0	5.0	5.5	6.0		6.0	6.0		
Vehicle Extension (s)	2.5	2.5	2.3	4.5		4.5	4.5		
	2.5	170	391	2932		1989	873		
Lane Grp Cap (vph) v/s Ratio Prot	c0.11	170	c0.22	0.49		c0.46	0/3		
v/s Ratio Prot v/s Ratio Perm	CU. I I	0.07	CU.ZZ	0.49		CU.40	0.16		
v/c Ratio	0.99	0.07	1.02	0.59		0.80	0.16		
Uniform Delay, d1	61.9	59.0	54.5	4.0		23.2	14.8		
Progression Factor	1.00	1.00	1.00	1.00		1.29	1.35		
Incremental Delay, d2	60.3	5.1	50.1	0.9		2.2	0.5		
Delay (s)	122.2	64.1	104.6	4.9		32.1	20.4		
Level of Service	122.2 F	04.1 E	F	4.9 A		32.1 C	20.4 C		
Approach Delay (s/veh)	85.2	L		23.6		30.1	U		
Approach LOS	65.2 F			23.0 C		C			
• •	'			U		U			
Intersection Summary		20.7	117	214 0000	l ( /	) i			
HCM 2000 Control Delay (s/veh)			33.7 0.88	HC	NI 2000	Level of S	service		
1 7				C	m of last	time (a)			
Actuated Cycle Length (s)	tion		140.0		Sum of lost time (s) ICU Level of Service				
Intersection Capacity Utiliza	luOf1		96.9%	iC	o revei c	o Service			
Analysis Period (min)			15						

	۶	*	•	<b>†</b>	L	<b>↓</b>	4	
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	
Lane Configurations	*	7	ሻ	<b>†</b> †	Ð	<b>†</b> †	7	
Traffic Volume (veh/h)	184	324	366	1584	0	1467	305	
Future Volume (veh/h)	184	324	366	1584	0	1467	305	
Initial Q (Qb), veh	0	0	0	0		0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00	
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00				0.99	
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00	
Work Zone On Approach	No			No		No		
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870		1826	1870	
Adj Flow Rate, veh/h	200	352	398	1722		1595	332	
Peak Hour Factor	0.92	0.92	0.92	0.92		0.92	0.92	
Percent Heavy Veh, %	2	5	2	2		5	2	
Cap, veh/h	204	177	394	2944		2007	910	
Arrive On Green	0.11	0.11	0.22	0.83		1.00	1.00	
Sat Flow, veh/h	1781	1547	1781	3647		3561	1573	
Grp Volume(v), veh/h	200	352	398	1722		1595	332	
Grp Sat Flow(s),veh/h/ln	1781	1547	1781	1777		1735	1573	
Q Serve(g_s), s	15.7	16.0	31.0	22.6		0.0	0.0	
Cycle Q Clear(g_c), s	15.7	16.0	31.0	22.6		0.0	0.0	
Prop In Lane	1.00	1.00	1.00				1.00	
Lane Grp Cap(c), veh/h	204	177	394	2944		2007	910	
V/C Ratio(X)	0.98	1.99	1.01	0.58		0.79	0.36	
Avail Cap(c_a), veh/h	204	177	394	2944		2007	910	
HCM Platoon Ratio	1.00	1.00	1.00	1.00		2.00	2.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00		0.50	0.50	
Uniform Delay (d), s/veh	61.9	62.0	54.5	4.0		0.0	0.0	
Incr Delay (d2), s/veh	57.8	465.3	47.6	0.9		1.7	0.6	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0	
%ile BackOfQ(50%),veh/ln	10.4	35.8	18.7	5.5		0.5	0.1	
Unsig. Movement Delay, s/vel								
LnGrp Delay(d), s/veh	119.6	527.3	102.1	4.8		1.7	0.6	
LnGrp LOS	F	F	F	Α		Α	Α	
Approach Vol, veh/h	552			2120		1927		
Approach Delay, s/veh	379.6			23.1		1.5		
Approach LOS	F			С		Α		
Timer - Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		120.0		20.0	35.0	85.0		
Change Period (Y+Rc), s		6.0		5.0	5.5	6.0		
Max Green Setting (Gmax), s		94.0		15.0	29.5	79.0		
Max Q Clear Time (g_c+l1), s		24.6		18.0	33.0	2.0		
Green Ext Time (p_c), s		64.3		0.0	0.0	65.8		
u = 7·		07.0		0.0	0.0	55.5		
Intersection Summary			50.0					
HCM 7th Control Delay, s/veh			56.8					
HCM 7th LOS			Е					
Notes								
User approved pedestrian inte			n phase n	nax greer	١.			
User approved ignoring U-Tur	ning mov	/ement.						

	-	•	•	*	1	<b>†</b>	/	<b>&gt;</b>	<b>↓</b>	4	
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	176	320	323	414	162	1333	253	482	1191	22	
v/c Ratio	0.50	0.92	0.92	0.69	0.95	0.98	0.26	0.90	0.77	0.03	
Control Delay (s/veh)	42.1	87.2	86.6	14.9	110.5	55.9	3.6	78.3	36.6	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	42.1	87.2	86.6	14.9	110.5	55.9	3.6	78.3	36.6	0.0	
Queue Length 50th (ft)	49	303	306	41	150	508	18	223	473	0	
Queue Length 95th (ft)	88	#504	#507	163	m#281	m#775	m45	#312	564	0	
Internal Link Dist (ft)	481		939			2372			1326		
Turn Bay Length (ft)		300		315	550		140	265		400	
Base Capacity (vph)	391	346	350	601	171	1361	979	556	1547	757	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.45	0.92	0.92	0.69	0.95	0.98	0.26	0.87	0.77	0.03	

## Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	٠	<b>→</b>	•	•	<b>←</b>	•	•	<b>†</b>	<b>/</b>	<b>\</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		414		ሻ	4	7	ሻ	<b>^</b>	7	ሻሻ	<b>†</b> †	7
Traffic Volume (vph)	23	78	65	528	76	389	152	1253	238	453	1120	21
Future Volume (vph)	23	78	65	528	76	389	152	1253	238	453	1120	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Lane Util. Factor		0.95		0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3296		1681	1702	1533	1770	3505	1561	3433	3438	1547
Flt Permitted		0.99		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3296		1681	1702	1533	1770	3505	1561	3433	3438	1547
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	24	83	69	562	81	414	162	1333	253	482	1191	22
RTOR Reduction (vph)	0	63	0	0	0	286	0	0	58	0	0	12
Lane Group Flow (vph)	0	113	0	320	323	128	162	1333	195	482	1191	10
Confl. Peds. (#/hr)	7					7	1		7	7		1
Heavy Vehicles (%)	2%	2%	3%	2%	3%	3%	2%	3%	2%	2%	5%	2%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	3	3		4	4		5	2	4	1	6	
Permitted Phases						4			2			6
Actuated Green, G (s)		12.2		28.8	28.8	28.8	13.6	54.4	83.2	21.9	63.0	63.0
Effective Green, g (s)		12.2		28.8	28.8	28.8	13.6	54.4	83.2	21.9	63.0	63.0
Actuated g/C Ratio		0.09		0.21	0.21	0.21	0.10	0.39	0.59	0.16	0.45	0.45
Clearance Time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Vehicle Extension (s)		2.3		2.3	2.3	2.3	2.3	4.5	2.3	2.3	4.8	4.8
Lane Grp Cap (vph)		287		345	350	315	171	1361	927	537	1547	696
v/s Ratio Prot		c0.03		c0.19	0.19		0.09	c0.38	0.04	c0.14	0.35	
v/s Ratio Perm						0.08			0.08			0.01
v/c Ratio		0.39		0.93	0.92	0.41	0.95	0.98	0.21	0.90	0.77	0.01
Uniform Delay, d1		60.4		54.6	54.5	48.2	62.8	42.2	13.2	57.9	32.4	21.3
Progression Factor		1.00		1.00	1.00	1.00	1.00	0.91	1.02	1.00	1.00	1.00
Incremental Delay, d2		0.5		30.1	29.0	0.5	45.3	17.1	0.1	17.4	3.8	0.0
Delay (s)		60.9		84.6	83.5	48.7	108.2	55.7	13.5	75.3	36.2	21.3
Level of Service		Е		F	F	D	F	Е	В	Е	D	С
Approach Delay (s/veh)		60.9			70.2			54.5			47.1	
Approach LOS		Е			Е			D			D	
Intersection Summary												
HCM 2000 Control Delay (s/veh)		55.6	Н	CM 2000	Level of	Service		Е				
HCM 2000 Volume to Capacity ratio		0.89										
Actuated Cycle Length (s)		140.0	Sum of lost time (s) 22.7									
Intersection Capacity Utilizat	tion		93.1%			of Service			F			
Analysis Period (min)			15									
0.10.110												

HCM 7th Edition methodology does not support exclusive ped or hold phases.

# 1: SW 124th Avenue & OR 99W (Pacific Highway)

	-	•	•	•	1	~
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1068	606	1187	803	188	394
v/c Ratio	0.91	0.71	0.87	0.30	0.37	0.29
Control Delay (s/veh)	50.1	11.7	42.1	5.4	25.3	15.4
Queue Delay	0.0	0.0	0.9	0.0	0.0	0.0
Total Delay (s/veh)	50.1	11.7	43.0	5.4	25.3	15.4
Queue Length 50th (ft)	413	63	406	66	74	148
Queue Length 95th (ft)	#541	207	#765	187	37	198
Internal Link Dist (ft)	1687			1822	503	
Turn Bay Length (ft)		225	550		300	275
Base Capacity (vph)	1174	858	1362	2666	990	1371
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	6	45	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.71	0.90	0.30	0.19	0.29
Intersection Summary						

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Movement
Lane Configurations
Traffic Volume (vph)         961         545         1068         723         169         355           Future Volume (vph)         961         545         1068         723         169         355           Ideal Flow (vphpl)         1900         1900         1900         1900         1900           Total Lost time (s)         4.0         4.0         4.0         4.0         5.6           Lane Util. Factor         0.95         1.00         0.97         0.95         0.97         0.88           Frpb, ped/bikes         1.00         1.00         1.00         1.00         1.00         1.00           Fit Protected         1.00         1.00         1.00         1.00         1.00         1.00           Fit Protected         1.00         1.00         0.95         1.00         0.95         1.00           Satd. Flow (prot)         3438         1568         3400         3438         3213         2472           Fit Permitted         1.00         1.00         0.95         1.00         0.95         1.00           Satd. Flow (prot)         3438         1568         3400         3438         3213         2472           Peak-hour factor, PHF         0.9
Future Volume (vph)
Ideal Flow (vphpl)
Total Lost time (s)
Lane Util. Factor         0.95         1.00         0.97         0.95         0.97         0.88           Frpb, ped/bikes         1.00         1.00         1.00         1.00         1.00         1.00         1.00           Flb, ped/bikes         1.00         1.00         1.00         1.00         1.00         1.00           Frt         1.00         0.85         1.00         1.00         0.95         1.00           Satd. Flow (prot)         3438         1568         3400         3438         3213         2472           Flt Permitted         1.00         1.00         0.95         1.00         0.95         1.00           Satd. Flow (perm)         3438         1568         3400         3438         3213         2472           Peak-hour factor, PHF         0.90         0.90         0.90         0.90         0.90         0.90           Adj. Flow (vph)         1068         606         1187         803         188         394           RTOR Reduction (vph)         0         323         0         0         0         0           Lane Group Flow (vph)         1068         283         1187         803         188         394
Frpb, ped/bikes         1.00         0.85         FIt Protected         1.00         1.00         0.95         1.00         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0.90         0
Flpb, ped/bikes
Frt         1.00         0.85         1.00         1.00         0.85           Fit Protected         1.00         1.00         0.95         1.00         0.95         1.00           Satd. Flow (prot)         3438         1568         3400         3438         3213         2472           Fit Permitted         1.00         1.00         0.95         1.00         0.95         1.00           Satd. Flow (perm)         3438         1568         3400         3438         3213         2472           Peak-hour factor, PHF         0.90         0.90         0.90         0.90         0.90         0.90         0.90           Adj. Flow (vph)         1068         606         1187         803         188         394           RTOR Reduction (vph)         0         323         0         0         0         0           Lane Group Flow (vph)         1068         283         1187         803         188         394           Confl. Peds. (#/hr)         3         3%         3%         5%         9%         15%           Turn Type         NA         Perm         Prot         NA         Prot         prot         Prot         Prot         Prot
Satd. Flow (prot)       3438       1568       3400       3438       3213       2472         Fit Permitted       1.00       1.00       0.95       1.00       0.95       1.00         Satd. Flow (perm)       3438       1568       3400       3438       3213       2472         Peak-hour factor, PHF       0.90       0.90       0.90       0.90       0.90       0.90         Adj. Flow (vph)       1068       606       1187       803       188       394         RTOR Reduction (vph)       0       323       0       0       0       0         Lane Group Flow (vph)       1068       283       1187       803       188       394         Confl. Peds. (#/hr)       3       38       35       5%       9%       15%         Turn Type       NA       Perm       Prot       NA       Prot       pt+ov         Protected Phases       2       1       6       8       1.4         Permitted Phases       2       1       6       8       1.4         Permitted Phases       2       2       1       6       8       1.4         Permitted Phases       2       39.0       39.0
Fit Permitted         1.00         1.00         0.95         1.00         0.95         1.00           Satd. Flow (perm)         3438         1568         3400         3438         3213         2472           Peak-hour factor, PHF         0.90         0.90         0.90         0.90         0.90         0.90           Adj. Flow (vph)         1068         606         1187         803         188         394           RTOR Reduction (vph)         0         323         0         0         0         0           Lane Group Flow (vph)         1068         283         1187         803         188         394           Confl. Peds. (#/hr)         3         3%         5%         9%         15%           Turn Type         NA         Perm         Prot         NA         Prot         pt+ov           Protected Phases         2         1         6         8         1.4           Permitted Phases         2         2         43.3         87.9         20.1         63.4           Effective Green, g (s)         41.0         44.9         89.9         22.1         58.4           Actuated g/C Ratio         0.34         0.34         0.37
Satd. Flow (perm)         3438         1568         3400         3438         3213         2472           Peak-hour factor, PHF         0.90         0.90         0.90         0.90         0.90         0.90           Adj. Flow (vph)         1068         606         1187         803         188         394           RTOR Reduction (vph)         0         323         0         0         0         0           Lane Group Flow (vph)         1068         283         1187         803         188         394           Confl. Peds. (#/hr)         3         188         394         394         394         394         394           Confl. Peds. (#/hr)         3         188         394
Peak-hour factor, PHF         0.90         0.90         0.90         0.90         0.90           Adj. Flow (vph)         1068         606         1187         803         188         394           RTOR Reduction (vph)         0         323         0         0         0         0           Lane Group Flow (vph)         1068         283         1187         803         188         394           Confl. Peds. (#/hr)         3         188         394
Adj. Flow (vph)       1068       606       1187       803       188       394         RTOR Reduction (vph)       0       323       0       0       0       0         Lane Group Flow (vph)       1068       283       1187       803       188       394         Confl. Peds. (#/hr)       3       38       394       398       398       398       398       398       398       398       398       399       399       399       399       399       399       399       399       399       399       399       399       399       399       399       399<
Adj. Flow (vph)       1068       606       1187       803       188       394         RTOR Reduction (vph)       0       323       0       0       0       0         Lane Group Flow (vph)       1068       283       1187       803       188       394         Confl. Peds. (#/hr)       3       38       394       398<
RTOR Reduction (vph)         0         323         0         0         0         0           Lane Group Flow (vph)         1068         283         1187         803         188         394           Confl. Peds. (#/hr)         3         3%         3%         5%         9%         15%           Heavy Vehicles (%)         5%         3%         3%         5%         9%         15%           Turn Type         NA         Perm         Prot         NA         Prot         pt+ov           Protected Phases         2         1         6         8         1.4           Permitted Phases         2         2         43.3         87.9         20.1         63.4           Effective Green, G (s)         39.0         39.0         43.3         87.9         20.1         63.4           Effective Green, g (s)         41.0         44.9         89.9         22.1         58.4           Actuated g/C Ratio         0.34         0.34         0.37         0.75         0.18         0.49           Clearance Time (s)         6.0         6.0         5.6         6.0         6.0         6.0           Vehicle Extension (s)         5.4         5.4 <td< td=""></td<>
Lane Group Flow (vph)       1068       283       1187       803       188       394         Confl. Peds. (#/hr)       3       3%       5%       9%       15%         Heavy Vehicles (%)       5%       3%       3%       5%       9%       15%         Turn Type       NA       Perm       Prot       NA       Prot       pt+ov         Protected Phases       2       1       6       8       1.4         Permitted Phases       2       2       4       4       4       4         Actuated Green, G (s)       39.0       39.0       43.3       87.9       20.1       63.4         Effective Green, g (s)       41.0       41.0       44.9       89.9       22.1       58.4         Actuated g/C Ratio       0.34       0.34       0.37       0.75       0.18       0.49         Clearance Time (s)       6.0       6.0       5.6       6.0       6.0       6.0         Vehicle Extension (s)       5.4       5.4       2.3       5.4       2.3         Lane Grp Cap (vph)       1174       535       1272       2575       591       1203         v/s Ratio Perm       0.18         v
Heavy Vehicles (%)         5%         3%         3%         5%         9%         15%           Turn Type         NA         Perm         Prot         NA         Prot         pt+ov           Protected Phases         2         1         6         8         1 4           Permitted Phases         2         2         2         4           Actuated Green, G (s)         39.0         39.0         43.3         87.9         20.1         63.4           Effective Green, g (s)         41.0         41.0         44.9         89.9         22.1         58.4           Actuated g/C Ratio         0.34         0.34         0.37         0.75         0.18         0.49           Clearance Time (s)         6.0         6.0         5.6         6.0         6.0         6.0           Vehicle Extension (s)         5.4         5.4         2.3         5.4         2.3           Lane Grp Cap (vph)         1174         535         1272         2575         591         1203           v/s Ratio Perm         0.18           v/c Ratio         0.91         0.53         0.93         0.31         0.32         0.33
Turn Type         NA         Perm         Prot         NA         Prot pt+ov           Protected Phases         2         1         6         8         1 4           Permitted Phases         2         2         43.3         87.9         20.1         63.4           Actuated Green, G (s)         39.0         39.0         43.3         87.9         20.1         63.4           Effective Green, g (s)         41.0         41.0         44.9         89.9         22.1         58.4           Actuated g/C Ratio         0.34         0.34         0.37         0.75         0.18         0.49           Clearance Time (s)         6.0         6.0         5.6         6.0         6.0           Vehicle Extension (s)         5.4         5.4         2.3         5.4         2.3           Lane Grp Cap (vph)         1174         535         1272         2575         591         1203           v/s Ratio Perm         0.18           v/c Ratio         0.91         0.53         0.93         0.31         0.32         0.33
Protected Phases         2         1         6         8         1 4           Permitted Phases         2           Actuated Green, G (s)         39.0         39.0         43.3         87.9         20.1         63.4           Effective Green, g (s)         41.0         44.9         89.9         22.1         58.4           Actuated g/C Ratio         0.34         0.34         0.37         0.75         0.18         0.49           Clearance Time (s)         6.0         6.0         5.6         6.0         6.0         6.0           Vehicle Extension (s)         5.4         5.4         2.3         5.4         2.3           Lane Grp Cap (vph)         1174         535         1272         2575         591         1203           v/s Ratio Prot         c0.31         c0.35         0.23         c0.06         0.16           v/s Ratio Perm         0.18         0.93         0.31         0.32         0.33
Protected Phases 2 1 6 8 1 4  Permitted Phases 2  Actuated Green, G (s) 39.0 39.0 43.3 87.9 20.1 63.4  Effective Green, g (s) 41.0 41.0 44.9 89.9 22.1 58.4  Actuated g/C Ratio 0.34 0.34 0.37 0.75 0.18 0.49  Clearance Time (s) 6.0 6.0 5.6 6.0 6.0  Vehicle Extension (s) 5.4 5.4 2.3 5.4 2.3  Lane Grp Cap (vph) 1174 535 1272 2575 591 1203  v/s Ratio Prot c0.31 c0.35 0.23 c0.06 0.16  v/s Ratio Perm  v/c Ratio 0.91 0.53 0.93 0.31 0.32 0.33
Actuated Green, G (s) 39.0 39.0 43.3 87.9 20.1 63.4  Effective Green, g (s) 41.0 41.0 44.9 89.9 22.1 58.4  Actuated g/C Ratio 0.34 0.34 0.37 0.75 0.18 0.49  Clearance Time (s) 6.0 6.0 5.6 6.0 6.0  Vehicle Extension (s) 5.4 5.4 2.3 5.4 2.3  Lane Grp Cap (vph) 1174 535 1272 2575 591 1203  v/s Ratio Prot c0.31 c0.35 0.23 c0.06 0.16  v/s Ratio Perm 0.18  v/c Ratio 0.91 0.53 0.93 0.31 0.32 0.33
Effective Green, g (s) 41.0 44.0 44.9 89.9 22.1 58.4  Actuated g/C Ratio 0.34 0.34 0.37 0.75 0.18 0.49  Clearance Time (s) 6.0 6.0 5.6 6.0 6.0  Vehicle Extension (s) 5.4 5.4 2.3 5.4 2.3  Lane Grp Cap (vph) 1174 535 1272 2575 591 1203  v/s Ratio Prot c0.31 c0.35 0.23 c0.06 0.16  v/s Ratio Perm 0.18  v/c Ratio 0.91 0.53 0.93 0.31 0.32 0.33
Actuated g/C Ratio 0.34 0.34 0.37 0.75 0.18 0.49 Clearance Time (s) 6.0 6.0 5.6 6.0 6.0 Vehicle Extension (s) 5.4 5.4 2.3 5.4 2.3  Lane Grp Cap (vph) 1174 535 1272 2575 591 1203 v/s Ratio Prot c0.31 c0.35 0.23 c0.06 0.16 v/s Ratio Perm 0.18 v/c Ratio 0.91 0.53 0.93 0.31 0.32 0.33
Clearance Time (s)       6.0       6.0       5.6       6.0       6.0         Vehicle Extension (s)       5.4       5.4       2.3       5.4       2.3         Lane Grp Cap (vph)       1174       535       1272       2575       591       1203         v/s Ratio Prot       c0.31       c0.35       0.23       c0.06       0.16         v/s Ratio Perm       0.18         v/c Ratio       0.91       0.53       0.93       0.31       0.32       0.33
Vehicle Extension (s)         5.4         5.4         2.3         5.4         2.3           Lane Grp Cap (vph)         1174         535         1272         2575         591         1203           v/s Ratio Prot         c0.31         c0.35         0.23         c0.06         0.16           v/s Ratio Perm         0.18           v/c Ratio         0.91         0.53         0.93         0.31         0.32         0.33
Lane Grp Cap (vph)     1174     535     1272     2575     591     1203       v/s Ratio Prot     c0.31     c0.35     0.23     c0.06     0.16       v/s Ratio Perm     0.18       v/c Ratio     0.91     0.53     0.93     0.31     0.32     0.33
v/s Ratio Prot     c0.31     c0.35     0.23     c0.06     0.16       v/s Ratio Perm     0.18       v/c Ratio     0.91     0.53     0.93     0.31     0.32     0.33
v/s Ratio Prot     c0.31     c0.35     0.23     c0.06     0.16       v/s Ratio Perm     0.18       v/c Ratio     0.91     0.53     0.93     0.31     0.32     0.33
v/c Ratio 0.91 0.53 0.93 0.31 0.32 0.33
Uniform Delay, d1 37.7 31.7 36.1 4.9 42.4 18.8
Progression Factor 1.00 1.00 1.00 0.54 0.98
Incremental Delay, d2 11.1 2.0 13.6 0.3 0.2 0.1
Delay (s) 48.8 33.8 49.7 5.2 22.9 18.6
Level of Service D C D A C B
Approach Delay (s/veh) 43.4 31.8 20.0
Approach LOS D C B
Intersection Summary
HCM 2000 Control Delay (s/veh) 34.7 HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio  0.85
Actuated Cycle Length (s) 120.0 Sum of lost time (s) 18.6
Intersection Capacity Utilization 96.2% ICU Level of Service F
Analysis Period (min) 15
c Critical Lane Group

HCM 7th Edition methodology does not support exclusive ped or hold phases.

## 2: SW 124th Avenue & SW Tualatin Road

	•	•	<b>†</b>	~	<b>\</b>	<b>↓</b>
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	60	253	359	59	1009	859
v/c Ratio	0.29	0.20	0.68	0.20	0.87	0.31
Control Delay (s/veh)	48.2	0.9	52.9	11.3	23.3	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.2	0.9	52.9	11.3	23.3	4.3
Queue Length 50th (ft)	44	0	138	0	190	42
Queue Length 95th (ft)	69	18	172	33	#956	161
Internal Link Dist (ft)	1180		1024			503
Turn Bay Length (ft)	25	300		150	200	
Base Capacity (vph)	437	1412	1006	516	1163	2766
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.18	0.36	0.11	0.87	0.31
Intersection Summary						

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	•	*	<b>†</b>	~	-	<b>↓</b>		
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	ሻ	7	<b>^</b>	1	ሻ	<b>†</b> †		
Traffic Volume (vph)	52	220	312	51	878	747		
Future Volume (vph)	52	220	312	51	878	747		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	0.0	4.5	4.5	4.0	4.5		
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95		
Frpb, ped/bikes	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		
Frt	1.00	0.85	1.00	0.85	1.00	1.00		
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1641	1509	3059	1449	1752	3438		
Flt Permitted	0.95	1.00	1.00	1.00	0.35	1.00		
Satd. Flow (perm)	1641	1509	3059	1449	649	3438		
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87		
Adj. Flow (vph)	60	253	359	59	1009	859		
RTOR Reduction (vph)	0	53	0	49	0	0		
Lane Group Flow (vph)	60	200	359	10	1009	859		
Confl. Peds. (#/hr)				1	1			
Heavy Vehicles (%)	10%	7%	18%	9%	3%	5%		
Turn Type	Perm	pt+ov	NA	Perm	D.P+P	NA		
Protected Phases		4 5	6		5	2		
Permitted Phases	4			6	6			
Actuated Green, G (s)	13.9	89.8	19.7	19.7	90.6	95.6		
Effective Green, g (s)	14.9	94.8	20.7	20.7	92.6	96.6		
Actuated g/C Ratio	0.12	0.79	0.17	0.17	0.77	0.81		
Clearance Time (s)	5.0		5.5	5.5	5.0	5.5		
Vehicle Extension (s)	4.0		4.5	4.5	4.0	4.5		
Lane Grp Cap (vph)	203	1192	527	249	1161	2767		
v/s Ratio Prot		0.13	0.12		c0.52	0.25		
v/s Ratio Perm	c0.04			0.01	c0.15			
v/c Ratio	0.30	0.17	0.68	0.04	0.87	0.31		
Uniform Delay, d1	47.8	3.1	46.6	41.4	13.8	3.0		
Progression Factor	1.00	1.00	1.00	1.00	0.99	1.02		
Incremental Delay, d2	1.1	0.1	4.2	0.1	4.7	0.2		
Delay (s)	48.9	3.1	50.8	41.5	18.4	3.3		
Level of Service	D	Α	D	D	В	Α		
Approach Delay (s/veh)	11.9		49.5			11.4		
Approach LOS	В		D			В		
Intersection Summary								
HCM 2000 Control Delay (s/	/veh)		17.6	H	ICM 2000	Level of Service	)	
HCM 2000 Volume to Capac			0.79					
Actuated Cycle Length (s)			120.0	S	Sum of lost	t time (s)		
Intersection Capacity Utiliza	tion		72.3%		CU Level o			
Analysis Period (min)			15					
c Critical Lane Group								

c Critical Lane Group

HCM 7th Edition methodology does not support exclusive ped or hold phases.

	•	<b>→</b>	•	•	<b>←</b>	•	•	<b>†</b>	<b>/</b>	<b>/</b>	<b>+</b>	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		ሻ	₽		ሻ	ĵ₃			4	
Traffic Volume (veh/h)	66	726	224	90	233	136	23	5	13	42	2	31
Future Volume (Veh/h)	66	726	224	90	233	136	23	5	13	42	2	31
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	72	789	243	98	253	148	25	5	14	46	2	34
Pedestrians								1			1	
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								3.5			3.5	
Percent Blockage								0			0	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	402			1033			1540	1654	912	1474	1701	328
vC1, stage 1 conf vol							1056	1056		524	524	
vC2, stage 2 conf vol							484	598		950	1177	
vCu, unblocked vol	402			1033			1540	1654	912	1474	1701	328
tC, single (s)	4.1			4.6			8.1	6.5	7.2	7.2	6.5	6.3
tC, 2 stage (s)							7.1	5.5		6.2	5.5	0.0
tF (s)	2.2			2.7			4.4	4.0	4.2	3.6	4.0	3.4
p0 queue free %	94			81			82	98	94	70	99	95
cM capacity (veh/h)	1150			518			142	221	225	155	143	686
	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	'		100	110	
Direction, Lane # Volume Total	72	1032	98	401	25	19	82					
Volume Left	72	0	98	0	25	0	46					
Volume Right	0	243	0	148	0	14	34					
cSH	1150	1700	518	1700	142	224	228					
Volume to Capacity	0.06	0.61	0.19	0.24	0.18	0.08	0.36					
Queue Length 95th (ft)	5	0.01	17	0.24	15	7	39					
Control Delay (s/veh)	8.3	0.0	13.6	0.0	35.6	22.6	29.5					
Lane LOS	0.3 A	0.0	13.0 B	0.0	55.0 E	22.0 C	29.5 D					
Approach Delay (s/veh)	0.5		2.7		30.0	C	29.5					
Approach LOS	0.5		2.1		D		29.5 D					
Intersection Summary												
Average Delay			3.3									
Intersection Capacity Utiliza	ation		77.8%	IC	U Level	of Service			D			
Analysis Period (min)			15									
,												

Int Delay, s/veh	lutous stieu												
Movement	Intersection	0.7											
Traffic Vol, veh/h	int Delay, s/ven	8.7											
Traffic Vol, veh/h	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	Lane Configurations	¥	ĵ.		¥	- f≽		ሻ	f)			4	
Conflicting Peds, #/hr	Traffic Vol, veh/h	66	726	224	90	233	136	23		13	42	2	31
Sign Control         Free Ray Pree Ray Pree Ray Pree Ray Pree Ray None         Free Ray None         Free Ray None         Free Ray None         Free Ray None         Stop None         Red None         Stop None         Stop None         Stop None         None         - None	Future Vol, veh/h	66	726	224	90	233	136	23	5		42	2	31
RT Channelized	Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Storage Length	Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
Veh in Median Storage, # - 0	RT Channelized	-	-	None		-	None	-	-	None	-	-	None
Grade, %         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         0         -         0         -         1         0         -         1         0         -         1         0         -         1         0         1         2         2         3         1         4         4         2         5         5         5         4         4         4         1         3         1         7         2         5         2<	Storage Length	25	-	-	25	-	-	0	-	-	-	-	-
Peak Hour Factor   92   92   92   92   92   92   92   9	Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Heavy Vehicles, %   3   2   40   50   9   7   100   2   100   10   2   14	Grade, %	-	-	-	-								
Mymit Flow         72         789         243         98         253         148         25         5         14         46         2         34           Major/Minor         Major1         Major2         Minor1         Minor2         Minor2           Conflicting Flow All         402         0         0         1034         0         0         1505         1653         912         1459         1701         328           Stage 1         -         -         -         -         -         -         1055         1055         -         524         524         -           Stage 2         -         -         -         -         4.6         -         -         8.1         6.52         7.2         7.2         6.2         5.52         -           Critical Hdwy Stg 1         -         -         -         -         7.1         5.52         -         6.2         5.52         -         Critical Hdwy Stg 2         -         -         -         7.1         5.52         -         6.2         5.52         -         Critical Hdwy Stg 2         -         -         -         -         7.1         5.52         -         6.2         5	Peak Hour Factor	92	92	92	92	92	92		92	92	92	92	92
Major/Minor   Major1	Heavy Vehicles, %								2				
Conflicting Flow All   402   0   0   1034   0   0   1505   1653   912   1459   1701   328	Mvmt Flow	72	789	243	98	253	148	25	5	14	46	2	34
Conflicting Flow All   402   0   0   1034   0   0   1505   1653   912   1459   1701   328													
Conflicting Flow All   402   0   0   1034   0   0   1505   1653   912   1459   1701   328	Major/Minor M	1ajor1			Major2			Minor1		_	/linor2		
Stage 1			0			0			1653			1701	328
Stage 2				-									
Critical Hdwy       4.13       -       4.6       -       -       8.1       6.52       7.2       7.2       6.52       6.34         Critical Hdwy Stg 1       -       -       -       -       7.1       5.52       -       6.2       5.52       -         Critical Hdwy Stg 2       -       -       -       -       7.1       5.52       -       6.2       5.52       -         Follow-up Hdwy       2.227       -       2.65       -       -       4.4       4.018       4.2       3.59       4.018       3.426         Pot Cap-1 Maneuver       1151       -       518       -       61       98       225       103       92       686         Stage 1       -       -       -       -       438       491       -       308       265       -         Platoon blocked, %       -       -       -       -       43       75       225       69       70       686         Mov Cap-1 Maneuver       1150       -       517       -       43       75       225       69       70       686         Mov Cap-2 Maneuver       -       -       -       -       170<		_	_	_	_	_							_
Critical Hdwy Stg 1       -       -       -       -       7.1       5.52       -       6.2       5.52       -         Critical Hdwy Stg 2       -       -       -       -       7.1       5.52       -       6.2       5.52       -         Follow-up Hdwy       2.227       -       -       2.65       -       -       4.4       4.018       4.2       3.59       4.018       3.426         Pot Cap-1 Maneuver       1151       -       -       518       -       -       61       98       225       103       92       686         Stage 1       -       -       -       -       -       438       491       -       308       265       -         Platoon blocked, %       -       -       -       -       -       438       491       -       308       265       -         Platoon blocked, %       -       -       -       -       -       43       75       225       69       70       686         Mov Cap-1 Maneuver       1150       -       517       -       43       75       225       69       70       686         Mov Cap-2 Maneuver		4.13	-	-	4.6	-	-			7.2			6.34
Critical Hdwy Stg 2         -         -         -         -         7.1         5.52         -         6.2         5.52         -           Follow-up Hdwy         2.227         -         -         2.65         -         -         4.4         4.018         4.2         3.59         4.018         3.426           Pot Cap-1 Maneuver         1151         -         -         518         -         -         61         98         225         103         92         686           Stage 1         -         -         -         -         -         438         491         -         308         265         -           Plation blocked, %         -         -         -         -         -         -         -         -         50         -		-	_	_	-	_							-
Follow-up Hdwy 2.227 2.65 4.4 4.018 4.2 3.59 4.018 3.426  Pot Cap-1 Maneuver 1151 518 61 98 225 103 92 686  Stage 1 182 302 - 522 530 - 183 265  Stage 2 438 491 - 308 265 - 191		-	-	-	-	-	-			-			-
Pot Cap-1 Maneuver		2.227	_	_	2.65	_	_			4.2			3,426
Stage 1       -       -       -       -       182       302       -       522       530       -         Stage 2       -       -       -       -       -       438       491       -       308       265       -         Platoon blocked, %       -			-	-		-	-						
Stage 2       -       -       -       -       438       491       -       308       265       -         Platoon blocked, %       - <t< td=""><td>•</td><td>-</td><td>_</td><td>_</td><td>-</td><td>_</td><td>_</td><td></td><td></td><td></td><td></td><td></td><td>-</td></t<>	•	-	_	_	-	_	_						-
Platoon blocked, %		-	-	-	-	-				-			-
Mov Cap-1 Maneuver         1150         -         -         517         -         -         43         75         225         69         70         686           Mov Cap-2 Maneuver         -         -         -         -         -         43         75         -         69         70         -           Stage 1         -         -         -         -         -         170         283         -         423         429         -           Stage 2         -         -         -         -         -         336         398         -         265         248         -           Approach         EB         WB         NB         NB         SB           HCM Control Delay, s/v 0.54         2.66         111.42         99.13           HCM Lane/Major Mvmt         NBLn1 NBLn2         EBL         EBT         EBR         WBL         WBT         WBR SBLn1           Capacity (veh/h)         43         144         1150         -         517         -         -         110           HCM Lane V/C Ratio         0.586         0.136         0.062         -         -         0.189         -			_	_		_							
Mov Cap-2 Maneuver         -         -         -         -         43         75         -         69         70         -           Stage 1         -         -         -         -         -         170         283         -         423         429         -           Stage 2         -         -         -         -         -         336         398         -         265         248         -           Approach         EB         WB         NB		1150	-	-	517	_	_	43	75	225	69	70	686
Stage 1         -         -         -         -         170         283         -         423         429         -           Stage 2         -         -         -         -         -         336         398         -         265         248         -           Approach         EB         WB         NB         NB         SB           HCM Control Delay, s/v         0.54         2.66         111.42         99.13           HCM LOS         F         F         F           Minor Lane/Major Mvmt         NBLn1 NBLn2         EBL         EBT         EBR         WBL         WBT         WBR SBLn1           Capacity (veh/h)         43         144         1150         -         -         517         -         -         110           HCM Lane V/C Ratio         0.586         0.136         0.062         -         -         0.189         -         -         0.741           HCM Control Delay (s/veh)         172.1         33.9         8.3         -         -         13.6         -         -         99.1           HCM Lane LOS         F         D         A         -         B         -         -         F<		-	_	_	-	_	_						-
Stage 2         -         -         -         -         -         -         336         398         -         265         248         -           Approach         EB         WB         NB         NB         SB           HCM Control Delay, s/v 0.54         2.66         111.42         99.13           HCM LOS         F         F         F           Minor Lane/Major Mvmt         NBLn1 NBLn2         EBL         EBT         EBR         WBL         WBR SBLn1           Capacity (veh/h)         43         144         1150         -         -         517         -         110           HCM Lane V/C Ratio         0.586         0.136         0.062         -         -         0.189         -         -         0.741           HCM Control Delay (s/veh)         172.1         33.9         8.3         -         -         13.6         -         -         99.1           HCM Lane LOS         F         D         A         -         B         -         -         F	•	-	-	-	-	-	-			-			-
Approach         EB         WB         NB         SB           HCM Control Delay, s/v 0.54         2.66         111.42         99.13           HCM LOS         F         F           Minor Lane/Major Mvmt         NBLn1 NBLn2         EBL         EBT         EBR         WBL         WBT         WBR SBLn1           Capacity (veh/h)         43         144         1150         -         -         517         -         -         110           HCM Lane V/C Ratio         0.586         0.136         0.062         -         -         0.189         -         -         0.741           HCM Control Delay (s/veh)         172.1         33.9         8.3         -         -         13.6         -         -         99.1           HCM Lane LOS         F         D         A         -         B         -         -         F	-	_	_	_	_	_	_			_			_
HCM Control Delay, s/v 0.54   2.66   111.42   99.13     HCM LOS	g											•	
HCM Control Delay, s/v 0.54   2.66   111.42   99.13     HCM LOS	Approach	FR			WB			NR			SB		
Minor Lane/Major Mvmt         NBLn1 NBLn2         EBL         EBT         EBR         WBL         WBT         WBR SBLn1           Capacity (veh/h)         43         144         1150         -         -         517         -         -         110           HCM Lane V/C Ratio         0.586         0.136         0.062         -         -         0.189         -         -         0.741           HCM Control Delay (s/veh)         172.1         33.9         8.3         -         -         13.6         -         -         99.1           HCM Lane LOS         F         D         A         -         -         B         -         -         F							,						
Minor Lane/Major Mvmt         NBLn1 NBLn2         EBL         EBT         EBR         WBL         WBT         WBR SBLn1           Capacity (veh/h)         43         144         1150         -         -         517         -         -         110           HCM Lane V/C Ratio         0.586         0.136         0.062         -         -         0.189         -         -         0.741           HCM Control Delay (s/veh)         172.1         33.9         8.3         -         -         13.6         -         -         99.1           HCM Lane LOS         F         D         A         -         -         B         -         -         F		0.04			2.00								
Capacity (veh/h) 43 144 1150 517 110  HCM Lane V/C Ratio 0.586 0.136 0.062 0.189 0.741  HCM Control Delay (s/veh) 172.1 33.9 8.3 13.6 99.1  HCM Lane LOS F D A - B - F	TOW LOO							ı			ı		
Capacity (veh/h) 43 144 1150 517 110  HCM Lane V/C Ratio 0.586 0.136 0.062 0.189 0.741  HCM Control Delay (s/veh) 172.1 33.9 8.3 13.6 99.1  HCM Lane LOS F D A - B - F	Minor Long/Major Manual		VIDL 4.1	UDL =0	EDI	EDT	EDD	WDI	WDT	WDD (	DI1		
HCM Lane V/C Ratio       0.586       0.136       0.062       -       -       0.189       -       -       0.741         HCM Control Delay (s/veh)       172.1       33.9       8.3       -       -       13.6       -       -       99.1         HCM Lane LOS       F       D       A       -       B       -       -       F						EBI	ERK		WBI	WBK			
HCM Control Delay (s/veh)       172.1       33.9       8.3       -       -       13.6       -       -       99.1         HCM Lane LOS       F       D       A       -       -       B       -       -       F	,					-	-		-	-			
HCM Lane LOS F D A B F						-	-		-	-			
		eh)				-	-		-	-			
11 (10 (10 th b) (1) (10 th) (1) (1) (1) (1) (1)						-	-		-	-			
TOM 95(11 %tile Q(Veri) 2.2 0.5 0.2 0.7 4	HCM 95th %tile Q(veh)		2.2	0.5	0.2	-	-	0.7	-	-	4		

	•	<b>→</b>	•	•	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<b></b>	<b>1</b>		W	
Traffic Volume (veh/h)	5	751	437	10	20	7
Future Volume (Veh/h)	5	751	437	10	20	7
Sign Control		Free	Free	.,	Stop	•
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	5	782	455	10	21	7
Pedestrians		. 02	100	.,	6	•
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)					'	
Median type		TWLTL	TWI TI			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	471				1258	466
vC1, stage 1 conf vol	7/1				466	400
vC2, stage 2 conf vol					792	
vCu, unblocked vol	471				1258	466
tC, single (s)	4.3				6.5	6.2
tC, 2 stage (s)	4.5				5.5	0.2
tF (s)	2.4				3.6	3.3
p0 queue free %	99				95	99
cM capacity (veh/h)	997				383	593
					303	393
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	5	782	465	28		
Volume Left	5	0	0	21		
Volume Right	0	0	10	7		
cSH	997	1700	1700	420		
Volume to Capacity	0.01	0.46	0.27	0.07		
Queue Length 95th (ft)	0	0	0	5		
Control Delay (s/veh)	8.6	0.0	0.0	14.2		
Lane LOS	Α			В		
Approach Delay (s/veh)	0.1		0.0	14.2		
Approach LOS				В		
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilizati	on		49.5%	IC	U Level o	of Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	0.4					
	EBL	EBT	WBT	WBR	SBL	SBR
Movement				WBK	SBL	SBK
Lane Configurations	ዃ	751	427	10		7
Traffic Vol, veh/h	5	751	437	10	20	7
Future Vol, veh/h	5	751	437	10	20	7
Conflicting Peds, #/hr	- 6	_ 0	_ 0	_ 6	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage,	# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	20	3	9	20	6	2
Mvmt Flow	5	782	455	10	21	7
Majay/Minay	1-:1		Anic TO		Min c :: O	
	lajor1		Major2		Minor2	105
Conflicting Flow All	472	0	-	0	1259	466
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	793	-
Critical Hdwy	4.3	-	-	-	6.46	6.22
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.38	-	-	-	3.554	3.318
Pot Cap-1 Maneuver	1002	-	-	-	185	596
Stage 1	-	-	-	-	623	-
Stage 2	-	-	-	-	439	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	997	_	_	_	182	593
Mov Cap-2 Maneuver	-	_	_	_	312	-
Stage 1	_	_			616	_
Stage 2	_	_	_	_	436	-
Slaye Z	-	-	-	_	400	-
Approach	EB		WB		SB	
HCM Control Delay, s/v	0.06		0		15.97	
HCM LOS					С	
Minor Long/Major Muset		EDI	EDT	WDT	WDD	CDI ~1
Minor Lane/Major Mvmt		EBL	EBT	WBT	WBR S	
Capacity (veh/h)		997	-	-	-	356
HCM Lane V/C Ratio		0.005	-	-		0.079
HCM Control Delay (s/v	eh)	8.6	-	-	-	16
		Λ.			-	С
HCM Lane LOS HCM 95th %tile Q(veh)		A 0	-	-		0.3

	-	$\rightarrow$	•	<b>←</b>	•	~
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	7.		ች	<b></b>	¥/	
Traffic Volume (veh/h)	788	42	40	377	74	5
Future Volume (Veh/h)	788	42	40	377	74	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	829	44	42	397	78	5
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				3.5	3.5	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			875		1334	854
vC1, stage 1 conf vol					853	
vC2, stage 2 conf vol					481	
vCu, unblocked vol			875		1334	854
tC, single (s)			4.2		6.4	6.5
tC, 2 stage (s)					5.4	
tF (s)			2.3		3.5	3.6
p0 queue free %			94		78	98
cM capacity (veh/h)			741		361	315
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	873	42	397	83		
Volume Left	0	42	0	78		
Volume Right	44	0	0	5		
cSH	1700	741	1700	357		
Volume to Capacity	0.51	0.06	0.23	0.23		
Queue Length 95th (ft)	0	4	0	22		
Control Delay (s/veh)	0.0	10.1	0.0	18.1		
Lane LOS		В		С		
Approach Delay (s/veh)	0.0	1.0		18.1		
Approach LOS				С		
Intersection Summary						
Average Delay			1.4			
Intersection Capacity Utiliza	ition		55.4%	IC	U Level o	f Service
Analysis Period (min)	-		15			

Intersection						
Int Delay, s/veh	1.6					
-			MD	WDT	ND	NDD
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	þ		ሻ	<b>↑</b>	¥	_
Traffic Vol, veh/h	788	42	40	377	74	5
Future Vol, veh/h	788	42	40	377	74	5
Conflicting Peds, #/hr	0	2	2	0	0	1
	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	25	-	-	-
Veh in Median Storage, #	<del>#</del> 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	15	9	9	2	33
Mvmt Flow	829	44	42	397	78	5
	ajor1		Major2		Minor1	
Conflicting Flow All	0	0	876	0	1335	855
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	481	-
Critical Hdwy	-	-	4.19	-	6.42	6.53
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	_	2.281	-		3.597
Pot Cap-1 Maneuver	_	-	742	-	170	316
Stage 1	_	_		-	417	-
Stage 2	_	_	_	-	622	_
Platoon blocked, %	_	_		_	ULL	
Mov Cap-1 Maneuver			741	_	160	315
Mov Cap-2 Maneuver	_	_	741	_	292	313
•	_	-	-	-	417	
Stage 1	-	-	-	-		-
Stage 2	-	-	-	-	586	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0.97		22.05	
HCM LOS			0.0.		С	
Minor Lane/Major Mvmt	1	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		293	-	-	741	-
HCM Lane V/C Ratio		0.283	-	-	0.057	-
HCM Control Delay (s/ve	h)	22.1	-	-	10.2	-
HCM Lane LOS		С	-	-	В	-
HCM 95th %tile Q(veh)		1.1	-	-	0.2	-

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥/			4	₽	
Traffic Volume (veh/h)	1	16	112	78	73	9
Future Volume (Veh/h)	1	16	112	78	73	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	17	122	85	79	10
Pedestrians	•					
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)				INOHE	INOHE	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	413	84	89			
	413	04	09			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	440	0.4	00			
vCu, unblocked vol	413	84	89			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)		0.0				
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	92			
cM capacity (veh/h)	547	975	1506			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	18	207	89			
Volume Left	1	122	0			
Volume Right	17	0	10			
cSH	935	1506	1700			
Volume to Capacity	0.02	0.08	0.05			
Queue Length 95th (ft)	1	7	0			
Control Delay (s/veh)	8.9	4.7	0.0			
Lane LOS	Α	Α				
Approach Delay (s/veh)	8.9	4.7	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			3.6			
Intersection Capacity Utiliza	tion		27.0%	IC	CU Level o	of Service
Analysis Period (min)	iuoii		15	ic	O LUVEI (	, our vice
Alialysis Fellou (IIIIII)			13			

Intersection						
Int Delay, s/veh	3.5					
•		EDD	NDI	NDT	CDT	CDD
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	40	440	<b>€</b>	- ∱	^
Traffic Vol, veh/h	1	16	112	78	73	9
Future Vol, veh/h	1	16	112	78	73	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	10	10	2
Mvmt Flow	1	17	122	85	79	10
Mailan/Minan	M: O		\1-!1		4-:0	
	Minor2		Major1		/lajor2	
Conflicting Flow All	413	84	89	0	-	0
Stage 1	84	-	-	-	-	-
Stage 2	328	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy		3.318		-	-	-
Pot Cap-1 Maneuver	596	975	1506	-	-	-
Stage 1	939	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	545	975	1506	-	-	-
Mov Cap-2 Maneuver	545	-	-	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	730	_	-	_	_	_
2.5.30 =	. 00					
Approach	EB		NB		SB	
HCM Control Delay, s/	v 8.94		4.48		0	
HCM LOS	Α					
Minor Lane/Major Mvn	nt	NBL	NRT	EBLn1	SBT	SBR
	π					
Capacity (veh/h)		1061	-	932	-	-
HCM Cantrol Delay (a)	( ها م	0.081	-	0.02	-	-
HCM Control Delay (s/	ven)	7.6	0	8.9	-	-
HCM Lane LOS	\	A	Α	A	-	-
HCM 95th %tile Q(veh	)	0.3	-	0.1	-	-

	۶	•	•	<b>†</b>	ļ	4
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	1>	
Traffic Volume (veh/h)	1	5	34	253	76	9
Future Volume (Veh/h)	1	5	34	253	76	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	5	37	275	83	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				1116		
pX, platoon unblocked						
vC, conflicting volume	437	88	93			
vC1, stage 1 conf vol	101					
vC2, stage 2 conf vol						
vCu, unblocked vol	437	88	93			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	0.1	0.2				
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	98			
cM capacity (veh/h)	563	970	1501			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	6	312	93			
Volume Left	1	37	0			
Volume Right	5	0	10			
cSH	866	1501	1700			
Volume to Capacity	0.01	0.02	0.05			
Queue Length 95th (ft)	1	2	0			
Control Delay (s/veh)	9.2	1.1	0.0			
Lane LOS	Α	Α				
Approach Delay (s/veh)	9.2	1.1	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utiliza	ation		31.9%	IC	CU Level o	f Service
Analysis Period (min)			15			22
rulary old i ollod (illiil)			10			

Intersection						
Int Delay, s/veh	0.8					
•					05-	055
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	₽	
Traffic Vol, veh/h	1	5	34	253	76	9
Future Vol, veh/h	1	5	34	253	76	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	10	10	2
Mvmt Flow	1	5	37	275	83	10
Maia -/Mina -	N 4: O		M-!4		4-10	
	Minor2		Major1		/lajor2	
Conflicting Flow All	436	88	92	0	-	0
Stage 1	88	-	-	-	-	-
Stage 2	349	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy		3.318		-	-	-
Pot Cap-1 Maneuver	577	971	1502	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	714	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	560	971	1502	-	-	-
Mov Cap-2 Maneuver	560	-	_	-	-	-
Stage 1	909	-	-	-	-	-
Stage 2	714	-	-	_	_	-
2.0.30 2						
Annraach	ED		ND		CD	
Approach	EB		NB		SB	
HCM Control Delay, s/			0.88		0	
HCM LOS	Α					
Minor Lane/Major Mvm	nt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		213	-		-	-
HCM Lane V/C Ratio		0.025		0.008	_	
HCM Control Delay (s/	(veh)	7.5	0	9.2	-	_
HCM Lane LOS	veri)	7.5 A	A	9.2 A	_	_
HCM 95th %tile Q(veh	1	0.1	-	0	-	_
How your wille Q(ven	)	U. I	-	U	_	-

## 10: SW 124th Avenue & SW Leveton Drive

	<b>≯</b>	<b>→</b>	•	<b>←</b>	•	<b>†</b>	-	<b>↓</b>	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Group Flow (vph)	6	174	16	54	32	428	185	771	
v/c Ratio	0.03	0.42	0.09	0.14	0.07	0.46	0.33	0.46	
Control Delay (s/veh)	33.6	22.8	32.9	9.4	9.4	19.2	10.9	14.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	33.6	22.8	32.9	9.4	9.4	19.2	10.9	14.8	
Queue Length 50th (ft)	1	35	3	1	3	42	19	48	
Queue Length 95th (ft)	17	131	30	27	26	154	109	272	
Internal Link Dist (ft)		981		1223		1392		1024	
Turn Bay Length (ft)	100		150		150		150		
Base Capacity (vph)	475	1263	245	940	753	2148	947	2649	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.01	0.14	0.07	0.06	0.04	0.20	0.20	0.29	
Intersection Summary									

	۶	<b>→</b>	•	•	•	•	•	<b>†</b>	~	-	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	, N	ĵ.		, M	₽		¥	Φ₽		7	ħβ	
Traffic Volume (vph)	5	114	34	14	6	40	27	283	81	157	631	25
Future Volume (vph)	5	114	34	14	6	40	27	283	81	157	631	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		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	0.87		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1504	1771		1128	1489		1612	3009		1768	3373	
Flt Permitted	0.95	1.00		0.95	1.00		0.30	1.00		0.45	1.00	
Satd. Flow (perm)	1504	1771		1128	1489		501	3009		837	3373	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	6	134	40	16	7	47	32	333	95	185	742	29
RTOR Reduction (vph)	0	10	0	0	37	0	0	20	0	0	2	0
Lane Group Flow (vph)	6	164	0	16	17	0	32	408	0	185	769	0
Confl. Peds. (#/hr)									3	3		
Heavy Vehicles (%)	20%	2%	9%	60%	17%	10%	12%	18%	6%	2%	6%	17%
Turn Type	Prot	NA		Prot	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							6			2		
Actuated Green, G (s)	8.0	12.2		1.1	12.5		31.2	20.5		31.2	29.0	
Effective Green, g (s)	1.8	13.2		2.1	13.5		33.2	21.5		31.2	29.0	
Actuated g/C Ratio	0.03	0.20		0.03	0.21		0.51	0.33		0.48	0.45	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	41	362		36	311		312	1003		559	1516	
v/s Ratio Prot	0.00	c0.09		c0.01	0.01		0.01	0.14		c0.05	c0.23	
v/s Ratio Perm							0.05			0.11		
v/c Ratio	0.15	0.45		0.44	0.05		0.10	0.41		0.33	0.51	
Uniform Delay, d1	30.6	22.5		30.6	20.4		8.0	16.6		9.6	12.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.9		8.5	0.1		0.1	0.3		0.4	0.3	
Delay (s)	32.2	23.4		39.1	20.5		8.1	16.9		10.0	12.9	
Level of Service	С	С		D	С		Α	В		Α	В	
Approach Delay (s/veh)		23.7			24.7			16.2			12.4	
Approach LOS		С			С			В			В	
Intersection Summary												
HCM 2000 Control Delay (s/v	,		15.2	H	CM 2000	Level of	Service		В			
HCM 2000 Volume to Capac	ity ratio		0.49									
Actuated Cycle Length (s)			64.5		um of lost				17.0			
Intersection Capacity Utilizat	ion		44.9%	IC	U Level o	of Service	Э		Α			
Analysis Period (min)			15									

c Critical Lane Group

	۶	<b>→</b>	•	•	<b>←</b>	•	•	<b>†</b>	<b>/</b>	<b>/</b>	<b>+</b>	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	<b>₽</b>		ሻ	ĵ₃		7	<b>∱</b> ∱		ሻ	<b>∱</b> ∱	
Traffic Volume (veh/h)	5	114	34	14	6	40	27	283	81	157	631	25
Future Volume (veh/h)	5	114	34	14	6	40	27	283	81	157	631	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
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	1604	1870	1767	1011	1648	1752	1722	1633	1811	1870	1811	1648
Adj Flow Rate, veh/h	6	134	40	16	7	47	32	333	95	185	742	29
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	20	2	9	60	17	10	12	18	6	2	6	17
Cap, veh/h	50	252	75	48	37	247	365	580	163	527	1154	45
Arrive On Green	0.03	0.18	0.16	0.05	0.20	0.18	0.06	0.24	0.22	0.16	0.34	0.34
Sat Flow, veh/h	1527	1383	413	963	185	1240	1640	2388	671	1781	3375	132
Grp Volume(v), veh/h	6	0	174	16	0	54	32	214	214	185	378	393
Grp Sat Flow(s),veh/h/ln	1527	0	1796	963	0	1425	1640	1552	1507	1781	1721	1787
Q Serve(g_s), s	0.2	0.0	4.1	0.7	0.0	1.5	0.5	5.6	5.8	3.3	8.6	8.6
Cycle Q Clear(g_c), s	0.2	0.0	4.1	0.7	0.0	1.5	0.5	5.6	5.8	3.3	8.6	8.6
Prop In Lane	1.00		0.23	1.00		0.87	1.00		0.44	1.00		0.07
Lane Grp Cap(c), veh/h	50	0	327	48	0	284	365	377	366	527	588	611
V/C Ratio(X)	0.12	0.00	0.53	0.33	0.00	0.19	0.09	0.57	0.58	0.35	0.64	0.64
Avail Cap(c_a), veh/h	529	0	1205	229	0	956	1016	1041	1012	1211	1490	1547
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	0.0	17.2	21.2	0.0	15.8	8.7	15.4	15.6	10.4	12.8	12.8
Incr Delay (d2), s/veh	1.0	0.0	1.3	4.0	0.0	0.3	0.1	1.4	1.5	0.4	1.2	1.1
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	0.1	0.0	1.5	0.2	0.0	0.4	0.1	1.7	1.7	1.0	2.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.7	0.0	18.5	25.2	0.0	16.1	8.8	16.7	17.1	10.8	14.0	14.0
LnGrp LOS	С		В	С		В	Α	В	В	В	В	В
Approach Vol, veh/h		180			70			460			956	
Approach Delay, s/veh		18.7			18.2			16.4			13.4	
Approach LOS		В			В			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	15.2	6.3	12.4	6.7	20.8	5.5	13.2				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	25.0	30.0	10.0	30.0	20.0	40.0	15.0	30.0				
Max Q Clear Time (g_c+l1), s	5.3	7.8	2.7	6.1	2.5	10.6	2.2	3.5				
Green Ext Time (p_c), s	0.7	2.0	0.0	1.7	0.1	4.0	0.0	0.4				
Intersection Summary												
HCM 7th Control Delay, s/veh			15.0									
HCM 7th LOS			В									
Notes												

User approved pedestrian interval to be less than phase max green.

	٠	<b>→</b>	•	•	•	•	•	<b>†</b>	<b>/</b>	<b>&gt;</b>	<b>↓</b>	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	20	296	16	8	42	5	11	3	37	0	2	3
Future Volume (vph)	20	296	16	8	42	5	11	3	37	0	2	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	24	357	19	10	51	6	13	4	45	0	2	4
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	400	67	62	6								
Volume Left (vph)	24	10	13	0								
Volume Right (vph)	19	6	45	4								
Hadj (s)	0.03	0.28	-0.17	-0.01								
Departure Headway (s)	4.2	4.8	4.8	5.0								
Degree Utilization, x	0.46	0.09	0.08	0.01								
Capacity (veh/h)	848	723	686	641								
Control Delay (s/veh)	10.8	8.2	8.2	8.1								
Approach Delay (s/veh)	10.8	8.2	8.2	8.1								
Approach LOS	В	Α	Α	Α								
Intersection Summary												
Delay			10.1									
Level of Service			В									
Intersection Capacity Utilizat	tion		36.4%	IC	U Level o	of Service			Α			
Analysis Period (min)			15									

Intersection			
Intersection Delay, s/veh	10		
Intersection LOS	Α		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	20	296	16	8	42	5	11	3	37	0	2	3
Future Vol, veh/h	20	296	16	8	42	5	11	3	37	0	2	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	19	20	8	100	18	2	13	2	2	33
Mvmt Flow	24	357	19	10	51	6	13	4	45	0	2	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB				SB	
Opposing Approach	WB			EB			SB				NB	
Opposing Lanes	1			1			1				1	
Conflicting Approach Left	SB			NB			EB				WB	
Conflicting Lanes Left	1			1			1				1	
Conflicting Approach Right	NB			SB			WB				EB	
Conflicting Lanes Right	1			1			1				1	
HCM Control Delay, s/veh	10.6			8.3			8.3				7.7	
HCM LOS	В			Α			Α				Α	

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	22%	6%	15%	0%	
Vol Thru, %	6%	89%	76%	40%	
Vol Right, %	73%	5%	9%	60%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	51	332	55	5	
LT Vol	11	20	8	0	
Through Vol	3	296	42	2	
RT Vol	37	16	5	3	
Lane Flow Rate	61	400	66	6	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.083	0.454	0.088	0.008	
Departure Headway (Hd)	4.851	4.085	4.78	4.688	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	742	868	753	767	
Service Time	2.857	2.172	2.79	2.697	
HCM Lane V/C Ratio	0.082	0.461	0.088	0.008	
HCM Control Delay, s/veh	8.3	10.6	8.3	7.7	
HCM Lane LOS	Α	В	Α	Α	
HCM 95th-tile Q	0.3	2.4	0.3	0	

	٠	<b>→</b>	<b>←</b>	•	<b>\</b>	✓
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	₽			7
Traffic Volume (veh/h)	1	314	43	3	1	2
Future Volume (Veh/h)	1	314	43	3	1	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	1	397	54	4	1	3
Pedestrians					4	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	62				459	60
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	62				459	60
tC, single (s)	4.1				6.5	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.5
p0 queue free %	100				100	100
cM capacity (veh/h)	1535				536	961
Direction, Lane #	EB 1	WB 1	SB 1	SB 2		
Volume Total	398	58	1	3		
Volume Left	1	0	1	0		
Volume Right	0	4	0	3		
cSH	1535	1700	536	961		
Volume to Capacity	0.00	0.03	0.00	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s/veh)	0.0	0.0	11.7	8.8		
Lane LOS	Α		В	Α		
Approach Delay (s/veh)	0.0	0.0	9.5			
Approach LOS			Α			
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utiliza	tion		27.3%	IC	U Level c	f Service
Analysis Period (min)			15			

Intersection							
Int Delay, s/veh	0.1						
		EDT	MOT	WDD	ODI	CDD	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		<b>- 4</b> 1	<b>1</b>	^	<u>ነ</u>		
Traffic Vol, veh/h	1	314	43	3	1	2	
Future Vol, veh/h	1	314	43	3	1	2	
Conflicting Peds, #/hr		0	0	_ 4	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	-	-	-	0	
Veh in Median Storage	e,# -	0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	79	79	79	79	79	79	
Heavy Vehicles, %	2	3	15	4	14	17	
Mvmt Flow	1	397	54	4	1	3	
Major/Minor	Major1	N	Major2		Minor2		
Conflicting Flow All	62	0	<u> </u>	0	460	60	
Stage 1	-	-	_	-	60	-	
Stage 2	_	_	_	_	400	_	
Critical Hdwy	4.12	-	-	-	6.54	6.37	
Critical Hdwy Stg 1	4.12	-	-	-	5.54	0.37	
Critical Hdwy Stg 2	-	-	-	-	5.54	-	
Follow-up Hdwy	2.218	-	-			3.453	
Pot Cap-1 Maneuver	1541	-	-	-	538	964	
•		-		-	933		
Stage 1	-	-	-		652	-	
Stage 2	-	-	-	-	002	-	
Platoon blocked, %	1525	-	-	-	E22	064	
Mov Cap-1 Maneuver		-	-	-	533	961	
Mov Cap-2 Maneuver		-	-	-	533	-	
Stage 1	-	-	-	-	928	-	
Stage 2	-	-	-	-	649	-	
Approach	EB		WB		SB		
HCM Control Delay, s	/v 0.02		0		9.76		
HCM LOS					Α		
NAII /NA NA		EDI	EDT	MOT	MPP	ODI 4 (	ם וחב
Minor Lane/Major Mvr	nt	EBL	EBT	WBT		SBLn1	
Capacity (veh/h)		6	-	-	-	533	961
HCM Lane V/C Ratio		0.001	-	-	-	0.002	
HCM Control Delay (s	/veh)	7.3	0	-	-	11.8	8.8
HCM Lane LOS		Α	Α	-	-	В	Α
HCM 95th %tile Q(veh	1)	0	-	-	-	0	0

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		ની	- ↑		ሻ	7
Traffic Volume (veh/h)	90	229	42	76	9	12
Future Volume (Veh/h)	90	229	42	76	9	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	115	294	54	97	12	15
Pedestrians					15	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)					-	
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	166				642	118
vC1, stage 1 conf vol	100				0.2	
vC2, stage 2 conf vol						
vCu, unblocked vol	166				642	118
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)	7.1				0.4	0.2
tF (s)	2.2				3.5	3.3
p0 queue free %	92				97	98
cM capacity (veh/h)	1392				397	921
		14/5 4	05.4	05.0	551	321
Direction, Lane #	EB 1	WB 1	SB 1	SB 2		
Volume Total	409	151	12	15		
Volume Left	115	0	12	0		
Volume Right	0	97	0	15		
cSH	1392	1700	397	921		
Volume to Capacity	0.08	0.09	0.03	0.02		
Queue Length 95th (ft)	7	0	2	1		
Control Delay (s/veh)	2.8	0.0	14.4	9.0		
Lane LOS	Α		В	Α		
Approach Delay (s/veh)	2.8	0.0	11.4			
Approach LOS			В			
Intersection Summary						
Average Delay			2.4			
Intersection Capacity Utilization	on		33.7%	IC	U Level o	of Service
Analysis Period (min)			15			

Intersection							
Int Delay, s/veh	2.1						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	LDL	<u>- ⊏</u>	VB1 }	WDIX	SBL	JOK 7	
Traffic Vol, veh/h	90	229	42	76	9	12	
Future Vol, veh/h	90	229	42	76	9	12	
Conflicting Peds, #/hr		0	0	15	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-			None	-		
Storage Length	_	-	_	-	_	0	
Veh in Median Storag		0	0	_	0	-	
Grade, %	-	0	0	_	0	_	
Peak Hour Factor	78	78	78	78	78	78	
Heavy Vehicles, %	2	4	7	4	2	2	
Mymt Flow	115	294	54	97	12	15	
	110	_0 /	- Or	01	14	10	
				_			
	Major1		Major2		Minor2		
Conflicting Flow All	166	0	-	0	642	118	
Stage 1	-	-	-	-	118	-	
Stage 2	-	-	-	-	524	-	
Critical Hdwy	4.12	-	-	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	-	5.42	-	
Follow-up Hdwy	2.218	-	-	-		3.318	
Pot Cap-1 Maneuver	1412	-	-	-	438	934	
Stage 1	-	-	-	-	907	-	
Stage 2	-	-	-	-	594	-	
Platoon blocked, %	4000	-	-	-	201	201	
Mov Cap-1 Maneuver		-	-	-	384	921	
Mov Cap-2 Maneuver	-	-	-	-	384	-	
Stage 1	-	-	-	-	806	-	
Stage 2	-	-	-	-	585	-	
Approach	EB		WB		SB		
HCM Control Delay, s	/v 2.21		0		11.42		
HCM LOS					В		
Minar Lana/Maiar Muu	4	EDI	EDT	WDT	WDD	ייין וחכ	ים וחי
Minor Lane/Major Mvr	nt	EBL	EBT	WBT		SBLn1 S	
Capacity (veh/h)		508	-	-	-	384	921
HCM Cantral Dalay (	/ a la \	0.083	-	-	-	0.03	
HCM Control Delay (s	ven)	7.8	0	-	-	14.7	9
HCM Lane LOS	-\	A	Α	-	-	В	Α
HCM 95th %tile Q(veh	1)	0.3	-	-	-	0.1	0.1

## HCM Unsignalized Intersection Capacity Analysis 14: Calmax Technology Access/East Access & SW Leveton Drive

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Volume (veh/h)	2	192	28	16	109	2	10	0	5	1	0	2
Future Volume (Veh/h)	2	192	28	16	109	2	10	0	5	1	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	2	218	32	18	124	2	11	0	6	1	0	2
Pedestrians											17	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											3.5	
Percent Blockage											2	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	143			250			401	417	234	422	432	142
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	143			250			401	417	234	422	432	142
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.6	6.5	6.7
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	4.0	4.0	3.8
p0 queue free %	100			99			98	100	99	100	100	100
cM capacity (veh/h)	1404			1316			545	510	805	445	500	780
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	252	144	17	3								
Volume Left	2	18	11	1								
Volume Right	32	2	6	2								
cSH	1404	1316	615	624								
Volume to Capacity	0.00	0.01	0.03	0.00								
Queue Length 95th (ft)	0	1	2	0								
Control Delay (s/veh)	0.1	1.1	11.0	10.8								
Lane LOS	Α	Α	В	В								
Approach Delay (s/veh)	0.1	1.1	11.0	10.8								
Approach LOS	<b>.</b>		В	В								
Intersection Summary												
Average Delay			0.9									
Intersection Capacity Utiliza	tion		26.8%	IC	CU Level o	of Service			Α			
Analysis Period (min)			15									

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	LDL	4	LDIN	VVDL	4	VVDIX	NDL	4	NUIN	ODL	4	ODIN
Traffic Vol, veh/h	2	192	28	16	109	2	10	0	5	1	0	2
Future Vol, veh/h	2	192	28	16	109	2	10	0	5	1	0	2
Conflicting Peds, #/hr	17	0	0	0	0	17	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	- -	None	- -	-	None
Storage Length	_		INOITE	_	_	INOITE	_		-	_		INOTIC
Veh in Median Storage		0	_	_	0	_	_	0	_		0	_
Grade, %	Σ, π -	0	_	_	0	_	_	0	_	_	0	_
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	4	7	2	2	4	6	2	2	2	50	2	50
Mvmt Flow	2	218	32	18	124	2	11	0	6	1	0	2
IVIVIIIL I IUW		210	32	10	124		11	U	U		U	
	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	143	0	0	250	0	0	399	418	234	401	433	142
Stage 1	-	-	-	-	-	-	239	239	-	178	178	-
Stage 2	-	-	-	-	-	-	160	180	-	223	255	-
Critical Hdwy	4.14	-	-	4.12	-	-	7.12	6.52	6.22	7.6	6.52	6.7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.6	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.6	5.52	-
Follow-up Hdwy	2.236	-	-	2.218	-	-	3.518	4.018		3.95	4.018	3.75
Pot Cap-1 Maneuver	1427	-	-	1316	-	-	561	526	805	483	516	793
Stage 1	-	-	-	-	-	-	765	708	-	724	752	-
Stage 2	-	-	-	-	-	-	842	751	-	683	697	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1404	-	-	1316	-	-	550	509	805	464	499	780
Mov Cap-2 Maneuver	-	-	-	-	-	-	550	509	-	464	499	-
Stage 1	-	-	-	-	-	-	763	707	-	701	729	-
Stage 2	-	-	-	-	-	-	827	728	-	677	695	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/				0.98			11.02			10.69		
HCM LOS							В			В		
Minor Long /Mailer M		UDL 4	EDI	EDT	EDD	WDI	MOT	WDD	ODL 4			
Minor Lane/Major Mvm	it f	VBLn1	EBL	EBT	EBR	WBL	WBT	WBR				
Capacity (veh/h)		615	16	-	-	226	-	-	636			
HCM Lane V/C Ratio	/ . 1. \	0.028	0.002	-	-	0.014	-		0.005			
HCM Control Delay (s/	ven)	11	7.6	0	-	7.8	0	-	10.7			
HCM Lane LOS	\	В	A	Α	-	A	Α	-	В			
HCM 95th %tile Q(veh	)	0.1	0	-	-	0	-	-	0			

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	ĵ∍	
Traffic Volume (veh/h)	161	62	93	200	47	32
Future Volume (Veh/h)	161	62	93	200	47	32
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	183	70	106	227	53	36
Pedestrians	19			1	1	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				861		
pX, platoon unblocked						
vC, conflicting volume	530	91	108			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	530	91	108			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	60	93	93			
cM capacity (veh/h)	455	948	1438			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	253	333	89			
Volume Left	183	106	0			
Volume Right	70	0	36			
cSH	532	1438	1700			
Volume to Capacity	0.48	0.07	0.05			
Queue Length 95th (ft)	63	6	0.00			
Control Delay (s/veh)	17.8	2.9	0.0			
Lane LOS	17.0	2.5 A	0.0			
Approach Delay (s/veh)	17.8	2.9	0.0			
Approach LOS	17.0	2.9	0.0			
Apploacii LOS	C					
Intersection Summary						
Average Delay			8.1			
Intersection Capacity Utiliza	ition		41.8%	IC	CU Level o	of Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	8.1					
-		EDD	ND	NET	OPT	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	M			4	- ∱	
Traffic Vol, veh/h	161	62	93	200	47	32
Future Vol, veh/h	161	62	93	200	47	32
Conflicting Peds, #/hr	1	1	19	0	0	19
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	7	2	5	21	28	12
Mvmt Flow	183	70	106	227	53	36
Major/Minor	Minor2		Major1		/lajor2	
			Major1			
Conflicting Flow All	530	92	109	0	-	0
Stage 1	91	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Critical Hdwy	6.47	6.22	4.15	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-		-	-	-
Follow-up Hdwy		3.318		-	-	-
Pot Cap-1 Maneuver	501	966	1463	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	442	947	1437	-	-	-
Mov Cap-2 Maneuver	442	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s/			2.45		0.0	
HCM LOS	V 10.37		2.40		U	
TICIVI LOS	U					
Minor Lane/Major Mvm	nt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		571	-	519	-	-
HCM Lane V/C Ratio		0.074	-	0.488	-	-
HCM Control Delay (s/	veh)	7.7	0	18.4	-	-
HCM Lane LOS		Α	Α	С	-	-
HCM 95th %tile Q(veh	)	0.2	-	2.6	-	-
0041 70410 0(1011	/	٥.٢				

## 16: SW Herman Road & SW 108th Ave

	•	<b>→</b>	•	<b>\</b>	4
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	16	437	638	84	12
v/c Ratio	0.03	0.40	0.59	0.23	0.03
Control Delay (s/veh)	3.1	6.5	9.9	21.3	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	3.1	6.5	9.9	21.3	12.2
Queue Length 50th (ft)	1	55	79	16	0
Queue Length 95th (ft)	7	120	281	70	12
Internal Link Dist (ft)		877	1007	781	
Turn Bay Length (ft)	100			135	
Base Capacity (vph)	598	1557	1539	1040	1019
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.03	0.28	0.41	0.08	0.01
Intersection Summary					

	۶	-	•	•	<b>&gt;</b>	4		
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		<b>†</b>	1>			#		
Traffic Volume (vph)	14	376	249	299	72	10		
Future Volume (vph)	14	376	249	299	72	10		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	4.0	4.0	4.0	1000	4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00		
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		
Frt	1.00	1.00	0.93		1.00	0.85		
Flt Protected	0.95	1.00	1.00		0.95	1.00		
Satd. Flow (prot)	1399	1557	1597		1504	1468		
Flt Permitted	0.30	1.00	1.00		0.95	1.00		
Satd. Flow (perm)	446	1557	1597		1504	1468		
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86		
Adj. Flow (vph)	16	437	290	348	84	12		
RTOR Reduction (vph)	0	437	33	340 0	04	10		
Lane Group Flow (vph)	16	437	605	0	84	2		
,	3	431	000	3	04	۷		
Confl. Peds. (#/hr) Heavy Vehicles (%)	29%	22%	12%	6%	20%	10%		
				0 70				
Turn Type D Protected Phases	).P+P	NA	NA		Prot	Perm		
	5	2	6		4	1		
Permitted Phases	6	27.0	24.0		7.5	4		
Actuated Green, G (s)	31.6	37.0	31.0		7.5	7.5		
Effective Green, g (s)	34.4	38.4	32.4		10.0	10.0		
Actuated g/C Ratio	0.61	0.68	0.57		0.18	0.18		
Clearance Time (s)	5.4	5.4	5.4		6.5	6.5		
Vehicle Extension (s)	2.0	3.1	3.1		2.6	2.6		
Lane Grp Cap (vph)	305	1060	917		266	260		
v/s Ratio Prot	0.00	c0.28	c0.38		c0.06	2.22		
v/s Ratio Perm	0.03				0.00	0.00		
v/c Ratio	0.05	0.41	0.66		0.32	0.01		
Uniform Delay, d1	8.8	4.0	8.2		20.2	19.1		
Progression Factor	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.0	0.3	1.8		0.5	0.0		
Delay (s)	8.9	4.3	10.0		20.8	19.1		
Level of Service	Α	Α	В		С	В		
Approach Delay (s/veh)		4.4	10.0		20.6			
Approach LOS		Α	В		С			
Intersection Summary								
HCM 2000 Control Delay (s/veh			8.7	H	CM 2000	Level of Servic	е	Α
HCM 2000 Volume to Capacity	ratio		0.59					
Actuated Cycle Length (s)			56.4		um of lost		1	2.0
Intersection Capacity Utilization			42.4%	IC	U Level o	of Service		Α
Analysis Period (min)			15					

c Critical Lane Group

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	*	<b>†</b>	1>		*	7
Traffic Volume (veh/h)	14	376	249	299	72	10
Future Volume (veh/h)	14	376	249	299	72	10
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1470	1574	1722	1811	1604	1752
Adj Flow Rate, veh/h	16	437	290	348	84	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	29	22	12	6	20	10
Cap, veh/h	422	1179	453	544	173	168
Arrive On Green	0.04	0.75	0.64	0.61	0.11	0.11
Sat Flow, veh/h	1400	1574	712	854	1527	1485
Grp Volume(v), veh/h	16	437	0	638	84	12
	1400	1574	0	1566	1527	1485
Grp Sat Flow(s),veh/h/ln		5.6	0.0	14.9	3.0	0.4
Q Serve(g_s), s	0.0		0.0	14.9	3.0	0.4
Cycle Q Clear(g_c), s		5.6	0.0			
Prop In Lane	1.00	4470	^	0.55	1.00	1.00
Lane Grp Cap(c), veh/h	422	1179	0	997	173	168
V/C Ratio(X)	0.04	0.37	0.00	0.64	0.48	0.07
Avail Cap(c_a), veh/h	635	1255	0	1760	853	829
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.9	2.5	0.0	6.8	24.2	23.1
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.7	1.7	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	0.0	3.4	1.1	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	9.9	2.7	0.0	7.5	25.9	23.2
LnGrp LOS	Α	Α		Α	С	С
Approach Vol, veh/h		453	638		96	
Approach Delay, s/veh		3.0	7.5		25.5	
Approach LOS		A	A		C	
		2		4		6
Timer - Assigned Phs					5	
Phs Duration (G+Y+Rc), s		47.6		10.6	6.5	41.1
Change Period (Y+Rc), s		5.4		6.5	5.4	5.4
Max Green Setting (Gmax), s		45.0		30.0	10.0	64.0
Max Q Clear Time (g_c+I1), s		7.6		5.0	2.0	16.9
Green Ext Time (p_c), s		10.1		0.2	0.0	18.8
Intersection Summary						
HCM 7th Control Delay, s/veh			7.2			
HCM 7th LOS			Α			

- + +
Movement EBT EBR WBL WBT NBL NBR
Lane Configurations 🏠 🥇 🏌
Traffic Volume (veh/h) 641 172 67 336 79 61
Future Volume (Veh/h) 641 172 67 336 79 61
Sign Control Free Stop
Grade 0% 0% 0%
Peak Hour Factor 0.95 0.95 0.95 0.95 0.95
Hourly flow rate (vph) 675 181 71 354 83 64
Pedestrians 2
Lane Width (ft) 12.0
Walking Speed (ft/s) 3.5
Percent Blockage 0
Right turn flare (veh)
Median type None TWLTL
Median storage veh) 2
Upstream signal (ft)
pX, platoon unblocked
vC, conflicting volume 858 1264 768
vC1, stage 1 conf vol 768
vC2, stage 2 conf vol 496
vCu, unblocked vol 858 1264 768
tC, single (s) 4.1 6.6 6.4
tC, 2 stage (s) 5.6
tF (s) 2.2 3.6 3.5
p0 queue free % 91 77 83
cM capacity (veh/h) 769 360 372
Direction, Lane # EB 1 WB 1 WB 2 NB 1 NB 2
Volume Total 856 71 354 83 64
Volume Left 0 71 0 83 0
Volume Right 181 0 0 0 64
cSH 1700 769 1700 360 372
Volume to Capacity 0.50 0.09 0.21 0.23 0.17
Queue Length 95th (ft) 0 8 0 22 15
Control Delay (s/veh) 0.0 10.2 0.0 18.0 16.7
Lane LOS B C C
Approach Delay (s/veh) 0.0 1.7 17.4
Approach LOS C
Intersection Summary
Average Delay 2.3
Intersection Capacity Utilization 62.3% ICU Level of Service
Analysis Period (min) 15

Intersection							
Int Delay, s/veh	4.1						
		EDD	WDI	WDT	NDI	NDD	J
	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	<b>}</b>	470	<u>`</u>	<b>↑</b>	<u> </u>	7	
Traffic Vol, veh/h	641	172	67	336	79	61	
·	641	172	67	336	79	61	
Conflicting Peds, #/hr	0	_ 2	_ 2	_ 0	0	0	
	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	25	-	100	0	
Veh in Median Storage, #	<del>#</del> 0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	2	3	5	7	15	21	
Mvmt Flow	675	181	71	354	83	64	
NA=:==/NA:===	-:1		M-:0		N 4: 4		
	ajor1		Major2		Minor1		
Conflicting Flow All	0	0	858	0	1262	767	
Stage 1	-	-	-	-	767	-	
Stage 2	-	-	-	-	495	-	
Critical Hdwy	-	-	4.15	-	6.55	6.41	
Critical Hdwy Stg 1	-	-	-	-	5.55	-	
Critical Hdwy Stg 2	-	-	-	-	5.55	-	
Follow-up Hdwy	-	-	2.245	-	3.635	3.489	
Pot Cap-1 Maneuver	-	-	770	-	176	373	
Stage 1	-	-	-	-	436	-	
Stage 2	-	-	-	-	587	-	
Platoon blocked, %	-	-		-			
Mov Cap-1 Maneuver	-	-	769	_	160	372	
Mov Cap-2 Maneuver	_	-	_	_	160	-	
Stage 1	_	_	_	_	435	_	
Stage 2	_	_	_	_	533	_	
olago 2					000		
Approach	EB		WB		NB		
HCM Control Delay, s/v	0		1.69		35.29		
HCM LOS					Ε		
Minor Lang/Major Mymt	,	NBLn1N	MDI 52	EBT	EBR	WBL	
Minor Lane/Major Mvmt	ı						
Capacity (veh/h)		160	372	-	-	769	
HCM Lane V/C Ratio			0.172	-		0.092	
HCM Control Delay (s/ve	h)	49.7	16.7	-	-	10.2	
HCM Lane LOS		Е	С	-	-	В	
HCM 95th %tile Q(veh)		2.6	0.6			0.3	

	-	•	•	<b>←</b>	•	<b>/</b>
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽			4	W	
Traffic Volume (veh/h)	28	12	47	84	110	113
Future Volume (Veh/h)	28	12	47	84	110	113
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	44	19	73	131	172	177
Pedestrians					37	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					4	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			100		368	91
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			100		368	91
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			95		70	81
cM capacity (veh/h)			1410		575	925
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	63	204	349			
Volume Left	0	73	172			
Volume Right	19	0	177			
cSH	1700	1410	712			
Volume to Capacity	0.04	0.05	0.49			
Queue Length 95th (ft)	0	4	68			
Control Delay (s/veh)	0.0	3.0	14.8			
Lane LOS		A	В			
Approach Delay (s/veh)	0.0	3.0	14.8			
Approach LOS			В			
Intersection Summary						
Average Delay			9.4			
Intersection Capacity Utilizati	ion		33.4%	IC	U Level c	f Service
Analysis Period (min)	1011		15	10	O LOVOI C	i oci vice
Alialysis Fellou (IIIIII)			15			

Intersection   Int Delay, s/veh   9.3     9.3
Movement         EBT         EBR         WBL         WBT         NBL         NBR           Lane Configurations         Image: Configuration of the properties of the prope
Lane Configurations         Image: Configuration of the proof of
Traffic Vol, veh/h         28         12         47         84         110         113           Future Vol, veh/h         28         12         47         84         110         113           Conflicting Peds, #/hr         0         37         37         0         0         0           Sign Control         Free         Free         Free         Free         Free         Stop         Stop           RT Channelized         -         None         -         None         -         None           Storage Length         -         -         -         0         -         -           Veh in Median Storage, #         0         -         -         0         0         -           Grade, %         0         -         -         0         0         -           Peak Hour Factor         64         64         64         64         64         64           Heavy Vehicles, %         2         25         7         6         4         5
Future Vol, veh/h       28       12       47       84       110       113         Conflicting Peds, #/hr       0       37       37       0       0       0         Sign Control       Free       Free       Free       Free       Free       Stop       Stop         RT Channelized       -       None       -       None       -       None       -       None         Storage Length       -       -       -       -       0       -       -       -       0       -       -         Veh in Median Storage, #       0       -       -       0       0       -       -       -       0       0       -         Grade, %       0       -       -       0       0       -       -       0       0       -       -         Peak Hour Factor       64
Conflicting Peds, #/hr         0         37         37         0         0         0           Sign Control         Free         Free         Free         Free         Free         Free         Stop         Stop           RT Channelized         -         None
Sign Control Free Free Free Free Stop Stop RT Channelized - None - None - None Storage Length 0 - 0 0 Crade, % 0 0 0 0 0 0 Crade, % 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
RT Channelized         - None         - None         - None         - None           Storage Length         0         0         0           Veh in Median Storage, # 0 0 0         0 0         0         0         0           Grade, % 0 0 0 0 0         0 0 0
Storage Length       -       -       -       -       0       -         Veh in Median Storage, #       0       -       -       0       0       -         Grade, %       0       -       -       0       0       -         Peak Hour Factor       64       64       64       64       64       64         Heavy Vehicles, %       2       25       7       6       4       5
Veh in Median Storage, #       0       -       -       0       0       -         Grade, %       0       -       -       0       0       -         Peak Hour Factor       64       64       64       64       64       64         Heavy Vehicles, %       2       25       7       6       4       5
Grade, %       0       -       -       0       0       -         Peak Hour Factor       64       64       64       64       64       64       64         Heavy Vehicles, %       2       25       7       6       4       5
Peak Hour Factor         64
Heavy Vehicles, % 2 25 7 6 4 5
· · · · · · · · · · · · · · · · · · ·
Mvmt Flow 44 19 73 131 172 177
M : (N): A M : O M: A
Major/Minor Major1 Major2 Minor1
Conflicting Flow All 0 0 100 0 368 90
Stage 1 90 -
Stage 2 278 -
Critical Hdwy 4.17 - 6.44 6.25
Critical Hdwy Stg 1 5.44 -
Critical Hdwy Stg 2 5.44 -
Follow-up Hdwy 2.263 - 3.536 3.345
Pot Cap-1 Maneuver 1462 - 628 959
Stage 1 928 -
Stage 2 764 -
Platoon blocked, %
Mov Cap-1 Maneuver 1411 - 572 926
Mov Cap-2 Maneuver 572
Stage 1 896 -
Stage 2 721 -
Otage 2
Approach EB WB NB
HCM Control Delay, s/v 0 2.76 14.88
HCM LOS B
Minor Lane/Major Mymt NRI n1 FRT FRR WRI WRT
Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT
Capacity (veh/h) 709 646 -
Capacity (veh/h) 709 646 - HCM Lane V/C Ratio 0.491 0.052 -
Capacity (veh/h) 709 646 - HCM Lane V/C Ratio 0.491 0.052 - HCM Control Delay (s/veh) 14.9 - 7.7 0
Capacity (veh/h) 709 646 - HCM Lane V/C Ratio 0.491 0.052 -

	•	•	<b>†</b>	<i>&gt;</i>	-	ţ
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		7	<b>†</b> †	7		<b>†</b> †
Traffic Volume (veh/h)	0	199	1285	20	0	1678
Future Volume (Veh/h)	0	199	1285	20	0	1678
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	226	1460	23	0	1907
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2415	731			1461	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2415	731			1461	
tC, single (s)	6.8	*6.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	48			100	
cM capacity (veh/h)	27	439			458	
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	226	730	730	23	954	954
Volume Left	0	0	0	0	0	0
Volume Right	226	0	0	23	0	0
cSH	439	1700	1700	1700	1700	1700
Volume to Capacity	0.52	0.43	0.43	0.01	0.56	0.56
Queue Length 95th (ft)	72	0.43	0.43	0.01	0.50	0.50
Control Delay (s/veh)	21.6	0.0	0.0	0.0	0.0	0.0
Lane LOS	Z1.0	0.0	0.0	0.0	0.0	0.0
Approach Delay (s/veh)	21.6	0.0			0.0	
Approach LOS	Z1.0	0.0			0.0	
•	U					
Intersection Summary						
Average Delay			1.4			
Intersection Capacity Utiliza	ition		54.5%	IC	U Level o	of Service
Analysis Period (min)			15			

User Entered Value

Intersection						
Int Delay, s/veh	1.9					
		WES	NET	NES	051	057
	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		7	<b>^</b>	7		<b>^</b>
Traffic Vol, veh/h	0	199	1285	20	0	1678
Future Vol, veh/h	0	199	1285	20	0	1678
Conflicting Peds, #/hr	0	0	0	1	1	0
	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	335	-	-
Veh in Median Storage, #	<del>#</del> 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	4	8	3	2	10
Mvmt Flow	0	226	1460	23	0	1907
		_				
	nor1		/lajor1	1	/lajor2	
Conflicting Flow All	-	730	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.98	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.34	-	-	-	-
Pot Cap-1 Maneuver	0	360	-	0	0	_
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %	•		_	•		_
Mov Cap-1 Maneuver	_	360	_	_	_	_
Mov Cap-1 Maneuver	_	-	_	_	_	_
		-		_	_	<u>-</u>
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s/v3	0.42		0		0	
	D					
HCM LOS						
HCM LOS						
		NET:	/DL - 4	057		
Minor Lane/Major Mvmt		NBTW		SBT		
Minor Lane/Major Mvmt Capacity (veh/h)		-	360	SBT -		
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio		-	360 0.628			
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s/ve		-	360	-		
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio		-	360 0.628	-		

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Group Flow (vph)	6	397	22	338	381	129	28	179	
v/c Ratio	0.03	0.76	0.08	0.70	0.67	0.21	0.07	0.48	
Control Delay (s/veh)	15.0	32.7	15.3	30.6	23.5	22.8	16.8	35.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	15.0	32.7	15.3	30.6	23.5	22.8	16.8	35.0	
Queue Length 50th (ft)	2	140	6	126	105	41	6	68	
Queue Length 95th (ft)	9	329	22	296	282	116	28	178	
Internal Link Dist (ft)		1007		989		572		1708	
Turn Bay Length (ft)	100		100		60		50		
Base Capacity (vph)	392	1099	511	976	640	1158	664	1323	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.02	0.36	0.04	0.35	0.60	0.11	0.04	0.14	
Intersection Summary									

	٠	<b>→</b>	•	•	<b>—</b>	•	•	<b>†</b>	<i>&gt;</i>	<b>/</b>	Ţ	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	f)		ሻ	f)		ň	ĵ»		ሻ	ĵ»	
Traffic Volume (vph)	5	190	164	20	277	24	339	87	28	25	134	25
Future Volume (vph)	5	190	164	20	277	24	339	87	28	25	134	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		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	0.93		1.00	0.99		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1128	1466		1543	1308		1656	1494		1593	1704	
Flt Permitted	0.43	1.00		0.31	1.00		0.48	1.00		0.67	1.00	
Satd. Flow (perm)	507	1466		509	1308		833	1494		1131	1704	
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)	6	213	184	22	311	27	381	98	31	28	151	28
RTOR Reduction (vph)	0	18	0	0	2	0	0	0	0	0	5	0
Lane Group Flow (vph)	6	379	0	22	336	0	381	129	0	28	174	0
Confl. Peds. (#/hr)									2	2		
Heavy Vehicles (%)	60%	16%	26%	17%	45%	27%	9%	24%	15%	13%	5%	30%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	27.8	27.0		29.8	28.0		38.0	30.8		22.0	18.8	
Effective Green, g (s)	27.8	27.5		29.8	28.5		38.0	31.3		22.0	19.3	
Actuated g/C Ratio	0.34	0.34		0.36	0.35		0.46	0.38		0.27	0.24	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	3.2		2.0	3.2		2.0	3.2		2.0	3.2	
Lane Grp Cap (vph)	178	492		208	455		539	571		322	402	
v/s Ratio Prot	0.00	c0.26		c0.00	0.26		c0.13	0.09		0.00	0.10	
v/s Ratio Perm	0.01			0.04			c0.20			0.02		
v/c Ratio	0.03	0.77		0.11	0.74		0.71	0.23		0.09	0.43	
Uniform Delay, d1	18.2	24.3		17.6	23.4		15.6	17.1		22.2	26.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	7.4		0.1	6.3		3.5	0.2		0.0	0.8	
Delay (s)	18.2	31.7		17.7	29.6		19.0	17.3		22.3	27.4	
Level of Service	В	C		В	C		В	B		С	C	
Approach Delay (s/veh)		31.5			28.9			18.6			26.7	
Approach LOS		С			С			В			С	
Intersection Summary												
HCM 2000 Control Delay (s			25.8	H	CM 2000	Level of	Service		С			
HCM 2000 Volume to Capa	city ratio		0.75									
Actuated Cycle Length (s)			81.8		um of lost				18.0			
Intersection Capacity Utiliza	ation		59.0%	IC	U Level	of Service	9		В			
Analysis Period (min)			15									

Analysis Period (min)
c Critical Lane Group

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		, M	<b>₽</b>		7	ĵ.		7	ĵ.	
Traffic Volume (veh/h)	5	190	164	20	277	24	339	87	28	25	134	25
Future Volume (veh/h)	5	190	164	20	277	24	339	87	28	25	134	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	0.99		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	1011	1663	1515	1648	1233	1500	1767	1544	1678	1707	1826	1455
Adj Flow Rate, veh/h	6	213	184	22	311	27	381	98	31	28	151	28
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	60	16	26	17	45	27	9	24	15	13	5	30
Cap, veh/h	186	303	262	260	430	37	508	371	117	307	219	41
Arrive On Green	0.01	0.37	0.36	0.02	0.38	0.38	0.21	0.33	0.32	0.03	0.15	0.14
Sat Flow, veh/h	963	823	711	1570	1119	97	1682	1124	355	1626	1496	277
Grp Volume(v), veh/h	6	0	397	22	0	338	381	0	129	28	0	179
Grp Sat Flow(s), veh/h/ln	963	0	1535	1570	0	1216	1682	0	1479	1626	0	1774
Q Serve(g_s), s	0.3	0.0	16.1	0.6	0.0	17.2	13.2	0.0	4.7	1.1	0.0	7.0
Cycle Q Clear(g_c), s	0.3	0.0	16.1	0.6	0.0	17.2	13.2	0.0	4.7	1.1	0.0	7.0
Prop In Lane	1.00		0.46	1.00		0.08	1.00		0.24	1.00		0.16
Lane Grp Cap(c), veh/h	186	0	565	260	0	468	508	0	488	307	0	260
V/C Ratio(X)	0.03	0.00	0.70	0.08	0.00	0.72	0.75	0.00	0.26	0.09	0.00	0.69
Avail Cap(c_a), veh/h	443	0	1150	652	0	894	611	0	1169	706	0	1353
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.4	0.0	19.7	15.7	0.0	19.1	18.9	0.0	17.9	25.5	0.0	29.5
Incr Delay (d2), s/veh	0.0	0.0	1.7	0.1	0.0	2.3	3.2	0.0	0.3	0.0	0.0	3.5
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	0.1	0.0	5.2	0.2	0.0	4.7	5.1	0.0	1.5	0.4	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.4	0.0	21.5	15.8	0.0	21.4	22.0	0.0	18.2	25.6	0.0	33.0
LnGrp LOS	В		С	В		С	С		В	С		С
Approach Vol, veh/h		403			360			510			207	
Approach Delay, s/veh		21.4			21.1			21.1			32.0	
Approach LOS		С			С			С			С	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	31.8	19.5	15.7	4.6	33.0	6.2	29.0				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	20.0	54.0	20.0	55.0	20.0	53.0	20.0	57.0				
Max Q Clear Time (g_c+l1), s	2.6	18.1	15.2	9.0	2.3	19.2	3.1	6.7				
Green Ext Time (p_c), s	0.0	8.2	0.3	0.6	0.0	7.4	0.1	1.8				
Intersection Summary							•••					
			22.7									
HCM 7th Control Delay, s/veh HCM 7th LOS			22.7 C									
HOW / (II LOS			C									

### 21: OR 99W (Pacific Highway) & SW Fischer Road

	•	•	1	<b>†</b>	ļ	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	253	453	148	1542	1416	149
v/c Ratio	0.78	1.00	0.84	0.61	0.68	0.15
Control Delay (s/veh)	71.4	72.7	96.7	8.9	25.9	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	71.4	72.7	96.7	8.9	25.9	4.3
Queue Length 50th (ft)	222	252	134	293	610	14
Queue Length 95th (ft)	#348	#485	#257	347	700	m27
Internal Link Dist (ft)	1134			1909	2372	
Turn Bay Length (ft)	275		435			200
Base Capacity (vph)	325	454	176	2531	2092	967
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	1.00	0.84	0.61	0.68	0.15

#### Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	۶	•	4	<b>†</b>	L♣	ļ	✓	
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	
Lane Configurations	ሻ	7	ሻ	<b>^</b>	Ð	<b>^</b>	7	
Traffic Volume (vph)	228	408	133	1388	0	1274	134	
Future Volume (vph)	228	408	133	1388	0	1274	134	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95		0.95	1.00	
Frpb, ped/bikes	1.00	0.98	1.00	1.00		1.00	0.97	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.85	1.00	1.00		1.00	0.85	
Flt Protected	0.95	1.00	0.95	1.00		1.00	1.00	
Satd. Flow (prot)	1752	1555	1543	3343		3406	1499	
Flt Permitted	0.95	1.00	0.95	1.00		1.00	1.00	
Satd. Flow (perm)	1752	1555	1543	3343	0.00	3406	1499	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	253	453	148	1542	0	1416	149	
RTOR Reduction (vph)	0	166	0	0	0	0	46	
Lane Group Flow (vph)	253	287	148	1542	0	1416	103	
Confl. Peds. (#/hr)	20/	7	470/	00/	00/	C0/	5	
Heavy Vehicles (%)	3%	2%	17%	8%	2%	6%	4%	
Turn Type	Prot	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	4	4	5	2	1	6	•	
Permitted Phases	05.0	4	44.5	404.0		04.0	6	
Actuated Green, G (s)	25.0	25.0	14.5	104.0		84.0	84.0	
Effective Green, g (s)	26.0 0.19	26.0 0.19	16.0 0.11	106.0 0.76		86.0 0.61	86.0 0.61	
Actuated g/C Ratio	5.0	5.0	5.5	6.0		6.0	6.0	
Clearance Time (s) Vehicle Extension (s)	2.5	2.5	2.3	4.5		4.5	4.5	
Lane Grp Cap (vph)	325	288	176	2531		2092	920	
v/s Ratio Prot	0.14	on 10	c0.10	0.46		c0.42	0.07	
v/s Ratio Perm v/c Ratio	0.78	c0.18 1.00	0.84	0.61		0.60	0.07 0.11	
	54.3	56.9	60.8	7.7		0.68 17.8	11.2	
Uniform Delay, d1 Progression Factor	1.00	1.00	1.00	1.00		17.8	1.38	
Incremental Delay, d2	10.8	51.6	28.1	1.00		1.33	0.2	
	65.0	108.6	88.9	8.8		25.5	15.6	
Delay (s) Level of Service	65.0 E	100.0 F	00.9 F	0.0 A		25.5 C	15.6 B	
Approach Delay (s/veh)	93.0	Г	Г	15.8		24.6	Б	
Approach LOS	93.0 F			15.6 B		24.0 C		
	Г			Ь		U		
Intersection Summary	/ . I. \		22.0	1.17	214 0000	1		
HCM 2000 Control Delay (s/			33.0	H(	JIVI ∠UUU	Level of S	service	
HCM 2000 Volume to Capac	city ratio		0.76	C.	ım of loct	time (a)		
Actuated Cycle Length (s)	tion		140.0		ım of lost	time (s) of Service		
Intersection Capacity Utilizat	uOH		71.3%	IC	o Level C	oervice		
Analysis Period (min)			15					

c Critical Lane Group

	۶	$\rightarrow$	•	<b>†</b>	L.	<b>↓</b>	4
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations	ሻ	7	ሻ	<b>†</b> †	ħ	<b>^</b>	7
Traffic Volume (veh/h)	228	408	133	1388	0	1274	134
Future Volume (veh/h)	228	408	133	1388	0	1274	134
Initial Q (Qb), veh	0	0	0	0		0	0
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00				1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No			No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1648	1781		1811	1841
Adj Flow Rate, veh/h	253	453	148	1542		1416	149
Peak Hour Factor	0.90	0.90	0.90	0.90		0.90	0.90
Percent Heavy Veh, %	3	2	17	8		6	4
Cap, veh/h	328	294	271	2771		2114	954
Arrive On Green	0.19	0.19	0.17	0.82		1.00	1.00
Sat Flow, veh/h	1767	1585	1570	3474		3532	1554
Grp Volume(v), veh/h	253	453	148	1542		1416	149
Grp Sat Flow(s), veh/h/ln	1767	1585	1570	1692		1721	1554
Q Serve(g_s), s	19.0	26.0	12.1	21.2		0.0	0.0
Cycle Q Clear(g_c), s	19.0	26.0	12.1	21.2		0.0	0.0
Prop In Lane	1.00	1.00	1.00	۷۱.۷		0.0	1.00
Lane Grp Cap(c), veh/h	328	294	271	2771		2114	954
V/C Ratio(X)	0.77	1.54	0.55	0.56		0.67	0.16
Avail Cap(c_a), veh/h	328	294	271	2771		2114	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00		2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		0.74	0.74
Uniform Delay (d), s/veh	54.2	57.0	52.9	4.2		0.74	0.74
Incr Delay (d2), s/veh	10.3	258.9	52.9 1.7	0.8		1.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%), veh/ln	9.5	41.9	4.8	5.3		0.0	0.0
, , ,		41.9	4.0	ე.ა		0.4	U. I
Unsig. Movement Delay, s/veh	64.5	315.9	54.6	5.0		1.3	0.3
LnGrp Delay(d), s/veh	04.5 E	315.9 F	54.6 D				0.3 A
LnGrp LOS		F	D	A 4000		4505	А
Approach Vol, veh/h	706			1690		1565	
Approach Delay, s/veh	225.8			9.4		1.2	
Approach LOS	F			Α		Α	
Timer - Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		118.7		30.0	28.7	90.0	
Change Period (Y+Rc), s		6.0		5.0	6.0	* 6	
Max Green Setting (Gmax), s		84.0		25.0	14.5	* 84	
Max Q Clear Time (g_c+l1), s		23.2		28.0	14.1	2.0	
Green Ext Time (p_c), s		54.0		0.0	0.0	63.9	
Intersection Summary							
HCM 7th Control Delay, s/veh			44.7				
HCM 7th LOS			44.7 D				
Notes							
User approved pedestrian inte	erval to be	e less that	n nhase n	nax dreen			
User approved ignoring U-Tur			прпазе п	iun giedi			

09/20/2024

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

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Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	132	200	204	248	74	1268	399	475	1107	12	
v/c Ratio	0.40	0.89	0.89	0.58	0.63	0.84	0.42	0.85	0.58	0.01	
Control Delay (s/veh)	44.6	95.7	95.6	12.1	75.4	40.0	7.7	72.5	22.1	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	44.6	95.7	95.6	12.1	75.4	40.0	7.7	72.5	22.1	0.0	
Queue Length 50th (ft)	41	189	193	0	67	557	125	219	354	0	
Queue Length 95th (ft)	75	#336	#342	81	m108	655	182	#304	426	0	
Internal Link Dist (ft)	481		939			2372			1326		
Turn Bay Length (ft)		300		315	550		140	265		400	
Base Capacity (vph)	350	231	235	430	134	1510	945	556	1910	944	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.38	0.87	0.87	0.58	0.55	0.84	0.42	0.85	0.58	0.01	

#### Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	۶	<b>→</b>	•	•	•	•	•	<b>†</b>	<b>/</b>	<b>&gt;</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		€1}+		ሻ	4	7	7	<b>^</b>	7	ሻሻ	十十	7
Traffic Volume (vph)	8	74	40	334	38	228	68	1167	367	437	1018	11
Future Volume (vph)	8	74	40	334	38	228	68	1167	367	437	1018	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Lane Util. Factor		0.95		0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3355		1633	1663	1536	1770	3343	1506	3433	3374	1583
Flt Permitted		1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3355		1633	1663	1536	1770	3343	1506	3433	3374	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)	9	80	43	363	41	248	74	1268	399	475	1107	12
RTOR Reduction (vph)	0	39	0	0	0	214	0	0	60	0	0	5
Lane Group Flow (vph)	0	93	0	200	204	34	74	1268	339	475	1107	7
Confl. Peds. (#/hr)	4					4			2			
Heavy Vehicles (%)	2%	2%	2%	5%	2%	3%	2%	8%	6%	2%	7%	2%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	3	3		4	4		5	2	4	1	6	
Permitted Phases						4			2			6
Actuated Green, G (s)		12.0		19.3	19.3	19.3	8.1	62.2	81.5	23.8	78.2	78.2
Effective Green, g (s)		12.0		19.3	19.3	19.3	8.1	62.2	81.5	23.8	78.2	78.2
Actuated g/C Ratio		0.09		0.14	0.14	0.14	0.06	0.44	0.58	0.17	0.56	0.56
Clearance Time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Vehicle Extension (s)		2.3		2.3	2.3	2.3	2.3	4.5	2.3	2.3	4.8	4.8
Lane Grp Cap (vph)		287		225	229	211	102	1485	941	583	1884	884
v/s Ratio Prot		c0.03		0.12	c0.12		0.04	c0.38	0.05	c0.14	0.33	
v/s Ratio Perm						0.02			0.18			0.00
v/c Ratio		0.32		0.89	0.89	0.16	0.73	0.85	0.36	0.81	0.59	0.01
Uniform Delay, d1		60.2		59.3	59.3	53.2	64.9	34.8	15.5	56.0	20.3	13.7
Progression Factor		1.00		1.00	1.00	1.00	0.90	1.03	0.84	1.00	1.00	1.00
Incremental Delay, d2		0.4		31.3	31.7	0.2	16.3	5.1	0.1	8.3	1.4	0.0
Delay (s)		60.6		90.6	91.0	53.4	74.5	40.8	13.0	64.3	21.7	13.7
Level of Service		Е		F	F	D	Е	D	В	Е	С	В
Approach Delay (s/veh)		60.6			76.6			35.9			34.3	
Approach LOS		Е			Е			D			С	
Intersection Summary												
HCM 2000 Control Delay (s/v	,		42.5	H	CM 2000	Level of S	Service		D			
HCM 2000 Volume to Capacit	ty ratio		0.80									
Actuated Cycle Length (s)			140.0	Sı	um of lost	t time (s)			22.7			
Intersection Capacity Utilization	on		75.6%	IC	U Level	of Service			D			
Analysis Period (min)			15									

c Critical Lane Group

09/20/2024

HCM 7th Edition methodology does not support exclusive ped or hold phases.

# 1: SW 124th Avenue & OR 99W (Pacific Highway)

	-	•	•	•	1	~
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	888	239	786	1219	769	837
v/c Ratio	0.73	0.35	0.81	0.54	0.82	0.54
Control Delay (s/veh)	39.1	5.4	48.5	12.3	42.6	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.1	5.4	48.5	12.3	42.6	18.3
Queue Length 50th (ft)	316	3	294	245	277	241
Queue Length 95th (ft)	392	58	#423	329	359	348
Internal Link Dist (ft)	1687			1822	503	
Turn Bay Length (ft)		225	550		300	275
Base Capacity (vph)	1209	678	968	2268	1058	1546
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.35	0.81	0.54	0.73	0.54
Internation Comment						

Intersection Summary
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	-	•	•	•		/			
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	<b>†</b> †	1	ሻሻ	<b>^</b>	ሻሻ	77			
Traffic Volume (vph)	835	225	739	1146	723	787			
Future Volume (vph)	835	225	739	1146	723	787			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	5.6			
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88			
Frpb, ped/bikes	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			
Frt	1.00	0.85	1.00	1.00	1.00	0.85			
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00			
Satd. Flow (prot)	3539	1538	3400	3438	3433	2787			
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00			
Satd. Flow (perm)	3539	1538	3400	3438	3433	2787			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94			
Adj. Flow (vph)	888	239	786	1219	769	837			
RTOR Reduction (vph)	0	153	0	0	0	0			
Lane Group Flow (vph)	888	86	786	1219	769	837			
Confl. Peds. (#/hr)	000	00	, 00	1210	, 00	1			
Heavy Vehicles (%)	2%	5%	3%	5%	2%	2%			
Turn Type	NA	Perm	Prot	NA	Prot	pt+ov			
Protected Phases	2	1 01111	1	6	8	14			
Permitted Phases		2	· ·	<u> </u>	U	I *T			
Actuated Green, G (s)	39.0	39.0	29.4	74.0	34.0	63.4			
Effective Green, g (s)	41.0	41.0	31.0	76.0	36.0	58.4			
Actuated g/C Ratio	0.34	0.34	0.26	0.63	0.30	0.49			
Clearance Time (s)	6.0	6.0	5.6	6.0	6.0	U.TJ			
Vehicle Extension (s)	5.4	5.4	2.3	5.4	2.3				
Lane Grp Cap (vph)	1209	525	878	2177	1029	1356			
v/s Ratio Prot	c0.25	JZJ	c0.23	0.35	c0.22	0.30			
v/s Ratio Perm	U.ZJ	0.06	00.20	0.00	00.22	0.00			
v/c Ratio	0.73	0.00	0.90	0.56	0.75	0.62			
Uniform Delay, d1	34.7	27.5	42.9	12.5	37.9	22.6			
Progression Factor	1.00	1.00	1.00	1.00	0.87	0.94			
Incremental Delay, d2	3.0	0.3	13.6	1.00	2.6	0.94			
Delay (s)	37.7	27.9	56.5	13.5	35.4	21.8			
Level of Service	31.1 D	21.9 C	50.5 E	13.5 B	55.4 D	C C			
Approach Delay (s/veh)	35.6		L	30.4	28.3	0			
Approach LOS	55.0 D			30.4 C	20.3 C				
• •	D			U	U				
Intersection Summary	1 1)		20.0	, ,	014 0000	1			
HCM 2000 Control Delay (s			30.9	Н	CM 2000	Level of Serv	rice	С	
HCM 2000 Volume to Capa	acity ratio		0.84	_		( C / . \		40.0	
Actuated Cycle Length (s)	C.		120.0		um of los			18.6	
Intersection Capacity Utiliza	ation		83.3%	IC	U Level	of Service		E	
Analysis Period (min)			15						

c Critical Lane Group

10/01/2024

HCM 7th Edition methodology does not support exclusive ped or hold phases.

### 2: SW 124th Avenue & SW Tualatin Road

	•	*	<b>†</b>	~	-	Į.
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	51	740	807	55	476	524
v/c Ratio	0.26	0.68	0.76	0.11	0.50	0.19
Control Delay (s/veh)	47.4	11.9	42.7	12.0	13.1	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.4	11.9	42.7	12.0	13.1	4.5
Queue Length 50th (ft)	38	112	293	8	32	20
Queue Length 95th (ft)	63	#417	357	37	m184	m92
Internal Link Dist (ft)	1180		1024			503
Turn Bay Length (ft)	25	300		150	200	
Base Capacity (vph)	445	1083	1173	552	943	2819
Starvation Cap Reductn	0	0	0	0	12	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.68	0.69	0.10	0.51	0.19

### Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	•	•	<b>†</b>	~	/	<b>↓</b>			
Movement	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations	7	7	<b>†</b> †	7	ሻ	<b>^</b>			
Traffic Volume (vph)	48	696	759	52	447	493			
Future Volume (vph)	48	696	759	52	447	493			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Total Lost time (s)	4.0	0.0	4.5	4.5	4.0	4.5			
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95			
Frt	1.00	0.85	1.00	0.85	1.00	1.00			
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00			
Satd. Flow (prot)	1671	1599	3539	1583	1752	3374			
Flt Permitted	0.95	1.00	1.00	1.00	0.14	1.00			
Satd. Flow (perm)	1671	1599	3539	1583	260	3374			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94			
Adj. Flow (vph)	51	740	807	55	476	524			
RTOR Reduction (vph)	0	245	0	29	0	0			
Lane Group Flow (vph)	51	495	807	26	476	524			
Heavy Vehicles (%)	8%	1%	2%	2%	3%	7%			
Turn Type	Perm	Over	NA	Perm	D.P+P	NA			
Protected Phases		5	6		5	2			
Permitted Phases	4			6	6				
Actuated Green, G (s)	12.1	57.3	35.1	35.1	92.4	97.4			
Effective Green, g (s)	13.1	62.3	36.1	36.1	94.4	98.4			
Actuated g/C Ratio	0.11	0.52	0.30	0.30	0.79	0.82			
Clearance Time (s)	5.0	5.0	5.5	5.5	5.0	5.5			
Vehicle Extension (s)	4.0	4.0	4.5	4.5	4.0	4.5			
Lane Grp Cap (vph)	182	830	1064	476	929	2766			
v/s Ratio Prot		c0.31	c0.23		0.25	0.16			
v/s Ratio Perm	c0.03			0.02	0.15				
v/c Ratio	0.28	0.60	0.76	0.06	0.51	0.19			
Uniform Delay, d1	49.1	20.1	38.0	29.8	14.9	2.3			
Progression Factor	1.00	1.00	1.00	1.00	0.62	1.30			
Incremental Delay, d2	1.2	3.2	3.5	0.1	0.6	0.1			
Delay (s)	50.3	23.3	41.6	29.9	9.8	3.1			
Level of Service	D	С	D	С	Α	А			
Approach Delay (s/veh)	25.0		40.8			6.3			
Approach LOS	С		D			Α			
Intersection Summary									
HCM 2000 Control Delay (s			23.1	F	ICM 2000	Level of Service	e	С	
HCM 2000 Volume to Capa	city ratio		0.63						
Actuated Cycle Length (s)			120.0	S	Sum of los	t time (s)		13.5	
Intersection Capacity Utiliza	tion		71.2%	[0	CU Level	of Service		С	
Analysis Period (min)			15						
c Critical Lane Group									

HCM 7th Edition methodology does not support exclusive ped or hold phases.

	•	<b>→</b>	•	•	<b>←</b>	•	•	<u></u>	<i>&gt;</i>	<b>/</b>	<del> </del>	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		7	f)		7	ĵ»			44	
Traffic Volume (veh/h)	50	394	21	20	644	257	174	42	91	22	2	24
Future Volume (Veh/h)	50	394	21	20	644	257	174	42	91	22	2	24
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	53	415	22	21	678	271	183	44	96	23	2	25
Pedestrians		1									4	
Lane Width (ft)		12.0									12.0	
Walking Speed (ft/s)		3.5									3.5	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	953			437			1279	1527	426	1499	1403	819
vC1, stage 1 conf vol							532	532		860	860	
vC2, stage 2 conf vol							747	995		639	543	
vCu, unblocked vol	953			437			1279	1527	426	1499	1403	819
tC, single (s)	4.1			4.1			7.1	6.5	6.3	7.2	6.5	6.4
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.4	3.5	4.0	3.5
p0 queue free %	93			98			34	82	84	90	99	93
cM capacity (veh/h)	718			1123			278	240	604	230	303	352
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	53	437	21	949	183	140	50					
Volume Left	53	0	21	0	183	0	23					
Volume Right	0	22	0	271	0	96	25					
cSH	718	1700	1123	1700	278	409	281					
Volume to Capacity	0.07	0.26	0.02	0.56	0.66	0.34	0.18					
Queue Length 95th (ft)	6	0	1	0	106	37	16					
Control Delay (s/veh)	10.4	0.0	8.3	0.0	39.7	18.3	20.5					
Lane LOS	В		Α		Е	С	С					
Approach Delay (s/veh)	1.1		0.2		30.4		20.5					
Approach LOS					D		С					
Intersection Summary												
Average Delay			6.3									
Intersection Capacity Utiliza	tion		73.0%	IC	U Level	of Service			С			
Analysis Period (min)			15									

Intersection													
Int Delay, s/veh	37.3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	ሻ	ĵ.	LDIX	ሻ	7>	WDI(	Ť	<b>1</b>	HUIT	ODL	4	ODIT	
Traffic Vol, veh/h	50	394	21	20	644	257	174	42	91	22	2	24	
Future Vol, veh/h	50	394	21	20	644	257	174	42	91	22	2	24	
Conflicting Peds, #/hr	4	0	0	0	0	4	1	0	0	0	0	1	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-		None	-	-	None	-	-	None	-	-	None	
Storage Length	25	_	-	25	_	-	0	_	-	_	_	-	
Veh in Median Storage		0	_		0	-	_	0	-	-	0	-	
Grade, %	-,	0	-	_	0	-	-	0	-	-	0	_	
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95	
Heavy Vehicles, %	2	3	2	2	2	2	2	2	14	5	2	17	
Mvmt Flow	53	415	22	21	678	271	183	44	96	23	2	25	
Major/Minor	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	952	0	0	437	0	0	1253	1526	426	1401	1401	818	
Stage 1	-	-	-	-	-	-	531	531	-	859	859	-	
Stage 2	_	-	-	_	-	-	722	995	-	542	542	-	
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.34	7.15	6.52	6.37	
Critical Hdwy Stg 1	-	-	-	-	_	-	6.12	5.52	-	6.15	5.52	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-	
Follow-up Hdwy	2.218	-	-	2.218	_	-	3.518	4.018	3.426	3.545	4.018	3.453	
Pot Cap-1 Maneuver	721	-	-	1123	-	-	~ 149	118	604	116	140	354	
Stage 1	-	-	-	-	-	-	532	526	-	347	373	-	
Stage 2	-	-	-	-	_	-	418	323	-	519	520	-	
Platoon blocked, %		-	-		-	-							
Mov Cap-1 Maneuver	719	-	-	1123	-	-	~ 124	107	604	54	127	352	
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 124	107	-	54	127	-	
Stage 1	-	-	-	-	_	-	493	488	-	339	365	-	
Stage 2	-	-	-	-	-	-	378	316	-	368	482	-	
Approach	EB			WB			NB			SB			
HCM Control Delay, s/	v 1.12			0.18			197.13			76.59			
HCM LOS							F			F			
Minor Lane/Major Mvm	nt	NBLn1 I	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)		124	244	719	_	-	1123	-	_	97			
HCM Lane V/C Ratio				0.073	-	-	0.019	-	-	0.52			
HCM Control Delay (s/	veh) §	318.9	37.8	10.4	-	-	8.3	-	-	76.6			
HCM Lane LOS	, ,	F	E	В	-	-	Α	-	-	F			
HCM 95th %tile Q(veh	)	12.8	3.2	0.2	-	-	0.1	-	-	2.3			
Notes													
	nao!t.:	¢. D.	alove sam	20d= 2/	200	0	nutetie:	Not D	ofin - d	*. AII	maiar:	oluss s	in platas:
~: Volume exceeds cap	pacity	\$: D6	elay exc	eeds 30	JUS	+: Com	putation	ו זטאו ו	ennea	:: All	major	voiume i	in platoon

	•	<b>→</b>	<b>←</b>	•	<b>&gt;</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<b></b>	<b>1</b>		W	
Traffic Volume (veh/h)	12	503	973	14	8	2
Future Volume (Veh/h)	12	503	973	14	8	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	13	559	1081	16	9	2
Pedestrians			2		3	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1100				1679	1092
vC1, stage 1 conf vol					1092	
vC2, stage 2 conf vol					587	
vCu, unblocked vol	1100				1679	1092
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	98				97	99
cM capacity (veh/h)	633				283	260
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	13	559	1097	11		
Volume Left	13	0	0	9		
	0	0	16	2		
Volume Right cSH	633	1700	1700	278		
Volume to Capacity	0.02	0.33	0.65	0.04		
	0.02					
Queue Length 95th (ft)		0	0	3 10 5		
Control Delay (s/veh)	10.8	0.0	0.0	18.5		
Lane LOS	B 0.2		0.0	C 10 5		
Approach LOS	0.2		0.0	18.5		
Approach LOS				С		
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utiliza	ation		62.1%	IC	U Level of	of Service
Analysis Period (min)			15			

latera estica						
Intersection	0.0					
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	7	<b></b>	<b></b>		¥	
Traffic Vol, veh/h	12	503	973	14	8	2
Future Vol, veh/h	12	503	973	14	8	2
Conflicting Peds, #/hr	3	0	0	3	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage	e,# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	4	2	8	2	2
Mvmt Flow	13	559	1081	16	9	2
					•	
N.A. ' (N.A.					4: 0	
	Major1		//ajor2		Minor2	
Conflicting Flow All	1100	0	-	0	1679	1092
Stage 1	-	-	-	-	1092	-
Stage 2	-	-	-	-	588	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	635	-	-	-	104	261
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	555	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	633	-	-	-	101	260
Mov Cap-2 Maneuver	-	-	-	-	225	-
Stage 1	_	-	-	_	314	-
Stage 2	-	-	-	-	554	-
Ŭ						
A	ED		MD		OD	
Approach	EB		WB		SB	
HCM Control Delay, s/	v 0.25		0		21.38	
HCM LOS					С	
Minor Lane/Major Mvn	nt	EBL	EBT	WBT	WBR :	SRI n1
Capacity (veh/h)		633	-	-	-	231
HCM Lane V/C Ratio		0.021		_		0.048
HCM Control Delay (s	/voh)	10.8	-	-	<u>-</u>	21.4
HCM Lane LOS	ven)	10.6 B	-	-	-	21.4 C
HCM 95th %tile Q(veh	.)	0.1			-	0.2
How som whe d(ven	1)	0.1	-	-	-	U.Z

	-	$\rightarrow$	•	<b>←</b>	•	~
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>1</b>		ሻ	<b></b>	*/*	
Traffic Volume (veh/h)	452	50	10	907	51	24
Future Volume (Veh/h)	452	50	10	907	51	24
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	491	54	11	986	55	26
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	_			<del>-</del>		
pX, platoon unblocked						
vC, conflicting volume			546		1527	519
vC1, stage 1 conf vol			0.10		519	0.10
vC2, stage 2 conf vol					1008	
vCu, unblocked vol			546		1527	519
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	0.2
tF(s)			2.2		3.5	3.3
p0 queue free %			99		82	95
cM capacity (veh/h)			1022		312	556
					012	000
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	545	11	986	81		
Volume Left	0	11	0	55		
Volume Right	54	0	0	26		
cSH	1700	1022	1700	363		
Volume to Capacity	0.32	0.01	0.58	0.22		
Queue Length 95th (ft)	0	1	0	21		
Control Delay (s/veh)	0.0	8.6	0.0	17.7		
Lane LOS		Α		С		
Approach Delay (s/veh)	0.0	0.1		17.7		
Approach LOS				С		
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utiliza	ation		58.7%	IC	U Level o	f Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1.1					
			=			
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽		7		¥	
Traffic Vol, veh/h	452	50	10	907	51	24
Future Vol, veh/h	452	50	10	907	51	24
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	25	-	-	-
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mymt Flow	491	54	11	986	55	26
WWW.CT IOW	101	01	• • •	000	00	20
	lajor1		Major2		Minor1	
Conflicting Flow All	0	0	547	0	1527	519
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	1008	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	_	-	-	-	5.42	-
Critical Hdwy Stg 2	-	_	_	-	5.42	-
Follow-up Hdwy	_	_	2.218	_	3.518	3.318
Pot Cap-1 Maneuver	_	-	1023	_	129	556
Stage 1	_	_	1020	_	597	-
Stage 2	_		_	_	353	_
Platoon blocked, %	_	_			000	_
		-	1000	-	100	EEG
Mov Cap-1 Maneuver	-	-	1022	-	128	556
Mov Cap-2 Maneuver	-	-	-	-	254	-
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	349	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0.09		20.89	
HCM LOS	U		0.03		C	
TIOWI LOO					U	
Minor Lane/Major Mvmt	1	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		307	-	-	1022	-
HCM Lane V/C Ratio		0.265	-	-	0.011	-
HCM Control Delay (s/ve	eh)	20.9	-	-	8.6	-
HCM Lane LOS	,	С	_	-	A	-
HCM 95th %tile Q(veh)		1	_	_	0	-
TION JOHN JUNE Q(VEII)					U	

	۶	•	•	<b>†</b>	ļ	4
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	ĵ»	
Traffic Volume (veh/h)	0	0	0	75	60	0
Future Volume (Veh/h)	0	0	0	75	60	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	82	65	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	147	65	65			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	147	65	65			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	845	999	1537			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	82	65			
Volume Left	0	02	00			
	0	0	0			
Volume Right cSH	1700	1537	1700			
	0.00	0.00	0.04			
Volume to Capacity						
Queue Length 95th (ft)	0	0	0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	A	0.0	0.0			
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utiliz	zation		7.3%	IC	CU Level o	f Service
Analysis Period (min)			15			
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	0					
	EDI	EDD	NDI	NDT	CDT	CDD
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			ન	- ∱	
Traffic Vol, veh/h	0	0	0	75	60	0
Future Vol, veh/h	0	0	0	75	60	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	82	65	0
		J		UL.	- 00	
Major/Minor I	Minor2		Major1	N	/lajor2	
Conflicting Flow All	147	65	65	0	-	0
Stage 1	65	-	-	-	-	-
Stage 2	82	_	_	-	_	_
Critical Hdwy	6.42	6.22	4.12	_	-	-
Critical Hdwy Stg 1	5.42	-		_	_	_
Critical Hdwy Stg 1	5.42		_			
Follow-up Hdwy	3.518	3.318		_	_	<u>-</u>
				-	-	-
Pot Cap-1 Maneuver	846	999	1537	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	846	999	1537	-	-	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	942	-	-	_	-	_
2.0.30 2	, <u>-</u>					
Approach	EB		NB		SB	
HCM Control Delay, s/	v 0		0		0	
HCM LOS	Α					
Minor Lane/Major Mym	<b>.</b> +	NBL	NDT	EBLn1	SBT	SBR
Minor Lane/Major Mvm	IL			_DLIII	SBI	SBK
Capacity (veh/h)		1537	-	-	-	-
HCM Lane V/C Ratio		-	-	-	-	-
HCM Control Delay (s/	veh)	0	-	0	-	-
HCM Lane LOS		Α	-	Α	-	-
HCM 95th %tile Q(veh)		0	-	-	-	-

	•	•	•	<b>†</b>	ļ	4
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	₽	
Traffic Volume (veh/h)	8	104	21	61	58	2
Future Volume (Veh/h)	8	104	21	61	58	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	113	23	66	63	2
Pedestrians						_
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)				140116	INOHE	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	176	64	65			
vC1, stage 1 conf vol	170	04	0.5			
vC2, stage 2 conf vol						
vCu, unblocked vol	176	64	65			
tC, single (s)	6.4	6.2	4.1			
	0.4	0.2	4.1			
tC, 2 stage (s)	3.5	3.3	2.2			
tF (s) p0 queue free %	99	89	99			
	802	1000				
cM capacity (veh/h)			1537			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	122	89	65			
Volume Left	9	23	0			
Volume Right	113	0	2			
cSH	982	1537	1700			
Volume to Capacity	0.12	0.01	0.04			
Queue Length 95th (ft)	11	1	0			
Control Delay (s/veh)	9.2	2.0	0.0			
Lane LOS	Α	Α				
Approach Delay (s/veh)	9.2	2.0	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			4.7			
Intersection Capacity Utiliza	ation		24.6%	IC	CU Level o	f Service
Analysis Period (min)	-		15			

Intersection						
Int Delay, s/veh	4.7					
•			NDI	NDT	OPT	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	40.4		4	- ∱	
Traffic Vol, veh/h	8	104	21	61	58	2
Future Vol, veh/h	8	104	21	61	58	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	113	23	66	63	2
NA - 1 /NA1	M				40	
	Minor2		Major1		/lajor2	
Conflicting Flow All	176	64	65	0	-	0
Stage 1	64	-	-	-	-	-
Stage 2	112	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	814	1000	1537	-	-	-
Stage 1	959	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Platoon blocked, %				_	-	-
Mov Cap-1 Maneuver	801	1000	1537	-	-	-
Mov Cap-2 Maneuver	801	-	-	_	_	-
Stage 1	944	-	-	-	-	-
Stage 2	913	_	_	_	_	_
Jugo 2	310					
Approach	EB		NB		SB	
HCM Control Delay, s/	v 9.18		1.89		0	
HCM LOS	Α					
Minor Lane/Major Mvn	nt	NBL	NRT	EBLn1	SBT	SBR
	ıı	461				
Capacity (veh/h) HCM Lane V/C Ratio			-		-	-
	(vob)	0.015		0.124	-	-
HCM Control Delay (s/	ven)	7.4	0	9.2	-	-
HCM Lane LOS	\	A	Α	Α	-	-
HCM 95th %tile Q(veh	)	0	-	0.4	-	-

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	f.	
Traffic Volume (veh/h)	8	32	7	68	197	2
Future Volume (Veh/h)	8	32	7	68	197	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	35	8	74	214	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)				140110	140110	
Upstream signal (ft)				1116		
pX, platoon unblocked				1110		
vC, conflicting volume	305	215	216			
vC1, stage 1 conf vol	303	213	210			
vC2, stage 2 conf vol						
vCu, unblocked vol	305	215	216			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	0.4	0.2	4.1			
	3.5	3.3	2.2			
tF (s)	99	96	99			
p0 queue free %	683	825				
cM capacity (veh/h)	003	023	1354			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	44	82	216			
Volume Left	9	8	0			
Volume Right	35	0	2			
cSH	791	1354	1700			
Volume to Capacity	0.06	0.01	0.13			
Queue Length 95th (ft)	4	0	0			
Control Delay (s/veh)	9.8	0.8	0.0			
Lane LOS	Α	Α				
Approach Delay (s/veh)	9.8	0.8	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			1.5			
Intersection Capacity Utilizat	tion		20.5%	ıc	CU Level c	of Convios
	uon			IC	o Level C	i Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1.4					
•			NDI	NET	OPT	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	₽	
Traffic Vol, veh/h	8	32	7	68	197	2
Future Vol, veh/h	8	32	7	68	197	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	35	8	74	214	2
Mailan/Minan	N 4: O		M-!4		A = : = =0	
	Minor2		Major1		/lajor2	
Conflicting Flow All	304	215	216	0	-	0
Stage 1	215	-	-	-	-	-
Stage 2	89	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy		3.318		-	-	-
Pot Cap-1 Maneuver	688	825	1353	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	934	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	683	825	1353	-	-	-
Mov Cap-2 Maneuver	683	-	-	-	-	-
Stage 1	816	-	-	-	-	-
Stage 2	934	-	-	-	_	_
0						
Approach	ED		ND		CD	
Approach	EB		NB		SB	
HCM Control Delay, s/			0.72		0	
HCM LOS	Α					
Minor Lane/Major Mvn	nt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		168	-		-	-
HCM Lane V/C Ratio		0.006		0.055	_	
HCM Control Delay (s/	(veh)	7.7	0	9.8	_	_
HCM Lane LOS	von)	Α	A	9.0 A	_	
HCM 95th %tile Q(veh	1	0	-	0.2	-	-
HOW SOUT WITH Q(VEH	)	U	-	U.Z	_	-

# 10: SW 124th Avenue & SW Leveton Drive

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	36	89	249	5	735	53	470
v/c Ratio	0.07	0.10	0.25	0.41	0.01	0.56	0.13	0.31
Control Delay (s/veh)	33.8	17.4	31.6	6.0	11.6	20.0	12.1	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.8	17.4	31.6	6.0	11.6	20.0	12.1	13.8
Queue Length 50th (ft)	8	6	30	1	1	122	9	47
Queue Length 95th (ft)	38	31	104	54	8	278	42	168
Internal Link Dist (ft)		981		1223		1392		1024
Turn Bay Length (ft)	100		150		150		150	
Base Capacity (vph)	629	1186	432	1120	598	2448	969	2506
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.03	0.21	0.22	0.01	0.30	0.05	0.19
Intersection Summary								

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		Ť	<b>f</b>		ሻ	<b>∱</b> Љ		ሻ	<b>ተ</b> ኈ	
Traffic Volume (vph)	21	16	16	81	2	225	5	648	21	48	421	6
Future Volume (vph)	21	16	16	81	2	225	5	648	21	48	421	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
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	0.93		1.00	0.85		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1690		1770	1580		1128	3506		1671	3425	
Flt Permitted	0.95	1.00		0.95	1.00		0.47	1.00		0.26	1.00	
Satd. Flow (perm)	1770	1690	2.04	1770	1580	0.04	553	3506	0.04	454	3425	0.04
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	23	18	18	89	2	247	5	712	23	53	463	7
RTOR Reduction (vph)	0	15	0	0	187	0	0	2	0	0	1	0
Lane Group Flow (vph)	23	21	0	89	62	0	5	733	0	53	469	0
Confl. Peds. (#/hr)	00/	00/	<b>C</b> 0/	00/	E00/	00/	C00/	00/	3	3	<b>F</b> 0/	470/
Heavy Vehicles (%)	2%	2%	6%	2%	50%	2%	60%	2%	15%	8%	5%	17%
Turn Type	Prot	NA		Prot	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	2.0	0.0		7.0	110		6	22.0		2	25.2	
Actuated Green, G (s)	2.2 3.2	9.2 10.2		7.2 8.2	14.2		25.9	22.0		25.9	25.2	
Effective Green, g (s)	0.05	0.16		0.13	15.2 0.24		27.9 0.45	23.0 0.37		25.9 0.42	25.2 0.40	
Actuated g/C Ratio	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Clearance Time (s) Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
	90	276			385			1294		264		
Lane Grp Cap (vph) v/s Ratio Prot				232			263 0.00			c0.01	1385	
v/s Ratio Prot v/s Ratio Perm	0.01	0.01		c0.05	c0.04		0.00	c0.21		0.07	c0.14	
v/c Ratio	0.26	0.08		0.38	0.16		0.01	0.57		0.07	0.34	
Uniform Delay, d1	28.4	22.1		24.7	18.5		9.5	15.7		11.4	12.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1		1.00	0.2		0.0	0.6		0.4	0.1	
Delay (s)	1.5 29.9	22.2		25.8	18.7		9.6	16.2		11.8	12.9	
Level of Service	23.3 C	C C		23.0 C	В		3.0 A	В		В	12.3 B	
Approach Delay (s/veh)	U	25.2		U	20.6		А	16.2		Ь	12.8	
Approach LOS		C			20.0 C			В			12.0 B	
Intersection Summary	/ 1)		10.1		0110000		<u> </u>					
HCM 2000 Control Delay (s			16.4	Н	CM 2000	Level of	Service		В			
HCM 2000 Volume to Capa	icity ratio		0.42		( ) - (	4: / \			47.0			
Actuated Cycle Length (s)	dia.a		62.3		um of lost				17.0			
Intersection Capacity Utiliza	ation		53.5%	IC	CU Level of	or Service	e 		Α			
Analysis Period (min)			15									

Analysis Period (min)
c Critical Lane Group

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	ĵ»		ሻ	<b>₽</b>		7	<b>ተ</b> ኈ		ሻ	<b>∱</b> 1≽	
Traffic Volume (veh/h)	21	16	16	81	2	225	5	648	21	48	421	6
Future Volume (veh/h)	21	16	16	81	2	225	5	648	21	48	421	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
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	1811	1870	1159	1870	1011	1870	1678	1781	1826	1648
Adj Flow Rate, veh/h	23	18	18	89	2	247	5	712	23	53	463	7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	6	2	50	2	60	2	15	8	5	17
Cap, veh/h	94	227	227	185	2	308	263	998	32	304	1184	18
Arrive On Green	0.05	0.26	0.25	0.10	0.32	0.30	0.02	0.28	0.27	0.08	0.34	0.34
Sat Flow, veh/h	1781	858	858	1781	8	976	963	3513	113	1697	3498	53
Grp Volume(v), veh/h	23	0	36	89	0	249	5	360	375	53	229	241
Grp Sat Flow(s),veh/h/ln	1781	0	1716	1781	0	983	963	1777	1849	1697	1735	1816
Q Serve(g_s), s	0.8	0.0	1.0	3.0	0.0	14.7	0.2	11.4	11.4	1.3	6.3	6.3
Cycle Q Clear(g_c), s	0.8	0.0	1.0	3.0	0.0	14.7	0.2	11.4	11.4	1.3	6.3	6.3
Prop In Lane	1.00		0.50	1.00		0.99	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	94	0	454	185	0	310	263	505	526	304	587	615
V/C Ratio(X)	0.24	0.00	0.08	0.48	0.00	0.80	0.02	0.71	0.71	0.17	0.39	0.39
Avail Cap(c_a), veh/h	454	0	847	312	0	485	563	877	913	849	1105	1157
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	0.0	17.5	26.6	0.0	20.2	12.6	20.2	20.2	15.0	15.8	15.8
Incr Delay (d2), s/veh	1.3	0.0	0.1	1.9	0.0	5.3	0.0	1.9	1.8	0.3	0.4	0.4
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	0.3	0.0	0.4	1.2	0.0	3.4	0.0	4.3	4.5	0.5	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.9	0.0	17.6	28.5	0.0	25.4	12.6	22.1	22.0	15.3	16.3	16.2
LnGrp LOS	С		В	С		С	В	С	С	В	В	В
Approach Vol, veh/h		59			338			740			523	
Approach Delay, s/veh		22.4			26.2			22.0			16.2	
Approach LOS		С			С			С			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	21.8	10.5	20.6	5.4	26.3	7.3	23.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	25.0	30.0	10.0	30.0	20.0	40.0	15.0	30.0				
Max Q Clear Time (g_c+l1), s	3.3	13.4	5.0	3.0	2.2	8.3	2.8	16.7				
Green Ext Time (p_c), s	0.1	3.3	0.1	0.2	0.0	2.2	0.0	2.2				
Intersection Summary												
HCM 7th Control Delay, s/veh			21.0									
HCM 7th LOS			С									
Notes												
User approved pedestrian inte	rval to be	e less tha	n phase n	nax greer	١.							

	•	<b>→</b>	$\rightarrow$	•	•	•	•	<b>†</b>	<b>/</b>	<b>&gt;</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	59	9	28	277	22	22	3	12	0	2	13
Future Volume (vph)	6	59	9	28	277	22	22	3	12	0	2	13
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	8	80	12	38	374	30	30	4	16	0	3	18
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	100	442	50	21								
Volume Left (vph)	8	38	30	0								
Volume Right (vph)	12	30	16	18								
Hadj (s)	0.04	0.01	0.12	-0.48								
Departure Headway (s)	4.6	4.2	5.3	4.7								
Degree Utilization, x	0.13	0.52	0.07	0.03								
Capacity (veh/h)	756	835	618	673								
Control Delay (s/veh)	8.2	11.6	8.7	7.8								
Approach Delay (s/veh)	8.2	11.6	8.7	7.8								
Approach LOS	Α	В	Α	Α								
Intersection Summary												
Delay			10.7									
Level of Service			В									
Intersection Capacity Utilizat	tion		38.6%	IC	U Level	of Service			Α			
Analysis Period (min)			15									

Intersection			
Intersection Delay, s/veh	10.7		
Intersection LOS	В		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	6	59	9	28	277	22	22	3	12	0	2	13
Future Vol, veh/h	6	59	9	28	277	22	22	3	12	0	2	13
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	2	5	11	2	2	2	5	2	25	2	2	2
Mvmt Flow	8	80	12	38	374	30	30	4	16	0	3	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB				SB	
Opposing Approach	WB			EB			SB				NB	
Opposing Lanes	1			1			1				1	
Conflicting Approach Left	SB			NB			EB				WB	
Conflicting Lanes Left	1			1			1				1	
Conflicting Approach Right	NB			SB			WB				EB	
Conflicting Lanes Right	1			1			1				1	
HCM Control Delay, s/veh	8.2			11.6			8.5				7.8	
HCM LOS	Α			В			Α				Α	

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	59%	8%	9%	0%	
Vol Thru, %	8%	80%	85%	13%	
Vol Right, %	32%	12%	7%	87%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	37	74	327	15	
LT Vol	22	6	28	0	
Through Vol	3	59	277	2	
RT Vol	12	9	22	13	
Lane Flow Rate	50	100	442	20	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.071	0.125	0.517	0.026	
Departure Headway (Hd)	5.12	4.497	4.209	4.668	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	699	798	862	765	
Service Time	3.154	2.519	2.209	2.705	
HCM Lane V/C Ratio	0.072	0.125	0.513	0.026	
HCM Control Delay, s/veh	8.5	8.2	11.6	7.8	
HCM Lane LOS	Α	Α	В	Α	
HCM 95th-tile Q	0.2	0.4	3	0.1	

	•	<b>→</b>	+	4	<b>\</b>	4	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	1≽		ሻ	7	
Traffic Volume (veh/h)	1	69	322	0	2	0	
Future Volume (Veh/h)	1	69	322	0	2	0	
Sign Control	·	Free	Free		Stop	•	
Grade		0%	0%		0%		
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	
Hourly flow rate (vph)	1	91	424	0	3	0	
Pedestrians	•			-			
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type		None	None				
Median storage veh)		, <u>.</u>	2				
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	424				517	424	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	424				517	424	
tC, single (s)	4.2				6.4	6.2	
tC, 2 stage (s)							
tF (s)	2.3				3.5	3.3	
p0 queue free %	100				99	100	
cM capacity (veh/h)	1099				516	630	
Direction, Lane #	EB 1	WB 1	SB 1	SB 2			
Volume Total	92	424	3	0			
Volume Left	1	0	3	0			
Volume Right	0	0	0	0			
cSH	1099	1700	516	1700			
Volume to Capacity	0.00	0.25	0.01	0.00			
Queue Length 95th (ft)	0.00	0.20	0.01	0.00			
Control Delay (s/veh)	0.1	0.0	12.0	0.0			
Lane LOS	A	0.0	В	A			
Approach Delay (s/veh)	0.1	0.0	12.0	7.			
Approach LOS	0.1	0.0	В				
Intersection Summary			0.1				
Average Delay	ation		0.1	10	المداماا	of Comiles	
Intersection Capacity Utiliza	สแดก		26.9%	IC	U Level o	of Service	
Analysis Period (min)			15				

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
	EDL	€Î		WDK		SBR
Lane Configurations	1		<b>1</b> → 322	0	<b></b>	
Traffic Vol, veh/h	1	69		0	2	0
Future Vol, veh/h	1	69	322	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	
Storage Length	-	-	-	-	-	0
Veh in Median Storage		0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	9	9	2	2	3	2
Mvmt Flow	1	91	424	0	3	0
Major/Minor	Major1	N	Major2		Minor2	
						404
Conflicting Flow All	424	0	-	0	517	424
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	93	-
Critical Hdwy	4.19	-	-	-	6.43	6.22
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2		-	-	-	5.43	-
Follow-up Hdwy	2.281	-	-	-	3.527	
Pot Cap-1 Maneuver	1099	-	-	-	517	630
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	928	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1099	-	-	-	516	630
Mov Cap-2 Maneuver	-	-	-	-	516	-
Stage 1	-	-	-	-	657	-
Stage 2	-	-	-	-	928	-
<b>J</b>						
A mara a a b	ED		\A/D		OD	
Approach	EB		WB		SB	
HCM Control Delay, s/	v 0.12		0		12.01	
HCM LOS					В	
Minor Lane/Major Mvn	nt	EBL	EBT	WBT	WBR 9	SBLn1 S
Capacity (veh/h)		26	-	-	-	516
HCM Lane V/C Ratio		0.001		_		0.005
HCM Control Delay (s/	(voh)	8.3	0			12
HCM Lane LOS	ven)			-	-	
	\	A	Α	-	-	В
HCM 95th %tile Q(veh	)	0	-	-	-	0

	•	<b>→</b>	<b>—</b>	•	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		र्स	1>			7
Traffic Volume (veh/h)	19	66	217	16	81	100
Future Volume (Veh/h)	19	66	217	16	81	100
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	25	86	282	21	105	130
Pedestrians					15	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	318				444	308
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	318				444	308
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					0.1	0.2
tF(s)	2.2				3.5	3.3
p0 queue free %	98				81	82
cM capacity (veh/h)	1224				552	722
		MD 1	CD 4	CD 0	002	,
Direction, Lane # Volume Total	EB 1 111	WB 1 303	SB 1 105	SB 2 130		
	25		105			
Volume Left		0		120		
Volume Right	0	21	0	130		
cSH	1224	1700	552	722		
Volume to Capacity	0.02	0.18	0.19	0.18		
Queue Length 95th (ft)	2	0	17	16		
Control Delay (s/veh)	1.9	0.0	13.0	11.1		
Lane LOS	Α	0.0	B	В		
Approach Delay (s/veh)	1.9	0.0	12.0			
Approach LOS			В			
Intersection Summary						
Average Delay			4.7			
Intersection Capacity Utiliza	tion		31.1%	IC	U Level c	f Service
Analysis Period (min)			15			

Intersection							
Int Delay, s/veh	4.7						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	LDL	4	7∌	VVDIX	SDL T	JUIN T	
Traffic Vol, veh/h	19	66	217	16	81	100	
Future Vol, veh/h	19	66	217	16	81	100	
Conflicting Peds, #/hr	15	0	0	15	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-		
Storage Length	-	-	-	-	-	0	
Veh in Median Storage	e, # -	0	0	-	0	-	
Grade, %	_	0	0	-	0	-	
Peak Hour Factor	77	77	77	77	77	77	
Heavy Vehicles, %	2	5	2	2	2	2	
Mvmt Flow	25	86	282	21	105	130	
Major/Minor I	Major1	N	//ajor2		Minor2		
Conflicting Flow All	318	0	-	0	442	307	
Stage 1	-	-	-	-	307	-	
Stage 2	_	_	-	_	135	-	
Critical Hdwy	4.12	-	_	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	-	5.42	-	
Follow-up Hdwy	2.218	-	-	-		3.318	
Pot Cap-1 Maneuver	1242	-	-	-	573	733	
Stage 1	-	-	-	-	746	-	
Stage 2	-	-	-	-	891	-	
Platoon blocked, %		-	-	-			
Mov Cap-1 Maneuver	1225	-	-	-	545	722	
Mov Cap-2 Maneuver	-	-	-	-	545	-	
Stage 1	-	-	-	-	720	-	
Stage 2	-	-	-	-	879	-	
Approach	EB		WB		SB		
HCM Control Delay, s/			0		12.02		
HCM LOS	v 1.13		U		12.02 B		
TOW LOO					U		
Min - n 1 - n - /N 4 - 1 P 4		EDI	CDT	MOT	MPP	ODL 4 0	DI . 0
Minor Lane/Major Mvm	IT	EBL	EBT	WBT		SBLn1 S	
Capacity (veh/h)		402	-	-	-	545	722
HCM Cartest Dates (c)		0.02	-	-		0.193	0.18
HCM Control Delay (s/	ven)	8	0	-	-	13.2	11.1
HCM CEAR Of the Of the D	\	Α	Α	-	-	B	В
HCM 95th %tile Q(veh)	)	0.1	-	-	-	0.7	0.7

# HCM Unsignalized Intersection Capacity Analysis 14: Calmax Technology Access/East Access & SW Leveton Drive

TT. Gairriax TooriiTo												
	•	-	•	•	•	•	1	<b>†</b>	1	-	ţ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		44			4			4			4	
Traffic Volume (veh/h)	0	143	8	6	183	0	27	0	14	0	0	0
Future Volume (Veh/h)	0	143	8	6	183	0	27	0	14	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	0	191	11	8	244	0	36	0	19	0	0	0
Pedestrians								4			15	
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								3.5			3.5	
Percent Blockage								0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	259			206			461	476	201	491	481	259
vC1, stage 1 conf vol	200											200
vC2, stage 2 conf vol												
vCu, unblocked vol	259			206			461	476	201	491	481	259
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)								0.0	0.2	,	0.0	0.2
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			93	100	98	100	100	100
cM capacity (veh/h)	1287			1360			500	476	837	462	473	768
		11/5 4	ND 4				300	470	001	402	473	700
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	202	252	55	0								
Volume Left	0	8	36	0								
Volume Right	11	0	19	0								
cSH	1287	1360	581	1700								
Volume to Capacity	0.00	0.01	0.09	0.00								
Queue Length 95th (ft)	0	0	8	0								
Control Delay (s/veh)	0.0	0.3	11.8	0.0								
Lane LOS		Α	В	Α								
Approach Delay (s/veh)	0.0	0.3	11.8	0.0								
Approach LOS			В	Α								
Intersection Summary												_
Average Delay			1.4									
Intersection Capacity Utiliza	tion		24.5%	IC	U Level o	of Service			Α			
Analysis Period (min)			15									

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	0	143	8	6	183	0	27	0	14	0	0	0
Future Vol, veh/h	0	143	8	6	183	0	27	0	14	0	0	0
Conflicting Peds, #/hr	15	0	4	4	0	15	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	_	_	None	-	_	None	_	-	None	-	-	None
Storage Length	-	_	_	-	_	_	-	-	_	-	-	_
Veh in Median Storage	e,# -	0	-	-	0	-	_	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	2	3	2	2	3	2	2	2	2	2	2	2
Mvmt Flow	0	191	11	8	244	0	36	0	19	0	0	0
Major/Minor	Major1		ı	Major2		ı	Minor1			Minor2		
Conflicting Flow All	259	0	0	205	0	0	460	475	200	466	480	259
Stage 1	259	-	<u>.</u>	205	-	-	200	200	200	275	275	209
Stage 2		-	_		_	_	260	275	-	191	205	_
Critical Hdwy	4.12	-	- -	4.12	_		7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	7.12	-	_	7.12	_	_	6.12	5.52	0.22	6.12	5.52	0.22
Critical Hdwy Stg 2	-	-	- -	-	_	-	6.12	5.52		6.12	5.52	-
Follow-up Hdwy	2.218	_	_	2.218	_					3.518	4.018	3.318
Pot Cap-1 Maneuver	1306	-		1366	_	_	512	488	841	507	485	780
Stage 1	-	_	_	-	_	_	802	736	-	731	683	- 100
Stage 2	-	-	_	_	_	_	745	683	-	811	732	_
Platoon blocked, %		_	_		_	_	175	000		011	102	
Mov Cap-1 Maneuver	1287	_	_	1361	_	_	506	476	838	485	473	768
Mov Cap-1 Maneuver	-	_	_	-	_	_	506	476	-	485	473	- 100
Stage 1	_	_	_	_	_	_	799	733	_	716	668	_
Stage 2	_	_	_	_	_	_	740	668	_	793	729	_
Olugo Z							170	300		1 33	123	
Approach	EB			WB			NB			SB		
HCM Control Delay, s/				0.24			11.78			0		
HCM LOS	v U			0.24			11.76			A		
I IOWI LOS							Б			A		
Minor Lane/Major Mvn	nt I	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SRI n1			
Capacity (veh/h)	1 1	585	1287	LDT	LDIX	57	WDI	WDIC	ODLIN			
HCM Lane V/C Ratio		0.093		-	-	0.006	-	-	-			
	(voh)	11.8	- 0	-	-	7.7	-	-	0			
HCM Control Delay (s/ HCM Lane LOS	ven)		0		-		0	-				
HCM 95th %tile Q(veh	.\	0.3	A 0	-	-	A 0	A	-	Α			
HOW SOUT WHILE CA (VEN	)	0.5	U	_	-	U	-	-	-			

	٠	•	1	<b>†</b>	ļ	4
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	f.	
Traffic Volume (veh/h)	23	156	30	52	161	132
Future Volume (Veh/h)	23	156	30	52	161	132
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	30	203	39	68	209	171
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				861		
pX, platoon unblocked						
vC, conflicting volume	442	296	381			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	442	296	381			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	95	73	97			
cM capacity (veh/h)	547	743	1171			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	233	107	380			
Volume Left	30	39	0			
Volume Right	203	0	171			
cSH	710	1171	1700			
Volume to Capacity	0.33	0.03	0.22			
Queue Length 95th (ft)	36	3	0.22			
Control Delay (s/veh)	12.5	3.2	0.0			
Lane LOS	12.3 B	3.2 A	0.0			
Approach Delay (s/veh)	12.5	3.2	0.0			
Approach LOS	12.3 B	J.Z	0.0			
	D					
Intersection Summary						
Average Delay			4.5			
Intersection Capacity Utilizat	tion		41.9%	IC	CU Level o	f Service
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	4.5					
•						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	₽	
Traffic Vol, veh/h	23	156	30	52	161	132
Future Vol, veh/h	23	156	30	52	161	132
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	6	2	3	9	7	2
Mvmt Flow	30	203	39	68	209	171
	0			_		
	Minor2		Major1		/lajor2	_
Conflicting Flow All	441	296	382	0	-	0
Stage 1	296	-	-	-	-	-
Stage 2	145	-	-	-	-	-
Critical Hdwy	6.46	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.318	2.227	-	-	-
Pot Cap-1 Maneuver	566	744	1171	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	872	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	545	743	1170	-	-	-
Mov Cap-2 Maneuver	545	-	-	_	_	_
Stage 1	719	_	_	_	_	_
Stage 2	871	_	_	_	_	_
Olugo Z	011					
Approach	EB		NB		SB	
HCM Control Delay, s/	v12.52		2.99		0	
HCM LOS	В					
Minor Lane/Major Mvn	nt.	NBL	NDT	EBLn1	SBT	SBR
	ıı					
Capacity (veh/h)		659	-		-	-
HCM Lane V/C Ratio		0.033		0.327	-	-
HCM Control Delay (s/	ven)	8.2	0	12.5	-	-
HCM Lane LOS	,	A	Α	В	-	-
HCM 95th %tile Q(veh	)	0.1	-	1.4	-	-

## 16: SW Herman Road & SW 108th Ave

	•	<b>→</b>	•	<b>\</b>	✓
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	8	348	586	333	23
v/c Ratio	0.02	0.41	0.72	0.53	0.04
Control Delay (s/veh)	6.6	10.9	19.0	20.9	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.6	10.9	19.0	20.9	8.6
Queue Length 50th (ft)	1	62	123	77	0
Queue Length 95th (ft)	8	159	398	253	17
Internal Link Dist (ft)		877	1007	781	
Turn Bay Length (ft)	100			135	
Base Capacity (vph)	538	1718	1645	1144	1002
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.01	0.20	0.36	0.29	0.02
Intersection Summary					

	٠	<b>→</b>	+	•	<b>/</b>	4	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	ሻ	<b>1</b>	<b>4</b>		75	7	
Traffic Volume (vph)	7	320	464	75	306	21	
Future Volume (vph)	7	320	464	75	306	21	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.98		1.00	0.85	
Flt Protected	0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)	1583	1776	1759		1770	1538	
Flt Permitted	0.23	1.00	1.00		0.95	1.00	
Satd. Flow (perm)	389	1776	1759		1770	1538	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	8	348	504	82	333	23	
RTOR Reduction (vph)	0	0	6	0	0	15	
Lane Group Flow (vph)	8	348	580	0	333	8	
Heavy Vehicles (%)	14%	7%	6%	6%	2%	5%	
Turn Type	D.P+P	NA	NA		Prot	Perm	
Protected Phases	5	2	6		4		
Permitted Phases	6					4	
Actuated Green, G (s)	25.4	30.8	24.8		17.5	17.5	
Effective Green, g (s)	28.2	32.2	26.2		20.0	20.0	
Actuated g/C Ratio	0.47	0.53	0.44		0.33	0.33	
Clearance Time (s)	5.4	5.4	5.4		6.5	6.5	
Vehicle Extension (s)	2.0	3.1	3.1		2.6	2.6	
Lane Grp Cap (vph)	221	949	765		588	510	
v/s Ratio Prot	0.00	c0.20	c0.33		c0.19		
v/s Ratio Perm	0.02					0.00	
v/c Ratio	0.04	0.37	0.76		0.57	0.01	
Uniform Delay, d1	16.6	8.1	14.3		16.5	13.5	
Progression Factor	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.3	4.4		1.1	0.0	
Delay (s)	16.6	8.4	18.7		17.6	13.5	
Level of Service	В	A	B		B	В	
Approach Delay (s/veh)		8.5	18.7		17.3		
Approach LOS		Α	В		В		
Intersection Summary	/ 1)		4	,	014 0000		
HCM 2000 Control Delay (s			15.5	H	CM 2000	Level of Service	ce I
HCM 2000 Volume to Capa	icity ratio		0.68			" / \	10
Actuated Cycle Length (s)			60.2		um of lost		12.
Intersection Capacity Utiliza	ation		52.6%	IC	U Level o	of Service	ı
Analysis Period (min)			15				
c Critical Lane Group							

	۶	<b>→</b>	•	*	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<b>†</b>	1>		75	7
Traffic Volume (veh/h)	7	320	464	75	306	21
Future Volume (veh/h)	7	320	464	75	306	21
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1693	1796	1811	1811	1870	1826
Adj Flow Rate, veh/h	8	348	504	82	333	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	14	7	6	6	2	5
Cap, veh/h	385	1122	808	131	451	392
Arrive On Green	0.03	0.62	0.53	0.51	0.25	0.25
Sat Flow, veh/h	1612	1796	1519	247	1781	1547
Grp Volume(v), veh/h	8	348	0	586	333	23
Grp Sat Flow(s), veh/h/ln	1612	1796	0	1767	1781	1547
Q Serve(g_s), s	0.0	5.9	0.0	15.3	11.2	0.7
Cycle Q Clear(g_c), s	0.0	5.9	0.0	15.3	11.2	0.7
Prop In Lane	1.00	0.0	0.0	0.14	1.00	1.00
Lane Grp Cap(c), veh/h	385	1122	0	939	451	392
V/C Ratio(X)	0.02	0.31	0.00	0.62	0.74	0.06
Avail Cap(c_a), veh/h	615	1274	0.00	1766	885	769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	5.7	0.00	10.8	22.4	18.5
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.7	1.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.2	0.0	0.7	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	0.0	5.0	4.5	0.0
		1.7	0.0	5.0	4.5	0.0
Unsig. Movement Delay, s/veh		5.9	0.0	11 5	24.4	18.6
LnGrp Delay(d), s/veh	14.8		0.0	11.5 B		
LnGrp LOS	В	A	500	В	C	В
Approach Vol, veh/h		356	586		356	
Approach Delay, s/veh		6.1	11.5		24.0	
Approach LOS		Α	В		С	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		44.9		20.6	6.1	38.8
Change Period (Y+Rc), s		5.4		6.5	5.4	5.4
Max Green Setting (Gmax), s		45.0		30.0	10.0	64.0
Max Q Clear Time (g_c+l1), s		7.9		13.2	2.0	17.3
Green Ext Time (p_c), s		7.6		0.9	0.0	16.1
Intersection Summary						
HCM 7th Control Delay, s/veh			13.5			
•						
HCM 7th LOS			В			

	-	•	•	•		<b>/</b>
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽		ሻ	<b></b>	*	7
Traffic Volume (veh/h)	376	106	45	755	157	70
Future Volume (Veh/h)	376	106	45	755	157	70
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	413	116	49	830	173	77
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage veh)	110110			2		
Upstream signal (ft)				_		
pX, platoon unblocked						
vC, conflicting volume			530		1400	472
vC1, stage 1 conf vol			000		472	
vC2, stage 2 conf vol					928	
vCu, unblocked vol			530		1400	472
tC, single (s)			4.2		6.4	6.3
tC, 2 stage (s)			7.∠		5.4	0.0
tF (s)			2.3		3.5	3.4
p0 queue free %			95		47	87
cM capacity (veh/h)			1011		329	583
						000
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	
Volume Total	529	49	830	173	77	
Volume Left	0	49	0	173	0	
Volume Right	116	0	0	0	77	
cSH	1700	1011	1700	329	583	
Volume to Capacity	0.31	0.05	0.49	0.53	0.13	
Queue Length 95th (ft)	0	4	0	72	11	
Control Delay (s/veh)	0.0	8.7	0.0	27.4	12.1	
Lane LOS		Α		D	В	
Approach Delay (s/veh)	0.0	0.5		22.7		
Approach LOS				С		
Intersection Summary						
Average Delay			3.7			
Intersection Capacity Utilizati	ion		55.1%	IC	U Level o	of Service
Analysis Period (min)			15			

Intersection									
Int Delay, s/veh	20.8								
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	<u>-2</u>	LDIT	<u> </u>	<u> </u>	ሻ	7			
Traffic Vol, veh/h	376	106	45	755	157	70			
Future Vol, veh/h	376	106	45	755	157	70			
Conflicting Peds, #/hr	0	100	1	0	0	0			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-		-		- -				
Storage Length	_	-	25	-	100	0			
Veh in Median Storage		_	-	0	0	-			
Grade, %	5, # 0 0	_	_	0	0	_			
Peak Hour Factor	91	91	91	91	91	91			
Heavy Vehicles, %	3	5	7	2	3	6			
Mvmt Flow	413	116	49	830	173	77			
IVIVIIIL FIOW	413	110	49	030	1/3	11			
	Major1		Major2	1	Minor1				
Conflicting Flow All	0	0	531	0	1401	472			
Stage 1	-	-	-	-	472	-			
Stage 2	-	-	-	-	929	-			
Critical Hdwy	-	-	4.17	-	6.43	6.26			
Critical Hdwy Stg 1	-	-	-	-	5.43	-			
Critical Hdwy Stg 2	-	-	-	-	5.43	-			
Follow-up Hdwy	-	-	2.263	-	3.527	3.354			
Pot Cap-1 Maneuver	-	_	1012	_	~ 154	584			
Stage 1	-	-	-	-	625	-			
Stage 2	-	-	-	-	383	-			
Platoon blocked, %	_	-		_					
Mov Cap-1 Maneuver	_	_	1011	_	~ 146	583			
Mov Cap-2 Maneuver	_	_	-	_	~ 146	-			
Stage 1	_	_	_	_	625	_			
Stage 2	_	_	_	_	364	_			
Olago Z					001				
			14/5						
Approach	EB		WB		NB				
HCM Control Delay, s/	'v 0		0.49	ĺ	136.56				
HCM LOS					F				
Minor Lane/Major Mvm	nt	NBLn11	NBLn2	EBT	EBR	WBL	WBT		
Capacity (veh/h)		146	583	-		1011	-		
HCM Lane V/C Ratio			0.132	-		0.049	-		
HCM Control Delay (s/	/veh)	192	12.1	-	-	8.7	-		
HCM Lane LOS		F	В	-	-	Α	-		
HCM 95th %tile Q(veh	)	9.9	0.5	-	-	0.2	-		
·	,								
Notes									
~: Volume exceeds ca	pacity	\$: De	elay exc	eeds 3	00s	+: Com	putation Not Defined	*: All major volume in platoon	

	-	$\rightarrow$	•	•		~
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽			4	W	
Traffic Volume (veh/h)	10	12	60	100	287	21
Future Volume (Veh/h)	10	12	60	100	287	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	16	19	94	156	448	33
Pedestrians					37	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					4	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			72		407	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			72		407	63
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			93		17	97
cM capacity (veh/h)			1444		538	959
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	35	250	481			
Volume Left	0	94	448			
Volume Right	19	0	33			
cSH	1700	1444	555			
Volume to Capacity	0.02	0.07	0.87			
Queue Length 95th (ft)	0	5	240			
Control Delay (s/veh)	0.0	3.2	40.1			
Lane LOS		Α	Е			
Approach Delay (s/veh)	0.0	3.2	40.1			
Approach LOS			Е			
Intersection Summary						
Average Delay			26.2			
Intersection Capacity Utilizati	ion		39.1%	IC	U Level c	f Service
Analysis Period (min)			15			

Intersection						
	26.7					
<b>3</b> ,			14	14/5-		
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽			4	À	
Traffic Vol, veh/h	10	12	60	100	287	21
Future Vol, veh/h	10	12	60	100	287	21
Conflicting Peds, #/hr	0	37	37	_ 0	0	0
	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	25	7	6	4	5
Mvmt Flow	16	19	94	156	448	33
Major/Minor Ma	ajor1		Major2		Minor1	
Conflicting Flow All	0	0	71	0	406	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	344	-
Critical Hdwy	-	-	4.17	-	6.44	6.25
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.263	-	0.000	3.345
Pot Cap-1 Maneuver	-	-	1498	-	597	995
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	-	714	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1445	-	535	959
Mov Cap-2 Maneuver	-	-	-	-	535	-
Stage 1	-	-	-	-	922	-
Stage 2	-	-	_	_	663	-
Ŭ						
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		2.87		40.91	
HCM LOS					Е	
Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		552	-	-		-
HCM Lane V/C Ratio		0.872			0.065	
	h)	40.9	-		7.7	-
HCM Lang LOS	11)		-	-		0
HCM 05th % tile O(yeh)		E	-	-	A	Α
HCM 95th %tile Q(veh)		9.7	-	-	0.2	-

	•	•	<b>†</b>	<b>/</b>	<b>/</b>	<b>↓</b>	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		7	<b>^</b>	7		<b>†</b> †	
Traffic Volume (veh/h)	0	319	1651	30	0	1831	
Future Volume (Veh/h)	0	319	1651	30	0	1831	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	347	1795	33	0	1990	
Pedestrians	1						
Lane Width (ft)	12.0						
Walking Speed (ft/s)	3.5						
Percent Blockage	0						
Right turn flare (veh)							
Median type			None			None	
Median storage veh)			2				
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	2791	899			1796		
vC1, stage 1 conf vol	_, ,	300					
vC2, stage 2 conf vol							
vCu, unblocked vol	2791	899			1796		
tC, single (s)	6.8	*6.0			4.1		
tC, 2 stage (s)	3.3						
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	2			100		
cM capacity (veh/h)	15	356			340		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	
Volume Total	347	898	898	33	995	995	
Volume Left	0	090	090	0	990	990	
Volume Right	347	0	0	33	0	0	
cSH	356			1700	1700	1700	
	0.98	1700 0.53	1700 0.53	0.02	0.59	0.59	
Volume to Capacity	272						
Queue Length 95th (ft)		0	0.0	0	0.0	0	
Control Delay (s/veh)	76.5 F	0.0	0.0	0.0	0.0	0.0	
Lane LOS		0.0			0.0		
Approach Delay (s/veh)	76.5	0.0			0.0		
Approach LOS	F						
Intersection Summary							
Average Delay			6.4				
Intersection Capacity Utilizati	ion		72.1%	IC	U Level	of Service	
Analysis Period (min)			15				

Intersection								
Int Delay, s/veh	14.3							
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations		1	<b>^</b>	7		<b>^</b>		
Traffic Vol, veh/h	0	319	1651	30	0	1831		
Future Vol, veh/h	0	319	1651	30	0	1831		
Conflicting Peds, #/hr		0	0	1	1	0		
Sign Control	Stop	Stop	Free	Free	Free	Free		
RT Channelized	-	Stop	-	Free	-			
Storage Length	_	0	_	335	_	-		
Veh in Median Storag	ge,# 0	-	0	-	_	0		
Grade, %	0	_	0	_	_	0		
Peak Hour Factor	92	92	92	92	92	92		
Heavy Vehicles, %	2	3	3	4	2	2		
Mymt Flow	0	347	1795	33	0	1990		
VIVIALL IOVV	0	U <del>T</del> 1	1133	30	U	1000		
Major/Minor	Minor1		//ajor1	N	lajor2			
Conflicting Flow All	-	897	0	_	-	-		
Stage 1	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-		
Critical Hdwy	-	6.96	-	-	-	-		
Critical Hdwy Stg 1	-	-	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-	-	-		
Follow-up Hdwy	-	3.33	-	-	-	-		
Pot Cap-1 Maneuver	0	~ 281	-	0	0	-		
Stage 1	0	-	-	0	0	-		
Stage 2	0	-	-	0	0	-		
Platoon blocked, %			_			-		
Mov Cap-1 Maneuve	r -	~ 281	-	-	_	_		
Mov Cap-2 Maneuve		-	_	-	_	_		
Stage 1	_	-	_	-	_	_		
Stage 2	-	_	_	-	-	_		
<b>3</b>								
Annroach	WB		NB		SB			
Approach								
HCM Control Delay, s			0		0			
HCM LOS	F							
Minor Lane/Major Mv	mt	NBTV	/BLn1	SBT				
Capacity (veh/h)		-	281	-				
HCM Lane V/C Ratio		-	1.235	-				
HCM Control Delay (s	s/veh)		170.3	-				
ICM Lane LOS		-	F	-				
HCM 95th %tile Q(ve	h)	-		-				
•								
Notes	.,	Φ.5	1		0		L.C. N. CD. C.	* All'
: Volume exceeds c	apacity	\$: De	lay exc	eeds 30	US	+: Com	outation Not Defined	*: All major volume in platoon

## 20: SW Teton Avenue & SW Herman Road

	<b>≯</b>	<b>→</b>	•	←	•	<b>†</b>	-	<b>↓</b>
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	8	699	50	366	229	229	21	197
v/c Ratio	0.02	0.84	0.22	0.37	0.64	0.42	0.07	0.70
Control Delay (s/veh)	13.7	37.5	15.3	18.0	35.8	34.4	25.0	56.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.7	37.5	15.3	18.0	35.8	34.4	25.0	56.9
Queue Length 50th (ft)	2	430	16	140	126	126	10	134
Queue Length 95th (ft)	10	#640	36	251	171	196	24	193
Internal Link Dist (ft)		1007		989		572		1708
Turn Bay Length (ft)	100		100		60		50	
Base Capacity (vph)	587	829	394	986	395	893	488	837
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.84	0.13	0.37	0.58	0.26	0.04	0.24

Intersection Summary

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	۶	<b>→</b>	•	•	•	•	•	<b>†</b>	~	-	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	<del>(</del> Î		ሻ	- ↑		ሻ	- 1→		ሻ	- 1	
Traffic Volume (vph)	6	254	305	40	264	29	183	150	33	17	129	29
Future Volume (vph)	6	254	305	40	264	29	183	150	33	17	129	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	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	0.92		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1543	1657		1626	1803		1596	1733		1703	1617	
Flt Permitted	0.49	1.00		0.15	1.00		0.36	1.00		0.62	1.00	
Satd. Flow (perm)	797	1657		262	1803		611	1733		1104	1617	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	8	318	381	50	330	36	229	188	41	21	161	36
RTOR Reduction (vph)	0	19	0	0	1	0	0	0	0	0	6	0
Lane Group Flow (vph)	8	680	0	50	365	0	229	229	0	21	191	0
Confl. Peds. (#/hr)							1					1
Heavy Vehicles (%)	17%	2%	8%	11%	4%	2%	13%	6%	10%	6%	16%	4%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	58.2	57.2		66.2	61.2		41.5	35.2		23.8	21.5	
Effective Green, g (s)	58.2	57.7		66.2	61.7		41.5	35.7		23.8	22.0	
Actuated g/C Ratio	0.49	0.49		0.56	0.52		0.35	0.30		0.20	0.19	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	3.2		2.0	3.2		2.0	3.2		2.0	3.2	
Lane Grp Cap (vph)	397	805		203	937		346	521		232	299	
v/s Ratio Prot	0.00	c0.41		c0.01	0.20		c0.09	0.13		0.00	0.12	
v/s Ratio Perm	0.01			0.13			c0.14			0.02		
v/c Ratio	0.02	0.84		0.25	0.39		0.66	0.44		0.09	0.64	
Uniform Delay, d1	15.6	26.6		18.4	17.2		29.9	33.4		38.4	44.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	8.2		0.2	0.3		3.7	0.6		0.1	4.5	
Delay (s)	15.6	34.8		18.7	17.4		33.6	34.1		38.5	49.2	
Level of Service	В	С		В	В		С	С		D	D	
Approach Delay (s/veh)		34.6			17.6			33.8			48.2	
Approach LOS		С			В			С			D	
Intersection Summary												
HCM 2000 Control Delay (s	s/veh)		32.1	Н	CM 2000	Level of	Service		С			
HCM 2000 Volume to Capa	,		0.76									
Actuated Cycle Length (s)	_		118.7	S	um of lost	time (s)			18.0			
Intersection Capacity Utiliza	ation		63.7%		U Level		)		В			
Analysis Period (min)			15									
c Critical Lane Group												

c Critical Lane Group

	۶	<b>→</b>	•	•	•	•	•	<b>†</b>	<b>/</b>	<b>/</b>	Ţ	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		ሻ	f)		7	f <sub>a</sub>		7	ĵ₃	
Traffic Volume (veh/h)	6	254	305	40	264	29	183	150	33	17	129	29
Future Volume (veh/h)	6	254	305	40	264	29	183	150	33	17	129	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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	1648	1870	1781	1737	1841	1870	1707	1811	1752	1811	1663	1841
Adj Flow Rate, veh/h	8	318	381	50	330	36	229	188	41	21	161	36
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	17	2	8	11	4	2	13	6	10	6	16	4
Cap, veh/h	438	379	454	225	843	92	326	383	84	275	199	45
Arrive On Green	0.01	0.49	0.48	0.04	0.52	0.51	0.14	0.27	0.26	0.02	0.15	0.15
Sat Flow, veh/h	1570	775	928	1654	1631	178	1626	1440	314	1725	1315	294
Grp Volume(v), veh/h	8	0	699	50	0	366	229	0	229	21	0	197
Grp Sat Flow(s),veh/h/ln	1570	0	1703	1654	0	1809	1626	0	1754	1725	0	1609
Q Serve(g_s), s	0.3	0.0	34.7	1.4	0.0	11.9	11.1	0.0	10.7	1.0	0.0	11.5
Cycle Q Clear(g_c), s	0.3	0.0	34.7	1.4	0.0	11.9	11.1	0.0	10.7	1.0	0.0	11.5
Prop In Lane	1.00		0.55	1.00		0.10	1.00		0.18	1.00		0.18
Lane Grp Cap(c), veh/h	438	0	833	225	0	935	326	0	466	275	0	244
V/C Ratio(X)	0.02	0.00	0.84	0.22	0.00	0.39	0.70	0.00	0.49	0.08	0.00	0.81
Avail Cap(c_a), veh/h	745	0	953	502	0	993	438	0	1035	591	0	917
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.0	0.0	21.7	18.1	0.0	14.3	28.7	0.0	30.2	34.1	0.0	40.0
Incr Delay (d2), s/veh	0.0	0.0	6.2	0.2	0.0	0.3	1.6	0.0	0.9	0.0	0.0	6.8
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/In	0.1	0.0	13.6	0.5	0.0	4.7	4.3	0.0	4.5	0.4	0.0	4.9
Unsig. Movement Delay, s/veh	l											
LnGrp Delay(d), s/veh	13.0	0.0	27.9	18.2	0.0	14.5	30.2	0.0	31.1	34.1	0.0	46.8
LnGrp LOS	В		С	В		В	С		С	С		D
Approach Vol, veh/h		707			416			458			218	
Approach Delay, s/veh		27.7			15.0			30.7			45.6	
Approach LOS		С			В			С			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	52.6	17.3	19.8	5.0	55.4	6.2	30.9				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	20.0	54.0	20.0	55.0	20.0	53.0	20.0	57.0				
Max Q Clear Time (g_c+l1), s	3.4	36.7	13.1	13.5	2.3	13.9	3.0	12.7				
Green Ext Time (p_c), s	0.0	10.4	0.2	0.7	0.0	8.4	0.1	3.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			27.7									
HCM 7th LOS			C C									
HOW FUI LOO			U									

## 21: OR 99W (Pacific Highway) & SW Fischer Road

	•	•	•	<b>†</b>	<b>↓</b>	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	205	362	410	1789	1645	341
v/c Ratio	1.01	0.87	1.05	0.61	0.83	0.35
Control Delay (s/veh)	127.4	36.3	110.6	5.2	33.5	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	127.4	36.3	110.6	5.2	33.5	7.6
Queue Length 50th (ft)	~193	74	~404	238	813	58
Queue Length 95th (ft)	#361	#253	#614	279	m875	m80
Internal Link Dist (ft)	1134			1909	2372	
Turn Bay Length (ft)	275		435			200
Base Capacity (vph)	202	417	391	2932	1989	964
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.87	1.05	0.61	0.83	0.35

### Intersection Summary

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

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

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

Lane Configurations		٠	•	•	<b>†</b>	L♣	ļ	4	
Traffic Volume (vph)	Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	
Traffic Volume (vph) 189 333 377 1646 0 1513 314	Lane Configurations	ሻ	7	ሻ	<b>^</b>	Ð	<b>^</b>	7	
Ideal Flow (vphpl)	Traffic Volume (vph)		333					314	
Total Lost time (s)	Future Volume (vph)	189	333	377	1646	0	1513	314	
Lane Util, Factor 1.00 1.00 1.00 0.95 0.95 1.00 Frph, ped/bikes 1.00 0.97 1.00 1.00 1.00 0.95 Frph, ped/bikes 1.00 1.00 1.00 1.00 1.00 0.95 Fit Protected 0.95 1.00 0.95 1.00 1.00 1.00 1.00 0.85 Fit Protected 0.95 1.00 0.95 1.00 1.00 1.00 1.00 Satd. Flow (prot) 1770 1493 1770 3539 3438 1509 Fit Permitted 0.95 1.00 0.95 1.00 1.00 1.00 Satd. Flow (perm) 1770 1493 1770 3539 3438 1509 Fit Permitted 0.95 1.00 0.95 1.00 0.95 1.00 1.00 1.00 Satd. Flow (perm) 1770 1493 1770 3539 3438 1509 Peak-hour factor, PHF 0.92 0.92 0.92 0.92 0.92 0.92 0.92 Adj. Flow (vph) 205 362 410 1789 0 1645 341 RTOR Reduction (vph) 0 247 0 0 0 0 91 Lane Group Flow (vph) 205 115 410 1789 0 1645 250 Confl. Peds. (#hr) 21 9 9 9 Heavy Vehicles (%) 2% 5% 2% 2% 2% 5% 2% Turn Type Prot Perm Prot NA Prot NA Perm Protected Phases 4 5 2 1 6 Permitted Phases 4 5 2 1 6 Permitted Phases 4 6 Actuated Green, G (s) 15.0 15.0 29.5 114.0 79.0 79.0 Effective Green, g (s) 16.0 16.0 31.0 116.0 81.0 81.0 Actuated Green, G (s) 5.0 5.0 5.0 5.6 6.0 6.0 6.0 Vehicle Extension (s) 2.5 2.5 2.3 4.5 4.5 4.5 Lane Grp Cap (vph) 202 170 391 2932 1989 873 V/s Ratio Prot 0.12 0.88 V/s Ratio Prot 0.12 0.88 V/s Ratio Prot 0.08 V/s Ratio Prot 0.01 0.00 1.00 1.00 1.07 V/s Ratio Prot 0.01 0.00 1.00 1.00 1.27 1.31 Incremental Delay, d1 62.0 59.5 54.5 4.2 23.8 14.9 Progression Factor 1.00 1.00 1.00 1.00 1.27 1.31 Incremental Delay, d2 67.2 9.3 58.8 1.0 2.5 0.5 Delay (s) 129.2 68.8 113.3 5.1 32.8 20.0 Level of Service F F F A C C C Intersection Summary HCM 2000 Control Delay (s/veh) 90.6 25.3 30.6 Approach LOS F C C C Intersection Capacity Utilization 98.9% Icu Level of Service D Intersection Capacity Utilization 98.9% Icu Level of Service F D Intersection Capacity Utilization 98.9% Icu Level of Service S D	Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	
Frpb, ped/bikes	Total Lost time (s)	4.0	4.0	4.0	4.0		4.0	4.0	
Fipb, ped/bikes	Lane Util. Factor	1.00	1.00	1.00	0.95		0.95	1.00	
Frit 1.00 0.85 1.00 1.00 1.00 0.85   Fit Protected 0.95 1.00 0.95 1.00 1.00 1.00   Satd. Flow (prot) 1770 1493 1770 3539 3438 1509   Fit Permitted 0.95 1.00 0.95 1.00 1.00 1.00   Satd. Flow (perm) 1770 1493 1770 3539 3438 1509   Peak-hour factor, PHF 0.92 0.92 0.92 0.92 0.92 0.92 0.92   Adj. Flow (vph) 205 362 410 1789 0 1645 341   RTOR Reduction (vph) 0 247 0 0 0 0 0 91   Lane Group Flow (vph) 205 115 410 1789 0 1645 250   Confl. Peds. (#/hr) 21 9 9 9   Heavy Vehicles (%) 2% 5% 2% 2% 5% 2%   Turn Type Prot Perm Prot NA Prot NA Perm Protected Phases 4 5 2 1 6   Permitted Phases 4 5 2 1 6   Permitted Phases 4 6   Actuated Green, G (s) 15.0 15.0 29.5 114.0 79.0 79.0   Effective Green, g (s) 16.0 16.0 31.0 116.0 81.0 81.0   Actuated Green, G (s) 15.0 15.0 29.5 114.0 79.0 79.0   Effective Green, g (s) 16.0 16.0 31.0 116.0 81.0 81.0   Actuated Grean (p) 5.0 5.0 5.5 6.0 6.0 6.0 6.0   Vehicle Extension (s) 2.5 2.5 2.3 4.5 4.5 4.5   Lane Grp Cap (vph) 202 170 391 2932 1989 873   V/s Ratio Prot c0.12 c0.23 0.51 c0.48   V/s Ratio Prot c0.12 c0.53 58.8 1.0 c0.55 0.5 c0.5 c0.5 c0.5 c0.5 c0.5 c0	Frpb, ped/bikes	1.00	0.97	1.00	1.00		1.00	0.95	
Fit Protected 0.95 1.00 0.95 1.00 1.00 1.00 1.00 Satd. Flow (prot) 1770 1493 1770 3539 3438 1509 Fit Permitted 0.95 1.00 0.95 1.00 1.00 1.00 Satd. Flow (perm) 1770 1493 1770 3539 3438 1509 Satd. Flow (perm) 1770 1493 1770 3539 3438 1509 Satd. Flow (perm) 1770 1493 1770 3539 3438 1509 Satd. Flow (perm) 1770 1493 1770 3539 3438 1509 Satd. Flow (perm) 1770 1493 1770 3539 3438 1509 Satd. Flow (perm) 1970 1493 1770 3539 3438 1509 Satd. Flow (perm) 1970 1493 1770 3539 3438 1509 Satd. Flow (perm) 1970 1493 1770 1789 0 1645 341 Satd. Flow (perm) 1970 1789 0 1645 341 Satd. Flow (perm) 1970 1789 0 1645 250 Satd. Flow (perm) 1970 1970 1970 1970 1970 1970 1970 1970	Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	
Satd. Flow (prot)         1770         1493         1770         3539         3438         1509           Fit Permitted         0.95         1.00         0.95         1.00         1.00         1.00           Satd. Flow (perm)         1770         1493         1770         3539         3438         1509           Peak-hour factor, PHF         0.92         0.92         0.92         0.92         0.92         0.92           Adj. Flow (vph)         205         362         410         1789         0         1645         341           RTOR Reduction (vph)         0         247         0         0         0         0         91           Lane Group Flow (vph)         205         115         410         1789         0         1645         250           Confl. Peds. (#/hr)         21         9         9         9         9         9           Heavy Vehicles (%)         2%         5%         2%         2%         5%         2%           Turn Type         Prot         Perm         Prot         NA         Prot         NA         Perm           Protected Phases         4         5         2         1         6         18.0	Frt	1.00	0.85	1.00	1.00		1.00	0.85	
Fit Permitted 0.95 1.00 0.95 1.00 1.00 1.00   Satd. Flow (perm) 1770 1493 1770 3539 3438 1509   Peak-hour factor, PHF 0.92 0.92 0.92 0.92 0.92 0.92 0.92   Adj. Flow (yph) 205 362 410 1789 0 1645 341   RTOR Reduction (yph) 0 247 0 0 0 0 0 91   Lane Group Flow (vph) 205 115 410 1789 0 1645 250   Confl. Peds. (#/hr) 21 9 9 9   Heavy Vehicles (%) 2% 5% 2% 2% 2% 5% 2% 2% 5% 2%   Turn Type Prot Prot Prot NA Prot NA Perm Protected Phases 4 5 2 1 6   Permitted Phases 4 5 2 1 6   Permitted Phases 4 5 2 1 6   Permitted Phases 4 6   Actuated Green, G (s) 15.0 15.0 29.5 114.0 79.0 79.0   Effective Green, g (s) 16.0 16.0 31.0 116.0 81.0 81.0   Actuated g/C Ratio 0.11 0.11 0.22 0.83 0.58 0.58   Clearance Time (s) 5.0 5.0 5.5 6.0 6.0 6.0 6.0   Vehicle Extension (s) 2.5 2.5 2.3 4.5 4.5 4.5   Lane Grp Cap (vph) 202 170 391 2932 1989 873   V/s Ratio Prot 0.12 0.23 0.51 0.48   V/s Ratio Perm 0.08 0.15 0.50 5.0 5.5 5.5 0.61 0.83 0.29   Uniform Delay, d1 62.0 59.5 54.5 4.2 23.8 14.9   Progression Factor 1.00 1.00 1.00 1.00 1.27 1.31   Incremental Delay, d2 67.2 9.3 58.8 1.0 2.5 0.5   Delay (s) 129.2 68.8 113.3 5.1 32.8 20.0   Level of Service F E F A C C C Approach LoS F C C C C   Intersection Summary  HCM 2000 Control Delay (s/veh) 35.3 HCM 2000 Level of Service F   Intersection Capacity Utilization 98.9% ICU Level of Service F	Flt Protected	0.95	1.00	0.95	1.00		1.00	1.00	
Satd. Flow (perm)         1770         1493         1770         3539         3438         1509           Peak-hour factor, PHF         0.92	Satd. Flow (prot)	1770	1493	1770	3539		3438	1509	
Peak-hour factor, PHF         0.92         0.02	Flt Permitted	0.95	1.00	0.95	1.00		1.00	1.00	
Adj. Flow (vph)	Satd. Flow (perm)	1770	1493	1770	3539		3438	1509	
Adj. Flow (vph)       205       362       410       1789       0       1645       341         RTOR Reduction (vph)       0       247       0       0       0       0       91         Lane Group Flow (vph)       205       115       410       1789       0       1645       250         Confl. Peds. (#/hr)       21       9       9       9         Heavy Vehicles (%)       2%       5%       2%       2%       5%       2%         Turn Type       Prot       Perm       Prot       NA       Prot       NA       Perm         Protected Phases       4       5       2       1       6         Actuated Green, G (s)       15.0       15.0       29.5       114.0       79.0       79.0         Effective Green, g (s)       16.0       31.0       116.0       81.0       81.0       81.0         Actuated g/C Ratio       0.11       0.11       0.22       0.83       0.58       0.58         Clearance Time (s)       5.0       5.0       5.0       5.0       6.0       6.0       6.0         Vehicle Extension (s)       2.5       2.5       2.3       4.5       4.5       4.5	Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
RTOR Reduction (vph)	Adj. Flow (vph)	205	362	410	1789	0	1645	341	
Confl. Peds. (#/hr)	RTOR Reduction (vph)	0	247	0	0	0	0	91	
Confl. Peds. (#/hr)	Lane Group Flow (vph)	205	115	410	1789	0	1645	250	
Turn Type	Confl. Peds. (#/hr)		21	9				9	
Protected Phases         4         5         2         1         6           Permitted Phases         4         6         6           Actuated Green, G (s)         15.0         15.0         29.5         114.0         79.0         79.0           Effective Green, g (s)         16.0         16.0         31.0         116.0         81.0         81.0           Actuated g/C Ratio         0.11         0.11         0.22         0.83         0.58         0.58           Clearance Time (s)         5.0         5.0         5.5         6.0         6.0         6.0           Vehicle Extension (s)         2.5         2.5         2.3         4.5         4.5         4.5           Lane Grp Cap (vph)         202         170         391         2932         1989         873           v/s Ratio Perm         0.08         0.51         0.48         0.48         0.48         0.49           V/s Ratio Perm         0.08         0.51         0.61         0.83         0.29           Uniform Delay, d1         62.0         59.5         54.5         4.2         23.8         14.9           Progression Factor         1.00         1.00         1.00         1.00	Heavy Vehicles (%)	2%	5%	2%	2%	2%	5%	2%	
Protected Phases         4         5         2         1         6           Permitted Phases         4         6         6           Actuated Green, G (s)         15.0         15.0         29.5         114.0         79.0         79.0           Effective Green, g (s)         16.0         16.0         31.0         116.0         81.0         81.0           Actuated g/C Ratio         0.11         0.11         0.22         0.83         0.58         0.58           Clearance Time (s)         5.0         5.0         5.5         6.0         6.0         6.0           Vehicle Extension (s)         2.5         2.5         2.3         4.5         4.5         4.5           Lane Grp Cap (vph)         202         170         391         2932         1989         873           v/s Ratio Perm         0.08         0.51         0.48         0.48         0.48         0.49           V/s Ratio Perm         0.08         0.51         0.61         0.83         0.29           Uniform Delay, d1         62.0         59.5         54.5         4.2         23.8         14.9           Progression Factor         1.00         1.00         1.00         1.00	Turn Type	Prot	Perm	Prot	NA	Prot	NA	Perm	
Actuated Green, G (s) 15.0 15.0 29.5 114.0 79.0 79.0 Effective Green, g (s) 16.0 16.0 31.0 116.0 81.0 81.0 81.0 Actuated g/C Ratio 0.11 0.11 0.22 0.83 0.58 0.58 Clearance Time (s) 5.0 5.0 5.5 6.0 6.0 6.0 6.0 Vehicle Extension (s) 2.5 2.5 2.3 4.5 4.5 4.5 Lane Grp Cap (vph) 202 170 391 2932 1989 873 v/s Ratio Prot c0.12 c0.23 0.51 c0.48 v/s Ratio Perm 0.08 0.17 v/c Ratio 1.01 0.68 1.05 0.61 0.83 0.29 Uniform Delay, d1 62.0 59.5 54.5 4.2 23.8 14.9 Progression Factor 1.00 1.00 1.00 1.00 1.27 1.31 Incremental Delay, d2 67.2 9.3 58.8 1.0 2.5 0.5 Delay (s) 129.2 68.8 113.3 5.1 32.8 20.0 Level of Service F E F A C C C Approach Delay (s/veh) 90.6 25.3 30.6 Approach LOS F C C C Intersection Summary  HCM 2000 Control Delay (s/veh) 35.3 HCM 2000 Level of Service D HCM 2000 Volume to Capacity ratio 0.90 Actuated Cycle Length (s) 140.0 Sum of lost time (s) 12.0 Incresection Capacity Utilization 98.9% ICU Level of Service F	Protected Phases						6		
Effective Green, g (s)       16.0       16.0       31.0       116.0       81.0       81.0         Actuated g/C Ratio       0.11       0.11       0.22       0.83       0.58       0.58         Clearance Time (s)       5.0       5.0       5.5       6.0       6.0       6.0         Vehicle Extension (s)       2.5       2.5       2.3       4.5       4.5       4.5         Lane Grp Cap (vph)       202       170       391       2932       1989       873         v/s Ratio Prot       c0.12       c0.23       0.51       c0.48         v/s Ratio Perm       0.08       0.17         v/c Ratio       1.01       0.68       1.05       0.61       0.83       0.29         Uniform Delay, d1       62.0       59.5       54.5       4.2       23.8       14.9         Progression Factor       1.00       1.00       1.00       1.27       1.31         Incremental Delay, d2       67.2       9.3       58.8       1.0       2.5       0.5         Delay (s)       129.2       68.8       113.3       5.1       32.8       20.0         Level of Service       F       F       C       C	Permitted Phases		4					6	
Actuated g/C Ratio 0.11 0.11 0.22 0.83 0.58 0.58 Clearance Time (s) 5.0 5.0 5.5 6.0 6.0 6.0 Vehicle Extension (s) 2.5 2.5 2.3 4.5 4.5 4.5  Lane Grp Cap (vph) 202 170 391 2932 1989 873 v/s Ratio Prot c0.12 c0.23 0.51 c0.48 v/s Ratio Perm 0.08 0.17 v/c Ratio 1.01 0.68 1.05 0.61 0.83 0.29 Uniform Delay, d1 62.0 59.5 54.5 4.2 23.8 14.9 Progression Factor 1.00 1.00 1.00 1.00 1.27 1.31 Incremental Delay, d2 67.2 9.3 58.8 1.0 2.5 0.5 Delay (s) 129.2 68.8 113.3 5.1 32.8 20.0 Level of Service F E F A C C C Approach Delay (s/veh) 90.6 Approach LOS F C C  Intersection Summary HCM 2000 Control Delay (s/veh) 35.3 HCM 2000 Level of Service D HCM 2000 Volume to Capacity ratio 0.90 Actuated Cycle Length (s) 140.0 Sum of lost time (s) 12.0 Intersection Capacity Utilization 98.9% ICU Level of Service F	Actuated Green, G (s)	15.0	15.0	29.5	114.0		79.0	79.0	
Actuated g/C Ratio 0.11 0.11 0.22 0.83 0.58 0.58 Clearance Time (s) 5.0 5.0 5.5 6.0 6.0 6.0 Vehicle Extension (s) 2.5 2.5 2.3 4.5 4.5 4.5  Lane Grp Cap (vph) 202 170 391 2932 1989 873 v/s Ratio Prot c0.12 c0.23 0.51 c0.48 v/s Ratio Perm 0.08 0.51 c0.48 v/s Ratio Perm 0.08 0.61 0.83 0.29 Uniform Delay, d1 62.0 59.5 54.5 4.2 23.8 14.9 Progression Factor 1.00 1.00 1.00 1.00 1.27 1.31 Incremental Delay, d2 67.2 9.3 58.8 1.0 2.5 0.5 Delay (s) 129.2 68.8 113.3 5.1 32.8 20.0 Level of Service F E F A C C C Approach Delay (s/veh) 90.6 25.3 30.6 Approach LOS F C C  Intersection Summary HCM 2000 Control Delay (s/veh) 35.3 HCM 2000 Level of Service D HCM 2000 Volume to Capacity ratio 0.90 Actuated Cycle Length (s) 140.0 Sum of lost time (s) 12.0 Intersection Capacity Utilization 98.9% ICU Level of Service F	Effective Green, g (s)	16.0	16.0	31.0	116.0		81.0	81.0	
Clearance Time (s)         5.0         5.0         5.5         6.0         6.0         6.0           Vehicle Extension (s)         2.5         2.5         2.3         4.5         4.5         4.5           Lane Grp Cap (vph)         202         170         391         2932         1989         873           v/s Ratio Prot         c0.12         c0.23         0.51         c0.48           v/s Ratio Perm         0.08         0.17           v/c Ratio         1.01         0.68         1.05         0.61         0.83         0.29           Uniform Delay, d1         62.0         59.5         54.5         4.2         23.8         14.9           Progression Factor         1.00         1.00         1.00         1.27         1.31           Incremental Delay, d2         67.2         9.3         58.8         1.0         2.5         0.5           Delay (s)         129.2         68.8         113.3         5.1         32.8         20.0           Level of Service         F         E         F         A         C         C           Approach LOS         F         C         C         C           Intersection Summary         B	Actuated g/C Ratio	0.11	0.11	0.22	0.83		0.58	0.58	
Vehicle Extension (s)         2.5         2.5         2.3         4.5         4.5         4.5           Lane Grp Cap (vph)         202         170         391         2932         1989         873           v/s Ratio Prot         c0.12         c0.23         0.51         c0.48           v/s Ratio Perm         0.08         0.17           v/c Ratio         1.01         0.68         1.05         0.61         0.83         0.29           Uniform Delay, d1         62.0         59.5         54.5         4.2         23.8         14.9           Progression Factor         1.00         1.00         1.00         1.27         1.31           Incremental Delay, d2         67.2         9.3         58.8         1.0         2.5         0.5           Delay (s)         129.2         68.8         113.3         5.1         32.8         20.0           Level of Service         F         F         F         A         C         C           Approach LOS         F         C         C         C           Intersection Summary         B         4.5         4.5         4.5         4.2         2.3         30.6         3.3         3.6         4.2	Clearance Time (s)	5.0	5.0	5.5	6.0		6.0	6.0	
v/s Ratio Prot         c0.12         c0.23         0.51         c0.48           v/s Ratio Perm         0.08         0.17           v/c Ratio         1.01         0.68         1.05         0.61         0.83         0.29           Uniform Delay, d1         62.0         59.5         54.5         4.2         23.8         14.9           Progression Factor         1.00         1.00         1.00         1.27         1.31           Incremental Delay, d2         67.2         9.3         58.8         1.0         2.5         0.5           Delay (s)         129.2         68.8         113.3         5.1         32.8         20.0           Level of Service         F         E         F         A         C         C           Approach Delay (s/veh)         90.6         25.3         30.6         Approach LOS         F         C         C           Intersection Summary         HCM 2000 Control Delay (s/veh)         35.3         HCM 2000 Level of Service         D           HCM 2000 Volume to Capacity ratio         0.90           Actuated Cycle Length (s)         140.0         Sum of lost time (s)         12.0           Intersection Capacity Utilization         98.9%         ICU Level of S	Vehicle Extension (s)	2.5	2.5	2.3	4.5		4.5	4.5	
v/s Ratio Prot         c0.12         c0.23         0.51         c0.48           v/s Ratio Perm         0.08         0.17           v/c Ratio         1.01         0.68         1.05         0.61         0.83         0.29           Uniform Delay, d1         62.0         59.5         54.5         4.2         23.8         14.9           Progression Factor         1.00         1.00         1.00         1.27         1.31           Incremental Delay, d2         67.2         9.3         58.8         1.0         2.5         0.5           Delay (s)         129.2         68.8         113.3         5.1         32.8         20.0           Level of Service         F         E         F         A         C         C           Approach Delay (s/veh)         90.6         25.3         30.6         Approach LOS         F         C         C           Intersection Summary         HCM 2000 Control Delay (s/veh)         35.3         HCM 2000 Level of Service         D           HCM 2000 Volume to Capacity ratio         0.90           Actuated Cycle Length (s)         140.0         Sum of lost time (s)         12.0           Intersection Capacity Utilization         98.9%         ICU Level of S	Lane Grp Cap (vph)	202	170	391	2932		1989	873	
v/s Ratio Perm       0.08       0.17         v/c Ratio       1.01       0.68       1.05       0.61       0.83       0.29         Uniform Delay, d1       62.0       59.5       54.5       4.2       23.8       14.9         Progression Factor       1.00       1.00       1.00       1.27       1.31         Incremental Delay, d2       67.2       9.3       58.8       1.0       2.5       0.5         Delay (s)       129.2       68.8       113.3       5.1       32.8       20.0         Level of Service       F       E       F       A       C       C         Approach Delay (s/veh)       90.6       25.3       30.6       Approach LOS       F       C       C         Intersection Summary       HCM 2000 Control Delay (s/veh)       35.3       HCM 2000 Level of Service       D         HCM 2000 Volume to Capacity ratio       0.90       Sum of lost time (s)       12.0         Actuated Cycle Length (s)       140.0       Sum of lost time (s)       12.0         Intersection Capacity Utilization       98.9%       ICU Level of Service       F	v/s Ratio Prot								
v/c Ratio         1.01         0.68         1.05         0.61         0.83         0.29           Uniform Delay, d1         62.0         59.5         54.5         4.2         23.8         14.9           Progression Factor         1.00         1.00         1.00         1.27         1.31           Incremental Delay, d2         67.2         9.3         58.8         1.0         2.5         0.5           Delay (s)         129.2         68.8         113.3         5.1         32.8         20.0           Level of Service         F         E         F         A         C         C           Approach Delay (s/veh)         90.6         25.3         30.6         Approach LOS         F         C         C           Intersection Summary         HCM 2000 Control Delay (s/veh)         35.3         HCM 2000 Level of Service         D           HCM 2000 Volume to Capacity ratio         0.90           Actuated Cycle Length (s)         140.0         Sum of lost time (s)         12.0           Intersection Capacity Utilization         98.9%         ICU Level of Service         F	v/s Ratio Perm		0.08					0.17	
Uniform Delay, d1         62.0         59.5         54.5         4.2         23.8         14.9           Progression Factor         1.00         1.00         1.00         1.27         1.31           Incremental Delay, d2         67.2         9.3         58.8         1.0         2.5         0.5           Delay (s)         129.2         68.8         113.3         5.1         32.8         20.0           Level of Service         F         E         F         A         C         C           Approach Delay (s/veh)         90.6         25.3         30.6         30.6           Approach LOS         F         C         C         C           Intersection Summary         HCM 2000 Control Delay (s/veh)         35.3         HCM 2000 Level of Service         D           HCM 2000 Volume to Capacity ratio         0.90         Actuated Cycle Length (s)         140.0         Sum of lost time (s)         12.0           Intersection Capacity Utilization         98.9%         ICU Level of Service         F	v/c Ratio	1.01		1.05	0.61		0.83		
Progression Factor         1.00         1.00         1.00         1.27         1.31           Incremental Delay, d2         67.2         9.3         58.8         1.0         2.5         0.5           Delay (s)         129.2         68.8         113.3         5.1         32.8         20.0           Level of Service         F         E         F         A         C         C           Approach Delay (s/veh)         90.6         25.3         30.6         30.6         Approach LOS         F         C         C           Intersection Summary         HCM 2000 Control Delay (s/veh)         35.3         HCM 2000 Level of Service         D           HCM 2000 Volume to Capacity ratio         0.90           Actuated Cycle Length (s)         140.0         Sum of lost time (s)         12.0           Intersection Capacity Utilization         98.9%         ICU Level of Service         F									
Incremental Delay, d2	Progression Factor								
Delay (s)         129.2         68.8         113.3         5.1         32.8         20.0           Level of Service         F         E         F         A         C         C           Approach Delay (s/veh)         90.6         25.3         30.6	Incremental Delay, d2								
Level of Service         F         E         F         A         C         C           Approach Delay (s/veh)         90.6         25.3         30.6	Delay (s)								
Approach Delay (s/veh)         90.6         25.3         30.6           Approach LOS         F         C         C           Intersection Summary           HCM 2000 Control Delay (s/veh)         35.3         HCM 2000 Level of Service         D           HCM 2000 Volume to Capacity ratio         0.90           Actuated Cycle Length (s)         140.0         Sum of lost time (s)         12.0           Intersection Capacity Utilization         98.9%         ICU Level of Service         F	Level of Service								
Approach LOS F C C  Intersection Summary  HCM 2000 Control Delay (s/veh) 35.3 HCM 2000 Level of Service D  HCM 2000 Volume to Capacity ratio 0.90  Actuated Cycle Length (s) 140.0 Sum of lost time (s) 12.0  Intersection Capacity Utilization 98.9% ICU Level of Service F	Approach Delay (s/veh)	90.6							
HCM 2000 Control Delay (s/veh)35.3HCM 2000 Level of ServiceDHCM 2000 Volume to Capacity ratio0.90Actuated Cycle Length (s)140.0Sum of lost time (s)12.0Intersection Capacity Utilization98.9%ICU Level of ServiceF	Approach LOS						С		
HCM 2000 Control Delay (s/veh)35.3HCM 2000 Level of ServiceDHCM 2000 Volume to Capacity ratio0.90Actuated Cycle Length (s)140.0Sum of lost time (s)12.0Intersection Capacity Utilization98.9%ICU Level of ServiceF	Intersection Summary								
HCM 2000 Volume to Capacity ratio 0.90 Actuated Cycle Length (s) 140.0 Sum of lost time (s) 12.0 Intersection Capacity Utilization 98.9% ICU Level of Service F	•	/veh)		35.3	Н	CM 2000	Level of S	Service	D
Actuated Cycle Length (s) 140.0 Sum of lost time (s) 12.0 Intersection Capacity Utilization 98.9% ICU Level of Service F	• \	,							
Intersection Capacity Utilization 98.9% ICU Level of Service F		,			Sı	ım of lost	time (s)		12.0
	, ,	ation							
	Analysis Period (min)			15					

c Critical Lane Group

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Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	
Lane Configurations	ሻ	1	ሻ	<b>†</b> †	ħ	<b>†</b> †	7	
Traffic Volume (veh/h)	189	333	377	1646	0	1513	314	
Future Volume (veh/h)	189	333	377	1646	0	1513	314	
Initial Q (Qb), veh	0	0	0	0	-	0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00		1.00	1.00	
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00				0.99	
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00	
Work Zone On Approach	No			No		No		
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870		1826	1870	
Adj Flow Rate, veh/h	205	362	410	1789		1645	341	
Peak Hour Factor	0.92	0.92	0.92	0.92		0.92	0.92	
Percent Heavy Veh, %	2	5	2	2		5	2	
Cap, veh/h	204	177	394	2944		2007	910	
Arrive On Green	0.11	0.11	0.22	0.83		1.00	1.00	
Sat Flow, veh/h	1781	1547	1781	3647		3561	1573	
Grp Volume(v), veh/h	205	362	410	1789		1645	341	
Grp Sat Flow(s),veh/h/ln	1781	1547	1781	1777		1735	1573	
Q Serve(g_s), s	16.0	16.0	31.0	24.3		0.0	0.0	
Cycle Q Clear(g_c), s	16.0	16.0	31.0	24.3		0.0	0.0	
Prop In Lane	1.00	1.00	1.00				1.00	
Lane Grp Cap(c), veh/h	204	177	394	2944		2007	910	
V/C Ratio(X)	1.01	2.05	1.04	0.61		0.82	0.37	
Avail Cap(c_a), veh/h	204	177	394	2944		2007	910	
HCM Platoon Ratio	1.00	1.00	1.00	1.00		2.00	2.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00		0.45	0.45	
Uniform Delay (d), s/veh	62.0	62.0	54.5	4.1		0.0	0.0	
Incr Delay (d2), s/veh	64.9	490.3	55.9	0.9		1.8	0.5	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0	0.0	
%ile BackOfQ(50%),veh/ln	11.0	37.0	19.7	6.0		0.5	0.1	
Unsig. Movement Delay, s/vel								
LnGrp Delay(d), s/veh	126.9	552.3	110.4	5.1		1.8	0.5	
LnGrp LOS	F	F	F	Α		Α	Α	
Approach Vol, veh/h	567			2199		1986		
Approach Delay, s/veh	398.5			24.7		1.6		
Approach LOS	F			С		A		
Timer - Assigned Phs		2		4	5	6		
		120.0		20.0	35.0	85.0		
Phs Duration (G+Y+Rc), s					35.0 5.5			
Change Period (Y+Rc), s		6.0		5.0		6.0		
Max Green Setting (Gmax), s		94.0		15.0	29.5	79.0		
Max Q Clear Time (g_c+l1), s Green Ext Time (p_c), s		26.3		18.0	33.0	2.0		
u = 77		63.7		0.0	0.0	67.2		
Intersection Summary								
HCM 7th Control Delay, s/veh			59.6					
HCM 7th LOS			Е					
Notes								
User approved pedestrian inte			n phase n	nax green				
User approved ignoring U-Tur	ning mov	ement.						

	<b>—</b>	•	•	•	•	<b>†</b>	/	-	<b>↓</b>	4	
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	182	330	332	426	166	1385	265	496	1229	23	
v/c Ratio	0.52	0.96	0.95	0.71	0.97	1.02	0.27	0.92	0.79	0.03	
Control Delay (s/veh)	42.4	93.3	92.0	17.1	114.6	66.6	3.9	80.3	37.7	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	42.4	93.3	92.0	17.1	114.6	66.6	3.9	80.3	37.7	0.1	
Queue Length 50th (ft)	51	314	316	54	154	~695	22	230	496	0	
Queue Length 95th (ft)	92	#531	#531	184	m#290	m#824	m51	#326	590	0	
Internal Link Dist (ft)	481		939			2372			1326		
Turn Bay Length (ft)		300		315	550		140	265		400	
Base Capacity (vph)	393	345	349	597	171	1355	976	556	1547	757	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.46	0.96	0.95	0.71	0.97	1.02	0.27	0.89	0.79	0.03	

### Intersection Summary

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

<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

	٠	<b>→</b>	•	•	•	•	•	<b>†</b>	<i>&gt;</i>	<b>&gt;</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		<b>€1</b> }		ሻ	र्स	7	ሻ	<b>^</b>	7	77	<b>^</b>	7
Traffic Volume (vph)	24	80	67	544	78	400	156	1302	249	466	1155	22
Future Volume (vph)	24	80	67	544	78	400	156	1302	249	466	1155	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Lane Util. Factor		0.95		0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3296		1681	1701	1533	1770	3505	1561	3433	3438	1547
FIt Permitted		0.99		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3296		1681	1701	1533	1770	3505	1561	3433	3438	1547
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	26	85	71	579	83	426	166	1385	265	496	1229	23
RTOR Reduction (vph)	0	65	0	0	0	283	0	0	59	0	0	13
Lane Group Flow (vph)	0	117	0	330	332	143	166	1385	206	496	1229	10
Confl. Peds. (#/hr)	7	00/	00/	00/	00/	7	1	00/	7	7	=0/	1
Heavy Vehicles (%)	2%	2%	3%	2%	3%	3%	2%	3%	2%	2%	5%	2%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	3	3		4	4		5	2	4	1	6	
Permitted Phases		40.0		00.0	20.0	4	40.0	<b>540</b>	2	00.4	00.0	6
Actuated Green, G (s)		12.2		28.8	28.8	28.8	13.6	54.2	83.0	22.1	63.0	63.0
Effective Green, g (s)		12.2		28.8	28.8	28.8	13.6	54.2	83.0	22.1	63.0	63.0
Actuated g/C Ratio		0.09		0.21	0.21	0.21	0.10	0.39	0.59	0.16	0.45	0.45
Clearance Time (s)		6.0		6.0	6.0	6.0	5.4	5.4	6.0	5.3	5.0	5.0
Vehicle Extension (s)		2.3		2.3	2.3	2.3	2.3	4.5	2.3	2.3	4.8	4.8
Lane Grp Cap (vph)		287		345	349	315	171	1356	925	541	1547	696
v/s Ratio Prot		c0.04		c0.20	0.20	0.00	0.09	c0.40	0.05	c0.14	0.36	0.04
v/s Ratio Perm		0.44		0.00	0.05	0.09	0.07	4.00	0.09	0.00	0.70	0.01
v/c Ratio		0.41		0.96	0.95	0.45	0.97	1.02	0.22	0.92	0.79	0.01
Uniform Delay, d1		60.5		55.0	54.9	48.7	63.0	42.9	13.4	58.0	33.0	21.3
Progression Factor		1.00		1.00	1.00	1.00	1.00	0.93	1.06	1.00	1.00	1.00
Incremental Delay, d2		0.6		36.6	35.3	0.6	51.2	26.8	0.1	20.2	4.3	0.0
Delay (s)		61.0 E		91.6 F	90.2 F	49.3 D	113.9 F	66.8 E	14.2 B	78.3 E	37.3	21.4
Level of Service		61.0		Г	74.6	U	Г		D	Е	D 48.7	С
Approach LOS		61.0 E			74.0 E			63.5 E				
Approach LOS		E			E			Е			D	
Intersection Summary			00.5		014 0000	1	<u> </u>					
HCM 2000 Control Delay (s/v	,		60.5	H	UM 2000	Level of S	service		E			
HCM 2000 Volume to Capac	ity ratio		0.92		المحال	hima a /-\			00.7			
Actuated Cycle Length (s)			140.0		um of lost				22.7			
Intersection Capacity Utilizati	on		95.3%	IC	U Level	of Service	<u> </u>		F			
Analysis Period (min)			15									

c Critical Lane Group

10/01/2024

HCM 7th Edition methodology does not support exclusive ped or hold phases.

APPENDIX I.

MITIGATION CALCULATIONS

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ኻ	₽		ች	1>		*	f)			4	
Traffic Volume (vph)	64	706	183	76	226	132	16	4	11	41	2	30
Future Volume (vph)	64	706	183	76	226	132	16	4	11	41	2	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		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	0.97		1.00	0.94		1.00	0.89			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1751	1786		1719	1644		1570	1509			1566	
Flt Permitted	0.52	1.00		0.12	1.00		0.78	1.00			0.82	
Satd. Flow (perm)	955	1786		211	1644		1288	1509			1315	
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)	70	767	199	83	246	143	17	4	12	45	2	33
RTOR Reduction (vph)	0	9	0	0	19	0	0	11	0	0	29	0
Lane Group Flow (vph)	70	957	0	83	370	0	17	5	0	0	51	0
Confl. Peds. (#/hr)	1		1	1		1						
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	3%	2%	5%	5%	9%	7%	15%	2%	15%	10%	2%	14%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			6			2	
Permitted Phases	8			4	•		6	•		2	_	
Actuated Green, G (s)	46.8	42.6		50.0	44.2		8.1	8.1			8.1	
Effective Green, g (s)	46.8	42.6		50.0	44.2		8.1	8.1			8.1	
Actuated g/C Ratio	0.68	0.62		0.73	0.65		0.12	0.12			0.12	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5			2.5	
Lane Grp Cap (vph)	701	1110		281	1060		152	178			155	
v/s Ratio Prot	0.01	c0.54		c0.02	0.22		102	0.00			.00	
v/s Ratio Perm	0.06	00.01		0.19	0.22		0.01	0.00			c0.04	
v/c Ratio	0.10	0.86		0.30	0.35		0.11	0.03			0.33	
Uniform Delay, d1	3.6	10.6		9.1	5.6		27.0	26.7			27.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.0	7.0		0.4	0.1		0.2	0.1			0.9	
Delay (s)	3.6	17.6		9.6	5.7		27.2	26.8			28.6	
Level of Service	A	В		A	A		С	C			C	
Approach Delay (s)	, ,	16.6			6.4			27.0			28.6	
Approach LOS		В			A			С			С	
Intersection Summary												
HCM 2000 Control Delay			14.4	H	CM 2000	Level of S	Service		В			
HCM 2000 Volume to Capa	city ratio		0.73									
Actuated Cycle Length (s)			68.5		um of lost				12.0			
Intersection Capacity Utiliza	tion		73.4%	IC	U Level o	of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)		7	f)		7	f)			4	
Traffic Volume (veh/h)	64	706	183	76	226	132	16	4	11	41	2	30
Future Volume (veh/h)	64	706	183	76	226	132	16	4	11	41	2	30
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		1.00	1.00		1.00
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	1856	1870	1826	1826	1767	1796	1678	1870	1678	1752	1870	1693
Adj Flow Rate, veh/h	70	767	199	83	246	143	17	4	12	45	2	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	2	5	5	9	7	15	2	15	10	2	14
Cap, veh/h	728	883	229	334	649	377	273	38	115	179	13	58
Arrive On Green	0.05	0.62	0.62	0.05	0.62	0.62	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1767	1425	370	1739	1038	604	1232	412	1236	745	140	621
Grp Volume(v), veh/h	70	0	966	83	0	389	17	0	16	80	0	0
Grp Sat Flow(s),veh/h/ln	1767	0	1794	1739	0	1642	1232	0	1648	1506	0	0
Q Serve(g_s), s	0.7	0.0	22.8	8.0	0.0	6.0	0.0	0.0	0.5	2.1	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	22.8	0.8	0.0	6.0	0.5	0.0	0.5	2.6	0.0	0.0
Prop In Lane	1.00		0.21	1.00		0.37	1.00		0.75	0.56		0.41
Lane Grp Cap(c), veh/h	728	0	1112	334	0	1026	273	0	154	250	0	0
V/C Ratio(X)	0.10	0.00	0.87	0.25	0.00	0.38	0.06	0.00	0.10	0.32	0.00	0.00
Avail Cap(c_a), veh/h	950	0	1776	544	0	1625	588	0	576	628	0	0
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.3	0.0	8.1	8.8	0.0	4.8	21.4	0.0	21.4	22.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.4	0.3	0.0	0.2	0.1	0.0	0.2	0.5	0.0	0.0
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	0.1	0.0	5.6	0.3	0.0	1.2	0.2	0.0	0.2	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.3	0.0	10.5	9.1	0.0	4.9	21.5	0.0	21.6	22.9	0.0	0.0
LnGrp LOS	Α	Α	В	Α	Α	Α	С	Α	С	С	Α	<u>A</u>
Approach Vol, veh/h		1036			472			33			80	
Approach Delay, s/veh		10.0			5.7			21.5			22.9	
Approach LOS		Α			Α			С			С	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		8.8	6.5	36.2		8.8	6.8	35.9				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		18.0	9.0	51.0		18.0	9.0	51.0				
Max Q Clear Time (g_c+l1), s		4.6	2.7	8.0		2.5	2.8	24.8				
Green Ext Time (p_c), s		0.2	0.0	2.2		0.1	0.1	7.1				
Intersection Summary												
HCM 6th Ctrl Delay			9.6									
HCM 6th LOS			A									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	f)		*	1>		ሻ	1>			4	
Traffic Volume (vph)	49	383	16	18	626	250	129	37	78	21	2	23
Future Volume (vph)	49	383	16	18	626	250	129	37	78	21	2	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.90			0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1850		1770	1768		1766	1550			1545	
Flt Permitted	0.13	1.00		0.48	1.00		0.73	1.00			0.85	
Satd. Flow (perm)	251	1850		901	1768		1349	1550			1348	
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	403	17	19	659	263	136	39	82	22	2	24
RTOR Reduction (vph)	0	1	0	0	14	0	0	67	0	0	20	0
Lane Group Flow (vph)	52	419	0	19	908	0	136	54	0	0	28	0
Confl. Peds. (#/hr)	4					4	1					1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	14%	5%	2%	17%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	47.5	44.6		45.1	43.4		12.6	12.6			12.6	
Effective Green, g (s)	47.5	44.6		45.1	43.4		12.6	12.6			12.6	
Actuated g/C Ratio	0.67	0.63		0.64	0.61		0.18	0.18			0.18	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5			2.5	
Lane Grp Cap (vph)	230	1163		593	1082		239	275			239	
v/s Ratio Prot	c0.01	0.23		0.00	c0.51			0.03				
v/s Ratio Perm	0.14	0.20		0.02	00.01		c0.10	0.00			0.02	
v/c Ratio	0.23	0.36		0.03	0.84		0.57	0.19			0.12	
Uniform Delay, d1	9.2	6.3		4.8	11.0		26.7	24.8			24.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.4	0.1		0.0	5.7		2.5	0.3			0.2	
Delay (s)	9.6	6.4		4.8	16.7		29.2	25.1			24.6	
Level of Service	A	Α		A	В		С	С			С	
Approach Delay (s)		6.8			16.5			27.3			24.6	
Approach LOS		А			В			С			С	
Intersection Summary												
HCM 2000 Control Delay			15.6	Н	CM 2000	Level of S	Service		В			
HCM 2000 Volume to Capa	city ratio		0.75									
Actuated Cycle Length (s)			70.9	S	um of lost	t time (s)			12.0			
Intersection Capacity Utiliza	ition		68.6%	IC	CU Level	of Service			С			
Analysis Period (min)			15									
c Critical Lane Group												

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	₽		ሻ	ĵ₃		7	<b>₽</b>			4	
Traffic Volume (veh/h)	49	383	16	18	626	250	129	37	78	21	2	23
Future Volume (veh/h)	49	383	16	18	626	250	129	37	78	21	2	23
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		1.00	1.00		1.00
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	1693	1826	1870	1648
Adj Flow Rate, veh/h	52	403	17	19	659	263	136	39	82	22	2	24
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	14	5	2	17
Cap, veh/h	313	1116	47	669	763	305	340	68	143	138	37	75
Arrive On Green	0.04	0.63	0.63	0.02	0.61	0.61	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	1780	75	1781	1261	503	1381	536	1127	302	290	592
Grp Volume(v), veh/h	52	0	420	19	0	922	136	0	121	48	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1855	1781	0	1765	1381	0	1662	1185	0	0
Q Serve(g_s), s	0.6	0.0	5.8	0.2	0.0	22.8	0.2	0.0	3.6	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.6	0.0	5.8	0.2	0.0	22.8	3.9	0.0	3.6	3.7	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.29	1.00		0.68	0.46		0.50
Lane Grp Cap(c), veh/h	313	0	1163	669	0	1068	340	0	212	250	0	0
V/C Ratio(X)	0.17	0.00	0.36	0.03	0.00	0.86	0.40	0.00	0.57	0.19	0.00	0.00
Avail Cap(c_a), veh/h	545	0	2141	940	0	2037	634	0	566	555	0	0
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.8	0.0	4.7	4.0	0.0	8.6	21.8	0.0	21.7	20.7	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.0	0.0	1.7	0.6	0.0	1.8	0.3	0.0	0.0
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	0.2	0.0	1.3	0.0	0.0	5.7	1.5	0.0	1.4	0.5	0.0	0.0
Unsig. Movement Delay, s/veh		0.0	4.0	4.0	0.0	40.0	00.4	0.0	00.5	04.0	0.0	0.0
LnGrp Delay(d),s/veh	9.0	0.0	4.9	4.0	0.0	10.3	22.4	0.0	23.5 C	21.0	0.0	0.0
LnGrp LOS	A	A 470	A	A	A 0.44	В	С	A	U	С	A 40	A
Approach Vol, veh/h		472			941			257			48	
Approach Delay, s/veh		5.3			10.2			22.9			21.0	
Approach LOS		Α			В			С			С	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.7	6.1	36.0		10.7	5.0	37.1				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		18.0	9.0	61.0		18.0	9.0	61.0				
Max Q Clear Time (g_c+l1), s		5.7	2.6	24.8		5.9	2.2	7.8				
Green Ext Time (p_c), s		0.1	0.0	7.1		0.7	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay			11.0									
HCM 6th LOS			В									

	۶	<b>→</b>	•	•	<b>←</b>	4	4	<b>†</b>	<b>/</b>	<b>/</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	₽		ሻ	f <sub>a</sub>		*	f)			4	
Traffic Volume (vph)	66	726	220	97	233	136	21	6	15	42	2	31
Future Volume (vph)	66	726	220	97	233	136	21	6	15	42	2	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		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	0.97		1.00	0.94		1.00	0.90			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1751	1776		1719	1644		1570	1532			1565	
Flt Permitted	0.51	1.00		0.10	1.00		0.75	1.00			0.81	
Satd. Flow (perm)	945	1776		183	1644		1235	1532			1309	
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)	72	789	239	105	253	148	23	7	16	46	2	34
RTOR Reduction (vph)	0	10	0	0	18	0	0	14	0	0	27	0
Lane Group Flow (vph)	72	1018	0	105	383	0	23	9	0	0	55	0
Confl. Peds. (#/hr)	1		1	1		1						
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	3%	2%	5%	5%	9%	7%	15%	2%	15%	10%	2%	14%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			6		. •	2	
Permitted Phases	8			4	•		6	•		2	_	
Actuated Green, G (s)	53.8	49.5		57.6	51.4		8.7	8.7		_	8.7	
Effective Green, g (s)	53.8	49.5		57.6	51.4		8.7	8.7			8.7	
Actuated g/C Ratio	0.70	0.65		0.75	0.67		0.11	0.11			0.11	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5			2.5	
Lane Grp Cap (vph)	710	1150		262	1106		140	174			149	
v/s Ratio Prot	0.01	c0.57		c0.03	0.23		110	0.01			110	
v/s Ratio Perm	0.07	00.01		0.27	0.20		0.02	0.01			c0.04	
v/c Ratio	0.10	0.89		0.40	0.35		0.16	0.05			0.37	
Uniform Delay, d1	3.5	11.1		11.7	5.3		30.6	30.2			31.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.0	8.4		0.7	0.1		0.4	0.1			1.1	
Delay (s)	3.5	19.5		12.5	5.5		31.0	30.3			32.4	
Level of Service	A	В		В	A		С	С			C	
Approach Delay (s)		18.4			6.9			30.6			32.4	
Approach LOS		В			A			С			С	
Intersection Summary												
HCM 2000 Control Delay			16.1	Н	CM 2000	Level of S	Service		В			
HCM 2000 Volume to Capa	city ratio		0.77									
Actuated Cycle Length (s)			76.4		um of lost				12.0			
Intersection Capacity Utiliza	ation		78.0%	IC	CU Level	of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

	۶	<b>→</b>	•	•	<b>←</b>	•	1	<b>†</b>	<b>/</b>	<b>/</b>	<b>+</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	₽		7	₽		7	₽			₩.	
Traffic Volume (veh/h)	66	726	220	97	233	136	21	6	15	42	2	31
Future Volume (veh/h)	66	726	220	97	233	136	21	6	15	42	2	31
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		1.00	1.00		1.00
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	1856	1870	1826	1826	1767	1796	1678	1870	1678	1752	1870	1693
Adj Flow Rate, veh/h	72	789	239	105	253	148	23	7	16	46	2	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	2	5	5	9	7	15	2	15	10	2	14
Cap, veh/h	740	891	270	312	683	399	254	46	106	160	14	56
Arrive On Green	0.05	0.65	0.65	0.06	0.66	0.66	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1767	1370	415	1739	1036	606	1231	506	1156	711	149	610
Grp Volume(v), veh/h	72	0	1028	105	0	401	23	0	23	82	0	0
Grp Sat Flow(s),veh/h/ln	1767	0	1785	1739	0	1642	1231	0	1662	1470	0	0
Q Serve(g_s), s	0.8	0.0	28.1	1.1	0.0	6.5	0.0	0.0	0.8	2.4	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	28.1	1.1	0.0	6.5	0.8	0.0	0.8	3.2	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.37	1.00		0.70	0.56		0.41
Lane Grp Cap(c), veh/h	740	0	1161	312	0	1082	254	0	152	229	0	0
V/C Ratio(X)	0.10	0.00	0.89	0.34	0.00	0.37	0.09	0.00	0.15	0.36	0.00	0.00
Avail Cap(c_a), veh/h	926	0	1839	480	0	1691	515	0	505	543	0	0
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.2	0.0	8.5	11.0	0.0	4.6	24.8	0.0	24.8	25.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.9	0.5	0.0	0.2	0.1	0.0	0.3	0.7	0.0	0.0
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	0.1	0.0	7.3	0.7	0.0	1.4	0.3	0.0	0.3	1.1	0.0	0.0
Unsig. Movement Delay, s/veh	3.2	0.0	11.5	11.5	0.0	4.7	24.9	0.0	25.1	26.6	0.0	0.0
LnGrp Delay(d),s/veh			11.5 B						25.1 C	20.0 C		0.0
LnGrp LOS	A	A 4400	Б	В	A 500	A	С	A 40	U	U	A	A
Approach Vol, veh/h		1100			506 6.1			46			82	
Approach LOS		10.9						25.0			26.6 C	
Approach LOS		В			Α			С			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.4	6.8	43.0		9.4	7.3	42.5				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		18.0	9.0	61.0		18.0	9.0	61.0				
Max Q Clear Time (g_c+I1), s		5.2	2.8	8.5		2.8	3.1	30.1				
Green Ext Time (p_c), s		0.2	0.0	2.3		0.1	0.1	8.4				
Intersection Summary												
HCM 6th Ctrl Delay			10.6									
HCM 6th LOS			В									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	f)		ሻ	ĵ.		ሻ	ĵ»			4	
Traffic Volume (vph)	50	394	21	21	644	257	158	45	99	22	2	24
Future Volume (vph)	50	394	21	21	644	257	158	45	99	22	2	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.90			0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1847		1770	1768		1766	1545			1545	
Flt Permitted	0.12	1.00		0.47	1.00		0.82	1.00			0.85	
Satd. Flow (perm)	230	1847		871	1768		1522	1545			1337	
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)	53	415	22	22	678	271	166	47	104	23	2	25
RTOR Reduction (vph)	0	2	0	0	14	0	0	71	0	0	20	0
Lane Group Flow (vph)	53	435	0	22	935	0	166	80	0	0	30	0
Confl. Peds. (#/hr)	4					4	1					1
Confl. Bikes (#/hr)	·		1			2	-					_
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	14%	5%	2%	17%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	, .	Perm	NA	7.0
Protected Phases	3	8		7	4		1 01111	6		1 01111	2	
Permitted Phases	8	•		4	•		6	•		2	_	
Actuated Green, G (s)	52.5	49.6		50.1	48.4		14.7	14.7		_	14.7	
Effective Green, g (s)	52.5	49.6		50.1	48.4		14.7	14.7			14.7	
Actuated g/C Ratio	0.67	0.64		0.64	0.62		0.19	0.19			0.19	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5			2.5	
Lane Grp Cap (vph)	212	1174		579	1097		286	291			251	
v/s Ratio Prot	c0.01	0.24		0.00	c0.53		200	0.05			201	
v/s Ratio Perm	0.16	0.24		0.02	60.55		c0.11	0.00			0.02	
v/c Ratio	0.10	0.37		0.02	0.85		0.58	0.28			0.02	
Uniform Delay, d1	10.7	6.8		5.2	11.9		28.8	27.1			26.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.5	0.1		0.0	6.5		2.5	0.4			0.2	
Delay (s)	11.2	6.9		5.2	18.4		31.3	27.5			26.4	
Level of Service	11.2 B	0.9 A		J.Z A	В		01.0 C	27.5 C			20.4 C	
Approach Delay (s)	U	7.4		^	18.1		U	29.5			26.4	
Approach LOS		7. <del>4</del>			В			29.5 C			20.4 C	
Intersection Summary		, ,										
			17.4	Ш	CM 2000	Lovel of 0	Comileo		D			
HCM 2000 Control Delay	noitu noti a		17.4	Н	CM 2000	Level of S	Service		В			
HCM 2000 Volume to Capa	acity ratio		0.76	0	um of la-4	time (a)			10.0			
Actuated Cycle Length (s)	ntion		78.0		um of lost				12.0			
Intersection Capacity Utiliza	auon		72.1%	IC	CU Level of	or Service			С			
Analysis Period (min)			15									
c Critical Lane Group												

	۶	<b>→</b>	•	•	<b>←</b>	4	1	<b>†</b>	~	<b>/</b>	<b>†</b>	√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	₽		ሻ	₽		ሻ	<b>₽</b>			4	
Traffic Volume (veh/h)	50	394	21	21	644	257	158	45	99	22	2	24
Future Volume (veh/h)	50	394	21	21	644	257	158	45	99	22	2	24
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		1.00	1.00		1.00
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	1693	1826	1870	1648
Adj Flow Rate, veh/h	53	415	22	22	678	271	166	47	104	23	2	25
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	14	5	2	17
Cap, veh/h	277	1104	59	640	769	307	339	82	181	133	35	83
Arrive On Green	0.04	0.63	0.63	0.02	0.61	0.61	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	1758	93	1781	1261	504	1380	517	1143	303	221	524
Grp Volume(v), veh/h	53	0	437	22	0	949	166	0	151	50	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1851	1781	0	1765	1380	0	1660	1048	0	0
Q Serve(g_s), s	0.7	0.0	7.1	0.3	0.0	28.2	1.6	0.0	5.2	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	7.1	0.3	0.0	28.2	6.9	0.0	5.2	5.3	0.0	0.0
Prop In Lane	1.00	0	0.05	1.00	0	0.29	1.00	0	0.69	0.46	^	0.50
Lane Grp Cap(c), veh/h	277	0	1163	640	0	1076	339	0	263	251	0	0
V/C Ratio(X)	0.19 466	0.00	0.38	0.03 862	0.00	0.88	0.49	0.00	0.57	0.20 436	0.00	0.00
Avail Cap(c_a), veh/h HCM Platoon Ratio	1.00	1.00	2116 1.00	1.00	1.00	2018 1.00	521 1.00	1.00	481 1.00	1.00	0 1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.0	0.00	5.6	4.6	0.00	10.2	24.9	0.00	24.2	22.7	0.00	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.0	0.0	1.9	0.8	0.0	1.5	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.2	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	0.0	0.0	1.9	0.0	0.0	8.0	2.3	0.0	2.1	0.6	0.0	0.0
Unsig. Movement Delay, s/veh		0.0	1.0	0.1	0.0	0.0	2.0	0.0	۷.۱	0.0	0.0	0.0
LnGrp Delay(d),s/veh	11.2	0.0	5.8	4.6	0.0	12.2	25.7	0.0	25.7	23.0	0.0	0.0
LnGrp LOS	В	Α	A	4.0 A	Α	В	C	Α	C	C	Α	Α
Approach Vol, veh/h		490	,,	,,	971			317			50	- / (
Approach Delay, s/veh		6.4			12.0			25.7			23.0	
Approach LOS		A			В			C			C	
•			_	_		^	7					
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.8	6.4	41.9		13.8	5.3	43.0				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s Max Q Clear Time (g_c+I1), s		18.0	9.0 2.7	71.0		18.0	9.0 2.3	71.0				
(6_ /-		7.3	0.0	30.2		8.9		9.1				
Green Ext Time (p_c), s		0.1	0.0	7.7		0.8	0.0	2.3				
Intersection Summary												
HCM 6th Ctrl Delay			13.2									
HCM 6th LOS			В									

APPENDIX J. **QUEUING ANALYSIS** 

## Intersection: 1: SW 124th Avenue & OR 99W (Pacific Highway)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	
Directions Served	T	T	R	L	L	Т	T	L	L	R	R	
Maximum Queue (ft)	1300	1367	410	730	615	276	259	166	144	207	226	
Average Queue (ft)	631	654	330	410	252	80	93	52	55	59	67	
95th Queue (ft)	1202	1257	516	685	482	206	201	116	118	143	155	
Link Distance (ft)	1714	1714		1829	1829	1829	1829	496	496			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			225							275	275	
Storage Blk Time (%)		46	17							0		
Queuing Penalty (veh)		201	79							0		

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

Movement	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	T	T	R	L	T	Т	
Maximum Queue (ft)	111	174	208	407	221	380	431	146	
Average Queue (ft)	43	50	63	188	28	217	74	51	
95th Queue (ft)	93	131	141	338	109	364	256	124	
Link Distance (ft)		1173	1027	1027			496	496	
Upstream Blk Time (%)							0		
Queuing Penalty (veh)							3		
Storage Bay Dist (ft)	25				150	200			
Storage Blk Time (%)	39	12		20		13	0		
Queuing Penalty (veh)	73	6		5		46	2		

## Intersection: 4: Site Access/SW 115th Avenue & SW Tualatin Road

Movement	EB	WB	NB	NB	SB	
Directions Served	L	L	L	TR	LTR	
Maximum Queue (ft)	56	36	35	47	98	
Average Queue (ft)	18	2	3	3	43	
95th Queue (ft)	49	17	23	23	81	
Link Distance (ft)			552	552	1330	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	25	25				
Storage Blk Time (%)	2	0				
Queuing Penalty (veh)	15	1				

## Intersection: 5: SW Tualatin Road & SW 112th Avenue

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	14	73
Average Queue (ft)	1	23
95th Queue (ft)	10	56
Link Distance (ft)		540
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

## Intersection: 6: SW 108th Ave & SW Tualatin Road

Movement	EB	WB	NB
Directions Served	TR	L	LR
Maximum Queue (ft)	5	72	46
Average Queue (ft)	0	22	5
95th Queue (ft)	4	57	25
Link Distance (ft)	1064		285
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		25	
Storage Blk Time (%)		5	
Queuing Penalty (veh)		16	

### Intersection: 8: SW 108th Ave & Center Access

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

## Intersection: 9: SW 108th Ave & South Access

Movement
Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Intersection: 10: SW 124th Avenue & SW Leveton Drive

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	TR	L	TR	L	Т	TR	L	Т	TR	
Maximum Queue (ft)	62	196	69	81	70	80	193	139	170	185	
Average Queue (ft)	6	85	9	26	18	24	75	61	47	68	
95th Queue (ft)	33	168	43	66	51	63	146	113	133	155	
Link Distance (ft)		1016		1226		1440	1440		1027	1027	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100		150		150			150			
Storage Blk Time (%)		10						0	0		
Queuing Penalty (veh)		1						0	1		

#### Intersection: 11: SW 118th Drive/JAE Access & SW Leveton Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	96	70	55	49
Average Queue (ft)	59	25	17	5
95th Queue (ft)	87	55	41	28
Link Distance (ft)	1226	1030	498	610
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 12: SW Leveton Drive & West Access

Movement	EB	SB	SB
Directions Served	LT	L	R
Maximum Queue (ft)	53	40	56
Average Queue (ft)	14	9	16
95th Queue (ft)	47	34	48
Link Distance (ft)	1030	531	531
Upstream Blk Time (%)			
Oversing Denethy (vol)			

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Intersection: 13: SW Leveton Drive & Center Access

Movement	EB	SB	SB
Directions Served	LT	L	R
Maximum Queue (ft)	40	14	35
Average Queue (ft)	3	1	5
95th Queue (ft)	20	11	25
Link Distance (ft)	860	353	353
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 14: Calmax Technology Access/East Access & SW Leveton Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	45	10	21	79
Average Queue (ft)	9	0	1	10
95th Queue (ft)	36	5	12	47
Link Distance (ft)	362	556	617	361
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 15: SW 108th Ave & SW Leveton Drive

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	74	40	6
Average Queue (ft)	36	7	0
95th Queue (ft)	61	30	5
Link Distance (ft)	556	796	207
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

#### Intersection: 16: SW Herman Road & SW 108th Ave

Movement	EB	EB	WB	SB	SB	
Directions Served	L	T	TR	L	R	
Maximum Queue (ft)	63	158	162	77	38	
Average Queue (ft)	8	45	49	23	5	
95th Queue (ft)	35	118	117	56	22	
Link Distance (ft)		933	994		796	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100			135		
Storage Blk Time (%)	0	1				
Queuing Penalty (veh)	0	0				

## Intersection: 17: SW Teton Avenue & SW Tualatin Road

Movement	EB	WB	WB	NB	NB	
Directions Served	TR	L	Т	L	R	
Maximum Queue (ft)	22	90	46	132	94	
Average Queue (ft)	2	31	1	53	42	
95th Queue (ft)	14	70	20	105	80	
Link Distance (ft)	169		1000		1711	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		25		100		
Storage Blk Time (%)		10		2	0	
Queuing Penalty (veh)		31		1	0	

## Intersection: 18: SW 115th Avenue & SW Hazelbrook Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	44	132
Average Queue (ft)	4	55
95th Queue (ft)	23	97
Link Distance (ft)	1163	1330
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 19: OR 99W (Pacific Highway) & SW Hazelbrook Road

Movement	WB	SB	SB
Directions Served	R	Т	T
Maximum Queue (ft)	197	136	130
Average Queue (ft)	21	7	7
95th Queue (ft)	113	98	107
Link Distance (ft)	1290	1944	1944
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 20: SW Teton Avenue & SW Herman Road

Movement	EB	EB	WB	WB	NB	NB	SB	SB	
Directions Served	L	TR	L	TR	L	TR	L	TR	
Maximum Queue (ft)	53	283	70	292	154	176	88	171	
Average Queue (ft)	4	116	12	115	84	49	15	64	
95th Queue (ft)	27	226	45	228	144	131	53	129	
Link Distance (ft)		994		1022		604		1711	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		100		60		50		
Storage Blk Time (%)		10	0	9	12	3	1	10	
Queuing Penalty (veh)		1	0	2	13	8	1	2	

## Intersection: 21: OR 99W (Pacific Highway) & SW Fischer Road

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	Т	T	T	R
Maximum Queue (ft)	456	657	432	672	679	932	558	331
Average Queue (ft)	279	289	314	258	253	245	224	55
95th Queue (ft)	467	563	517	670	642	659	498	224
Link Distance (ft)		1160		1944	1944	2374	2374	
Upstream Blk Time (%)						0		
Queuing Penalty (veh)						0		
Storage Bay Dist (ft)	275		435					200
Storage Blk Time (%)	20	15	15	2		6	9	
Queuing Penalty (veh)	78	34	96	2		0	11	

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	L	LT	R	L	Т	T	R	L	L	T
Maximum Queue (ft)	145	205	326	397	269	151	540	575	315	343	426	359
Average Queue (ft)	29	93	188	230	109	56	307	316	167	202	238	197
95th Queue (ft)	101	170	309	363	206	124	517	538	364	304	348	322
Link Distance (ft)		503		959	959		2374	2374				1364
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	275		300			550			140	265	265	
Storage Blk Time (%)		0	0	3			0	25	2	1	5	2
Queuing Penalty (veh)		0	1	5			0	86	11	4	23	10

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	373	22
Average Queue (ft)	192	2
95th Queue (ft)	319	12
Link Distance (ft)	1364	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		400
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

## Zone Summary

Zone wide Queuing Penalty: 871

## Intersection: 1: SW 124th Avenue & OR 99W (Pacific Highway)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	
Directions Served	Т	T	R	L	L	T	T	L	L	R	R	
Maximum Queue (ft)	1311	1306	410	585	460	399	438	472	510	410	248	
Average Queue (ft)	626	608	215	284	209	179	191	258	257	128	89	
95th Queue (ft)	1252	1242	497	520	405	378	397	405	423	315	195	
Link Distance (ft)	1714	1714		1829	1829	1829	1829	496	496			
Upstream Blk Time (%)	1	1						0	1			
Queuing Penalty (veh)	0	0						1	4			
Storage Bay Dist (ft)			225							275	275	
Storage Blk Time (%)		48	0						11	0	0	
Queuing Penalty (veh)		95	1						71	0	0	

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

Movement	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	T	T	R	L	T	Т	
Maximum Queue (ft)	121	399	246	334	125	397	502	272	
Average Queue (ft)	33	136	117	193	28	159	63	60	
95th Queue (ft)	83	303	205	297	82	325	260	175	
Link Distance (ft)		1173	1027	1027			496	496	
Upstream Blk Time (%)							0	0	
Queuing Penalty (veh)							2	0	
Storage Bay Dist (ft)	25				150	200			
Storage Blk Time (%)	32	21		22		8			
Queuing Penalty (veh)	158	7		10		17			

## Intersection: 4: Site Access/SW 115th Avenue & SW Tualatin Road

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	TR	LTR
Maximum Queue (ft)	81	32	14	41	59	92
Average Queue (ft)	29	1	0	2	10	34
95th Queue (ft)	66	23	7	18	41	71
Link Distance (ft)		1193		800	552	1330
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	25		25			
Storage Blk Time (%)	9		0	0		
Queuing Penalty (veh)	33		0	0		

## Intersection: 5: SW Tualatin Road & SW 112th Avenue

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	44	52	48	40
Average Queue (ft)	9	2	3	10
95th Queue (ft)	35	22	25	36
Link Distance (ft)		800	1064	540
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	25			
Storage Blk Time (%)	2	0		
Queuing Penalty (veh)	8	0		

## Intersection: 6: SW 108th Ave & SW Tualatin Road

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	27	70
Average Queue (ft)	2	27
95th Queue (ft)	14	59
Link Distance (ft)		285
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	2	

#### Intersection: 8: SW 108th Ave & Center Access

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

#### Intersection: 9: SW 108th Ave & South Access

Movement
Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Intersection: 10: SW 124th Avenue & SW Leveton Drive

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR	
Maximum Queue (ft)	80	91	76	146	50	194	188	68	133	152	
Average Queue (ft)	16	19	30	57	2	81	77	22	40	66	
95th Queue (ft)	50	58	65	100	16	151	154	55	105	128	
Link Distance (ft)		1016		1226		1440	1440		1027	1027	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100		150		150			150			
Storage Blk Time (%)		0		0		1			0		
Queuing Penalty (veh)		0		0		0			0		

#### Intersection: 11: SW 118th Drive/JAE Access & SW Leveton Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	67	102	59	40
Average Queue (ft)	29	47	18	12
95th Queue (ft)	55	77	44	39
Link Distance (ft)	1226	1030	498	610
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 12: SW Leveton Drive & West Access

Movement	EB	SB	SB
	ED	JD	SD
Directions Served	LT	L	R
Maximum Queue (ft)	28	73	113
Average Queue (ft)	2	36	49
95th Queue (ft)	14	62	83
Link Distance (ft)	1030	531	531
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 13: SW Leveton Drive & Center Access

Movement	EB	SB	SB
Directions Served	LT	L	R
Maximum Queue (ft)	19	46	58
Average Queue (ft)	1	20	23
95th Queue (ft)	10	48	54
Link Distance (ft)	860	353	353
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 14: Calmax Technology Access/East Access & SW Leveton Drive

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	35	74
Average Queue (ft)	4	36
95th Queue (ft)	23	64
Link Distance (ft)	617	361
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 15: SW 108th Ave & SW Leveton Drive

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	80	19
Average Queue (ft)	44	1
95th Queue (ft)	68	8
Link Distance (ft)	556	796
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 16: SW Herman Road & SW 108th Ave

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	50	159	243	116	30
Average Queue (ft)	4	61	103	56	5
95th Queue (ft)	24	116	184	99	19
Link Distance (ft)		933	994		796
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100			135	
Storage Blk Time (%)	0	1		0	
Queuing Penalty (veh)	0	0		0	

## Intersection: 17: SW Teton Avenue & SW Tualatin Road

Movement	EB	WB	NB	NB	
Directions Served	TR	L	L	R	
Maximum Queue (ft)	17	43	174	241	
Average Queue (ft)	0	14	93	57	
95th Queue (ft)	4	42	169	162	
Link Distance (ft)	169			1711	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		25	100		
Storage Blk Time (%)		2	16	0	
Queuing Penalty (veh)		15	10	0	

## Intersection: 18: SW 115th Avenue & SW Hazelbrook Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	54	129
Average Queue (ft)	5	61
95th Queue (ft)	30	104
Link Distance (ft)	1163	1330
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 19: OR 99W (Pacific Highway) & SW Hazelbrook Road

Movement	WB	NB	SB	SB
Directions Served	R	T	Т	Т
Maximum Queue (ft)	435	27	108	106
Average Queue (ft)	157	1	5	7
95th Queue (ft)	440	15	79	90
Link Distance (ft)	1290	1829	1944	1944
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 20: SW Teton Avenue & SW Herman Road

Movement	EB	EB	WB	WB	NB	NB	SB	SB	
Directions Served	L	TR	L	TR	L	TR	L	TR	
Maximum Queue (ft)	26	244	114	201	141	154	56	192	
Average Queue (ft)	4	120	24	87	50	51	9	64	
95th Queue (ft)	17	205	75	164	107	116	38	136	
Link Distance (ft)		994		1022		604		1711	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		100		60		50		
Storage Blk Time (%)		10	0	5	5	4	0	11	
Queuing Penalty (veh)		1	1	2	9	6	0	2	

## Intersection: 21: OR 99W (Pacific Highway) & SW Fischer Road

Movement	EB	EB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	L	T	Т	Т	T	R	
Maximum Queue (ft)	460	834	460	1454	1458	1300	1329	400	
Average Queue (ft)	278	345	427	743	685	632	645	183	
95th Queue (ft)	470	676	534	1606	1639	1250	1291	462	
Link Distance (ft)		1160		1944	1944	2374	2374		
Upstream Blk Time (%)				0	4				
Queuing Penalty (veh)				0	33				
Storage Bay Dist (ft)	275		435					200	
Storage Blk Time (%)	19	25	47	1		25	32	0	
Queuing Penalty (veh)	61	45	340	2		0	97	2	

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	L	LT	R	L	T	Т	R	L	L	T
Maximum Queue (ft)	171	230	375	794	768	674	808	833	315	345	419	594
Average Queue (ft)	54	119	329	508	322	188	467	486	224	219	263	326
95th Queue (ft)	137	204	428	896	768	429	721	745	429	318	391	507
Link Distance (ft)		503		959	959		2374	2374				1364
Upstream Blk Time (%)				6	6							
Queuing Penalty (veh)				0	0							
Storage Bay Dist (ft)	275		300			550			140	265	265	
Storage Blk Time (%)			14	39			5	42	0	2	8	15
Queuing Penalty (veh)			45	101			7	94	1	9	42	65

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	591	19
Average Queue (ft)	331	4
95th Queue (ft)	500	15
Link Distance (ft)	1364	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		400
Storage Blk Time (%)	3	
Queuing Penalty (veh)	1	

## Zone Summary

Zone wide Queuing Penalty: 1399

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	Т	Т	R	L	T	Т
Maximum Queue (ft)	114	450	359	543	335	399	422	344
Average Queue (ft)	33	225	185	294	57	197	78	72
95th Queue (ft)	85	402	306	470	218	362	282	202
Link Distance (ft)		1173	1027	1027			496	496
Upstream Blk Time (%)							1	0
Queuing Penalty (veh)							3	0
Storage Bay Dist (ft)	25				150	200		
Storage Blk Time (%)	29	34		35		12	0	
Queuing Penalty (veh)	143	12		17		27	2	

## Intersection: 1: SW 124th Avenue & OR 99W (Pacific Highway)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	
Directions Served	T	T	R	L	L	T	T	L	L	R	R	
Maximum Queue (ft)	1283	1316	410	1106	1061	706	625	160	167	183	202	
Average Queue (ft)	731	752	318	704	566	212	166	61	64	57	63	
95th Queue (ft)	1587	1649	507	1236	1145	698	529	128	129	138	146	
Link Distance (ft)	1714	1714		1829	1829	1829	1829	496	496			
Upstream Blk Time (%)	3	5										
Queuing Penalty (veh)	0	0										
Storage Bay Dist (ft)			225							275	275	
Storage Blk Time (%)		40	24								0	
Queuing Penalty (veh)		199	112								0	

#### Intersection: 2: SW 124th Avenue & SW Tualatin Road

Movement	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	T	Т	R	L	T	T	
Maximum Queue (ft)	114	145	210	416	124	388	408	182	
Average Queue (ft)	45	46	86	207	24	255	123	71	
95th Queue (ft)	94	111	177	356	81	397	340	159	
Link Distance (ft)		1173	1027	1027			496	496	
Upstream Blk Time (%)							0		
Queuing Penalty (veh)							2		
Storage Bay Dist (ft)	25				150	200			
Storage Blk Time (%)	43	12		24		19	0		
Queuing Penalty (veh)	83	6		7		80	2		

## Intersection: 4: Site Access/SW 115th Avenue & SW Tualatin Road

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	L	TR	LTR
Maximum Queue (ft)	64	9	42	5	38	38	105
Average Queue (ft)	20	0	3	0	2	4	42
95th Queue (ft)	53	6	19	4	19	24	80
Link Distance (ft)		1193		800	552	552	1330
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	25		25				
Storage Blk Time (%)	3	0	1	0			
Queuing Penalty (veh)	23	0	2	0			

## Intersection: 5: SW Tualatin Road & SW 112th Avenue

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	21	62
Average Queue (ft)	1	23
95th Queue (ft)	12	54
Link Distance (ft)		540
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

## Intersection: 6: SW 108th Ave & SW Tualatin Road

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	62	81	45	50
Average Queue (ft)	2	25	2	7
95th Queue (ft)	30	64	29	32
Link Distance (ft)	1064		727	285
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		25		
Storage Blk Time (%)		6	0	
Queuing Penalty (veh)		22	0	

#### Intersection: 8: SW 108th Ave & Center Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	35	39
Average Queue (ft)	16	8
95th Queue (ft)	44	32
Link Distance (ft)	421	252
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 9: SW 108th Ave & South Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	35	38
Average Queue (ft)	7	4
95th Queue (ft)	29	22
Link Distance (ft)	415	207
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 10: SW 124th Avenue & SW Leveton Drive

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	TR	L	TR	L	Т	TR	L	Т	TR	
Maximum Queue (ft)	84	206	68	75	69	154	238	229	248	214	
Average Queue (ft)	5	93	14	26	17	42	98	87	56	73	
95th Queue (ft)	35	173	50	60	51	105	186	171	152	163	
Link Distance (ft)		1016		1226		1440	1440		1027	1027	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100		150		150			150			
Storage Blk Time (%)	0	10				0		2	0		
Queuing Penalty (veh)	0	1				0		6	1		

## Intersection: 11: SW 118th Drive/JAE Access & SW Leveton Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	151	58	71	40
Average Queue (ft)	73	30	21	4
95th Queue (ft)	112	54	51	23
Link Distance (ft)	1226	1030	498	610
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 12: SW Leveton Drive & West Access

Movement	EB	SB	SB
Directions Served	LT	L	R
Maximum Queue (ft)	72	52	47
Average Queue (ft)	19	8	13
95th Queue (ft)	55	32	43
Link Distance (ft)	1030	531	531
Upstream Blk Time (%)			
Ouguing Penalty (yeh)			

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Intersection: 13: SW Leveton Drive & Center Access

Movement	EB	SB	SB
Directions Served	LT	L	R
Maximum Queue (ft)	55	27	35
Average Queue (ft)	5	2	5
95th Queue (ft)	28	14	24
Link Distance (ft)	860	353	353
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 14: Calmax Technology Access/East Access & SW Leveton Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	6	31	46	60
Average Queue (ft)	0	2	13	3
95th Queue (ft)	4	13	42	25
Link Distance (ft)	362	556	617	361
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 15: SW 108th Ave & SW Leveton Drive

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	124	58
Average Queue (ft)	62	10
95th Queue (ft)	98	41
Link Distance (ft)	556	796
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Intersection: 16: SW Herman Road & SW 108th Ave

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	56	160	171	89	35
Average Queue (ft)	9	59	69	29	5
95th Queue (ft)	38	131	140	61	22
Link Distance (ft)		933	994		796
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100			135	
Storage Blk Time (%)	0	1		0	
Queuing Penalty (veh)	0	0		0	

## Intersection: 17: SW Teton Avenue & SW Tualatin Road

Movement	EB	WB	WB	NB	NB	
Directions Served	TR	L	Т	L	R	
Maximum Queue (ft)	41	73	49	137	123	
Average Queue (ft)	3	32	2	59	46	
95th Queue (ft)	19	64	26	114	89	
Link Distance (ft)	169		1000		1711	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		25		100		
Storage Blk Time (%)		11		3	0	
Queuing Penalty (veh)		35		2	0	

## Intersection: 18: SW 115th Avenue & SW Hazelbrook Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	42	131
Average Queue (ft)	4	57
95th Queue (ft)	22	100
Link Distance (ft)	1163	1330
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 19: OR 99W (Pacific Highway) & SW Hazelbrook Road

Movement	WB	SB
Directions Served	R	T
Maximum Queue (ft)	158	6
Average Queue (ft)	25	0
95th Queue (ft)	121	5
Link Distance (ft)	1290	1944
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 20: SW Teton Avenue & SW Herman Road

Movement	EB	EB	WB	WB	NB	NB	SB	SB	
Directions Served	L	TR	L	TR	L	TR	L	TR	
Maximum Queue (ft)	96	300	105	314	158	253	73	165	
Average Queue (ft)	5	122	19	136	96	63	12	69	
95th Queue (ft)	46	228	71	258	163	172	46	136	
Link Distance (ft)		994		1022		604		1711	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		100		60		50		
Storage Blk Time (%)		9	0	12	17	4	1	13	
Queuing Penalty (veh)		0	0	2	20	12	1	3	

## Intersection: 21: OR 99W (Pacific Highway) & SW Fischer Road

Movement	EB	EB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	L	T	Т	Т	Т	R	
Maximum Queue (ft)	460	838	459	918	903	534	541	400	
Average Queue (ft)	287	330	309	401	397	221	221	47	
95th Queue (ft)	475	696	548	1012	996	477	481	203	
Link Distance (ft)		1160		1944	1944	2374	2374		
Upstream Blk Time (%)		0							
Queuing Penalty (veh)		0							
Storage Bay Dist (ft)	275		435					200	
Storage Blk Time (%)	14	22	32	2		5	8		
Queuing Penalty (veh)	57	51	214	2		0	11		

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	L	LT	R	L	Т	T	R	L	L	T
Maximum Queue (ft)	157	205	301	366	297	148	548	569	315	329	353	396
Average Queue (ft)	36	104	184	224	103	62	331	348	185	196	228	220
95th Queue (ft)	113	182	273	323	200	127	528	549	392	294	325	349
Link Distance (ft)		503		959	959		2374	2374				1364
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	275		300			550			140	265	265	
Storage Blk Time (%)		0	0	2			0	27	2	1	4	4
Queuing Penalty (veh)		0	0	3			0	98	13	4	20	16

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	402	16
Average Queue (ft)	206	3
95th Queue (ft)	344	11
Link Distance (ft)	1364	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		400
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

## Zone Summary

Zone wide Queuing Penalty: 1111

## Intersection: 1: SW 124th Avenue & OR 99W (Pacific Highway)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	
Directions Served	Т	T	R	L	L	T	T	L	L	R	R	
Maximum Queue (ft)	932	922	410	663	573	457	474	495	522	410	265	
Average Queue (ft)	486	468	198	390	286	218	226	290	295	187	111	
95th Queue (ft)	892	893	462	648	535	422	436	468	501	401	228	
Link Distance (ft)	1714	1714		1829	1829	1829	1829	496	496			
Upstream Blk Time (%)								0	4			
Queuing Penalty (veh)								3	21			
Storage Bay Dist (ft)			225							275	275	
Storage Blk Time (%)		40	0						20	0	0	
Queuing Penalty (veh)		86	1						153	1	0	

#### Intersection: 2: SW 124th Avenue & SW Tualatin Road

Movement	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	T	T	R	L	Т	Т	
Maximum Queue (ft)	112	600	354	607	335	400	498	240	
Average Queue (ft)	35	239	158	279	60	210	92	76	
95th Queue (ft)	88	611	282	504	225	364	302	181	
Link Distance (ft)		1173	1027	1027			496	496	
Upstream Blk Time (%)		0					1		
Queuing Penalty (veh)		1					4		
Storage Bay Dist (ft)	25				150	200			
Storage Blk Time (%)	30	33		35		15	0		
Queuing Penalty (veh)	155	12		17		36	1		

## Intersection: 4: Site Access/SW 115th Avenue & SW Tualatin Road

Movement	EB	WB	WB	NB	SB	
Directions Served	L	L	TR	TR	LTR	
Maximum Queue (ft)	64	14	54	55	90	
Average Queue (ft)	29	1	4	12	35	
95th Queue (ft)	60	11	26	43	72	
Link Distance (ft)			800	552	1330	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	25	25				
Storage Blk Time (%)	10	0	0			
Queuing Penalty (veh)	37	1	0			

## Intersection: 5: SW Tualatin Road & SW 112th Avenue

Movement	EB	EB	WB	SB	
Directions Served	L	T	TR	LR	
Maximum Queue (ft)	45	41	43	45	
Average Queue (ft)	8	2	2	11	
95th Queue (ft)	33	22	19	39	
Link Distance (ft)		800	1064	540	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	25				
Storage Blk Time (%)	2	0			
Queuing Penalty (veh)	6	0			

## Intersection: 6: SW 108th Ave & SW Tualatin Road

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	34	107
Average Queue (ft)	5	41
95th Queue (ft)	25	80
Link Distance (ft)		285
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	1	
Queuing Penalty (veh)	6	

#### Intersection: 8: SW 108th Ave & Center Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	89	18
Average Queue (ft)	44	0
95th Queue (ft)	66	6
Link Distance (ft)	421	252
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 9: SW 108th Ave & South Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	74	34
Average Queue (ft)	27	1
95th Queue (ft)	58	13
Link Distance (ft)	415	207
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 10: SW 124th Avenue & SW Leveton Drive

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	TR	L	TR	L	Т	TR	L	Т	TR	
Maximum Queue (ft)	55	84	120	188	64	225	238	91	121	141	
Average Queue (ft)	16	21	49	81	6	100	105	35	42	68	
95th Queue (ft)	43	56	98	146	33	179	200	73	100	125	
Link Distance (ft)		1016		1226		1440	1440		1027	1027	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100		150		150			150			
Storage Blk Time (%)		0	0	1		2			0		
Queuing Penalty (veh)		0	0	1		0			0		

## Intersection: 11: SW 118th Drive/JAE Access & SW Leveton Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	72	159	62	34
Average Queue (ft)	37	65	18	12
95th Queue (ft)	61	112	43	38
Link Distance (ft)	1226	1030	498	610
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 12: SW Leveton Drive & West Access

Movement	EB	SB	SB
Directions Served	LT	L	R
Maximum Queue (ft)	33	91	142
Average Queue (ft)	2	37	51
95th Queue (ft)	15	69	92
Link Distance (ft)	1030	531	531
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

#### Intersection: 13: SW Leveton Drive & Center Access

Movement	EB	SB	SB
Directions Served	LT	L	R
Maximum Queue (ft)	33	60	62
Average Queue (ft)	2	20	27
95th Queue (ft)	18	51	57
Link Distance (ft)	860	353	353
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 14: Calmax Technology Access/East Access & SW Leveton Drive

Movement	WB	NB
Directions Served	LTR	LTR
Maximum Queue (ft)	34	62
Average Queue (ft)	3	27
95th Queue (ft)	17	56
Link Distance (ft)	556	617
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 15: SW 108th Ave & SW Leveton Drive

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	105	50
Average Queue (ft)	49	10
95th Queue (ft)	78	37
Link Distance (ft)	556	796
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Intersection: 16: SW Herman Road & SW 108th Ave

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	45	175	270	173	40
Average Queue (ft)	6	80	120	85	9
95th Queue (ft)	29	142	210	149	28
Link Distance (ft)		933	994		796
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100			135	
Storage Blk Time (%)		2		1	
Queuing Penalty (veh)		0		0	

## Intersection: 17: SW Teton Avenue & SW Tualatin Road

Movement	EB	WB	NB	NB	
Directions Served	TR	L	L	R	
Maximum Queue (ft)	14	51	192	316	
Average Queue (ft)	1	14	104	63	
95th Queue (ft)	8	43	186	210	
Link Distance (ft)	169			1711	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		25	100		
Storage Blk Time (%)		3	20	0	
Queuing Penalty (veh)		25	14	0	

## Intersection: 18: SW 115th Avenue & SW Hazelbrook Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	100	302
Average Queue (ft)	9	75
95th Queue (ft)	60	180
Link Distance (ft)	1163	1330
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 19: OR 99W (Pacific Highway) & SW Hazelbrook Road

Movement	WB	NB	NB	NB	SB	SB
Directions Served	R	Т	Т	R	T	T
Maximum Queue (ft)	626	263	249	85	132	130
Average Queue (ft)	215	43	40	0	5	5
95th Queue (ft)	662	341	336	0	88	84
Link Distance (ft)	1290	1829	1829		1944	1944
Upstream Blk Time (%)	3					
Queuing Penalty (veh)	8					
Storage Bay Dist (ft)				335		
Storage Blk Time (%)			2			
Queuing Penalty (veh)			1			

## Intersection: 20: SW Teton Avenue & SW Herman Road

Movement	EB	EB	WB	WB	NB	NB	SB	SB	
Directions Served	L	TR	L	TR	L	TR	L	TR	
Maximum Queue (ft)	62	386	115	231	155	228	60	228	
Average Queue (ft)	3	172	27	95	69	73	10	83	
95th Queue (ft)	31	328	77	175	142	177	36	173	
Link Distance (ft)		994		1022		604		1711	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		100		60		50		
Storage Blk Time (%)		17	0	6	9	9	0	18	
Queuing Penalty (veh)		1	0	3	17	14	0	3	

## Intersection: 21: OR 99W (Pacific Highway) & SW Fischer Road

Movement	EB	EB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	L	Т	Т	Т	T	R	
Maximum Queue (ft)	460	952	460	1631	1623	1577	1598	400	
Average Queue (ft)	313	447	434	834	773	800	825	176	
95th Queue (ft)	506	875	522	1743	1742	1675	1723	453	
Link Distance (ft)		1160		1944	1944	2374	2374		
Upstream Blk Time (%)		0		2	7	0	0		
Queuing Penalty (veh)		0		17	60	0	0		
Storage Bay Dist (ft)	275		435					200	
Storage Blk Time (%)	22	41	51	0		28	34	0	
Queuing Penalty (veh)	70	75	400	0		0	103	2	

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	L	LT	R	L	T	Т	R	L	L	T
Maximum Queue (ft)	213	265	375	893	846	674	1085	1103	315	364	464	896
Average Queue (ft)	61	133	336	603	474	268	696	720	215	246	310	374
95th Queue (ft)	153	218	437	1042	1024	659	1146	1168	430	367	470	673
Link Distance (ft)		503		959	959		2374	2374				1364
Upstream Blk Time (%)				16	16							0
Queuing Penalty (veh)				0	0							0
Storage Bay Dist (ft)	275		300			550			140	265	265	
Storage Blk Time (%)	0	0	19	43			22	50	0	6	16	17
Queuing Penalty (veh)	0	0	64	113			28	117	0	33	88	79

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	859	106
Average Queue (ft)	373	8
95th Queue (ft)	637	72
Link Distance (ft)	1364	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		400
Storage Blk Time (%)	7	
Queuing Penalty (veh)	1	

## Zone Summary

Zone wide Queuing Penalty: 1880

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	Т	Т	R	L	T	Т
Maximum Queue (ft)	124	792	687	848	335	398	451	237
Average Queue (ft)	37	293	232	405	77	218	85	70
95th Queue (ft)	102	539	485	740	276	356	257	161
Link Distance (ft)		1173	1027	1027			496	496
Upstream Blk Time (%)			0	1			0	
Queuing Penalty (veh)			0	3			1	
Storage Bay Dist (ft)	25				150	200		
Storage Blk Time (%)	28	44		45		19	0	
Queuing Penalty (veh)	147	16		21		45	1	

## Intersection: 1: SW 124th Avenue & OR 99W (Pacific Highway)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	
Directions Served	T	T	R	L	L	T	T	L	L	R	R	
Maximum Queue (ft)	1554	1640	410	1374	1305	1028	898	142	155	208	188	
Average Queue (ft)	939	981	377	962	839	416	312	58	64	60	65	
95th Queue (ft)	1769	1822	501	1513	1467	1000	829	120	130	147	147	
Link Distance (ft)	1714	1714		1829	1829	1829	1829	496	496			
Upstream Blk Time (%)	6	10										
Queuing Penalty (veh)	0	0										
Storage Bay Dist (ft)			225							275	275	
Storage Blk Time (%)		56	33								0	
Queuing Penalty (veh)		288	153								0	

#### Intersection: 2: SW 124th Avenue & SW Tualatin Road

Movement	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	T	Т	R	L	T	Т	
Maximum Queue (ft)	120	181	184	430	193	400	510	212	
Average Queue (ft)	41	55	67	205	44	319	182	76	
95th Queue (ft)	89	136	148	345	137	449	493	165	
Link Distance (ft)		1173	1027	1027			496	496	
Upstream Blk Time (%)							2		
Queuing Penalty (veh)							15		
Storage Bay Dist (ft)	25				150	200			
Storage Blk Time (%)	44	13		23		27	1		
Queuing Penalty (veh)	92	6		11		100	11		

## Intersection: 4: Site Access/SW 115th Avenue & SW Tualatin Road

Movement	EB	EB	WB	WB	NB	NB	SB	
Directions Served	L	TR	L	TR	L	TR	LTR	
Maximum Queue (ft)	74	92	120	190	118	77	158	
Average Queue (ft)	19	9	55	18	28	19	64	
95th Queue (ft)	55	45	114	104	87	62	129	
Link Distance (ft)		1193		800	552	552	1330	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	25		25					
Storage Blk Time (%)	2	0	20	0				
Queuing Penalty (veh)	20	0	71	0				

## Intersection: 5: SW Tualatin Road & SW 112th Avenue

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (ft)	32	7	58
Average Queue (ft)	2	0	25
95th Queue (ft)	16	5	55
Link Distance (ft)		1064	540
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	25		
Storage Blk Time (%)	0		
Queuing Penalty (veh)	1		

## Intersection: 6: SW 108th Ave & SW Tualatin Road

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	11	60	12	90
Average Queue (ft)	0	20	0	40
95th Queue (ft)	6	55	9	74
Link Distance (ft)	1064		727	285
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		25		
Storage Blk Time (%)		4	0	
Queuing Penalty (veh)		15	0	

#### Intersection: 8: SW 108th Ave & Center Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	46	46
Average Queue (ft)	14	6
95th Queue (ft)	43	30
Link Distance (ft)	421	252
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 9: SW 108th Ave & South Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	35	39
Average Queue (ft)	7	3
95th Queue (ft)	29	18
Link Distance (ft)	415	207
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 10: SW 124th Avenue & SW Leveton Drive

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	TR	L	TR	L	Т	TR	L	Т	TR	
Maximum Queue (ft)	89	216	58	85	72	90	261	140	180	192	
Average Queue (ft)	8	94	14	28	19	26	95	51	59	80	
95th Queue (ft)	45	188	47	64	54	69	193	102	142	161	
Link Distance (ft)		1016		1226		1440	1440		1027	1027	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100		150		150			150			
Storage Blk Time (%)	0	12						0	0		
Queuing Penalty (veh)	0	1						0	1		

## Intersection: 11: SW 118th Drive/JAE Access & SW Leveton Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	126	75	71	42
Average Queue (ft)	61	32	24	6
95th Queue (ft)	97	60	51	27
Link Distance (ft)	1226	1030	498	610
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 12: SW Leveton Drive & West Access

Movement	SB	SB
Directions Served	L	R
Maximum Queue (ft)	20	39
Average Queue (ft)	1	4
95th Queue (ft)	9	22
Link Distance (ft)	531	531
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Intersection: 13: SW Leveton Drive & Center Access

Movement	EB	WB	SB	SB
Directions Served	LT	TR	L	R
Maximum Queue (ft)	64	7	40	41
Average Queue (ft)	15	0	7	11
95th Queue (ft)	48	7	30	38
Link Distance (ft)	860	362	353	353
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 14: Calmax Technology Access/East Access & SW Leveton Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	24	28	41	38
Average Queue (ft)	1	2	16	3
95th Queue (ft)	13	16	45	20
Link Distance (ft)	362	556	617	361
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 15: SW 108th Ave & SW Leveton Drive

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	118	54	5
Average Queue (ft)	62	8	0
95th Queue (ft)	101	36	4
Link Distance (ft)	556	796	207
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

#### Intersection: 16: SW Herman Road & SW 108th Ave

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	67	190	209	93	39
Average Queue (ft)	12	63	76	34	4
95th Queue (ft)	46	154	154	72	21
Link Distance (ft)		933	994		796
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100			135	
Storage Blk Time (%)	0	2		0	
Queuing Penalty (veh)	0	0		0	

## Intersection: 17: SW Teton Avenue & SW Tualatin Road

Movement	EB	WB	WB	NB	NB	
Directions Served	TR	L	Т	L	R	
Maximum Queue (ft)	53	86	33	128	114	
Average Queue (ft)	2	32	1	58	40	
95th Queue (ft)	21	69	24	109	83	
Link Distance (ft)	169		1000		1711	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		25		100		
Storage Blk Time (%)		10		3	0	
Queuing Penalty (veh)		32		1	0	

## Intersection: 18: SW 115th Avenue & SW Hazelbrook Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	6	36	102
Average Queue (ft)	0	4	52
95th Queue (ft)	4	22	85
Link Distance (ft)	1290	1163	1330
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 19: OR 99W (Pacific Highway) & SW Hazelbrook Road

Movement	WB	SB	SB
Directions Served	R	T	Т
Maximum Queue (ft)	144	109	96
Average Queue (ft)	11	5	3
95th Queue (ft)	76	56	55
Link Distance (ft)	1290	1944	1944
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 20: SW Teton Avenue & SW Herman Road

Movement	EB	EB	WB	WB	NB	NB	SB	SB	
Directions Served	L	TR	L	TR	L	TR	L	TR	
Maximum Queue (ft)	57	360	96	363	158	275	95	194	
Average Queue (ft)	4	144	15	141	103	71	14	70	
95th Queue (ft)	27	277	56	276	166	196	47	148	
Link Distance (ft)		994		1022		604		1711	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		100		60		50		
Storage Blk Time (%)		14	0	13	21	4	0	14	
Queuing Penalty (veh)		1	0	3	24	11	1	3	

## Intersection: 21: OR 99W (Pacific Highway) & SW Fischer Road

Movement	EB	EB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	L	T	Т	T	T	R	
Maximum Queue (ft)	455	649	460	1203	1202	579	579	400	
Average Queue (ft)	291	345	396	602	571	269	256	68	
95th Queue (ft)	490	618	567	1244	1231	548	534	267	
Link Distance (ft)		1160		1944	1944	2374	2374		
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	275		435					200	
Storage Blk Time (%)	23	27	51	4		6	11		
Queuing Penalty (veh)	90	63	347	6		0	14		

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	L	LT	R	L	Т	T	R	L	L	T
Maximum Queue (ft)	150	189	319	378	219	159	566	620	315	324	390	444
Average Queue (ft)	31	94	190	231	101	60	331	351	182	199	234	232
95th Queue (ft)	104	167	290	348	179	124	518	569	386	299	345	385
Link Distance (ft)		503		959	959		2374	2374				1364
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	275		300			550			140	265	265	
Storage Blk Time (%)			0	2			0	28	2	1	5	5
Queuing Penalty (veh)			0	4			0	100	12	3	25	21

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	422	16
Average Queue (ft)	228	2
95th Queue (ft)	378	9
Link Distance (ft)	1364	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		400
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

## Zone Summary

Zone wide Queuing Penalty: 1546

## Intersection: 1: SW 124th Avenue & OR 99W (Pacific Highway)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	
Directions Served	Т	Т	R	L	L	T	T	L	L	R	R	
Maximum Queue (ft)	873	858	410	627	527	503	495	494	506	410	293	
Average Queue (ft)	434	417	175	351	276	222	235	299	300	168	102	
95th Queue (ft)	767	762	420	580	487	452	462	470	487	381	212	
Link Distance (ft)	1714	1714		1829	1829	1829	1829	496	496			
Upstream Blk Time (%)								0	2			
Queuing Penalty (veh)								3	13			
Storage Bay Dist (ft)			225							275	275	
Storage Blk Time (%)		37	0						19	0	0	
Queuing Penalty (veh)		81	0						146	1	0	

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

Movement	WB	WB	B46	NB	NB	NB	SB	SB	SB
Directions Served	L	R	T	T	T	R	L	T	Т
Maximum Queue (ft)	124	713	32	244	409	228	399	499	200
Average Queue (ft)	45	241	1	120	214	42	189	86	79
95th Queue (ft)	100	551	23	215	361	149	331	260	161
Link Distance (ft)		1173	1193	1027	1027			496	496
Upstream Blk Time (%)		0						1	
Queuing Penalty (veh)		3						3	
Storage Bay Dist (ft)	25					150	200		
Storage Blk Time (%)	36	28			26		13	1	
Queuing Penalty (veh)	232	13			13		31	2	

## Intersection: 4: Site Access/SW 115th Avenue & SW Tualatin Road

Movement	EB	EB	WB	WB	NB	NB	SB	
Directions Served	L	TR	L	TR	L	TR	LTR	
Maximum Queue (ft)	87	74	34	63	250	172	82	
Average Queue (ft)	31	3	4	5	101	64	32	
95th Queue (ft)	72	36	22	29	215	133	68	
Link Distance (ft)		1193		800	552	552	1330	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	25		25					
Storage Blk Time (%)	10	0	0	0				
Queuing Penalty (veh)	40	0	4	0				

## Intersection: 5: SW Tualatin Road & SW 112th Avenue

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (ft)	40	20	40
Average Queue (ft)	8	1	9
95th Queue (ft)	32	14	33
Link Distance (ft)		1064	540
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	25		
Storage Blk Time (%)	2		
Queuing Penalty (veh)	8		

### Intersection: 6: SW 108th Ave & SW Tualatin Road

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	35	120
Average Queue (ft)	5	48
95th Queue (ft)	24	95
Link Distance (ft)		285
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	1	
Queuing Penalty (veh)	7	

#### Intersection: 8: SW 108th Ave & Center Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	95	20
Average Queue (ft)	44	1
95th Queue (ft)	76	10
Link Distance (ft)	421	252
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 9: SW 108th Ave & South Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	64	33
Average Queue (ft)	26	2
95th Queue (ft)	57	16
Link Distance (ft)	415	207
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

### Intersection: 10: SW 124th Avenue & SW Leveton Drive

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	TR	L	TR	L	Т	TR	L	Т	TR	
Maximum Queue (ft)	79	125	110	138	65	185	198	90	148	174	
Average Queue (ft)	19	29	45	60	8	83	88	32	48	72	
95th Queue (ft)	55	81	87	107	38	153	157	72	120	140	
Link Distance (ft)		1016		1226		1440	1440		1027	1027	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100		150		150			150			
Storage Blk Time (%)		2	0	0		1			0		
Queuing Penalty (veh)		0	0	0		0			0		

### Intersection: 11: SW 118th Drive/JAE Access & SW Leveton Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	74	122	56	45
Average Queue (ft)	36	57	20	14
95th Queue (ft)	62	92	44	42
Link Distance (ft)	1226	1030	498	610
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 12: SW Leveton Drive & West Access

Movement	EB	SB
Directions Served	LT	L
Maximum Queue (ft)	14	27
Average Queue (ft)	0	1
95th Queue (ft)	7	12
Link Distance (ft)	1030	531
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Intersection: 13: SW Leveton Drive & Center Access

Movement	EB	WB	SB	SB
Movement	ED	WD	<u> </u>	SD
Directions Served	LT	TR	L	R
Maximum Queue (ft)	49	14	66	73
Average Queue (ft)	5	0	34	39
95th Queue (ft)	28	7	57	65
Link Distance (ft)	860	362	353	353
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 14: Calmax Technology Access/East Access & SW Leveton Drive

Movement	WB	NB
Directions Served	LTR	LTR
Maximum Queue (ft)	6	75
Average Queue (ft)	0	31
95th Queue (ft)	5	62
Link Distance (ft)	556	617
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 15: SW 108th Ave & SW Leveton Drive

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	90	46	7
Average Queue (ft)	47	8	0
95th Queue (ft)	75	34	5
Link Distance (ft)	556	796	207
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

#### Intersection: 16: SW Herman Road & SW 108th Ave

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	37	173	241	188	25
Average Queue (ft)	7	79	122	88	6
95th Queue (ft)	30	144	209	153	21
Link Distance (ft)		933	994		796
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100			135	
Storage Blk Time (%)		2		1	
Queuing Penalty (veh)		0		0	

### Intersection: 17: SW Teton Avenue & SW Tualatin Road

Movement	WB	NB	NB	
Directions Served	L	L	R	
Maximum Queue (ft)	61	199	307	
Average Queue (ft)	17	104	70	
95th Queue (ft)	49	190	206	
Link Distance (ft)			1711	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	25	100		
Storage Blk Time (%)	3	24	0	
Queuing Penalty (veh)	20	17	0	

## Intersection: 18: SW 115th Avenue & SW Hazelbrook Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	83	423
Average Queue (ft)	11	138
95th Queue (ft)	68	498
Link Distance (ft)	1163	1330
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

### Intersection: 19: OR 99W (Pacific Highway) & SW Hazelbrook Road

Movement	WB	NB	NB	SB	SB
Directions Served	R	T	Т	Т	Т
Maximum Queue (ft)	811	84	70	188	405
Average Queue (ft)	413	11	8	7	22
95th Queue (ft)	1107	82	63	128	332
Link Distance (ft)	1290	1829	1829	1944	1944
Upstream Blk Time (%)	5				0
Queuing Penalty (veh)	15				0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

### Intersection: 20: SW Teton Avenue & SW Herman Road

Movement	EB	EB	WB	WB	NB	NB	SB	SB	
Directions Served	L	TR	L	TR	L	TR	L	TR	
Maximum Queue (ft)	98	439	120	256	151	319	65	211	
Average Queue (ft)	9	189	26	104	73	81	10	71	
95th Queue (ft)	65	368	71	197	141	210	37	151	
Link Distance (ft)		994		1022		604		1711	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		100		60		50		
Storage Blk Time (%)		19	0	7	12	7	0	15	
Queuing Penalty (veh)		1	0	3	23	13	0	3	

## Intersection: 21: OR 99W (Pacific Highway) & SW Fischer Road

Movement	EB	EB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	L	Т	Т	Т	T	R	
Maximum Queue (ft)	460	935	460	1651	1634	1852	1849	400	
Average Queue (ft)	307	449	437	889	950	870	896	191	
95th Queue (ft)	516	953	524	1785	2093	1738	1779	467	
Link Distance (ft)		1160		1944	1944	2374	2374		
Upstream Blk Time (%)		2		1	17				
Queuing Penalty (veh)		0		6	155				
Storage Bay Dist (ft)	275		435					200	
Storage Blk Time (%)	26	31	53	0		32	37	0	
Queuing Penalty (veh)	86	57	423	1		0	111	2	

### Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	L	LT	R	L	T	T	R	L	L	T
Maximum Queue (ft)	201	252	375	849	685	596	1048	1080	315	350	464	545
Average Queue (ft)	60	129	331	483	308	240	642	665	237	217	269	343
95th Queue (ft)	155	219	428	781	633	558	1029	1054	433	319	411	504
Link Distance (ft)		503		959	959		2374	2374				1364
Upstream Blk Time (%)				0	0							
Queuing Penalty (veh)				0	0							
Storage Bay Dist (ft)	275		300			550			140	265	265	
Storage Blk Time (%)		0	13	41			19	48	0	1	7	15
Queuing Penalty (veh)		0	45	107			28	115	1	7	39	68

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	549	116
Average Queue (ft)	347	9
95th Queue (ft)	502	74
Link Distance (ft)	1364	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		400
Storage Blk Time (%)	4	
Queuing Penalty (veh)	1	

### Zone Summary

Zone wide Queuing Penalty: 1950

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	Т	T	R	L	T	Т
Maximum Queue (ft)	124	709	728	827	335	399	505	267
Average Queue (ft)	45	349	284	435	95	252	145	83
95th Queue (ft)	109	636	632	836	304	412	415	191
Link Distance (ft)		1173	1027	1027			496	496
Upstream Blk Time (%)			0	4			7	0
Queuing Penalty (veh)			0	17			34	0
Storage Bay Dist (ft)	25				150	200		
Storage Blk Time (%)	30	39		49	0	31	0	
Queuing Penalty (veh)	194	18		25	0	75	1	

## Intersection: 1: SW 124th Avenue & OR 99W (Pacific Highway)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	
Directions Served	T	T	R	L	L	T	T	L	L	R	R	
Maximum Queue (ft)	1715	1732	410	1522	1463	1240	1129	267	252	222	232	
Average Queue (ft)	1312	1335	378	1015	864	448	294	84	90	63	63	
95th Queue (ft)	2244	2268	504	1713	1698	1181	866	180	183	153	152	
Link Distance (ft)	1714	1714		1829	1829	1829	1829	496	496			
Upstream Blk Time (%)	22	39		0	0	0						
Queuing Penalty (veh)	0	0		0	1	1						
Storage Bay Dist (ft)			225							275	275	
Storage Blk Time (%)		55	41						0	0	0	
Queuing Penalty (veh)		304	199						1	0	0	

### Intersection: 2: SW 124th Avenue & SW Tualatin Road

Movement	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	T	Т	R	L	Т	Т	
Maximum Queue (ft)	115	228	238	405	284	400	513	228	
Average Queue (ft)	47	60	88	213	48	329	212	76	
95th Queue (ft)	100	149	177	364	158	456	539	172	
Link Distance (ft)		1173	1027	1027			496	496	
Upstream Blk Time (%)							3		
Queuing Penalty (veh)							25		
Storage Bay Dist (ft)	25				150	200			
Storage Blk Time (%)	42	15		24	0	31	2		
Queuing Penalty (veh)	93	8		12	0	115	17		

### Intersection: 4: Site Access/SW 115th Avenue & SW Tualatin Road

Movement	EB	EB	WB	WB	NB	NB	SB		
Directions Served	L	TR	L	TR	L	TR	LTR		
Maximum Queue (ft)	80	133	123	420	174	96	226		
Average Queue (ft)	16	13	63	57	49	25	68		
95th Queue (ft)	53	66	119	278	127	75	153		
Link Distance (ft)		1193		800	552	552	1330		
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	25		25						
Storage Blk Time (%)	2	0	27	0					
Queuing Penalty (veh)	22	0	101	0					

## Intersection: 5: SW Tualatin Road & SW 112th Avenue

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	28	71
Average Queue (ft)	2	24
95th Queue (ft)	16	59
Link Distance (ft)		540
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

### Intersection: 6: SW 108th Ave & SW Tualatin Road

Movement	EB	WB	NB
Directions Served	TR	L	LR
Maximum Queue (ft)	7	58	110
Average Queue (ft)	0	18	48
95th Queue (ft)	5	52	94
Link Distance (ft)	1064		285
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		25	
Storage Blk Time (%)		4	
Queuing Penalty (veh)		14	

#### Intersection: 8: SW 108th Ave & Center Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	47	39
Average Queue (ft)	16	8
95th Queue (ft)	45	31
Link Distance (ft)	421	252
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 9: SW 108th Ave & South Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	35	31
Average Queue (ft)	7	2
95th Queue (ft)	30	17
Link Distance (ft)	415	207
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

### Intersection: 10: SW 124th Avenue & SW Leveton Drive

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	TR	L	TR	L	Т	TR	L	Т	TR	
Maximum Queue (ft)	75	218	88	80	75	135	231	148	207	225	
Average Queue (ft)	7	102	18	26	19	34	98	55	66	88	
95th Queue (ft)	43	191	65	63	55	91	182	112	155	174	
Link Distance (ft)		1016		1226		1440	1440		1027	1027	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100		150		150			150			
Storage Blk Time (%)	0	13	0		0	0		1	1		
Queuing Penalty (veh)	0	1	0		0	0		2	1		

### Intersection: 11: SW 118th Drive/JAE Access & SW Leveton Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	122	93	69	62
Average Queue (ft)	64	33	24	7
95th Queue (ft)	100	69	48	36
Link Distance (ft)	1226	1030	498	610
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 12: SW Leveton Drive & West Access

Movement	SB	SB
Directions Served	L	R
Maximum Queue (ft)	7	35
Average Queue (ft)	0	3
95th Queue (ft)	5	19
Link Distance (ft)	531	531
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Intersection: 13: SW Leveton Drive & Center Access

Movement	EB	WB	SB	SB
Directions Served	LT	TR	J I	R
Maximum Queue (ft)	83	5	34	45
Average Queue (ft)	13	0	9	14
95th Queue (ft)	48	4	33	43
Link Distance (ft)	860	362	353	353
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 14: Calmax Technology Access/East Access & SW Leveton Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	13	40	45	54
Average Queue (ft)	0	4	15	4
95th Queue (ft)	7	21	43	30
Link Distance (ft)	362	556	617	361
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 15: SW 108th Ave & SW Leveton Drive

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	139	71	5
Average Queue (ft)	64	9	0
95th Queue (ft)	110	40	4
Link Distance (ft)	556	796	207
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

#### Intersection: 16: SW Herman Road & SW 108th Ave

Movement	EB	EB	WB	SB	SB	
Directions Served	L	T	TR	L	R	
Maximum Queue (ft)	68	188	198	115	23	
Average Queue (ft)	11	68	86	37	3	
95th Queue (ft)	41	150	163	84	15	
Link Distance (ft)		933	994		796	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100			135		
Storage Blk Time (%)		2		0		
Queuing Penalty (veh)		0		0		

### Intersection: 17: SW Teton Avenue & SW Tualatin Road

Movement	EB	WB	NB	NB	
Directions Served	TR	L	L	R	
Maximum Queue (ft)	55	79	141	129	
Average Queue (ft)	3	29	56	49	
95th Queue (ft)	27	66	108	102	
Link Distance (ft)	169			1711	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		25	100		
Storage Blk Time (%)		9	3	1	
Queuing Penalty (veh)		31	2	1	

## Intersection: 18: SW 115th Avenue & SW Hazelbrook Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	42	133
Average Queue (ft)	3	57
95th Queue (ft)	22	98
Link Distance (ft)	1163	1330
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 19: OR 99W (Pacific Highway) & SW Hazelbrook Road

WB	SB	SB
R	T	Т
191	63	37
24	3	1
119	53	15
1290	1944	1944
	R 191 24 119	R T 191 63 24 3 119 53

### Intersection: 20: SW Teton Avenue & SW Herman Road

Movement	EB	EB	WB	WB	NB	NB	SB	SB	
Directions Served	L	TR	L	TR	L	TR	L	TR	
Maximum Queue (ft)	82	317	87	400	159	366	78	210	
Average Queue (ft)	5	147	13	161	113	93	16	77	
95th Queue (ft)	39	270	55	301	175	262	52	157	
Link Distance (ft)		994		1022		604		1711	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		100		60		50		
Storage Blk Time (%)		15	0	17	23	4	1	16	
Queuing Penalty (veh)		1	0	3	27	14	1	4	

## Intersection: 21: OR 99W (Pacific Highway) & SW Fischer Road

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	Т	Т	T	T	R
Maximum Queue (ft)	460	1043	459	1001	997	606	598	400
Average Queue (ft)	336	461	307	381	380	256	253	57
95th Queue (ft)	537	891	517	1185	1179	536	538	234
Link Distance (ft)		1160		1944	1944	2374	2374	
Upstream Blk Time (%)		0						
Queuing Penalty (veh)		0						
Storage Bay Dist (ft)	275		435					200
Storage Blk Time (%)	26	36	23	0		6	10	
Queuing Penalty (veh)	105	83	156	1		0	14	

### Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	L	LT	R	L	Т	Т	R	L	L	T
Maximum Queue (ft)	162	215	327	364	291	261	607	640	315	344	417	490
Average Queue (ft)	35	101	203	243	117	71	320	335	166	200	236	240
95th Queue (ft)	115	178	313	356	237	178	514	557	370	312	357	389
Link Distance (ft)		503		959	959		2374	2374				1364
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	275		300			550			140	265	265	
Storage Blk Time (%)			0	5			0	26	2	2	5	5
Queuing Penalty (veh)			1	8			0	94	14	8	28	24

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	430	20
Average Queue (ft)	232	2
95th Queue (ft)	369	10
Link Distance (ft)	1364	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		400
Storage Blk Time (%)	1	
Queuing Penalty (veh)	0	

### Zone Summary

Zone wide Queuing Penalty: 1539

## Intersection: 1: SW 124th Avenue & OR 99W (Pacific Highway)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	
Directions Served	Т	T	R	L	L	T	T	L	L	R	R	
Maximum Queue (ft)	943	960	410	826	715	558	564	503	514	410	260	
Average Queue (ft)	448	431	202	443	333	237	242	299	308	194	108	
95th Queue (ft)	823	819	462	754	636	463	471	469	502	423	213	
Link Distance (ft)	1714	1714		1829	1829	1829	1829	496	496			
Upstream Blk Time (%)								0	3			
Queuing Penalty (veh)								3	20			
Storage Bay Dist (ft)			225							275	275	
Storage Blk Time (%)		36	3						22	0	0	
Queuing Penalty (veh)		81	11						178	0	0	

#### Intersection: 2: SW 124th Avenue & SW Tualatin Road

Movement	WB	WB	B46	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	T	T	T	R	L	T	T	
Maximum Queue (ft)	124	833	46	310	458	282	399	448	232	
Average Queue (ft)	43	283	3	149	223	40	226	107	77	
95th Queue (ft)	104	696	38	256	361	149	372	322	168	
Link Distance (ft)		1173	1193	1027	1027			496	496	
Upstream Blk Time (%)		1						4		
Queuing Penalty (veh)		6						17		
Storage Bay Dist (ft)	25					150	200			
Storage Blk Time (%)	34	28			31		19	0		
Queuing Penalty (veh)	235	14			16		47	2		

### Intersection: 4: Site Access/SW 115th Avenue & SW Tualatin Road

Movement	EB	EB	B46	WB	WB	NB	NB	SB	
Directions Served	L	TR	T	L	TR	L	TR	LTR	
Maximum Queue (ft)	85	322	237	35	350	437	314	128	
Average Queue (ft)	35	69	48	6	81	186	109	40	
95th Queue (ft)	83	518	421	28	457	411	309	98	
Link Distance (ft)		1193	1173		800	552	552	1330	
Upstream Blk Time (%)		5	3		5	6	1		
Queuing Penalty (veh)		23	15		50	0	0		
Storage Bay Dist (ft)	25			25					
Storage Blk Time (%)	19			1	8				
Queuing Penalty (veh)	77			7	2				

## Intersection: 5: SW Tualatin Road & SW 112th Avenue

Movement	EB	EB	WB	SB
Directions Served	L	Т	TR	LR
Maximum Queue (ft)	40	13	452	50
Average Queue (ft)	9	0	84	11
95th Queue (ft)	34	5	538	40
Link Distance (ft)		800	1064	540
Upstream Blk Time (%)			3	
Queuing Penalty (veh)			32	
Storage Bay Dist (ft)	25			
Storage Blk Time (%)	1	0		
Queuing Penalty (veh)	7	0		

### Intersection: 6: SW 108th Ave & SW Tualatin Road

Movement	EB	WB	WB	B40	NB
Directions Served	TR	L	T	T	LR
Maximum Queue (ft)	5	50	329	87	182
Average Queue (ft)	0	4	45	7	57
95th Queue (ft)	4	27	337	66	134
Link Distance (ft)	1064		727	169	285
Upstream Blk Time (%)			3	2	0
Queuing Penalty (veh)			30	14	0
Storage Bay Dist (ft)		25			
Storage Blk Time (%)		0	4		
Queuing Penalty (veh)		4	0		

#### Intersection: 8: SW 108th Ave & Center Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	89	20
Average Queue (ft)	42	1
95th Queue (ft)	72	10
Link Distance (ft)	421	252
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 9: SW 108th Ave & South Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	75	34
Average Queue (ft)	27	3
95th Queue (ft)	60	19
Link Distance (ft)	415	207
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

### Intersection: 10: SW 124th Avenue & SW Leveton Drive

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	TR	L	TR	L	Т	TR	L	Т	TR	
Maximum Queue (ft)	60	79	106	148	62	186	200	97	188	204	
Average Queue (ft)	17	22	49	62	6	83	88	29	40	64	
95th Queue (ft)	49	55	94	112	35	156	162	69	114	135	
Link Distance (ft)		1016		1226		1440	1440		1027	1027	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100		150		150			150			
Storage Blk Time (%)	0	0	0	0		1			0		
Queuing Penalty (veh)	0	0	0	0		0			0		

### Intersection: 11: SW 118th Drive/JAE Access & SW Leveton Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	83	100	50	39
Average Queue (ft)	36	59	18	14
95th Queue (ft)	61	88	42	42
Link Distance (ft)	1226	1030	498	610
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 12: SW Leveton Drive & West Access

Movement	SB
Directions Served	L
Maximum Queue (ft)	33
Average Queue (ft)	3
95th Queue (ft)	19
Link Distance (ft)	531
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

#### Intersection: 13: SW Leveton Drive & Center Access

Movement	EB	WB	SB	SB
Directions Served	LT	TR	L	R
Maximum Queue (ft)	44	7	91	79
Average Queue (ft)	5	0	37	43
95th Queue (ft)	26	5	70	71
Link Distance (ft)	860	362	353	353
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 14: Calmax Technology Access/East Access & SW Leveton Drive

Movement	WB	NB
Directions Served	LTR	LTR
Maximum Queue (ft)	6	85
Average Queue (ft)	0	30
95th Queue (ft)	4	66
Link Distance (ft)	556	617
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 15: SW 108th Ave & SW Leveton Drive

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	106	66
Average Queue (ft)	47	11
95th Queue (ft)	81	43
Link Distance (ft)	556	796
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Intersection: 16: SW Herman Road & SW 108th Ave

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	62	219	340	209	115
Average Queue (ft)	9	89	142	99	10
95th Queue (ft)	37	164	261	173	59
Link Distance (ft)		933	994		796
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100			135	
Storage Blk Time (%)	0	4		2	
Queuing Penalty (veh)	0	0		0	

### Intersection: 17: SW Teton Avenue & SW Tualatin Road

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	28	65	217	200	439
Average Queue (ft)	1	18	17	115	133
95th Queue (ft)	15	48	194	212	442
Link Distance (ft)	169		1000		1711
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		25		100	
Storage Blk Time (%)		3	2	32	1
Queuing Penalty (veh)		20	1	23	1

## Intersection: 18: SW 115th Avenue & SW Hazelbrook Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	299	644
Average Queue (ft)	68	268
95th Queue (ft)	399	974
Link Distance (ft)	1163	1330
Upstream Blk Time (%)	0	8
Queuing Penalty (veh)	0	27
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 19: OR 99W (Pacific Highway) & SW Hazelbrook Road

Movement	WB	NB	NB	NB	SB
Directions Served	R	T	T	R	T
Maximum Queue (ft)	947	639	642	85	16
Average Queue (ft)	533	87	79	6	1
95th Queue (ft)	1295	603	574	89	8
Link Distance (ft)	1290	1829	1829		1944
Upstream Blk Time (%)	13	0	0		
Queuing Penalty (veh)	44	0	0		
Storage Bay Dist (ft)				335	
Storage Blk Time (%)			4		
Queuing Penalty (veh)			1		

### Intersection: 20: SW Teton Avenue & SW Herman Road

Movement	EB	EB	WB	WB	NB	NB	SB	SB	
Directions Served	L	TR	L	TR	L	TR	L	TR	
Maximum Queue (ft)	37	624	116	267	157	287	49	234	
Average Queue (ft)	4	239	32	106	79	86	11	76	
95th Queue (ft)	21	469	85	207	147	204	41	163	
Link Distance (ft)		994		1022		604		1711	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		100		60		50		
Storage Blk Time (%)		24	0	7	15	10	1	18	
Queuing Penalty (veh)		2	1	3	31	19	1	3	

## Intersection: 21: OR 99W (Pacific Highway) & SW Fischer Road

Movement	EB	EB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	L	Т	Т	Т	T	R	
Maximum Queue (ft)	460	926	460	1695	1673	1554	1569	400	
Average Queue (ft)	302	402	442	1018	987	813	839	198	
95th Queue (ft)	504	772	513	1978	2058	1569	1621	480	
Link Distance (ft)		1160		1944	1944	2374	2374		
Upstream Blk Time (%)		0		3	15				
Queuing Penalty (veh)		0		33	143				
Storage Bay Dist (ft)	275		435					200	
Storage Blk Time (%)	21	31	57	0		30	35	0	
Queuing Penalty (veh)	70	59	471	1		0	110	1	

### Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	L	LT	R	L	Т	Т	R	L	L	T
Maximum Queue (ft)	208	254	375	929	692	675	1240	1272	315	358	464	662
Average Queue (ft)	55	130	335	552	338	304	677	700	222	228	293	372
95th Queue (ft)	153	218	432	947	764	646	1132	1153	434	335	448	567
Link Distance (ft)		503		959	959		2374	2374				1364
Upstream Blk Time (%)				8	7							
Queuing Penalty (veh)				0	0							
Storage Bay Dist (ft)	275		300			550			140	265	265	
Storage Blk Time (%)		0	14	42			20	49	0	2	10	19
Queuing Penalty (veh)		0	49	115			32	122	1	12	55	87

## Intersection: 22: OR 99W (Pacific Highway) & SW 116th Avenue/SW Durham Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	670	291
Average Queue (ft)	383	21
95th Queue (ft)	577	163
Link Distance (ft)	1364	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		400
Storage Blk Time (%)	7	
Queuing Penalty (veh)	2	

### Zone Summary

Zone wide Queuing Penalty: 2433

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

Movement	WB	WB	B46	NB	NB	NB	SB	SB	SB
Directions Served	L	R	Т	T	T	R	L	Т	Т
Maximum Queue (ft)	120	1062	26	691	792	335	400	515	314
Average Queue (ft)	34	468	1	366	539	103	245	124	93
95th Queue (ft)	98	959	19	841	1066	326	381	370	207
Link Distance (ft)		1173	1193	1027	1027			496	496
Upstream Blk Time (%)		0		0	9			4	0
Queuing Penalty (veh)		4		2	39			21	0
Storage Bay Dist (ft)	25					150	200		
Storage Blk Time (%)	21	42			58		29	0	
Queuing Penalty (veh)	150	20			30		71	1	

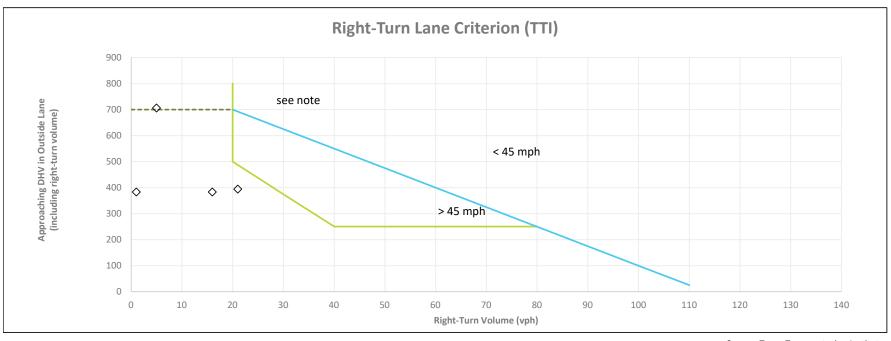
APPENDIX K.

**WARRANTS** 

Project: Lam TUX
Job #: 2240022.00
Date: 6/25/2024

Subject: EB Right-Turn Lane Evaluation - Tualatin/115th Site Access

		AM Peak Hour			PM Peak Hour			
	Posted	Volume			Volume			
Condition	Speed	Approaching	Right	Result	Approaching	Right	Result	
2027 Pre-Development	35	706	5	Possible Shoulder	383	1	None	
2027 Post-Development	35	706	185	Possible Lane	383	16	None	
2030 Post-Development	35	726	224	Possible Lane	394	21	None	



Source: Texas Transportation Institute

Note: If there is no right-turn lane, a shoulder needs to be provided.

If this intersection is in a rural area and is a connection to a public street, a right-turn lane is needed.

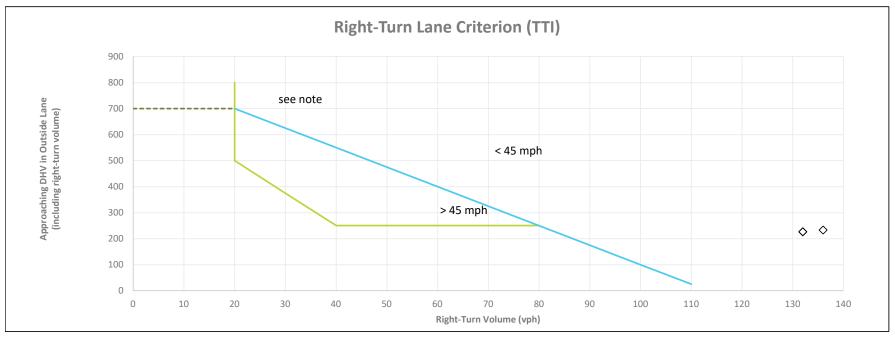
Project: Lam TUX

Job #: 2240022.00

Date: 6/25/2024

Subject: WB Right-Turn Lane Evaluation - Tualatin/115th Site Access

			AM Peak H	our		PM Peak Hour		
	Posted	Volume			Volume			
Condition	Speed	Approaching	Right	Result	Approaching	Right	Result	
2027 Pre-Development	35	226	132	Possible Lane	626	250	Possible Lane	
2027 Post-Development	35	226	132	Possible Lane	626	250	Possible Lane	
2030 Post-Development	35	233	136	Possible Lane	644	257	Possible Lane	



Source: Texas Transportation Institute

Note: If there is no right-turn lane, a shoulder needs to be provided.

If this intersection is in a rural area and is a connection to a public street, a right-turn lane is needed.

	INTERSECTION INFORMATION									
City: Population:	Tualatin 28,000		Condition:	2027 Post-De	velopment					
Intersection Location:	20,000									
(Rural/Urban)	Urban									
Major Street Name:	SW Tualatin R	Road	Minor Street Name:	SW 115th Ave	nue/Site Acce					
Number of Moving	317 1441441111		Number of Moving	011 220117110						
Lanes for Each Approach:	1		Lanes for Each Approach:	1						
Speed:	35 mph		Speed:	35 mph						
Street	·		Street	·						
Width:	36 ft		Width:	36 ft						
Direction:	EB	WB	Direction:	NB	SB	Total				
Direction.	ED	WD	Direction.	IND	SD	TOTAL				
Hour Beginning:			Hour Beginning:							
12:00 AM			12:00 AM			0				
1:00 AM			1:00 AM			0				
2:00 AM			2:00 AM			0				
3:00 AM			3:00 AM			0				
4:00 AM			4:00 AM			0				
5:00 AM			5:00 AM			0				
6:00 AM			6:00 AM			0				
7:00 AM			7:00 AM			0				
8:00 AM	955	430	8:00 AM	31	73	1,489				
9:00 AM			9:00 AM			0				
10:00 AM			10:00 AM			0				
11:00 AM			11:00 AM			0				
12:00 PM			12:00 PM			0				
1:00 PM			1:00 PM			0				
2:00 PM			2:00 PM			0				
3:00 PM			3:00 PM			0				
4:00 PM	448	894	4:00 PM	247	46	1,635				
5:00 PM			5:00 PM			0				
6:00 PM			6:00 PM			0				
7:00 PM			7:00 PM			0				
8:00 PM			8:00 PM			0				
9:00 PM			9:00 PM			0				
10:00 PM			10:00 PM			0				
11:00 PM			11:00 PM			0				
24-hour Total	1,403	1,324	24-hour Total	278	119	3,124				
						•				

#### Warrants Evaluated:

Warrant 1, 8-Hour Vehicular Volume - Evaluated for Conditions A & B

Warrant 2 , 4-Hour Vehicular Volume - Evaluated

Warrant 3, Peak Hour - Evaluated for Conditions A-2, A-3 (A-1 needs to be evaluated separately), and Condition B

Warrant 4, Pedestrian Volume - Not Analyzed

Warrant 5, School Crossing - Not Analyzed

Warrant 6, Coordinated Signal System - Not Analyzed

Warrant 7, Accident Experience - Not Analyzed

Warrant 8, Roadway Network - Not Analyzed

Warrant 9, Intersection Near a Grade Crossing - Not Analyzed

WARRANT 3, PEAK HOUR VEHICULAR VOLUME									
		MAJOR			MINOR		Calculated		
	EB	WB	Total	NB	SB	Max	Threshold (B)	A-2&3	<u>B</u>
4:00 PM	448	894	1,342	247	46	247	118	Υ	Υ
8:00 AM	955	430	1,385	31	73	73	111	N	N
12:00 AM	0	0	0	0	0	0	885	N	N
12:00 PM	0	0	0	0	0	0	885	N	N

#### Warrant Requirements:

Major Street Lanes: 1
Minor Street Lanes: 1

#### CONDITION A-1 - Stopped Delay

Cannot be evaluated based on volumes alone. Condition met if traffic on one minor-street approach (one direction only) controlled by STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach.

#### **CONDITION A-2 - Minor Street Volume**

Minimum Volume on Higher Minor Street Approach: 100

#### **CONDITION A-3 - Total Approach Volume**

Minimum Volume of Total Approaches: 800

CONDITION B - Plot of Minor Street Volume (high vol approach) vs. Major Street Volume (Both approaches)

#### ARE CONDITIONS A-2 AND A-3 OF SIGNAL WARRANT 3 MET?

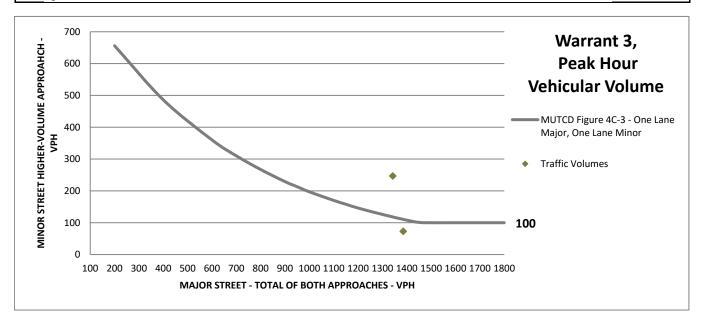
YES Stopped Delay Needs to be Checked

Note: All 3 subsections of Condition A must be met to warrant signal.

IS CONDITION B OF SIGNAL WARRANT 3 MET?

YES

Note: Signal Warrant 3 is met if either Condition A or Condition B is met.



INTERSECTION INFORMATION								
City:	Tualatin		Condition:	2030 Post-De	velopment			
Population:	28,000		condition.	2000 : 000 20	Telepinent			
Intersection Location:								
(Rural/Urban)	Urban							
Major Street Name:	SW Tualatin R	Road	Minor Street Name:	SW 115th Ave	enue/Site Acce			
Number of Moving			Number of Moving		•			
Lanes for Each Approach:	1		Lanes for Each Approach:	1				
Speed:	35 mph		Speed:	35 mph				
Street			Street					
Width:	36 ft		Width:	36 ft				
Direction:	EB	WB	Direction:	NB	SB	Total		
Direction.	25	****	Direction.	145	35	10141		
Hour Beginning:			Hour Beginning:					
12:00 AM			12:00 AM			0		
1:00 AM			1:00 AM			0		
2:00 AM			2:00 AM			0		
3:00 AM			3:00 AM			0		
4:00 AM			4:00 AM			0		
5:00 AM			5:00 AM			0		
6:00 AM			6:00 AM			0		
7:00 AM			7:00 AM			0		
8:00 AM	1,016	459	8:00 AM	41	75	1,591		
9:00 AM			9:00 AM			0		
10:00 AM			10:00 AM			0		
11:00 AM			11:00 AM			0		
12:00 PM			12:00 PM			0		
1:00 PM			1:00 PM			0		
2:00 PM			2:00 PM			0		
3:00 PM			3:00 PM			0		
4:00 PM	465	921	4:00 PM	307	48	1,741		
5:00 PM			5:00 PM			0		
6:00 PM			6:00 PM			0		
7:00 PM			7:00 PM			0		
8:00 PM			8:00 PM			0		
9:00 PM			9:00 PM			0		
10:00 PM			10:00 PM			0		
11:00 PM			11:00 PM			0		
24-hour Total	1,481	1,380	24-hour Total	348	123	3,332		

#### Warrants Evaluted:

Warrant 1, 8-Hour Vehicular Volume - Evaluated for Conditions A & B

Warrant 2 , 4-Hour Vehicular Volume - Evaluated

Warrant 3, Peak Hour - Evaluated for Conditions A-2, A-3 (A-1 needs to be evaluated separately), and Condition B

Warrant 4, Pedestrian Volume - Not Analyzed

Warrant 5, School Crossing - Not Analyzed

Warrant 6, Coordinated Signal System - Not Analyzed

Warrant 7, Accident Experience - Not Analyzed

Warrant 8, Roadway Network - Not Analyzed

Warrant 9, Intersection Near a Grade Crossing - Not Analyzed

WARRANT 3, PEAK HOUR VEHICULAR VOLUME									
		MAJOR			MINOR		Calculated		
	EB	WB	Total	NB	SB	Max	Threshold (B)	A-2&3	<u>B</u>
4:00 PM	465	921	1,386	307	48	307	111	Υ	Υ
8:00 AM	1,016	459	1,475	41	75	75	100	N	N
12:00 AM	0	0	0	0	0	0	885	N	N
12:00 PM	0	0	0	0	0	0	885	N	N

#### Warrant Requirements:

Major Street Lanes: 1
Minor Street Lanes: 1

#### CONDITION A-1 - Stopped Delay

Cannot be evaluated based on volumes alone. Condition met if traffic on one minor-street approach (one direction only) controlled by STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach.

#### **CONDITION A-2 - Minor Street Volume**

Minimum Volume on Higher Minor Street Approach: 100

**CONDITION A-3 - Total Approach Volume** 

Minimum Volume of Total Approaches: 800

CONDITION B - Plot of Minor Street Volume (high vol approach) vs. Major Street Volume (Both approaches)

#### ARE CONDITIONS A-2 AND A-3 OF SIGNAL WARRANT 3 MET?

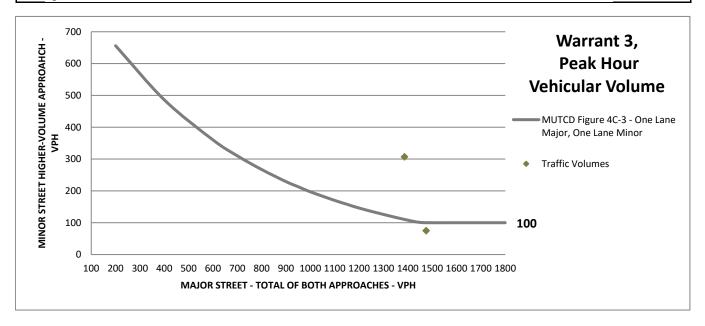
YES Stopped Delay Needs to be Checked

YES

Note: All 3 subsections of Condition A must be met to warrant signal.

IS CONDITION B OF SIGNAL WARRANT 3 MET?

Note: Signal Warrant 3 is met if either Condition A or Condition B is met.



APPENDIX L.

CALIBRATION MATERIALS

# Critical Gap and Follow-Up

3       16:02:30       16:02:36       06       00         4       16:03:38       16:03:44       06       00         5       00       16:04:19       16:04:43       24       7 Vehicles went       3.4         6       00       16:05:25       16:06:01       36       8 Vehicles went       4.5         7       16:06:03       16:06:09       06       00         8       16:06:35       16:06:40       05       00         9       00       16:08:58       14       3 Vehicles went       4.6         10       16:08:52       16:08:58       06       00         11       16:08:58       16:09:02       04       00         12       00       16:11:49       16:12:10       21       6 Vehicles went       3.5         13       00       16:12:39       16:13:00       21       6 Vehicles went       3.5         14       16:13:17       16:13:22       05       00         15       16:13:32       16:13:37       05       00         16       00       16:13:38       16:13:55       17       4 Vehicles went       4.2	Observation ID	Time Stamp (Start)	Time Stamp (End)	Critical Gap (Seconds)	Minor Street Vehicle Departure Time	Next Minor Street Vehicle Departure Time	Follow-up Time (Seconds)	Notes	Follow-Up Time per Veh (Seconds)
3	1	16:01:31	16:01:39	08			00		
4         16:03:38         16:03:44         06         00         16:04:19         16:04:43         24         7 Vehicles went         3.4           6         0         16:05:25         16:06:01         36         8 Vehicles went         4.5           7         16:06:03         16:06:40         05         00         00         00           8         16:06:35         16:06:40         05         00         00         00         00           9         0         00         16:06:44         16:06:58         14         3 Vehicles went         4.6           10         16:08:52         16:08:58         06         00         00         00           11         16:08:58         16:09:02         04         00         00         00           12         0         0         16:11:49         16:12:10         21         6 Vehicles went         3.5           13         0         0         16:13:32         05         00         00         00         00           15         16:13:37         05         0         00         00         00         00         00         00         00         00         00         00	2	16:01:40	16:01:46	06			00		30
5         00         16:04:19         16:04:43         24         7 Vehicles went         3.4           6         00         16:05:25         16:06:01         36         8 Vehicles went         4.5           7         16:06:03         16:06:40         05         00         00         00           8         16:06:35         16:06:40         05         00         00         00         00           9         00         16:08:58         14         3 Vehicles went         4.6         10         16:08:58         14         3 Vehicles went         4.6         10         16:08:58         16         00	3	16:02:30	16:02:36	06			00		
6         00         16:06:09         06         00         4.5         4.5         4.5         4.5         4.5         4.5         4.5         4.5         4.5         4.5         6.0         8.1         16:06:30         16:06:40         0.5         0.0         0.0         9.0         <	4	16:03:38	16:03:44	06			00		
7         16:06:03         16:06:09         06         00           8         16:06:35         16:06:40         05         00           9         00         16:06:44         16:06:58         14         3 Vehicles went         4.6           10         16:08:52         16:08:58         06         00         00         00           11         16:08:58         16:09:02         04         00	5			00	16:04:19	16:04:43	24	7 Vehicles went	3.43
8         16:06:35         16:06:40         05         00         16:06:58         14         3 Vehicles went         4.6           10         16:08:52         16:08:58         06         00         00         11         16:08:58         16:09:02         04         00         00         16:11:49         16:12:10         00         00         16:12:39         16:13:10         21         6 Vehicles went         3.5         3.5         14         16:13:17         16:13:22         05         00         00         00         00         15         16:13:32         16:13:33         05         00         00         00         00         16:13:33         16:13:33         16:13:38         16:13:55         17         4 Vehicles went         4.2         4.2         17         4.2         3 Vehicles went         4.2         3.8         18         18         00	6			00	16:05:25	16:06:01	36	8 Vehicles went	4.5
9	7	16:06:03	16:06:09	06			00		
10       16:08:52       16:08:58       06       00         11       16:08:58       16:09:02       04       00         12       00       16:11:49       16:12:10       21       6 Vehicles went       3.5         13       00       16:12:39       16:13:00       21       6 Vehicles went       3.5         14       16:13:17       16:13:22       05       00       00         15       16:13:32       16:13:37       05       00       00         16       00       16:13:38       16:13:55       17       4 Vehicles went       4.2         17       00       16:14:04       16:14:16       12       3 Vehicles went       4         18       00       00       00       00       00       00         20       00       00       00       00       00       00       00         21       00       0	8	16:06:35	16:06:40	05					
11       16:08:58       16:09:02       04       00       16:11:49       16:12:10       21       6 Vehicles went       3.5         13       00       16:12:39       16:13:00       21       6 Vehicles went       3.5         14       16:13:17       16:13:22       05       00         15       16:13:32       16:13:37       05       00         16       00       16:13:38       16:13:55       17       4 Vehicles went       4.2         17       00       16:14:04       16:14:16       12       3 Vehicles went       4         18       00       00       00       00       00       00         20       00       00       00       00       00       00         21       00       <	9			00	16:06:44	16:06:58	14	3 Vehicles went	4.67
12       00       16:11:49       16:12:10       21       6 Vehicles went       3.5         13       00       16:12:39       16:13:00       21       6 Vehicles went       3.5         14       16:13:17       16:13:22       05       00       00       00         15       16:13:32       16:13:37       05       00       00       00       00         16       00       16:13:38       16:13:55       17       4 Vehicles went       4.2         17       00       16:14:04       16:14:16       12       3 Vehicles went       4         18       00       00       00       00       00       00         20       00       00       00       00       00       00         21       00	10	16:08:52	16:08:58	06			00		
13       00       16:12:39       16:13:00       21       6 Vehicles went       3.8         14       16:13:17       16:13:22       05       00         15       16:13:32       16:13:37       05       00         16       00       16:13:38       16:13:55       17       4 Vehicles went       4.2         17       00       16:14:04       16:14:16       12       3 Vehicles went       4         18       00       00       00       00       00       00         20       0	11	16:08:58	16:09:02	04			00		
14       16:13:17       16:13:22       05       00         15       16:13:32       16:13:37       05       00         16       00       16:13:38       16:13:55       17       4 Vehicles went       4.2         17       00       16:14:04       16:14:16       12       3 Vehicles went       4         18       00       00       00       00       90	12			00	16:11:49	16:12:10	21	6 Vehicles went	3.5
15       16:13:32       16:13:37       05       00         16       00       16:13:38       16:13:55       17       4 Vehicles went       4.2         17       00       16:14:04       16:14:16       12       3 Vehicles went       4         18       00 <td>13</td> <td></td> <td></td> <td>00</td> <td>16:12:39</td> <td>16:13:00</td> <td>21</td> <td>6 Vehicles went</td> <td>3.5</td>	13			00	16:12:39	16:13:00	21	6 Vehicles went	3.5
16     00     16:13:38     16:13:55     17     4 Vehicles went     4.2       17     00     16:14:04     16:14:16     12     3 Vehicles went     4       18     00     00       19     00     00       20     00     00       21     00     00       22     00     00       23     00     00       24     00     00       25     00     00       26     00     00       27     00     00	14	16:13:17	16:13:22	05			00		
17       00       16:14:04       16:14:16       12       3 Vehicles went       4         18       00	15	16:13:32	16:13:37	05			00		
18       00       00         19       00       00         20       00       00         21       00       00         22       00       00         23       00       00         24       00       00         25       00       00         26       00       00         27       00       00	16			00	16:13:38	16:13:55	17	4 Vehicles went	4.25
19       00       00         20       00       00         21       00       00         22       00       00         23       00       00         24       00       00         25       00       00         26       00       00         27       00       00	17			00	16:14:04	16:14:16	12	3 Vehicles went	4
20       00       00         21       00       00         22       00       00         23       00       00         24       00       00         25       00       00         26       00       00         27       00       00	18			00			00		
21     00     00       22     00     00       23     00     00       24     00     00       25     00     00       26     00     00       27     00     00	19			00			00		
22     00     00       23     00     00       24     00     00       25     00     00       26     00     00       27     00     00	20			00			00		
23       00       00         24       00       00         25       00       00         26       00       00         27       00       00	21			00			00		
24     00     00       25     00     00       26     00     00       27     00     00									
25     00     00       26     00     00       27     00     00	23			00			00		
26     00       27     00       00     00	24			00			00		
27 00 00				00					
28 00 00	27			00			00		
	28			00			00		



#### Queue and Delay - Teton Ave NB Left and NB Right to SW Tualatin Rd - AM



Site Code: 16689505

Location: Queue and Delay - Teton Ave NB Left and NB Right to SW Tualatin RD
Date: 7/25/2024

Time: 7:00 AM - 9:00 AM Peak Hour: 7:30AM

NBR	Average Delay:	00:06
INDIX	Average Queue:	1.00
NBI	Average Delay:	00:18
INDL	Average Queue:	1.00

		Delay Int	formation					
	NBR		NBL					
Vehicle Stop (Comes to a stop regardless of position in queue)	Vehicle Release (When vehicle finally crosses stop bar)	Delay Time	Vehicle Stop (Comes to a stop regardless of position	Vehicle Release (When vehicle finally crosses stop bar)	Delay Tim			
7:04:24 AM	7:04:25 AM	00:01	in queue)	7:00:20 AM	00:03			
		00:01	7:00:17 AM					
7:17:27 AM	7:17:28 AM	00:01	7:01:26 AM	7:01:38 AM	00:12			
7:19:06 AM	7:19:09 AM	00:03	7:02:50 AM	7:02:52 AM	00:02 00:14			
7:19:28 AM 7:21:15 AM	7:19:35 AM 7:21:55 AM	00:07 00:40	7:07:03 AM 7:07:11 AM	7:07:17 AM 7:07:30 AM	00:14			
7:23:46 AM 7:26:40 AM	7:23:49 AM 7:26:41 AM	00:03 00:01	7:07:15 AM 7:07:17 AM	7:07:37 AM 7:07:56 AM	00:22			
7:37:13 AM	7:37:44 AM	00:31	7:09:05 AM	7:09:10 AM	00:05			
7:42:15 AM	7:42:16 AM	00:01	7:10:36 AM	7:10:38 AM	00:03			
7:46:31 AM	7:46:32 AM	00:01	7:12:08 AM	7:10:35 AM	00:02			
7:47:10 AM	7:47:13 AM	00:03	7:15:58 AM	7:16:00 AM	00:03			
7:53:42 AM	7:53:43 AM	00:01	7:19:13 AM	7:19:49 AM	00:36			
8:00:13 AM	8:00:22 AM	00:09	7:21:06 AM	7:21:06 AM	00:00			
8:04:37 AM	8:04:41 AM	00:04	7:21:20 AM	7:21:55 AM	00:35			
8:07:30 AM	8:07:31 AM	00:04	7:22:52 AM	7:23:03 AM	00:33			
8:10:21 AM	8:10:31 AM	00:10	7:24:54 AM	7:25:15 AM	00:11			
8:11:00 AM	8:11:01 AM	00:01	7:24:55 AM	7:25:24 AM	00:29			
8:15:59 AM	8:16:00 AM	00:01	7:24:56 AM	7:25:29 AM	00:33			
8:22:17 AM	8:22:24 AM	00:07	7:26:41 AM	7:26:56 AM	00:15			
8:23:47 AM	8:23:48 AM	00:01	7:26:49 AM	7:27:01 AM	00:12			
8:23:57 AM	8:23:58 AM	00:01	7:26:52 AM	7:27:11 AM	00:19			
8:27:56 AM	8:27:57 AM	00:01	7:28:33 AM	7:28:38 AM	00:05			
8:37:18 AM	8:37:19 AM	00:01	7:29:30 AM	7:29:32 AM	00:02			
8:37:23 AM	8:37:24 AM	00:01	7:29:36 AM	7:29:49 AM	00:13			
8:38:10 AM	8:38:12 AM	00:02	7:30:00 AM	7:30:03 AM	00:03			
8:38:32 AM	8:38:39 AM	00:07	7:30:08 AM	7:30:11 AM	00:03			
8:41:58 AM	8:41:59 AM	00:01	7:31:22 AM	7:31:25 AM	00:03			
8:45:07 AM	8:45:11 AM	00:04	7:33:07 AM	7:33:08 AM	00:01			
8:46:43 AM	8:46:58 AM	00:15	7:34:22 AM	7:34:24 AM	00:02			
			7:40:34 AM	7:40:36 AM	00:02			
			7:40:56 AM	7:41:02 AM	00:06			
			7:43:41 AM	7:43:42 AM	00:01			
			7:43:49 AM	7:43:54 AM	00:05			
			7:43:50 AM	7:44:01 AM	00:11			
			7:46:43 AM	7:46:49 AM	00:06			
			7:46:45 AM	7:47:13 AM	00:28			
			7:46:47 AM	7:47:20 AM	00:33			
			7:48:38 AM	7:49:00 AM	00:22			
			7:48:53 AM	7:49:18 AM	00:25			
			7:51:18 AM	7:51:29 AM	00:11			
			7:51:19 AM	7:51:38 AM	00:19			
			7:53:13 AM	7:54:25 AM	01:12			
			7:53:16 AM	7:54:39 AM	01:23			
			7:53:18 AM	7:54:53 AM	01:35			
			7:53:50 AM	7:55:25 AM	01:35			
			7:55:29 AM	7:55:53 AM	00:24			
			7:55:33 AM	7:56:05 AM	00:32			
			7:55:34 AM	7:56:10 AM	00:36			
			7:56:36 AM	7:56:39 AM	00:03			
			7:57:09 AM	7:57:10 AM	00:01			
			7:58:28 AM	7:58:30 AM	00:02			
			7:58:34 AM	7:58:39 AM	00:05			
			7:58:36 AM	7:58:52 AM	00:16			
			7:58:46 AM	7:58:57 AM	00:11			
			7:58:53 AM	7:59:09 AM	00:16			
			7:59:02 AM	7:59:26 AM	00:24			
			8:01:22 AM	8:01:24 AM	00:02			
			8:01:37 AM	8:01:47 AM	00:10			
			8:01:53 AM	8:01:58 AM	00:05			
	1	1	8:01:56 AM	8:02:04 AM	. ∩∩·∩Ω			

8:01:56 AM

8:02:09 AM

8:03:13 AM

8:03:15 AM

8:03:18 AM

8:04:40 AM

8:02:04 AM

8:02:21 AM

8:03:21 AM

8:03:30 AM

8:03:42 AM

8:04:44 AM

80:00

00:12

00:08

00:15

00:24

Study								
	Average Queue	25						
NBR	Maximum Queue	25						
	95th Percentile Queue	0						
	Average Queue	25						
NBL	Maximum Queue	100						
	95th Percentile Queue	50						

	NBR	NBL	
	Running Queue Total	Running Queue Total	
7:00:00 AM	0	0	
7:00:15 AM	0	0	
7:00:30 AM	0	0	
7:00:45 AM	0	0	
7:01:00 AM 7:01:15 AM	0	0	
7:01:30 AM	0	1	
7:01:45 AM	0	0	
7:02:00 AM	0	0	
7:02:15 AM	0	0	
7:02:30 AM	0	0	
7:02:45 AM	0	0	
7:03:00 AM	0	0	
7:03:15 AM 7:03:30 AM	0	0	
7:03:45 AM	0	0	
7:04:00 AM	0	0	
7:04:15 AM	0	0	
7:04:30 AM	0	0	
7:04:45 AM	0	0	
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7:06:00 AM	0	0	
7:06:15 AM	0	0	
7:06:30 AM	0	0	
7:06:45 AM	0	0	
7:07:00 AM	0	0	
7:07:15 AM	0	2	
7:07:30 AM	0	3	
7:07:45 AM 7:08:00 AM	0	0	
7:08:00 AM	0	0	
7:08:30 AM	0	0	
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7:09:00 AM	0	0	
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7:10:35 AM	0	0	
7:11:00 AM	0	0	
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7:11:30 AM	0	0	
7:11:45 AM	0	0	
7:12:00 AM	0	0	
7:12:15 AM 7:12:30 AM	0	0	
7:12:30 AM 7:12:45 AM	0	0	
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7:13:15 AM	0	0	
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7:14:45 AM 7:15:00 AM	0	0	
7:15:15 AM	0	0	
7:15:30 AM	0	0	
7:15:45 AM	0	0	
7:16:00 AM	0	1	

## Queue and Delay - Teton Ave NB Left and NB Right to SW Tualatin Rd - AM

66			8:04:42 AM	8:04:51 AM	00:09
67			8:04:54 AM	8:04:58 AM	00:04
68			8:06:54 AM	8:06:55 AM	00:01
69			8:07:26 AM	8:07:28 AM	00:02
70			8:07:44 AM	8:07:46 AM	00:02
71			8:09:00 AM	8:09:30 AM	00:30
72			8:11:02 AM	8:11:13 AM	00:11
73			8:12:16 AM	8:12:29 AM	00:13
74			8:13:10 AM	8:13:12 AM	00:02
75			8:16:04 AM	8:16:05 AM	00:01
76			8:16:20 AM	8:16:35 AM	00:15
77			8:17:37 AM	8:17:38 AM	00:01
		-			00:19
78			8:17:57 AM	8:18:16 AM	
79			8:19:15 AM	8:19:17 AM	00:02
80			8:21:42 AM	8:21:51 AM	00:09
81			8:21:44 AM	8:22:29 AM	00:45
82			8:21:51 AM	8:22:47 AM	00:56
83			8:22:03 AM	8:22:53 AM	00:50
84			8:23:12 AM	8:23:13 AM	00:01
85		<u> </u>	8:23:17 AM	8:23:18 AM	00:01
86	1		8:24:49 AM	8:25:04 AM	00:01
	<del> </del>				
87			8:24:51 AM	8:25:18 AM	00:27
88			8:25:03 AM	8:25:27 AM	00:24
89			8:25:06 AM	8:25:31 AM	00:25
90			8:26:25 AM	8:26:41 AM	00:16
91			8:30:03 AM	8:30:13 AM	00:10
92			8:30:03 AM	8:30:20 AM	00:17
93			8:30:05 AM	8:30:30 AM	00:25
94			8:30:06 AM	8:30:41 AM	00:35
95			8:31:25 AM	8:31:27 AM	00:02
96			8:33:49 AM	8:33:54 AM	00:05
97			8:37:27 AM	8:37:43 AM	00:16
98			8:38:27 AM	8:38:45 AM	00:18
99			8:40:25 AM	8:40:40 AM	00:15
100			8:43:16 AM	8:43:26 AM	00:10
101			8:44:55 AM	8:45:01 AM	00:06
102			8:45:16 AM	8:45:30 AM	00:14
103			8:45:19 AM	8:45:42 AM	00:23
104			8:46:41 AM	8:47:01 AM	00:20
105			8:47:58 AM	8:48:00 AM	00:02
106			8:48:27 AM	8:48:28 AM	00:01
107			8:50:11 AM	8:50:15 AM	00:04
108			8:51:22 AM	8:51:32 AM	00:10
109			8:52:44 AM	8:52:56 AM	00:12
110			8:53:03 AM	8:53:07 AM	00:04
111			8:53:04 AM	8:53:15 AM	00:11
112			8:53:53 AM	8:53:54 AM	00:01
113			8:54:37 AM	8:54:47 AM	00:01
	<del>                                     </del>				00:10
114			8:55:05 AM	8:55:08 AM	
115			8:56:30 AM	8:56:35 AM	00:05
116			8:56:32 AM	8:56:41 AM	00:09
117			8:56:33 AM	8:56:52 AM	00:19
118		T	8:57:44 AM	8:57:48 AM	00:04
119			8:57:53 AM	8:58:01 AM	00:08
120			8:57:55 AM	8:58:09 AM	00:14
121		<u> </u>	8:57:57 AM	8:58:16 AM	00:19
					00:19
122	<del> </del>		8:58:13 AM	8:58:22 AM	
123			8:59:24 AM	8:59:28 AM	00:04
124			8:59:32 AM	8:59:33 AM	00:01
125			8:59:36 AM	8:59:46 AM	00:10
126			8:59:38 AM	8:59:50 AM	00:12
127	 	T	8:59:40 AM	8:59:56 AM	00:16
128			8:59:48 AM	9:00:00 AM	00:12
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129					

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7:19:15 AM	0	1
7:19:30 AM	1	1
7:19:45 AM	0	1
7:20:00 AM	0	0
7:20:15 AM	0	0
7:20:30 AM	0	0
7:20:45 AM	0	0
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7:21:45 AM	1	1
7:22:00 AM	0	0
7:22:15 AM	0	0
7:22:30 AM	0	0
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7:23:45 AM	0	0
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7:24:30 AM	0	0
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7:25:00 AM	0	3
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7:27:45 AM	0	0
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Site Code: 16689506

**Location:** Queue and Delay - Teton Ave NB Left and NB Right to SW Tualatin RD

Date: 7/25/2024 Time: 4:00 PM - 6:00 PM Peak Hour: 4:00PM

NBR	Average Delay:	00:08
INDIV	Average Queue:	1.00
NDI	Average Delay:	00:43
NBL	Average Queue:	2.00

	Study				
	Average Queue	25			
NBR	Maximum Queue	50			
	95th Percentile Queue	25			
	Average Queue	50			
NBL	Maximum Queue	225			
	95th Percentile Queue	150			

NBL Running

Queue Total

0 0 0

	NBR
	Running Queue Total
4:00:00 PM	0
4:00:15 PM	0
4:00:30 PM	0
4:00:45 PM	
4:01:00 PM	
4:01:15 PM 4:01:30 PM	
4:01:45 PM	
4:02:00 PM	
4:02:15 PM	0
4:02:30 PM	
4:02:45 PM	
4:03:00 PM 4:03:15 PM	
4:03:30 PM	
4:03:45 PM	
4:04:00 PM	0
4:04:15 PM	0
4:04:30 PM	
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	Delay Information					
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	4:06:08 PM	4:06:10 PM	00:02	4:00:00 PM	4:00:23 PM	00:23
	4:12:36 PM	4:12:38 PM	00:02	4:00:00 PM	4:00:35 PM	00:35
	4:18:57 PM	4:19:05 PM	00:08	4:00:00 PM	4:00:54 PM	00:54
	4:19:38 PM	4:19:51 PM	00:13	4:00:03 PM	4:01:29 PM	01:26
	4:19:48 PM	4:20:02 PM	00:14	4:00:06 PM	4:01:31 PM	01:25
	4:24:29 PM	4:24:34 PM	00:05	4:00:07 PM	4:01:45 PM	01:38
	4:25:45 PM	4:25:48 PM	00:03	4:00:17 PM	4:01:53 PM	01:36
	4:27:21 PM	4:27:26 PM	00:05	4:01:25 PM	4:02:12 PM	00:47
	4:28:58 PM	4:29:01 PM	00:03	4:01:25 PM	4:02:17 PM	00:52
	4:34:07 PM	4:34:08 PM	00:01	4:01:28 PM	4:02:23 PM	00:55
	4:34:16 PM	4:34:51 PM	00:35	4:02:10 PM	4:02:30 PM	00:20
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	4:35:57 PM	4:35:59 PM	00:02	4:03:33 PM	4:03:52 PM	00:19
	4:37:17 PM	4:37:18 PM	00:01	4:03:37 PM	4:03:57 PM	00:20
	4:38:22 PM	4:38:40 PM	00:18	4:04:16 PM	4:05:01 PM	00:45
	4:39:14 PM	4:39:32 PM	00:18	4:04:52 PM	4:05:13 PM	00:21
	4:39:34 PM	4:39:40 PM	00:06	4:05:08 PM	4:05:17 PM	00:09
	4:40:16 PM	4:40:17 PM	00:01	4:05:12 PM	4:05:21 PM	00:09
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	4:47:03 PM	4:47:05 PM	00:02	4:05:26 PM	4:06:04 PM	00:38
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	4:31:28 PM	4:32:06 PM	00:38
	4:32:12 PM	4:32:18 PM	00:06
	4:32:15 PM	4:32:32 PM	00:17
	4:32:16 PM	4:32:43 PM	00:27
	4:32:31 PM 4:32:40 PM	4:32:52 PM 4:32:56 PM	00:21 00:16
	4:32:42 PM	4:33:00 PM	00:18
	4:33:19 PM	4:33:49 PM	00:30
	4:33:22 PM	4:33:54 PM	00:32
	4:33:29 PM	4:33:57 PM	00:28
	4:33:39 PM	4:34:04 PM	00:25
	4:33:42 PM 4:33:53 PM	4:34:08 PM 4:35:16 PM	00:26 01:23
	4:34:14 PM	4:35:20 PM	01:06
	4:34:18 PM	4:35:22 PM	01:04
	4:34:37 PM	4:35:24 PM	00:47
	4:34:39 PM	4:36:24 PM	01:45
	4:35:34 PM 4:36:09 PM	4:36:32 PM 4:36:44 PM	00:58 00:35
	4:36:15 PM	4:36:54 PM 4:36:54 PM	00:35
	4:36:53 PM	4:36:57 PM	00:04
	4:36:58 PM	4:37:01 PM	00:03
	4:37:06 PM	4:38:58 PM	01:52
	4:37:43 PM	4:39:02 PM	01:19
	4:38:07 PM 4:38:09 PM	4:39:32 PM 4:39:40 PM	01:25
	4:38:11 PM	4:39:51 PM	01:31 01:40
	4:38:12 PM	4:40:13 PM	02:01
	4:38:30 PM	4:40:39 PM	02:09
	4:38:38 PM	4:40:42 PM	02:04
	4:38:39 PM	4:40:54 PM	02:15
	4:38:55 PM 4:39:37 PM	4:41:04 PM 4:41:17 PM	02:09 01:40
	4:40:19 PM	4:41:23 PM	01:04
	4:40:20 PM	4:41:47 PM	01:27
	4:41:59 PM	4:42:16 PM	00:17
	4:42:20 PM	4:42:27 PM	00:07
	4:42:26 PM	4:42:38 PM	00:12
	4:42:26 PM 4:42:57 PM	4:42:42 PM 4:43:11 PM	00:16 00:14
	4:43:31 PM	4:43:39 PM	00:08
	4:45:31 PM	4:45:37 PM	00:06
	4:46:04 PM	4:46:37 PM	00:33
	4:46:16 PM	4:46:48 PM	00:32
	4:46:59 PM	4:47:04 PM	00:05
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	4:47:12 PM	4:48:14 PM	01:02
	4:47:12 PM	4:48:23 PM	01:11
	4:48:38 PM	4:48:41 PM	00:03
	4:48:48 PM	4:48:48 PM	00:00
	4:49:01 PM	4:49:04 PM	00:03 00:02
	4:50:37 PM 4:50:45 PM	4:50:39 PM 4:50:51 PM	00:02
	4:50:46 PM	4:51:06 PM	00:20
	4:51:10 PM	4:51:12 PM	00:02
	4:52:48 PM	4:52:55 PM	00:07
	4:53:10 PM	4:53:21 PM	00:11
	4:53:16 PM 4:53:32 PM	4:53:24 PM 4:54:11 PM	00:08 00:39
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	4:58:57 PM 4:59:00 PM	5:00:00 PM	01:03
	4:59:47 PM	5:00:32 PM	00:45
	5:00:08 PM	5:00:32 PM	00:24
	5:00:18 PM	5:00:36 PM	00:18
	5:00:18 PM	5:00:42 PM	00:24
	5:00:22 PM	5:00:54 PM	00:32
	5:01:42 PM 5:01:44 PM	5:02:02 PM 5:02:11 PM	00:20 00:27
+	5:01:45 PM	5:02:34 PM	00:49

44545844		
4:16:15 PM	0	4
4:16:30 PM	0	4
4:16:45 PM	0	3
4:17:00 PM	0	4
		4
4:17:15 PM	0	
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4:18:15 PM		4
	0	
4:18:30 PM	0	4
4:18:45 PM	0	3
4:19:00 PM	1	1
4:19:15 PM	0	0
4:19:30 PM	0	0
4:19:45 PM	1	0
4:20:00 PM	1	0
4:20:15 PM	0	0
4:20:30 PM	0	0
4:20:45 PM	0	0
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	0	2
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4:24:30 PM	1	1
4:24:45 PM	0	2
4:25:00 PM	0	1
4:25:15 PM	0	1
4:25:30 PM	0	0
4:25:45 PM	1	0
4:26:00 PM	0	0
4:26:15 PM	0	1
4:26:30 PM	0	1
4:26:45 PM	0	0
4:27:00 PM	0	0
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4:32:15 PM	0	2
4:32:30 PM	0	2
4:32:45 PM	0	3
4:33:00 PM	0	0
4:33:15 PM	0	0
4:33:30 PM	0	3
4:33:45 PM	0	5
4:34:00 PM	0	3
4:34:15 PM	0	2
4:34:30 PM	2	3
4:34:45 PM	2	5
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		5
4:35:15 PM	0	
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4:35:45 PM	1	2
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4:36:15 PM	0	4
4:36:30 PM	0	3
4:36:45 PM	0	1
4:37:00 PM	0	1
4:37:15 PM	0	1
4:37:30 PM	0	1

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151			5:01:48 PM	5:03:04 PM	01:16
152			5:01:51 PM	5:03:23 PM	01:32
153			5:03:02 PM	5:03:34 PM	00:32
154			5:03:19 PM	5:03:55 PM	00:36
155			5:03:19 PM	5:04:11 PM	00:52
156			5:03:19 PM	5:04:29 PM	01:10
			5:03:50 PM	5:04:36 PM	
157					00:46
158			5:04:04 PM	5:04:57 PM	00:53
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163			5:04:50 PM	5:06:58 PM	02:08
164			5:04:50 PM	5:07:08 PM	02:18
165			5:05:41 PM	5:07:20 PM	01:39
166			5:05:50 PM	5:07:27 PM	01:37
					01:18
167			5:06:21 PM	5:07:39 PM	
168			5:06:24 PM	5:07:46 PM	01:22
169			5:06:33 PM	5:08:26 PM	01:53
170			5:06:41 PM	5:08:36 PM	01:55
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172			5:08:34 PM	5:08:46 PM	00:12
173			5:08:44 PM	5:09:16 PM	00:32
174	ļ		5:09:39 PM	5:09:41 PM	00:02
175	 <u></u>		5:09:40 PM	5:09:48 PM	00:08
176			5:09:50 PM	5:09:51 PM	00:01
		1			00:07
177			5:11:22 PM	5:11:29 PM	
178			5:11:34 PM	5:11:57 PM	00:23
179	 <u></u>		5:11:37 PM	5:12:02 PM	00:25
180			5:11:40 PM	5:12:05 PM	00:25
181			5:11:41 PM	5:12:11 PM	00:30
182	 <u></u>	<u> </u>	5:12:26 PM	5:12:29 PM	00:03
183			5:13:01 PM	5:13:29 PM	00:28
			5:13:03 PM		
184				5:13:42 PM	00:39
185			5:13:53 PM	5:14:14 PM	00:21
186			5:13:56 PM	5:14:34 PM	00:38
187				5:15:22 PM	00:06
			5:15:16 PM		
188			5:15:20 PM	5:15:27 PM	00:07
189			5:15:29 PM	5:15:32 PM	00:03
190			5:15:36 PM	5:15:44 PM	00:08
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192			5:15:38 PM	5:16:07 PM	00:29
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194			5:15:41 PM	5:16:21 PM	00:40
195			5:16:26 PM	5:16:29 PM	00:03
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202			5:19:23 PM	5:19:33 PM	00:10
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204			5:20:39 PM	5:20:44 PM	00:05
205			5:21:42 PM	5:21:51 PM	00:09
206			5:23:34 PM	5:23:41 PM	00:07
207	 <u></u>	<u> </u>	5:23:36 PM	5:23:45 PM	00:09
208			5:23:50 PM	5:23:58 PM	00:08
209			5:24:06 PM	5:24:08 PM	00:02
210			5:25:22 PM	5:25:50 PM	00:28
211	 <u></u>	<u> </u>	5:25:22 PM	5:25:59 PM	00:37
212			5:25:25 PM	5:26:31 PM	01:06
213			5:25:31 PM	5:26:38 PM	01:07
		1			
214	ļ		5:25:31 PM	5:27:00 PM	01:29
215	 		5:27:19 PM	5:27:52 PM	00:33
216			5:28:47 PM	5:29:39 PM	00:52
				5:30:04 PM	
217			5:28:51 PM		01:13
218			5:28:56 PM	5:30:14 PM	01:18
219	 <u></u>		5:28:58 PM	5:30:23 PM	01:25
220			5:29:01 PM	5:30:39 PM	01:38
		+			
221	ļ		5:29:01 PM	5:30:47 PM	01:46
	<u> </u>	<u> </u>	5:30:02 PM	5:31:25 PM	01:23
222	 		5:32:47 PM	5:32:49 PM	00:02
223			5-22-54 DM	5-27-E6 DM	00.03
223 224			5:32:54 PM	5:32:56 PM	00:02
223 224			5:32:54 PM 5:34:08 PM	5:32:56 PM 5:34:10 PM	00:02 00:02
223 224 225					
223 224 225 226			5:34:08 PM 5:34:53 PM	5:34:10 PM 5:34:55 PM	00:02 00:02
223 224 225 226 227			5:34:08 PM 5:34:53 PM 5:35:00 PM	5:34:10 PM 5:34:55 PM 5:35:04 PM	00:02 00:02 00:04
223 224 225 226 227 228			5:34:08 PM 5:34:53 PM 5:35:00 PM 5:35:01 PM	5:34:10 PM 5:34:55 PM 5:35:04 PM 5:35:08 PM	00:02 00:02 00:04 00:07
223 224 225 226 227 228			5:34:08 PM 5:34:53 PM 5:35:00 PM	5:34:10 PM 5:34:55 PM 5:35:04 PM	00:02 00:02 00:04
223 224 225 226 227 228 229			5:34:08 PM 5:34:53 PM 5:35:00 PM 5:35:01 PM 5:35:03 PM	5:34:10 PM 5:34:55 PM 5:35:04 PM 5:35:08 PM 5:35:13 PM	00:02 00:02 00:04 00:07 00:10
223 224 225 226 227 228 229 230			5:34:08 PM 5:34:53 PM 5:35:00 PM 5:35:01 PM 5:35:03 PM 5:35:06 PM	5:34:10 PM 5:34:55 PM 5:35:04 PM 5:35:08 PM 5:35:13 PM 5:35:39 PM	00:02 00:02 00:04 00:07 00:10
223 224 225 226 227 228 229 230 231			5:34:08 PM 5:34:53 PM 5:35:00 PM 5:35:01 PM 5:35:03 PM 5:35:03 PM 5:35:06 PM	5:34:10 PM 5:34:55 PM 5:35:04 PM 5:35:08 PM 5:35:13 PM 5:35:39 PM 5:36:23 PM	00:02 00:02 00:04 00:07 00:10 00:33 01:03
223 224 225 226 227 228 229 230 231			5:34:08 PM 5:34:53 PM 5:35:00 PM 5:35:01 PM 5:35:03 PM 5:35:06 PM	5:34:10 PM 5:34:55 PM 5:35:04 PM 5:35:08 PM 5:35:13 PM 5:35:39 PM	00:02 00:02 00:04 00:07 00:10
223			5:34:08 PM 5:34:53 PM 5:35:00 PM 5:35:01 PM 5:35:03 PM 5:35:03 PM 5:35:06 PM	5:34:10 PM 5:34:55 PM 5:35:04 PM 5:35:08 PM 5:35:13 PM 5:35:39 PM 5:36:23 PM	00:02 00:02 00:04 00:07 00:10 00:33 01:03
223			5:34:08 PM 5:34:53 PM 5:35:00 PM 5:35:01 PM 5:35:03 PM 5:35:06 PM 5:35:06 PM 5:35:20 PM 5:36:14 PM 5:36:22 PM	5:34:10 PM 5:34:55 PM 5:35:04 PM 5:35:08 PM 5:35:13 PM 5:35:39 PM 5:36:23 PM 5:36:25 PM 5:36:45 PM	00:02 00:02 00:04 00:07 00:10 00:33 01:03 00:21 00:23
223			5:34:08 PM 5:34:53 PM 5:35:00 PM 5:35:01 PM 5:35:03 PM 5:35:06 PM 5:35:06 PM 5:36:14 PM 5:36:12 PM 5:36:22 PM	5:34:10 PM 5:34:55 PM 5:35:04 PM 5:35:08 PM 5:35:13 PM 5:35:39 PM 5:36:23 PM 5:36:35 PM 5:36:45 PM 5:37:01 PM	00:02 00:02 00:04 00:07 00:10 00:33 01:03 00:21 00:23 00:37
222			5:34:08 PM 5:34:53 PM 5:35:00 PM 5:35:01 PM 5:35:03 PM 5:35:06 PM 5:35:06 PM 5:35:20 PM 5:36:14 PM 5:36:22 PM	5:34:10 PM 5:34:55 PM 5:35:04 PM 5:35:08 PM 5:35:13 PM 5:35:39 PM 5:36:23 PM 5:36:25 PM 5:36:45 PM	00:02 00:02 00:04 00:07 00:10 00:33 01:03 00:21 00:23

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4:38:30 PM	1	7
4:38:45 PM	0	9
4:39:00 PM	0	9
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4:39:30 PM	1	8
4:39:45 PM		
	0	7
4:40:00 PM	0	6
4:40:15 PM	0	5
4:40:30 PM	1	7
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4:48:00 PM	0	2
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4:58:15 PM	0	0
4:58:15 PM 4:58:30 PM	0	0
4:58:15 PM	0	0 0 0
4:58:15 PM 4:58:30 PM	0	0
4:58:15 PM 4:58:30 PM 4:58:45 PM	0 0 0	0 0 0

S38.52 PM   S39.33 PM   O0.41					
S-4015 PM	237		5:38:52 PM	5:39:33 PM	00:41
	238		5:38:56 PM	5:40:03 PM	01:07
S14206 PM	239		5:40:15 PM	5:40:19 PM	00:04
S-42:13 PM	240		5:42:05 PM	5:42:08 PM	00:03
S-42:20 PM	241		5:42:06 PM	5:42:14 PM	00:08
S-42-21 PM	242		5:42:13 PM	5:42:14 PM	00:01
S-42-21 PM	243		5:42:20 PM	5:42:36 PM	00:16
1.542.30 PM	244		5:42:21 PM	5:42:42 PM	00:21
S-344-09 PM	245		5:42:21 PM	5:42:47 PM	00:26
248         5:44:09 PM         5:44:24 PM         00:15           249         5:344:57 PM         5:45:29 PM         00:28           250         5:345:31 PM         5:45:29 PM         00:16           251         5:345:21 PM         5:45:29 PM         00:24           252         5:345:22 PM         5:46:54 PM         00:32           253         5:345:22 PM         5:46:16 PM         00:59           254         5:345:26 PM         5:46:28 PM         00:59           255         5:345:32 PM         5:46:28 PM         00:59           256         5:346:39 PM         5:47:10 PM         00:37           257         5:346:39 PM         5:47:10 PM         00:37           258         5:347:46 PM         5:47:39 PM         00:44           258         5:347:46 PM         5:47:39 PM         00:44           258         5:347:46 PM         5:47:39 PM         00:06           259         5:348:38 PM         5:49:03 PM         00:05           260         5:59:59 PM         5:51:09 PM         00:17           261         5:50:52 PM         5:51:09 PM         00:17           262         5:50:52 PM         5:51:39 PM         00:34	246		5:42:30 PM	5:42:58 PM	00:28
S44:57 PM	247		5:44:09 PM	5:44:15 PM	00:06
Side	248		5:44:09 PM	5:44:24 PM	00:15
Side	249		5:44:57 PM	5:45:25 PM	00:28
252         5:45:22 PM         5:45:54 PM         00:32           253         5:35:22 PM         5:46:16 PM         00:54           254         5:45:22 PM         5:46:25 PM         00:59           255         5:45:32 PM         5:46:28 PM         00:56           256         5:46:33 PM         5:47:10 PM         00:37           257         5:46:39 PM         5:47:10 PM         00:37           258         5:47:46 PM         5:47:52 PM         00:06           259         5:48:58 PM         5:49:03 PM         00:05           259         5:48:58 PM         5:49:03 PM         00:05           260         5:50:52 PM         5:51:16 PM         00:02           261         5:50:52 PM         5:51:16 PM         00:24           262         5:50:52 PM         5:51:16 PM         00:33           263         5:50:58 PM         5:51:26 PM         00:33           264         5:50:58 PM         5:51:28 PM         00:34           265         5:51:23 PM         5:51:52 PM         00:34           266         5:51:23 PM         5:51:52 PM         00:36           266         5:52:23 PM         5:52:32 PM         00:36	250		5:45:13 PM	5:45:29 PM	00:16
253         5:45:22 PM         5:46:16 PM         00:54           254         5:45:26 PM         5:46:28 PM         00:59           255         5:45:32 PM         5:46:28 PM         00:56           256         5:46:33 PM         5:47:10 PM         00:37           257         5:46:39 PM         5:47:43 PM         00:44           258         5:47:46 PM         5:47:52 PM         00:06           259         5:48:58 PM         5:49:03 PM         00:05           260         5:50:52 PM         5:51:10 PM         00:17           261         5:50:52 PM         5:51:16 PM         00:33           262         5:50:52 PM         5:51:16 PM         00:33           263         5:50:52 PM         5:51:16 PM         00:33           263         5:50:52 PM         5:51:16 PM         00:33           263         5:50:58 PM         5:51:15 PM         00:47           264         5:50:58 PM         5:51:32 PM         00:47           265         5:51:23 PM         5:51:52 PM         00:33           266         5:51:23 PM         5:53:35 PM         5:53:35 PM         00:33           268         5:54:22 PM         5:53:35 PM         5:53:30 PM <td>251</td> <td></td> <td>5:45:21 PM</td> <td>5:45:45 PM</td> <td>00:24</td>	251		5:45:21 PM	5:45:45 PM	00:24
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Queue and Delay - Teton Ave NB Left and NB Right to SW Tualatin Rd - AM

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Site Code: 16689507 Location: Queue and Delay - SW Hazelbrook Rd and to OR 99W Date: 7/25/2024 Time: 7:00 AM - 9:00 AM Peak Hour: 7:00AM

Delay Information			
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	ehicle Stop (Comes to a op regardless of position	Vehicle Release (When vehicle finally crosses stop	Delay Time
	in queue)	bar)	
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┝	7:08:51 AM	7:08:52 AM	00:01
H	7:09:03 AM 7:09:15 AM	7:09:04 AM 7:10:10 AM	00:01 00:55
	7:09:58 AM	7:10:10 AM	00:14
	7:10:35 AM	7:10:36 AM	00:01
L	7:10:38 AM	7:10:40 AM	00:02
┝	7:12:25 AM 7:12:57 AM	7:12:26 AM 7:12:58 AM	00:01 00:01
H	7:14:24 AM	7:14:52 AM	00:28
	7:14:34 AM	7:15:03 AM	00:29
L	7:14:44 AM	7:15:05 AM	00:21
⊩	7:14:50 AM 7:14:52 AM	7:15:09 AM 7:15:13 AM	00:19
┢	7:14:57 AM	7:15:13 AM 7:15:16 AM	00:21 00:19
	7:15:35 AM	7:15:36 AM	00:01
	7:16:01 AM	7:16:16 AM	00:15
⊩	7:16:12 AM	7:16:19 AM	00:07
$\vdash$	7:16:22 AM 7:16:26 AM	7:16:23 AM 7:16:27 AM	00:01 00:01
F	7:19:04 AM	7:19:05 AM	00:01
	7:19:33 AM	7:19:34 AM	00:01
L	7:19:36 AM	7:19:37 AM	00:01
┝	7:21:29 AM 7:21:31 AM	7:21:30 AM 7:21:33 AM	00:01 00:02
r	7:22:18 AM	7:22:24 AM	00:06
	7:22:20 AM	7:22:28 AM	00:08
L	7:22:35 AM	7:22:40 AM	00:05
$\vdash$	7:22:46 AM 7:23:44 AM	7:22:47 AM 7:24:20 AM	00:01 00:36
H	7:24:04 AM	7:24:24 AM	00:20
	7:24:58 AM	7:24:59 AM	00:01
L	7:25:53 AM	7:25:58 AM	00:05
H	7:26:11 AM 7:27:30 AM	7:26:13 AM 7:27:42 AM	00:02 00:12
H	7:27:36 AM	7:27:42 AM 7:27:45 AM	00:12
	7:28:10 AM	7:28:11 AM	00:01
	7:28:18 AM	7:28:20 AM	00:02
H	7:29:31 AM 7:29:35 AM	7:29:40 AM	00:09
⊩	7:29:35 AM 7:30:45 AM	7:29:43 AM 7:31:18 AM	00:08 00:33
	7:31:24 AM	7:31:34 AM	00:10
	7:31:37 AM	7:31:38 AM	00:01
H	7:31:41 AM 7:31:51 AM	7:31:42 AM 7:31:54 AM	00:01 00:03
H	7:31:51 AW 7:31:58 AM	7:31:54 AM 7:32:02 AM	00:04
	7:32:12 AM	7:32:13 AM	00:01
E	7:32:34 AM	7:32:38 AM	00:04
L	7:32:39 AM	7:32:40 AM	00:01
┝	7:32:53 AM 7:32:57 AM	7:33:10 AM 7:33:23 AM	00:17 00:26
┢	7:33:08 AM	7:33:26 AM	00:18
	7:34:53 AM	7:35:24 AM	00:31
L	7:35:03 AM	7:35:27 AM	00:24
L	7:35:48 AM 7:35:52 AM	7:35:49 AM	00:01
H	7:35:52 AM 7:35:58 AM	7:35:53 AM 7:35:59 AM	00:01 00:01
E	7:36:06 AM	7:36:11 AM	00:05
3	7:36:29 AM	7:36:30 AM	00:01

W/DD	Average Delay:	00:10
WDN	Average Queue:	1.00

Study	
Average Queue	25
Maximum Queue	125
95th Percentile Queue	50

ĺ	WBR
	Running
	Queue Total
7:00:00 AM	0
7:00:15 AM 7:00:30 AM	0
7:00:45 AM	0
7:01:00 AM 7:01:15 AM	0
7:01:30 AM 7:01:45 AM	1
7:02:00 AM	2
7:02:15 AM 7:02:30 AM	0
7:02:45 AM	0
7:03:00 AM 7:03:15 AM	0
7:03:30 AM	0
7:03:45 AM 7:04:00 AM	1
7:04:15 AM 7:04:30 AM	1
7:04:45 AM	0
7:05:00 AM 7:05:15 AM	0
7:05:30 AM	0
7:05:45 AM 7:06:00 AM	0
7:06:15 AM	0
7:06:30 AM 7:06:45 AM	0
7:07:00 AM	0
7:07:15 AM 7:07:30 AM	0
7:07:45 AM	0
7:08:00 AM 7:08:15 AM	2
7:08:30 AM	0
7:08:45 AM 7:09:00 AM	0
7:09:15 AM 7:09:30 AM	0
7:09:45 AM	1
7:10:00 AM 7:10:15 AM	0
7:10:30 AM	0
7:10:45 AM 7:11:00 AM	0
7:11:15 AM	0
7:11:30 AM 7:11:45 AM	0
7:12:00 AM 7:12:15 AM	0
7:12:30 AM	0
7:12:45 AM 7:13:00 AM	0
7:13:15 AM	0
7:13:30 AM 7:13:45 AM	0
7:14:00 AM	0
7:14:15 AM 7:14:30 AM	1
7:14:45 AM	3
7:15:00 AM 7:15:15 AM	5 1
7:15:30 AM	0
7:15:45 AM 7:16:00 AM	0
7:16:15 AM 7:16:30 AM	0
7:16:45 AM	0
7:17:00 AM 7:17:15 AM	0
7:17:30 AM	0
7:17:45 AM 7:18:00 AM	0
7:18:15 AM	0
7:18:30 AM 7:18:45 AM	0
7:19:00 AM 7:19:15 AM	0
7.15.13 AW	J

79 80	7:37:10 AM	7:37:11 AM 7:37:50 AM	00:01 00:01
81	7:37:49 AM 7:39:04 AM	7:39:05 AM	00:01
82	7:39:38 AM	7:40:00 AM	00:22
83 84	7:39:42 AM 7:39:48 AM	7:40:02 AM 7:40:08 AM	00:20
85	7:40:31 AM	7:40:32 AM	00:20 00:01
86	7:40:59 AM	7:41:07 AM	00:08
87	7:41:40 AM	7:42:01 AM	00:21
88 89	7:41:45 AM 7:42:46 AM	7:42:03 AM 7:42:47 AM	00:18 00:01
90	7:43:06 AM	7:43:24 AM	00:18
91	7:43:53 AM	7:43:54 AM	00:01
92 93	7:43:57 AM 7:44:45 AM	7:43:58 AM 7:44:53 AM	00:01 00:08
94	7:44:49 AM	7:44:57 AM	00:08
95	7:44:58 AM	7:44:59 AM	00:01
96 97	7:45:42 AM 7:45:46 AM	7:45:47 AM 7:45:49 AM	00:05 00:03
98	7:45:53 AM	7:45:54 AM	00:01
99	7:46:26 AM	7:46:27 AM	00:01
100 101	7:46:32 AM 7:46:35 AM	7:46:33 AM 7:46:36 AM	00:01 00:01
101	7:47:01 AM	7:47:18 AM	00:17
103	7:47:04 AM	7:47:22 AM	00:18
104 105	7:47:12 AM	7:47:43 AM 7:47:49 AM	00:31
105	7:47:19 AM 7:47:37 AM	7:47:51 AM	00:30 00:14
107	7:47:58 AM	7:48:06 AM	00:08
108	7:48:29 AM	7:48:34 AM	00:05
109 110	7:48:30 AM 7:48:43 AM	7:48:38 AM 7:49:23 AM	00:08 00:40
111	7:48:44 AM	7:49:24 AM	00:40
112	7:49:18 AM	7:49:51 AM	00:33
113 114	7:49:40 AM 7:49:41 AM	7:50:07 AM 7:50:11 AM	00:27 00:30
115	7:49:47 AM	7:50:11 AM	00:29
116	7:50:03 AM	7:50:20 AM	00:17
117 118	7:50:29 AM 7:51:22 AM	7:50:30 AM 7:51:32 AM	00:01 00:10
119	7:51:26 AM	7:51:36 AM	00:10
120	7:52:44 AM	7:52:45 AM	00:01
121 122	7:52:49 AM 7:53:07 AM	7:52:50 AM 7:53:08 AM	00:01 00:01
123	7:53:39 AM	7:53:40 AM	00:01
124	7:54:44 AM	7:54:48 AM	00:04
125	7:54:50 AM	7:54:51 AM	00:01
126 127	7:55:34 AM 7:56:00 AM	7:55:35 AM 7:56:02 AM	00:01 00:02
128	7:56:03 AM	7:56:04 AM	00:01
129	7:56:15 AM	7:56:16 AM	00:01
130 131	7:56:35 AM 7:56:58 AM	7:56:37 AM 7:57:10 AM	00:02 00:12
132	7:57:05 AM	7:57:26 AM	00:21
133	7:57:15 AM	7:57:30 AM	00:15
134 135	7:57:18 AM 7:57:40 AM	7:57:34 AM 7:57:41 AM	00:16 00:01
136	7:57:43 AM	7:57:44 AM	00:01
137	7:58:15 AM	7:58:16 AM	00:01
138 139	7:58:29 AM 7:58:34 AM	7:58:30 AM 7:58:35 AM	00:01 00:01
140	7:59:14 AM	7:59:45 AM	00:31
141	7:59:18 AM	7:59:48 AM	00:30
142 143	7:59:49 AM 8:00:39 AM	7:59:54 AM	00:05
144	8:00:39 AM 8:01:09 AM	8:00:47 AM 8:01:35 AM	00:08 00:26
145	8:01:13 AM	8:01:38 AM	00:25
146	8:01:41 AM	8:01:43 AM	00:02
147 148	8:01:45 AM 8:01:50 AM	8:01:47 AM 8:01:58 AM	00:02 00:08
149	8:03:22 AM	8:03:33 AM	00:11
150	8:03:24 AM	8:03:36 AM	00:12
151 152	8:03:44 AM 8:03:48 AM	8:03:45 AM 8:03:49 AM	00:01 00:01
153	8:04:02 AM	8:04:03 AM	00:01
154	8:05:39 AM	8:05:40 AM	00:01
155 156	8:05:47 AM 8:06:03 AM	8:06:01 AM 8:06:06 AM	00:14 00:03
157	8:06:36 AM	8:06:42 AM	00:06
158	8:06:49 AM	8:06:50 AM	00:01
159 160	8:07:01 AM 8:07:06 AM	8:07:02 AM 8:07:34 AM	00:01 00:28
161	8:07:08 AM	8:07:44 AM	00:36
162	8:07:29 AM	8:07:48 AM	00:19
163 164	8:09:24 AM 8:09:35 AM	8:09:41 AM 8:09:50 AM	00:17 00:15
165	8:09:39 AM	8:09:50 AM 8:09:52 AM	00:13
166	8:09:55 AM	8:09:56 AM	00:01
167	8:10:00 AM	8:10:01 AM	00:01
168 169	8:10:10 AM 8:10:47 AM	8:10:11 AM 8:10:48 AM	00:01 00:01
170	8:11:58 AM	8:11:59 AM	00:01
171	8:12:02 AM	8:12:03 AM	00:01
172 173	8:12:11 AM 8:12:12 AM	8:12:17 AM 8:12:21 AM	00:06 00:09
174	8:12:47 AM	8:12:48 AM	00:01
175	8:13:24 AM	8:13:33 AM	00:09
176 177	8:13:25 AM 8:13:47 AM	8:13:38 AM 8:13:56 AM	00:13 00:09
177	8:13:58 AM	8:13:56 AM 8:13:59 AM	00:09
179	8:14:14 AM	8:14:15 AM	00:01

D Leit and ND	rtigrit to
7:19:30 AM 7:19:45 AM	0
7:19:45 AM 7:20:00 AM	0
7:20:15 AM 7:20:30 AM	0
7:20:30 AM 7:20:45 AM	0
7:21:00 AM	0
7:21:15 AM 7:21:30 AM	0 1
7:21:45 AM	0
7:22:00 AM 7:22:15 AM	0
7:22:15 AM 7:22:30 AM	0
7:22:45 AM	0
7:23:00 AM 7:23:15 AM	0
7:23:30 AM	0
7:23:45 AM 7:24:00 AM	1
7:24:15 AM	2
7:24:30 AM 7:24:45 AM	0
7:24:45 AM 7:25:00 AM	0
7:25:15 AM	0
7:25:30 AM 7:25:45 AM	0
7:26:00 AM	0
7:26:15 AM	0
7:26:30 AM 7:26:45 AM	0
7:27:00 AM	0
7:27:15 AM 7:27:30 AM	0
7:27:45 AM	1
7:28:00 AM	0
7:28:15 AM 7:28:30 AM	0
7:28:45 AM	0
7:29:00 AM 7:29:15 AM	0
7:29:30 AM	0
7:29:45 AM 7:30:00 AM	0
7:30:15 AM	0
7:30:30 AM 7:30:45 AM	0
7:31:00 AM	1
7:31:15 AM	1
7:31:30 AM 7:31:45 AM	0
7:32:00 AM	1
7:32:15 AM	0
7:32:30 AM 7:32:45 AM	0
7:33:00 AM	2
7:33:15 AM 7:33:30 AM	0
7:33:45 AM	0
7:34:00 AM 7:34:15 AM	0
7:34:30 AM	0
7:34:45 AM 7:35:00 AM	0
7:35:00 AM 7:35:15 AM	2
7:35:30 AM	0
7:35:45 AM 7:36:00 AM	0
7:36:15 AM	0
7:36:30 AM 7:36:45 AM	0
7:37:00 AM	0
7:37:15 AM	0
7:37:30 AM 7:37:45 AM	0
7:38:00 AM	0
7:38:15 AM 7:38:30 AM	0
7:38:45 AM	0
7:39:00 AM 7:39:15 AM	0
7:39:15 AM 7:39:30 AM	0
7:39:45 AM	2
7:40:00 AM 7:40:15 AM	0
7:40:30 AM	0
7:40:45 AM 7:41:00 AM	0 1
7:41:15 AM	0
7:41:30 AM	0
7:41:45 AM 7:42:00 AM	2
7:42:15 AM	0
7:42:30 AM 7:42:45 AM	0
7:43:00 AM	0
7:43:15 AM 7:43:30 AM	0
7:43:45 AM	0
7:44:00 AM	0
7:44:15 AM 7:44:30 AM	0

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180	8:14:17 AM	8:14:18 AM	00:01
181 182	8:14:23 AM 8:14:33 AM	8:14:30 AM 8:14:34 AM	00:07 00:01
183	8:15:36 AM	8:15:43 AM	00:07
184 185	8:15:37 AM	8:15:47 AM 8:16:39 AM	00:10
186	8:16:38 AM 8:16:45 AM	8:16:47 AM	00:01 00:02
187	8:16:51 AM	8:16:52 AM	00:01
188	8:16:58 AM	8:16:59 AM	00:01
189 190	8:17:02 AM 8:17:17 AM	8:17:03 AM 8:17:18 AM	00:01 00:01
191	8:17:56 AM	8:18:03 AM	00:07
192	8:18:14 AM	8:18:18 AM	00:04
193 194	8:18:25 AM 8:18:30 AM	8:18:26 AM 8:18:31 AM	00:01 00:01
195	8:18:44 AM	8:18:48 AM	00:04
196	8:18:57 AM	8:19:34 AM	00:37
197 198	8:19:09 AM 8:19:49 AM	8:19:50 AM 8:19:55 AM	00:41 00:06
199	8:20:23 AM	8:20:24 AM	00:01
200	8:20:43 AM	8:20:44 AM	00:01
201 202	8:20:52 AM 8:21:20 AM	8:21:17 AM 8:21:21 AM	00:25 00:01
203	8:21:29 AM	8:21:31 AM	00:02
204	8:22:11 AM	8:22:20 AM	00:09
205 206	8:22:16 AM	8:22:30 AM	00:14
207	8:22:39 AM 8:23:32 AM	8:22:40 AM 8:23:34 AM	00:01 00:02
208	8:23:36 AM	8:23:37 AM	00:01
209	8:23:59 AM	8:24:00 AM	00:01
210 211	8:24:13 AM 8:24:21 AM	8:25:16 AM 8:25:18 AM	01:03 00:57
212	8:24:28 AM	8:25:25 AM	00:57
213	8:24:45 AM	8:25:40 AM	00:55
214 215	8:24:50 AM 8:25:17 AM	8:25:44 AM 8:25:47 AM	00:54 00:30
216	8:25:18 AM	8:25:50 AM	00:32
217	8:25:52 AM	8:25:54 AM	00:02
218 219	8:26:06 AM 8:27:27 AM	8:26:07 AM 8:27:29 AM	00:01 00:02
220	8:29:03 AM	8:29:27 AM	00:24
221	8:29:32 AM	8:29:44 AM	00:12
222 223	8:29:54 AM 8:30:30 AM	8:29:56 AM 8:30:31 AM	00:02 00:01
224	8:30:58 AM	8:31:42 AM	00:44
225	8:31:35 AM	8:32:02 AM	00:27
226	8:32:40 AM	8:32:41 AM	00:01
227 228	8:32:44 AM 8:32:47 AM	8:32:45 AM 8:32:48 AM	00:01 00:01
229	8:32:53 AM	8:32:57 AM	00:04
230	8:33:02 AM	8:33:04 AM	00:02
231 232	8:33:08 AM 8:33:54 AM	8:33:38 AM 8:33:55 AM	00:30 00:01
233	8:33:57 AM	8:33:58 AM	00:01
234	8:34:21 AM	8:34:26 AM	00:05
235 236	8:34:47 AM 8:35:04 AM	8:34:59 AM 8:35:15 AM	00:12 00:11
237	8:35:17 AM	8:35:18 AM	00:01
238	8:35:45 AM	8:35:47 AM	00:02
239 240	8:35:48 AM 8:36:23 AM	8:35:50 AM 8:36:26 AM	00:02 00:03
241	8:36:30 AM	8:36:31 AM	00:01
242	8:36:39 AM	8:36:52 AM	00:13
243 244	8:38:25 AM 8:40:14 AM	8:38:26 AM 8:40:28 AM	00:01 00:14
245	8:41:50 AM	8:41:56 AM	00:06
246	8:42:59 AM	8:43:07 AM	00:08
247 248	8:43:49 AM 8:43:58 AM	8:43:50 AM 8:44:00 AM	00:01 00:02
249	8:44:09 AM	8:44:10 AM	00:01
250	8:44:24 AM	8:44:25 AM	00:01
251	8:44:33 AM	8:44:34 AM	00:01
252 253	8:44:42 AM 8:45:38 AM	8:44:46 AM 8:45:40 AM	00:04 00:02
254	8:45:42 AM	8:45:43 AM	00:01
255	8:45:48 AM	8:45:57 AM	00:09
256 257	8:46:08 AM 8:46:53 AM	8:46:10 AM 8:46:54 AM	00:02 00:01
258	8:46:59 AM	8:47:00 AM	00:01
259	8:47:36 AM	8:47:44 AM	00:08
260 261	8:48:11 AM 8:48:12 AM	8:48:19 AM 8:48:22 AM	00:08 00:10
262	8:48:25 AM	8:48:26 AM	00:01
263	8:49:24 AM	8:49:25 AM	00:01
264 265	8:49:27 AM 8:49:46 AM	8:49:30 AM 8:50:20 AM	00:03 00:34
266	8:50:09 AM	8:50:24 AM	00:15
267	8:50:12 AM	8:50:27 AM	00:15
268	8:51:02 AM	8:51:04 AM	00:02
269 270	8:51:51 AM 8:52:37 AM	8:52:02 AM 8:52:41 AM	00:11 00:04
271	8:53:40 AM	8:53:53 AM	00:13
272	8:54:23 AM	8:54:24 AM	00:01
273 274	8:56:43 AM 8:56:51 AM	8:56:49 AM 8:56:54 AM	00:06 00:03
275	8:57:07 AM	8:57:36 AM	00:29
276	8:57:54 AM	8:57:56 AM	00:02
277 278	8:58:17 AM 8:58:53 AM	8:58:18 AM 8:59:01 AM	00:01 00:08
279	8:58:58 AM 8:58:58 AM	8:59:01 AM 8:59:07 AM	00:08
280	8:59:15 AM	8:59:19 AM	00:04

D Leit and ND	Trigiti to
7:44:45 AM	0
7:45:00 AM 7:45:15 AM	0
7:45:30 AM 7:45:45 AM	0
7:45:45 AM 7:46:00 AM	0
7:46:15 AM	0
7:46:30 AM 7:46:45 AM	0
7:47:00 AM	0
7:47:15 AM	2
7:47:30 AM 7:47:45 AM	2
7:48:00 AM	1
7:48:15 AM 7:48:30 AM	0 1
7:48:45 AM	2
7:49:00 AM 7:49:15 AM	2
7:49:30 AM	1
7:49:45 AM	3
7:50:00 AM 7:50:15 AM	2
7:50:30 AM	1
7:50:45 AM 7:51:00 AM	0
7:51:00 AM 7:51:15 AM	0
7:51:30 AM 7:51:45 AM	2
7:51:45 AW 7:52:00 AM	0
7:52:15 AM	0
7:52:30 AM 7:52:45 AM	0 1
7:53:00 AM	0
7:53:15 AM 7:53:30 AM	0
7:53:45 AM	0
7:54:00 AM	0
7:54:15 AM 7:54:30 AM	0
7:54:45 AM	1
7:55:00 AM 7:55:15 AM	0
7:55:30 AM	0
7:55:45 AM 7:56:00 AM	0
7:56:15 AM	0
7:56:30 AM	0
7:56:45 AM 7:57:00 AM	1
7:57:15 AM	1
7:57:30 AM 7:57:45 AM	0
7:58:00 AM	0
7:58:15 AM	0
7:58:30 AM 7:58:45 AM	0
7:59:00 AM	0
7:59:15 AM 7:59:30 AM	2
7:59:45 AM	2
8:00:00 AM 8:00:15 AM	0
8:00:15 AM 8:00:30 AM	0
8:00:45 AM	1
8:01:00 AM 8:01:15 AM	2
8:01:30 AM	2
8:01:45 AM 8:02:00 AM	0
8:02:00 AM 8:02:15 AM	0
8:02:30 AM	0
8:02:45 AM 8:03:00 AM	0
8:03:15 AM	0
8:03:30 AM 8:03:45 AM	1
8:04:00 AM	0
8:04:15 AM 8:04:30 AM	0
8:04:45 AM	0
8:05:00 AM	0
8:05:15 AM 8:05:30 AM	0
8:05:45 AM	0
8:06:00 AM 8:06:15 AM	0
8:06:30 AM	0
8:06:45 AM	0
8:07:00 AM 8:07:15 AM	2
8:07:30 AM	3
8:07:45 AM 8:08:00 AM	0
8:08:15 AM	0
8:08:30 AM	0
8:08:45 AM 8:09:00 AM	0
8:09:15 AM	0
8:09:30 AM 8:09:45 AM	2
0.05.45 AIVI	

281 8:59:29 AM 8:59:36 AM 00:07

8:10:00 AM	0
8:10:15 AM	0
8:10:30 AM	0
8:10:45 AM	0
8:11:00 AM	0
8:11:15 AM	0
8:11:30 AM	0
8:11:45 AM	0
8:12:00 AM	0
8:12:15 AM	2
8:12:30 AM	0
8:12:45 AM	0
8:13:00 AM	0
8:13:15 AM	0
8:13:30 AM	2
8:13:45 AM	0
8:14:00 AM	0
8:14:15 AM	1
8:14:30 AM	1
8:14:45 AM	0
8:15:00 AM	0
8:15:15 AM	0
8:15:30 AM	0
8:15:45 AM	1
8:16:00 AM	0
8:16:15 AM	0
8:16:30 AM	0
8:16:45 AM	0
8:17:00 AM	0
8:17:15 AM	0
8:17:30 AM	0
8:17:45 AM	0
8:18:00 AM	1
8:18:15 AM	1
8:18:30 AM	
	0
8:18:45 AM	1
8:19:00 AM	1
8:19:15 AM	2
8:19:30 AM	2
8:19:45 AM	1
8:20:00 AM	0
8:20:15 AM	0
8:20:30 AM	0
8:20:45 AM	0
8:21:00 AM	1
8:21:15 AM	1
	1
8:21:30 AM	
8:21:45 AM	0
8:22:00 AM	0
8:22:15 AM	1
8:22:30 AM	1
8:22:45 AM	0
8:23:00 AM	0
8:23:15 AM	0
8:23:30 AM	0
8:23:45 AM	0
8:24:00 AM	1
8:24:15 AM	1
8:24:30 AM	3
8:24:45 AM	
	3
8:25:00 AM	5
8:25:15 AM	5
8:25:30 AM	4
8:25:45 AM	2
8:26:00 AM	0
8:26:15 AM	0
8:26:30 AM	0
8:26:45 AM	0
8:27:00 AM	0
8:27:15 AM	0
8:27:30 AM	0
8:27:45 AM	0
8:28:00 AM	0
8:28:15 AM	0
8:28:30 AM	0
8:28:45 AM	0
8:29:00 AM	0
8:29:15 AM	1
8:29:30 AM	0
8:29:45 AM	0
8:30:00 AM	0
8:30:15 AM	0
8:30:30 AM	0
8:30:45 AM	0
8:31:00 AM	1
8:31:15 AM	
	1
8:31:30 AM	1
8:31:45 AM	1
8:32:00 AM	1
8:32:15 AM	0
8:32:30 AM	0
8:32:45 AM	1
8:33:00 AM	0
8:33:15 AM	1
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8:33:45 AM	0
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8:35:15 AM	1
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8:35:45 AM 8:36:00 AM	0
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8:37:45 AM	0
8:38:00 AM	0
8:38:15 AM	0
8:38:30 AM	0
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8:39:00 AM	0
8:39:15 AM	0
8:39:30 AM	0
8:39:45 AM	0
8:40:00 AM	0
8:40:15 AM	1
8:40:30 AM	0
8:40:45 AM	0
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8:42:00 AM	0
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8:42:30 AM	0
8:42:45 AM	0
8:43:00 AM	1
8:43:15 AM	0
8:43:30 AM	0
8:43:45 AM	0
8:44:00 AM	1
8:44:15 AM	0
8:44:30 AM	0
8:44:45 AM	1
8:45:00 AM	0
8:45:15 AM	0
8:45:30 AM	0
8:45:45 AM	0
8:46:00 AM	0
8:46:15 AM	0
8:46:30 AM	0
8:46:45 AM	0
8:47:00 AM	1
8:47:15 AM	0
8:47:30 AM	0
8:47:45 AM	0
8:48:00 AM	0
8:48:15 AM	_
	2
8:48:30 AM	0
8:48:45 AM	0
8:49:00 AM	0
8:49:15 AM	0
8:49:30 AM	1
8:49:45 AM	0
8:50:00 AM	1
8:50:15 AM	3
8:50:30 AM	0
8:50:45 AM	0
8:51:00 AM	0
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8:56:30 AM	0
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Site Code: 16689508

Location: Queue and Delay - SW Hazelbrook Rd and to OR 99W

Date: 7/25/2024 Time: 4:00 PM - 6:00 PM Peak Hour: 3:50PM

Peak Hour: 3:50PM		
	Delay Information	
	WBR	
Vehicle Stop (Comes to a	Vehicle Release (When	
stop regardless of position	vehicle finally crosses stop	Delay Time
in queue)	bar)	
4:00:07 PM	4:00:26 PM	00:19
4:00:16 PM	4:00:35 PM	00:19
4:00:18 PM	4:00:46 PM	00:28
4:01:09 PM	4:01:32 PM	00:23
4:01:49 PM	4:01:50 PM	00:01
4:01:55 PM	4:01:56 PM	00:01
4:01:58 PM	4:01:59 PM	00:01
4:02:42 PM	4:02:49 PM	00:07
4:03:18 PM	4:03:19 PM	00:01
4:03:36 PM	4:03:48 PM	00:12
4:03:55 PM	4:04:11 PM	00:16
4:04:02 PM	4:04:37 PM	00:35
4:04:24 PM	4:04:39 PM	00:15
4:04:24 PM	4:04:42 PM	00:18
4:04:47 PM	4:04:49 PM	00:02
4:04:54 PM	4:04:55 PM	00:01
4:04:55 PM	4:04:58 PM	00:03
4:05:02 PM	4:05:14 PM	00:12
4:05:41 PM	4:05:42 PM	00:01
4:05:48 PM	4:05:49 PM	00:01
4:05:53 PM	4:05:53 PM	00:00
4:06:05 PM	4:06:15 PM	00:10
4:06:30 PM	4:06:31 PM	00:01
4:06:35 PM	4:06:37 PM	00:02
4:06:43 PM	4:06:53 PM	00:10
4:07:33 PM	4:07:35 PM	00:02
4:07:38 PM	4:08:03 PM	00:25
4:07:42 PM	4:08:06 PM	00:24
4:07:58 PM	4:08:15 PM	00:17
4:08:53 PM	4:08:54 PM	00:01
4:08:56 PM	4:08:57 PM	00:01
4:09:07 PM	4:09:10 PM	00:03
4:09:11 PM	4:09:12 PM	00:01
4:09:27 PM	4:09:28 PM	00:01
4:09:30 PM 4:09:41 PM	4:09:32 PM 4:09:58 PM	00:02 00:17
4:09:50 PM 4:10:09 PM	4:10:00 PM 4:10:12 PM	00:10
4:10:12 PM	4:10:12 PM 4:10:18 PM	00:03 00:06
4:10:12 PM 4:10:19 PM	4:10:18 PM 4:10:49 PM	00:06
4:10:39 PM	4:10:53 PM	00:14
4:10:44 PM	4:10:56 PM	00:12
4:10:59 PM	4:11:01 PM	00:02
4:11:02 PM	4:11:03 PM	00:01
4:11:02 PM	4:11:10 PM	00:01
4:11:25 PM	4:11:32 PM	00:07
4:11:25 PM	4:12:00 PM	00:35
4:11:57 PM	4:12:14 PM	00:17
4:11:59 PM	4:12:17 PM	00:18
4:12:10 PM	4:12:21 PM	00:11
4:12:22 PM	4:12:23 PM	00:01
4:12:25 PM	4:12:26 PM	00:01
4:12:40 PM	4:12:45 PM	00:05
4:12:42 PM	4:12:49 PM	00:07
4:12:55 PM	4:12:56 PM	00:01
4:13:02 PM	4:13:07 PM	00:05
4:13:02 FM	4:13:37 PM	00:03

4:13:37 PM

4:13:43 PM

4:13:48 PM

4:14:03 PM

4:14:44 PM

4:14:46 PM

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4:13:25 PM

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4:13:46 PM

4:13:57 PM

4:14:41 PM

4:14:45 PM

4:14:58 PM

4:15:01 PM

4:15:09 PM

60 61

WBR	Average Delay:	00:38
	Average Queue:	4.00

Study	
Average Queue	100
Maximum Queue	650
95th Percentile Queue	500

	WBR
	Running Queue Total
4:00:00 PM	0
4:00:15 PM	1
4:00:30 PM	2
4:00:45 PM	1
4:01:00 PM	0
4:01:15 PM 4:01:30 PM	1
4:01:45 PM	0
4:02:00 PM	0
4:02:15 PM	0
4:02:30 PM	0
4:02:45 PM 4:03:00 PM	0
4:03:15 PM	0
4:03:30 PM	0
4:03:45 PM	1
4:04:00 PM	1
4:04:15 PM	1
4:04:30 PM 4:04:45 PM	0
4:04:45 PM 4:05:00 PM	0
4:05:15 PM	0
4:05:30 PM	0
4:05:45 PM	0
4:06:00 PM	0
4:06:15 PM 4:06:30 PM	1
4:06:45 PM	1
4:07:00 PM	0
4:07:15 PM	0
4:07:30 PM	0
4:07:45 PM 4:08:00 PM	3
4:08:15 PM	0
4:08:30 PM	0
4:08:45 PM	0
4:09:00 PM	0
4:09:15 PM 4:09:30 PM	0
4:09:45 PM	1
4:10:00 PM	0
4:10:15 PM	1
4:10:30 PM	1
4:10:45 PM 4:11:00 PM	3
4:11:00 PM 4:11:15 PM	0
4:11:30 PM	2
4:11:45 PM	1
4:12:00 PM	2
4:12:15 PM 4:12:30 PM	0
4:12:45 PM	1
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4:15:45 PM	3
4:16:00 PM	1

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66	4:15:12 PM	4:15:33 PM	00:21
67	4:15:14 PM	4:15:47 PM	00:33
68	4:15:16 PM	4:15:57 PM	00:41
69	4:15:41 PM	4:16:10 PM	00:29
70	4:16:38 PM	4:16:39 PM	00:01
71	4:16:40 PM	4:16:41 PM	00:01
72	4:16:47 PM	4:17:01 PM	00:14
73	4:16:52 PM	4:17:12 PM	00:20
74	4:17:06 PM	4:17:12 PM	00:06
75	4:17:15 PM	4:17:16 PM	00:01
76	4:17:23 PM	4:17:24 PM	00:01
77	4:17:27 PM	4:17:29 PM	00:02
78 79	4:17:40 PM 4:18:35 PM	4:17:42 PM	00:02
80	4:18:39 PM	4:18:36 PM 4:18:41 PM	00:01 00:02
81	4:18:51 PM	4:18:51 PM	00:02
82	4:18:57 PM	4:18:58 PM	00:00
83	4:19:01 PM	4:19:03 PM	00:01
84	4:19:09 PM	4:19:25 PM	00:16
85	4:19:40 PM	4:19:41 PM	00:01
86	4:19:54 PM	4:19:55 PM	00:01
87	4:20:16 PM	4:20:39 PM	00:23
88	4:20:26 PM	4:20:40 PM	00:14
89	4:20:46 PM	4:21:06 PM	00:20
90	4:20:56 PM	4:21:08 PM	00:12
91	4:21:11 PM	4:21:13 PM	00:02
92	4:21:15 PM	4:21:16 PM	00:01
93	4:21:44 PM	4:21:49 PM	00:05
94	4:21:47 PM	4:21:53 PM	00:06
95	4:22:44 PM	4:22:48 PM	00:04
96	4:23:05 PM	4:23:15 PM	00:10
97	4:23:27 PM	4:23:30 PM	00:03
98	4:23:31 PM	4:23:33 PM	00:02
99	4:23:55 PM	4:23:57 PM	00:02
100	4:24:13 PM	4:24:29 PM	00:16
101	4:24:14 PM	4:24:31 PM	00:17
102	4:24:40 PM	4:24:45 PM	00:05
103	4:24:52 PM	4:24:55 PM	00:03
104	4:25:13 PM	4:25:16 PM	00:03
105	4:25:15 PM	4:25:26 PM	00:11
106	4:25:30 PM	4:25:47 PM	00:17
107	4:25:32 PM	4:25:53 PM	00:21
108 109	4:26:42 PM 4:26:49 PM	4:26:45 PM 4:26:56 PM	00:03
110	4:26:59 PM	4:27:06 PM	00:07 00:07
111	4:27:02 PM	4:27:23 PM	00:21
112	4:27:05 PM	4:27:25 PM	00:20
113	4:27:10 PM	4:27:38 PM	00:28
114	4:27:34 PM	4:27:46 PM	00:12
115	4:27:36 PM	4:28:18 PM	00:42
116	4:28:46 PM	4:28:57 PM	00:11
117	4:29:04 PM	4:29:06 PM	00:02
118	4:29:23 PM	4:29:24 PM	00:01
119	4:29:43 PM	4:30:17 PM	00:34
120	4:29:50 PM	4:30:24 PM	00:34
121	4:29:54 PM	4:30:27 PM	00:33
122	4:29:58 PM	4:30:30 PM	00:32
123	4:30:40 PM	4:30:42 PM	00:02
124	4:30:47 PM	4:30:49 PM	00:02
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128	4:31:15 PM	4:31:16 PM	00:01
129	4:31:48 PM	4:31:52 PM	00:04
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131	4:32:04 PM 4:32:21 PM	4:32:11 PM	00:07
132 133	4:32:30 PM	4:32:38 PM 4:32:43 PM	00:17
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136	4:32:52 PM	4:33:09 PM	00:20
137	4:32:55 PM	4:33:11 PM	00:16
138	4:32:58 PM	4:33:16 PM	00:18
139	4:33:19 PM	4:33:31 PM	00:12
140	4:33:20 PM	4:33:32 PM	00:12
141	4:33:21 PM	4:33:36 PM	00:15
142	4:33:26 PM	4:34:06 PM	00:40
143	4:33:28 PM	4:34:15 PM	00:47
144	4:33:35 PM	4:34:23 PM	00:48
145	4:33:51 PM	4:34:26 PM	00:35
146	4:34:31 PM	4:34:39 PM	00:08
147	4:34:43 PM	4:34:44 PM	00:01
148	4:35:14 PM	4:35:21 PM	00:07
149	4:35:16 PM	4:35:24 PM	00:08
150	4:35:17 PM	4:35:27 PM	00:10
151	4:35:37 PM	4:35:47 PM	00:10

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4:17:30 PM	0
4:17:45 PM	0
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4:18:45 PM	0
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4:20:30 PM	2
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4:22:15 PM	0
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4:23:30 PM	0
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4:24:00 PM	0
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4:25:45 PM	2
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4:26:15 PM	0
4:26:30 PM	0
4:26:45 PM	0
4:27:00 PM	1
4:27:15 PM	3
4:27:30 PM	1
4:27:45 PM	2
4:28:00 PM	1
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4:28:15 PM	1
4:28:15 PM 4:28:30 PM	0
4:28:30 PM	0
4:28:30 PM 4:28:45 PM	0
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4:28:30 PM 4:28:45 PM	0
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5:35:00 PM 5:35:15 PM 5:35:30 PM 5:35:45 PM 5:36:00 PM 5:36:15 PM 5:36:35 PM 5:37:30 PM 5:37:30 PM 5:37:35 PM 5:37:35 PM 5:37:35 PM	0 0 0 0 0 2 0 0 1 1 1 1 0 0
5:35:00 PM 5:35:15 PM 5:35:30 PM 5:35:45 PM 5:36:00 PM 5:36:15 PM 5:36:30 PM 5:36:30 PM 5:37:00 PM 5:37:30 PM 5:37:45 PM 5:37:45 PM 5:38:15 PM 5:38:30 PM	0 0 0 0 2 0 0 1 1 1 1 0 0
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410	5:35:52 PM	5:36:11 PM	00:19
411	5:36:12 PM 5:36:35 PM	5:36:13 PM 5:36:38 PM	00:01 00:03
413	5:36:41 PM	5:36:57 PM	00:03
414	5:36:47 PM	5:37:08 PM	00:21
415	5:37:15 PM	5:37:18 PM	00:03
416	5:37:20 PM	5:37:22 PM	00:02
417	5:37:24 PM	5:37:29 PM	00:05
418 419	5:37:29 PM 5:37:36 PM	5:37:35 PM 5:37:38 PM	00:06 00:02
420	5:37:58 PM	5:38:00 PM	00:02
421	5:38:19 PM	5:38:28 PM	00:09
422	5:38:28 PM	5:38:31 PM	00:03
423	5:38:33 PM	5:38:36 PM	00:03
424 425	5:38:52 PM 5:39:15 PM	5:38:58 PM	00:06 00:02
426	5:39:18 PM	5:39:17 PM 5:39:19 PM	00:02
427	5:39:34 PM	5:39:37 PM	00:03
428	5:40:05 PM	5:40:15 PM	00:10
429	5:40:06 PM	5:40:33 PM	00:27
430	5:40:08 PM	5:40:36 PM	00:28
431 432	5:40:47 PM 5:40:53 PM	5:40:51 PM 5:40:54 PM	00:04 00:01
433	5:41:30 PM	5:41:32 PM	00:02
434	5:41:40 PM	5:41:41 PM	00:01
435	5:41:52 PM	5:41:55 PM	00:03
436	5:42:01 PM	5:42:09 PM	00:08
437 438	5:42:21 PM	5:42:51 PM	00:30
439	5:42:26 PM 5:42:45 PM	5:42:53 PM 5:43:02 PM	00:27 00:17
440	5:43:07 PM	5:43:11 PM	00:04
441	5:43:07 PM	5:43:15 PM	00:08
442	5:43:17 PM	5:43:19 PM	00:02
443	5:43:21 PM	5:43:23 PM	00:02
444 445	5:43:33 PM 5:44:04 PM	5:43:36 PM 5:44:12 PM	00:03 00:08
446	5:44:08 PM	5:44:14 PM	00:06
447	5:44:16 PM	5:44:22 PM	00:06
448	5:44:30 PM	5:44:32 PM	00:02
449	5:44:50 PM	5:45:12 PM	00:22
450 451	5:45:31 PM 5:45:33 PM	5:45:36 PM 5:45:40 PM	00:05 00:07
452	5:46:05 PM	5:46:11 PM	00:06
453	5:46:20 PM	5:46:22 PM	00:02
454	5:46:24 PM	5:46:25 PM	00:01
455	5:46:56 PM	5:47:03 PM	00:07
456 457	5:47:37 PM 5:47:43 PM	5:47:39 PM 5:47:45 PM	00:02 00:02
458	5:47:51 PM	5:47:53 PM	00:02
459	5:48:11 PM	5:48:14 PM	00:03
460	5:48:34 PM	5:48:41 PM	00:07
461 462	5:48:44 PM 5:48:53 PM	5:48:47 PM 5:49:07 PM	00:03
463	5:49:09 PM	5:49:11 PM	00:14 00:02
464	5:49:48 PM	5:49:49 PM	00:01
465	5:49:51 PM	5:49:53 PM	00:02
466	5:51:08 PM	5:51:10 PM	00:02
467 468	5:51:14 PM	5:51:16 PM 5:52:12 PM	00:02 00:02
469	5:52:10 PM 5:53:10 PM	5:52:12 PM 5:53:14 PM	00:02
470	5:53:31 PM	5:53:39 PM	00:08
471	5:53:32 PM	5:53:43 PM	00:11
472	5:53:34 PM	5:53:48 PM	00:14
473 474	5:53:51 PM 5:54:13 PM	5:54:12 PM 5:54:20 PM	00:21
475	5:54:20 PM	5:54:24 PM	00:07 00:04
476	5:54:44 PM	5:54:47 PM	00:03
477	5:54:53 PM	5:54:56 PM	00:03
478	5:55:09 PM	5:55:15 PM	00:06
479 480	5:55:17 PM 5:55:25 PM	5:55:19 PM 5:55:30 PM	00:02 00:05
481	5:56:10 PM	5:56:26 PM	00:05
482	5:56:58 PM	5:57:01 PM	00:03
483	5:57:31 PM	5:57:48 PM	00:17
484	5:57:34 PM	5:57:59 PM	00:25
485	5:57:57 PM	5:58:18 PM	00:21
486 487	5:58:06 PM 5:58:06 PM	5:58:20 PM 5:58:26 PM	00:14 00:20
488	5:58:07 PM	5:58:34 PM	00:27
489	5:58:15 PM	5:58:38 PM	00:23
490	5:58:40 PM	5:58:41 PM	00:01
491	5:58:56 PM	5:58:59 PM	00:03
492 493	5:59:02 PM 5:59:12 PM	5:59:03 PM 5:59:13 PM	00:01 00:01
494	5:59:19 PM	5:59:20 PM	00:01
495	5:59:39 PM	5:59:41 PM	00:02
_			

 5:42:15 PM	0
5:42:30 PM	2
5:42:45 PM	3
5:43:00 PM	1
5:43:15 PM	0
5:43:30 PM	0
5:43:45 PM	0
5:44:00 PM	0
5:44:15 PM	0
5:44:30 PM	1
5:44:45 PM	
	0
5:45:00 PM	1
5:45:15 PM	0
5:45:30 PM	0
5:45:45 PM	0
5:46:00 PM	0
5:46:15 PM	0
5:46:30 PM	0
5:46:45 PM	0
5:47:00 PM	1
5:47:15 PM	0
5:47:30 PM	0
5:47:45 PM	0
5:48:00 PM	0
5:48:15 PM	
	0
5:48:30 PM	0
5:48:45 PM	1
5:49:00 PM	1
5:49:15 PM	0
5:49:30 PM	0
5:49:45 PM	0
5:50:00 PM	0
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5:53:30 PM	0
 5:53:45 PM	1
5:54:00 PM	1
5:54:15 PM	1
5:54:30 PM	0
5:54:45 PM	1
5:55:00 PM	0
 5:55:15 PM	0
5:55:30 PM	0
5:55:45 PM	0
5:56:00 PM	0
5:56:15 PM	1
5:56:30 PM	0
5:56:45 PM	0
5:57:00 PM	1
5:57:15 PM	0
5:57:30 PM	0
5:57:45 PM	2
5:58:00 PM	1
5:58:15 PM	5
5:58:30 PM	2
5:58:45 PM	0
5:59:00 PM	0
5:59:15 PM	0
5:59:30 PM	
	0
5:59:45 PM	0

496	5:59:48 PM	5:59:57 PM	00:09
497	5:59:49 PM	6:00:00 PM	00:11
498	5:59:53 PM	6:00:00 PM	00:07
499	5:59:55 PM	6:00:00 PM	00:05



Location: Queue - SW 124th SB left to SW Tualatin Rd Date: 7/25/2024 Peak Hour; 7:30AM 4:30PM

	Peak Hour.
Start	Longest Queue
Time	(number of cars)
7:00 AM	7
7:05 AM	6
7:10 AM	3
7:15 AM	4
7:20 AM	4
7:25 AM	6
7:30 AM	7
7:35 AM	3
7:40 AM	7
7:45 AM	5
7:50 AM	5
7:55 AM	11
8:00 AM	6
8:05 AM	6
8:10 AM	3
8:15 AM	8
8:20 AM	2
8:25 AM	6
8:30 AM	5
8:35 AM	9
8:40 AM	6
8:45 AM	7
8:50 AM	4
8:55 AM	1

St	tudy	
	AM	PM
Average Queue	150	225
Maximum Queue	275	300
95th Percentile Queue	225	300

Start	Longest Queue
	(number of cars)
4:00 PM	9
4:05 PM	7
4:10 PM	15
4:15 PM	8
4:20 PM	10
4:25 PM	5
4:30 PM	11
4:35 PM	12
4:40 PM	12
4:45 PM	10
4:50 PM	9
4:55 PM	6
5:00 PM	6
5:05 PM	8
5:10 PM	12
5:15 PM	9
5:20 PM	6
5:25 PM	8
5:30 PM	13
5:35 PM	13
5:40 PM	16
5:45 PM	10
5:50 PM	3
5:55 PM	5



Location: Queue - SW Tualatin Rd WB Right and WB Left to SW 124th Ave Date: 7/25/2024
Peak Hour: 7:30AM 4:30PM

Study				
	AM PM			M
	WBR	WBL	WBR	WBL
Average Queue	50	25	175	50
Maximum Queue	100	75	250	125
95th Percentile Queue	75	75	250	125

	WBR		
Start	Longest Queue		
Time	(number of cars)		
7:00 AM	2		
7:05 AM	1		
7:10 AM	1		
7:15 AM	1		
7:20 AM	2		
7:25 AM	1		
7:30 AM	2		
7:35 AM	2		
7:40 AM	2		
7:45 AM	4		
7:50 AM	1		
7:55 AM	3		
8:00 AM	3		
8:05 AM	1		
8:10 AM	1		
8:15 AM	1		
8:20 AM	3		
8:25 AM	1		
8:30 AM	3		
8:35 AM	1		
8:40 AM	1		
8:45 AM	6		
8:50 AM	1		
8:55 AM	1		

WBL		
	Longest Queue	
Start Time	(number of cars)	
7:00 AM	1	
7:05 AM	1	
7:10 AM	1	
7:15 AM	1	
7:20 AM	2	
7:25 AM	1	
7:30 AM	3	
7:35 AM	1	
7:40 AM	2	
7:45 AM	1	
7:50 AM	0	
7:55 AM	1	
8:00 AM	3	
8:05 AM	2 2 0	
8:10 AM	2	
8:15 AM		
8:20 AM	0	
8:25 AM	1	
8:30 AM	2	
8:35 AM	1	
8:40 AM	1	
8:45 AM	3	
8:50 AM	1	
8:55 AM	1	

Start   Longest Queue (number of cars)
4:00 PM 5 4:05 PM 6 4:10 PM 5 4:15 PM 10+ 4:20 PM 7 4:25 PM 5 4:30 PM 10+ 4:35 PM 10+ 4:40 PM 10+ 4:45 PM 10+
4:05 PM 6 4:10 PM 5 4:15 PM 10+ 4:20 PM 7 4:25 PM 5 4:30 PM 10+ 4:35 PM 10+ 4:40 PM 10+ 4:45 PM 10+
4:10 PM 5 4:15 PM 10+ 4:20 PM 7 4:20 PM 5 4:25 PM 5 4:30 PM 10+ 4:35 PM 10+ 4:40 PM 10+ 4:45 PM 10+
4:15 PM 10+ 4:20 PM 7 4:25 PM 5 4:30 PM 10+ 4:35 PM 10+ 4:40 PM 10+ 4:45 PM 10+
4:20 PM 7 4:25 PM 5 4:30 PM 10+ 4:35 PM 10+ 4:40 PM 10+ 4:45 PM 10+
4:25 PM 5 4:30 PM 10+ 4:35 PM 10+ 4:40 PM 10+ 4:45 PM 10+
4:30 PM 10+ 4:35 PM 10+ 4:40 PM 10+ 4:45 PM 10+
4:35 PM 10+ 4:40 PM 10+ 4:45 PM 10+
4:40 PM 10+ 4:45 PM 10+
4:45 PM 10+
1.101111
4:50 PM 10+
4:55 PM 2
5:00 PM 7
5:05 PM 10
5:10 PM 10
5:15 PM 8
5:20 PM 10
5:25 PM 4
5:30 PM 5
5:35 PM 5
5:40 PM 7
5:45 PM 10
5:50 PM 2
5:55 PM 3

WBL		
	Longest Queue	
Start Time	(number of cars)	
4:00 PM	2	
4:05 PM	1	
4:10 PM	2	
4:15 PM	0	
4:20 PM	2	
4:25 PM	0	
4:30 PM	1	
4:35 PM	1	
4:40 PM	1	
4:45 PM	3	
4:50 PM	2	
4:55 PM	4	
5:00 PM	1	
5:05 PM	5	
5:10 PM	2	
5:15 PM	5	
5:20 PM	3	
5:25 PM	1	
5:30 PM	2	
5:35 PM	2	
5:40 PM	4	
5:45 PM	1	
5:50 PM	1	
5:55 PM	1	



Location: Queue - OR 99W WB Left to SW 124th Ave Date: 7/25/2024

Study				
	AM PM			
	WBL1	WBL2	WBL1	WBL2
Average Queue	375	300	350	225
Maximum Queue	600	625	475	325
95th Percentile Queue	575	575	450	325

_		
Start	WBL1 Longest Queue	WBL2 Longest Queue
Time	(number of cars)	(number of cars)
7:00 AM	17	10
7:05 AM	17	6
7:10 AM	11	4
7:15 AM	8	12
7:20 AM	11	10
7:25 AM	18	11
7:30 AM	12	8
7:35 AM	15	7
7:40 AM	11	4
7:45 AM	23	21
7:50 AM	24	25
7:55 AM	21	22
8:00 AM	11	8
8:05 AM	10	4
8:10 AM	10	8
8:15 AM	10	7
8:20 AM	14	11
8:25 AM	10	8
8:30 AM	9	8
8:35 AM	14	6
8:40 AM	11	5
8:45 AM	10	7
8:50 AM	8	5
8:55 AM	9	11

Start	WBL1 Longest Queue	WBL2 Longest Queue	
Time	(number of cars)	(number of cars)	
4:00 PM	13	11	
4:05 PM	8	5	
4:10 PM	16	7	
4:15 PM	7	8	
4:20 PM	12	6	
4:25 PM	14	9	
4:30 PM	15	10	
4:35 PM	17	6	
4:40 PM	15	11	
4:45 PM	17	13	
4:50 PM	19	12	
4:55 PM	16	13	
5:00 PM	10	7	
5:05 PM	11	11	
5:10 PM	9	13	
5:15 PM	14	6	
5:20 PM	13	9	
5:25 PM	14	6	
5:30 PM	20	7	
5:35 PM	14	5	
5:40 PM	11	9	
5:45 PM	16	6	
5:50 PM	12	7	
5:55 PM	11	9	



Location: Queue - SW 124th Ave NB Right and NB Left to OR 99W Date: 7/25/2024

Study				
	AM		P	M
	NBR1	NBR2	NBR1	NBR2
Average Queue	75	50	200	150
Maximum Queue	125	100	275	275
95th Percentile Queue	125	75	275	250

Study				
	AM		PM	
	NBL1	NBL2	NBL1	NBL2
Average Queue	75	50	275	275
Maximum Queue	150	100	475	450
95th Percentile Queue	125	75	450	400

	NBR		
Start	NBR1 Longest Queue	NBR2 Longest Queue	
Time	(number of cars)	(number of cars)	
7:00 AM	2	2	
7:05 AM	5	5	
7:10 AM	2	2	
7:15 AM	2	2	
7:20 AM	3	1	
7:25 AM	3	3	
7:30 AM	5	2	
7:35 AM		3	
7:40 AM	2	3	
7:45 AM	4	2	
7:50 AM		4	
7:55 AM	2	1	
8:00 AM	5	3	
8:05 AM	5	2	
8:10 AM	4	1	
8:15 AM	6	3	
8:20 AM	2	2	
8:25 AM	4	2	
8:30 AM	2	1	
8:35 AM	4	2	
8:40 AM		3	
8:45 AM	5	2	
8:50 AM	3	3	
8:55 AM	4	2	

NBL			
	NBL1 Longest Queue	NBL2 Longest Queue	
Start Time	(number of cars)	(number of cars)	
7:00 AM	1	1	
7:05 AM	2	2	
7:10 AM	3	2	
7:15 AM	1	2	
7:20 AM	2	3	
7:25 AM	3	1	
7:30 AM	2	3	
7:35 AM	3	3	
7:40 AM	2	2	
7:45 AM	2	2	
7:50 AM	4	4	
7:55 AM	3	2	
8:00 AM	3	2	
8:05 AM	6	1	
8:10 AM	3	3	
8:15 AM	3	3	
8:20 AM	5	2	
8:25 AM	3	4	
8:30 AM	2	3	
8:35 AM	2	2	
8:40 AM	3	3	
8:45 AM	4	3	
8:50 AM	2	1	
8:55 AM	1	2	

NBR			
Start	NBR1 Longest Queue	NBR2 Longest Queue	
Time	(number of cars)	(number of cars)	
4:00 PM	6	6	
4:05 PM		7	
4:10 PM		6	
4:15 PM		6	
4:20 PM		5	
4:25 PM	6	3	
4:30 PM		7	
4:35 PM		4	
4:40 PM		9	
4:45 PM	11	11	
4:50 PM	8	6	
4:55 PM	6	5	
5:00 PM	4	3	
5:05 PM	8	10	
5:10 PM	10	10	
5:15 PM	9	7	
5:20 PM		2	
5:25 PM	4	7	
5:30 PM	4	2	
5:35 PM		5	
5:40 PM		3	
5:45 PM	6	4	
5:50 PM	6	5	
5:55 PM	6	4	

	NBL			
	NBL1 Longest Queue	NBL2 Longest Queue		
Start Time	(number of cars)	(number of cars)		
4:00 PM	11	10		
4:05 PM	8	7		
4:10 PM	7	7		
4:15 PM	14	11		
4:20 PM	9	9		
4:25 PM	6	12		
4:30 PM	12	12		
4:35 PM	18	18		
4:40 PM	19	13		
4:45 PM	15	15		
4:50 PM	6	15		
4:55 PM	9	8		
5:00 PM	9	11		
5:05 PM	12	10		
5:10 PM	11	12		
5:15 PM	9	13		
5:20 PM	14	13		
5:25 PM	12	8		
5:30 PM	10	8		
5:35 PM	13	13		
5:40 PM	11	11		
5:45 PM	11	6		
5:50 PM	8	12		
5:55 PM	6	7		