TUALATIN ARCHITECTURAL REVIEW BOARD MEETING

WEDNESDAY, MARCH 09, 2022

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CALL TO ORDER & ROLL CALL

ANNOUNCEMENTS & COMMUNICATION

APPROVAL OF MINUTES

1. Review of January 22, 2020 Minutes

COMMUNICATION FROM THE PUBLIC (NOT ON THE AGENDA)

ACTION ITEMS

1. Consideration of an Architectural Review application for the Tualatin Logistics Park (AR 21-0011), an approximately 452,800 square foot industrial building on 24.16 acres in the General Manufacturing (MG) zone at 20400 SW Cipole Road (Tax Lot: 2S128A000100).

COMMUNICATION FROM CITY STAFF

FUTURE ACTION ITEMS

ADJOURNMENT

City of Tualatin

www.tualatinoregon.gov

UNOFFICIAL

ARCHITECTURAL REVIEW BOARD

MINUTES OF January 22, 2020

ARB MEMBERS PRESENT:	**STAFF PRESENT**
Commissioner Skip Stanaway	Steve Koper
Commissioner Nichole George	Tabitha Boschetti
Commissioner Patrick Gaynor	Lynette Sanford
Commissioner Chris Goodell	

ARB MEMBERS ABSENT:
Chair Nancy Grimes, Commissioner Lisa Quichocho, Commissioner Carol Bellows

GUESTS: Dustin Elmore, Craig Harris, Mike DeArmey, Kyle Zertelsen, Calvin Coatsworth

1. CALL TO ORDER AND ROLL CALL:

Commissioner Goodell called the meeting to order at 6:35 PM and reviewed the agenda. Roll call was taken.

2. APPROVAL OF MINUTES:

Commissioner Goodell, acting Chair, asked for approval of the ARB minutes dated November 20, 2019. MOTION by Commissioner Gaynor SECONDED by Commissioner Stanaway to approve the minutes as written. MOTION PASSED 4-0.

Commissioner Goodell read the script for quasi-judicial hearings. Commissioner Goodell asked the board members if they have conflict of interest, bias, or ex-parte contact with the applicant. Commissioner Goodell stated that his firm worked with the property owner approximately ten years ago, but has not had contact with the owner since. Commissioner Goodell noted that it would not affect his decision.

3. ACTION ITEMS:

A. Consideration of an Architectural Review application (AR 19-0008) for two industrial buildings (129,975 square feet and 187,150 square feet) on 16.5 acres at 11040 SW Tualatin-Sherwood Road (2S122D Tax lots 600 and 700) and 2S127AA tax lot 500).

Tabitha Boschetti, Assistant Planner, presented the staff report and presentation for AR 19-0008, Tualatin Industrial Park, which included a presentation. Ms. Boschetti stated that the application requests approval of two industrial buildings (129,975 square feet and 187,150 square feet) on 16.5 acres at 11040 SW Tualatin-Sherwood Road (2S122D Tax lots 600 and 700 and 2S127AA Tax lot 500).

Ms. Boschetti noted that the site comprises of primarily vacant land. The land has been used for agricultural purposes and a single-family home with accessory structures, which would be demolished to accommodate the proposed development. Ms. Boschetti added that the site is flat, very few trees, no wetlands, and within the fringe area of the wetlands protection district. The developer is proposing a warehouse/manufacturing project with no specified tenant.

Ms. Boschetti stated that vehicular access to the site is proposed via SW Myslony Street, with additional emergency-only access from the north side of SW Tualatin-Sherwood Road. An easement is proposed for the Ice Age Tonquin Trail at the north extent of the property, connecting to SW Myslony Street. Ms. Boschetti added that traffic impacts have been analyzed and final public infrastructure improvements are being decided through a separate but related Public Facilities Decision.

Ms. Boschetti stated that approval criteria is limited to Architectural Features, which include:

- Architecture
- Pedestrian and bicycle circulation
- Parking lot
- Landscaping
- Trash Plan
- Lighting

Ms. Boschetti mentioned that tree removal is justified by either a need for development or the health/condition of trees. Ms. Boschetti noted that there are few trees on the site and the conditions are recommended for off-site trees. The application includes a tree preservation plan and arborist report.

Ms. Boschetti stated that the application demonstrates the proposal complies with requirements for minimum landscape area, landscape buffers, tree preservation, irrigation, revegetation of disturbed areas, and minimum standards for planning. Parking standards have also been met; 274 spaces proposed, 264 required.

Ms. Boschetti added the findings demonstrate that the proposal meets the applicable criteria of the Tualatin Development Code with the recommended conditions of approval. Therefore, staff respectfully recommends approval of the subject Architectural Review

application (AR 19-0008), as conditioned.

Mike DeArmey, Phelan Development, 450 Newport Center Dr. Suite 405, Newport Beach, CA

Mike DeArmey stated that Phelan Development is based in Orange County, California and currently have six buildings under construction in Oregon. Mr. DeArmey added that Phelan Development builds Class A industrial buildings and he provided renderings of some of the buildings they have completed.

C*raig Harris, AAI Engineering, 4875 SW Griffith Dr. Beaverton, OR*

Mr. Harris noted that he agreed with staff and would like to remove the dimensions of the easement for the path to the north.

Mr. DeArmey stated that after talking with local individuals, he understands there is a concern that the wall along Tualatin-Sherwood Road has no appeal. Mr. DeArmey acknowledged that the wall will have character with landscaping and elevation changes. Mr. DeArmey added that he is encouraged that many tenants will take advantage of this proposed building – hopefully local companies wishing to expand.

Commissioner George inquired about the widening of Tualatin-Sherwood Road and the proposed sidewalk. Mr. DeArmey stated that he has consulted with the County and there will be a dedication sidewalk with a ten-foot slope easement to the building.

Mr. Harris stated that there are two office uses on one side of the building. The side of the building facing Tualatin-Sherwood Rd. has height changes, medallions and canopies, which gives dimension and color change. Furthermore, there is a textured panel in the center. Commissioner George inquired about the setbacks from the widening and mentioned that other buildings in the area have parking in that location. Mr. Harris responded that there will be no access off Tualatin-Sherwood Road and therefore no parking. Mr. Harris added that the building will be 35-40 feet back from the sidewalk.

Commissioner Goodell asked where the easement is located. Mr. Harris replied that it is on the north side. Mr. Harris added that he is working with Metro and the Tualatin Parks and Recreation Department regarding the Ice Age trail.

Commissioner Stanaway suggested breaking down the scale of the wall with lighting and landscaping. Commissioner Stanaway encouraged the applicants to look at the building he is involved with on 124th & Myslony for ideas.

Commissioner Goodell asked if the proposed building is at the same elevation as the street. Mr. Harris responded that the roadway is higher so there will be a slight down slope.

Commissioner Stanaway inquired about the landscape plan. Mr. Harris responded that the

landscape architect could not attend this evening, but they looked at what the City requires and complied. In addition, evergreens and architectural landscape features will be added. Commissioner Stanaway mentioned that a good example is the road leading to the airport. It has changed over the years and is progressive. Mr. Harris responded that they will add non-repetitive tree clusters to achieve this.

Commissioner Stanaway inquired about the landscape plan and how lighting will be managed. Mr. DeArmey responded that the plan was developed with a Class A look – functional and professional. Mr. Harris stated that they focused on the entrance facing Tualatin-Sherwood Road with ground cover, shrubs, and a variety of trees. On the northwest corner, additional features have been added. Mr. Harris added that there will be also landscaping between buildings and standard parking lot lighting. Commissioner Stanaway suggested LED light temperature of 3500.

Commissioner Gaynor stated that he would like to see better irrigation requirements in the code. Commissioner Gaynor would like to recommend taller landscaping on Tualatin-Sherwood Road and Conifer trees on the site. Commissioner Gaynor recommended replace of the Chinese Pistache with a Sterling Silver Linden. Commissioner Gaynor also recommended sod and to bring the ground cover/landscaping away from the building.

After discussion, it was determined that conditions should be refined:

- Add landscaping and lighting to Condition A3
- Replace Chinese Pistache tree
- Have a mix of conifers and deciduous trees to break up façade. Include pedestrian scale, size, variety, and placement – horizontal and vertical scale. Irregular organic spacing along entire façade of building.
- Up lighting along Tualatin-Sherwood Rd. façade.
- Encourage pattern of landscaping and lighting elsewhere on the site.

Commissioner Goodell asked the applicant if they would like to waive the seven-day waiting period. The applicant answered affirmatively.

MOTION by Commissioner George, SECONDED by Commissioner Gaynor to approve with the refined conditions. MOTION approved 4-0.

4. COMMUNICATION FROM CITY STAFF

None

5. ADJOURNMENT

MOTION by Commissioner Stanaway to adjourn the meeting at 7:42 PM.

Office Coordinator, Planning Division

CITY OF TUALATIN
Planning Division

TO:	Architectural Review Board
THROUGH:	Steve Koper, AICP, Planning Manager
FROM:	Erin Engman, Senior Planner
DATE:	March 9, 2022

SUBJECT:
Consideration of an Architectural Review application (AR 21-0011) for an approximately 452,800 square foot industrial building on 24.16 acres in the General Manufacturing (MG) zone at 20400 SW Cipole Road (Tax Lot: 2S128A000100).

RECOMMENDATION:
Based on the analysis and findings, as well as the application materials demonstrating compliance with the applicable review criteria, staff respectfully recommends approval of the subject Architectural Review application (AR 21-00011), subject to the recommended conditions of approval in the attached Analysis and Findings.

EXECUTIVE SUMMARY:

- The subject proposal is a Type III land use case, subject to a quasi-judicial hearing before the Architectural Review Board.
- The subject site comprises 24.16 acres of land in the General Manufacturing zone, located between SW Cipole Road and SW 124th Avenue, approximately 800 feet north of SW Tualatin-Sherwood Road. The land is currently occupied by Tualatin Island Greens, which is improved with a 43-tee driving range and miniature golf park.
- The applicant requests approval of an approximately 452,800 square foot industrial building to be used for speculative warehouse and freight movement uses. The building can serve up to four tenants and includes 197 parking stalls. Loading facilities include four berths and 115 docks oriented along the eastern and western elevations, as well as 133 trailer parking stalls.
- Two vehicular access points are proposed, including full-access from SW Cipole Street and a restricted right-in/right-out access from SW 124th Avenue.
- The applicant has been conditioned to provide an access easement on the southeast corner of the site to provide the adjacent southern property an access opportunity off of SW 124th Avenue and adjacent to Cimino Street as required by TDC 75.140(6)(c)(iv)(B).

OUTCOMES OF DECISION:
Approval of AR 21-0011 will facilitate construction of the proposed development.

ALTERNATIVES TO RECOMMENDATION:
The Architectural Review Board may alternatively:

- Approve AR 21-0011 with amended conditions of approval and direct staff to provide updated Analysis and Findings;
- Continue the hearing to a later date for further consideration; or
- Deny AR 21-0011.

ATTACHMENTS:

- Analysis and Findings
- Presentation
- Exhibit A1 - Applicant's Narrative
- Exhibit A2 – Plan Set and Elevations
- Exhibit A3 – Tree Assessment Report
- Exhibit A4 – Transportation Impact Analysis
- Exhibit A5 – Stormwater Report
- Exhibit A6 – Supporting Documents
- Exhibit B – Public Noticing Requirements
- Exhibit C – Tualatin Valley Fire & Rescue Conditions
- Exhibit D – Clean Water Services Memorandum
- Exhibit E – Washington County Conditions
- Exhibit F – Map 8-1 Functional Classification Plan
- Exhibit G – Map 8-5 Transit Plan
- Exhibit H – Map 10-5 Commercial Setback
- Exhibit I – Water System Capacity Analysis
- Exhibit J – Public Comment
- Exhibit K – Revised Conditions of Approval (3-09-2022)

AR 21-0011
Tualatin Logistics Park

ARCHITECTURAL REVIEW BOARD
March 9, 2022

Tonight's Presentation

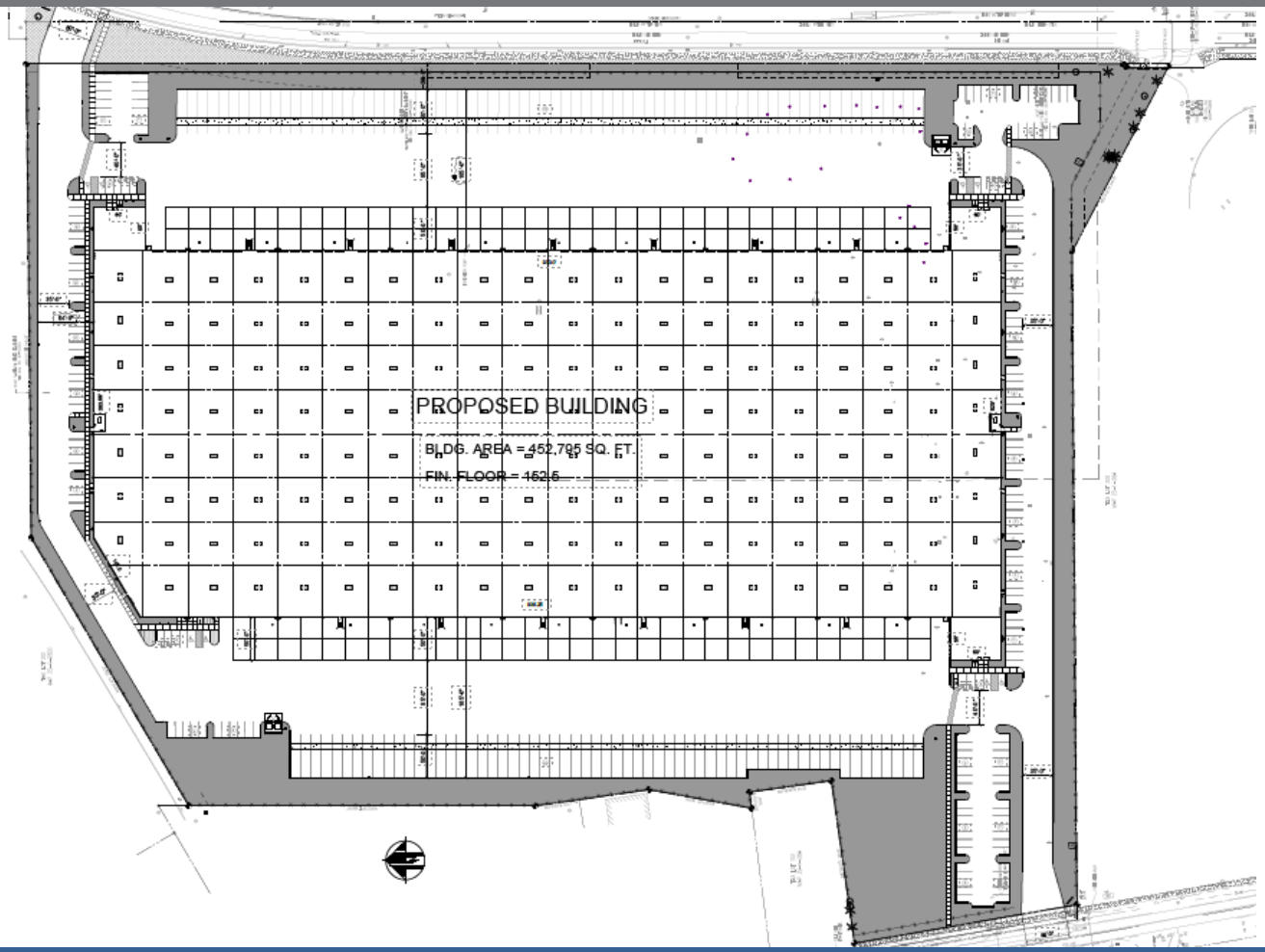
1. Site Background
2. Project Overview
3. Applicable Criteria
4. Conclusion

Site Background

AR 21-0011
Tualatin Logistics Park

ARCHITECTURAL REVIEW BOARD
March 9, 2022

Project Overview



AR 21-0011
Tualatin Logistics Park

ARCHITECTURAL REVIEW BOARD
March 9, 2022

Procedures (TDC 32.230)

Type III Architectural Review:

- Application submitted on July 30, 2021 and forced "complete" on September 24, 2021
- Notice of Hearing sent October 11, 2021, then Notice of Postponement sent November 10, 2021, at applicant's request
- Notice of Hearing resent on February 9, 2022
- Public hearing March 9, 2022
- Applicant granted 51-day extension to 120-day rule
- Final decision required by March 14, 2022

Architectural Review (TDC 33.020)

Architectural Review for Large Industrial Developments: Approval criteria listed in Chapter 73A through 73G, including:

- Site Design Standards
- Landscaping Standards
- Parking Standards
- Waste & Recyclable Management Standards

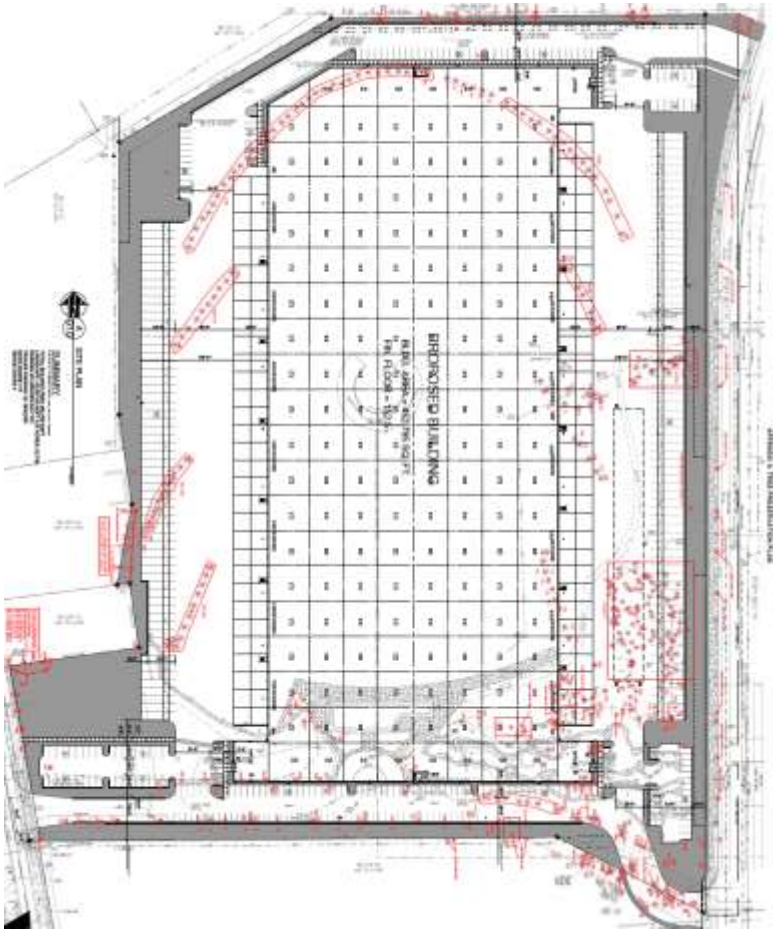
Conditions of Approval: may implement identified public facilities and services needed to serve the proposed development through Chapters 74 and 75.

Tree Removal (TDC 33.110)

The application includes tree removal:

Approval Criteria

- The tree is diseased;
- The tree is a hazard;
- Necessary to remove tree to construct proposed improvements



MG Zone (TDC 61)

The proposal complies with zoning:

- Setbacks
- Building height
- Permitted uses

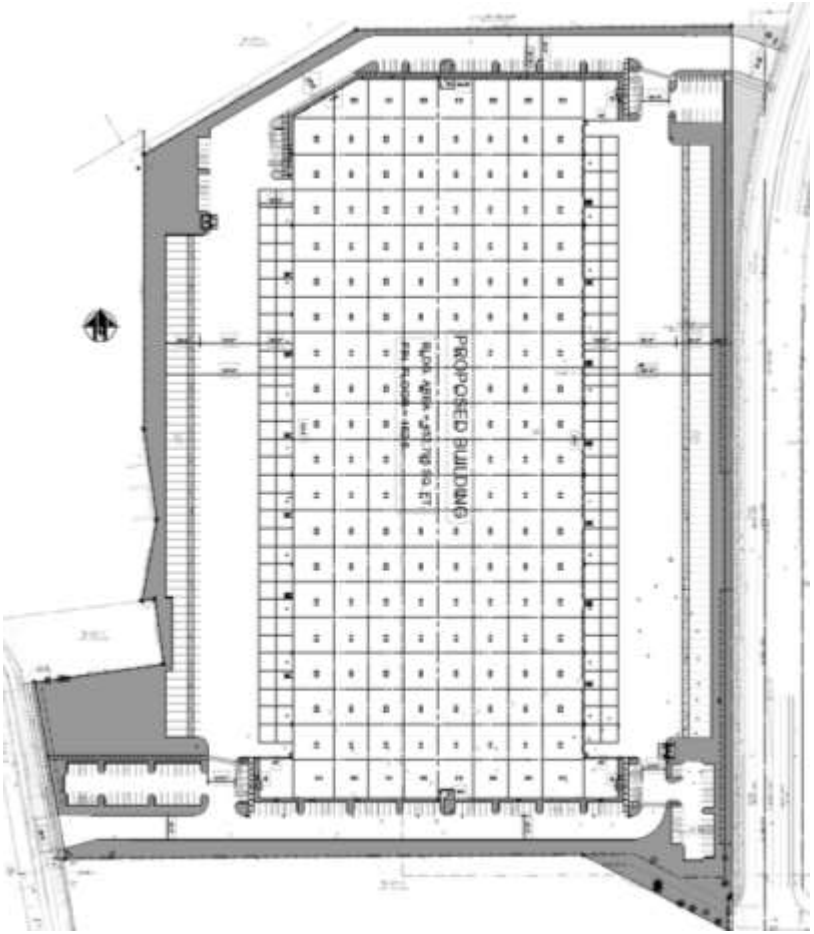
STANDARD	REQUIREMENT	MIN. PROPOSAL
Setbacks:		
Front (SW 124th Ave)	30 ft	166 ft
Front (Cipole Rd)	30 ft	299 ft
Parking Area	5 ft	9 ft
Building Height:	60 ft	42.7 ft

USE CATEGORY	STATUS	LIMITATIONS AND CODE REFERENCES
Warehouse and Freight Movement	P/C	Conditional use required for warehousing of building materials and supplies. All other uses permitted outright.

Site Design (TDC 73A)

The proposal complies with requirements for:

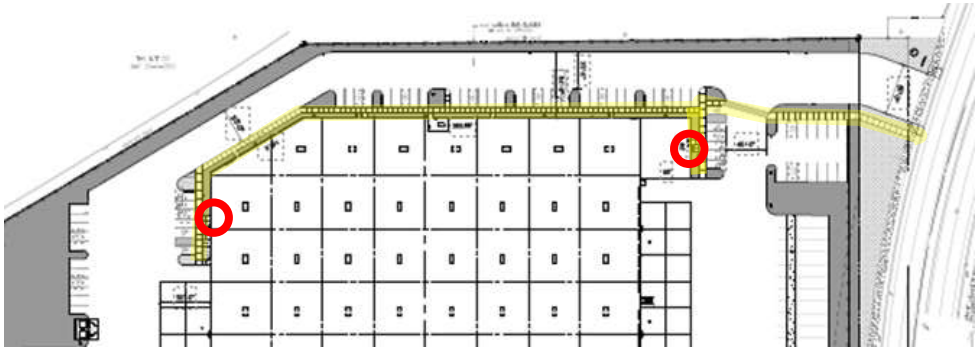
- Windows
- Lighting
- Safety and security
- Storage and screening

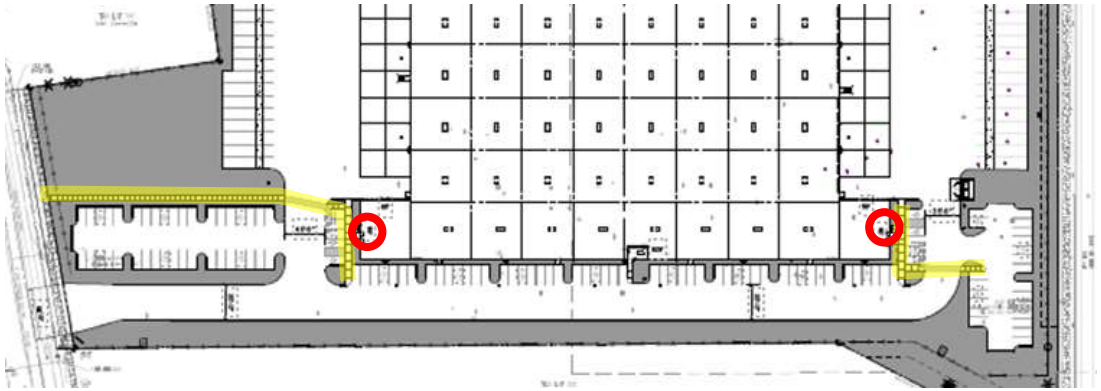


Site Design (TDC 73A)

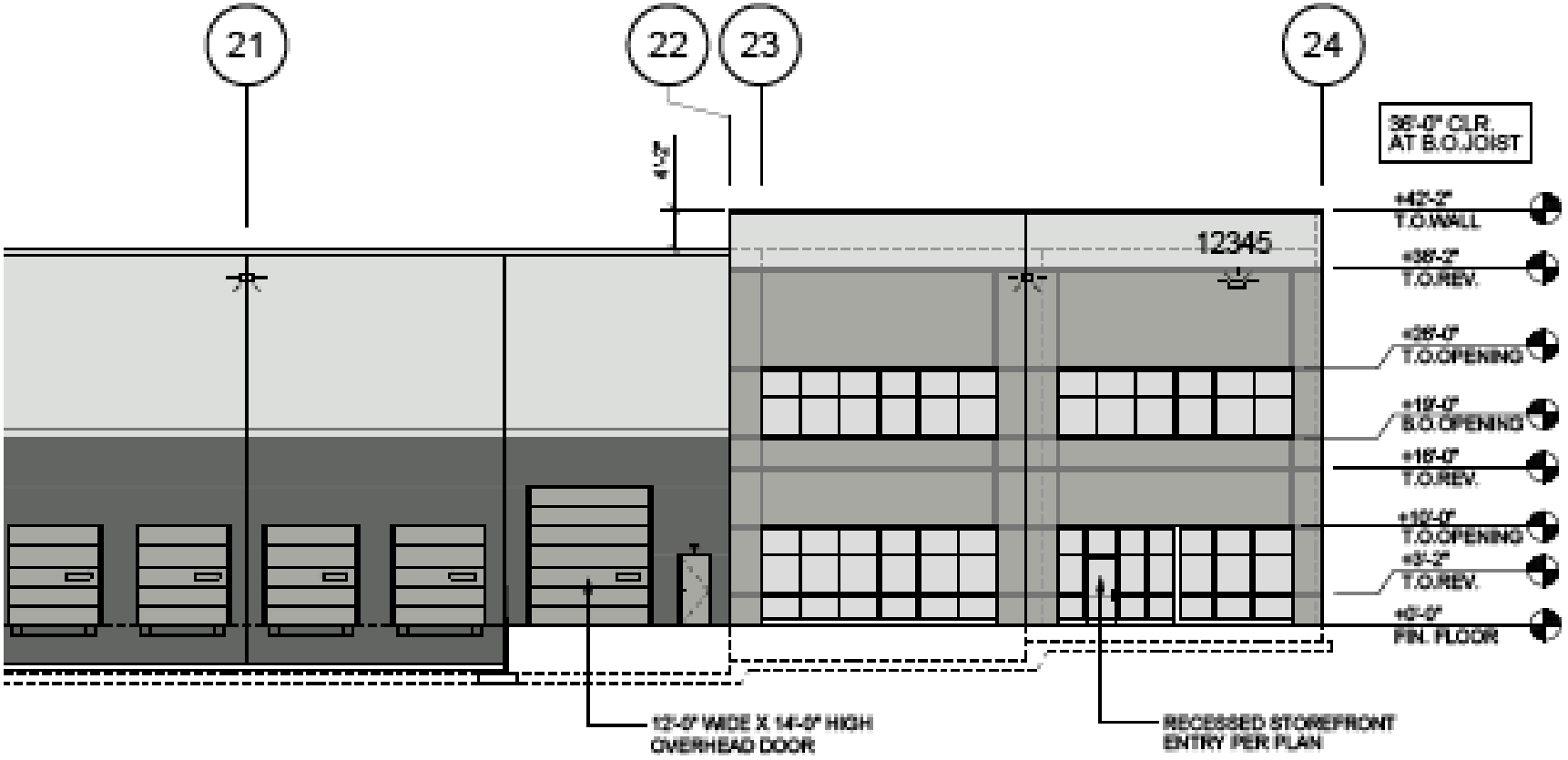
With conditions, the proposal complies with TDC 73A.500(1):

- Provide walkways between main building entrances and sidewalks along the public right-of-way;





Building Design (TDC 73A)



Building Design (TDC 73A)

SW CIPOLE

SW TUALATIN-SHERWOOD

SW 124TH AVE


SW MYSLONY

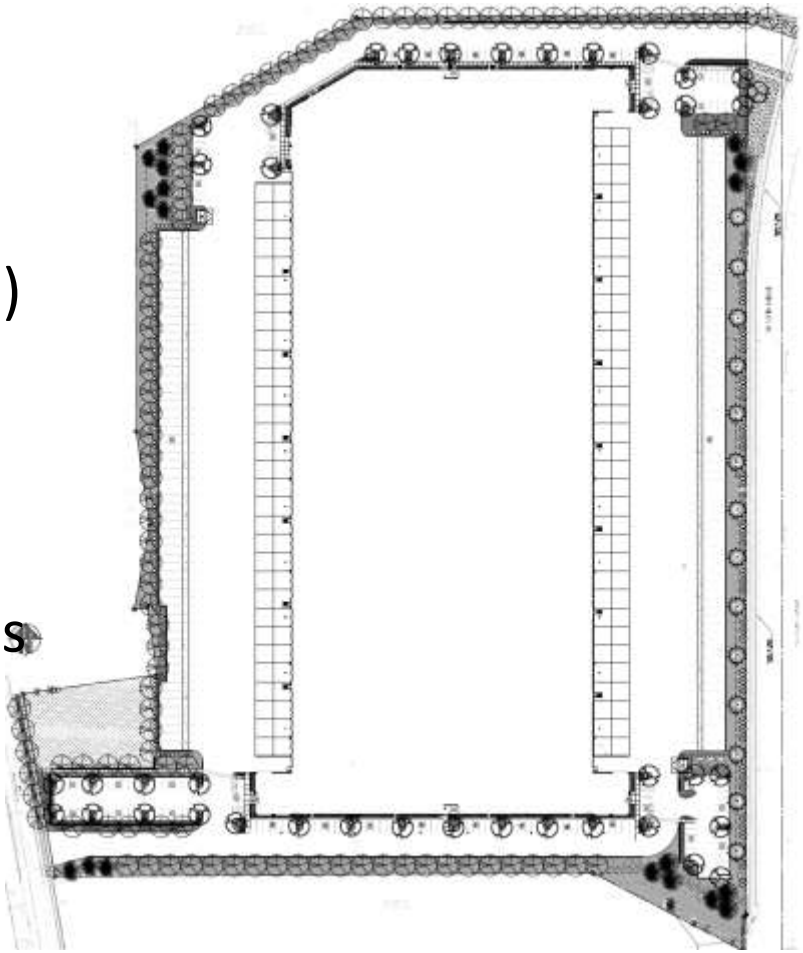
AR 21-0011
Tualatin Logistics Park

ARCHITECTURAL REVIEW BOARD
March 9, 2022

Landscaping Standards (TDC 73B)

The application demonstrates the proposal complies with requirements for:

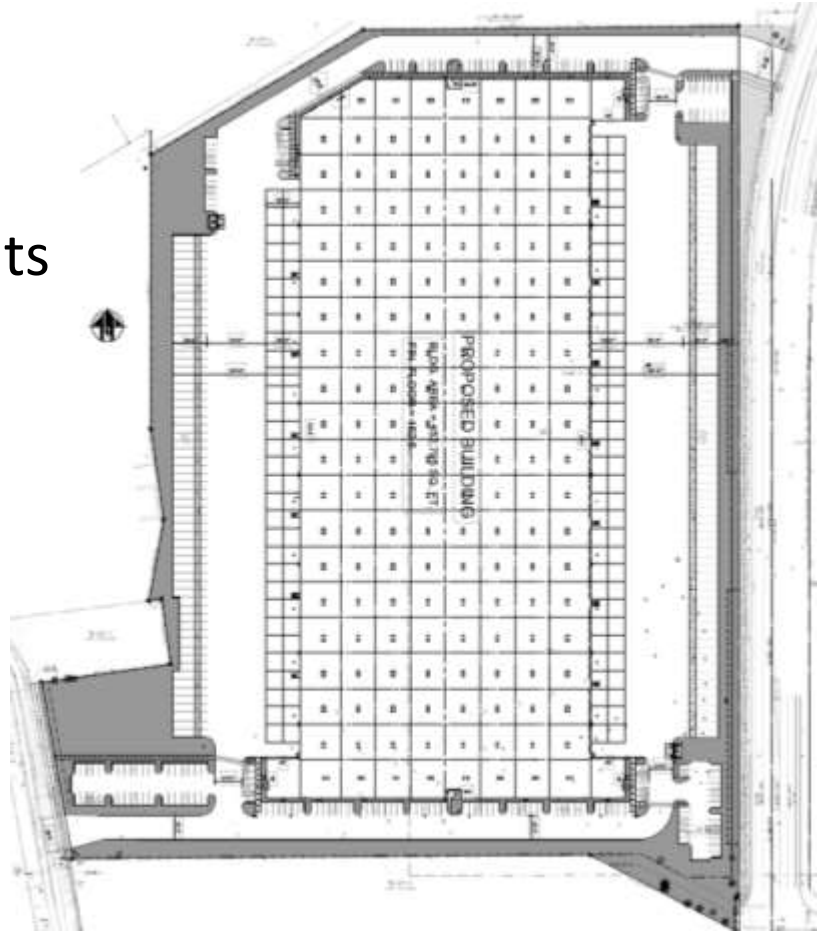
- Minimum landscape area (15%)
- Landscape buffers
- Tree preservation
- Irrigation
- Revegetation of disturbed areas
- Minimum standards for plantings



Parking Standards (TDC 73C)

The application demonstrates the proposal complies with requirements for:

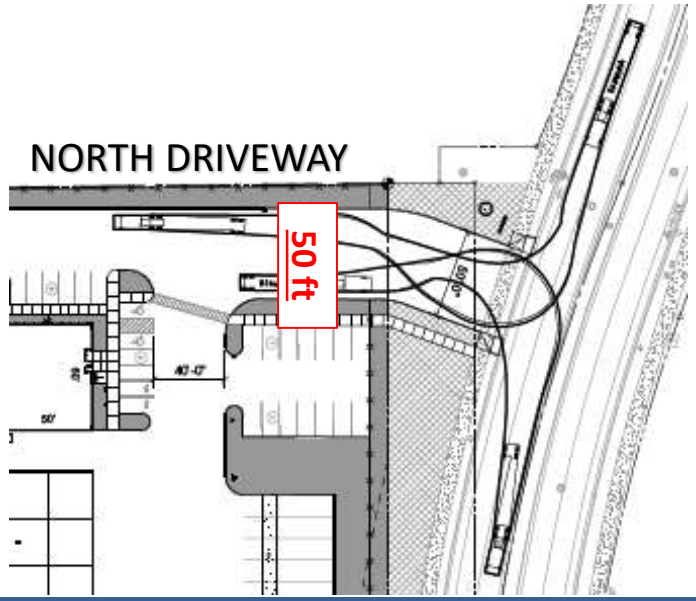
- Minimum parking requirements (197 proposed, 136 required)
- Bike parking (45 spaces required)
- Parking / drive aisle standards
- Loading berth standards
- Parking lot landscaping

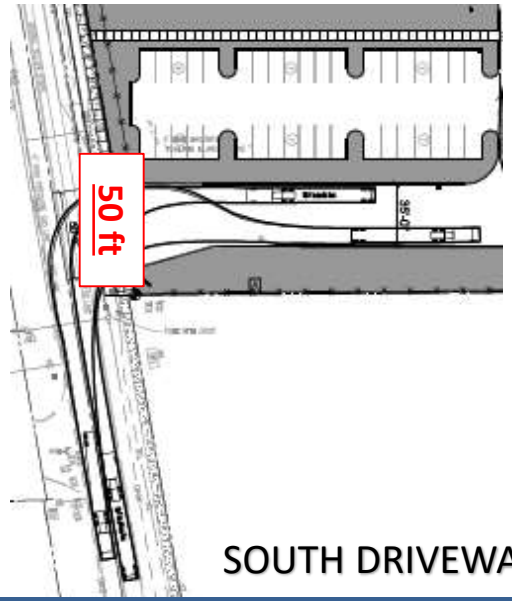


Parking Standards (TDC 73C)

With conditions, the proposal complies with TDC 73C.130(6):

- Ingress/egress for industrial uses with over 250 parking spaces must provide driveways at a maximum width as required by the City Manager

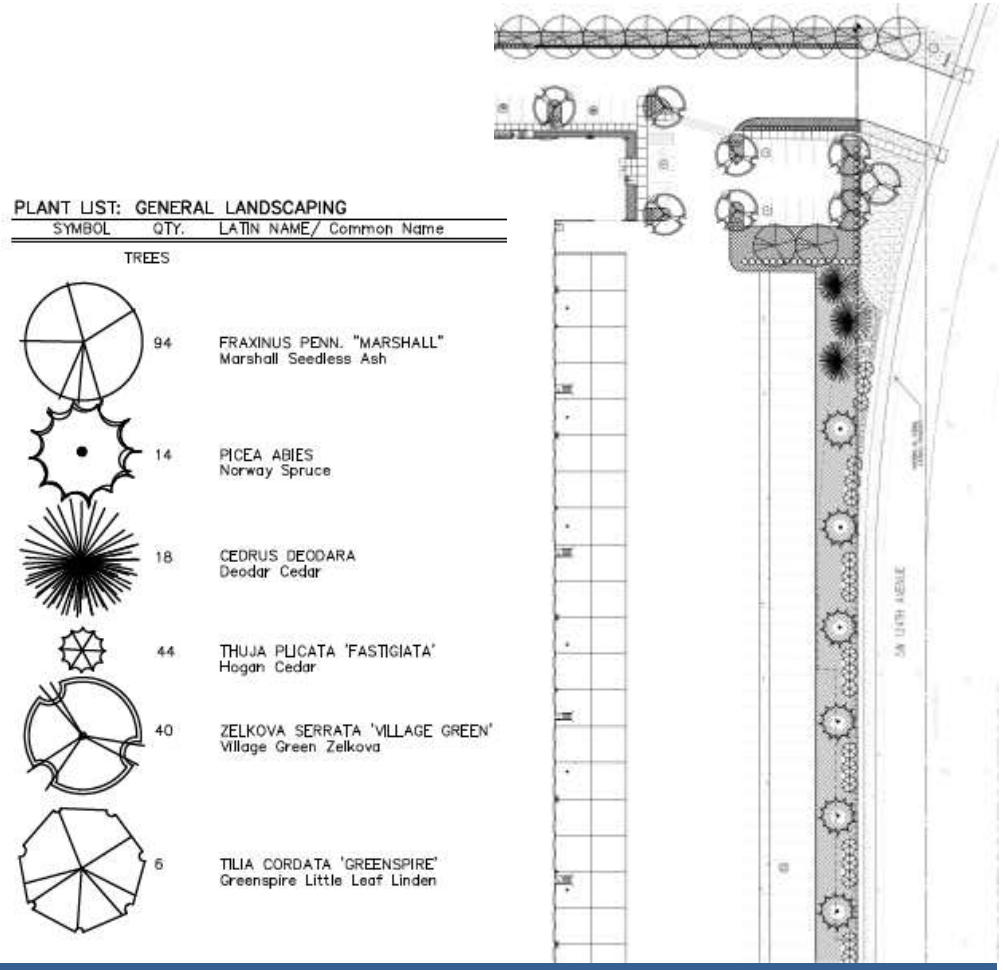




Parking Standards (TDC 73C)

With conditions, the proposal complies with TDC 73C.240(3):

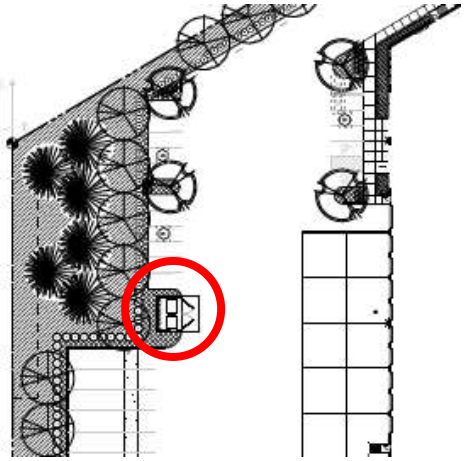
- Deciduous trees located less than 30 ft apart in vehicular landscape buffer



Waste and Recyclables (TDC 73D)

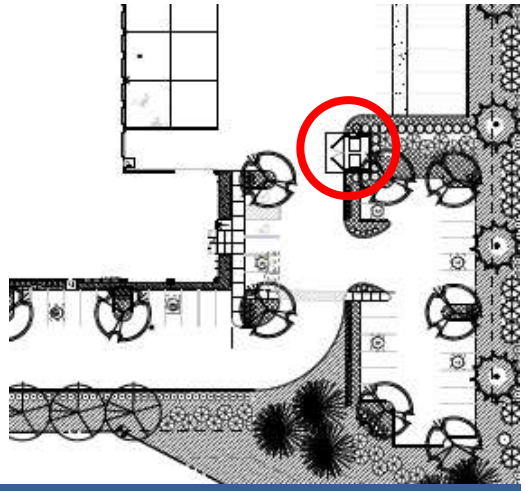
With conditions, the proposal complies with requirements for:

- Minimum storage area
- Location
- Design / screening
- Access



NW TRASH ENCLOSURE

SE TRASH ENCLOSURE



Public Improvements (TDC 74)

With conditions that include a trip cap and recommended street improvements, the proposal will mitigate traffic impacts.

- **TDC 74.420. - Street Improvements.** (3)
  The required improvements may include the construction or rebuilding of off-site improvements which are identified to mitigate the impact of the development.
- **TDC 74.440. - Streets, Traffic Study Required.** (3)(e)
  Recommendation of necessary improvements to ensure an acceptable level of service for roadways and a level of service of at least D and E for signalized and unsignalized intersections respectively, after the future traffic impacts are considered.

Public Improvements (TDC 74)

With conditions, the proposal will require compliance with both the City and CWS storm drainage requirements, or an acceptable alternative.

- **TDC 74.630. - Storm Drainage System.** (1)
  Storm drainage lines must be installed to serve each property in accordance with City standards and Clean Water Services standards. Storm drainage construction plans and calculations must be submitted to the City Manager for review and approval prior to construction.

Access Management (TDC 75)

With conditions, the proposal will require either construction of a full access at Cimino *or* an exception granted to allow a northerly right-in-right-out access to 124th with additional mitigation measures.

- **TDC 75.050. - Access Limited Roadways.** (2)(f)
  124th Avenue from Pacific Highway 99W south to Tonquin to Basalt Creek Parkway
- **TDC 75.140. - Existing Streets Access Standards.** (6)(c)(iv) *124TH AVENUE*
  On the west side of 124th Avenue between Herman Road and Tualatin-Sherwood Road the area will be served by the following streets or driveways:
  A street or driveway intersection approximately 800 feet north of the intersection of Tualatin-Sherwood Road and 124th Avenue (Cimino).
  - The exact location and configuration of the streets or driveways shall be determined by the City Manager. These recommendations are examples of possible solutions and shall not be construed as limiting the City' s authority to change *or* impose different conditions if additional studies result in different recommendations from those listed below.

Conclusion

- The findings demonstrate that the proposal meets the applicable criteria of the Tualatin Development Code with the recommended Conditions of Approval.
- Therefore, staff respectfully recommends approval of the subject Architectural Review application (AR 21-0011), as conditioned.
- Questions?

CITY OF TUALATIN
Planning Division

ANALYSIS AND FINDINGS

for Tualatin Logistics Park

March 9, 2022

Case #:	AR 21-0011
Project:	Tualatin Logistics Park
Location:	20400 SW Cipole Road; Tax Lot: 2S128A000100
Applicant:	Amy Tallent, VLMK Engineering + Design
Owner:	Fore-Sight Balboa, LLC

TABLE OF CONTENTS

Arrangements can be made to provide these materials in alternative formats such as large type or audio recording. Please contact the Planning Division at 503.691.3026 and allow as much lead time as possible.

I. INTRODUCTION

A. Applicable Criteria

The following Chapters of the Tualatin Municipal Code (TMC) and the Tualatin Development Code (TDC) are applicable to the subject proposal:

- TMC 3: Utilities and Water Quality
- TDC 33.020: Architectural Review
- TDC 33.110: Tree Removal Permit/Review
- TDC 61: General Manufacturing Zone (MG)
- TDC 71: Wetlands Protection District (WPD)
- TDC 73A: Site Design Standards
- TDC 73B: Landscaping Standards
- TDC 73C: Parking Standards
- TDC 73D: Waste and Recyclables Management Standards
- TDC 74: Public Improvements
- TDC 75: Access

B. Site Description

The subject site is a 24.2 acre property located at 20400 SW Cipole Road (Washington County Tax Assessor Map 2S128A000100), and is zoned General Manufacturing (MG).

The site is currently occupied by the Tualatin Island Greens driving range and mini-golf course. The land features an open range with bermed areas to the west, north, and east. The site is served by a clubhouse and parking areas on the southern end of the property with primary access available off of Cipole Road. The land reaches a high point of 174 feet in elevation along the southern property line and slopes down to a low point of 142 feet near the northwest corner of the property.

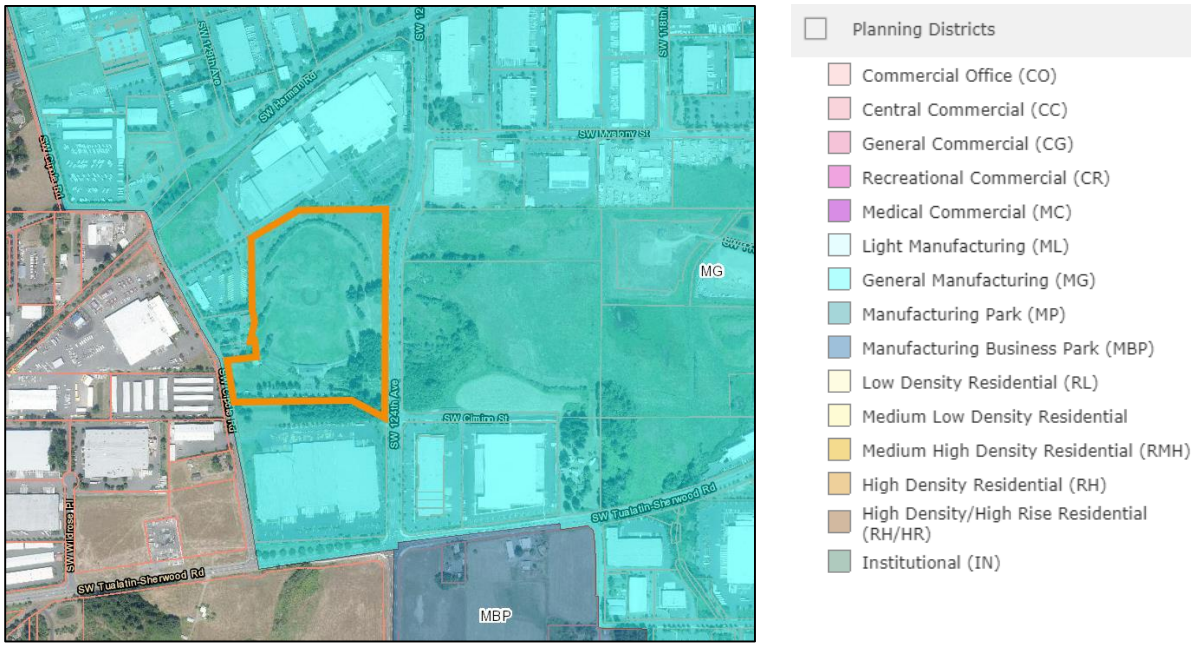


Figure 1: Aerial view of subject site (highlighted)

C. Proposed Project

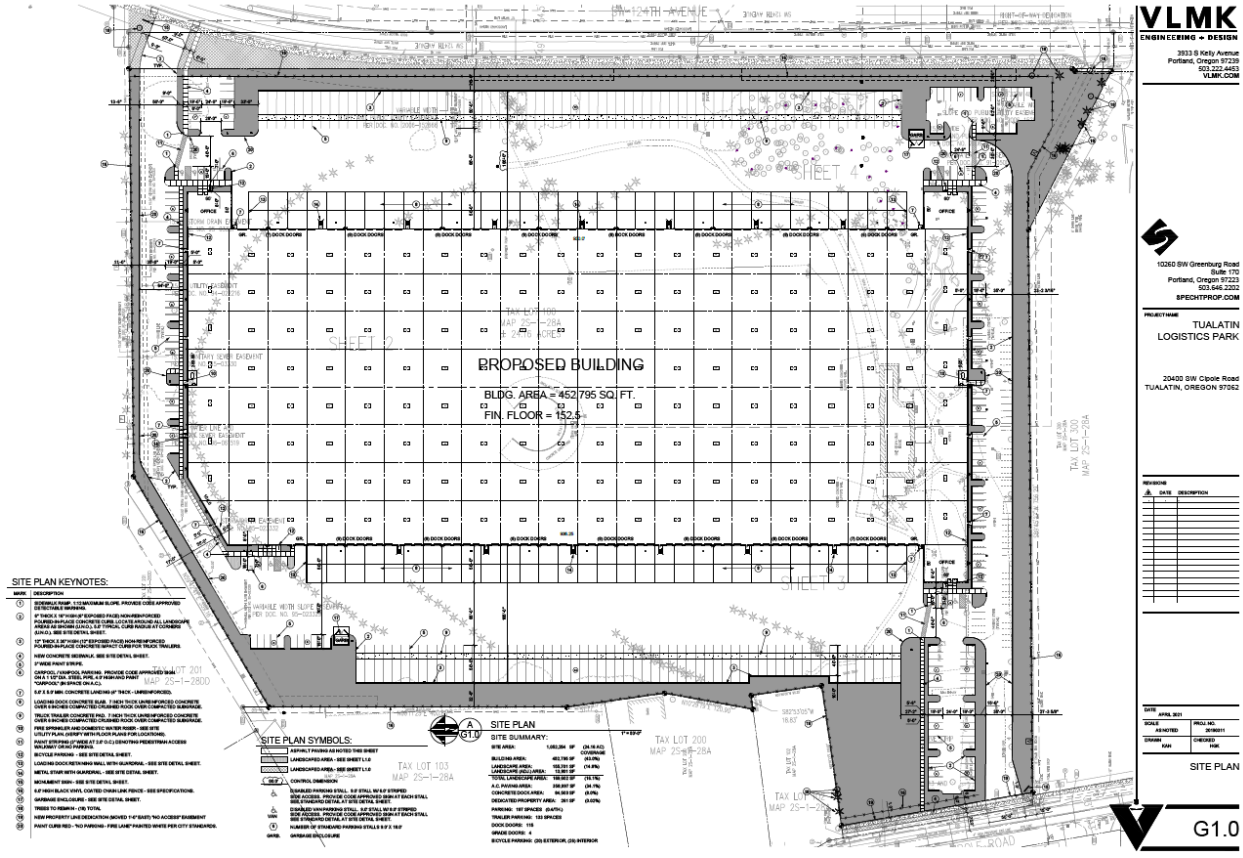
As described in the applicant's narrative (Exhibit A1), Specht Development proposes to construct an approximately 452,800 square foot (10.4 acre) industrial building shell intended for warehouse/distribution space to accommodate up to four tenants.

As shown on the applicant's architectural elevations (Exhibit A2), the proposed concrete tilt-up building would stand approximately 42.17-feet in height. Design elements include horizontal color blocking in shades of grey with glazed storefront entries on the corners. Loading docks line the eastern elevation that faces 124th Avenue, as well as the western elevation for a total of four loading berths and 115 loading docks.

The surrounding vicinity is dominated by concrete tilt-up structures of varying heights. There aren't many examples of similarly sized and massed buildings with a comparable volume of loading docks in Tualatin. As comparison, the building located directly south of the project is approximately 366,288 square feet and includes six loading berths and 28 loading docks.

The remainder of the site that is not dedicated to building and loading, is allocated to vehicle maneuvering and parking. The site plan proposes vehicle access off the northeast corner at SW 124th street and southwest corner at SW Cipole Road with a total of 197 parking stalls.

Figure 2: Site Plan (overview)



D. Previous Land Use Actions

- ANN 82-08 Property Annexed into Tualatin
- CUP 93-08 Conditional Use Permit for Driving Range
- AR 94-12 Tualatin Island Greens

E. Surrounding Uses

Surrounding areas indicate industrial uses. Adjacent land uses include:

North: General Manufacturing (MG)

- Nortek HVAC Manufacturer
- SW Herman Road

East: General Manufacturing (MG)

- Vacant Land
- SW 124th Avenue

West: General Manufacturing (MG)

- Sherwood School District Fleet Maintenance Facility
- Residential Property (Washington County)
- SW Cipole Road

South: General Manufacturing (MG)

- Columbia Corrugated Box Packaging Manufacturer

F. Exhibit List

Exhibit A1 - Applicant's Narrative
Exhibit A2 – Plan Set and Elevations
Exhibit A3 – Tree Assessment Report
Exhibit A4 – Transportation Impact Analysis
Exhibit A5 – Stormwater Report
Exhibit A6 – Supporting Documents
Exhibit B – Public Noticing Requirements
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Exhibit D – Clean Water Services Memorandum
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Exhibit F – Map 8-1 Functional Classification Plan
Exhibit G – Map 8-5 Transit Plan
Exhibit H – Map 10-5 Commercial Setback
Exhibit I – Water System Capacity Analysis
Exhibit J – Public Comment

II. PLANNING FINDINGS

These findings reference the Tualatin Development Code (TDC), unless otherwise noted.

Chapter 32: Procedures

Section 32.010 – Purpose and Applicability.

[…]

(2) Applicability of Review Procedures. All land use and development permit applications and decisions, will be made by using the procedures contained in this Chapter. The procedure "type" assigned to each application governs the decision-making process for that permit or application. There are five types of permit/application procedures as described in subsections (a) through (e) below. Table 32-1 lists the City's land use and development applications and corresponding review procedure(s).

[…]

(c) Type III Procedure (Quasi-Judicial Review – Public Hearing). Type III procedure is used when the standards and criteria require discretion, interpretation, or policy or legal judgment. Quasi-Judicial decisions involve discretion but implement established policy. Type III decisions are made by the Planning Commission or Architectural Review Board and require public notice and a public hearing, with an opportunity for appeal to the City Council.

[…]

(3) Determination of Review Type. Unless specified in Table 32-1, the City Manager will determine whether a permit or application is processed as Type I, II, III, IV-A or IV-B based on the descriptions above. Questions regarding the appropriate procedure will be resolved in favor of the review type providing the widest notice and opportunity to participate. An applicant may choose to elevate a Type I or II application to a higher numbered review type, provided the applicant pays the appropriate fee for the selected review type.

Table 32-1 – Applications Types and Review Procedures

Application / Action	Type	Decision Body*	Appeal Body*	Pre-Application Conference Required	Neighborhood /Developer Mtg Required	Applicable Code Chapter
Architectural Review						
Industrial Buildings 150,000 square feet + […] as requested by the CM	III	ARB	CC	Yes	Yes	TDC 33.020
[…]						
* City Council (CC); Planning Commission (PC); Architectural Review Board (ARB); City Manager or designee (CM); Land Use Board of Appeals (LUBA).						

Finding:

The proposed project includes over 452,800 square feet of industrial square footage and is therefore classified as a Type III Procedure Types according to Table 32-1. The application has been processed according to the applicable code for Type III procedures. This standard is met.

Section 32.030 – Time to Process Applications.

(1) Time Limit - 120-day Rule. The City must take final action on all Type II, Type III, and Type IV-A land use applications, as provided by ORS 227.178, including resolution of all local appeals, within 120 days after the application has been deemed complete under TDC 32.160, unless the applicant provides

written request or consent to an extension in compliance with ORS 227.178. (Note: The 120-day rule does not apply to Type IV-B (Legislative Land Use) decisions.)
[…]

Finding:
The application was forced complete by the applicant on September 24, 2021. The applicant has also elected to grant a 21-day extension to the 120 day rule on November 11, 2021 and a second 30-day extension on February 4, 2022. The hearing for AR 21-0011 is scheduled for March 9, 2022. The final action will take place by March 14, 2022 in compliance with ORS 227.178. This standard is met.

Section 32.110 – Pre-Application Conference.
(1) Purpose of Pre-Application Conferences. Pre-application conferences are intended to familiarize applicants with the requirements of the TDC; to provide applicants with an opportunity discuss proposed projects in detail with City staff; and to identify approval criteria, standards, and procedures prior to filing a land use application. The pre-application conference is intended to be a tool to assist applicants in navigating the land use process, but is not intended to be an exhaustive review that identifies or resolves all potential issues, and does not bind or preclude the City from enforcing any applicable regulations or from applying regulations in a manner differently than may have been indicated at the time of the pre-application conference.
(2) When Mandatory. Pre-application conferences are mandatory for all land use actions identified as requiring a pre-application conference in Table 32-1. An applicant may voluntarily request a pre-application conference for any land use action even if it is not required.
(3) Timing of Pre-Application Conference. A pre-application conference must be held with City staff before an applicant submits an application and before an applicant conducts a Neighborhood/Developer meeting.
(4) Application Requirements for Pre-Application Conference.
(a) Application Form. Pre-application conference requests must be made on forms provided by the City Manager.
(b) Submittal Requirements. Pre-application conference requests must include:
(i) A completed application form;
(ii) Payment of the application fee;
(iii) The information required, if any, for the specific pre-application conference sought; and
(iv) Any additional information the applicant deems necessary to demonstrate the nature and scope of the proposal in sufficient detail to allow City staff to review and comment.
(5) Scheduling of Pre-Application Conference. Upon receipt of a complete application, the City Manager will schedule the pre-application conference. The City Manager will coordinate the involvement of city departments, as appropriate, in the pre-application conference. Pre-application conferences are not open to the general public.
(6) Validity Period for Mandatory Pre-Application Conferences; Follow-Up Conferences. A follow-up conference is required for those mandatory pre-application conferences that have previously been held when:
(a) An application relating to the proposed development that was the subject of the pre-application conference has not been submitted within six (6) months of the pre-application conference;
(b) The proposed use, layout, and/or design of the proposal have significantly changed; or
(c) The owner and/or developer of a project changes after the pre-application conference and prior to application submittal.

Finding:
The subject land use action is identified as requiring a pre-application conference in Table 32-1. The applicant participated in a pre-application meeting on May 5, 2021, 86 days prior to submittal. These standards are met.

Section 32.120 – Neighborhood/Developer Meetings.
(1) Purpose. The purpose of this meeting is to provide a means for the applicant and surrounding property owners to meet to review a development proposal and identify issues regarding the proposal so they can be considered prior to the application submittal. The meeting is intended to allow the developer and neighbors to share information and concerns regarding the project. The applicant may consider whether to incorporate solutions to these issues prior to application submittal.
(2) When Mandatory. Neighborhood/developer meetings are mandatory for all land use actions identified in Table 32-1 as requiring a neighborhood/developer meeting. An applicant may voluntarily conduct a neighborhood/developer meeting even if it is not required and may conduct more than one neighborhood/developer meeting at their election.
(3) Timing. A neighborhood/developer meeting must be held after a pre-application meeting with City staff, but before submittal of an application.
(4) Time and Location. Required neighborhood/developer meetings must be held within the city limits of the City of Tualatin at the following times:
(a) If scheduled on a weekday, the meeting must begin no earlier than 6:00 p.m.
(b) If scheduled on a weekend, the meeting must begin between 10:00 a.m. and 6:00 p.m.
(5) Notice Requirements.
(a) The applicant must provide notice of the meeting at least 14 calendar days and no more than 28 calendar days before the meeting. The notice must be by first class mail providing the date, time, and location of the meeting, as well as a brief description of the proposal and its location. The applicant must keep a copy of the notice to be submitted with their land use application.
(b) The applicant must mail notice of a neighborhood/developer meeting to the following persons:
(i) All property owners within 1,000 feet measured from the boundaries of the subject property;
(ii) All property owners within a platted residential subdivision that is located within 1,000 feet of the boundaries of the subject property. The notice area includes the entire subdivision and not just those lots within 1,000 feet. If the residential subdivision is one of two or more individually platted phases sharing a single subdivision name, the notice area need not include the additional phases; and
(iii) All designated representatives of recognized Citizen Involvement Organizations as established in TMC Chapter 11-9.
(c) The City will provide the applicant with labels for mailing for a fee.
(d) Failure of a property owner to receive notice does not invalidate the neighborhood/developer meeting proceedings.
(6) Neighborhood/Developer Sign Posting Requirements. The applicant must provide and post on the subject property, at least 14 calendar days before the meeting. The sign must conform to the design and placement standards established by the City for signs notifying the public of land use actions in TDC 32.150.
(7) Neighborhood/Developer Meeting Requirements. The applicant must have a sign-in sheet for all attendees to provide their name, address, telephone number, and email address and keep a copy of the sign-in sheet to provide with their land use application. The applicant must prepare meeting notes

identifying the persons attending, those commenting and the substance of the comments expressed, and the major points that were discussed. The applicant must keep a copy of the meeting notes for submittal with their land use application.

Finding:
The applicant has provided evidence within Exhibit A6 that they held a Neighborhood/Developer meeting on June 10, 2021, 50 days prior to application submittal. The applicant has provided documentation of sign posting and notification in compliance with this section, as well as a sign-in sheet and notes from the meeting. These standards are met.

Section 32.130 – Initiation of Applications.
(1) Type I, Type II, Type III, and Type IV-A Applications. Type I, Type II, Type III, and Type IV-A applications may be submitted by one or more of the following persons:
(a) The owner of the subject property;
(b) The contract purchaser of the subject property, when the application is accompanied by proof of the purchaser's status as such and by the seller's written consent;
(c) A lessee in possession of the property, when the application is accompanied by the owners' written consent; or
(d) The agent of any of the foregoing, when the application is duly authorized in writing by a person authorized to submit an application by paragraphs (a), (b) or (c) of this subsection, and accompanied by proof of the agent's authority.
[…]

Finding:
The application has been signed by a representative of Fore-Sight Balboa, LLC. This standard is met.

Section 32.140 – Application Submittal.
(1) Submittal Requirements. Land use applications must be submitted on forms provided by the City. A land use application may not be accepted in partial submittals. All information supplied on the application form and accompanying the application must be complete and correct as to the applicable facts. Unless otherwise specified, all of the following must be submitted to initiate completeness review under TDC 32.160:
(a) A completed application form. The application form must contain, at a minimum, the following information:
(i) The names and addresses of the applicant(s), the owner(s) of the subject property, and any authorized representative(s) thereof;
(ii) The address or location of the subject property and its assessor's map and tax lot number;
(iii) The size of the subject property;
(iv) The comprehensive plan designation and zoning of the subject property;
(v) The type of application(s);
(vi) A brief description of the proposal; and
(vii) Signatures of the applicant(s), owner(s) of the subject property, and/or the duly authorized representative(s) thereof authorizing the filing of the application(s).
(b) A written statement addressing each applicable approval criterion and standard;
(c) Any additional information required under the TDC for the specific land use action sought;
(d) Payment of the applicable application fee(s) pursuant to the most recently adopted fee schedule;
(e) Recorded deed/land sales contract with legal description.
(f) A preliminary title report or other proof of ownership.

(g) For those applications requiring a neighborhood/developer meeting:
(i) The mailing list for the notice;
(ii) A copy of the notice;
(iii) An affidavit of the mailing and posting;
(iv) The original sign-in sheet of participants; and
(v) The meeting notes described in TDC 32.120(7).
(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;
(i) Any additional information, as determined by the City Manager, that may be required by another provision, or for any other permit elsewhere, in the TDC, and any other information that may be required to adequately review and analyze the proposed development plan as to its conformance to the applicable criteria;
(2) Application Intake. Each application, when received, must be date-stamped with the date the application was received by the City, and designated with a receipt number and a notation of the staff person who received the application.
(3) Administrative Standards for Applications. The City Manager is authorized to establish administrative standards for application forms and submittals, including but not limited to plan details, information detail and specificity, number of copies, scale, and the form of submittal.

Finding:
The applicant submitted the subject application on July 30, 2021. The applicant submitted additional information on September 24, 2021 and asked that the application be deemed complete. The general land use submittal requirements were included with this application. These standards are met.

Section 32.150 - Sign Posting.
(1) When Signs Posted. Signs in conformance with these standards must be posted as follows:
(a) Signs providing notice of an upcoming neighborhood/developer meeting must be posted prior to a required neighborhood/developer meeting in accordance with Section 32.120(6); and
(b) Signs providing notice of a pending land use application must be posted after land use application has been submitted for Type II, III and IV-A applications.
(2) Sign Design Requirements. The applicant must provide and post a sign(s) that conforms to the following standards:
(a) Waterproof sign materials;
(b) Sign face must be no less than eighteen (18) inches by twenty-four (24) inches (18" x 24"); and
(c) Sign text must be at least two (2) inch font.
(3) On-site Placement. The applicant must place one sign on their property along each public street frontage of the subject property. (Example: If a property adjoins four public streets, the applicant must place a sign at each of those public street frontages for a total of four signs). The applicant cannot place the sign within public right of way.
(4) Removal. If a sign providing notice of a pending land use application disappears prior to the final decision date of the subject land use application, the applicant must replace the sign within forty-eight (48) hours of discovery of the disappearance or of receipt of notice from the City of its disappearance, whichever occurs first. The applicant must remove the sign no later than fourteen (14) days after:

(a) The meeting date, in the case of signs providing notice of an upcoming neighborhood/developer meeting; or
(b) The City makes a final decision on the subject land use application, in the case of signs providing notice of a pending land use application.

Finding:
The applicant provided certification within Exhibit A6 that signs in conformance with this section were placed on site in accordance with this section. This standard is met.

Section 32.160 – Completeness Review.
(1) Duration. Except as otherwise provided under ORS 227.178, the City Manager must review an application for completeness within 30 days of its receipt.
(2) Considerations. Determination of completeness will be based upon receipt of the information required under TDC 32.140 and will not be based on opinions as to quality or accuracy. Applications that do not respond to relevant code requirements or standards can be deemed incomplete. A determination that an application is complete indicates only that the application is ready for review on its merits, not that the City will make a favorable decision on the application.
(3) Complete Applications. If an application is determined to be complete, review of the application will commence.
(4) Incomplete Applications. If an application is determined to be incomplete, the City Manager must provide written notice to the applicant identifying the specific information that is missing and allowing the applicant the opportunity to submit the missing information. An application which has been determined to be incomplete must be deemed complete for purposes of this section upon receipt of:
(a) All of the missing information;
(b) Some of the missing information and written notice from the applicant that no other information will be provided; or
(c) Written notice from the applicant that none of the missing information will be provided.
(5) Vesting. If an application was complete at the time it was first submitted, or if the applicant submits additional required information within 180 days of the date the application was first submitted, approval or denial of the application must be based upon the standards and criteria that were in effect at the time the application was first submitted.
(6) Void Applications. An application is void if the application has been on file with the City for more than 180 days and the applicant has not provided the missing information or otherwise responded, as provided in subsection (4) of this section.
[…]

Finding:
The subject application was submitted on July 30, 2021. The applicant forced the application complete September 24, 2021. These standards are met.

Section 32.230 – Type III Procedure (Quasi-Judicial Review – Public Hearing).
Type III decisions involve the use of discretion and judgment and are made by the Planning Commission or Architectural Review Board after a public hearing with an opportunity for appeal to the City Council. The decision body for each application type is specified in Table 32-1. A hearing under these procedures provides a forum to apply standards to a specific set of facts to determine whether the facts conform to the applicable criteria and the resulting determination will directly affect only a small number of identifiable persons.

(1) Submittal Requirements. Type III applications must include the submittal information required by TDC 32.140(1).
(2) Determination of Completeness. After receiving an application for filing, the City Manager will review the application will for completeness in accordance with TDC 32.160.
(3) Written Notice of Public Hearing – Type III. Once the application has been deemed complete, the City must mail by regular first class mail Notice of a Public Hearing to the following individuals and agencies no fewer than 20 days before the hearing.

(a) Recipients:

(i) The applicant and, the owners of the subject property;

(ii) All property owners within 1,000 feet measured from the boundaries of the subject property;

(iii) All property owners within a platted residential subdivision that is located within 1,000 feet of the boundaries of the subject property. The notice area includes the entire subdivision and not just those lots within 1,000 feet. If the residential subdivision is one of two or more individually platted phases sharing a single subdivision name, the notice area need not include the additional phases;

(iv) All recognized neighborhood associations within 1,000 feet from the boundaries of the subject property;

(v) All designated representatives of recognized Citizen Involvement Organizations as established in TMC Chapter 11-9;

(vi) Any person who submits a written request to receive a notice;

(vii) Any governmental agency that is entitled to notice under an intergovernmental agreement entered into with the City and any other affected agencies, including but not limited to: school districts; fire district; where the project either adjoins or directly affects a state highway, the Oregon Department of Transportation; and where the project site would access a County road or otherwise be subject to review by the County, then the County; and Clean Water Services; Tri Met; and, ODOT Rail Division and the railroad company if a railroad-highway grade crossing provides or will provide the only access to the subject property. The failure of another agency to respond with written comments on a pending application does not invalidate an action or permit approval made by the City under this Code;

(viii) Utility companies (as applicable); and,

(ix) Members of the decision body identified in Table 32-1.

(b) The Notice of a Public Hearing, at a minimum, must contain all of the following information:

(i) The names of the applicant(s), any representative(s) thereof, and the owner(s) of the subject property;

(ii) The street address if assigned, if no street address has been assigned then Township, Range, Section, Tax Lot or Tax Lot ID;

(iii) The type of application and a concise description of the nature of the land use action;

(iv) A list of the approval criteria by TDC section for the decision and other ordinances or regulations that apply to the application at issue;

(v) Brief summary of the local decision making process for the land use decision being made and a general explanation of the requirements for submission of testimony and the procedure for conduct of hearings;

(vi) The date, time and location of the hearing;

(vii) Disclosure statement indicating that if any person fails to address the relevant approval criteria with enough detail, he or she may not be able to appeal to the Land Use Board of Appeals on that issue, and that only comments on the relevant approval criteria are considered relevant evidence;

(viii) The name of a City representative to contact and the telephone number where additional information may be obtained; and

(ix) Statement that the application and all documents and evidence submitted to the City are in the public record and available for review, and that copies can be obtained at a reasonable cost from the City; and

(x) Statement that a copy of the staff report will be available for inspection at no cost at least seven days prior to the hearing and will be provided at reasonable cost.

(c) Failure of a person or agency to receive a notice, does not invalidate any proceeding in connection with the application, provided the City can demonstrate by affidavit that required notice was given.

Finding:

After submittal and completeness review as required by this section, notice for the Type III hearing concerning AR 21-0011 was mailed by city staff on February 9, 2022 and contained the information required by this section. One public comment was received from the adjacent property owner to the south, and is attached as Exhibit J. The comment was in support of granting their site full access off of SW 124th Avenue and adjacent to SW Cimino Street in accordance with TDC 75.140(6)(c)(iv)(B). These standards are met.

(4) Conduct of the Hearing - Type III.

The person chairing the hearing must follow the order of proceedings set forth below. These procedures are intended to provide all interested persons a reasonable opportunity to participate in the hearing process and to provide for a full and impartial hearing on the application before the body. Questions concerning the propriety or the conduct of a hearing will be addressed to the chair with a request for a ruling. Rulings from the chair must, to the extent possible, carry out the stated intention of these procedures. A ruling given by the chair on such question may be modified or reversed by a majority of those members of the decision body present and eligible to vote on the application before the body. The procedures to be followed by the chair in the conduct of the hearing are as follows:

(a) At the commencement of the hearing, the person chairing the hearing must state to those in attendance all of the following information and instructions:

(i) The applicable substantive criteria;

(ii) That testimony, arguments and evidence must be directed toward the criteria described in paragraph (i) of this subsection or other criteria in the plan or land use regulation which the person believes to apply to the decision;

(iii) That failure to raise an issue accompanied by statements or evidence sufficient to afford the decision maker and the parties an opportunity to respond to the issue precludes appeal to the State Land Use Board of Appeals based on that issue;

(iv) At the conclusion of the initial evidentiary hearing, the decision body must deliberate and make a decision based on the facts and arguments in the public record; and

(v) Any participant may ask the decision body for an opportunity to present additional relevant evidence or testimony that is within the scope of the hearing; if the decision body grants the request, it will schedule a date to continue the hearing as provided in TDC 32.230(4)(e), or leave the record open for additional written evidence or testimony as provided TDC 32.230(4)(f).

(b) The public is entitled to an impartial decision body as free from potential conflicts of interest and pre-hearing ex parte (outside the hearing) contacts as reasonably possible. Where questions related to ex parte contact are concerned, members of the decision body must follow the guidance for disclosure of ex parte contacts contained in ORS 227.180. Where a real conflict of

interest arises, that member or members of the decision body must not participate in the hearing, except where state law provides otherwise. Where the appearance of a conflict of interest is likely, that member or members of the decision body must individually disclose their relationship to the applicant in the public hearing and state whether they are capable of rendering a fair and impartial decision. If they are unable to render a fair and impartial decision, they must be excused from the proceedings.

(c) Presenting and receiving evidence.

(i) The decision body may set reasonable time limits for oral presentations and may limit or exclude cumulative, repetitious, irrelevant, or personally derogatory testimony or evidence;

(ii) No oral testimony will be accepted after the close of the public hearing. Written testimony may be received after the close of the public hearing only as provided by this section; and

(iii) Members of the decision body may visit the property and the surrounding area, and may use information obtained during the site visit to support their decision, if the information relied upon is disclosed at the beginning of the hearing and an opportunity is provided to dispute the evidence.

(d) The decision body, in making its decision, must consider only facts and arguments in the public hearing record; except that it may take notice of facts not in the hearing record (e.g., local, state, or federal regulations; previous City decisions; case law; staff reports). Upon announcing its intention to take notice of such facts in its deliberations, it must allow persons who previously participated in the hearing to request the hearing record be reopened, as necessary, to present evidence concerning the newly presented facts.

(e) If the decision body decides to continue the hearing, the hearing must be continued to a date that is at least seven days after the date of the first evidentiary hearing (e.g., next regularly scheduled meeting). An opportunity must be provided at the continued hearing for persons to present and respond to new written evidence and oral testimony. If new written evidence is submitted at the continued hearing, any person may request, before the conclusion of the hearing, that the record be left open for at least seven days, so that he or she can submit additional written evidence or arguments in response to the new written evidence. In the interest of time, after the close of the hearing, the decision body may limit additional testimony to arguments and not accept additional evidence.

(f) If the decision body leaves the record open for additional written testimony, the record must be left open for at least seven days after the hearing. Any participant may ask the decision body in writing for an opportunity to respond to new evidence (i.e., information not disclosed during the public hearing) submitted when the record was left open. If such a request is filed, the decision body must reopen the record, as follows:

(i) When the record is reopened to admit new evidence or arguments (testimony), any person may raise new issues that relate to that new evidence or testimony;

(ii) An extension of the hearing or record granted pursuant to this section is subject to the limitations of TDC 32.030, unless the applicant waives his or her right to a final decision being made within the required timeframe; and

(iii) If requested by the applicant, the decision body must grant the applicant at least seven days after the record is closed to all other persons to submit final written arguments, but not evidence, provided the applicant may expressly waive this right.

Finding:

The Architectural Review Board will follow the hearing requirements set forth by this section. These standards will be met.

(5) Notice of Adoption of a Type III Decision.
Notice of Adoption must be provided to the property owner, applicant, and any person who provided testimony at the hearing or in writing. The Type III Notice of Adoption must contain all of the following information:

(a) A description of the applicant's proposal and the City's decision on the proposal, which may be a summary, provided it references the specifics of the proposal and conditions of approval in the public record;
(b) The address or other geographic description of the property proposed for development, including a map of the property in relation to the surrounding area;
(c) A statement that a copy of the decision and complete case file, including findings, conclusions, and conditions of approval, if any, is available for review and how copies can be obtained;
(d) The date the decision becomes final, unless a request for appeal is submitted; and
(e) The notice must include an explanation of rights to appeal the decision to the City Council in accordance with TDC 32.310.

(6) Appeal of a Type III Decision. Appeal of an Architectural Review Board or Planning Commission Type III Decision to the City Council may be made in accordance with TDC 32.310.
(7) Effective Date of a Type III Decision.

(a) The written order is the final decision on the application.
(b) The mailing date is the date of the order certifying its approval by the decision body.
(c) A decision of the Architectural Review Board or Planning Commission is final unless:
(i) a written appeal is received at the City offices within 14 calendar days of the date notice of the final decision is mailed; or
(ii) The City Manager or a member of the City Council requests a review of the decision within 14 calendar days of the date notice of the final decision is mailed.

Finding:
A final decision and any appeal will follow the requirements of this section. These standards will be met.

Chapter 33: Applications and Approval Criteria

[…]

Section 33.020 Architectural Review
[…]
(5) Approval Criteria.
(c)Large Commercial, Industrial, and Multifamily Development. Applications for Large Commercial, Industrial, and Multifamily Development must comply with the applicable standards and objectives in TDC Chapter 73A through 73G.

Finding:
The subject application, which is for large industrial development, which must comply with the standards and objectives in TDC 73A through 73G. These standards are met by findings and conditions of approval for the subject application.

(9) Permit Expiration.
Architectural Review decisions (including Minor Architectural Review decisions) expire two (2) years from the effective date unless the applicant has received a building, or grading permit submitted in conjunction with a building permit application, substantial construction has occurred pursuant to the building permit, and an inspection has been performed by a member of the Building Division.

(10) Extension of Permit Expiration.

(a) An Architectural Review approval may be extended if the applicant, or successor interest, submits a written request for an extension of time within two (2) years of the effective date.

[…]

(c) Upon receipt of a request for an extension of time, the City will process the extension request as follows:

(i) If the City Manager approved the Architectural Review, then the City Manager will decide the extension request under the Type II procedures in TDC 32.220.

(ii) If the Architectural Review Board (ARB) approved the Architectural Review, then the ARB will decide the extension request under the Type III quasi-judicial procedures in TDC 32.230.

(d) The City must provide notice of the extension request to past recipients of the Architectural Review notice of decision and the applicant must post a sign pursuant to TDC 32.150.

(e) The City Manager or Architectural Review Board, as applicable, may grant the extension of time upon finding the following:

(i) The applicant submitted a written extension request prior to the expiration date;

(ii) There have been no significant changes in any conditions, ordinances, regulations or standards of the City or applicable agencies that affect the previously approved project so as to warrant its resubmittal for Architectural Review;

(iii) If the previously approved application included a special study, the applicant provided a status report includes a letter from a recognized professional that states that conditions have not changed after the original approval and that no new study is warranted; and

(iv) If the site has been neglected so as to allow the site to become blighted, the deciding party must factor this into its decision.

(f) The City Manager or Architectural Review Board, as applicable, may grant or deny the extension request. The decision must be in writing and must be made within sixty (60) days of receipt of the request for extension. If the decision is to grant the extension, the extension can be no more than a single one-year extension.

(g) Upon making the decision, the City must provide notice of the extension decision as provided in TDC 32.220 for Type II decisions made by the City Manager and TDC 32.230 for Type III decisions made by the Architectural Review Board.

Finding:

The proposed application is approved subject the compliance with the above criteria. With recommended Condition of Approval A1, these standards are met.

Section 33.110 Tree Removal Permit/Review

(1) Purpose. To regulate the removal of trees within the City limits other than trees within the public right-of-way which are subject to TDC Chapter 74.

(2) Applicability. No person may remove a tree on private property within the City limits, unless the City grants a tree removal permit, consistent with the provisions of this Section.

[…]

(3) Procedure Type. Tree Removal Permit applications are subject to Type II Review in accordance with TDC Chapter 32. Tree Removal Permit applications submitted with an Architectural Review, Subdivision, or Partition application will be processed in conjunction with the Architectural Review, Subdivision, or Partition decision.

Finding:
The applicant has submitted a tree preservation plan and sufficient documentation in conjunction with the Architectural Review application. The criteria in TDC 33.110, addressed below, are the basis on approval or denial for tree removal as part of this Architectural Review. These standards are met.

Section 33.110 Tree Removal Permit/Review Approval Criteria
(5) Approval Criteria.
(a) An applicant must satisfactorily demonstrate that at least one of the following criteria are met:
(i) The tree is diseased and:
(A) The disease threatens the structural integrity of the tree; or
(B) The disease permanently and severely diminishes the esthetic value of the tree; or
(C) The continued retention of the tree could result in other trees being infected with a disease that threatens either their structural integrity or esthetic value.
(ii) The tree represents a hazard which may include but not be limited to:
(A) The tree is in danger of falling; or
(B) Substantial portions of the tree are in danger of falling.
(iii) It is necessary to remove the tree to construct proposed improvements based on Architectural Review approval, building permit, or approval of a Subdivision or Partition Review.
(b) If none of the conditions in TDC 33.110(5)(a) are met, the certified arborist must evaluate the condition of each tree.
(i) Evergreen Trees. An evergreen tree which meets any of the following criteria as determined by a certified arborist will not be required to be retained:
(A) Trunk Condition - extensive decay and hollow; or
(B) Crown Development - unbalanced and lacking a full crown;
(ii) Deciduous Trees. A deciduous tree which meets any of the following criteria as determined by a certified arborist will not be required to be retained:
(A) Trunk Condition - extensive decay and hollow;
(B) Crown Development - unbalanced and lacking a full crown; or
(C) Structure - Two or more dead limbs.

Finding:
The applicant's arborist surveyed 447 trees over 8" dbh on site. In report recommends removal of 415 trees, 26 of which are located off-site and would require property owner authorization. Of the on-site trees proposed for removal, all are proposed to be removed to construct the proposed improvements in accordance with criterion 33.110(5)(a)(iii).

The tree survey also identified tree protection measures for neighboring off-site to protect them from grading impacts. The arborist identified 30 off-site trees likely to be impacted by proposed development on site. With recommended Condition of Approval A12 related to requirements for tree removal on neighboring properties, and recommended Condition of Approval A15 related to tree protection, these standards are met.

Chapter 61: General Manufacturing (MG) Zone

[...]
Section 61.200. - Use Categories.
(1) Use Categories. Table 61-1 lists use categories Permitted Outright (P) or Conditionally Permitted (C) in the MG zone. Use categories may also be designated as Limited (L) and subject to the limitations listed in Table 61-1 and restrictions identified in TDC 61.210. Limitations may restrict the specific type

of use, location, size, or other characteristics of the use category. Use categories which are not listed are prohibited within the zone, except for uses which are found by the City Manager or appointee to be of a similar character and to meet the purpose of this zone, as provided in TDC 31.070.
(2) Use Categories in the Limited Commercial Setback. Commercial uses may be further restricted within the Limited Commercial Setback, see TDC 60.210(4).
(3) Overlay Zones. Additional uses may be allowed in a particular overlay zone. See the overlay zone Chapters for additional uses.

Table 61-1
Use Categories in the MG Zone

USE CATEGORY	STATUS	LIMITATIONS AND CODE REFERENCES
[…]		
INDUSTRIAL USE CATEGORIES		
[…]		
Warehouse and Freight Movement	P/C	Conditional use required for warehousing of building materials and supplies. All other uses permitted outright.

[…]

Finding:
The project identifies warehouse and distribution uses for the site. Warehouse and freight movement are characterized by the storage, repackaging, delivery and movement of products in TDC 39.440. A conditional use permit is required for warehousing of building materials and supplies, while other warehouse and freight uses are permitted in the subject zone. Additional review may be necessary at the time of tenant improvements. With recommended Condition of Approval A24, this standard is met.

Section 61.210. - Additional Limitations on Uses.
(4)Limited Commercial Setback. The purpose of the Limited Commercial Setback is to restrict commercial uses from locating within 300 feet from the centerline of SW Tualatin-Sherwood Road and SW 124th Avenue and 350 feet from the centerline of SW Pacific Highway (99W) west of Cipole Road, as depicted in Comprehensive Plan Map 10-5.
(a)Restriction on Commercial Uses. No commercial uses, including parking or outdoor storage and display areas, are permitted outright in the Limited Commercial Setback.

Finding:
A portion of the subject site is located within 300 feet of the centerline of SW 124th Avenue and the Limited Commercial setback, as shown in Exhibit E. With recommended Condition of Approval A26, this standard is met.

Section 61.300 – Development Standards.
Development standards in the MG zone are listed in Table 61-2. Additional standards may apply to some uses and situations, see TDC 61.310.

Table 61-2
Development Standards in the MG Zone

	Standard	Minimum Proposed
MINIMUM SETBACKS		
Front (SW 124th Avenue)	**30**	166
Front (SW Cipole Road)	**30**	299
Side (South)	**0-50 feet**	83
Rear (Northwest)	**0-50 feet**	62
Parking and Circulation Areas	**5 feet** No minimum setback required adjacent to joint access approach in accordance with TDC 73C.	9
STRUCTURE HEIGHT		
Maximum Height	**60 feet**	42.17 feet

[…]

Finding:
As shown in the table above, the development standards are met.

Section 61.310. - Additional Development Standards.
(1)Outdoor Uses. All uses must be conducted wholly within a completely enclosed building, except off-street parking and loading, Basic Utilities, Wireless Communication Facilities and outdoor play areas of child day care centers as required by state day care certification standards.
[…]

Finding:
The applicant has not proposed outdoor uses. With recommended Condition of Approval A27, this standard is met.

Chapter 63: Industrial Uses and Utilities and Manufacturing Zones – Environmental Regulations

Section 63.020 – Applicability.
The regulations of this Chapter apply to:
(1) All industrial uses and utilities, regardless of the Planning District in which they are located, and
(2) All Manufacturing Planning Districts, regardless of the use category
[…]

Finding:
The site is located in the General Manufacturing District and the proposal includes industrial uses. Therefore the noise, vibration, air quality, odor, heat and glare, materials storage, waste disposal, and dangerous substances regulations of this Chapter apply. With recommended Condition of Approval A28, these standards are met.

Chapter 73A: Site Design

Section 73A.400 – Industrial Design Standards.

The following standards are minimum requirements for commercial development in all zones:

(1) Walkways. Industrial development must provide walkways as follows:

(a) Walkways must be a minimum of five feet in width;

(b) Walkways must be constructed of asphalt, concrete, or a pervious surface such as pavers or grasscrete (not gravel or woody material);

(c) Walkways must meet ADA standards applicable at time of construction or alteration;

(e) Walkways must be provided between the main building entrances and other on-site buildings, accessways, and sidewalks along the public right-of-way;

(f) Walkways through parking areas, drive aisles, and loading areas must be of a different appearance than the adjacent paved vehicular areas; and

(g) Outdoor Recreation Access Routes must be provided between the development's walkway and bikeway circulation system and parks, bikeways and greenways where a bike or pedestrian path is designated.

Finding:

Main entrances are proposed at the four building corners as shown in Exhibit A2. A sidewalk that varies in width from 5-7 feet connects the SW building entrance to the public sidewalk located along SW Cipole Road to the west. A sidewalk connection that is 5 feet in width is proposed between the NW and NE building entrances and extends to join the public sidewalk located along SW 124th Avenue to the east. A seven foot wide sidewalk is proposed along the SE building entrance with a five foot wide connection to the parking area to the east; however there is no connection proposed to the public sidewalk at SW 124th Avenue due to a 13% slope. Sidewalks are proposed as concrete or paved markings through vehicular areas. Further compliance with ADA standards will be evaluated at the time of building permit.

With recommended Conditionals of Approval A11.a for connectivity and A16 for appearance, these standards will be met.

[…]

(4) Safety and Security. Industrial development must provide safety and security features as follows:

(a) Locate windows and provide lighting in a manner that enables tenants, employees, and police to watch over pedestrian, parking, and loading areas;

(b) Locate windows and interior lighting to enable surveillance of interior activity from the public right-of-way;

(c) Locate, orient, and select exterior lighting to facilitate surveillance of on-site activities from the public right-of-way without shining into public rights-of-way or fish and wildlife habitat areas;

(d) Provide an identification system which clearly locates buildings and their entries for patrons and emergency services; and

[…]

Finding:

As seen on the elevation and photometric plans (Exhibit A2), windows and wallpak lighting have been located at the corner building entrances and office areas. Wallpak lighting has been located throughout the loading areas and pole mounted lighting has been located over the trailer parking at the east and west sides of the site. Loading area doors are shown with a single window each, providing additional

visibility. As shown on the applicant's photometric study (Exhibit A2), lighting will primarily be focused toward the edges of perimeter of the buildings and interior parking areas. Standards (a-c) are met.

Building identification will be reviewed at the time of building permit, and should meet all standards of Tualatin Valley Fire and Rescue as well as all applicable building code standards. With recommended Condition of Approval A19, criterion (d) is met.

(5) Service, Delivery, and Screening. Industrial development must provide service, delivery, and screening features as follows:

(a) Above grade and on-grade electrical and mechanical equipment such as transformers, heat pumps and air conditioners must be screened with sight obscuring fences, walls or landscaping;
(b) Outdoor storage must be screened with a sight obscuring fence, wall, berm or dense evergreen landscaping; and
(c) Above ground pumping stations, pressure reading stations, water reservoirs; electrical substations, and above ground natural gas pumping stations must be screened with sight-obscuring fences or walls and landscaping.

Finding:
Mechanical equipment is not proposed with this application, and electrical transformers are not shown on the plan set included as Exhibit A2. Additionally outdoor storage is not proposed. With recommended Condition of Approval A29 requiring equipment screening, these standards are met.

(6) Adjacent to Transit. Commercial development adjacent to transit must comply with the following:

(a) Development on a transit street designated in TDC Chapter 11 (Figure 11-5) must provide either a transit stop pad on-site, or an on-site or public sidewalk connection to a transit stop along the subject property's frontage on the transit street.
[…]

Finding:
SW 124th Avenue is designated as a transit street in Comprehensive Plan Map 8-5 (Exhibit F); however there is no existing bus stop along the frontage of this property. A walkway connection is proposed between the northern building entrances to SW 124th Avenue. This standard is met.

Chapter 73B: Landscaping Standards

Section 73B.020 – Landscape Area Standards Minimum Areas by Use and Zone.
Excerpted from 73B.020

Zone	Minimum Area Requirement*	Minimum Area Requirement with dedication for a fish and wildlife habitat*
[…]		
(3) CO, CR, CC, CG, ML and MG zones except within the Core Area Parking District—All uses	15 percent of the total area to be developed	12.5 percent of the total area to be developed

Finding:
As shown in the site plan (Exhibit A2), 169,602 square feet of landscaping is provided. The landscape area represents 16.1% of the total site area. This standard is met.

Section 73B.060 – Additional Minimum Landscaping Requirements for Industrial Uses.
(1)General. In addition to requirements in TDC 73B.020, industrial uses must comply with the following:

(a)All areas not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas, or undisturbed natural areas must be landscaped.

(i)This standard does not apply to areas subject to the Hedges Creek Wetlands Mitigation Agreement.

Finding:
Landscaping is provided in all areas not otherwise occupied by buildings, vehicle area, or pedestrian area. The site is not located adjacent to the Hedges Creek Wetland. With recommended Condition of Approval A21, this standard is met.

(b) Minimum 5-foot-wide landscaped area must be located along all building perimeters viewable by the general public from parking lots or the public right-of-way, but the following may be used instead of the 5-foot-wide landscaped area requirement:

(i) Pedestrian amenities such as landscaped plazas and arcades; and

(ii) Areas developed with pavers, bricks, or other surfaces, for exclusive pedestrian use and contain pedestrian amenities, such as benches, tables with umbrellas, children's play areas, shade trees, canopies.

(c) 5-foot-wide landscaped area requirement does not apply to:

(i) loading areas,

(ii) bicycle parking areas,

(iii) pedestrian egress/ingress locations, and

(iv) where the distance along a wall between two vehicle or pedestrian access openings (such as entry doors, garage doors, carports and pedestrian corridors) is less than 8 feet.

Finding:
The buildings are buffered with at least five feet of landscaping, with the exception of loading and pedestrian areas, as seen on the Landscape Plans (Exhibit A2). This standard is met.

Section 73B.080 – Minimum Landscaping Standards for All Zones.
The following are minimum standards for landscaping for all zones.

(1) Required Landscape Areas	• **Must be designed, constructed, installed, and maintained so that within three years the ground must be covered by living grass or other plant materials.** • **The foliage crown of trees cannot be used to meet this requirement.** • **A maximum of 10% of the landscaped area may be covered with un-vegetated areas of bark chips, rock or stone.** • **Must be installed in accordance with the provisions of the American National Standards Institute ANSI A300 (Part 1) (Latest Edition).** • **Must be controlled by pruning, trimming, or otherwise so that:** • **It will not interfere with designated pedestrian or vehicular access; and** • **It will not constitute a traffic hazard because of reduced visibility.**

Finding:
The density of plantings as shown on Landscape Plans (Exhibit A2) is sufficient to provide full coverage of landscaping within three years. These standards are met.

(2) Fences	**Landscape plans that include fences must integrate any fencing into the plan to guide wild animals toward animal crossings under, over, or around transportation corridors.**

Finding:
A six-foot high fence is proposed around the perimeter of the property as shown on the Site Plan included in Exhibit A2. There are no established wildlife crossings in the vicinity; however a designated wetland conversation district is located east of the property and adjacent to 124th Avenue. This standard is met.

(3) Tree Preservation	• **Trees and other plant materials to be retained must be identified on the landscape plan and grading plan.** **During construction:** • **Must provide above and below ground protection for existing trees and plant materials identified to remain;** • **Trees and plant materials identified for preservation must be protected by chain link or other sturdy fencing placed around the tree at the drip line;** • **If it is necessary to fence within the drip line, such fencing must be specified by a qualified arborist;** • **Top soil storage and construction material storage must not be located within the drip line of trees designated to be preserved;** • **Where site conditions make necessary a grading, building, paving, trenching, boring, digging, or other similar encroachment upon a preserved tree's drip-line area, such grading, paving, trenching, boring, digging, or similar encroachment must only be permitted under the direction of a qualified arborist. Such direction must assure that the health needs of trees within the preserved area can be met; and** • **Tree root ends must not remain exposed.** • **Landscaping under preserved trees must be compatible with the retention and health of the preserved tree.** • **When it is necessary for a preserved tree to be removed in accordance with TDC 33.110 (Tree Removal Permit) the landscaped area surrounding the tree or trees must be maintained and replanted with trees that relate to the present landscape plan, or if there is no landscape plan, then trees that are complementary with existing, landscape materials. Native trees are encouraged** • **100% of the area preserved under any tree or group of trees (Except for impervious surface areas) retained in the landscape plan must apply directly to the percentage of landscaping required for a development**

Finding:
The Arborist Report (Exhibit A3) calls for preserving one on-site tree and including protection measures for neighboring off-site trees. Protection for off-site trees been has not been identified on Grading Plan (Exhibit A2). With recommended Condition of Approval A11.b. and A15, these standards are met.

(4) Grading	• **After completion of site grading, top-soil is to be restored to exposed cut and fill areas to provide a suitable base for seeding and planting.** • **All planting areas must be graded to provide positive drainage.**

	• **Soil, water, plant materials, mulch, or other materials must not be allowed to wash across roadways or walkways.** • **Impervious surface drainage must be directed away from pedestrian walkways, dwelling units, buildings, outdoor private and shared areas and landscape areas except where the landscape area is a water quality facility.**

Finding:
The applicant proposes to develop or landscape all exposed areas remaining after grading. With recommended Condition of Approval A21, this standard is met.

(5) Irrigation	• **Landscaped areas must be irrigated with an automatic underground or drip irrigation system** • **Exceptions: Irrigation requirement does not apply to duplexes and townhouses.**

Finding:
Irrigation is proposed in new landscaping areas as detailed in the General Notes on the Landscape Plan (Exhibit A2). This standard is met.

(6) Re-vegetation in Un-landscaped Areas	• **Vegetation must be replanted in all areas where vegetation has been removed or damaged in areas not affected by the landscaping requirements and that are not to be occupied by structures or other improvements,.** • **Plant materials must be watered at intervals sufficient to ensure survival and growth for a minimum of two growing seasons.** • **The use of native plant materials is encouraged to reduce irrigation and maintenance demands.** • **Disturbed soils should be amended to an original or higher level of porosity to regain infiltration and stormwater storage capacity.**

Finding:
The applicant proposes to landscape all areas not otherwise proposed for development. With recommended Condition of Approval A21, this standard is met.

Section 73B.080 – Minimum Standards Trees and Plants.
The following minimum standards apply to the types of landscaping required to be installed for all zones.

(1) Deciduous Shade Trees	• **One and on-half inch caliper measured six inches above ground;** • **Balled and burlapped; bare root trees will be acceptable to plant during their dormant season;** • **Reach a mature height of 30 feet or more;** • **Cast moderate to dense shade in summer;** • **Live over 60 years;** • **Do well in urban environments, tolerant of pollution and heat, and resistant to drought;** • **Require little maintenance and mechanically strong;** • **Insect- and disease-resistant;** • **Require little pruning; and** • **Barren of fruit production.**

(2) Deciduous Ornamental Trees	• **One and on-half inch caliper measured six inches above ground;** • **balled and burlapped; bare root trees will be acceptable to plant during their dormant season; and** • **Healthy, disease-free, damage-free, well-branched stock, characteristic of the species**
(3) Coniferous Trees	• **5 feet in height above ground;** • **balled and burlapped; bare root trees will be acceptable to plant during their dormant season; and** • **Healthy, disease-free, damage-free, well-branched stock, characteristic of the species.**
(4) Evergreen and Deciduous Shrubs	• **One to five gallon size;** • **Healthy, disease-free, damage-free, well-branched stock, characteristic of the species; and** • **Side of shrub with best foliage must be oriented to public view.**
(5) Groundcovers	• **Fully rooted;** • **Well branched or leafed;** • **Healthy, disease-free, damage-free, well-branched stock, characteristic of the species; and** • **English ivy (Hedera helix) is prohibited.**
(6) Lawns	• **Consist of grasses, including sod, or seeds of acceptable mix within the local landscape industry;** • **100 percent coverage and weed free; and** • **Healthy, disease-free, damage-free, characteristic of the species.**

Finding:
Per the Plant Schedule provided on the Landscape Plan included in Exhibit A2, the standards for groundcover, shrubs, and trees to be planted are met.

Chapter 73C: Parking Standards

TDC 73C.010. - Off-Street Parking and Loading Applicability and General Requirements.

[…]

(2)General Requirements. Off-street parking spaces, off-street vanpool and carpool parking spaces, off-street bicycle parking, and off-street loading berths must be as provided as set forth in TDC 73C.100, unless greater requirements are otherwise established by the conditional use permit or the Architectural Review process.

(a)The following apply to property and/or use with respect to the provisions of TDC 73C.100:

(i)The requirements apply to both the existing structure and use, and enlarging a structure or use;

(ii)The floor area is measured by gross floor area of the building primary to the function of the particular use of the property other than space devoted to off-street parking or loading;

[…]

(v)If the use of a property changes, thereby increasing off-street parking or loading requirements, the increased parking/loading area must be provided prior to commencement of the new use;

(vi)Parking and loading requirements for structures not specifically listed herein must be determined by the City Manager, based upon requirements of comparable uses listed;

(vii)When several uses occupy a single structure, the total requirements for off-street parking may be the sum of the requirements of the several uses computed separately or be computed in accordance with TDC 73.370(1)(m), Joint Use Parking;
[…]
(ix)Required parking spaces must be available for the parking of operable passenger automobiles of residents, customers, patrons and employees and must not be used for storage of vehicles or materials or for the parking of trucks used in conducting the business;
(x)Institution of on-street parking, where none is previously provided, must not be done solely for the purpose of relieving crowded parking lots in commercial or industrial zones; and
(xi)Required vanpool and carpool parking must meet the 9-foot parking stall standards in Figure 73-1 and be identified with appropriate signage.

Finding:
While tenants have not been named for this development, the applicant has identified warehousing and freight movement uses for the site. Parking requirements have been evaluated based on this use category in TDC 73C.100. Drive aisles and stalls are proposed to be comprised of asphalt. Concrete curbs are also proposed. With recommended Condition of Approval A24 and A22 to show compliance with standards (v) and (xi), these standards are met.

Section 73C.020 – Parking Lot Design Standards.
A parking lot, whether an accessory or principal use, intended for the parking of automobiles or trucks, must comply with the following:
(1) Off-street parking lot design must comply with the dimensional standards set forth in Figure 73-1;
[…]
(2) Parking lot drive aisles must be constructed of asphalt, concrete, or pervious concrete;
(3) Parking stalls must be constructed of asphalt, concrete, previous concrete, or a pervious surface such as pavers or grasscrete, but not gravel or woody material. Pervious surfaces, are encouraged for parking stalls in or abutting the Natural Resource Protection Overlay District, Other Natural Areas, or in a Clean Water Services Vegetated Corridor;
(4) Parking lots must be maintained adequately for all-weather use and drained to avoid water flow across sidewalks;
(5) Parking bumpers or wheel stops or curbing must be provided to prevent cars from encroaching on adjacent landscaped areas, or adjacent pedestrian walkways.

Finding:
As shown on the Site Plan (Exhibit A2), stalls are proposed to be 19 feet long and 9 feet wide and drive aisles are a minimum of 24-feet wide. Drive aisles and stalls are proposed to be comprised of asphalt. Concrete curbs are also proposed. These standards are met.

(6) Disability parking spaces and accessibility must meet ADA standards applicable at time of construction or alteration;
(7) Parking stalls for sub-compact vehicles must not exceed 35 percent of the total parking stalls required by TDC 73C.100. Stalls in excess of the number required by TDC 73C.100 can be sub-compact stalls;

Finding:
The Site Plan (Exhibit A2) shows a total of eight ADA compliant parking spaces planned near the four building entrances. There are no subcompact stalls proposed. ADA standards will be reviewed in greater detail during the building permit phase. These standards are met.

(8) Groups of more than 4 parking spaces must be so located and served by driveways that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley;
(9) Drives to off-street parking areas must be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site;
(10) On-site drive aisles without parking spaces, which provide access to parking areas with regular spaces or with a mix of regular and sub-compact spaces, must have a minimum width of 22 feet for two-way traffic and 12 feet for one-way traffic; When 90 degree stalls are located on both sides of a drive aisle, a minimum of 24 feet of aisle is required. On-site drive aisles without parking spaces, which provide access to parking areas with only sub-compact spaces, must have a minimum width of 20 feet for two-way traffic and 12 feet for one-way traffic;

Finding:
The design of the parking lot will not require movement on the public street. Drive aisles with parking are at least 24 feet wide as proposed. These standards are met.

(11) Artificial lighting, must be deflected to not shine or create glare in a residential zones, street right-of-way, a Natural Resource Protection Overlay District, Other Natural Areas, or a Clean Water Services Vegetated Corridor;
(12) Parking lot landscaping must be provided pursuant to the requirements of TDC 73C.200; and
(13) Except for parking to serve residential uses, parking areas adjacent to or within residential zones or adjacent to residential uses must be designed to minimize disturbance of residents.

Finding:
As shown on the Site Lighting Plan (Exhibit A2), lighting will primarily be focused toward the building entrances, loading, and interior parking areas. These standards are met.

Section 73C.050 – Bicycle Parking Requirements and Standards.
(1) Requirements. Bicycle parking facilities must include:
- **(a) Long-term parking that consists of covered, secure stationary racks, lockable enclosures, or rooms in which the bicycle is stored;**
- **(i) Long-term bicycle parking facilities may be provided inside a building in suitable secure and accessible locations.**
- **(b) Short-term parking provided by secure stationary racks (covered or not covered), which accommodate a bicyclist's lock securing the frame and both wheels.**

(2) Standards. Bicycle parking must comply with the following:
- **(a) Each bicycle parking space must be at least six feet long and two feet wide, with overhead clearance in covered areas must be at least seven feet;**
- **(b) A five (5) foot-wide bicycle maneuvering area must be provided beside or between each row of bicycle parking. It must be constructed of concrete, asphalt, or a pervious hard surface such as pavers or grasscrete, and be maintained;**

(c) Access to bicycle parking must be provided by an area at least three feet in width. It must be constructed of concrete, asphalt, or a pervious hard surface such as pavers or grasscrete, and be maintained;
(d) Bicycle parking areas and facilities must be identified with appropriate signing as specified in the Manual on Uniform Traffic Control Devices (MUTCD) (latest edition). At a minimum, bicycle parking signs must be located at the main entrance and at the location of the bicycle parking facilities;
(e) Bicycle parking must be located in convenient, secure, and well-lighted locations approved through the Architectural Review process. Lighting, which may be provided, must be deflected to not shine or create glare into street rights-of-way or fish and wildlife habitat areas;
(f) Required bicycle parking spaces must be provided at no cost to the bicyclist, or with only a nominal charge for key deposits, etc. This does not preclude the operation of private for-profit bicycle parking businesses;
[…]
(h) The City Manager or the Architectural Review Board may approve a form of bicycle parking not specified in these provisions but that meets the needs of long-term and/or short-term parking pursuant to Architectural Review.

Finding:
As shown on the Site Plan (Exhibit A2), the applicant proposes to provide outdoor bike parking at the building corners, near proposed tenant entrances. Dimensioned details of the bike parking furnishings were not included in the application materials.

With recommended Condition of Approval A11.c. and A22 to show compliance with standards (a), (b), (c), and (d), these standards are met.

Section 73C.100 – Off-Street Parking Minimum/Maximum Requirements.

USE	MINIMUM MOTOR VEHICLE PARKING	MAXIMUM MOTOR VEHICLE PARKING	BICYCLE PARKING	PERCENTAGE OF BICYCLE PARKING TO BE COVERED
[…]				
(f) Industrial				
(ii) Warehousing	0.30 spaces per 1,000 square feet of gross floor area	Zone A: 0.4 spaces per 1,000 square feet of gross floor area Zone B: 0.5 spaces per 1,000 square feet of gross floor area	2, or 0.10 spaces per 1,000 gross square feet, whichever is greater	First five spaces or 30 percent, whichever is greater

Finding:
While tenants have not been named for this development, the applicant has identified warehousing and freight movement uses.

Table 1: Minimum and Proposed Parking by Use

Use	Square Footage	Vehicle Parking Min.	Proposed	Bike Parking Min.	Proposed

Warehousing	*452,800*	*136*	***197***	*45*	***46***

A minimum of 136 parking spaces are required, and 197 vehicle parking spaces and 133 trailer parking spaces are proposed. Additionally, 45 bike parking spaces are required by code based on the building area, 14 of which must be covered. The site plan notes that bike parking is proposed at all four building entrances but does not provide details (Exhibit A2). With recommended Condition of Approval A11.c. requiring additional bike parking details, these standards are met.

(2) In addition to the general parking requirements in subsection (1), the following are the minimum number of off-street vanpool and carpool parking for commercial, institutional, and industrial uses.

Number of Required Parking Spaces	Number of Vanpool or Carpool Spaces
0 to 10	1
10 to 25	2
26 and greater	1 for each 25 spaces

[…]

Finding:
Since 136 parking spaces are required, five are required to be carpool/vanpool spaces. There are eight carpool/vanpool spaces are designated on the Site Plan (Exhibit A2). With recommended Condition of Approval A22, this standard is met.

Section 73C.120 – Off-Street Loading Facilities Minimum Requirements.
(1) The minimum number of off-street loading berths for commercial, industrial, and institutional uses is as follows:

Use	Square Feet of Floor Area	Number of Berths	Dimensions of Berth	Unobstructed Clearance of Berth
Industrial				
60,000 and over	3	12 feet x 35 feet	14 feet	60,000 and over

(2) Loading berths must not use the public right-of-way as part of the required off-street loading area.
(3) Required loading areas must be screened from public view, public streets, and adjacent properties by means of sight-obscuring landscaping, walls or other means, as approved through the Architectural Review process.
(4) Required loading facilities must be installed prior to final building inspection and must be permanently maintained as a condition of use.
(5) The off-street loading facilities must in all cases be on the same lot or parcel as the structure they are intended to serve. In no case must the required off-street loading spaces be part of the area used to satisfy the off-street parking requirements.
[…]

Finding:
Given the nature of the proposed site, the proposal includes a number of loading facilities including four berths and 115 docks oriented along the eastern and western elevations as shown on the Elevation Sheets (Exhibit A2) and are accessible from a private loading area. The loading area on the eastern elevation will be screened from adjacent 124th Avenue with Norway spruce and Hogan Cedar trees. These standards are met.

Section 73C.130 – Parking Lot Driveway and Walkway Minimum Requirements. Parking lot driveways and walkways must comply with the following requirements:

[…]
(3) Industrial Uses. Ingress and egress for industrial uses must not be less than the following:

Required Parking Spaces	Minimum Number Required	Minimum Pavement Width	Minimum Pavement Walkways, Etc.
1-250	1	36 feet for first 50' from ROW, 24 feet thereafter	No curbs or walkway required
Over 250	As required by City Manager	As required by City Manager	As required by City Manager

Finding:
The site proposes two points of ingress and egress, one at the north end of the property along SW 124th Avenue and one at the south end of the property along SW Cipole Road. The proposal includes a combination of vehicle and trailer parking for a total of 330 spaces. The access along SW 124th Avenue is proposed at a width of 50 feet for the first 50 feet. And the access along SW Cipole Road is proposed at a width of 50 feet that gradually narrows down to 36 feet within the first 50 feet. Condition of Approval A11.d. is recommended to ensure this standard is met.

(6) Maximum Driveway Widths and Other Requirements.

(a) Unless otherwise provided in this chapter, maximum driveway widths for Commercial, Industrial, and Institutional uses must not exceed 40 feet.
(b) Driveways must not be constructed within 5 feet of an adjacent property line, unless the two adjacent property owners elect to provide joint access to their respective properties, as provided by TDC73C.040.
(c) The provisions of subsection (b) do not apply to townhouses and duplexes, which are allowed to construct driveways within 5 feet of adjacent property lines.
(d) There must be a minimum distance of 40 feet between any two adjacent driveways on a single property unless a lesser distance is approved by the City Manager.
(e) Must comply with the distance requirements for access as provided in TDC 75.
(f) Must comply with vision clearance requirements in TDC 75.

Finding:
Proposed driveways widths are illustrated at 50 feet and exceed the maximum width, as shown on the Site Plan in Exhibit A2. Access findings are further addressed in Chapter 75. With recommended Condition of Approval A11.d., these standards are met.

Section 73C.240 – Industrial Parking Lot Landscaping Requirements. Industrial uses must comply with the following landscaping requirements for parking lots in all zones.
(1) General. Locate landscaping or approved substitute materials in all areas not necessary for vehicular parking and maneuvering

Finding:
The parking lot contains landscaping in areas not used for vehicle and pedestrian movement. This standard is met.

(2) Clear Zone. Clear zone required for the driver at ends of on-site drive aisles and at driveway entrances, vertically between a maximum of 30 inches and a minimum of 8 feet as measured from the ground level.

Finding:
As shown in the Landscape Plans (Exhibit A2), the proposed plantings will provide for visual clearance at the end of drive aisles and drive entrances. With recommended Condition of Approval A33 related to maintenance, this standard is met.

(3) Perimeter. Minimum 5 feet in width in all off-street parking and vehicular circulation areas, including loading areas and must comply with the following:
(a) Deciduous trees located not more than 30 feet apart on average as measured on center;
(b) Shrubs or ground cover, planted so as to achieve 90 percent coverage within three years;
(c) Plantings which reach a mature height of 30 inches in three years which provide screening of vehicular headlights year round;
(d) Native trees and shrubs are encouraged; and
(e) Exception: Not required where off-street parking areas on separate lots are adjacent to one another and connected by vehicular access.

Finding:
As shown in the Landscape Plans (Exhibit A2), at least five feet of landscape buffer is proposed for all parking and vehicle drive areas.

These areas are not all proposed with deciduous trees as specified under standard (a). Coniferous trees are proposed along the vehicular circulation area facing SW 124th Avenue. With recommended Condition of Approval A11.e. to provide deciduous as specified in standard (a) or as recommended by the Architectural Review Board, these standards are met.

(4) Landscape Island. Minimum 25 square feet per parking stall must be improved with landscape island areas and must comply with the following.
(a) May be lower than the surrounding parking surface to allow them to receive stormwater run-off and function as water quality facilities as well as parking lot landscaping;
(b) Must be protected from vehicles by curbs, but the curbs may have spaces to allow drainage into the islands;
(c) Islands must be utilized at aisle ends to protect parked vehicles from moving vehicles and emphasize vehicular circulation patterns;
(d) Landscape separation required for every eight continuous spaces in a row;
(e) Must be planted with one deciduous shade trees for every four parking spaces; Required trees must be evenly dispersed throughout the parking lot;
(f) Must be planted with groundcover or shrubs;
(g) Native plant materials are encouraged;
(h) Landscape island areas with trees must be a minimum of 5 feet in width (from inside of curb to curb);
(i) Required plant material in landscape islands must achieve 90 percent coverage within three years; and
[…]

Finding:
Given that a minimum of 136 parking spaces are required based on the proposed use, 3,400 square feet of parking lot landscape island area is required. It's unclear on the Site Plan or Landscape Plan (Exhibit A2) if the required parking lot landscaping area is met. Given 136 parking spaces, 34 trees are required and 57 are proposed. Curbs are included in the design and islands are provided at aisle ends. The

landscape islands meet the spacing and size criteria as well. With recommended Condition of Approval A11.f., these standards are met.

Chapter 73D: Waste and Recyclables Management Standards

Section 73D.010 – Applicability and Objectives.

(1) Applicability. The requirements of this Chapter apply to all new or expanded:

(a) Common wall residential developments containing five or more units;
(b) Commercial developments;
(c) Industrial developments; and
(d) Institutional developments.

(2) Objectives. Mixed solid waste and source separated recyclable storage areas should be designed to the maximum extent practicable to:

(a) Screen elements such as garbage and recycling containers from view;
(b) Ensure storage areas are centrally located and easy to use;
(c) Meet dimensional and access requirements for haulers;
(d) Designed to mitigate the visual impacts of storage areas;
(e) Provide adequate storage for mixed solid waste and source separated recyclables; and
(f) Improve the efficiency of collection of mixed solid waste and source separated recyclables.

Section 73D.020 - Design Methods.

An applicant required to provide mixed solid waste and source separated recyclables storage areas must comply with one of following methods:
(1) The minimum standards method in TDC 73D.030;
(2) The waste assessment method in TDC 73D.040;
(3) The comprehensive recycling plan method in TDC 73D.050; or
(4) The franchised hauler review method in TDC 73D.060.

Finding:
The applicant proposes to use the Minimum Standards Method (TDC 73D.030) and has verified that the location and configuration of the proposed waste facility and access will satisfy Republic Services. As discussed below, these standards are met.

Section 73D.030 – Minimum Standards Method.

This method specifies a minimum storage area requirement based on the size and general use category of the new or expanded development. This method is most appropriate when specific use of a new or expanded development is not known. It provides specific dimensional standards for the minimum size of storage areas by general use category.
(1) The size and location of the storage area(s) must be indicated on the site plan. Requirements are based on an assumed storage area height of four feet for mixed solid waste and source separated recyclables. Vertical storage higher than four feet, but no higher than 7 feet may be used to accommodate the same volume of storage in a reduced floor space (potential reduction of 43 percent of specific requirements). Where vertical or stacked storage is proposed, submitted plans must include drawings to illustrate the layout of the storage area and dimensions for containers.
(2) The storage area requirement is based on uses. If a building has more than one use and that use occupies 20 percent or less of the gross leasable area (GLA) of the building, the GLA occupied by that use must be counted toward the floor area of the predominant use(s). If a building has more than one use and that use occupies more than 20 percent of the GLA of the building, then the storage area

requirement for the whole building must be the sum of the area of each use. Minimum storage area requirements by use is as follows:

[…]

(c) Commercial, industrial, and institutional developments must provide a minimum storage area of 10 square feet plus:

[…]

(iii) Wholesale/ Warehouse/ Manufacturing - 6 square feet/1000 square feet GLA;

[…]

(3) Mixed solid waste and source separated recyclables storage areas for multiple tenants on a single site may be combined and shared.

Finding:

*While tenants have not yet been identified, warehousing uses have been identified to fulfill the requirement. A minimum of 2,727 square feet of trash enclosure area is required to meet the minimum standards method (452,800/100 *6+10). Two trash enclosures are proposed to serve the overall development as shown on the Site Plan (Exhibit A2) and include an approximately 280-square-foot enclosure located at the southeast corner and an approximately 275-square-foot enclosure at the northwest corner. With recommended Condition of Approval A14, demonstrating that the development includes an acceptable waste and recyclables management solution, these standards are met.*

Section 73D.070 – Location, Design and Access Standards.

The following location, design, and access standards are applicable to all storage areas:

(1) Location Standards.

(a) The storage area for source separated recyclables may be collocated with the storage area for mixed solid waste.

(b) Storage area space requirements can be satisfied with a single location or multiple locations, and can combine both interior and exterior locations.

(c) Exterior storage areas must:

(i) Be located in central and visible locations on the site to enhance security for users;

(ii) Be located in a parking area; and

(iii) Not be located within a required front yard setback or in a yard adjacent to a public or private street.

(2) Design Standards.

(a) The dimensions of the storage area must accommodate containers consistent with current methods of local collection at time of construction or alteration.

(b) Indoor and outdoor storage areas must comply with Oregon Building and Fire Code requirements.

(c) Exterior storage areas must be enclosed by a sight obscuring fence or wall at least 6 feet in height.

(d) Evergreen plants must be placed around the enclosure walls, excluding the gate or entrance openings for common wall, commercial, and institutional developments.

(e) Gate openings for haulers must be a minimum of 10 feet wide and must be capable of being secured in a closed and open position.

(f) Horizontal clearance must be a minimum of 10 feet and a vertical clearance of 8 feet is required if the storage area is covered.

(g) A separate pedestrian access must also be provided in common wall, commercial, and institutional developments.

(h) Exterior storage areas must have either a concrete or asphalt floor surface.

(i) Storage areas and containers must be clearly labeled to indicate the type of material accepted.

Finding:
The applicant has proposed two waste areas that are in visible areas convenient to tenant entries, parking and loading areas, and are outside of the applicable setbacks, as shown in the applicant's submittal (Exhibit A2). Further compliance with Building and Fire Code standards will be reviewed at the time of building permit. While location standards are met on the plan set; the applicant has not provided sufficient details addressing design standards. With recommended Condition of Approval A11.g., design method standards (c),(e), and (f) are met.

(3) Access Standards.

(a) Storage areas must be accessible to users at convenient times of the day, and to hauler personnel on the day and approximate time they are scheduled to provide hauler service.
(b) Storage areas must be designed to be easily accessible to hauler trucks and equipment, considering paving, grade, gate clearance and vehicle access.
(c) Storage areas must be accessible to hauler trucks without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius must be provided to allow hauler trucks to safely exit the site in a forward motion.
(d) Storage areas must located so that pedestrian and vehicular traffic movement are not obstructed on site or on public streets adjacent to the site.
(e) The following is an exception to the access standard:
(i) Access may be limited for security reasons.

Finding:
As shown in the applicant's submittal, Republic Services, the applicable waste hauler, has indicated that the dimensions and accessibility of the enclosures meet their service needs (Exhibit A6). These standards are met.

Chapter 74: Public Improvement Requirements

[…]

TDC 74.120 Public Improvements.

(1) Except as specially provided, all public improvements must be installed at the expense of the applicant. All public improvements installed by the applicant must be constructed and guaranteed as to workmanship and material as required by the Public Works Construction Code prior to acceptance by the City. Work must not be undertaken on any public improvement until after the construction plans have been approved by the City Manager and a Public Works Permit issued and the required fees paid.

Finding:
All public improvements will be installed by the applicant at their expense and will require prior approval of plans and a Public Works Permit. With recommended Conditions of Approval, this criterion is met.

TDC 74.130 Private Improvements.

All private improvements must be installed at the expense of the applicant. The property owner must retain maintenance responsibilities over all private improvements.

Finding:
All private improvements will be installed by the applicant at their expense and will require prior approval of plans and building permits. With recommended Conditions of Approval, this criterion is met.

TDC 74.140 Construction Timing.

(1) All the public improvements required under this chapter must be completed and accepted by the City prior to the issuance of a Certificate of Occupancy.
(2) All private improvements required under this Chapter must be approved by the City prior to the issuance of a Certificate of Occupancy.

Finding:
All public and private improvements proposed and modified by conditions of approval must be completed prior to receiving a Certificate of Occupancy. These criteria are met with recommended Conditions of Approval.

[…]

TDC 74.210 Minimum Street Right-of-Way Widths.

The width of streets in feet shall not be less than the width required to accommodate a street improvement needed to mitigate the impact of a proposed development. In cases where a street is required to be improved according to the standards of the TDC, the width of the right-of-way shall not be less than the minimums indicated in TDC Chapter 74, Public Improvement Requirements, Figures 74-2A through 74-2G.
(2) For development applications other than subdivisions and partitions, wherever existing or future streets adjacent to property proposed for development are of inadequate right-of-way width, the additional right-of-way necessary to comply with TDC Chapter 74, Public Improvement Requirements, Figures 74-2A through 74-2G of the Tualatin Community Plan must be dedicated to the City for use by the public prior to issuance of any building permit for the proposed development. This right-of-way dedication must be for the full width of the property abutting the roadway and, if required by the City Manager, additional dedications must be provided for slope and utility easements if deemed necessary.

Finding:
The proposal is adjacent to SW Cipole Road and SW 124th Avenue.

SW Cipole is within Washington County's jurisdiction. Washington County has provided comments on the proposal as Exhibit E and include a condition requiring 38 feet of right-of-way dedication from the centerline of SW Cipole Road. The street will be improved to meet the City of Tualatin requirements for a Major Collector.

SW 124th is under Tualatin's jurisdiction. Figure 74-2 of the Tualatin Development Code identifies an Arterial with Multi-Use Path preferred right-of-way width of 74 feet. This would require a right-of-way dedication of 55 feet from the centerline of SW 124th Avenue.

With recommended Condition of Approval A6 and A8, these criteria are met.

TDC 74.320. - Slope Easements.

(1)The applicant must obtain and convey to the City any slope easements determined by the City Manager to be necessary adjacent to the proposed development site to support the street improvements in the public right-of-way or accessway or utility improvements required to be constructed by the applicant.
[…]
(3)For all other development applications, a slope easement dedication must be submitted to the City Manager; building permits must not be issued for the development prior to acceptance of the easement by the City.

Finding:
Any required slope easements will be provided and completed prior to Building Permit issuance. With recommended Condition of Approval A6 and A10, this criteria is met.

TDC 74.330. - Utility Easements.

(1) Utility easements for water, sanitary sewer and storm drainage facilities, telephone, television cable, gas, electric lines and other public utilities must be granted to the City.
[…]
(4)For development applications other than subdivisions and partitions, and for both on-site and off-site easement areas, a utility easement must be granted to the City; building permits must not be issued for the development prior to acceptance of the easement by the City. The City may elect to exercise eminent domain and condemn necessary off-site public utility easements at the applicant's request and expense. The City Council must determine when condemnation proceedings are to be used.
(5) The width of the public utility easement must meet the requirements of the Public Works Construction Code. All subdivisions and partitions must have a 6-foot public utility easement adjacent to the street and a 5-foot public utility easement adjacent to all side and rear lot lines. Other easements may be required as determined by the City Manager.

Finding:
Any required utility easements will be granted to the City, with required widths to meet the Public Works Construction Code. With recommended Condition of Approval A9, this criteria is met.

TDC 74.350. - Maintenance Easement or Lots.

A dedicated lot or easement will be required when access to public improvements for operation and maintenance is required, as determined by the City Manager. Access for maintenance vehicles must be constructed of an all-weather driving surface capable of carrying a 50,000-pound vehicle. The width of the lot or easement must be at least 15-feet in order to accommodate City maintenance vehicles. In subdivisions and partitions, the easement or lot must be dedicated to the City on the final plat. In any other development, the easement or lot must be granted to the City and recorded prior to issuance of a building permit.

Finding:
Utility easements are included in the proposal. With recommended Conditions of Approval, this criteria is met.

TDC 74.420 Street Improvements.

When an applicant proposes to develop land adjacent to an existing or proposed street, including land which has been excluded under TDC 74.220, the applicant should be responsible for the improvements to the adjacent existing or proposed street that will bring the improvement of the street into conformance with the Transportation Plan (TDC Chapter 11), TDC 74.425 (Street Design Standards), and the City' s Public Works Construction Code, subject to the following provisions:
(1) For any development proposed within the City, roadway facilities within the right-of-way described in TDC 74.210 must be improved to standards as set out in the Public Works Construction Code.
(2) The required improvements may include the rebuilding or the reconstruction of any existing facilities located within the right-of-way adjacent to the proposed development to bring the facilities into compliance with the Public Works Construction Code.
(3) The required improvements may include the construction or rebuilding of off-site improvements which are identified to mitigate the impact of the development.
(4) Where development abuts an existing street, the improvement required must apply only to that portion of the street right-of-way located between the property line of the parcel proposed for development and the centerline of the right-of-way, plus any additional pavement beyond the centerline deemed necessary by the City Manager to ensure a smooth transition between a new improvement and the existing roadway (half-street improvement). Additional right-of-way and street improvements and off-site right-of-way and street improvements may be required by the City to mitigate the impact of the development. The new pavement must connect to the existing pavement at the ends of the section being improved by tapering in accordance with the Public Works Construction Code.
[…]
(6) All required street improvements must include curbs, sidewalks with appropriate buffering, storm drainage, street lights, street signs, street trees, and, where designated, bikeways and transit facilities.
(8) For development applications other than subdivisions and partitions, all street improvements required by this section must be completed and accepted by the City prior to the issuance of a Certificate of Occupancy.
[…]
(11) Existing streets which abut the proposed development site must be graded, constructed, reconstructed, surfaced or repaired as necessary in accordance with the Public Works Construction Code and TDC Chapter 11, Transportation Plan, and TDC 74.425 (Street Design Standards).
(12) Sidewalks with appropriate buffering must be constructed along both sides of each internal street and at a minimum along the development side of each external street in accordance with the Public Works Construction Code.
(13) The applicant must comply with the requirements of the Oregon Department of Transportation (ODOT), Tri-Met, Washington County and Clackamas County when a proposed development site is adjacent to a roadway under any of their jurisdictions, in addition to the requirements of this chapter.
(14) The applicant must construct any required street improvements adjacent to parcels excluded from development, as set forth in TDC 74.220 of this chapter.
(15) Except as provided in TDC 74.430, whenever an applicant proposes to develop land with frontage on certain arterial streets and, due to the access management provisions of TDC Chapter 75, is not allowed direct access onto the arterial, but instead must take access from another existing or future public street thereby providing an alternate to direct arterial access, the applicant must be required to construct and place at a minimum street signage, a sidewalk, street trees and street lights along that portion of the arterial street adjacent to the applicant's property. The three certain arterial streets are

S.W. Tualatin-Sherwood Road, S.W. Pacific Highway (99W) and S.W. 124th Avenue. In addition, the applicant may be required to construct and place on the arterial at the intersection of the arterial and an existing or future public non-arterial street warranted traffic control devices (in accordance with the Manual on Uniform Traffic Control Devices, latest edition), pavement markings, street tapers and turning lanes, in accordance with the Public Works Construction Code.
(16) The City Manager may determine that, although concurrent construction and placement of the improvements in (14) and (15) of this section, either individually or collectively, are impractical at the time of development, the improvements will be necessary at some future date. In such a case, the applicant must sign a written agreement guaranteeing future performance by the applicant and any successors in interest of the property being developed. The agreement must be subject to the City's approval.
(17) Intersections should be improved to operate at a level of service of at least D and E for signalized and unsignalized intersections, respectively.
[...]

Finding:
A Traffic Study conducted by Lancaster Mobley was submitted as Exhibit A4. Washington County has also reviewed the proposed development, and have recommended applicable conditions of approval within Exhibit E. Additionally the City Engineer has reviewed the proposal against the above requirements, and with recommended Condition of Approval A6 and A8, these criteria are met.

TDC 74.425 Street Design Standards.

(1) Street design standards are based on the functional and operational characteristics of streets such as travel volume, capacity, operating speed, and safety. They are necessary to ensure that the system of streets, as it develops, will be capable of safely and efficiently serving the traveling public while also accommodating the orderly development of adjacent lands.
(2) The proposed street design standards are shown in Figures 72A through 72G. The typical roadway cross sections comprise the following elements: right-of-way, number of travel lanes, bicycle and pedestrian facilities, and other amenities such as landscape strips. These figures are intended for planning purposes for new road construction, as well as for those locations where it is physically and economically feasible to improve existing streets.
[…]
(4) All streets must be designed and constructed according to the preferred standard. The City Manager may reduce the requirements of the preferred standard based on specific site conditions, but in no event will the requirement be less than the minimum standard. The City Manager must take into consideration the following factors when deciding whether the site conditions warrant a reduction of the preferred standard:
(a)Arterials:
(i)Whether adequate right-of-way exists;
(ii)Impacts to properties adjacent to right-of-way;
(iii)Current and future vehicle traffic at the location; and
(iv)Amount of heavy vehicles (buses and trucks).
(b)Collectors:
(i)Whether adequate right-of-way exists;
(ii)Impacts to properties adjacent to right-of-way;
(iii)Amount of heavy vehicles (buses and trucks); and
(iv)Proximity to property zoned manufacturing or industrial.
[...]

Finding:
The proposal is adjacent to SW Cipole Road and SW 124th Avenue. SW Cipole Road is designated a Major Collector and SW 124th Avenue is designated a Major Arterial on Tualatin Comprehensive Plan Map 8-1 (Exhibit F). A Traffic Study conducted by Lancaster Mobley was submitted as Exhibit A4. With recommended Condition of Approval A6 and A8, these criteria are met.

TDC 74.430. - Streets, Modifications of Requirements in Cases of Unusual Conditions.

Finding:
The City Engineer has found that no modifications are required. This section does not apply.

TDC 74.440 Streets, Traffic Study Required.

(1) The City Manager may require a traffic study to be provided by the applicant and furnished to the City as part of the development approval process as provided by this Code, when the City Manager determines that such a study is necessary in connection with a proposed development project in order to:

(a) Assure that the existing or proposed transportation facilities in the vicinity of the proposed development are capable of accommodating the amount of traffic that is expected to be generated by the proposed development, and/or

(b) Assure that the internal traffic circulation of the proposed development will not result in conflicts between on-site parking movements and/or on-site loading movements and/or on-site traffic movements, or impact traffic on the adjacent streets.

(2) The required traffic study must be completed prior to the approval of the development application.

(3) The traffic study must include, at a minimum:

(a) an analysis of the existing situation, including the level of service on adjacent and impacted facilities.

(b) an analysis of any existing safety deficiencies.

(c) proposed trip generation and distribution for the proposed development.

(d) projected levels of service on adjacent and impacted facilities.

(e) recommendation of necessary improvements to ensure an acceptable level of service for roadways and a level of service of at least D and E for signalized and unsignalized intersections respectively, after the future traffic impacts are considered.

(f) The City Manager will determine which facilities are impacted and need to be included in the study.

(g) The study must be conducted by a registered engineer.

(4) The applicant must implement all or a portion of the improvements called for in the traffic study as determined by the City Manager.

Finding:
A Traffic Study conducted by Lancaster Mobley was submitted as Exhibit A4. City staff has reviewed the subject analysis and has determined that it meets the above requirements. These criteria are met.

TDC 74.450. - Bikeways and Pedestrian Paths.

(1) Where proposed development abuts or contains an existing or proposed bikeway, pedestrian path, or multi-use path, as set forth in TDC Chapter 11, Transportation Figure 11-4, the City may require that

a bikeway, pedestrian path, or multi-use path be constructed, and an easement or dedication provided to the City.
(2) Where required, bikeways and pedestrian paths must be provided as follows:
(a) Bike and pedestrian paths must be constructed and surfaced in accordance with the Public Works Construction Code.
(b) The applicant must install the striping and signing of the bike lanes and shared roadway facilities, where designated.

Finding:
The proposal is adjacent to SW Cipole Road and SW 124th Avenue. Both roadways require a sidewalk and bike lane on Tualatin Comprehensive Plan Map 8-4. The City Engineer has reviewed the proposal against the above requirements and has required a 12-foot wide multi-use path along the applicant's 124th Avenue frontage. The City Engineer has also required the 12-foot multi-use path to be constructed along the 124th Avenue frontage south of this project to the intersection with Tualatin-Sherwood Road. If the off-site multi-use path cannot be constructed by the applicant, they will need to submit information to the City Engineer for consideration.

[…]

TDC 74.470 Street Lights.

(1) Street light poles and luminaries must be installed in accordance with the Public Works Construction Code.

(2) The applicant must submit a street lighting plan for all interior and exterior streets on the proposed development site prior to issuance of a Public Works Permit.

Finding:
The proposal is adjacent to SW Cipole Road and SW 124th Avenue. Both roadways require street lights. With recommended Condition of Approval A6, this criteria is met.

[…]

TDC 74.610 Water Service.

(1) Water lines must be installed to serve each property in accordance with the Public Works Construction Code. Water line construction plans must be submitted to the City Manager for review and approval prior to construction.
(2) If there are undeveloped properties adjacent to the subject site, public water lines must be extended by the applicant to the common boundary line of these properties. The lines must be sized to provide service to future development, in accordance with the City's Water System Master Plan, TDC Chapter 12.
(3) As set forth is TDC Chapter 12, Water Service, the City has three water service levels. All development applicants must be required to connect the proposed development site to the service level in which the development site is located. If the development site is located on a boundary line between two service levels the applicant must be required to connect to the service level with the higher reservoir elevation. The applicant may also be required to install or provide pressure reducing valves to supply appropriate water pressure to the properties in the proposed development site.

Finding:
Utility Plans, submitted as Exhibit A2, illustrate a 4-inch water meter and backflow device for a domestic service connecting to the public water main within SW Cipole Road. Two fire DCVA vaults are shown

adjacent to a 12-inch main near an existing public water easement adjacent to the south property line and through the southwest corner of the lot. The vaults connect ends of a private looped fire service line to the public system.

A gate valve must be located near the main for each water lateral. Public utility easements must surround fire vaults by five feet. Public water easements must extend from the existing public water easement 10-feet wide centered on the lateral and surrounding the vaults by 5 feet.

Additionally, an analysis of water system capacity was conducted by Murraysmith and included as Exhibit I. The conclusions did not require public system upgrades.

With recommended Condition of Approval A2, this criteria is met.

TDC 74.620 Sanitary Sewer Service.

(1) Sanitary sewer lines must be installed to serve each property in accordance with the Public Works Construction Code. Sanitary sewer construction plans and calculations must be submitted to the City Manager for review and approval prior to construction.
(2) If there are undeveloped properties adjacent to the proposed development site which can be served by the gravity sewer system on the proposed development site, the applicant must extend public sanitary sewer lines to the common boundary line with these properties. The lines must be sized to convey flows to include all future development from all up stream areas that can be expected to drain through the lines on the site, in accordance with the City's Sanitary Sewer System Master Plan, TDC Chapter 13.

Finding:
Utility Plans, submitted as Exhibit A2, illustrate three 6-inch gravity sanitary sewer laterals connecting to existing public sanitary sewer lines within public easements. The laterals connect to a proposed manhole at the main to the northwest, an existing manhole to the west, and an existing lateral to the east. The proposed manhole to the northwest is near an existing private stormwater facility on Tax Lot: 2S128A000103. Construction activities must not affect the private stormwater facility.

Surrounding parcels are developed and there is no need for a sanitary sewer main to be extended through the property. Final sanitary sewer permit plans must be submitted that show cleanouts at the edge of public easements.

With recommended Condition of Approval A3, this criteria is met.

TDC 74.630 Storm Drainage System.

(1)Storm drainage lines must be installed to serve each property in accordance with City standards and Clean Water Services standards. Storm drainage construction plans and calculations must be submitted to the City Manager for review and approval prior to construction.
(2)The storm drainage calculations must confirm that adequate capacity exists to serve the site. The discharge from the development must be analyzed in accordance with the City's Storm and Surface Water Regulations and Clean Water Services standards.
(3)If there are undeveloped properties adjacent to the proposed development site which can be served by the storm drainage system on the proposed development site, the applicant must extend storm drainage lines to the common boundary line with these properties. The lines must be sized to

convey expected flows to include all future development from all up stream areas that will drain through the lines on the site, in accordance with the adopted Stormwater Master Plan.

Finding:
A Stormwater Report has been submitted as Exhibit A5 and proposes an underground detention chamber facility. The proposed facility must be sized to meet the current City of Tualatin and Clean Water Service requirements for stormwater quality and quantity. Final plans and stormwater calculation must demonstrate that the development has direct access by gravity to public storm and sanitary sewer from within 5 feet of the building the public main in accordance with Clean Water Service standards.

Utility Plans, submitted as Exhibit A2, illustrate stormwater laterals at right-of-way. Final plans must show the stormwater lateral from the flow control manhole perpendicular to the public stormwater system within right-of-way and include a cleanout at right-of-way.

There are no undeveloped parcels adjacent to the site that would be served by extension of the public stormwater system. With recommended Condition of Approval A4, this criteria is met.

TDC 74.640 Grading.

(1) Development sites must be graded to minimize the impact of storm water runoff onto adjacent properties and to allow adjacent properties to drain as they did before the new development.
(2) A development applicant must submit a grading plan showing that all lots in all portions of the development will be served by gravity drainage from the building crawl spaces; and that this development will not affect the drainage on adjacent properties. The City Manager may require the applicant to remove all excess material from the development site.

Finding:

The plans indicate disturbance of approximately 24.16 acres. Erosion and sediment control plans and permit applications conforming to the requirements of the City of Tualatin, CWS, and Oregon Department of Environmental Quality must be provided with the construction permit submittal documents. The applicant must obtain an erosion control permit from the City of Tualatin for disturbance greater than 500 square feet and a National Pollution Discharge Elimination System (NPDES) 1200-C Construction Erosion Control permit from Oregon DEQ for over 5 acres.

The development site must be graded to minimize the impact of stormwater runoff onto adjacent properties and to allow adjacent properties to drain as they did before the new development. A development applicant must submit a grading plan showing that all lots in all portions of the development will be served by gravity drainage from the building crawl spaces; and that this development will not affect the drainage on adjacent properties. There will be no crawl spaces under the proposed building. The proposed grading plan is shown to minimize the impact of stormwater runoff to adjacent properties and allows adjacent properties to drain as they did before the development. With recommended Condition of Approval A4 and A5, this criteria is met.

TDC 74.650 Water Quality, Storm Water Detention and Erosion Control.

(1) All Applications. The applicant must comply with the water quality, stormwater detention, and erosion control requirements in Tualatin Municipal Code Chapter 3-5 (Soil Erosion, Surface Water Management, Water Quality Facilities, and Building and Sewers) and Clean Water Services standards.

[…]

(3)All Development, Except Subdivisions and Partitions. Prior to issuance of any building permit, an applicant for any development, except Subdivisions and Partitions, must:

(a)Submit a stormwater facilities design with calculations to satisfy the requirements of the Tualatin Municipal Code Chapter 3-5 (Soil Erosion, Surface Water Management, Water Quality Facilities, and Building And Sewers);

(b)Obtain a Stormwater Connection Permit from Clean Water Services; and

(c)Either construct a permanent on-site water quality facility and stormwater detention facility; or enter into an agreement with the City, as provided in TMC 3-5-390, recorded against the property, to guarantee construction of a permanent on-site water quality facility and stormwater detention facility.

(4) On-Site Private and Regional Non-Residential Facilities. For on-site private and regional non-residential public facilities, the applicant must:

(a) Enter into a stormwater facility agreement, as provided in TMC 3-5-390, recorded against the property. The stormwater facility agreement will include an operation and maintenance plan, provided by the City and consistent with Clean Water Services requirements, for the water quality facility.

(b) Submit an erosion control plan prior to issuance of a Public Works Permit consistent with TMC 3-5 and Clean Water Services standards. No construction or disturbing of the site must occur until the erosion control plan is approved by the City and the required measures are in place and approved by the City.

Finding:

As shown on the Utility Plans, submitted as Exhibit A2, an underground detention facility is proposed.

A Clean Water Services Service Memorandum was received and included as Exhibit D. After land use decision issuance, the applicant must submit final plans complying with the Service Provider Letter conditions and CWS Memorandum that are sufficient to obtain a Stormwater Connection Permit Authorization Letter from Clean Water Services in accordance with TDC 74.650(2) and CWS D&CS 3.01.2(d). With recommended Condition of Approval A4, this criteria is met.

TDC 74.660 Underground.

(1) All utility lines including, but not limited to, those required for gas, electric, communication, lighting and cable television services and related facilities must be placed underground. Surface-mounted transformers, surface-mounted connection boxes and meter cabinets may be placed above ground. Temporary utility service facilities, high capacity electric and communication feeder lines, and utility transmission lines operating at 50,000 volts or above may be placed above ground. The applicant must make all necessary arrangements with all utility companies to provide the underground services. The City reserves the right to approve the location of all surface-mounted transformers.

(2)Any existing overhead utilities may not be upgraded to serve any proposed development. If existing overhead utilities are not adequate to serve the proposed development, the applicant must, at their own expense, provide an underground system. The applicant must be responsible for obtaining any off-site deeds and/or easements necessary to provide utility service to this site; the deeds and/or easements must be submitted to the City Manager for acceptance by the City prior to issuance of the Public Works Permit.

Findings:
New utility lines associated with the project are correctly indicated to be placed underground. There are existing overhead utility lines along the frontage of SW Cipole Road. These criteria are met.

TDC 74.765. - Street Tree Species and Planting Locations.

All trees, plants or shrubs planted in the right-of-way of the City must conform in species and location and in accordance with the street tree plan and City standards, including Table 74-1. If the City Manager determines that none of the species in City standards, including Table 74-1 is appropriate or finds appropriate a species not listed, the City Manager may substitute an unlisted species.

Table 74-1 Street Tree Species					
Species Common Names	Planting Strip Width (feet)			Power line compatible	Spacing on center (feet)
	4	5	6+		
Amur Maackia	•	•	•	•	30
Amur Maple	•	•	•	•	30
Armstrong Maple	•	•	•		30
Autumn Applause Ash		•	•		30
Black Tupelo	•	•	•		30
Capital Flowering Pear	•	•	•		30
Cascara	•	•	•	•	30
Crimson King Maple		•	•		30
Crimson Sentry Maple	•	•	•	•	30
Eastern Redbud	•	•	•		30
European Hornbeam	•	•	•	•	30
Frontier Elm			•		60
Ginko		•	•		30
Globe Sugar Maple			•		60
Golden Desert Ash	•	•	•	•	30
Goldenrain	•	•	•		30
Greenspire Linden		•	•		30
Ivory Japanese Lilac	•	•	•	•	30
Leprechaun Ash	•	•	•		30
Persain Parrotia	•	•	•		30
Purple Beech	•	•	•		30
Raywood Ash		•	•	•	30
Katsura	•	•	•		30
Red Oak			•		60
Red Sunset Maple			•		60
Scanlon/Bowhall Maple	•	•	•		30
Scarlet Oak			•		60
Shademaster Honey Locust		•	•		30
Skyrocket English Oak	•	•	•		30
Japanese snowbell	•	•	•	•	30
Sourwood	•	•	•	•	30
Tall Stewartia	•	•	•	•	30
Chinese Fringetree	•	•	•	•	30

Tri-Color Beech			•		60
Trident Maple	•	•	•	•	30
Urbanite Ash		•	•		30
Yellowwood	•	•	•		30
Zelkova Musashino	•	•	•		30

Finding:
The Landscape Plan submitted as Exhibit A2, illustrates street trees along SW Cipole Road. With recommended Condition of Approval A6, this criteria is met.

Chapter 75 Access Management

[…]

TDC 75.020. - Permit for New Driveway Approach

(1) Applicability. A driveway approach permit must be obtained prior to constructing, relocating, reconstructing, enlarging, or altering any driveway approach.

(3) Procedure Type. A Driveway Approach Permit is processed as a Type II procedure under TDC 32.220 (Type II).

(4) Submittal Requirements. In addition to the application materials required by TDC 32.140, the following application materials are also required:

(a)A site plan, of a size and form and in the number of copies meeting the standards established by the City Manager, containing the following information:

(i)The location and dimensions of the proposed driveway approach;
(ii)The relationship to nearest street intersection and adjacent driveway approaches;
(iii)Topographic conditions;
(iv)The location of all utilities;
(v)The location of any existing or proposed buildings, structures, or vehicular use areas;
(vi)The location of any trees and vegetation adjacent to the location of the proposed driveway approach that are required to be protected pursuant to TDC Chapter 73B or 73C; and
(vii)The location of any street trees adjacent to the location of the proposed driveway approach.

(b) Identification of the uses or activities served, or proposed to be served, by the driveway approach; and

(c) Any other information, as determined by the City Manager, which may be required to adequately review and analyze the proposed driveway approach for conformance with the applicable criteria.

(5) Criteria. A Driveway Approach Permit must be granted if:

(a) The proposed driveway approach meets the standards of this Chapter and the Public Works Construction Code;

(b) No site conditions prevent placing the driveway approach in the required location;

(c) The number of driveway approaches onto an arterial are minimized;

(d) The proposed driveway approach, where possible:

(i)Is shared with an adjacent property; or
(ii)Takes access from the lowest classification of street abutting the property;

(e) The proposed driveway approach meets vision clearance standards;

(f) The proposed driveway approach does not create traffic hazards and provides for safe turning movements and access;

(g) The proposed driveway approach does not result in significant adverse impacts to the vicinity;
(g) The proposed driveway approach minimizes impact to the functionality of adjacent streets and intersections; and
(i)The proposed driveway approach balances the adverse impacts to residentially zoned property and the functionality of adjacent streets.
[…]

Finding:
There are two driveway approaches proposed for this project, as shown on the Site Plan included as Exhibit A2. The applicant is proposing a new driveway on the northeast portion of the site with access from SW 124th Avenue. Access for this driveway is limited to right-in, right-out movements to minimize impacts to the Major Arterial. The applicant will construct a raised median at the proposed driveway location to limit the turning movements. The applicant has proposed a 50-foot wide driveway, which does not meet the City's design standards. The applicant shall submit turning templates to show the wider driveway provides safe turning movements.

The applicant has also proposed widening of the existing driveway located on the southwest portion of the site with access taken off of SW Cipole Road. The County has requested turning templates for the proposed driveway width for the proposed truck use.

As described in the Traffic Report included in Exhibit A4, the proposed driveways will not create traffic hazards and will not result in significant adverse impacts to the vicinity. No residentially zoned properties are located adjacent to the development. With recommended Condition of Approval A11.d., these standards are met.

TDC 75.040. - Driveway Approach Requirements

(1)The provision and maintenance of driveway approaches from private property to the public streets as stipulated in this Code are continuing requirements for the use of any structure or parcel of real property in the City of Tualatin. No building or other permit may be issued until scale plans are presented that show how the driveway approach requirement is to be fulfilled. If the owner or occupant of a lot or building changes the use to which the lot or building is put, thereby increasing driveway approach requirements, it is unlawful and a violation of this code to begin or maintain such altered use until the required increase in driveway approach is authorized by the City.
(2) Owners of two or more uses, structures, or parcels of land may agree to utilize jointly the same driveway approach when the combined driveway approach of both uses, structures, or parcels of land satisfies their combined requirements as designated in this code; provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts to establish joint use. Copies of said deeds, easements, leases or contracts must be placed on permanent file with the City Recorder.
(3) Joint and Cross Access.
(a)Adjacent commercial uses may be required to provide cross access drive and pedestrian access to allow circulation between sites.
(b)A system of joint use driveways and cross access easements may be required and may incorporate the following:
(i)A continuous service drive or cross access corridor extending the entire length of each block served to provide for driveway separation consistent with the access management classification system and standards;

(ii)A design speed of ten mph and a maximum width of 24 feet to accommodate two-way travel aisles designated to accommodate automobiles, service vehicles, and loading vehicles;
(iii)Stub-outs and other design features to make it visually obvious that the abutting properties may be tied in to provide cross access via a service drive; and
(iv)An unified access and circulation system plan for coordinated or shared parking areas.

(c)Pursuant to this section, property owners may be required to:
(i)Record an easement with the deed allowing cross access to and from other properties served by the joint use driveways and cross access or service drive;
(ii)Record an agreement with the deed that remaining access rights along the roadway will be dedicated to the city and pre-existing driveways will be closed and eliminated after construction of the joint-use driveway;
(iii)Record a joint maintenance agreement with the deed defining maintenance responsibilities of property owners; and(iv)If subsection(i) through (iii) above involve access to the state highway system or county road system, ODOT or the county must be contacted and must approve changes to subsection(i) through (iii) above prior to any changes.

[…]

(5) Lots that front on more than one street may be required to locate motor vehicle accesses on the street with the lower functional classification as determined by the City Manager.
(6) Except as provided in TDC 53.100, all driveway approach must connect directly with public streets.
(7) To afford safe pedestrian access and egress for properties within the City, a sidewalk must be constructed along all street frontage, prior to use or occupancy of the building or structure proposed for said property. The sidewalks required by this section must be constructed to City standards, except in the case of streets with inadequate right-of-way width or where the final street design and grade have not been established, in which case the sidewalks must be constructed to a design and in a manner approved by the City Manager. Sidewalks approved by the City Manager may include temporary sidewalks and sidewalks constructed on private property; provided, however, that such sidewalks must provide continuity with sidewalks of adjoining commercial developments existing or proposed. When a sidewalk is to adjoin a future street improvement, the sidewalk construction must include construction of the curb and gutter section to grades and alignment established by the City Manager.
(8) The standards set forth in this Code are minimum standards for driveway approaches, and may be increased through the Architectural Review process in any particular instance where the standards provided herein are deemed insufficient to protect the public health, safety, and general welfare.
(9) Minimum driveway approach width for uses are as provided in Table 75-1 (Driveway Approach Width):

TABLE 75-1
Driveway Approach Width

Use	Minimum Driveway Approach Width	Maximum Driveway Approach Width
Industrial	36 feet	Over 250 Parking Spaces = As Required by the City Manager, but not exceeding 40 feet

(10)Driveway Approach Separation. There must be a minimum distance of 40 feet between any two adjacent driveways on a single property unless a lesser distance is approved by the City Manager.
(11) Distance between Driveways and Intersections. Except for single-family dwellings, the minimum distance between driveways and intersections must be as provided below. Distances listed must be measured from the stop bar at the intersection.

(a) At the intersection of collector or arterial streets, driveways must be located a minimum of 150 feet from the intersection.

[…]

(12) Vision Clearance Area.

[…]

(b) Collector Streets. A vision clearance area for all collector/arterial street intersections, collector/arterial street and local street intersections, and collector/arterial street and railroad intersections must be that triangular area formed by the right-of-way lines along such lots and a straight line joining the right-of-way lines at points which are 25 feet from the intersection point of the right-of-way lines, as measured along such lines. Where a driveway intersects with a collector/arterial street, the distance measured along the driveway line for the triangular area must be ten feet (see Figure 73-2 for illustration).

(c) Vertical Height Restriction. Except for items associated with utilities or publicly owned structures such as poles and signs and existing street trees, no vehicular parking, hedge, planting, fence, wall structure, or temporary or permanent physical obstruction must be permitted between 30 inches and eight feet above the established height of the curb in the clear vision area (see Figure 73-2 for illustration).

Finding:

As shown on the Site Plan (Exhibit A2), the applicant has proposed two driveway approaches. One is located on the northeast portion of the site off of SW 124th and the second includes widening of the existing driveway at SW Cipole Road.

Staff recommends Condition of Approval A10 to grant the adjacent southern property a cross access easement in support of TDC 75.140(6)(c)(iv)(B). Staff recommends Condition of Approval A6 for the construction of sidewalks along both street frontages. The proposal includes a combination of vehicle and trailer parking for a total of 330 spaces. The access along SW 124th Avenue is proposed at a width of 50 feet for the first 50 feet. And the access along SW Cipole Road is proposed at a width of 50 feet that gradually narrows down to 36 feet within the first 50 feet. Staff recommends Condition of Approval A11.d. for City Manager acceptance of the proposed driveway width. With recommended Condition of Approval A33, the vision clearance requirements are met.

TDC 75.050. - Access Limited Roadways

(1) This section applies to all developments, permit approvals, land use approvals, partitions, subdivisions, or any other actions taken by the City pertaining to property abutting any road or street listed in TDC 75.050(2). In addition, any property not abutted by a road or street listed in subsection (2), but having access to an arterial by any easement or prescriptive right, must be treated as if the property did abut the arterial and this Chapter applies.
(2) The following Freeways and Arterials are access limited roadways:
[…]
(6)124TH AVENUE.
[…]

(c)Herman Road to Tualatin-Sherwood Road.

[…]

(iv) On the west side of 124th Avenue between Herman Road and Tualatin-Sherwood Road the area will be served by the following streets or driveways:

(A) A driveway across from Myslony Street.

(B) A street or driveway intersection approximately 800 feet north of the intersection of Tualatin-Sherwood Road and 124th Avenue. The exact location and configuration of the streets or driveways shall be determined by the City Manager.

Finding:

The proposed development has frontage on SW 124th and the southern portion of the property is approximately 800 feet north of the intersection of Tualatin-Sherwood Road and 124th Avenue. The applicant has requested site access at the northeast corner; however, staff recommends Condition of Approval A6 and A10 to provide and construct an access easement across the subject property for the benefit of the adjacent southern property in the location of this identified driveway location.

TDC 75.070. - Existing Driveways and Street Intersections.

(1) Existing driveways with access onto arterials on the date this chapter was originally adopted are allowed to remain. If additional development occurs on properties with existing driveways with access onto arterials then this Chapter applies and the entire site must be made to conform with the requirements of this chapter.

(2)The City Manager may restrict existing driveways and street intersections to right-in and right-out by construction of raised median barriers or other means.

Finding:

The site takes existing access off of SW Cipole Road, which is designated a Major Collector. The proposal will continue to utilize this access.

[…]

TDC 75.120. - Collector Streets Access Standards.

(1)Major Collectors. Direct access from newly constructed single family homes, duplexes or triplexes are not permitted. As major collectors in residential areas are fully improved, or adjacent land redevelops, direct access should be relocated to the nearest local street where feasible.
(2)Minor Collectors. Residential, commercial and industrial driveways where the frontage is greater or equal to 70 feet are permitted. Minimum spacing at 100 feet. Uses with less than 50 feet of frontage shall use a common (joint) access where available.
(3)If access is not able to be relocated to the nearest local street, the City Manager may allow interim access in accordance with 75.060 of this chapter to provide for the eventual implementation of the overall access plan.

Finding:

The site takes existing access off of SW Cipole Road, which is designated a Major Collector. The length of frontage is approximately 261 feet. Access is also provided off SW 124th Avenue, which is designated a Major Arterial. The length of frontage is approximately 1,322 feet. These standards are met.

TDC 75.140. - Existing Streets Access Standards.

The following list describes in detail the freeways and arterials as defined in TDC 75.050 with respect to access. Recommendations are made for future changes in accesses and location of future accesses. These recommendations are examples of possible solutions and shall not be construed as limiting the City' s authority to change or impose different conditions if additional studies result in different recommendations from those listed below.

(6)124TH AVENUE.

(c)Herman Road to Tualatin-Sherwood Road. On the east side of 124th Avenue between Herman Road and Tualatin-Sherwood Road the area will be served by the following streets or driveways: […]

(iv)On the west side of 124th Avenue between Herman Road and Tualatin-Sherwood Road the area will be served by the following streets or driveways.

(B)A street or driveway intersection approximately 800 feet north of the intersection of Tualatin-Sherwood Road and 124th Avenue. The exact location and configuration of the streets or driveways shall be determined by the City Manager.

Finding:

The proposed development has frontage on SW 124th and the southern portion of the property is approximately 800 feet north of the intersection of Tualatin-Sherwood Road and 124th Avenue. The applicant has requested site access at the northeast corner; however, staff recommends Condition of Approval A6 and A10 to provide and construct an access easement across the subject property for the benefit of the adjacent southern property in the location of this identified driveway location.

III. RECOMMENDATION

Based on the application materials and analysis and findings presented above, staff finds that the applicable criteria have been met relative to AR 21-0011, and therefore recommends approval of this application with the following conditions of approval:

GENERAL:

A1. This Architectural Review approval shall expire after two years unless a building, or grading permit submitted in conjunction with a building permit application, has been issued and substantial construction pursuant thereto has taken place and an inspection performed by a member of the Building Division, or an extension is granted under the terms of Section 33.020(10).

PRIOR TO EROSION CONTROL, PUBLIC WORKS, AND WATER QUALITY PERMIT ISSUANCE:

Submit to eTrakit for review and approval:

A2. In accordance with code section TMC 3-3, TDC 74.330 and 74.610, and the Public Works Construction Code the applicant must submit final water plans that show:
- a. A gate valve at the main for each lateral.
- b. Adjacent to rights-of-way within a public utility easement or adjacent to the existing public water easement near the south property line:
  - i. Reduced pressure backflow prevention and water meter for the domestic lateral.
  - ii. Irrigation after a domestic meter and reduced pressure backflow device, routed to the planter strips for SW 124th Avenue and SW Cipole Road.
  - iii. The fire vault surrounded by five feet of public utility easement.
  - iv. As needed to maintain a public easement from the main to the vault, a 10-foot wide easement centered on the lateral.
  - v. If a vault is located in a drive aisle, then the cover/hatch must be rated for truck traffic as approved by the City Engineer.

A3. In accordance with code section TMC 3-2, TDC 74.330, 74.620, and the Public Works Construction Code the applicant must:
- a. Submit sanitary sewer system plans that show:
  - i. Location of the sanitary sewer lines, grade, materials, and other details.
  - ii. Laterals serving the lot.
  - iii. A cleanout at the right-of-way and public easements the laterals.
  - iv. Construction of laterals to the existing and proposed manholes on TLID 2S128A000103 to the northwest of this development that does not affect the private stormwater systems.
- b. Comply with the contractor insurance and bond requirements of the City of Tualatin.

A4. In accordance with TMC 3-5-200 through 3-5-430, TDC 74.630 and 74.650, Public Works Construction Code (PWCC), and Clean Water Services' (CWS) Design and Construction Standards (D&CS) Chapter 4 the applicant must submit:
- a. Final stormwater plans and calculations certified by an Oregon registered, professional engineer in accordance with TMC 3-5-390(1) proving proposed systems:
  - i. In accordance with CWS D&CS 1.03.39 and 5.09.3(a) (1) and (4) with gravity flow from five feet from the outside the established line of the building to the public stormwater system or as otherwise approved by the City Engineer.

ii. All private catch basins located outside of public sanitary sewer, stormwater, and water easements.
iii. Address runoff from all new and modified private and public impervious areas.
iv. Treat new and modified impervious areas in accordance with CWS D&CS 4.08.1.d meeting phosphorous removal in accordance with TMC 3-5-350 per the design storm in accordance with TMC 3-5-360 and CWS D&CS 4.08.2.
    1. Public water quality facilities may be LIDA street swales within appropriately sized planter strips.
    2. Additional dedication of right-of-way may be required to accommodate public stormwater facilities.
v. Detain up to the 25 year storm event in accordance with TMC 3-5-220(4), TMC 3-5-230, and CWS D&CS 4.08.
vi. Show onsite facilities to accommodate hydromodification including release rates for ½ the 2-year or 5-year storm events for proposed new and modified impervious areas in accordance with CWS D&CS 4.03.5.
vii. Submit conveyance calculations that accommodates up to a 25-year storm event with 100-year overland flow to the public stormwater system in accordance with TDC 74.640 and CWS D&CS 5.05.2.d.
viii. Demonstrate compliance with the submitted Clean Water Services' Service Provider Letter CWS File Number 21-002052 conditions to obtain a Stormwater Connection Permit Authorization Letter in accordance with TDC 74.650(2) and CWS D&CS 3.01.2(d) including mitigation of Vegetated Corridor impacts must be met through purchase of Wetland Mitigation Bank Credit.
ix. Comply with all requirements stated within the Service Provider Letter and CWS Memo dated February 24, 2022 and included as Exhibit D.

b. Submit financial assurance for construction performance in accordance with TMC 3-390(c), PWCC 102.14.00, and amount per CWS D&CS 2.07 Table 2-1.
c. Submit a copy of the recorded private stormwater maintenance agreement. The agreement must assure the owner as responsible for maintenance of the constructed portions of private stormwater systems within their lot. The identified system must include all conveyance, detention, hydromodification, and treatment.

A5. In accordance with TMC 3-5-050 and 3-5-060, TDC 74.640, Public Works Construction Code, and Clean Water Services' Design and Construction Standards Chapters 2 and 6 the applicant must submit:
a. Grading within public easements as approved by the City Engineer.
b. Final erosion control plans that minimize the impact of stormwater from the development to adjacent properties.
c. A copy of the National Pollution Discharge Elimination System (NPDES) 1200-C Construction Erosion Control permit from Oregon DEQ.

A6. In accordance with code sections TDC 74.120, 74.130, 74.210, 74.320, 74.330, 74.420, 74.425, 74.450, 74.470, 74.485, 74.765, 75.020, 75.040, and 75.140(6)(c)(iv)(B).
a. For 124th Avenue, the applicant shall construct a full site access at SW Cimino Street or a limited site access (right-in-right-out) at the northeast corner of the site with the following mitigations:
    1. Dedication of right-of-way adequate to construct a minimum 12-foot wide sidewalk behind the existing curb and planter strip. At the discretion

of the City Engineer, the sidewalk may be placed within a public access easement.

2. Construction of a 12-foot wide sidewalk behind the existing curb and planter strip. The existing sidewalk may be utilized as part of the construction if it meets ADA requirements.
3. Asphalt overlay 2-inch minimum, and grind along the curb or gutter to match grade, or as directed by the City Engineer, of existing pavement from to the centerline/median to curb adjacent to the lot's frontage.
4. A striping plan to consist of two 12-foot wide travel lanes and one 6-foot wide bike lane.
5. Replacement of existing street light fixtures to the LED, Option A standard.
6. Construction of a continuation of the 12-foot wide multi-use path improvement to SW Tualatin-Sherwood Road across the adjacent property to the south (Tax Lot: 2S128A000100) within the existing right-of-way. If inadequate right-of-way exists, the City Engineer may approve modifications within the existing right-of-way including, but not limited to, eliminating this requirement.
7. Construction of an access at the southeast corner of the site, between SW Cimino Street and TLID 2S128A000300, consisting of a paved minimum 40-foot wide driveway, located within a permanent access easement dedicated to lot TLID 2S128A000300, adequate construction easements, and permanent slope easement.
8. Construction of a northerly extension of the existing median within 124th Avenue, as determined by the City Engineer, to limit turning movements from the site access.

b. For 124th Avenue, verification of adequate queue lengths for southbound SW 124th Avenue left-turn movement to SW Tualatin-Sherwood Road must be constructed by this developer, exist, or proof of Washington County agreement to construct with their widening of SW Tualatin-Sherwood Road

c. For SW Cipole Road the applicant must submit final plans that show construction to include:

1. An 8-foot wide public utility easement adjacent to right-of-way
2. A total of 38 feet of right-of-way from the centerline plus any additional to accommodate final accepted future public stormwater LIDA management
3. A 6-foot wide sidewalk
4. A 6-foot wide planter or wider on the west side to accommodate a LIDA swale (6 feet plus 1 foot shy adjacent to the sidewalk)
5. Street lights
6. Approvable street trees and planting locations with irrigation
7. A 2-foot wide curb and gutter
8. A 6-foot wide bike lane
9. A 12-foot wide travel lane
10. Half of a 12-foot wide turn lane

d. For SW Cipole Road the applicant must provide Washington County with recorded documents for a non-access restriction for the frontage, additional right-of-way to provide 38 feet from centerline, and an 8-foot PUE along the site's frontage.

PRIOR TO BUILDING OR ENGINEERING PERMIT ISSUANCE:

Submit to eTrakit for review and approval:

A7. The applicant must obtain a Facility Permit from Washington County and Erosion Control, Public Works, and Water Quality Permits from the City of Tualatin. Per TDC 74.120, work must not be undertaken on any public improvement until after the construction plans have been approved by the City Engineer and permits issued and the required fees paid.

A8. In accordance with code sections TDC 74.120, 74.210, 74.420, 74.425, 74.470, 74.485, and 74.765 the applicant must submit a copy of recorded dedication of sufficient right-of-way for SW Cipole Road including 38 feet of right-of-way and SW 124th Avenue including a total of 55 feet of right-of-way from the centerline plus any additional to accommodate final accepted public stormwater LIDA management.

A9. In accordance with TDC 74.330, the applicant must submit a copy of recorded easements:
   a. 8-foot wide public utility easement adjacent to SW Cipole Road.
   b. Five feet public water easement surrounding fire vaults.
   c. As needed to maintain a public easement from the main to the fire vault, a 10-foot wide easement centered on the lateral.

A10. Submit a copy of recorded permanent access easement, construction easement, and permanent slope easement to enable the lot to the south to construct a 40 foot-wide driveway to their site in accordance with TDC 75.140(6)(c)(iv)(B). Provide written documentation of acceptance of the easements from the CCB property owners.

A11. The applicant must submit a Final Site Plan Set (in PDF format) to the Planning Division that is in substantial conformance to the submitted site plans and includes:
   a. Walkways must be a minimum of five feet and provided between the main building entrances and sidewalks along the public right-of-way, consistent with TDC 73A.500(1).
   b. Trees identified for retention in Tree Assessment Report (Exhibit A3) must be identified on the grading plan, consistent with TDC 73B.080(3). This includes on-site Tree 447 and off-site Trees 353-358, 417, 421, 431, 432, 434, 436- 439, and 442. Tree protection fencing and other preservation measures recommended by the Arborist should also be specified on the grading plan.
   c. Details to demonstrate that proposed bicycle parking meets the standards of TDC 73C.050(2) (a), (b), and (c), and 45 spaces are provided, with 14 covered, in conformance with TDC 73C.100(1).
   d. Site driveways must comply with a minimum pavement width of 40 feet or as approved by the City Manager, in accordance with TDC 73C.130(3) and 75.040(9).
   e. Trees, as approved by the Architectural Review Board, must be planted no more than 30 feet apart on the perimeter of vehicle circulation areas consistent with TDC 73C.230(3). Such trees may be omitted where the perimeter area is also within a Public Utility Easement as required by the City Engineer, and where there are existing trees at or near the property line.

f. A minimum of 3,400 square feet or 25 square feet per parking stall improved with parking lot landscape island area with one deciduous shade trees for every four parking spaces, consistent with TDC 73C.240(4).
g. Demonstrate that an adequate waste and recyclables management solution is provided in compliance with TDC 73D. If the minimum standards method is chosen, a minimum of 2,727 square feet of trash enclosure area must be shown on the plans. These facilities must comply with the location, design, and access standards in TDC 73D.070.

A12. The applicant must demonstrate property owner permission for removal of the 26 off-site trees identified in the Tree Assessment Report, submitted as Exhibit A3 and located on Tax Lot: 2S128A000300. Alternatively, the applicant must provide a revised grading and landscaping plan showing all off-site trees as preserved, with adequate protection for trees at the property line from all impacts of development.

A13. The applicant must address that the TVF&R emergency radio communication coverage requirement is met, consistent with Exhibit C. A fee in lieu is available and must be paid prior to issuance of building permits.

A14. The applicant must submit a solid waste and recyclables storage area plan that is in substantial conformance with the Minimum Standards Method described in TDC 73D.060 or other design method listed in TDC 73.020.

DURING CONSTRUCTION ACTIVITY:

A15. The applicant must install the tree protection fencing consistent with the Tree Assessment Report submitted as Exhibit A3 and Section 73B.080(3). Please contact the Planning Division to schedule an inspection with a minimum of 48 hours' notice. Where site conditions make grading or other similar encroachment upon a preserved tree's drip-line area, such grading or similar encroachment must only be permitted under the direction of a qualified arborist.

PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY:

A16. The applicant must complete all work associated with the City's Public Works Permit and Water Quality Permit, as well as Washington County's Facility Permit.

A17. Per TDC 74.120, except as specially provided, all public improvements must be installed at the expense of the applicant. All public improvements installed by the applicant must be constructed and guaranteed as to workmanship and material as required by the Public Works Construction Code prior to acceptance by the City.

A18. Walkways through parking areas, drive aisles, and loading areas must be of a different appearance than the adjacent paved vehicular areas, pursuant to TDC 73A.500(1).

A19. Provide an identification system which clearly locates buildings and their entries for patrons and emergency services, pursuant to TDC 73A.500(4)(d). Building identification approved by TVF&R must be placed in a position that is plainly legible and visible from the street fronting the property. Numbers must contrast with their background, be a minimum of 4 inches high, and have a minimum stroke width of 1/2 inch. It is recommended to double this size on large buildings.

A20. Fire lane curbing must be painted red in areas marked on Exhibit C. Private fire hydrants and underground must be inspected by TVFR.

A21. Areas impacted by grading and all areas not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas, or undisturbed natural areas must be landscaped, pursuant to TDC 73B.060(1).

A22. The applicant must install bicycle parking signage and vanpool/carpool parking signage per MUTCD standards, pursuant to TDC 73C.010(2)(xi) and TDC 73C.050(2)(d).

A23. The applicant must construct proposed buildings and all site improvements as illustrated on the approved Final Site Plan and Final Color Architectural Elevations. The applicant must contact the Planning Division for a site inspection at least 72 hours prior to requesting a certificate of occupancy. This inspection is separate from inspection(s) done by the Building Division.

THE FOLLOWING ITEMS APPLY TO THE SITE IN AN ON-GOING MANNER:

A24. The site has been permitted as warehouse and freight movement uses (TDC 39.440). A conditional use permit must be required if warehousing of building materials and supplies is proposed by future tenants. Future proposals that change the use of the property will be subject to review and limited to uses permitted in the General Manufacturing (MG) District, as identified in Table 61-1. If the use of a property changes, thereby increasing off-street parking or loading requirements, the increased parking/loading area must be provided prior to commencement of the new use, in accordance with TDC 73C.010(2)(a)(v).

A25. Consistent with the Transportation Impact Analysis dated December 15, 2021 prepared by Lancaster Mobley (Exhibit A4), future land uses on the site are must not generate more than 246 PM Peak Hour Trips and/or 1,690 Average Daily Trips. Alterations to this limitation require submittal and approval of a new Architectural Review application with corresponding traffic study under TDC 32.020(7), and in accordance with TDC 74.440.

A26. No commercial uses, including parking or outdoor storage and display areas, are permitted within the Limited Commercial Setback, located 300 feet from the centerline of SW 124th Avenue, and identified on Exhibit H - Map 10-5.

A27. All uses must be conducted within a completely enclosed building, except off-street parking and loading, and basic utilities, pursuant to TDC 61.310(1).

A28. The proposed development must comply with the Environmental Regulations of TDC 63.

A29. All mechanical equipment must be screened in accordance with TDC 73A.300(5). Prior to approval of a mechanical permit, the applicant or property owner must submit scaled elevations illustrating that above-grade or on-grade equipment will be screened by parapet, sight-obscuring fence, landscaping, or other method.

A30. All sign permits require separate sign permit approval per TDC Chapter 38. This approval does not constitute sign permit approval.

A31. All site, building exterior, and landscaping improvements approved through the AR process must be continually maintained, so as to remain substantially similar to original approval through the AR process, except as permitted under TDC 33.020(7) *(Modifications to Previously Approved Final Architectural Review Decisions)*.

A32. All parking spaces shall be continuously maintained in compliance with the dimensional standards specified in TDC Figure 73-1.

A33. No vehicular parking, hedge, planting, fence, wall structure, or temporary/permanent physical obstruction is permitted between 30 inches and eight feet above the established height of the curb in the vision clearance area specified in TDC Figure 73-2.

TUALATIN LOGISTICS PARK

NEW SHELL BUILDING

SW 124th Avenue, NW of SW Cimino Street
Tualatin, Oregon 97062

ARCHITECTURAL REVIEW NARRATIVE – Revised for Completeness

Prepared By: Havlin G. Kemp
August 24, 2021

PROJECT NARRATIVE

Architectural Review
City of Tualatin, Oregon

Project: Tualatin Logistics Park – Shell Only

Site:	Address: SW 124th Avenue – Located NW of SW 124th Ave. and SW Cimino Street intersection, Tualatin, Oregon
	Property ID: Map and Tax Lot: 2S128A 000100
Cross Streets:	SW 124th Avenue at SW Cimino Street
Applicant:	VLMK Engineering + Design, Contact: Amy Tallent - 503.222.4453
Owner:	Fore-Sight Balboa, LLC, Contact: Charles Johnson – 503-691-8400
Developer:	Specht Development, Contact: Peter Skei. Ph: 503-646-2202
Proposal:	Construction of a new speculative distribution warehouse shell building.
Zoning:	MG (General Manufacturing)

OVERVIEW

The Tualatin Logistics Park Project is an approximate 24.2-acre industrial development on the site of the current Tualatin Island Greens driving range and mini-golf course. The planned construction is one building that is approximately 452,800 square feet. The project is intended to provide lease space to warehouse/distribution tenants. The building will accommodate one to 4 tenants.

This project will make available state-of-the-art facilities for warehouse/distribution tenants in need of large spaces (120,000sft to 450,000 sft.) The project is planned to be upscale as is evidenced by the proposed building elevations and landscaping.

The site is bounded by SW 124th Ave. to the east, SW Cipole Road and neighboring properties to the west, the Columbia Corrugated Box site to the south and Hunt Air Site to the north.

Sanitary sewer service is available to the west, north and in SW 124th to the east. Water service is available from a public watermain running east-west near the south property line. Both will be provided by the City of Tualatin.

The current projected schedule is to begin rough grading for the entire site as soon as the approvals/permits are obtained (approximately June 2022) with an anticipated completion of August, 2023.

Site Condition: The site is currently occupied by Tualatin Island Greens driving range and mini-golf course.

Vehicle Access: Access to this development will from an upgraded driveway at the existing driveway location on SW Cipole Road and a new driveway at the NE corner of the site onto SW 124th Ave. This new driveway is proposed to be a full service driveway that will require removal of the median in SW 124th to allow access to and from northbound SW 124th traffic.

Parking: The proposed parking for the site is above the required minimum parking spaces in the city development code for warehouse/distribution buildings. The parking spaces are located on the north and south ends of the site to be near the future office locations at the corners of the building and to be clear of the truck maneuvering areas.

Traffic and Transportation: A traffic study provided by Lancaster Mobley will show that the anticipated auto and truck trips will closely resemble a light industrial use with low access. The proposed SW Cipole Road driveway and the new NE driveway will be sufficient to serve this industrial use site.

Jurisdictions: There are several jurisdictions having some level of authority over the proposed project including:

1. City of Tualatin (Design Review, Traffic review, Storm and Sanitary Sewer and Site/Building Permits, Public Works / Water Quality and 1200C permits).
2. Clean Water Services (CWS) (Pre-screen Site Assessment and Public Works / Water Quality permits).
3. Washington County at Cipole Road: (Public works half street improvements (driveway/sidewalk) and traffic review).
4. Tualatin Valley Fire District

Construction Materials: The proposed building construction consists of tilt up concrete perimeter walls with industrial slab on grade concrete floor. Roof structure to be framed with open web steel joists and girders with OSB roof sheathing supported by 2x6 subpurlins and capped with a membrane roofing system.

Finishes will include aluminum framed storefront entry systems with enhanced paint and reveals to enhance the office locations.

Site Utilities:

- Storm: The site will be fully served with an underground piped storm system. The system will include catchbasins and piping flowing to filters located in vaults at the east side of the site. Stormwater will then flow to a below grade detention system. Stormwater will flow out of the detention system to a duplex pump system that will pump the stormwater to the existing manhole and culvert located at the west side of SW124th ROW. The culvert flows under SW124th east to the wetland located east of SW 124th. New site improvements will include installation of new catch basins, conveyance piping and providing water quality treatment and detention of all site impervious areas in compliance with current Clean Water Services requirements.
- Sanitary: The site will be fully served with private sanitary sewer laterals tying into the public sanitary lines at the west and at the east in SW 124th Ave.
- Water: The site will be fully served from the existing public water main located near the south property line. Domestic water will be tapped from this main and enter the building at the south end of the building. A fire water loop will tap into the public main east and west of the building and loop around the building. The proposed building will be fully sprinklered and have a fire pump for the ESFR sprinkler system. Fire hydrants will be spaced around the site per the TVFR requirements.
- Gas: The site will be served by a new underground gas line from SW 124th Ave. or SW Cipole Road.
- Power: The site will be served by new underground electrical service from SW 124th Street or SW Cipole Road.
- Lighting: The proposed on-site lighting systems will have energy efficient lights. Perimeter lighting will be pole mounted and shielded with cut-offs to prevent light from broadcasting to neighboring properties. The exterior walls of the building will be lit with LED wallpak lighting. The vehicle parking areas will be lit with the wallpaks and with pole mounted lighting.
- Solid Waste & Recycling: Solid waste and recycling will be handled in the two proposed garbage enclosures located on the site plan. The local garbage hauler (Republic Services) has approved the site plan and the letter is included in our AR submittal.

Responses to Applicable Sections of the Tualatin Development Code.

TDC 33.020. Architectural Review.

(2) *Applicability.*

(a) The following types of development are subject to Architectural Review:

(iii) Any site alteration which alters the topography, appearance or function of the site;

RESPONSE: The existing Golf Driving range, clubhouse and mini-golf course will be removed, the site will be regraded and a new concrete tiltup warehouse will be constructed.

(b) Examples of development subject to Architectural Review, include but are not limited to the following:

(i) New buildings, condominiums, townhouse, single family dwellings, or manufactured dwelling park;

RESPONSE: A new building is proposed to be constructed.

(3) *Types of Architectural Review Applications—Procedure Type.*

(d) *Large Commercial, Industrial, and Multifamily Development.* Development applications that propose any of the following are subject to Type III Review by the Architectural Review Board as the hearing body:

(ii) New Industrial Buildings 150,000 square feet and larger;

RESPONSE: The proposed building is a new 452,800 sft warehouse/distribution building.

(4) *Application Materials.* The application must be on forms provided by the City. In addition to the application materials required by TDC 32.140 (Application Submittal), the following application materials are also required:

(a) The project name and the names, addresses, and telephone numbers of the architect, landscape architect, and engineer on the project;

(b) Existing conditions plan, site plan, grading plan, utility plan, landscape plan, and lighting plan all drawn to scale;

(c) A materials board that includes example building materials and textures;

(d) Title report; and

(e) A Service Provider Letter from Clean Water Services.

RESPONSE: All of the above are provided with this AR submittal

(5) *Approval Criteria.*

(c) *Large Commercial, Industrial, and Multifamily Development.* Applications for Large Commercial, Industrial, and Multifamily Development must comply with the applicable standards and objectives in TDC Chapter 73A through 73G.

RESPONSE: See responses to Chap. 73A, 73B, 73C and 73D. Note that 73E-G do not apply.

TDC 33.110. Tree Removal Permit/Review.

(1) *Purpose.* To regulate the removal of trees within the City limits other than trees within the public right-of-way which are subject to TDC Chapter 74.

(2) *Applicability.* No person may remove a tree on private property within the City limits, unless the City grants a tree removal permit, consistent with the provisions of this Section.

(3) *Exemptions.* The following actions are exempt from the requirements of a tree removal permit.

Response: None Applicable

(3) *Procedure Type.* Tree Removal Permit applications are subject to Type II Review in accordance with TDC Chapter 32. Tree Removal Permit applications submitted with an Architectural Review, Subdivision, or Partition application will be processed in conjunction with the Architectural Review, Subdivision, or Partition decision.

Response: Submitted with Type III Architectural Review.

(4) *Specific Submittal Requirements.* In addition to the general submittal requirements in TDC 32.140 (Application Submittal), an applicant must submit the following:

(a) *Tree Preservation Plan.* A tree preservation plan drawn to scale must include:

(i) The location, size, species, and tag identification number of all trees on-site eight inches or more in diameter;

(ii) All trees proposed for removal and all trees proposed to be preserved;

(iii) All existing and proposed structures;

(iv) All existing and proposed public and private improvements; and

(v) All existing public and private easements.

(b) *Tree Assessment Report.* A tree assessment prepared by a certified arborist must include:

(i) An analysis as to whether trees proposed for preservation may be preserved in light of the development proposed, are healthy specimens, and do not pose an imminent hazard to persons or property if preserved;

(ii) An analysis as to whether any trees proposed for removal could reasonably be preserved in light of the development proposed and health of the tree;

(iii) a statement addressing the approval criteria set forth in TDC 33.110(5);

(iv) the name, contact information, and signature of the arborist preparing the report; and

(v) The tree assessment report must have been prepared and dated no more than one calendar year preceding the date the development or Tree Removal Permit application is deemed complete by the City.

(c) *Tree Tags.* All trees on-site must be physically identified and numbered in the field with an arborist-approved tagging system that corresponds to the Tree Preservation Plan and Tree Assessment Report.

Response: A tree preservation plan is included with the Arborist's Tree Assessment Report. All the trees over 8-inches in diameter have been tagged onsite.

(5) *Approval Criteria.*

(a) An applicant must satisfactorily demonstrate that at least one of the following criteria are met:

(i) The tree is diseased and:

(A) The disease threatens the structural integrity of the tree; or
(B) The disease permanently and severely diminishes the esthetic value of the tree; or
(C) The continued retention of the tree could result in other trees being infected with a disease that threatens either their structural integrity or esthetic value.

(ii) The tree represents a hazard which may include but not be limited to:

(A) The tree is in danger of falling; or
(B) Substantial portions of the tree are in danger of falling.

(iii) It is necessary to remove the tree to construct proposed improvements based on Architectural Review approval, building permit, or approval of a Subdivision or Partition Review.

Response: The Arborists report shows that removal of the trees is necessary to construct the project as proposed. A few trees that occur near the west, north and south property lines are proposed to remain.

(6) *Emergencies.* **Response: None Applicable**

TDC 61.200. Use Categories.

Table 61-1
Use Categories in the MG Zone

USE CATEGORY	STATUS	LIMITATIONS AND CODE REFERENCES
INDUSTRIAL USE CATEGORIES		
Heavy Manufacturing	P (L)	Concrete batch plants are not permitted in the Leveton Tax Increment District. All other uses permitted outright.
Light Manufacturing	P	—
Solid Waste Treatment and Recycling	C (L)	Conditional uses limited to: • Recycling collection center; • Waste transfer station; and • Resource recovery facility. Recycling collection center or waste transfer station are not permitted within the Limited Commercial Setback.
Vehicle Storage	P/C (L)	Conditional use required for bus maintenance and storage facility. Vehicle storage not permitted within the Limited Commercial Setback. Vehicles sales are not permitted. All other uses permitted outright in other locations.

Warehouse and Freight Movement	P/C	Conditional use required for warehousing of building materials and supplies. All other uses permitted outright.
Wholesale Sales	P/C (L)	Permitted uses limited to: • Sales of industrial hand tools, industrial supplies such as safety equipment and welding equipment, that are products primarily sold wholesale to other industrial firms or industrial workers; and • Sale, service and rental of construction and industrial equipment to contractors and industrial firms only. Conditional use permit required for wholesale sales of building materials and supplies.

RESPONSE: The proposed use of WAREHOUSE AND FREIGHT MOVEMENT is a permitted use. If a future tenant requires warehousing of building materials and supplies, a Condition Use Permit will be applied for. It is possible that a small amount of manufacturing might occupy the building. Both Heavy and Light manufacturing are permitted uses at this site.

TDC 61.210. Additional Limitations on Uses.

RESPONSE: Not applicable. Warehouse/Distribution and manufacturing are the only proposed uses.

Standards.

Development standards in the MG zone are listed in Table 61-2. Additional standards may apply to some uses and situations, see TDC 61.310.

Table 61-2
Development Standards in the MG Zone

STANDARD	REQUIREMENT	LIMITATIONS AND CODE REFERENCES
LOT SIZE		
Minimum Lot Size **RESPONSE: Met, lot is 24.2 acres.**	20,000 square feet	—
LOT DIMENSIONS		

Minimum Lot Width **RESPONSE: Met at both SW 124th Ave. and at SW Cipole Road.**	100 feet	When lot has frontage on public street, minimum lot width at the street is 100 feet. When lot has frontage on cul-de-sac street, minimum lot width at the street is 50 feet.
Infrastructure and Utilities Uses	—	As determined through the Subdivision, Partition, or Lot Line Adjustment process
Flag Lots **RESPONSE: Not applicable.**	—	Must be sufficient to comply with minimum access requirements of TDC 73C.
MINIMUM SETBACKS		
Front **RESPONSE: 30-foot setback provided at SW 124th Ave.**	30 feet	
Front Setback Adjacent to Residential or Manufacturing Park Zone **RESPONSE: Not applicable**	50 feet	
Side	0-50 feet	Determined through Architectural Review process. No minimum setback if adjacent to railroad right-of-way or spur track.
Side Setback Adjacent to Residential or Manufacturing Park Zone	50 feet	
Rear	0-50 feet	Determined through Architectural Review process. No minimum setback if adjacent to railroad right-of-way or spur track.
Rear setback adjacent to Residential or Manufacturing Park Zone **RESPONSE: Not applicable**	50 feet	
Parking and Circulation Areas **RESPONSE: Met at all property boundaries.**	5 feet	No minimum setback required adjacent to joint access approach in accordance with TDC 73C.

Parking and Circulation Areas Adjacent to Residential or Manufacturing Park Zone **RESPONSE: Not Applicable**	10 feet	
Fences **RESPONSE: Met at both SW 124th Ave. and at SW Cipole Road.**	10 feet	From public right-of-way.
STRUCTURE HEIGHT		
Maximum Height **RESPONSE: Met, top of wall height on Building is 38-feet at warehouse and 42-feet at office pop-outs.**	60 feet	May be increased to 100 feet if yards adjacent to structure are not less than a distance equal to the height of the structure. Measured at the 50-foot setback line, includes flagpoles. The building height may extend above 28 feet on a plane beginning at the 50-foot setback line at a slope of 45 degrees extending away from the 50-foot setback line. Flagpoles may extend to 100 feet.
Maximum Height Adjacent to Residential Zone **RESPONSE: Not applicable.**	28 feet	

TDC 61.310. Additional Development Standards.

(1) *Outdoor Uses.* All uses must be conducted wholly within a completely enclosed building, except off-street parking and loading, Basic Utilities, Wireless Communication Facilities and outdoor play areas of child day care centers as required by state day care certification standards.

RESPONSE: All uses are proposed to be conducted within the building.

(2) *Sound Barrier Construction.* Sound barrier construction is required to mitigate the impact of noise associated with overhead doors and building mechanical equipment, including but not limited to heating, cooling and ventilation equipment, compressors, waste evacuation systems, electrical transformers, and other motorized or powered machinery located on the exterior of a building. Sound barrier construction must conform to the following standards:

(a) *Applicability.* New construction, including additions or changes to existing facilities, must comply with the provisions of this section. When additions or changes to existing facilities are proposed, existing structures on the property may be required to comply with the provisions of this section, as determined through the Architectural Review process. Where buildings or outdoor use areas located on more than one parcel are all part of a single use as determined through the Architectural Review process, all of the parcels may be required to comply with the provisions of this section.

RESPONSE: Not applicable, see below.

(b) *Distance from Residential Use.* Sound barriers must be used to intercept all straight-line lateral (direct line between two points) paths of 450 feet or less between a residential property within a residential planning district and:

(i) Any side edge of an overhead door or other doorway larger than 64 square feet, at a minimum height of eight feet above the floor elevation of the doorway; or

(ii) Any building mechanical device at a minimum height equal to the height of the mechanical object to be screened.

RESPONSE: Not applicable. There are no residences within a residential planning district within 450-feet of this site.

(c) *Exemption for Existing Structures.*

RESPONSE: Not applicable.

(d) *Design.* Sound barriers must consist of masonry walls or earth berms located so as to reflect sound away from, rather than toward, noise sensitive properties. This may include masonry "wing walls" attached to a building, detached masonry walls (such as at the perimeter of the site), earth berms, or combinations of the three. Wing walls must be at least as tall as the tallest overhead door they are designed to screen at the point where they meet the building. The height of the wall may be reduced along a maximum incline formed by a horizontal distance twice the vertical change in height, or 26.5 degrees from horizontal.

(i) "Wing wall" means a wall that is attached to a building on one side and meets the screening requirements of (1) and (2) of this section."

(3) *Setback Reduction for Developments Adjacent to Greenways and Natural Areas.*

RESPONSE: Not Applicable.

CHAPTER 73A SITE DESIGN STANDARDS

TDC 73A.010. Site and Building Design Standards Purpose and Objectives.

INDUSTRIAL DESIGN STANDARDS

TDC 73A.500. Industrial Design Standards.

The following standards are minimum requirements for industrial development in all zones, except the Mixed-Use Commercial (MUC) zone, which has its own standards:

(1) *Walkways.* Industrial development must provide walkways as follows:

(a) Walkways must be a minimum of five feet in width; **RESPONSE: All walkways are 5-feet, minimum.**

(b) Walkways must be constructed of asphalt, concrete, or a pervious surface such as pavers or grasscrete (not gravel or woody material); **RESPONSE: All walkways are constructed of concrete.**

(c) Walkways must meet ADA standards applicable at time of construction or alteration; **RESPONSE: All walkways will be designed to meet ADA standards.**

(e) Walkways must be provided between the main building entrances and other on-site buildings, accessways, and sidewalks along the public right-of-way; **RESPONSE: The building has four possible main building entrances. The entrances at the NW and NE are connected to the public sidewalk on SW 124th. The entrance at the SW is connected to the new (to be constructed) sidewalk on SW Cipole Road. The grades at the SE entrance are too steep to connect a sidewalk to SW 124th and meet the ADA standards. It is proposed that the connection of the SE entrance be just to the "pick up, drop off area" directly in front of the SE entrance rather than connecting to the sidewalk on SW 124th.**

(f) Walkways through parking areas, drive aisles, and loading areas must be of a different appearance than the adjacent paved vehicular areas; and **RESPONSE: Walkways crossing the drive aisles will be painted, cross striped walkways.**

(g) Outdoor Recreation Access Routes must be provided between the development's walkway and bikeway circulation system and parks, bikeways and greenways where a bike or pedestrian path is designated. **RESPONSE: Not applicable. There are no bike nor pedestrian paths designated.**

(2) *Accessways.*

(a) *When Required.* Accessways are required to be constructed when a common wall development is adjacent to any of the following:

(i) Residential property;

(ii) Commercial property;

(iii) Areas intended for public use, such as schools and parks; and

(iv) Collector or arterial streets where transit stops or bike lanes are provided or designated.

RESPONSE: Not applicable.

(3) *Drive-up Uses.* **RESPONSE: Not applicable. No drive-up uses are proposed.**

(4) *Safety and Security.* Industrial development must provide safety and security features as follows:

(a) Locate windows and provide lighting in a manner that enables tenants, employees, and police to watch over pedestrian, parking, and loading areas; **RESPONSE: Windows and wallpak lighting have been located at the office areas at the NW, NE, SW and SE areas of the building. Wallpak lighting has been**

located of the loading dock areas and pole mounted lighting has been located over the trailer parking at the east and west sides of the site.

(b) Locate windows and interior lighting to enable surveillance of interior activity from the public right-of-way; **RESPONSE**: **Windows and wallpak lighting have been located at the office areas at the NW, NE, SW and SE areas of the building. These areas are visible from SW 124th and from SW Cipole Road.**

(c) Locate, orient, and select exterior lighting to facilitate surveillance of on-site activities from the public right-of-way without shining into public rights-of-way or fish and wildlife habitat areas; **RESPONSE: Windows and wallpak lighting have been located at the office areas at the NW, NE, SW and SE areas of the building. Wallpak lighting has been located of the loading dock areas and pole mounted lighting has been located over the trailer parking at the east and west sides of the site. All of this lighting is located far enough from the public ROW to not shine in the ROW. There is no fish nor wildlife habitat near the site.**

(d) Provide an identification system which clearly locates buildings and their entries for patrons and emergency services; and **RESPONSE: Building addresses will be added to the building, above the office entrances, facing SW 124th and/or SW Cipole Road when the building is occupied by tenants.**

(e) Above ground sewer or water pumping stations, pressure reading stations, water reservoirs, electrical substations, and above ground natural gas pumping stations must provide a minimum six foot tall security fence or wall. **RESPONSE: Not applicable. None of these uses are proposed.**

(5) *Service, Delivery, and Screening.* Industrial development must provide service, delivery, and screening features as follows:

(a) Above grade and on-grade electrical and mechanical equipment such as transformers, heat pumps and air conditioners must be screened with sight obscuring fences, walls or landscaping; **RESPONSE: Electrical Transformers will be screened with landscaping. This is a Shell building so no roof mounted HVAC units are proposed. With future Tenant buildouts, rooftop mounted HVAC units will be screened with walls at the units if visible.**

(b) Outdoor storage must be screened with a sight obscuring fence, wall, berm or dense evergreen landscaping; and **RESPONSE: No outdoor storage is proposed.**

(c) Above ground pumping stations, pressure reading stations, water reservoirs; electrical substations, and above ground natural gas pumping stations must be screened with sight-obscuring fences or walls and landscaping. **RESPONSE: Not applicable. None of these uses are proposed.**

(6) *Adjacent to Transit.* **RESPONSE: Not applicable. This development is not adjacent to a Transit Street.**

CHAPTER 73B LANDSCAPING STANDARDS

TDC 73B.010. Landscape Standards Purpose and Objectives.

TDC 73B.020. Landscape Area Standards Minimum Areas by Use and Zone.

The following are the minimum areas required to be landscaped for each use and zone:

Zone	Minimum Area Requirement*	Minimum Area Requirement with dedication for a fish and wildlife habitat*
(3) CO, CR, CC, CG, ML and MG zones except within the Core Area Parking District—All uses	15 percent of the total area to be developed **RESPONSE: Met, 15% landscaping has been provided.**	12.5 percent of the total area to be developed

Table 73B-1R
Required Landscape Buffer Between Uses

		Proposed Improvement				
Abutting		Residential	Commercial	Institutional	Parking Lots 4—50 spaces	Parking Lots 50+ spaces
	Residential	—	D	D	C	D
	Commercial	C	—	D	—	—
	Industrial	D	A	D	—	—
	Parking Lots	C	—	—	—	—
	Arterial Streets	A	—	A	—	—

	Options	Width (feet)	Trees (per linear feet of buffer)	Shrubs or Groundcover	Screening
A	—	10	—	Lawn/living groundcover	—
B	—	10	20 feet min/30 feet max spacing	Lawn/living groundcover	—
C	1	10	15 feet min/30 feet max spacing	Shrubs	4 feet hedges
	2	8		Shrubs	5 feet fence
	3	6		Shrubs	6 feet wall
D	1	20	10 feet min/20 feet max spacing	Shrubs	6 feet hedge
	2	15		Shrubs	6 feet fence
	3	10		Shrubs	6 feet wall

(Ord. No. 1438-20 , § 23, 6-22-20)

RESPONSE: This site is bounded by MG, Industrial zoned properties and SW 124th, an Arterial street . SW Cipole Road is a Collector street and not referenced in the table. The "A" type landscape buffer is met with the 30-feet of landscaping along SW 124th.

TDC 73B.060. Additional Minimum Landscaping Requirements for Industrial Uses.

(1) *General.* In addition to requirements in TDC 73B.020, industrial uses must comply with the following:

(a) All areas not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas, or undisturbed natural areas must be landscaped.

RESPONSE: This standard is met with this proposal.

(b) Minimum 5-foot-wide landscaped area must be located along all building perimeters viewable by the general public from parking lots or the public right-of-way, but the following may be used instead of the 5-foot-wide landscaped area requirement:

(i) Pedestrian amenities such as landscaped plazas and arcades; and

(ii) Areas developed with pavers, bricks, or other surfaces, for exclusive pedestrian use and contain pedestrian amenities, such as benches, tables with umbrellas, children's play areas, shade trees, canopies.

(c) Five-foot-wide landscaped area requirement does not apply to:

(i) Loading areas,

(ii) Bicycle parking areas,

(iii) Pedestrian egress/ingress locations, and

(iv) Where the distance along a wall between two vehicle or pedestrian access openings (such as entry doors, garage doors, carports and pedestrian corridors) is less than eight feet.

RESPONSE: This standard is met with this proposal. The 5-foot wide landscape area at the building perimeter has been provided at all required locations.

(d) Development that abuts an RL or MP Zone must have landscaping approved through Architectural Review and must provide and perpetually maintain dense, evergreen landscaped buffers between allowed uses and the adjacent RL and MP zones.

RESPONSE: Not applicable.

(2) *MP Area—Wetland Buffer.* **RESPONSE: Not applicable.**

TDC 73B.080. Minimum Landscaping Standards for All Zones.

The following are minimum standards for landscaping for all zones.

(1) Required Landscape Areas	• Must be designed, constructed, installed, and maintained so that within three years the ground must be covered by living grass or other plant materials. • The foliage crown of trees cannot be used to meet this

	requirement. • A maximum of ten percent of the landscaped area may be covered with un-vegetated areas of bark chips, rock or stone. • Must be installed in accordance with the provisions of the American National Standards Institute ANSI A300 (Part 1) (Latest Edition). • Must be controlled by pruning, trimming, or otherwise so that: • It will not interfere with designated pedestrian or vehicular access; and • It will not constitute a traffic hazard because of reduced visibility.
(2) Fences	• Landscape plans that include fences must integrate any fencing into the plan to guide wild animals toward animal crossings under, over, or around transportation corridors.
(3) Tree Preservation	• Trees and other plant materials to be retained must be identified on the landscape plan and grading plan. • During construction: ◦ Must provide above and below ground protection for existing trees and plant materials identified to remain; ◦ Trees and plant materials identified for preservation must be protected by chain link or other sturdy fencing placed around the tree at the drip line; ◦ If it is necessary to fence within the drip line, such fencing must be specified by a qualified arborist; ◦ Top soil storage and construction material storage must not be located within the drip line of trees designated to be preserved; ◦ Where site conditions make necessary a grading, building, paving, trenching, boring, digging, or other similar encroachment upon a preserved tree's drip-line area, such grading, paving, trenching, boring, digging, or similar encroachment must only be permitted under the direction of a qualified arborist. Such direction must assure that the health needs of trees within the preserved area can be met; and ◦ Tree root ends must not remain exposed. • Landscaping under preserved trees must be compatible with the retention and health of the preserved tree. • When it is necessary for a preserved tree to be removed in accordance with TDC 33.110 (Tree Removal Permit) the landscaped area surrounding the tree or trees must be maintained and replanted with trees that relate to the present landscape plan, or if there is no landscape plan, then trees

	that are complementary with existing, landscape materials. Native trees are encouraged • 100 percent of the area preserved under any tree or group of trees (Except for impervious surface areas) retained in the landscape plan must apply directly to the percentage of landscaping required for a development
(4) Grading	• After completion of site grading, top-soil is to be restored to exposed cut and fill areas to provide a suitable base for seeding and planting. • All planting areas must be graded to provide positive drainage. • Soil, water, plant materials, mulch, or other materials must not be allowed to wash across roadways or walkways. • Impervious surface drainage must be directed away from pedestrian walkways, dwelling units, buildings, outdoor private and shared areas and landscape areas except where the landscape area is a water quality facility.
(5) Irrigation	• Landscaped areas must be irrigated with an automatic underground or drip irrigation system • Exceptions: ◦ Irrigation requirement does not apply to duplexes and townhouses.
(6) Re-vegetation in Un-landscaped Areas	• Vegetation must be replanted in all areas where vegetation has been removed or damaged in areas not affected by the landscaping requirements and that are not to be occupied by structures or other improvements. • Plant materials must be watered at intervals sufficient to ensure survival and growth for a minimum of two growing seasons. • The use of native plant materials is encouraged to reduce irrigation and maintenance demands. • Disturbed soils should be amended to an original or higher level of porosity to regain infiltration and stormwater storage capacity.

RESPONSE: These standards are met with this proposal. See the Site Plan, Site Grading Plan, Tree Preservation Plan and the Landscape Plan.

TDC 73B.090. Minimum Standards Trees and Plants.

The following minimum standards apply to the types of landscaping required to be installed for all zones.

(1) Deciduous Shade Trees	• One and on-half inch caliper measured six inches above ground; • Balled and burlapped; bare root trees will be acceptable to plant during their dormant season; • Reach a mature height of 30 feet or more; • Cast moderate to dense shade in summer; • Live over 60 years; • Do well in urban environments, tolerant of pollution and heat, and resistant to drought; • Require little maintenance and mechanically strong; • Insect- and disease-resistant; • Require little pruning; and • Barren of fruit production.
(2) Deciduous Ornamental Trees	• One and on-half inch caliper measured six inches above ground; • balled and burlapped; bare root trees will be acceptable to plant during their dormant season; and • Healthy, disease-free, damage-free, well-branched stock, characteristic of the species
(3) Coniferous Trees	• Five feet in height above ground; • Balled and burlapped; bare root trees will be acceptable to plant during their dormant season; and • Healthy, disease-free, damage-free, well-branched stock, characteristic of the species.
(4) Evergreen and Deciduous Shrubs	• One to five gallon size; • Healthy, disease-free, damage-free, well-branched stock, characteristic of the species; and • Side of shrub with best foliage must be oriented to public view.
(5) Groundcovers	• Fully rooted; • Well branched or leafed; • Healthy, disease-free, damage-free, well-branched stock, characteristic of the species; and • English ivy (Hedera helix) is prohibited.
(6) Lawns	• Consist of grasses, including sod, or seeds of acceptable mix within the local landscape industry; • 100 percent coverage and weed free; and • Healthy, disease-free, damage-free, characteristic of the species.

RESPONSE: This standard is met with this proposal. See the Landscape Plans.

CHAPTER 73C PARKING STANDARDS

In General

Parking Lot Landscaping

IN GENERAL

TDC 73C.010. Off-Street Parking and Loading Applicability and General Requirements.

(1) *Applicability.* Off-street parking and loading is required to be provided by the owner and/or developer, in all zones, whenever the following occurs:

(a) Establishment of a new structure or use; **RESPONSE: This proposal is for a New Structure.**

(2) *General Requirements.* Off-street parking spaces, off-street vanpool and carpool parking spaces, off-street bicycle parking, and off-street loading berths must be as provided as set forth in TDC 73C.100, unless greater requirements are otherwise established by the conditional use permit or the Architectural Review process.

(a) The following apply to property and/or use with respect to the provisions of TDC 73C.100:

(i) The requirements apply to both the existing structure and use, and enlarging a structure or use;

(ii) The floor area is measured by gross floor area of the building primary to the function of the particular use of the property other than space devoted to off-street parking or loading;

(iii) Where employees are specified, the term applies to all persons, including proprietors, working on the premises during the peak shift;

(iv) Calculations to determine the number of required parking spaces and loading berths must be rounded to the nearest whole number;

(v) If the use of a property changes, thereby increasing off-street parking or loading requirements, the increased parking/loading area must be provided prior to commencement of the new use;

(vi) Parking and loading requirements for structures not specifically listed herein must be determined by the City Manager, based upon requirements of comparable uses listed;

(vii) When several uses occupy a single structure, the total requirements for off-street parking may be the sum of the requirements of the several uses computed separately or be computed in accordance with TDC 73.370(1)(m), Joint Use Parking;

(viii) Off-street parking spaces for dwellings must be located on the same lot with the dwelling. Other required parking spaces may be located on a separate parcel, provided the parcel is not greater than five hundred (500) feet from the entrance to the building to be served, measured along the shortest pedestrian route to the building. The applicant must prove that the parking located on another parcel is functionally located and that there is safe vehicular and pedestrian access to and from the site. The parcel upon which parking facilities are located must be in the same ownership as the structure;

(ix) Required parking spaces must be available for the parking of operable passenger automobiles of residents, customers, patrons and employees and must not be used for storage of vehicles or materials or for the parking of trucks used in conducting the business;

(x) Institution of on-street parking, where none is previously provided, must not be done solely for the purpose of relieving crowded parking lots in commercial or industrial zones; and

(xi) Required vanpool and carpool parking must meet the 9-foot parking stall standards in Figure 73-1 and be identified with appropriate signage.

TDC 73C.020. Parking Lot Design Standards.

A parking lot, whether an accessory or principal use, intended for the parking of automobiles or trucks, must comply with the following:

(1) Off-street parking lot design must comply with the dimensional standards set forth in Figure 73-1;

  (a) Exception: Parking structures and underground parking where stall length and width requirements for a standard size stall must be reduced by .5 feet and vehicular access at the entrance if gated must be a minimum of 18 feet in width.

(2) Parking lot drive aisles must be constructed of asphalt, concrete, or pervious concrete;

(3) Parking stalls must be constructed of asphalt, concrete, previous concrete, or a pervious surface such as pavers or grasscrete, but not gravel or woody material. Pervious surfaces, are encouraged for parking stalls in or abutting the Natural Resource Protection Overlay District, Other Natural Areas, or in a Clean Water Services Vegetated Corridor;

(4) Parking lots must be maintained adequately for all-weather use and drained to avoid water flow across sidewalks;

(5) Parking bumpers or wheel stops or curbing must be provided to prevent cars from encroaching on adjacent landscaped areas, or adjacent pedestrian walkways.

(6) Disability parking spaces and accessibility must meet ADA standards applicable at time of construction or alteration;

(7) Parking stalls for sub-compact vehicles must not exceed 35 percent of the total parking stalls required by TDC 73C.100. Stalls in excess of the number required by TDC 73C.100 can be sub-compact stalls;

(8) Groups of more than four parking spaces must be so located and served by driveways that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley;

(9) Drives to off-street parking areas must be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site;

(10) On-site drive aisles without parking spaces, which provide access to parking areas with regular spaces or with a mix of regular and sub-compact spaces, must have a minimum width of 22 feet for two-way traffic and 12 feet for one-way traffic; When 90 degree stalls are located on both sides of a drive aisle, a minimum of 24 feet of aisle is required. On-site drive aisles without parking spaces, which provide access to parking areas with only sub-compact spaces, must have a minimum width of 20 feet for two-way traffic and 12 feet for one-way traffic;

(11) Artificial lighting, must be deflected to not shine or create glare in a residential zones, street right-of-way, a Natural Resource Protection Overlay District, Other Natural Areas, or a Clean Water Services Vegetated Corridor;

(12) Parking lot landscaping must be provided pursuant to the requirements of TDC 73C.200; and

(13) Except for parking to serve residential uses, parking areas adjacent to or within residential zones or adjacent to residential uses must be designed to minimize disturbance of residents.

RESPONSE: All of the above criteria have been met with the proposed development.

TDC 73C.050. Bicycle Parking Requirements and Standards.

(1) *Requirements.* Bicycle parking facilities must include:

(a) Long-term parking that consists of covered, secure stationary racks, lockable enclosures, or rooms in which the bicycle is stored;

(i) Long-term bicycle parking facilities may be provided inside a building in suitable secure and accessible locations.

(b) Short-term parking provided by secure stationary racks (covered or not covered), which accommodate a bicyclist's lock securing the frame and both wheels.

(2) *Standards.* Bicycle parking must comply with the following:

(a) Each bicycle parking space must be at least six feet long and two feet wide, with overhead clearance in covered areas must be at least seven feet;

(b) A five-foot-wide bicycle maneuvering area must be provided beside or between each row of bicycle parking. It must be constructed of concrete, asphalt, or a pervious hard surface such as pavers or grasscrete, and be maintained;

(c) Access to bicycle parking must be provided by an area at least three feet in width. It must be constructed of concrete, asphalt, or a pervious hard surface such as pavers or grasscrete, and be maintained;

(d) Bicycle parking areas and facilities must be identified with appropriate signing as specified in the Manual on Uniform Traffic Control Devices (MUTCD) (latest edition). At a minimum, bicycle parking signs must be located at the main entrance and at the location of the bicycle parking facilities;

(e) Bicycle parking must be located in convenient, secure, and well-lighted locations approved through the Architectural Review process. Lighting, which may be provided, must be deflected to not shine or create glare into street rights-of-way or fish and wildlife habitat areas;

(f) Required bicycle parking spaces must be provided at no cost to the bicyclist, or with only a nominal charge for key deposits, etc. This does not preclude the operation of private for-profit bicycle parking businesses;

(g) Bicycle parking may be provided within the public right-of-way in the Core Area Parking District subject to approval of the City Engineer and provided it meets the other requirements for bicycle parking; and

(h) The City Manager or the Architectural Review Board may approve a form of bicycle parking not specified in these provisions but that meets the needs of long-term and/or short-term parking pursuant to Architectural Review.

TDC 73C.100. Off-Street Parking Minimum/Maximum Requirements.

(1) The following are the minimum and maximum requirements for off-street motor vehicle parking in the City, except these standards do not apply in the Core Area Parking District. The Core Area Parking District standards are in TDC 73C.110.

USE	MINIMUM MOTOR VEHICLE PARKING	MAXIMUM MOTOR VEHICLE PARKING	BICYCLE PARKING	PERCENTAGE OF BICYCLE PARKING TO BE COVERED
(f) Industrial				
(i) Manufacturing	1.60 spaces per 1,000 square feet of gross floor area	None	2, or 0.10 spaces per 1,000 gross square feet, whichever is greater	First five spaces or 30 percent, whichever is greater
(ii) Warehousing	0.30 spaces per 1,000 square feet of gross floor area	Zone A: 0.4 spaces per 1,000 square feet of gross floor area Zone B: 0.5 spaces per 1,000 square feet of gross floor area	2, or 0.10 spaces per 1,000 gross square feet, whichever is greater	First five spaces or 30 percent, whichever is greater

RESPONSE: Vehicle parking spaces: For warehousing, 135 spaces minimum and 226 spaces maximum are allowed. 197 vehicle parking spaces are provided.

Bicycle Parking spaces: For warehousing, 45 spaces are required. 46 bicycle parking spaces are provided with 24 exterior spaces and 22 interior spaces provided (48 %).

(2) In addition to the general parking requirements in subsection (1), the following are the minimum number of off-street vanpool and carpool parking for commercial, institutional, and industrial uses.

Number of Required Parking Spaces	Number of Vanpool or Carpool Spaces
0 to 10	1
10 to 25	2
26 and greater	1 for each 25 spaces

RESPONSE: A total of 197 vehicle parking spaced are provided. 197/25=7.88. Therefore, 8 Vanpool/carpool parking spaces are required. See the Site Plan for the location of these 8 spaces.

TDC 73C.120. Off-Street Loading Facilities Minimum Requirements.

(1) The minimum number of off-street loading berths for commercial, industrial, and institutional uses is as follows:

Use	Square Feet of Floor Area	Number of Berths	Dimensions of Berth	Unobstructed Clearance of Berth
Industrial	Less than 5,000	0	0	0
	5,000—25,000	1	12 feet × 60 feet	14 feet
	25,000—60,000	2	12 feet × 60 feet	14 feet
	60,000 and over	3	12 feet × 60 feet	14 feet

RESPONSE: The proposed building exceeds 60,000sft and more than three loading berths are provided. The loading berths are 13' x 75' and have nothing overhead and therefore are more than 14-feet clear.

(2) Loading berths must not use the public right-of-way as part of the required off-street loading area.

RESPONSE: The public ROW at SW 124th and SW Cipole Rd. are not used as part of the required loading areas.

(3) Required loading areas must be screened from public view, public streets, and adjacent properties by means of sight-obscuring landscaping, walls or other means, as approved through the Architectural Review process.

RESPONSE: The loading areas at the east and west sides of the proposed building are screened from view with sight-obscuring landscaping. See the Landscape Plan.

(4) Required loading facilities must be installed prior to final building inspection and must be permanently maintained as a condition of use.

RESPONSE: The loading facilities are an integral part of this Shell Building and will be installed prior to building completion and will be maintained.

(5) The off-street loading facilities must in all cases be on the same lot or parcel as the structure they are intended to serve. In no case must the required off-street loading spaces be part of the area used to satisfy the off-street parking requirements.

RESPONSE: The loading facilities are on the same parcel as the proposed building.

TDC 73C.130. Parking Lot Driveway and Walkway Minimum Requirements.

Parking lot driveways and walkways must comply with the following requirements:

(1) *Residential Use.* **RESPONSE: Not applicable.**

(2) *Commercial Uses.* **RESPONSE: Not applicable.**

(3) *Industrial Use.* Ingress and egress for industrial uses must not be less than the following:

Required Parking Spaces	Minimum Number Required	Minimum Pavement Width	Minimum Pavement Walkways, etc.
1-250	1	36 feet for first 50' from ROW, 24 feet thereafter	No curbs or walkway required
Over 250	As required by City Manager	As required by City Manager	As required by City Manager

(4) *Institutional Uses.* **RESPONSE: Not applicable.**

(5) *One-way Ingress or Egress.* **RESPONSE: Not applicable, none proposed.**

(6) *Maximum Driveway Widths and Other Requirements.*

(a) Unless otherwise provided in this chapter, maximum driveway widths for Commercial, Industrial, and Institutional uses must not exceed 40 feet.

RESPONSE: The proposed driveway widths are as follows:

1. **The SW driveway is proposed at the existing driveway location on SW Cipole and is proposed to be widened to 50-feet for efficient truck access and maneuvering into and out of the site onto SW Cipole Road.**

2. **The NE driveway is proposed to be a full service driveway onto SW 124th and is proposed to be 50-feet wide for efficient truck access and maneuvering into and out of the site onto SW 124th. Removal of the median and creation of a left turn lane into the site is proposed.**

(b) Driveways must not be constructed within five feet of an adjacent property line, unless the two adjacent property owners elect to provide joint access to their respective properties, as provided by TDC73C.040.
RESPONSE: The NE and SW driveways are not within 5-feet of the adjacent property. The proposed SE driveway is located at the existing intersection of SW 124th and SW Cimino Street.

(c) The provisions of subsection (b) do not apply to townhouses and duplexes, which are allowed to construct driveways within five feet of adjacent property lines.

RESPONSE: Not applicable.

(d) There must be a minimum distance of 40 feet between any two adjacent driveways on a single property unless a lesser distance is approved by the City Manager.

RESPONSE: This criteria is met with this proposed plan.

(e) Must comply with the distance requirements for access as provided in TDC 75.

RESPONSE: This criteria is met with this proposed plan.

(f) Must comply with vision clearance requirements in TDC 75.

RESPONSE: This criteria is met with this proposed plan.

PARKING LOT LANDSCAPING

TDC 73C.200. Parking Lot Landscaping Standards Purpose and Applicability.

TDC 73C.240. Industrial Parking Lot Landscaping Requirements.

Industrial uses must comply with the following landscaping requirements for parking lots in all zones.

(1) *General.* Locate landscaping or approved substitute materials in all areas not necessary for vehicular parking and maneuvering.

(2) *Clear Zone.* Clear zone required for the driver at ends of on-site drive aisles and at driveway entrances, vertically between a maximum of 30 inches and a minimum of eight feet as measured from the ground level.

(a) Exception: does not apply to parking structures and underground parking.

(3) *Perimeter.* Minimum five feet in width in all off-street parking and vehicular circulation areas, including loading areas and must comply with the following:

(a) Deciduous trees located not more than 30 feet apart on average as measured on center;

(b) Shrubs or ground cover, planted so as to achieve 90 percent coverage within three years;

(c) Plantings which reach a mature height of 30 inches in three years which provide screening of vehicular headlights year round;

(d) Native trees and shrubs are encouraged; and

(e) Exception: Not required where off-street parking areas on separate lots are adjacent to one another and connected by vehicular access.

(4) *Landscape Island.* Minimum 25 square feet per parking stall must be improved with landscape island areas and must comply with the following.

(a) May be lower than the surrounding parking surface to allow them to receive stormwater run-off and function as water quality facilities as well as parking lot landscaping;

(b) Must be protected from vehicles by curbs, but the curbs may have spaces to allow drainage into the islands;

(c) Islands must be utilized at aisle ends to protect parked vehicles from moving vehicles and emphasize vehicular circulation patterns;

(d) Landscape separation required for every eight continuous spaces in a row;

(e) Must be planted with one deciduous shade trees for every four parking spaces; Required trees must be evenly dispersed throughout the parking lot;

(f) Must be planted with groundcover or shrubs;

(g) Native plant materials are encouraged;

(h) Landscape island areas with trees must be a minimum of five feet in width (from inside of curb to curb);

(i) Required plant material in landscape islands must achieve 90 percent coverage within three years; and

(j) Exception: Landscape square footage requirements do not apply to parking structures and underground parking.

RESPONSE: All of the above criteria are met with this proposal. See the Site Plan and Landscape Plan.

(5) *Landscaping Along Driveway Access.* For lots with 12 or more parking spaces:

(a) Landscape area at least five (5) feet in width on each side of an accessway;

(b) Landscape area must extend 30 feet back from the property line; and

(c) Exceptions: does not apply to parking structures and underground parking which must be determined through the Architectural Review process.

RESPONSE: All of the above criteria are met with this proposal. See the Site Plan and Landscape Plan.

CHAPTER 73D WASTE AND RECYCLABLES MANAGEMENT STANDARDS

TDC 73D.010. Applicability and Objectives.

(1) *Applicability.* The requirements of this Chapter apply to all new or expanded:

(a) Common wall residential developments containing five or more units;

(b) Commercial developments;

(c) Industrial developments; and **RESPONSE: This project is an Industrial development.**

(d) Institutional developments.

TDC 73D.020. Design Methods.

An applicant required to provide mixed solid waste and source separated recyclables storage areas must comply with one of following methods:

TDC 73D.030. Minimum Standards Method.

This method specifies a minimum storage area requirement based on the size and general use category of the new or expanded development. This method is most appropriate when specific use of a new or expanded development is not known. It provides specific dimensional standards for the minimum size of storage areas by general use category.

RESPONSE: This Shell Building is anticipated to have between one and four future tenants that will operate warehouse/distribution operations from the building. Future office buildouts are anticipated to be small, accounting for about 2% of the building area. It is anticipated that the requirement for waste storage will be very small as these uses do not generate much waste or recyclable material. The actual requirement for Waste Storage will be determined with each Tenant Improvement permit. It is anticipated that if more waste storage is required than the two exterior waste storage areas, that the added required area will be provided within the building structure in each of the tenant's space.

(1) The size and location of the storage area(s) must be indicated on the site plan. Requirements are based on an assumed storage area height of four feet for mixed solid waste and source separated recyclables. Vertical storage higher than four feet, but no higher than seven feet may be used to accommodate the same volume of storage in a reduced floor space (potential reduction of 43 percent of specific requirements). Where vertical or stacked storage is proposed, submitted plans must include drawings to illustrate the layout of the storage area and dimensions for containers.

(2) The storage area requirement is based on uses. If a building has more than one use and that use occupies 20 percent or less of the gross leasable area (GLA) of the building, the GLA occupied by that use must be counted toward the floor area of the predominant use(s). If a building has more than one use and that use occupies more than 20 percent of the GLA of the building, then the storage area requirement for the whole building must be the sum of the area of each use. Minimum storage area requirements by use is as follows:

(c) Commercial, industrial, and institutional developments must provide a minimum storage area of ten square feet plus:

(i) Office—Four square feet/1,000 square feet gross leasable area (GLA); **RESPONSE: It is not anticipated that this use will occupy more than 2% of the building with the future tenant improvements.**

(ii) Retail—Ten square feet/1,000 square feet GLA; **RESPONSE: This is not an anticipated future use of the building.**

(iii) Wholesale/Warehouse/Manufacturing—Six square feet/1,000 square feet GLA; **RESPONSE: This is anticipated to be the major use of the building with the future tenant improvements. The actual required areas for the waste storage will be determined with the future Tenant Improvement permits when tenants are secured for the building.**

(iv) Educational and Institutional—Four square feet/1,000 square feet GLA; and **RESPONSE: This is not an anticipated future use of the building.**

(v) All other uses—Four square feet/1,000 square feet GLA. **RESPONSE: This is not an anticipated future use of the building.**

(3) Mixed solid waste and source separated recyclables storage areas for multiple tenants on a single site may be combined and shared.

RESPONSE: It is anticipated that the future tenants of this proposed shell building will share the two outdoor waste storage areas.

TDC 73D.040. Waste Assessment Method.

RESPONSE: Not used.

TDC 73D.050. Comprehensive Recycling Plan Method.

RESPONSE: Not used.

TDC 73D.060. Franchised Hauler Review Method.

RESPONSE: Not used but may be applicable when tenants are selected for this Shell Building.

TDC 73D.070. Location, Design and Access Standards.

The following location, design, and access standards are applicable to all storage areas:

(1) *Location Standards.*

(a) The storage area for source separated recyclables may be collocated with the storage area for mixed solid waste. **RESPONSE: Recyclables are proposed to be collocated with mixed solid waste.**

(b) Storage area space requirements can be satisfied with a single location or multiple locations and can combine both interior and exterior locations. **RESPONSE: Two locations for exterior waste storage are proposed; one at the SE side and one at the NW side. These are provided with the Shell construction. When Tenants are selected for the building, additional waste storage areas will be provided, most likely within the structure.**

(c) Exterior storage areas must:

(i) Be located in central and visible locations on the site to enhance security for users;

(ii) Be located in a parking area; and

(iii) Not be located within a required front yard setback or in a yard adjacent to a public or private street.

RESPONSE: These 3 criteria are satisfied with the two proposed exterior waste storage areas.

(2) *Design Standards.*

(a) The dimensions of the storage area must accommodate containers consistent with current methods of local collection at time of construction or alteration.

(b) Indoor and outdoor storage areas must comply with Oregon Building and Fire Code requirements.

(c) Exterior storage areas must be enclosed by a sight obscuring fence or wall at least six feet in height.

(d) Evergreen plants must be placed around the enclosure walls, excluding the gate or entrance openings for common wall, commercial, and institutional developments.

(e) Gate openings for haulers must be a minimum of ten feet wide and must be capable of being secured in a closed and open position.

(f) Horizontal clearance must be a minimum of ten feet and a vertical clearance of eight feet is required if the storage area is covered.

(g) A separate pedestrian access must also be provided in common wall, commercial, and institutional developments.

(h) Exterior storage areas must have either a concrete or asphalt floor surface.

(i) Storage areas and containers must be clearly labeled to indicate the type of material accepted.

RESPONSE: These 9 criteria are satisfied with the two proposed exterior waste storage areas except criteria (g) does not apply to this development.

(3) *Access Standards.*

(a) Storage areas must be accessible to users at convenient times of the day, and to hauler personnel on the day and approximate time they are scheduled to provide hauler service.

(b) Storage areas must be designed to be easily accessible to hauler trucks and equipment, considering paving, grade, gate clearance and vehicle access.

(c) Storage areas must be accessible to hauler trucks without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius must be provided to allow hauler trucks to safely exit the site in a forward motion.

(d) Storage areas must located so that pedestrian and vehicular traffic movement are not obstructed on site or on public streets adjacent to the site.

(e) The following is an exception to the access standard:

(i) Access may be limited for security reasons.

RESPONSE: These 5 criteria are satisfied with the two proposed exterior waste storage areas.

CHAPTER 74 PUBLIC IMPROVEMENT REQUIREMENTS

TDC 74.110. Phasing of Improvements.

The applicant may build the development in phases. If the development is to be phased the applicant must submit a phasing plan to the City Manager for approval with the development application. The timing and extent or scope of public improvements and the conditions of development must be determined by the City Council on subdivision applications and by the City Manager on other development applications.

RESPONSE: Phasing is not anticipated with this development proposal.

TDC 74.120. Public Improvements.

(1) Except as specially provided, all public improvements must be installed at the expense of the applicant. All public improvements installed by the applicant must be constructed and guaranteed as to workmanship and material as required by the Public Works Construction Code prior to acceptance by the City. Work must not be undertaken on any public improvement until after the construction plans have been approved by the City Manager and a Public Works Permit issued and the required fees paid.

RESPONSE: The anticipated Public Improvements with this development are:

1. **The driveway approach at SW 124th at the NE of this site and the driveway at the SW of the site to SW Cipole.**
2. **A full service driveway is requested at the NE of the site which will require Median Removal at SW 124th to allow .**
3. **A half-street improvement for the SW Cipole Road frontage to Washington County standards.**

(2) In accordance with the Tualatin Basin Program for fish and wildlife habitat the City intends to minimize or eliminate the negative impacts of public streets by modifying right-of-way widths and street improvements when appropriate. The City Manager is authorized to modify right-of-way widths and street improvements to address the negative impacts on fish and wildlife habitat.

RESPONSE: No impacts to fish and wildlife habitat are anticipated with the Public Improvements.

TDC 74.130. Private Improvements.

All private improvements must be installed at the expense of the applicant. The property owner must retain maintenance responsibilities over all private improvements.

RESPONSE: Understood.

TDC 74.140. Construction Timing.

(1) All the public improvements required under this chapter must be completed and accepted by the City prior to the issuance of a Certificate of Occupancy; or, for subdivision and partition applications, in accordance with the requirements of the Subdivision regulations.

(2) All private improvements required under this Chapter must be approved by the City prior to the issuance of a Certificate of Occupancy; or for subdivision and partition applications, in accordance with the requirements of the Subdivision regulations.

RESPONSE: These criteria are understood.

RIGHT-OF-WAY

TDC 74.210. Minimum Street Right-of-Way Widths.

The width of streets in feet must not be less than the width required to accommodate a street improvement needed to mitigate the impact of a proposed development. In cases where a street is required to be improved according to the standards of the TDC, the width of the right-of-way must not be less than the minimums indicated in TDC Chapter 74, Public Improvement Requirements, Figures 74-2A through 74-2G.

(1) For subdivision and partition applications, wherever existing or future streets adjacent to property proposed for development are of inadequate right-of-way width the additional right-of-way necessary to comply with TDC Chapter 74, Public Improvement Requirements, Figures 74-2A through 74-2G must be shown on the final subdivision or partition plat prior to approval of the plat by the City. This right-of-way dedication must be for the full width of the property abutting the roadway and, if required by the City Manager, additional dedications must be provided for slope and utility easements if deemed necessary.

RESPONSE: Not applicable.

(2) For development applications other than subdivisions and partitions, wherever existing or future streets adjacent to property proposed for development are of inadequate right-of-way width, the additional right-of-way necessary to comply with TDC Chapter 74, Public Improvement Requirements, Figures 74-2A through 74-2G must be dedicated to the City for use by the public prior to issuance of any building permit for the proposed development. This right-of-way dedication must be for the full width of the property abutting the roadway and, if required by the City Manager, additional dedications must be provided for slope and utility easements if deemed necessary.

RESPONSE: An additional 1-foot of ROW is anticipated to be dedicated for the SW Cipole half-street improvement.

(3) For development applications that will impact existing streets not adjacent to the applicant's property, and to construct necessary street improvements to mitigate those impacts would require additional right-of-way, the applicant must be responsible for obtaining the necessary right-of-way from the property owner. A right-of-way dedication deed form must be obtained from the City Manager and upon completion returned to the City Manager for acceptance by the City. On subdivision and partition plats the right-of-way dedication must be accepted by the City prior to acceptance of the final plat by the City. On other development applications the right-of-way dedication must be accepted by the City prior to issuance of building permits. The City may elect to exercise eminent domain and condemn necessary off-site right-of-way at the applicant's request and expense. The City Council must determine when condemnation proceedings are to be used.

RESPONSE: Not applicable

(4) If the City Manager deems that it is impractical to acquire the additional right-of-way as required in subsections (1)—(3) of this section from both sides of the center-line in equal amounts, the City Manager may require that the right-of-way be dedicated in a manner that would result in unequal dedication from each side of the road. This requirement will also apply to slope and utility easements as discussed in TDC 74.320 and 74.330. The City Manager's recommendation must be presented to the City Council in the preliminary plat approval for subdivisions and partitions, and in the recommended decision on all other development applications, prior to finalization of the right-of-way dedication requirements.

RESPONSE: Not anticipated.

(5) Whenever a proposed development is bisected by an existing or future road or street that is of inadequate right-of-way width according to TDC Chapter 74, Public Improvement Requirements, Figures 74-2A through 74-2G, additional right-of-way must be dedicated from both sides or from one side only as determined by the City Manager to bring the road right-of-way in compliance with this section.

RESPONSE: Not applicable.

(6) When a proposed development is adjacent to or bisected by a street proposed in the Transportation System Plan and no street right-of-way exists at the time the development is proposed, the entire right-of-way as shown in TDC Chapter 74, Public Improvement Requirements, Figures 74-2A through 74-2G must be dedicated by the applicant. The dedication of right-of-way required in this subsection must be along the route of the road as determined by the City.

RESPONSE: Not applicable.

TDC 74.220. Parcels Excluded from Development.

On subdivision development applications which include land partitioned off or having adjusted property lines from the original parcel, but do not include the original parcel, the applicant must be responsible for obtaining any necessary right-of-way from the owner of the original parcel if the right-of-way is needed to accommodate street improvements required of the applicant. The applicant must submit a completed right-of-way dedication deed to the City Manager for acceptance. The right-of-way dedication must be accepted by the City prior to the City approving the final subdivision plat.

RESPONSE: Not applicable.

EASEMENTS AND TRACTS

TDC 74.310. Greenway, Natural Area, Bike, and Pedestrian Path Dedications and Easements.

RESPONSE: Not applicable.

TDC 74.320. Slope Easements.

(1) The applicant must obtain and convey to the City any slope easements determined by the City Manager to be necessary adjacent to the proposed development site to support the street improvements in the public right-of-way or accessway or utility improvements required to be constructed by the applicant.

RESPONSE: Any required slope easements will be provided.

(2) For subdivision and partition applications, the slope easement dedication area must be shown to be dedicated to the City on the final subdivision or partition plat prior to approval of the plat by the City; or

RESPONSE: Not applicable.

(3) For all other development applications, a slope easement dedication must be submitted to the City Manager; building permits must not be issued for the development prior to acceptance of the easement by the City.

RESPONSE: Any required slope easements will be completed prior to Building Permit issuance.

TDC 74.330. Utility Easements.

(1) Utility easements for water, sanitary sewer and storm drainage facilities, telephone, television cable, gas, electric lines and other public utilities must be granted to the City.

RESPONSE: Any required utility easements will be granted to the City.

(2) For subdivision and partition applications, the on-site public utility easement dedication area must be shown to be dedicated to the City on the final subdivision or partition plat prior to approval of the plat by the City; and

RESPONSE: Not applicable.

(3) For subdivision and partition applications which require off-site public utility easements to serve the proposed development, a utility easement must be granted to the City prior to approval of the final plat by the City. The City may elect to exercise eminent domain and condemn necessary off-site public utility easements at the applicant's request and expense. The City Council must determine when condemnation proceedings are to be used.

RESPONSE: Not applicable.

(4) For development applications other than subdivisions and partitions, and for both on-site and off-site easement areas, a utility easement must be granted to the City; building permits must not be issued for the development prior to acceptance of the easement by the City. The City may elect to exercise eminent domain and condemn necessary off-site public utility easements at the applicant's request and expense. The City Council must determine when condemnation proceedings are to be used.

RESPONSE: Any required easements will be completed prior to Building Permit issuance.

(5) The width of the public utility easement must meet the requirements of the Public Works Construction Code. All subdivisions and partitions must have a 6-foot public utility easement adjacent to the street and a 5-foot public utility easement adjacent to all side and rear lot lines. Other easements may be required as determined by the City Manager.

RESPONSE: Any required easements will have widths to meet the Public Works Construction Code.

TDC 74.340. Watercourse Easements.

RESPONSE: Not anticipated on this project.

TDC 74.350. Maintenance Easement or Lots.

A dedicated lot or easement will be required when access to public improvements for operation and maintenance is required, as determined by the City Manager. Access for maintenance vehicles must be constructed of an all-weather driving surface capable of carrying a 50,000-pound vehicle. The width of the lot or easement must be at least 15-feet in order to accommodate City maintenance vehicles. In subdivisions and partitions, the easement or lot must be dedicated to the City on the final plat. In any other development, the easement or lot must be granted to the City and recorded prior to issuance of a building permit.

RESPONSE: Maintenance easements will be provided as required.

TDC 74.410. Future Street Extensions.

RESPONSE: None are anticipated with this project.

TDC 74.420. Street Improvements.

When an applicant proposes to develop land adjacent to an existing or proposed street, including land which has been excluded under TDC 74.220, the applicant should be responsible for the improvements to the adjacent existing or proposed street that will bring the improvement of the street into conformance with the Transportation Plan (TDC Chapter 11), TDC 74.425 (Street Design Standards), and the City' s Public Works Construction Code, subject to the following provisions:

(1) For any development proposed within the City, roadway facilities within the right-of-way described in TDC 74.210 must be improved to standards as set out in the Public Works Construction Code.

(2) The required improvements may include the rebuilding or the reconstruction of any existing facilities located within the right-of-way adjacent to the proposed development to bring the facilities into compliance with the Public Works Construction Code.

(3) The required improvements may include the construction or rebuilding of off-site improvements which are identified to mitigate the impact of the development.

(4) Where development abuts an existing street, the improvement required must apply only to that portion of the street right-of-way located between the property line of the parcel proposed for development and the centerline of the right-of-way, plus any additional pavement beyond the centerline deemed necessary by the City Manager to ensure a smooth transition between a new improvement and the existing roadway (half-street improvement). Additional right-of-way and street improvements and off-site right-of-way and street improvements may be required by the City to mitigate the impact of the development. The new pavement must connect to the existing pavement at the ends of the section being improved by tapering in accordance with the Public Works Construction Code.

(5) If additional improvements are required as part of the Access Management Plan of the City, TDC Chapter 75, the improvements must be required in the same manner as the half-street improvement requirements.

(6) All required street improvements must include curbs, sidewalks with appropriate buffering, storm drainage, streetlights, street signs, street trees, and, where designated, bikeways and transit facilities.

(7) For subdivision and partition applications, the street improvements required by TDC Chapter 74 must be completed and accepted by the City prior to signing the final subdivision or partition plat, or prior to releasing the security provided by the applicant to assure completion of such improvements or as otherwise specified in the development application approval.

(8) For development applications other than subdivisions and partitions, all street improvements required by this section must be completed and accepted by the City prior to the issuance of a Certificate of Occupancy.

(9) In addition to land adjacent to an existing or proposed street, the requirements of this section must apply to land separated from such a street only by a railroad right-of-way.

(10) Streets within, or partially within, a proposed development site must be graded for the entire right-of-way width and constructed and surfaced in accordance with the Public Works Construction Code.

(11) Existing streets which abut the proposed development site must be graded, constructed, reconstructed, surfaced or repaired as necessary in accordance with the Public Works Construction Code and TDC Chapter 11, Transportation Plan, and TDC 74.425 (Street Design Standards).

(12) Sidewalks with appropriate buffering must be constructed along both sides of each internal street and at a minimum along the development side of each external street in accordance with the Public Works Construction Code.

(13) The applicant must comply with the requirements of the Oregon Department of Transportation (ODOT), Tri-Met, Washington County and Clackamas County when a proposed development site is adjacent to a roadway under any of their jurisdictions, in addition to the requirements of this chapter.

(14) The applicant must construct any required street improvements adjacent to parcels excluded from development, as set forth in TDC 74.220 of this chapter.

(15) Except as provided in TDC 74.430, whenever an applicant proposes to develop land with frontage on certain arterial streets and, due to the access management provisions of TDC Chapter 75, is not allowed direct access onto the arterial, but instead must take access from another existing or future public street thereby providing an alternate to direct arterial access, the applicant must be required to construct and place at a minimum street signage, a sidewalk, street trees and street lights along that portion of the arterial street adjacent to the applicant's property. The three certain arterial streets are S.W. Tualatin-Sherwood Road, S.W. Pacific Highway (99W) and S.W. 124th Avenue. In addition, the applicant may be required to construct and place on the arterial at the intersection of the arterial and an existing or future public non-arterial street warranted traffic control devices (in accordance with the Manual on Uniform Traffic Control Devices, latest edition), pavement markings, street tapers and turning lanes, in accordance with the Public Works Construction Code.

(16) The City Manager may determine that, although concurrent construction and placement of the improvements in (14) and (15) of this section, either individually or collectively, are impractical at the time of development, the improvements will be necessary at some future date. In such a case, the applicant must sign a written agreement guaranteeing future performance by the applicant and any successors in interest of the property being developed. The agreement must be subject to the City's approval.

(17) Intersections should be improved to operate at a level of service of at least D and E for signalized and unsignalized intersections, respectively.

(18) Pursuant to requirements for off-site improvements as conditions of development approval, proposed multi-family residential, commercial, or institutional uses that are adjacent to a major transit stop will be required to comply with the City's Mid-Block Crossing Policy.

RESPONSE: A half-street improvement on SW Cipole Road will be included with this proposal to meet the above requirements and the requirements of Washington County.

TDC 74.425. Street Design Standards.

(1) Street design standards are based on the functional and operational characteristics of streets such as travel volume, capacity, operating speed, and safety. They are necessary to ensure that the system of streets, as it develops, will be capable of safely and efficiently serving the traveling public while also accommodating the orderly development of adjacent lands.

(2) The proposed street design standards are shown in Figures 72A through 72G. The typical roadway cross sections comprise the following elements: right-of-way, number of travel lanes, bicycle and pedestrian facilities, and other amenities such as landscape strips. These figures are intended for planning purposes for new road construction, as well as for those locations where it is physically and economically feasible to improve existing streets.

(3) In accordance with the Tualatin Basin Program for fish and wildlife habitat it is the intent of Figures 74-2A through 74-2G to allow for modifications to the standards when deemed appropriate by the City Manager to address fish and wildlife habitat.

(4) All streets must be designed and constructed according to the preferred standard. The City Manager may reduce the requirements of the preferred standard based on specific site conditions, but in no event will the

requirement be less than the minimum standard. The City Manager must take into consideration the following factors when deciding whether the site conditions warrant a reduction of the preferred standard:

(a) *Arterials:*

(i) Whether adequate right-of-way exists;

(ii) Impacts to properties adjacent to right-of-way;

(iii) Current and future vehicle traffic at the location; and

(iv) Amount of heavy vehicles (buses and trucks).

(b) *Collectors:*

(i) Whether adequate right-of-way exists;

(ii) Impacts to properties adjacent to right-of-way;

(iii) Amount of heavy vehicles (buses and trucks); and

(iv) Proximity to property zoned manufacturing or industrial.

(c) *Local Streets:*

(i) Local streets proposed within areas which have environmental constraints and/or sensitive areas and will not have direct residential access may utilize the minimum design standard.

(ii) When the minimum design standard is allowed, the City Manager may determine that no parking signs are required on one or both sides of the street.

RESPONSE: A half-street improvement on SW Cipole Road will be included with this proposal to meet the above requirements and the requirements of Washington County. The street will be improved to meet the City of Tualatin requirements for a Major Collector.

TDC 74.430. Streets, Modifications of Requirements in Cases of Unusual Conditions.

(1) When, in the opinion of the City Manager, the construction of street improvements in accordance with TDC 74.420 would result in the creation of a hazard, or would be impractical, or would be detrimental to the City, the City Manager may modify the scope of the required improvement to eliminate such hazardous, impractical, or detrimental results. Examples of conditions requiring modifications to improvement requirements include but are not limited to horizontal alignment, vertical alignment, significant stands of trees, fish and wildlife habitat areas, the amount of traffic generated by the proposed development, timing of the development or other conditions creating hazards for pedestrian, bicycle or motor vehicle traffic. The City Manager may determine that, although an improvement may be impractical at the time of development, it will be necessary at some future date. In such cases, a written agreement guaranteeing future performance by the applicant in installing the required improvements must be signed by the applicant and approved by the City.

(2) When the City Manager determines that modification of the street improvement requirements in TDC 74.420 is warranted pursuant to subsection (1) of this section, the City Manager must prepare written findings of modification. The City Manager must forward a copy of said findings and description of modification to the applicant, or his authorized agent, as part of the Utility Facilities Review for the proposed development, as provided by TDC Chapter 32 (Procedures). The decision of the City Manager may be appealed to the City Council in accordance with TDC Chapter 32 (Procedures).

(3) To accommodate bicyclists on streets prior to those streets being upgraded to the full standards, an interim standard may be implemented by the City. These interim standards include reduction in motor vehicle lane

width to ten feet (the minimum specified in AASHTO's A Policy on Geo-metric Design of Highways and Streets (1990)), a reduction of bike lane width to 4-feet (as measured from the longitudinal gutter joint to the centerline of the bike lane stripe), and a paint-striped separation two to four feet wide in lieu of a center turn lane. Where available roadway width does not provide for these minimums, the roadway can be signed for shared use by bicycle and motor vehicle travel. When width constraints occur at an intersection, bike lanes should terminate 50 feet from the intersection with appropriate signing.

RESPONSE: Not anticipated to be applicable.

TDC 74.440. Streets, Traffic Study Required.

(1) The City Manager may require a traffic study to be provided by the applicant and furnished to the City as part of the development approval process as provided by this Code, when the City Manager determines that such a study is necessary in connection with a proposed development project in order to:

   (a) Assure that the existing or proposed transportation facilities in the vicinity of the proposed development are capable of accommodating the amount of traffic that is expected to be generated by the proposed development; and/or

   (b) Assure that the internal traffic circulation of the proposed development will not result in conflicts between on-site parking movements and/or on-site loading movements and/or on-site traffic movements, or impact traffic on the adjacent streets.

(2) The required traffic study must be completed prior to the approval of the development application.

(3) The traffic study must include, at a minimum:

   (a) An analysis of the existing situation, including the level of service on adjacent and impacted facilities.

   (b) An analysis of any existing safety deficiencies.

   (c) Proposed trip generation and distribution for the proposed development.

   (d) Projected levels of service on adjacent and impacted facilities.

   (e) Recommendation of necessary improvements to ensure an acceptable level of service for roadways and a level of service of at least D and E for signalized and unsignalized intersections respectively, after the future traffic impacts are considered.

   (f) The City Manager will determine which facilities are impacted and need to be included in the study.

   (g) The study must be conducted by a registered engineer.

(4) The applicant must implement all or a portion of the improvements called for in the traffic study as determined by the City Manager.

RESPONSE: A Traffic Study done by Lancaster Mobley has been provided with this AR Submittal.

TDC 74.450. Bikeways and Pedestrian Paths.

RESPONSE: Not applicable.

TDC 74.460. Accessways in Residential, Commercial and Industrial Subdivisions and Partitions.

RESPONSE: Not applicable, subdivision or partition are not proposed.

TDC 74.470. Street Lights.

(1) Street light poles and luminaries must be installed in accordance with the Public Works Construction Code.

(2) The applicant must submit a street lighting plan for all interior and exterior streets on the proposed development site prior to issuance of a Public Works Permit.

RESPONSE: Street lights on SW Cipole will be provided as required.

TDC 74.475. Street Names.

(1) A street name must not be used which will duplicate or be confused with the names of existing streets in the Counties of Washington or Clackamas, except for extensions of existing streets. Street names and numbers must conform to the established pattern in the surrounding area.

(2) The City Manager must maintain the approved list of street names from which the applicant may choose. Prior to the creation of any street, the street name must be approved by the City Manager.

RESPONSE: Not applicable, no new streets are proposed.

TDC 74.480. Street Signs.

(1) Street name signs must be installed at all street intersections in accordance with standards adopted by the City.

(2) Stop signs and other traffic control signs (speed limit, dead-end, etc.) may be required by the City.

(3) Prior to approval of the final subdivision or partition plat, the applicant must pay the City a non-refundable fee equal to the cost of the purchase and installation of street signs, traffic control signs and street name signs. The location, placement, and cost of the signs must be determined by the City.

RESPONSE: Street signs will be provided as required.

TDC 74.485. Street Trees.

(1) Prior to approval of a residential subdivision or partition final plat, the applicant must pay the City a non-refundable fee equal to the cost of the purchase and installation of street trees. The location, placement, and cost of the trees must be determined by the City. This sum must be calculated on the interior and exterior streets as indicated on the final subdivision or partition plat.

RESPONSE: Not applicable.

(2) In nonresidential subdivisions and partitions street trees must be planted by the owners of the individual lots as development occurs.

RESPONSE: Not applicable.

(3) The Street Tree Ordinance specifies the species of tree which is to be planted and the spacing between trees.

RESPONSE: Street trees will be provided on SW Cipole as required.

UTILITIES

TDC 74.610. Water Service.

(1) Water lines must be installed to serve each property in accordance with the Public Works Construction Code. Water line construction plans must be submitted to the City Manager for review and approval prior to construction.

RESPONSE: A public waterline exists along the south property line of this site. Domestic water and fire water will be obtained for this project from that public main.

(2) If there are undeveloped properties adjacent to the subject site, public water lines must be extended by the applicant to the common boundary line of these properties. The lines must be sized to provide service to future development, in accordance with the City's Water System Master Plan, TDC Chapter 12.

RESPONSE: Not applicable, there are no undeveloped properties adjacent to the site.

(3) As set forth is TDC Chapter 12, Water Service, the City has three water service levels. All development applicants must be required to connect the proposed development site to the service level in which the development site is located. If the development site is located on a boundary line between two service levels the applicant must be required to connect to the service level with the higher reservoir elevation. The applicant may also be required to install or provide pressure reducing valves to supply appropriate water pressure to the properties in the proposed development site.

RESPONSE: A public waterline exists along the south property line of this site. Domestic water and fire water will be obtained for this project from that public main.

TDC 74.620. Sanitary Sewer Service.

(1) Sanitary sewer lines must be installed to serve each property in accordance with the Public Works Construction Code. Sanitary sewer construction plans and calculations must be submitted to the City Manager for review and approval prior to construction.

RESPONSE: Sanitary sewer lines will be installed in accordance with the Public Works Construction Code.

(2) If there are undeveloped properties adjacent to the proposed development site which can be served by the gravity sewer system on the proposed development site, the applicant must extend public sanitary sewer lines to the common boundary line with these properties. The lines must be sized to convey flows to include all future development from all up stream areas that can be expected to drain through the lines on the site, in accordance with the City's Sanitary Sewer System Master Plan, TDC Chapter 13.

RESPONSE: Not applicable, there are no undeveloped properties adjacent to the site.

TDC 74.630. Storm Drainage System.

(1) Storm drainage lines must be installed to serve each property in accordance with City standards and Clean Water Services standards. Storm drainage construction plans and calculations must be submitted to the City Manager for review and approval prior to construction.

RESPONSE: Storm lines will be installed in accordance with the City Standards and CWS requirements.

(2) The storm drainage calculations must confirm that adequate capacity exists to serve the site. The discharge from the development must be analyzed in accordance with the City's Storm and Surface Water Regulations and Clean Water Services standards.

RESPONSE: Storm drainage calculations will be provided. Discharge from the site will be to the existing culvert under SW 124th.

(3) If there are undeveloped properties adjacent to the proposed development site which can be served by the storm drainage system on the proposed development site, the applicant must extend storm drainage lines to the common boundary line with these properties. The lines must be sized to convey expected flows to include all future development from all up stream areas that will drain through the lines on the site, in accordance with the adopted Stormwater Master Plan.

RESPONSE: Not applicable, there are no undeveloped properties adjacent to the site.

TDC 74.640. Grading.

(1) Development sites must be graded to minimize the impact of storm water runoff onto adjacent properties and to allow adjacent properties to drain as they did before the new development.

RESPONSE: The proposed Site Grading minimizes the stormwater runoff to the adjacent properties.

(2) A development applicant must submit a grading plan showing that all lots in all portions of the development will be served by gravity drainage from the building crawl spaces; and that this development will not affect the drainage on adjacent properties. The City Manager may require the applicant to remove all excess material from the development site.

RESPONSE: There will be no crawl spaces under the proposed building. Storm drainage from this site will not affect the drainage on adjacent properties.

TDC 74.650. Water Quality, Storm Water Detention and Erosion Control.

(1) All Applications. The applicant must comply with the water quality, stormwater detention, and erosion control requirements in Tualatin Municipal Code Chapter 3-5 (Soil Erosion, Surface Water Management, Water Quality Facilities, and Building and Sewers) and Clean Water Services standards.

RESPONSE: Permits for water quality, stormwater detention and Erosion Control will be obtained complying with the requirements of Tualatin and CWS.

(2) Subdivisions and Partitions. Prior to approval of the final plat, an application for subdivision and partition development must:

(a) Submit a stormwater facilities design with calculations to satisfy the requirements of the Tualatin Municipal Code Chapter 3-5 (Soil Erosion, Surface Water Management, Water Quality Facilities, and Building And Sewers) and applicable Clean Water Services standards;

(b) Obtain a Stormwater Connection Permit from Clean Water Services; and

(c) Either construct a permanent on-site water quality facility and stormwater detention facility; or enter into an agreement with the City, as provided in TDC 36.320 and TMC 3-5-390, recorded against the property, to guarantee construction of a permanent on-site water quality facility and stormwater detention facility.

RESPONSE: Not applicable.

(3) All Development, Except Subdivisions and Partitions. Prior to issuance of any building permit, an applicant for any development, except Subdivisions and Partitions, must:

(a) Submit a stormwater facilities design with calculations to satisfy the requirements of the Tualatin Municipal Code Chapter 3-5 (Soil Erosion, Surface Water Management, Water Quality Facilities, and Building And Sewers);

RESPONSE: A stormwater facility design satisfying the TMC will be submitted for permit.

(b) Obtain a Stormwater Connection Permit from Clean Water Services; and

RESPONSE: A Stormwater connection Permit will be obtained.

(c) Either construct a permanent on-site water quality facility and stormwater detention facility; or enter into an agreement with the City, as provided in TMC 35-390, recorded against the property, to guarantee construction of a permanent on-site water quality facility and stormwater detention facility.

RESPONSE: A permanent, on-site Stormwater water quality and detention facility will be provided meeting the City and CWS standards.

(4) On-Site Private and Regional Non-Residential Facilities. For on-site private and regional non-residential public facilities, the applicant must:

(a) Enter into a stormwater facility agreement, as provided in TMC 3-5-390, recorded against the property. The stormwater facility agreement will include an operation and maintenance plan, provided by the City and consistent with Clean Water Services requirements, for the water quality facility.

RESPONSE: A Stormwater Facility agreement will be provided meeting CWS standards.

(b) Submit an erosion control plan prior to issuance of a Public Works Permit consistent with TMC 3-5 and Clean Water Services standards. No construction or disturbing of the site must occur until the erosion control plan is approved by the City and the required measures are in place and approved by the City.

RESPONSE: An Erosion Control plan will be provided meeting CWS standards prior to any site disturbance.

TDC 74.660. Underground.

(1) All utility lines including, but not limited to, those required for gas, electric, communication, lighting and cable television services and related facilities must be placed underground. Surface-mounted transformers, surface-mounted connection boxes and meter cabinets may be placed above ground. Temporary utility service facilities, high capacity electric and communication feeder lines, and utility transmission lines operating at 50,000 volts or above may be placed above ground. The applicant must make all necessary arrangements with all utility companies to provide the underground services. The City reserves the right to approve the location of all surface-mounted transformers.

RESPONSE: New utilities serving the proposed building will be placed underground.

(2) Any existing overhead utilities may not be upgraded to serve any proposed development. If existing overhead utilities are not adequate to serve the proposed development, the applicant must, at their own expense, provide an underground system. The applicant must be responsible for obtaining any off-site deeds and/or easements necessary to provide utility service to this site; the deeds and/or easements must be submitted to the City Manager for acceptance by the City prior to issuance of the Public Works Permit.

RESPONSE: There are overhead powerlines along SW Cipole Road. Determination of whether these powerlines need to be placed underground with this development will be determined after contacting the Electrical power

provider to determine if the existing service is adequate or if it needs to be upgraded.

TDC 74.670. Existing Structures.

RESPONSE: Not applicable.

TDC 74.700. Removal, Destruction or Injury of Trees.

It is unlawful for a person, without a written permit from the City Manager, to remove, destroy, break or injure a tree, plant or shrub, that is planted or growing in or upon a public right-of-way within the City, or cause, authorize, or procure a person to do so, authorize or procure a person to injure, misuse or remove a device set for the protection of any tree, in or upon a public right-of-way.

RESPONSE: No trees will be removed from the ROW without a permit.

TDC 74.705. Street Tree Removal Permit.

RESPONSE: No existing street trees are proposed to be removed.

TDC 74.706. Street Tree Fees.

A person who applies to remove a street tree under TDC 74.705 must pay all costs incurred by the City as reflected in the applicable fees listed in the city of Tualatin Fee Schedule. City actions and associated fees include but are not limited to inspection of a street tree requested for removal, removal of a street tree, removal of a stump, planting of a street tree, and inspection(s) to determine if the applicant has fulfilled permit requirements.

RESPONSE: Not applicable.

TDC 74.707. Street Tree Voluntary Planting.

A person who desires to plant a tree in or upon a public right-of-way may plant or have the City plant a species of street tree permitted by Table 74-1 without a City permit, if the tree is not a replacement for a tree that the person has removed. Such a person may submit a request to the City with payment of fee(s) so that the City may plant a street tree. If a stump exists where a street tree is to be planted, the person must remove the stump or pay a fee to the City as established in TDC 74.706 so that the City may remove the stump on behalf of the person. In all instances, a person who desires to plant a tree must comply with other applicable TDC sections and any additional requirements of the City Manager.

RESPONSE: Not applicable.

TDC 74.708. Street Tree Emergencies.

(1) If emergency conditions occur that require the immediate cutting or removal of street trees to avoid danger or hazard to persons or property, the City Manager must issue emergency permits without payment of fees and formal applications. If the City Manager is unavailable, the adjacent property owners may proceed to cut the trees without permits to the extent necessary to eliminate the immediate danger or hazard. If a street tree is cut under this section without filing of an application with the City Manager, the person doing so must report the action to the City Manager within two City business days without payment of fee and must

provide such information and evidence as may be reasonably required by the City Manager to explain and justify the removal.

(2) In all instances, a person who removes a street tree as a result of an emergency must replace it within 60 days of notifying the City Manager. The City reserves the right to waive this requirement.

(3) A person who fails to comply with TDC 74.708 must pay an enforcement fee and a restoration fee to the City of Tualatin, as set forth in TDC 34.220(3), in addition to civil penalties in TDC 31.111.

(4) If no emergency is found to exist, no person must cut or remove a street tree without complying with the requirement of the Tualatin Development Code.

RESPONSE: Not applicable.

TDC 74.710. Open Ground.

When impervious material or substance is laid down or placed in or upon a public right-of-way near a tree, at least nine square feet of open ground for a tree up to three inches in diameter must be provided about the base of the trunk of each tree.

RESPONSE: To be shown on Street improvement landscape plan.

TDC 74.715. Attachments to Trees.

It is unlawful for a person to attach or keep attached a rope, wire, chain, sign or other device to a tree, plant or shrub in or upon a public right-of-way or to the guard or stake intended for the protection of such tree, except as a support for a tree, plant or shrub.

RESPONSE: No attachments will be made to trees in the right of way.

TDC 74.720. Protection of Trees During Construction.

(1) During the erection, repair, alteration or removal of a building or structure, it is unlawful for the person in charge of such erection, repair, alteration or removal to leave a tree in or upon a public right-of-way in the vicinity of the building or structure without a good and sufficient guard or protectors to prevent injury to the tree arising out of or by reason of such erection, repair, alteration or removal.

(2) Excavations and driveways must not be placed within six feet of a tree in or upon a public right-of-way without written permission from the City Manager. During excavation or construction, the person must guard the tree within six feet and all building material or other debris must be kept at least four feet from any tree.

RESPONSE: Existing street trees on SW 124th will be protected during the construction of the new driveway.

TDC 74.725. Maintenance Responsibilities.

Trees, shrubs or plants standing in or upon a public right-of-way, on public or private grounds that have branches projecting into the public street or sidewalk must be kept trimmed by the owner of the property adjacent to or in front of where such trees, shrubs or plants are growing so that:

(1) The lowest branches are not less than 12 feet above the surface of the street and are not less than 14 feet above the surface of streets designated as state highways.

(2) The lowest branches are not less than eight feet above the surface of a sidewalk or footpath.

(3) A plant, tree, bush or shrub must not be more than 24 inches in height in the triangular area at the street or highway corner of a corner lot, or the alley-street intersection of a lot, such an area defined by a line across the corner between the points on the street right-of-way line measured ten feet back from the corner, and extending the line to the street curbs or, if there are no curbs, then to that portion of the street or alley used for vehicular traffic.

(4) Newly planted trees may remain untrimmed if they do not interfere with street traffic or persons using the sidewalk or obstruct the light of a street electric lamp.

(5) Maintenance responsibilities of the property owner include repair and upkeep of the sidewalk in accordance with the City Sidewalk Maintenance Ordinance.

RESPONSE: Landscaping in the ROW along SW 124th and new landscaping proposed in the SW Cipole Road will be maintained by the property owner.

TDC 74.730. Notice of Violation.

When the owner, lessee, occupant or person in charge of private grounds neglects or refuses to trim a tree, shrub or plant as provided in TDC 74.725, the City Manager must cause a written notice to trim such tree or trees, shrubs or plants to be served upon such owner, lessee, occupant or person in charge, within ten days after the giving the notice; and if the owner, lessee or occupant or person in charge fails to do so, the person is guilty of violating this ordinance and subject to the penalties in TDC 74.760. The notice must be served upon the owner, lessee, occupant or person in charge either by "Certified Mail-Return Receipt Requested," or by posting the same notice on the property or near to the trees, shrubs or plants to be trimmed.

RESPONSE: Understood.

TDC 74.735. Trimming by City.

If the owner, lessee, occupant or person in charge of the property fails and neglects to trim the trees, shrubs or plants within ten days after service of the notice in TDC 74.730, the City Manager may trim the trees, shrubs or plants. Such trimming by the City does not act to relieve such owner, lessee, occupant or person in charge of responsibility for violating this Chapter.

RESPONSE: Understood.

TDC 74.740. Prohibited Trees.

It is unlawful for a person to plant a tree within the right-of-way of the City of Tualatin that is not in conformance with City standards, including Table 74-1. Any tree planted subsequent to adoption of this Chapter not in compliance with City standards, including Table 74-1, must be removed at the expense of the property owner.

RESPONSE: New trees proposed for the SW Cipole ROW will meet the City and Washington County Standards.

TDC 74.745. Cutting and Planting Specifications.

The following regulations are established for the planting, trimming and care of trees in or upon the public right-of-way of the City.

(1) When trees are cut down, the stump must be removed to a depth of six inches below the surface of the ground or finish grade of the street, whichever is of greater depth.

(2) Trees must be planted in accordance with City standards, Table 74-1, except when a greater density is allowed under a special permit from the City Manager.

RESPONSE: New trees in the SW Cipole ROW will be planted to meet City and County Standards.

TDC 74.750. Removal or Treatment by City.

The City Manager may remove or cause or order to be removed a tree, plant or shrub, planted or growing in or upon a public right-of-way which by its nature causes an unsafe condition or is injurious to sewers or public improvements, or is affected with an injurious fungus disease, insect or other pest. When, in the opinion of the City Manager, trimming or treatment of a tree or shrub located on private grounds, but having branches extending over a public right-of-way is necessary, the City Manager may trim or treat such a branch or branches, or cause or order branches to be trimmed or treated.

RESPONSE: Understood.

TDC 74.755. Appeal of Permit Denial.

When application for a permit under this Chapter is denied by the City Manager, an order is issued by the City Manager directing certain trees, shrubs or plants to be trimmed or removed, or a permit is granted by the City Manager containing conditions which the applicant deems unreasonable, the applicant may appeal to the Council in writing and filed with the City Recorder within ten City business days after the denial of the permit sought or the making of the order the appellant deems unreasonable. After hearing, the Council may either grant or deny the application, rescind or modify the order from which the appeal was taken.

RESPONSE: Not anticipated at this time.

TDC 74.760. Penalties.

A person who violates this ordinance or fails to trim a tree or shrub for which notice to do so was provided, must, upon conviction, be fined not more than $100.00.

RESPONSE: Understood

TDC 74.765. Street Tree Species and Planting Locations.

All trees, plants or shrubs planted in the right-of-way of the City must conform in species and location and in accordance with the street tree plan and City standards, including Table 74-1. If the City Manager determines that none of the species in City standards, including Table 74-1 is appropriate or finds appropriate a species not listed, the City Manager may substitute an unlisted species.

RESPONSE: Street trees selected for SW Cipole half-street improvement will meet the City and Washington County required tree type.

CHAPTER 75 ACCESS MANAGEMENT

TDC 75.010. Purpose.

The purpose of this chapter is to promote the development of safe, convenient and economic transportation systems and to preserve the safety and capacity of the street system by limiting conflicts resulting from uncontrolled driveway access, street intersections, and turning movements while providing for appropriate access for all properties.

TDC 75.020. Permit for New Driveway Approach.

(1) *Applicability.* A driveway approach permit must be obtained prior to constructing, relocating, reconstructing, enlarging, or altering any driveway approach.

RESPONSE: Driveway approaches are requested for the new NE driveway to SW 124th and the widening of the existing driveway at SW Cipole Road.

(2) *Exceptions.* A driveway approach permit is not required for:

(a) The construction, relocation, reconstruction, enlargement, or alteration of any driveway approach that requires a state highway access permit; or

(b) The construction, relocation, reconstruction, enlargement or alteration of any driveway approach that is part of the construction of a publicly or privately engineered public improvement project.

RESPONSE: Not applicable.

(3) *Procedure Type.* A Driveway Approach Permit is processed as a Type II procedure under TDC 32.220 (Type II).

RESPONSE: The (2) driveway approaches proposed for this project are included with the Type III Architectural Review.

(4) *Submittal Requirements.* In addition to the application materials required by TDC 32.140 (Application Submittal), the following application materials are also required:

(a) A site plan, of a size and form and in the number of copies meeting the standards established by the City Manager, containing the following information:

(i) The location and dimensions of the proposed driveway approach;

(ii) The relationship to nearest street intersection and adjacent driveway approaches;

(iii) Topographic conditions;

(iv) The location of all utilities;

(v) The location of any existing or proposed buildings, structures, or vehicular use areas;

(vi) The location of any trees and vegetation adjacent to the location of the proposed driveway approach that are required to be protected pursuant to TDC Chapter 73B or 73C; and

(vii) The location of any street trees adjacent to the location of the proposed driveway approach.

(b) Identification of the uses or activities served, or proposed to be served, by the driveway approach; and

(c) Any other information, as determined by the City Manager, which may be required to adequately review and analyze the proposed driveway approach for conformance with the applicable criteria.

RESPONSE: All the above noted required information has been included with this AR submittal either on the Site and Grading Plans or in the Traffic Study.

(5) *Criteria.* A Driveway Approach Permit must be granted if:

(a) The proposed driveway approach meets the standards of this Chapter and the Public Works Construction Code;

(b) No site conditions prevent placing the driveway approach in the required location;

(c) The number of driveway approaches onto an arterial are minimized;

(d) The proposed driveway approach, where possible:

(i) Is shared with an adjacent property; or

(ii) Takes access from the lowest classification of street abutting the property;

(e) The proposed driveway approach meets vision clearance standards;

(f) The proposed driveway approach does not create traffic hazards and provides for safe turning movements and access;

(g) The proposed driveway approach does not result in significant adverse impacts to the vicinity;

(h) The proposed driveway approach minimizes impact to the functionality of adjacent streets and intersections; and

(i) The proposed driveway approach balances the adverse impacts to residentially zoned property and the functionality of adjacent streets.

(6) *Effective Date.* The effective date of a Driveway Approach Permit approval is the date the notice of decision is mailed.

(7) *Permit Expiration.* A Driveway Approach Permit approval expires one year from the effective date unless the driveway approach is constructed within the one-year period in accordance with the approval decision and City standards.

TDC 75.030. Driveway Approach Closure.

RESPONSE: No driveway approach closures are proposed nor anticipated.

TDC 75.040. Driveway Approach Requirements.

(1) The provision and maintenance of driveway approaches from private property to the public streets as stipulated in this Code are continuing requirements for the use of any structure or parcel of real property in the City of Tualatin. No building or other permit may be issued until scale plans are presented that show how the driveway approach requirement is to be fulfilled. If the owner or occupant of a lot or building changes the use to which the lot or building is put, thereby increasing driveway approach requirements, it is unlawful and a violation of this code to begin or maintain such altered use until the required increase in driveway approach is authorized by the City.

RESPONSE: Driveway approaches are requested for the new NE driveway to SW 124th and the widening of the existing driveway at SW Cipole Road.

(2) Owners of two or more uses, structures, or parcels of land may agree to utilize jointly the same driveway approach when the combined driveway approach of both uses, structures, or parcels of land satisfies their

combined requirements as designated in this code; provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts to establish joint use. Copies of said deeds, easements, leases or contracts must be placed on permanent file with the City Recorder.

RESPONSE: Not proposed for this project.

(3) Joint and Cross Access.

(a) Adjacent commercial uses may be required to provide cross access drive and pedestrian access to allow circulation between sites.

(b) A system of joint use driveways and cross access easements may be required and may incorporate the following:

(i) A continuous service drive or cross access corridor extending the entire length of each block served to provide for driveway separation consistent with the access management classification system and standards;

(ii) A design speed of ten mph and a maximum width of 24 feet to accommodate two-way travel aisles designated to accommodate automobiles, service vehicles, and loading vehicles;

(iii) Stub-outs and other design features to make it visually obvious that the abutting properties may be tied in to provide cross access via a service drive; and

(iv) An unified access and circulation system plan for coordinated or shared parking areas.

(c) Pursuant to this section, property owners may be required to:

(i) Record an easement with the deed allowing cross access to and from other properties served by the joint use driveways and cross access or service drive;

(ii) Record an agreement with the deed that remaining access rights along the roadway will be dedicated to the city and pre-existing driveways will be closed and eliminated after construction of the joint-use driveway;

(iii) Record a joint maintenance agreement with the deed defining maintenance responsibilities of property owners; and

(iv) If subsection(i) through (iii) above involve access to the state highway system or county road system, ODOT or the county must be contacted and must approve changes to subsection(i) through (iii) above prior to any changes.

RESPONSE: Not proposed for this project.

(4) Requirements for Development on Less than the Entire Site.

(a) To promote unified access and circulation systems, lots and parcels under the same ownership or consolidated for the purposes of development and comprised of more than one building site must be reviewed as one unit in relation to the access standards. The number of access points permitted must be the minimum number necessary to provide reasonable access to these properties, not the maximum available for that frontage. All necessary easements, agreements, and stipulations must be met. This must also apply to phased development plans. The owner and all lessees within the affected area must comply with the access requirements.

(b) All access must be internalized using the shared circulation system of the principal commercial development or retail center. Driveways should be designed to avoid queuing across surrounding parking and driving aisles.

RESPONSE: Not applicable. The entire site is being developed.

(5) Lots that front on more than one street may be required to locate motor vehicle accesses on the street with the lower functional classification as determined by the City Manager.

RESPONSE: Driveway approaches are requested for the new NE driveway to SW 124th and the widening of the existing driveway at SW Cipole Road.

(6) Except as provided in TDC 53.100, all driveway approach must connect directly with public streets.

RESPONSE: The (2) Driveway approaches connect directly with SW 124th and SW Cipole Road.

(7) To afford safe pedestrian access and egress for properties within the City, a sidewalk must be constructed along all street frontage, prior to use or occupancy of the building or structure proposed for said property. The sidewalks required by this section must be constructed to City standards, except in the case of streets with inadequate right-of-way width or where the final street design and grade have not been established, in which case the sidewalks must be constructed to a design and in a manner approved by the City Manager. Sidewalks approved by the City Manager may include temporary sidewalks and sidewalks constructed on private property; provided, however, that such sidewalks must provide continuity with sidewalks of adjoining commercial developments existing or proposed. When a sidewalk is to adjoin a future street improvement, the sidewalk construction must include construction of the curb and gutter section to grades and alignment established by the City Manager.

RESPONSE: There is an existing sidewalk along the SW 124th frontage. A new sidewalk is proposed with the half-street improvement on SW Cipole Road.

(8) The standards set forth in this Code are minimum standards for driveway approaches, and may be increased through the Architectural Review process in any particular instance where the standards provided herein are deemed insufficient to protect the public health, safety, and general welfare.

RESPONSE: Driveway approaches are requested for the new NE driveway to SW 124th and the widening of the existing driveway at SW Cipole Road. The 2 driveways are proposed to be 50-feet in width, exceeding the 40-maximum width as noted below. The added width of the driveways if necessary, to provide easy truck access to the site and to provide necessary width for trucks turning onto the site and leaving the site onto SW 124th and onto SW Cipole Road.

(9) Minimum driveway approach width for uses are as provided in Table 75-1 (Driveway Approach Width):

TABLE 75-1
Driveway Approach Width

Use	Minimum Driveway Approach Width	Maximum Driveway Approach Width
Industrial	36 feet	Over 250 Parking Spaces = As Required by the City Manager, but not exceeding 40 feet

RESPONSE: Driveway approaches are requested for the new NE driveway to SW 124th and the widening of the existing driveway at SW Cipole Road. The 2 driveways are proposed to be 50-feet in width, exceeding the 40-maximum width as noted below. The added width of the driveways if necessary, to provide easy truck access to the site and to provide necessary width for trucks turning onto the site and leaving the site onto SW 124th and onto SW Cipole Road.

(10) *Driveway Approach Separation.* There must be a minimum distance of 40 feet between any two adjacent driveways on a single property unless a lesser distance is approved by the City Manager.

RESPONSE: There is only one driveway proposed at SW Cipole and one driveway at SW 124th and therefore, the spacing is not applicable.

(11) *Distance between Driveways and Intersections.* Except for single-family dwellings, the minimum distance between driveways and intersections must be as provided below. Distances listed must be measured from the stop bar at the intersection.

(a) At the intersection of collector or arterial streets, driveways must be located a minimum of 150 feet from the intersection.

RESPONSE: The distance from the Myslony/SW 124th intersection to the proposed NE driveway is approximately 520-feet. The distance from the SW driveway on SW Cipole to the intersection of SW Cipole and T-S Hwy is approximately 1100-feet.

(12) *Vision Clearance Area.*

(a) *Local Streets.*

RESPONSE: Not applicable.

(b) *Collector Streets.* A vision clearance area for all collector/arterial street intersections, collector/arterial street and local street intersections, and collector/arterial street and railroad intersections must be that triangular area formed by the right-of-way lines along such lots and a straight line joining the right-of-way lines at points which are 25 feet from the intersection point of the right-of-way lines, as measured along such lines. Where a driveway intersects with a collector/arterial street, the distance measured along the driveway line for the triangular area must be ten feet (see Figure 73-2 for illustration).

RESPONSE: The required vision clearance area will be provided at each driveway.

(c) *Vertical Height Restriction.* Except for items associated with utilities or publicly owned structures such as poles and signs and existing street trees, no vehicular parking, hedge, planting, fence, wall structure, or temporary or permanent physical obstruction must be permitted between 30 inches and eight feet above the established height of the curb in the clear vision area (see Figure 73-2 for illustration).

RESPONSE: The required vertical height clearances will be provided at each driveway.

TDC 75.050. Access Limited Roadways.

(1) This section applies to all developments, permit approvals, land use approvals, partitions, subdivisions, or any other actions taken by the City pertaining to property abutting any road or street listed in TDC 75.050(2). In addition, any property not abutted by a road or street listed in subsection (2), but having access to an arterial by any easement or prescriptive right, must be treated as if the property did abut the arterial and this Chapter applies.

(2) The following Freeways and Arterials are access limited roadways:

(f) 124th Avenue from Pacific Highway 99W south to Tonquin to Basalt Creek Parkway;

RESPONSE: Another driveway is proposed with this development as the NE driveway and occurs at the west side of SW 124th, approximately 550-feet south of the Myslony street intersection and approximately 1280-feet north of the SW Cimino Street intersection. This driveway is proposed to be a full service driveway allowing access to the site from both North and southbound traffic on SW 124th.

(3) This Chapter takes precedence over any other TDC chapter and over any other ordinance of the City when considering any development, land use approval or other proposal for property abutting an arterial or any property having an access right to an arterial.

(4) The City may act on its own initiative to protect the public safety and control access on arterials or any street to be included by TDC 75.030, consistent with its authority as the City Road Authority.

TDC 75.060. Interim Access Agreement.

RESPONSE: Not requested with this proposal.

TDC 75.070. Existing Driveways and Street Intersections.

(1) Existing driveways with access onto arterials on the date this chapter was originally adopted are allowed to remain. If additional development occurs on properties with existing driveways with access onto arterials, then this Chapter applies and the entire site must be made to conform with the requirements of this chapter.

(2) The City Manager may restrict existing driveways and street intersections to right-in and right-out by construction of raised median barriers or other means.

RESPONSE: Not applicable. There are no existing driveways onto SW 124th, an arterial.

TDC 75.100. Spacing Standards for New Intersections.

Except as shown in TDC Chapter 11, Transportation, (Figures 11-1 and 11-3), all new intersections with arterials must have a minimum spacing of one-half mile between intersections.

RESPONSE: Not applicable. No new intersections are proposed.

TDC 75.110. Joint Access Standards.

When the City Manager determines that joint accesses are required by properties undergoing development or redevelopment, an overall access plan shall be prescribed by the City Manager and all properties shall adhere to this. Interim accesses may be allowed in accordance with TDC 75.060 of this chapter to provide for the eventual implementation of the overall access plan.

RESPONSE: Not applicable. Joint access is not proposed with this development.

TDC 75.120. Collector Streets Access Standards.

(1) *Major Collectors.* Direct access from newly constructed single family homes, duplexes or triplexes are not permitted. As major collectors in residential areas are fully improved, or adjacent land redevelops, direct access should be relocated to the nearest local street where feasible.

RESPONSE: Not applicable. This proposal is for an industrial development.

(2) *Minor Collectors.* Residential, commercial and industrial driveways where the frontage is greater or equal to 70 feet are permitted. Minimum spacing at 100 feet. Uses with less than 50 feet of frontage shall use a common (joint) access where available.

RESPONSE: Not applicable.

(3) If access is not able to be relocated to the nearest local street, the City Manager may allow interim access in accordance with 75.060 of this chapter to provide for the eventual implementation of the overall access plan.

RESPONSE: Not applicable.

TDC 75.130. New Streets Access Standards.

RESPONSE: Not Applicable.

TDC 75.140. Existing Streets Access Standards.

The following list describes in detail the freeways and arterials as defined in TDC 75.050 with respect to access. Recommendations are made for future changes in accesses and location of future accesses. These recommendations are examples of possible solutions and shall not be construed as limiting the City' s authority to change or impose different conditions if additional studies result in different recommendations from those listed below.

(6) *124TH AVENUE.*

(c) Herman Road to Tualatin-Sherwood Road.

(iv) On the west side of 124th Avenue between Herman Road and Tualatin-Sherwood Road the area will be served by the following streets or driveways:

(A) A driveway across from Myslony Street.

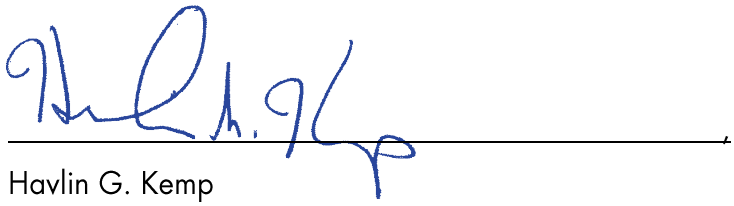
3933 SW Kelly Avenue Portland, OR 97239 tel: 503.222.4453 fax: 503.248.9263 www.vlmk.com

(B) A street or driveway intersection approximately 800 feet north of the intersection of Tualatin-Sherwood Road and 124th Avenue. The exact location and configuration of the streets or driveways shall be determined by the City Manager.

RESPONSE: This location is at the intersection of SW 124th and SW Cimino Street. No driveway is proposed at this location due to site constraints. The elevation of this proposed development is 20-25' lower than the property to the south. A common access driveway cannot be located at this location to serve both properties due to the grade difference.

Another driveway is proposed with this development as the NE driveway and occurs at the west side of SW 124th, approximately 550-feet south of the Myslony street intersection and approximately 1280-feet north of the SW Cimino Street intersection. This driveway is proposed to be a full service driveway allowing access to the site from both North and southbound traffic on SW 124th. Removal of the median in SW 124th is proposed with this project to provide for the proposed full service access driveway.

Prepared by:



Havlin G. Kemp

Principal

VLMK Engineering + Design

3933 SW Kelly Avenue Portland, OR 97239 tel: 503.222.4453 fax: 503.248.9263 www.vlmk.com

Tualatin Logistics Park

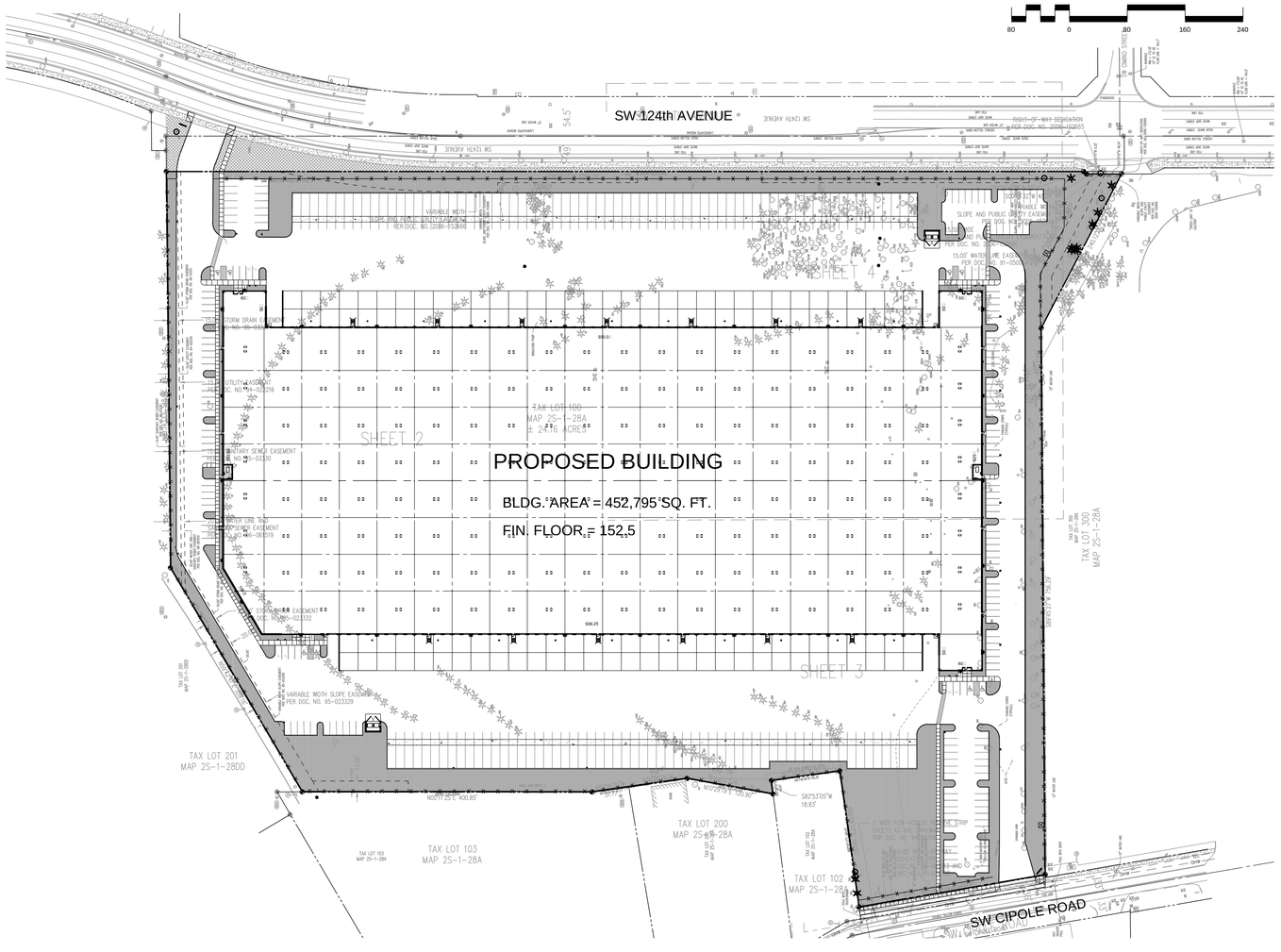
A New Distribution Facility

20400 Southwest Cipole Road

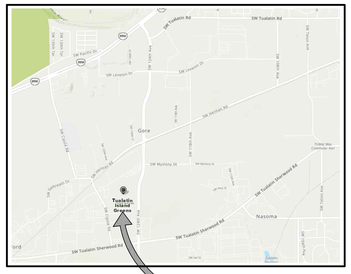
Tualatin, Oregon 97062

General Site Plan - Reference Only

1" = 80.0'



Vicinity Map:



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Phone: (503) 968-8787
Contact: George Saunders

Schedule of Drawings:

SHEET	TITLE	DATE	ARCH. REVIEW INITIAL SET 07.29.21	ARCH. REVIEW RE-SUBMITTAL 08 09.03.21	ARCH. REVIEW RE-SUBMITTAL 09 09.17.21	ARCH. REVIEW RE-SUBMITTAL 10 09.24.21
	REVISIONS					
	Description of Set:					
CVR1.0	COVER SHEET		●	●	●	●
G1.0	SITE PLAN		●	●	●	●
G2.0	SITE DETAILS					
TT1.0	TRUCK TURNING PLAN		●	●	●	●
LT1.0	SITE LIGHTING PLAN		●	●	●	●
LT1.1	SITE LIGHTING DETAILS		●		●	○
C1.0	OVERALL GRADING PLAN		●		●	●
C1.1	ENLARGED GRADING PLAN N.E. CORNER					
C1.2	ENLARGED GRADING PLAN S.E. CORNER					
C1.3	ENLARGED GRADING PLAN S.W. CORNER					
C1.4	ENLARGED GRADING PLAN N.W. CORNER					
C2.0	OVERALL UTILITY PLAN		●		●	●
C2.1	ENLARGED UTILITY PLAN N.E. CORNER					
C2.2	ENLARGED UTILITY PLAN S.E. CORNER					
C2.3	ENLARGED UTILITY PLAN S.W. CORNER					
C2.4	ENLARGED UTILITY PLAN N.W. CORNER					
C2.5	UTILITY DETAILS					
C2.6	UTILITY DETAILS					
C2.7	UTILITY DETAILS					
C3.0	EROSION AND SEDIMENT CONTROL COVER					
C3.1	CLEARING AND DEMOLITION ESCP OVERALL PLAN					
C3.2	CLEARING AND DEMOLITION PLAN N.E.C.					
C3.3	CLEARING AND DEMOLITION PLAN S.E.C.					
C3.4	CLEARING AND DEMOLITION PLAN S.W.C.					
C3.5	CLEARING AND DEMOLITION PLAN N.W.C.					
C3.6	GRADING AND UTILITY CONSTRUCTION ESCP OVERALL PLAN					
C3.7	GRADING AND UTILITY CONSTRUCTION ESCP N.E.C.					
C3.8	GRADING AND UTILITY CONSTRUCTION ESCP S.E.C.					
C3.9	GRADING AND UTILITY CONSTRUCTION ESCP S.W.C.					
C3.10	GRADING AND UTILITY CONSTRUCTION ESCP N.W.C.					
C3.11	EROSION AND SEDIMENT CONTROL DETAILS					
C4.0	OVERALL SITE AND PAVING PLAN					
C4.1	ENLARGED PAVING AND STRIPING PLAN N.E. SECTION					
C4.2	ENLARGED PAVING AND STRIPING PLAN S.E. SECTION					
C4.3	ENLARGED PAVING AND STRIPING PLAN S.W. SECTION					
C4.4	ENLARGED PAVING AND STRIPING PLAN N.W. SECTION					
FS1.0	FIRE SUPPLY PLAN					●
-	SITE SURVEY - SHEET 1 OF 5		●		●	○
-	SITE SURVEY - SHEET 2 OF 5		●		●	○
-	SITE SURVEY - SHEET 3 OF 5		●		●	○
-	SITE SURVEY - SHEET 4 OF 5		●		●	○
-	SITE SURVEY - SHEET 5 OF 5		●		●	○
L1.0	OVERALL LANDSCAPE SITE PLAN				●	●
L1.1	LANDSCAPE PLAN				●	○
L1.2	LANDSCAPE PLAN				●	●
L1.3	LANDSCAPE PLAN				●	○
L1.4	LANDSCAPE PLAN				●	○
L2.0	LANDSCAPE DETAILS AND SPECIFICATIONS				●	○
A0.0	CODE REVIEW					
A0.1	ENLARGED CODE REVIEW FLOOR PLANS AND ADA DETAILS					
A1.0	OVERALL FLOOR					
A1.1	ENLARGED FLOOR PLAN - NORTHEAST					
A1.2	ENLARGED FLOOR PLAN - SOUTHEAST					
A1.3	ENLARGED FLOOR PLAN - SOUTHWEST					
A1.4	ENLARGED FLOOR PLAN - NORTHWEST					
A2.0	OVERALL BUILDING ELEVATIONS					
A2.1	ENLARGED BUILDING ELEVATIONS		●		●	○
A2.2	ENLARGED BUILDING ELEVATIONS		●		●	○
A2.3	BUILDING SECTIONS AND COLORS					
A3.0	WALL SECTIONS					
A3.1	WALL SECTIONS					
A3.2	WALL SECTIONS					
A3.3	WALL SECTIONS					
A4.0	ARCHITECTURAL DETAILS					
A4.1	ARCHITECTURAL DETAILS					
A5.0	ROOF PLAN AND DETAILS					
A5.1	ROOF DETAILS					
A5.2	ROOF DETAILS					
A6.0	SPECIFICATIONS					
A6.1	SPECIFICATIONS					
A6.2	SPECIFICATIONS					
S0.0	SPECIAL INSPECTIONS AND NOTES					
S1.0	OVERALL FOUNDATION PLAN AND SCHEDULES					
S1.1	ENLARGED FOUNDATION PLAN N.E. CORNER					
S1.2	ENLARGED FOUNDATION PLAN S.E. CORNER					
S1.3	ENLARGED FOUNDATION PLAN S.W. CORNER					
S1.4	ENLARGED FOUNDATION PLAN N.W. CORNER					
S2.0	FOUNDATION DETAILS					
S2.1	FOUNDATION DETAILS					
S3.0	OVERALL ROOF FRAMING PLAN					
S3.1	ENLARGED ROOF FRAMING PLAN N.E. CORNER					
S3.2	ENLARGED ROOF FRAMING PLAN S.E. CORNER					
S3.3	ENLARGED ROOF FRAMING PLAN S.W. CORNER					
S3.4	ENLARGED ROOF FRAMING PLAN N.W. CORNER					
S4.0	ROOF FRAMING DETAILS					
S4.1	ROOF FRAMING DETAILS					
S4.2	ROOF FRAMING DETAILS					
S5.0	PANEL ELEVATIONS NORTH AND EAST					
S5.1	PANEL ELEVATIONS SOUTH AND WEST					
S6.0	TYPICAL PANEL ELEVATIONS					
S6.1	TYPICAL PANEL ELEVATIONS					
S6.2	PANEL DETAILS					
S7.0	BRBF ELEVATIONS AND DETAILS					
S8.0	CANOPY FRAMING PLANS AND DETAILS					
FP001	FIRE PROTECTION NOTES					
FP101	FIRE PROTECTION SITE PLAN AND DETAILS					
FP401	FIRE PUMP ROOM					
FA001	FIRE ALARM NOTES AND DETAILS					
P2.0	PLUMBING PLAN					
MT0.1	MECHANICAL TITLE SHEET					
M2.0	HVAC PLAN					
E1.0	POWER SITE PLAN - NORTH					
E2.0	POWER SITE PLAN - SOUTH					
EL1.0	SITE PHOTOMETRIC PLAN					
-	CIVIL CALCULATIONS					
-	STRUCTURAL CALCULATIONS					

● FIRST ISSUE ○ RE-ISSUED - NO CHANGES (P) PRELIMINARY/PROGRESS
(X) DELETED (R) REVISED (C) CALCULATIONS

Separate Permits / Deferred Submittals

NO.	SYSTEM DESCRIPTION	SUB-CONTRACTOR	SUBMITTAL
1	STEEL ROOF JOISTS AND GIRDERS	TO BE DETERMINED	SHOP DRAWINGS
2	ELECTRICAL	TO BE DETERMINED	DIRECTLY TO CITY BY SUB-CONTRACTOR
3	MECHANICAL	TO BE DETERMINED	DIRECTLY TO CITY BY SUB-CONTRACTOR
4	FIRE PROTECTION	TO BE DETERMINED	DIRECTLY TO CITY BY SUB-CONTRACTOR
5	PLUMBING	TO BE DETERMINED	DIRECTLY TO CITY BY SUB-CONTRACTOR
6	EMERGENCY RESPONDER RADIO	TO BE DETERMINED	DIRECTLY TO CITY BY SUB-CONTRACTOR
7	LANDSCAPE IRRIGATION	TO BE DETERMINED	DIRECTLY TO CITY BY SUB-CONTRACTOR
8	RACKING	TO BE DETERMINED	DIRECTLY TO CITY BY SUB-CONTRACTOR
9	OFFICE IMPROVEMENTS	TO BE DETERMINED	DIRECTLY TO CITY BY ARCHITECT
10			

DEFERRED SUBMITTAL NOTE:
IN ACCORDANCE WITH I.B.C. SECTION 107.3.4.1 DEFERRED SUBMITTAL ITEMS SHALL BE REVIEWED BY VLMK PRIOR TO SUBMITTAL TO THE BUILDING OFFICIAL FOR PERMIT APPROVAL. THE SUBCONTRACTOR OR VENDOR IS RESPONSIBLE TO PROVIDE CUSTOMARY DESIGN DOCUMENTS AND PERMIT COORDINATION FOR THEIR DEFERRED SUBMITTAL ITEMS. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

APPLICABLE CODES AND STANDARDS INCLUDE:
2019 O.S.S.C, 2019 O.M.S.C., 2017 O.P.S.C., 2017 O.E.S.C., 2019 O.E.E.S.C. AND 2009 ICC ANSI 117.1

Building Codes:

APPLICABLE CODES AND STANDARDS INCLUDE:

1☐	BUILDING	2019 OREGON STRUCTUAL SPECIALTY CODE ☐OSSC☐
2☐	MECHANICAL	2019 OREGON MECHANICAL SPECIALTY CODE ☐OMSC☐
3☐	PLUMBING	2017 OREGON PLUMBING SPECIALTY CODE ☐OPSC☐
4☐	ELECTRICAL	2017 OREGON ELECTRICAL SPECIALTY CODE ☐OESC☐
5☐	FIRE	2019 OREGON FIRE CODE ☐OFC☐
6☐	ENERGY	2019 OREGON ☐ERO ENERGY READY COMMERCAIL CODE ☐O☐ERCC☐
7☐	ADA	2010 STANDARDS FOR ACCESSIBLE DESIGN
8☐	N.F.P.A.	NATIONAL FIRE PROTECTION AGENCY

BID SET	☐
ARCH. REVIEW SET	☒
PERMIT SET	☐
CONSTRUCTION SET	☐
RECORD SET	☐

PROJECT: TUALATIN LOGISTICS PARK
VLMK PROJECT #: 20190311
DATE: JUNE 2021

EXP 12/31/19

COVER SHEET

VLMK ENGINEERING + DESIGN
3933 SW Kelly Avenue Portland, Oregon 97239 | tel: 503.222.4453 | fax: 503.248.9263 | www.vlmk.com

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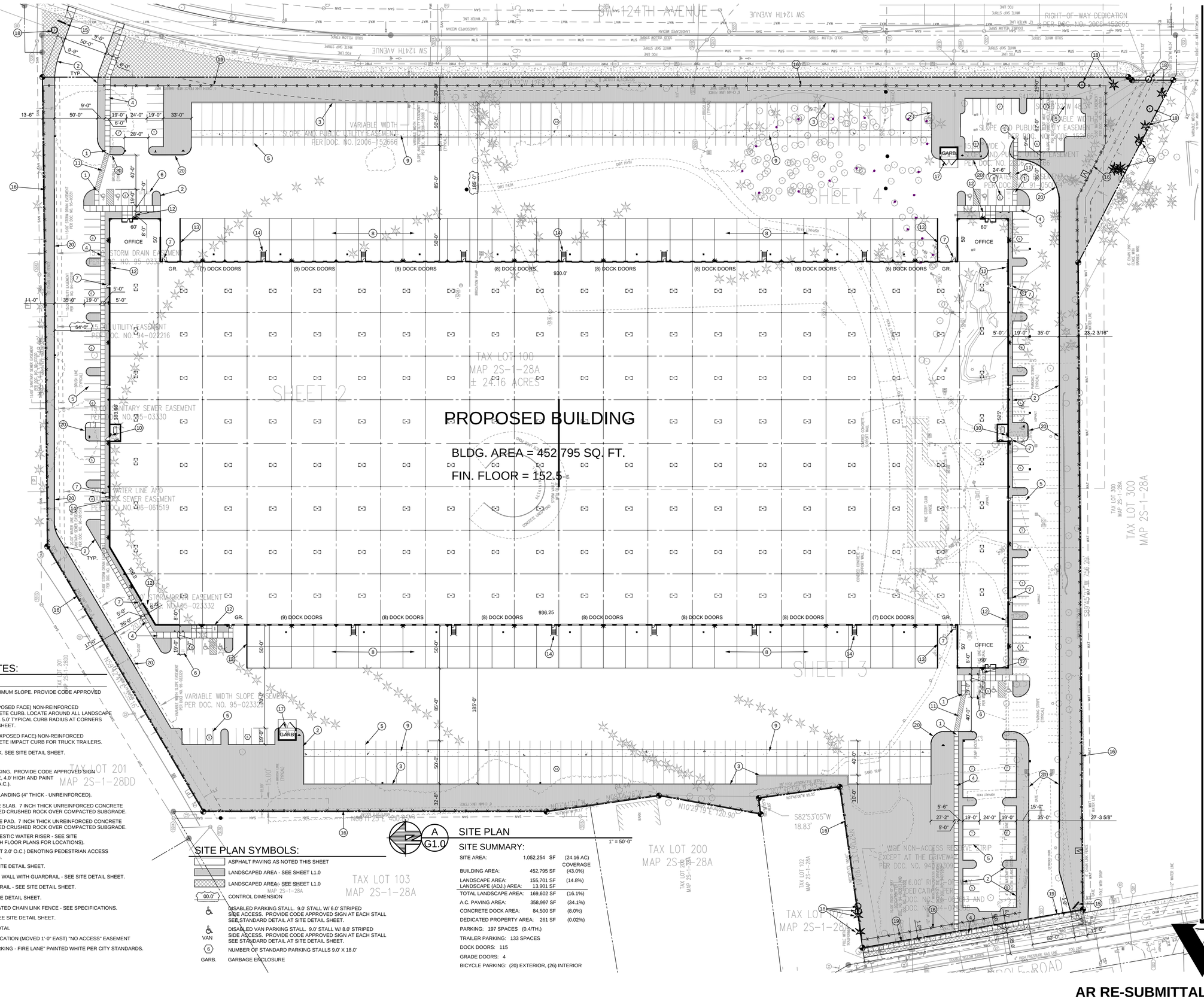

SITE PLAN KEYNOTES:

MARK	DESCRIPTION
1	SIDEWALK RAMP. 1:12 MAXIMUM SLOPE. PROVIDE CODE APPROVED DETECTABLE WARNING.
2	6" THICK X 16" HIGH (6" EXPOSED FACE) NON-REINFORCED POURED-IN-PLACE CONCRETE CURB. LOCATE AROUND ALL LANDSCAPE AREAS AS SHOWN (U.N.O.). 5.0' TYPICAL CURB RADIUS AT CORNERS (U.N.O.). SEE SITE DETAIL SHEET.
3	12" THICK X 30" HIGH (12" EXPOSED FACE) NON-REINFORCED POURED-IN-PLACE CONCRETE IMPACT CURB FOR TRUCK TRAILERS.
4	NEW CONCRETE SIDEWALK. SEE SITE DETAIL SHEET.
5	3" WIDE PAINT STRIPE.
6	CARPOOL / VANPOOL PARKING. PROVIDE CODE APPROVED SIGN ON A 1 1/2" DIA. STEEL PIPE, 4.0' HIGH AND PAINT "CARPOOL" (IN SPACE ON A.C.).
7	5.0' X 5.0' MIN. CONCRETE LANDING (4" THICK - UNREINFORCED).
8	LOADING DOCK CONCRETE SLAB. 7 INCH THICK UNREINFORCED CONCRETE OVER 6 INCHES COMPACTED CRUSHED ROCK OVER COMPACTED SUBGRADE.
9	TRUCK TRAILER CONCRETE PAD. 7 INCH THICK UNREINFORCED CONCRETE OVER 6 INCHES COMPACTED CRUSHED ROCK OVER COMPACTED SUBGRADE.
10	FIRE SPRINKLER AND DOMESTIC WATER RISER - SEE SITE UTILITY PLAN. (VERIFY WITH FLOOR PLANS FOR LOCATIONS).
11	PAINT STRIPING (3" WIDE AT 2.0' O.C.) DENOTING PEDESTRIAN ACCESS WALKWAY OR NO PARKING.
12	BICYCLE PARKING - SEE SITE DETAIL SHEET.
13	LOADING DOCK RETAINING WALL WITH GUARDRAIL - SEE SITE DETAIL SHEET.
14	METAL STAIR WITH GUARDRAIL - SEE SITE DETAIL SHEET.
15	MONUMENT SIGN - SEE SITE DETAIL SHEET.
16	6.0' HIGH BLACK VINYL COATED CHAIN LINK FENCE - SEE SPECIFICATIONS.
17	GARBAGE ENCLOSURE - SEE SITE DETAIL SHEET.
18	TREES TO REMAIN - (18) TOTAL
19	NEW PROPERTY LINE DEDICATION (MOVED 1'-0" EAST) "NO ACCESS" EASEMENT
20	PAINT CURB RED - "NO PARKING - FIRE LANE" PAINTED WHITE PER CITY STANDARDS.

SITE PLAN SYMBOLS:

- ASPHALT PAVING AS NOTED THIS SHEET
- LANDSCAPED AREA - SEE SHEET L1.0
- LANDSCAPED AREA - SEE SHEET L1.0
- 00.0' CONTROL DIMENSION
- DISABLED PARKING STALL. 9.0' STALL W/ 6.0' STRIPED SIDE ACCESS. PROVIDE CODE APPROVED SIGN AT EACH STALL SEE STANDARD DETAIL AT SITE DETAIL SHEET.
- VAN DISABLED VAN PARKING STALL. 9.0' STALL W/ 8.0' STRIPED SIDE ACCESS. PROVIDE CODE APPROVED SIGN AT EACH STALL SEE STANDARD DETAIL AT SITE DETAIL SHEET.
- 6 NUMBER OF STANDARD PARKING STALLS 9.0' X 18.0'
- GARB. GARBAGE ENCLOSURE

A G1.0

SITE PLAN

SITE SUMMARY:

SITE AREA:	1,052,254 SF	(24.16 AC)
		COVERAGE
BUILDING AREA:	452,795 SF	(43.0%)
LANDSCAPE AREA:	155,701 SF	(14.8%)
LANDSCAPE (ADJ.) AREA:	13,901 SF	
TOTAL LANDSCAPE AREA:	169,602 SF	(16.1%)
A.C. PAVING AREA:	358,997 SF	(34.1%)
CONCRETE DOCK AREA:	84,500 SF	(8.0%)
DEDICATED PROPERTY AREA:	261 SF	(0.02%)

PARKING: 197 SPACES (0.4/TH.)

TRAILER PARKING: 133 SPACES

DOCK DOORS: 115

GRADE DOORS: 4

BICYCLE PARKING: (20) EXTERIOR, (26) INTERIOR

VLMK
ENGINEERING + DESIGN
3933 S Kelly Avenue
Portland, Oregon 97239
503.222.4453
VLMK.COM

10260 SW Greenburg Road
Suite 170
Portland, Oregon 97223
503.646.2202
SPECHTPROP.COM

PROJECT NAME

TUALATIN
LOGISTICS PARK

20400 SW Cipole Road
TUALATIN, OREGON 97062

REVISIONS

	DATE	DESCRIPTION
-	-	

DATE
APRIL 2021

SCALE	PROJ. NO.
AS NOTED	20190311
DRAWN	CHECKED
KAN	HGK

SITE PLAN

G1.0

AR RE-SUBMITTAL SET - 09 / 24 / 21

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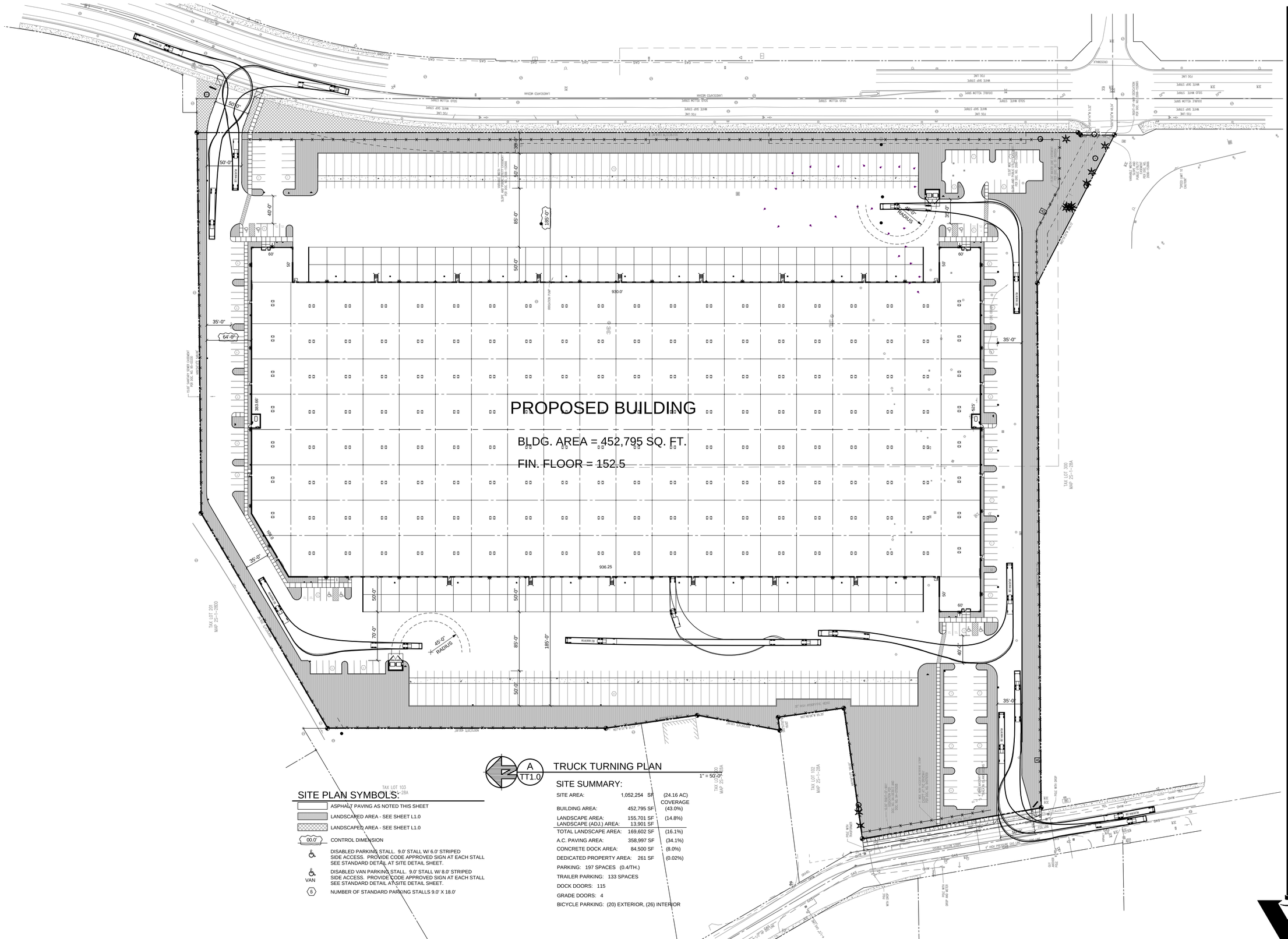

SITE PLAN SYMBOLS:

- ASPHALT PAVING AS NOTED THIS SHEET
- LANDSCAPED AREA - SEE SHEET L1.0
- LANDSCAPED AREA - SEE SHEET L1.0
- 00.0' — CONTROL DIMENSION
- DISABLED PARKING STALL. 9.0' STALL W/ 6.0' STRIPED SIDE ACCESS. PROVIDE CODE APPROVED SIGN AT EACH STALL SEE STANDARD DETAIL AT SITE DETAIL SHEET.
- VAN — DISABLED VAN PARKING STALL. 9.0' STALL W/ 8.0' STRIPED SIDE ACCESS. PROVIDE CODE APPROVED SIGN AT EACH STALL SEE STANDARD DETAIL AT SITE DETAIL SHEET.
- 5 — NUMBER OF STANDARD PARKING STALLS 9.0' X 18.0'

A / TT1.0 — TRUCK TURNING PLAN

1" = 50'-0"

SITE SUMMARY:

SITE AREA:	1,052,254 SF	(24.16 AC)
		COVERAGE
BUILDING AREA:	452,795 SF	(43.0%)
LANDSCAPE AREA:	155,701 SF	(14.8%)
LANDSCAPE (ADJ.) AREA:	13,901 SF	
TOTAL LANDSCAPE AREA:	169,602 SF	(16.1%)
A.C. PAVING AREA:	358,997 SF	(34.1%)
CONCRETE DOCK AREA:	84,500 SF	(8.0%)
DEDICATED PROPERTY AREA:	261 SF	(0.02%)

PARKING: 197 SPACES (0.4/TH.)

TRAILER PARKING: 133 SPACES

DOCK DOORS: 115

GRADE DOORS: 4

BICYCLE PARKING: (20) EXTERIOR, (26) INTERIOR

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-	-	

DATE
APRIL 2021

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AS NOTED	20190311
DRAWN	CHECKED
KAN	HGK

TRUCK
TURNING
PLAN

TT1.0

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PROPOSED BUILDING

BLDG. AREA = 452,795 SQ. FT.

FIN. FLOOR = 152.5

930.0'

936.25

A LT1.0 SITE LIGHTING PLAN

1" = 50'-0"

0 50 100 150

(N) NEW

ON- SITE LIGHT POLE (L.P.)

BUILDING WALL PACK LIGHT (W.P.)

PATH LIGHT - LIGHT BOLLARD

TAX LOT 103 MAP 2S-1-28A

TAX LOT 200 MAP 2S-1-28A

TAX LOT 102 MAP 2S-1-28A

TAX LOT 201 MAP 2S-1-2800

TAX LOT 300 MAP 2S-1-28A

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3933 S Kelly Avenue
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KAN	HGK

SITE LIGHTING
PLAN

LT1.0

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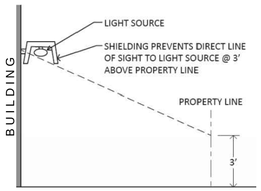
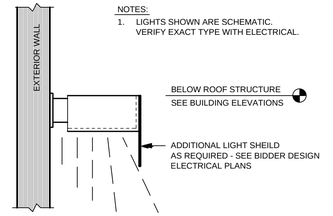


TYPICAL LIGHTING SHEILD

ALL SITE LIGHTING TO MEET THE REQUIREMENTS OF C.O. CANBY STANDARDS TABLE 16.43.070 FOR ZONE LZ-2 'AMBIENT LEVEL MEDIUM' LIGHTING

CONSTRUCTION DOCUMENTS TO PROVIDE LZ-2 LUMENS FOR LIGHTING IN ACCORDANCE WITH TABLE 17.43.070 LUMINAIRE MAXIMUMS



1 / LT1.1 WALL LIGHT DETAIL

GT102.dwg 1" = 1'-0"

D-Series Size 2
LED Area Luminaire

Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements.

d*series

Specifications

EPA: 2.0 ft² (0.19 m²)
Length: 40" (101.6 cm)
Width: 15" (38.1 cm)
Height: 7-1/2" (19.0 cm)
Weight (max): 39 lbs (17.7 kg)

Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. The Size 2 is ideal for replacing 400-1000W metal halide in area lighting applications with energy savings of up to 80% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX2 LED 80C 1000 40K T4M MVOLT SPA DDBXD

DSX2 LED

Series	# LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting	Control options	Other options	Finish (required)
DSX2 LED	**Forward optics** 80C 80 LEDs (four engines) 100C 100 LEDs (four engines) **Rotated optics** 80C 80 LEDs (four engines)	530 530 mA 700 700 mA 1000 1000 mA (1 A)*	30K 3000K 40K 4000K 50K 5000K	T1S Type I Short T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4M Type IV Medium T4FT4 Forward Throw Medium T5VS Type V Very Short T5S Type V Short T5M Type V Medium T5W Type V Wide	MVOLT 120-277V SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor* RPUMBA Round pole universal mounting adaptor*	**Shipped included** PIR 180 lens, motion sensor, 8' mounting height, ambient sensor enabled at 1 fc** PIRH 180 lens, motion sensor, 15-30' mounting height, ambient sensor enabled at 1 fc** DMG 0-10V dimming driver (standard) DCR Dimmable and controllable via ROAM® (no control)** ES Dual switching** PIR1 Motion sensor, 15-30' mounting height** BL30 Bi-level switched, dimming, 30%** BL50 Bi-level switched, dimming, 50%**	**Shipped installed** HS House-side shield (2 required)** WTB Utility terminal block* SF Single fuse (120, 277, 347V)** DF Double fuse (208, 240, 480V)** TCS Tool-less entry trigger latch** L90 Left rotated optics** R90 Right rotated optics**	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

Drilling

Template #8

Top of Pole

Controls & Shields

Accessories

DSX2 shares a unique drilling pattern with the AERO™ family. Specify this drilling pattern when specifying poles, per the table below.

DBH565	Single unit	DBH565	1 at 90° *
DBH665	2 at 180°	DBH665	2 at 90° *
DBH865	4 at 90° *	DBH365	3 at 120° *

Example: SSA 30 4C DBH665 DDBXD

Visit Lithonia Lighting's POLES CENTRAL to see our wide selection of poles, accessories and decorative bases.

*Round pole top must be 3.25" O.D. minimum.
**For round pole mounting (RPA) only.

Tenon Mounting Slipfitter **

Tenon O.D.	Single	2 @ 180°	3 @ 120°	4 @ 90°
2-3/8"	AST20-190	AST20-280	N/A	N/A
3.75"	AST25-190	AST25-280	N/A	AST25-290
4"	AST35-190	AST35-280	AST35-320	AST35-290

NOTES

1 Available with 80 LEDs (80C option) only.
2 Configured with 4000K CRI70 provides the shortest lead times. Consult factory for other color temperature options.
3 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options).
4 Not available with T5VS, T5S, T5M or T5W distributions. Not available with DCR.
5 Available as a separate combination accessory: RUMBA Shield ().
6 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. Not available with motion sensor (PIR) option.
7 Not available with SAT or WBA.
8 Specifies a ROAM® enabled luminaire with 0-10V dimming capability. PIR option includes integrated motion sensor. Sensor will not ship with the luminaire. Sensor options and services required for ROAM® deployment, must be purchased separately. Call 1.800.442.6745 or email: sales@roamservices.net. Not available with PIRH, DCR, BL30, BL50 or SPUMBA.
9 Provides 10/0.1 volt/amp operation as two independent drivers on two separate circuits. Not with PIRH, DCR, PIR or WTB. Not for 1000mA (A*) or 1050mA (WH).
10 Not available with fusing (SF or DF).
11 Specifies the Acuity Brands CSA-certified, 4-pin locking photocontrol. See Accessories Guide for details. Not available with PIR, PIRH, DCR, BL30 or BL50.
12 Dimming driver standard. MVOLT only. Not available with DCR, TLS or WTB.
13 Also available as a separate accessory; see Accessories information.
14 WTB not available with BL30, BL50, DS or PIRH. N/A 347V or 480V.
15 Not available with 347V, 480V, HVOLT or XVOLT voltage option. Double fuse (DF) requires 208, 240 or 480V voltage option.
16 Not available with 1000mA (1A) or when DCR is selected. Reference Performance Data for more information.
17 Requires luminaire to be specified with PIR or PIRH. Ordered and shipped as a separate line item from Acuity Brands Controls. Cannot be ordered with DCR. Shipped with 120V, 277V, 347V or 480V dual-voltage sensor. Reconfigure in the field for other voltages using the integral dip switch. Sensor is factory set to 1 fc and can be adjusted in the field using a calibrated light meter. Sensor is factory set to ON mode and can be adjusted in the field using a wireless remote. Ordering info: Sensor Configuration Kit (SCK) for PIR or PIRH. Sensor Replacement Kit (SRK) for PIR or PIRH. Refer to PIR Motion Sensor Default Settings and PIR Motion Sensor Advanced Settings for more information.
18 Not available with SPUMBA or RPUMBA.
19 Not available with T5VS, T5S, T5M or T5W distributions.
20 Not available with 1000mA (1A) or when DCR is selected.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown and values may change due to variation in CCT and CRI. Actual performance may differ as a result of end-user environment and application. Actual wattage may differ by +/- 5% when operating between 120-480V +/- 10%. Contact factory for performance data on any configurations not shown here.

LEDs	Drive current (mA)	Performance Package	System Watts	Distribution	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)				
				Type	Lumens	B	U	G	Zone	Lumens	B	U	G	Zone
80C (80 LEDs)	700	80C 700 - 4	168W	T1S	19,774	3	0	3	30	17,441	3	0	3	30
				T2S	19,774	3	0	3	30	17,441	3	0	3	30
				T2M	19,459	3	0	3	30	17,178	3	0	3	30
				T3S	19,818	3	0	3	30	17,252	3	0	3	30
				T3M	19,705	3	0	3	30	17,218	3	0	3	30
				T4M	19,461	3	0	3	30	16,762	3	0	3	30
	1000	80C 1000 - 4	215W	T1S	27,273	3	0	3	30	24,057	3	0	3	30
				T2S	27,273	3	0	3	30	24,057	3	0	3	30
				T2M	26,841	3	0	3	30	23,677	3	0	3	30
				T3S	27,330	3	0	3	30	24,111	3	0	3	30
				T3M	27,175	3	0	3	30	23,974	3	0	3	30
				T4M	26,846	3	0	3	30	23,682	3	0	3	30
				T4FT4	26,846	3	0	3	30	23,682	3	0	3	30
				T5VS	27,273	3	0	3	30	24,057	3	0	3	30
				T5S	27,273	3	0	3	30	24,057	3	0	3	30
				T5M	27,175	3	0	3	30	23,974	3	0	3	30
				T5W	26,846	3	0	3	30	23,682	3	0	3	30
100C (100 LEDs)	700	100C 700 - 4	210W	T1S	24,717	3	0	3	30	21,801	3	0	3	30
				T2S	24,717	3	0	3	30	21,801	3	0	3	30
				T2M	24,326	3	0	3	30	21,456	3	0	3	30
				T3S	24,767	3	0	3	30	21,845	3	0	3	30
				T3M	24,627	3	0	3	30	21,722	3	0	3	30
				T4M	24,330	3	0	3	30	21,460	3	0	3	30
				T4FT4	24,330	3	0	3	30	21,460	3	0	3	30
				T5VS	24,717	3	0	3	30	21,801	3	0	3	30
				T5S	24,717	3	0	3	30	21,801	3	0	3	30
				T5M	24,627	3	0	3	30	21,722	3	0	3	30
				T5W	24,330	3	0	3	30	21,460	3	0	3	30
	1000	100C 1000 - 4	270W	T1S	31,364	3	0	3	30	27,658	3	0	3	30
				T2S	31,364	3	0	3	30	27,658	3	0	3	30
				T2M	30,867	3	0	3	30	27,219	3	0	3	30
				T3S	31,427	3	0	3	30	27,714	3	0	3	30
				T3M	31,251	3	0	3	30	27,559	3	0	3	30
				T4M	30,874	3	0	3	30	27,226	3	0	3	30
				T4FT4	30,874	3	0	3	30	27,226	3	0	3	30
				T5VS	31,364	3	0	3	30	27,658	3	0	3	30
				T5S	31,364	3	0	3	30	27,658	3	0	3	30
				T5M	31,251	3	0	3	30	27,559	3	0	3	30
				T5W	30,874	3	0	3	30	27,226	3	0	3	30

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient	Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.99

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate L27, use the lower maintenance factor that corresponds to the desired number of operating hours from the Lumen Maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	DSX2 LED 80C 700		
	1.0	0.95	0.92	0.88
	1.0	DSX2 LED 100C 700		
	1.0	0.96	0.91	0.85

Electrical Load

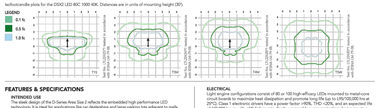
# of LEDs	Drive Current (mA)	System Watts	Current (A)				
			120V	208	240	277	347	480
80	530	142W	1.31	0.76	0.66	0.57	0.45	0.33
	700	168W	1.74	1.00	0.87	0.73	0.60	0.44
	1000	215W	2.05	1.47	1.27	1.16	0.88	0.64
100	530	171W	1.62	0.93	0.81	0.70	0.56	0.41
	700	210W	2.02	1.16	1.01	0.87	0.70	0.50

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Size 2 homepage.

Isofootcandle plots for the DSX2 LED 80C 1000 40K. Distances are in units of mounting height (30').

LEGEND
- 0.1 fc
- 0.5 fc
- 1.0 fc



FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 2 perfectly fits the embedded high performance LED solution into a low profile, fully integrated housing. Ideal for roadways and large parking lots adjacent to malls, transit stations, grocery stores, home centers, and other big-box retailers.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance. Housing is IP66 rated for protection against dust and water ingress. Optional low operating temperature and hi-temp fits. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (2.0 ft²) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish which provides superior resistance to corrosion, weathering and UV degradation. Electrostatic powder process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, application spacing and uniformity. Light engine consists of 80 or 100 high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L70/100,000+ hrs at 25°C). Class 1 electronic drivers have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate at 25°C ambient operating temperature. Locations receive a minimum Category C Low operation (per ANSI/IESNA RP-8-14).

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 2 to withstand up to 3 G's of vibration in accordance with ANSI C136.31. Arm is cast as an integral part of the AERO™ one-piece drilling pattern. Optional terminal block, two-level fuse entry, and NEMA photocontrol receptacle are also available.

LISTINGS
CSA certified to U.S. and Canadian standards. Light engines are IP66 rated, luminaire is IP65 rated (per IEC 60529). IP66 minimum ambient. U.S. Patent No. D675,007. E. International patent pending.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to determine if versions are qualified.

WARRANTY
Five year limited warranty. Full warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Specifications subject to change without notice.

ELECTRICAL
Luminaire configurations consist of 80 or 100 high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L70/100,000+ hrs at 25°C). Class 1 electronic drivers have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate at 25°C ambient operating temperature. Locations receive a minimum Category C Low operation (per ANSI/IESNA RP-8-14).

WALL / POLE LIGHTS

NOTE:
LIGHT SHOWN IS CAPABLE OF BOTH WALL AND POLE MOUNT
SENSOR PROVIDED FOR SUNSET / SUNRISE OPERATION

MATCH EXISTING LIGHTS & FIXTURES.

2 / LT1.1 TYPICAL LIGHTING

N.T.S.

ElumTools General Use Illuminance Results

Average	Maximum	Minimum	Avg/Min	Max/Min
2.8 fc	10.8 fc	0.0 fc	59.8	228.6

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503.646.2202
SPECHTPROP.COM

PROJECT NAME
TUALATIN
LOGISTICS PARK

20400 SW Cipole Road
TUALATIN, OREGON 97062

REVISIONS

	DATE	DESCRIPTION
1	-	-

DATE
APRIL 2021

SCALE	PROJ. NO.
AS NOTED	20190311
DRAWN: KAN	CHECKED: HGK

SITE LIGHTING DETAILS

LT1.1

AR RE-SUBMITTAL SET - 09 / 24 / 21

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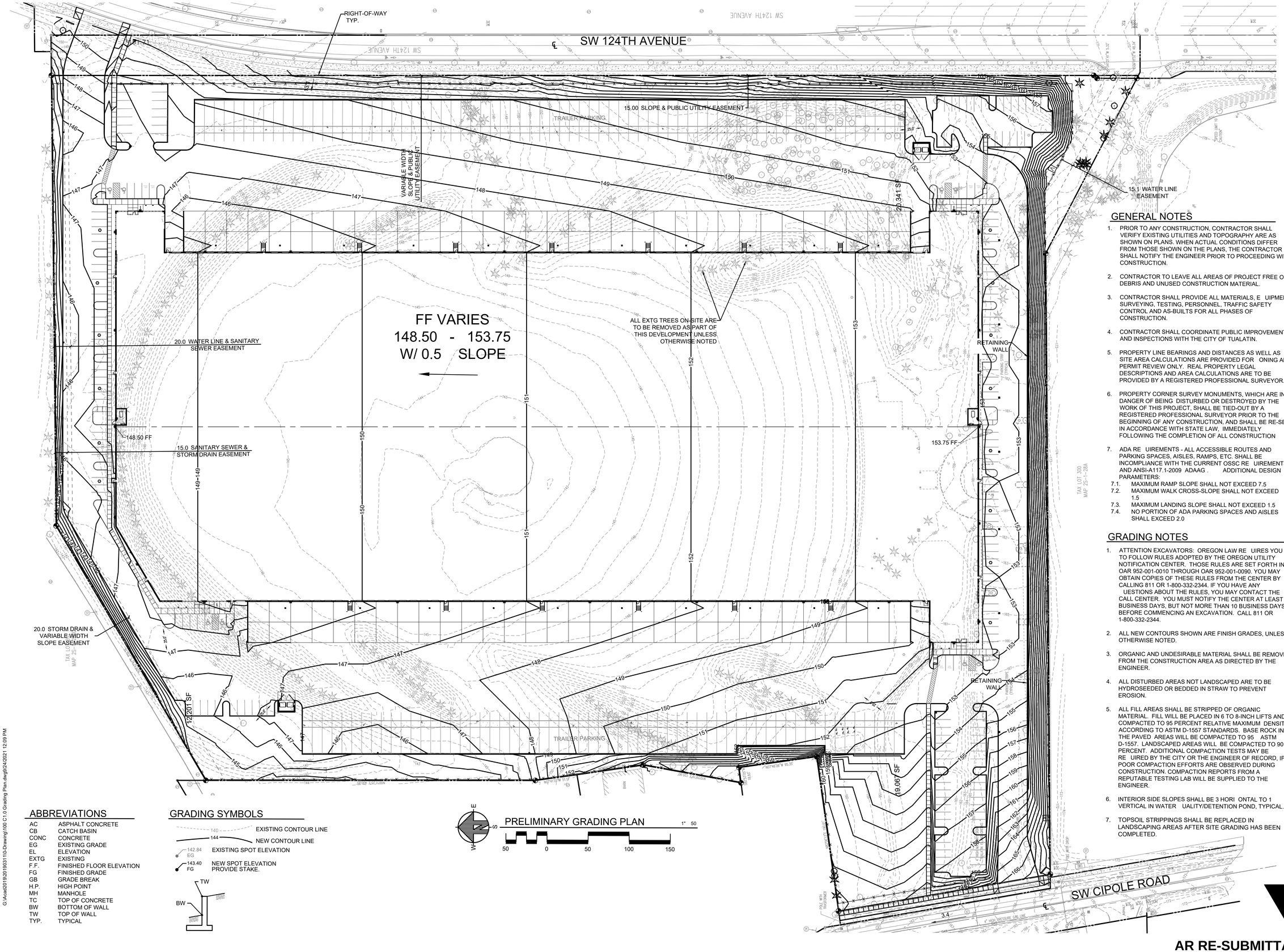

GENERAL NOTES

1. PRIOR TO ANY CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING UTILITIES AND TOPOGRAPHY ARE AS SHOWN ON PLANS. WHEN ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. CONTRACTOR TO LEAVE ALL AREAS OF PROJECT FREE OF DEBRIS AND UNUSED CONSTRUCTION MATERIAL.
3. CONTRACTOR SHALL PROVIDE ALL MATERIALS, E UIPMENT, SURVEYING, TESTING, PERSONNEL, TRAFFIC SAFETY CONTROL AND AS-BUILTS FOR ALL PHASES OF CONSTRUCTION.
4. CONTRACTOR SHALL COORDINATE PUBLIC IMPROVEMENTS AND INSPECTIONS WITH THE CITY OF TUALATIN.
5. PROPERTY LINE BEARINGS AND DISTANCES AS WELL AS SITE AREA CALCULATIONS ARE PROVIDED FOR ONING AND PERMIT REVIEW ONLY. REAL PROPERTY LEGAL DESCRIPTIONS AND AREA CALCULATIONS ARE TO BE PROVIDED BY A REGISTERED PROFESSIONAL SURVEYOR.
6. PROPERTY CORNER SURVEY MONUMENTS, WHICH ARE IN DANGER OF BEING DISTURBED OR DESTROYED BY THE WORK OF THIS PROJECT, SHALL BE TIED-OUT BY A REGISTERED PROFESSIONAL SURVEYOR PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, AND SHALL BE RE-SET IN ACCORDANCE WITH STATE LAW, IMMEDIATELY FOLLOWING THE COMPLETION OF ALL CONSTRUCTION
7. ADA RE UIREMENTS - ALL ACCESSIBLE ROUTES AND PARKING SPACES, AISLES, RAMPS, ETC. SHALL BE INCOMPLIANCE WITH THE CURRENT OSSC RE UIREMENTS AND ANSI-A117.1-2009 ADAAG . ADDITIONAL DESIGN PARAMETERS:
   - 7.1. MAXIMUM RAMP SLOPE SHALL NOT EXCEED 7.5
   - 7.2. MAXIMUM WALK CROSS-SLOPE SHALL NOT EXCEED 1.5
   - 7.3. MAXIMUM LANDING SLOPE SHALL NOT EXCEED 1.5
   - 7.4. NO PORTION OF ADA PARKING SPACES AND AISLES SHALL EXCEED 2.0

GRADING NOTES

1. ATTENTION EXCAVATORS: OREGON LAW RE UIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 811 OR 1-800-332-2344. IF YOU HAVE ANY UESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CALL CENTER. YOU MUST NOTIFY THE CENTER AT LEAST 2 BUSINESS DAYS, BUT NOT MORE THAN 10 BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 811 OR 1-800-332-2344.
2. ALL NEW CONTOURS SHOWN ARE FINISH GRADES, UNLESS OTHERWISE NOTED.
3. ORGANIC AND UNDESIRABLE MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION AREA AS DIRECTED BY THE ENGINEER.
4. ALL DISTURBED AREAS NOT LANDSCAPED ARE TO BE HYDROSEEDED OR BEDDED IN STRAW TO PREVENT EROSION.
5. ALL FILL AREAS SHALL BE STRIPPED OF ORGANIC MATERIAL. FILL WILL BE PLACED IN 6 TO 8-INCH LIFTS AND COMPACTED TO 95 PERCENT RELATIVE MAXIMUM DENSITY ACCORDING TO ASTM D-1557 STANDARDS. BASE ROCK IN THE PAVED AREAS WILL BE COMPACTED TO 95 ASTM D-1557. LANDSCAPED AREAS WILL BE COMPACTED TO 90 PERCENT. ADDITIONAL COMPACTION TESTS MAY BE RE UIRED BY THE CITY OR THE ENGINEER OF RECORD, IF POOR COMPACTION EFFORTS ARE OBSERVED DURING CONSTRUCTION. COMPACTION REPORTS FROM A REPUTABLE TESTING LAB WILL BE SUPPLIED TO THE ENGINEER.
6. INTERIOR SIDE SLOPES SHALL BE 3 HORI ONTAL TO 1 VERTICAL IN WATER UALITY/DETENTION POND, TYPICAL.
7. TOPSOIL STRIPPINGS SHALL BE REPLACED IN LANDSCAPING AREAS AFTER SITE GRADING HAS BEEN COMPLETED.

ABBREVIATIONS

AC	ASPHALT CONCRETE
CB	CATCH BASIN
CONC	CONCRETE
EG	EXISTING GRADE
EL	ELEVATION
EXTG	EXISTING
F.F.	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
GB	GRADE BREAK
H.P.	HIGH POINT
MH	MANHOLE
TC	TOP OF CONCRETE
BW	BOTTOM OF WALL
TW	TOP OF WALL
TYP.	TYPICAL

GRADING SYMBOLS

- 140 — EXISTING CONTOUR LINE
- 144 — NEW CONTOUR LINE
- 142.84 EG — EXISTING SPOT ELEVATION
- 143.40 FG — NEW SPOT ELEVATION PROVIDE STAKE.

PRELIMINARY GRADING PLAN 1" = 50'

50 0 50 100 150

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PROJECT NAME
TUALATIN LOGISTICS PARK

20400 SW Ci ole Road
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REVISIONS

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SCALE	PROJ. NO.
AS NOTED	20190311
DRAWN: JG	CHECKED: HGK

PRELIMINARY GRADING PLAN

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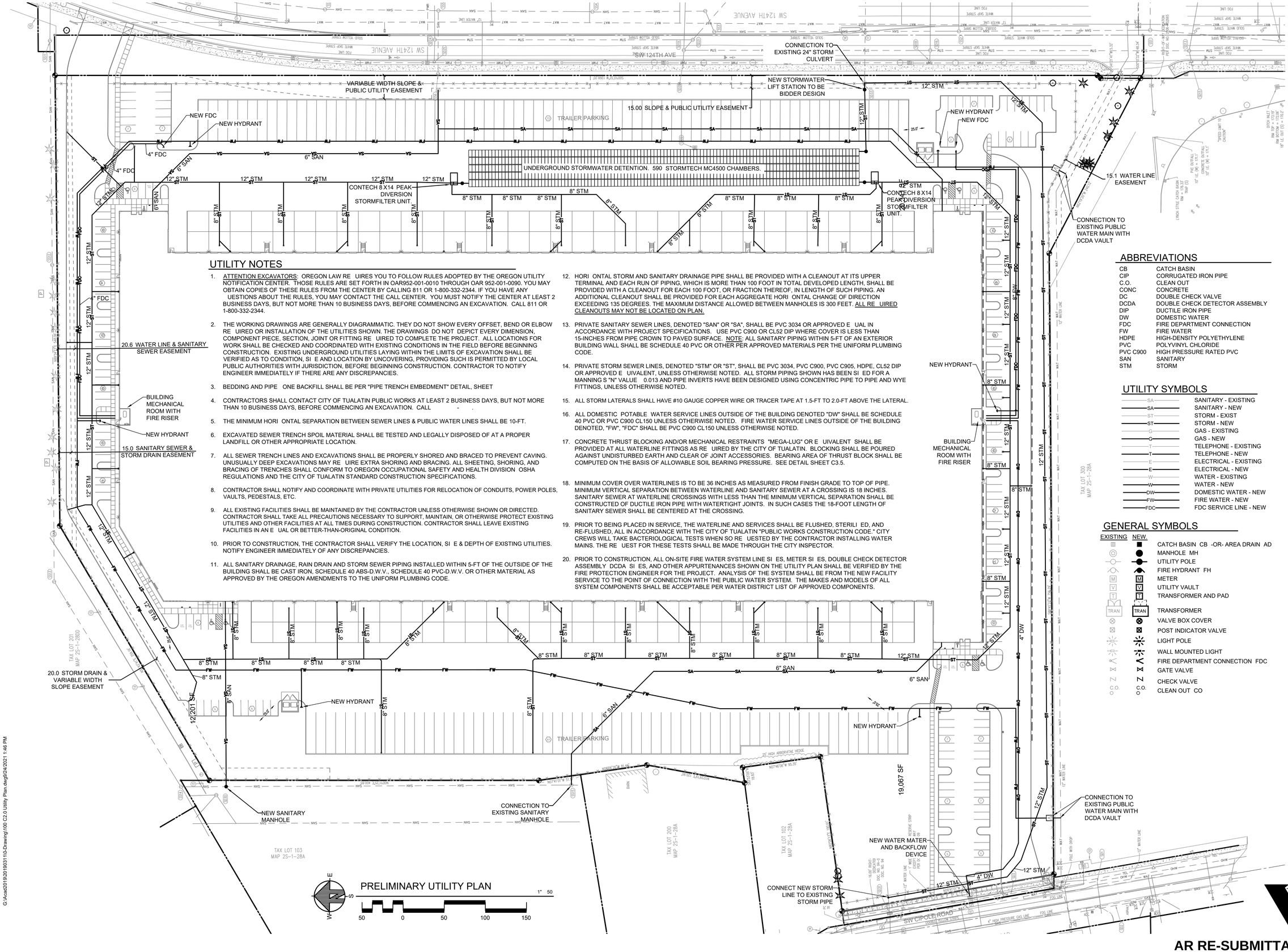

UTILITY NOTES

1. ATTENTION EXCAVATORS: OREGON LAW RE UIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 811 OR 1-800-332-2344. IF YOU HAVE ANY UESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CALL CENTER. YOU MUST NOTIFY THE CENTER AT LEAST 2 BUSINESS DAYS, BUT NOT MORE THAN 10 BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 811 OR 1-800-332-2344.
2. THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW RE UIRED OR INSTALLATION OF THE UTILITIES SHOWN. THE DRAWINGS DO NOT DEPICT EVERY DIMENSION, COMPONENT PIECE, SECTION, JOINT OR FITTING RE UIRED TO COMPLETE THE PROJECT. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION. EXISTING UNDERGROUND UTILITIES LAYING WITHIN THE LIMITS OF EXCAVATION SHALL BE VERIFIED AS TO CONDITION, SI E AND LOCATION BY UNCOVERING, PROVIDING SUCH IS PERMITTED BY LOCAL PUBLIC AUTHORITIES WITH JURISDICTION, BEFORE BEGINNING CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY IF THERE ARE ANY DISCREPANCIES.
3. BEDDING AND PIPE ONE BACKFILL SHALL BE PER "PIPE TRENCH EMBEDMENT" DETAIL, SHEET
4. CONTRACTORS SHALL CONTACT CITY OF TUALATIN PUBLIC WORKS AT LEAST 2 BUSINESS DAYS, BUT NOT MORE THAN 10 BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL - .
5. THE MINIMUM HORI ONTAL SEPARATION BETWEEN SEWER LINES & PUBLIC WATER LINES SHALL BE 10-FT.
6. EXCAVATED SEWER TRENCH SPOIL MATERIAL SHALL BE TESTED AND LEGALLY DISPOSED OF AT A PROPER LANDFILL OR OTHER APPROPRIATE LOCATION.
7. ALL SEWER TRENCH LINES AND EXCAVATIONS SHALL BE PROPERLY SHORED AND BRACED TO PREVENT CAVING. UNUSUALLY DEEP EXCAVATIONS MAY RE UIRE EXTRA SHORING AND BRACING. ALL SHEETING, SHORING, AND BRACING OF TRENCHES SHALL CONFORM TO OREGON OCCUPATIONAL SAFETY AND HEALTH DIVISION OSHA REGULATIONS AND THE CITY OF TUALATIN STANDARD CONSTRUCTION SPECIFICATIONS.
8. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH PRIVATE UTILITIES FOR RELOCATION OF CONDUITS, POWER POLES, VAULTS, PEDESTALS, ETC.
9. ALL EXISTING FACILITIES SHALL BE MAINTAINED BY THE CONTRACTOR UNLESS OTHERWISE SHOWN OR DIRECTED. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO SUPPORT, MAINTAIN, OR OTHERWISE PROTECT EXISTING UTILITIES AND OTHER FACILITIES AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL LEAVE EXISTING FACILITIES IN AN E UAL OR BETTER-THAN-ORIGINAL CONDITION.
10. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION, SI E & DEPTH OF EXISTING UTILITIES. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
11. ALL SANITARY DRAINAGE, RAIN DRAIN AND STORM SEWER PIPING INSTALLED WITHIN 5-FT OF THE OUTSIDE OF THE BUILDING SHALL BE CAST IRON, SCHEDULE 40 ABS-D.W.V., SCHEDULE 40 PVC-D.W.V. OR OTHER MATERIAL AS APPROVED BY THE OREGON AMENDMENTS TO THE UNIFORM PLUMBING CODE.
12. HORI ONTAL STORM AND SANITARY DRAINAGE PIPE SHALL BE PROVIDED WITH A CLEANOUT AT ITS UPPER TERMINAL AND EACH RUN OF PIPING, WHICH IS MORE THAN 100 FOOT IN TOTAL DEVELOPED LENGTH, SHALL BE PROVIDED WITH A CLEANOUT FOR EACH 100 FOOT, OR FRACTION THEREOF, IN LENGTH OF SUCH PIPING. AN ADDITIONAL CLEANOUT SHALL BE PROVIDED FOR EACH AGGREGATE HORI ONTAL CHANGE OF DIRECTION EXCEEDING 135 DEGREES. THE MAXIMUM DISTANCE ALLOWED BETWEEN MANHOLES IS 300 FEET. ALL RE UIRED CLEANOUTS MAY NOT BE LOCATED ON PLAN.
13. PRIVATE SANITARY SEWER LINES, DENOTED "SAN" OR "SA", SHALL BE PVC 3034 OR APPROVED E UAL IN ACCORDANCE WITH PROJECT SPECIFICATIONS. USE PVC C900 OR CL52 DIP WHERE COVER IS LESS THAN 15-INCHES FROM PIPE CROWN TO PAVED SURFACE. NOTE: ALL SANITARY PIPING WITHIN 5-FT OF AN EXTERIOR BUILDING WALL SHALL BE SCHEDULE 40 PVC OR OTHER PER APPROVED MATERIALS PER THE UNIFORM PLUMBING CODE.
14. PRIVATE STORM SEWER LINES, DENOTED "STM" OR "ST", SHALL BE PVC 3034, PVC C900, PVC C905, HDPE, CL52 DIP OR APPROVED E UIVALENT, UNLESS OTHERWISE NOTED. ALL STORM PIPING SHOWN HAS BEEN SI ED FOR A MANNING S "N" VALUE 0.013 AND PIPE INVERTS HAVE BEEN DESIGNED USING CONCENTRIC PIPE TO PIPE AND WYE FITTINGS, UNLESS OTHERWISE NOTED.
15. ALL STORM LATERALS SHALL HAVE #10 GAUGE COPPER WIRE OR TRACER TAPE AT 1.5-FT TO 2.0-FT ABOVE THE LATERAL.
16. ALL DOMESTIC POTABLE WATER SERVICE LINES OUTSIDE OF THE BUILDING DENOTED "DW" SHALL BE SCHEDULE 40 PVC OR PVC C900 CL150 UNLESS OTHERWISE NOTED. FIRE WATER SERVICE LINES OUTSIDE OF THE BUILDING DENOTED, "FW", "FDC" SHALL BE PVC C900 CL150 UNLESS OTHERWISE NOTED.
17. CONCRETE THRUST BLOCKING AND/OR MECHANICAL RESTRAINTS "MEGA-LUG" OR E UIVALENT SHALL BE PROVIDED AT ALL WATERLINE FITTINGS AS RE UIRED BY THE CITY OF TUALATIN. BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH AND CLEAR OF JOINT ACCESSORIES. BEARING AREA OF THRUST BLOCK SHALL BE COMPUTED ON THE BASIS OF ALLOWABLE SOIL BEARING PRESSURE. SEE DETAIL SHEET C3.5.
18. MINIMUM COVER OVER WATERLINES IS TO BE 36 INCHES AS MEASURED FROM FINISH GRADE TO TOP OF PIPE. MINIMUM VERTICAL SEPARATION BETWEEN WATERLINE AND SANITARY SEWER AT A CROSSING IS 18 INCHES. SANITARY SEWER AT WATERLINE CROSSINGS WITH LESS THAN THE MINIMUM VERTICAL SEPARATION SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH WATERTIGHT JOINTS. IN SUCH CASES THE 18-FOOT LENGTH OF SANITARY SEWER SHALL BE CENTERED AT THE CROSSING.
19. PRIOR TO BEING PLACED IN SERVICE, THE WATERLINE AND SERVICES SHALL BE FLUSHED, STERILI ED, AND RE-FLUSHED, ALL IN ACCORDANCE WITH THE CITY OF TUALATIN "PUBLIC WORKS CONSTRUCTION CODE." CITY CREWS WILL TAKE BACTERIOLOGICAL TESTS WHEN SO RE UESTED BY THE CONTRACTOR INSTALLING WATER MAINS. THE RE UEST FOR THESE TESTS SHALL BE MADE THROUGH THE CITY INSPECTOR.
20. PRIOR TO CONSTRUCTION, ALL ON-SITE FIRE WATER SYSTEM LINE SI ES, METER SI ES, DOUBLE CHECK DETECTOR ASSEMBLY DCDA SI ES, AND OTHER APPURTENANCES SHOWN ON THE UTILITY PLAN SHALL BE VERIFIED BY THE FIRE PROTECTION ENGINEER FOR THE PROJECT. ANALYSIS OF THE SYSTEM SHALL BE FROM THE NEW FACILITY SERVICE TO THE POINT OF CONNECTION WITH THE PUBLIC WATER SYSTEM. THE MAKES AND MODELS OF ALL SYSTEM COMPONENTS SHALL BE ACCEPTABLE PER WATER DISTRICT LIST OF APPROVED COMPONENTS.

ABBREVIATIONS

CB	CATCH BASIN
CIP	CORRUGATED IRON PIPE
C.O.	CLEAN OUT
CONC	CONCRETE
DC	DOUBLE CHECK VALVE
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY
DIP	DUCTILE IRON PIPE
DW	DOMESTIC WATER
FDC	FIRE DEPARTMENT CONNECTION
FW	FIRE WATER
HDPE	HIGH-DENSITY POLYETHYLENE
PVC	POLYVINYL CHLORIDE
PVC C900	HIGH PRESSURE RATED PVC
SAN	SANITARY
STM	STORM

UTILITY SYMBOLS

SA	SANITARY - EXISTING
SA	SANITARY - NEW
ST	STORM - EXIST
ST	STORM - NEW
G	GAS - EXISTING
G	GAS - NEW
T	TELEPHONE - EXISTING
T	TELEPHONE - NEW
E	ELECTRICAL - EXISTING
E	ELECTRICAL - NEW
W	WATER - EXISTING
W	WATER - NEW
DW	DOMESTIC WATER - NEW
FW	FIRE WATER - NEW
FDC	FDC SERVICE LINE - NEW

GENERAL SYMBOLS

EXISTING NEW.

- CATCH BASIN CB -OR- AREA DRAIN AD
- MANHOLE MH
- UTILITY POLE
- FIRE HYDRANT FH
- METER
- UTILITY VAULT
- TRANSFORMER AND PAD
- TRANSFORMER
- VALVE BOX COVER
- POST INDICATOR VALVE
- LIGHT POLE
- WALL MOUNTED LIGHT
- FIRE DEPARTMENT CONNECTION FDC
- GATE VALVE
- CHECK VALVE
- CLEAN OUT CO

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REVISIONS

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-	-	

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AS NOTED	20190311
DRAWN	CHECKED
GLT	HGK

PRELIMINARY UTILITY PLAN

C2.0

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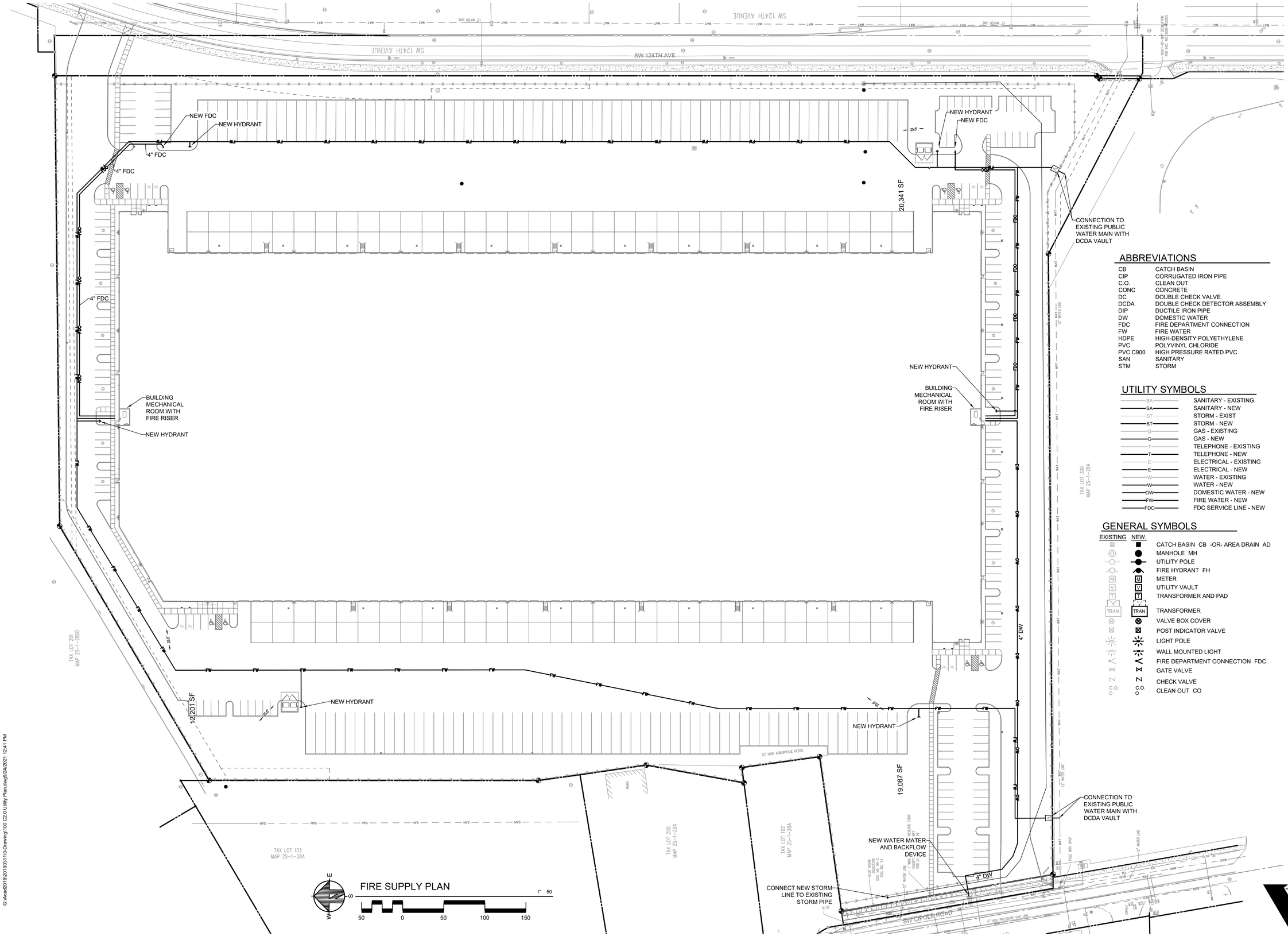

ABBREVIATIONS

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FW	FIRE WATER
HDPE	HIGH-DENSITY POLYETHYLENE
PVC	POLYVINYL CHLORIDE
PVC C900	HIGH PRESSURE RATED PVC
SAN	SANITARY
STM	STORM

UTILITY SYMBOLS

SA	SANITARY - EXISTING
SA	SANITARY - NEW
ST	STORM - EXIST
ST	STORM - NEW
G	GAS - EXISTING
G	GAS - NEW
T	TELEPHONE - EXISTING
T	TELEPHONE - NEW
E	ELECTRICAL - EXISTING
E	ELECTRICAL - NEW
W	WATER - EXISTING
W	WATER - NEW
DW	DOMESTIC WATER - NEW
FW	FIRE WATER - NEW
FDC	FDC SERVICE LINE - NEW

GENERAL SYMBOLS

EXISTING	NEW.	
	■	CATCH BASIN CB -OR- AREA DRAIN AD
	●	MANHOLE MH
	●	UTILITY POLE
	◆	FIRE HYDRANT FH
M	M	METER
V	V	UTILITY VAULT
T	T	TRANSFORMER AND PAD
TRAN	TRAN	TRANSFORMER
⊗	⊗	VALVE BOX COVER
⊠	⊠	POST INDICATOR VALVE
	✳	LIGHT POLE
	✳	WALL MOUNTED LIGHT
	⧓	FIRE DEPARTMENT CONNECTION FDC
	⧖	GATE VALVE
	⧖	CHECK VALVE
C.O.	C.O.	CLEAN OUT CO

VLMK
ENGINEERING + DESIGN
3933 S Kelly Avenue
Portland, Oregon 97239
503.222.4453
VLMK.COM

SPECHT
10260 SW Greenburg Road
Suite 170
Portland, Oregon 97223
503.646.2202
SPECHTPROP.COM

PROJECT NAME

TUALATIN
LOGISTICS PARK

20400 SW Ci ole Road
TUALATIN, OREGON 97062

REVISIONS

	DATE	DESCRIPTION
	-	

DATE
APRIL 2021

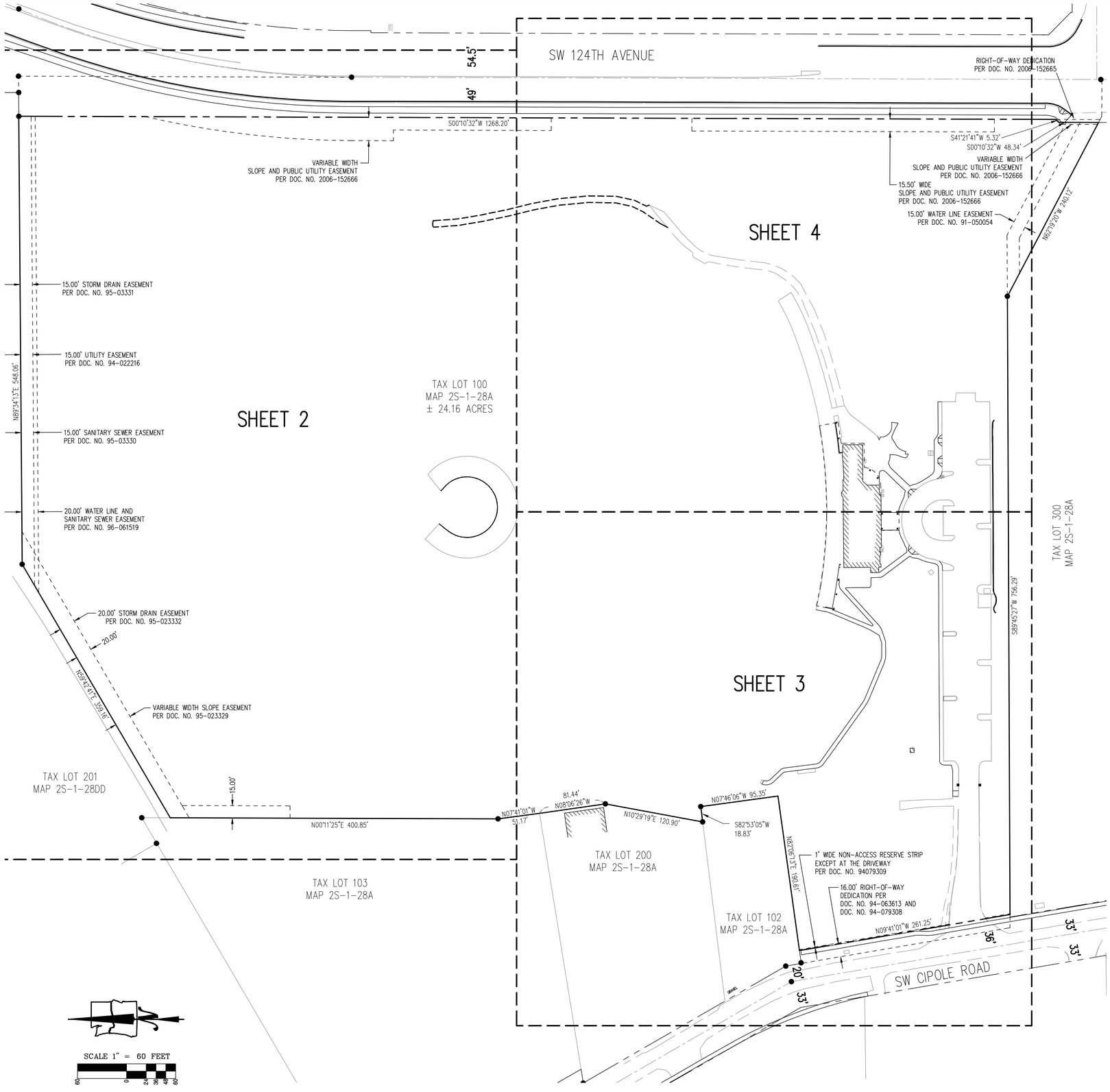
SCALE	PROJ. NO.
AS NOTED	20190311
DRAWN	CHECKED
CLT	HGK

FIRE SUPPLY PLAN

FS1.0

AR RE-SUBMITTAL SET - 09 / 24 / 21

G:\Acad2019\20190311\0-Drawing\100 C2.0 Utility Plan.dwg9/24/2021 12:41 PM



SCALE 1" = 60 FEET

60 0 24 36 48 60

STORM SEWER INFORMATION

(SD24) MANHOLE
RIM = 155.71'
12" I.E. IN (E)
12" I.E. IN (W)
12" I.E. OUT (S)

(SD25) CURB INLET
RIM = 156.20'
12" I.E. OUT (E)

(SD26) DRY WELL MANHOLE
RIM = 146.43'
SUMP = 145.4'

(SD27) CURB INLET
RIM = 148.87'
12" I.E. OUT (NW) = 146.3'

(SD28) CURB BASIN
RIM = 148.99'
12" I.E. IN (SE) = 145.4'
12" I.E. OUT (NW) = 145.4'

(SD29) MANHOLE
RIM = 148.82'
12" (SE TO N)
FLOW LINE = 143.8'

(SD30) MANHOLE
RIM = 144.77'
8" I.E. IN (NW) = 139.6'
24" I.E. IN (SW) = 139.2'
24" I.E. OUT (N) = 137.2'
SUMP = 135.7'

SANITARY SEWER INFORMATION

(SS5) MANHOLE
RIM = 155.38'
6" IN (W)
10" (S TO N)
FLOW LINE = 127.9'

(SS6) MANHOLE
RIM = 156.73'
10" (SE TO W)
FLOW LINE = 138.6'

(SS7) MANHOLE
RIM = 153.24'
10" (S TO NE)
FLOW LINE = 137.0')

(SS8) MANHOLE
RIM = 150.78'
10" IN (SW)
10" OUT (NE)

(SS9) MANHOLE
RIM = 148.33'
8" IN (W)
10" (SW TO NE)
FLOW LINE = 135.1'

(SS10) MANHOLE
RIM = 149.25'
8" I.E. IN (W) = 135.6'
8" I.E. OUT (E) = 135.5'

(SS11) MANHOLE
RIM = 148.88'
8" I.E. IN (W) = 135.9'
8" I.E. OUT (E) = 135.9'

(SS12) MANHOLE
RIM = 143.92'
8" I.E. IN (W) = 137.1'
8" I.E. OUT (E) = 137.2'

(SS13) MANHOLE
RIM = 143.33'
8" I.E. IN (W)
8" I.E. OUT (E)

(SS14) MANHOLE
RIM = 144.05'
8" I.E. IN (N) = 140.1'
8" IN (S)
8" OUT (NE)
FLOW LINE = 140.0'

KEY NOTES:

1. ADA RAMP
2. 3' HIGH VINYL RAIL FENCE
3. MASONRY GATE COLUMN
4. 5' HIGH WROUGHT IRON FENCE
5. 5' HIGH CHAIN LINK FENCE
6. 6' HIGH CHAIN LINK FENCE WITH BARBED WIRE
7. TRASH ENCLOSURE WITH 6' HIGH WOOD FENCE & WALLS
8. BUILDING OVERHANG
9. METAL POST WITH "DISABLED PARKING ONLY" SIGN
10. 6' HIGH CHAIN LINK FENCE
11. GATE MOTOR
12. VARIABLE HIEGHT CONCRETE BLOCK WALL
13. METAL POST WITH "EVACUATION AREA" SIGN
14. METAL POST WITH ROAD TURNS ARRROW SIGN
15. METAL POST WITH "SPEED 35" SIGN
16. METAL POST WITH DIVIDED LANES SIGN
17. METAL POST WITH REFLECTOR
18. MINIATURE GOLF COURSE (SEE NOTE 7)
19. 15' HIGH METAL POLES WITH NETTING

NOTES

1) THE FIELD SURVEY FOR THIS MAP WAS COMPLETED ON JUNE 10, 2021.

2) ELEVATIONS AND CONTOURS ARE BASED ON WASHINGTON COUNTY BENCHMARK NO. 102. THE BENCHMARK IS A BRASS DISK LOCATED NORTH OF THE RAILROAD TRACKS NEAR THE MOST NORTHERLY CORNER OF THE PROPERTY, AS SHOWN. IT HAS AN ELEVATION OF 157.30 FEET ON THE NGVD 1929 VERTICAL DATUM.

3) THE BASIS OF BEARINGS FOR THIS SURVEY IS SURVEY NO. 32478.

4) THE RIGHT-OF-WAY WIDTHS WERE ESTABLISH USING INFORMATION FROM PLATS, RECORD SURVEYS AND THE TAX ASSESSOR'S MAP.

5) THE EASEMENTS SHOWN ON THIS MAP ARE BASED ON THE TITLE REPORT, PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, WITH ORDER NUMBER NCS-961894-OR1 AND WITH AN EFFECTIVE DATE OF APRIL 1, 2021 AT 8:00 AM.

6) THE UNDERGROUND UTILITIES ARE BASED ON THE MARKINGS PER LOCATE TICKET NUMBERS 21121399 AND 2112141.

7) THERE IS A MINIATURE GOLF COURSE LOCATED IN THE SOUTHEASTERLY AREA OF THE PROPERTY, AS SHOWN. THE APPROXIMATE EXTENTS OF THE CONTRITE SURFACES HAVE BEEN MAPPED. HOWEVER OTHER COURSE FEATURES LIKE MAN MADE WATER WAYS HAVE NOT BEEN MAPPED.

8) TREES WITH NUMBER 1-447 HAVE ALUMINUM TAGS WITH CORRESPONDING NUMBERS. THE TREES WITH LARGER NUMBERS DO NOT HAVE TAGS.

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

LEGEND ALL SHEETS

DECIDUOUS TREE	
CONIFEROUS TREE	
FIRE HYDRANT	
FIRE DEPARTMENT CONNECTION	FDC
WATER BLOWOFF	WBO
WATER METER	WM
WATER VALVE	WV
DOUBLE CHECK VALVE	DCV
WATER VAULT	WV
CATHODIC PROTECTION TEST STATION	
SANITARY SEWER CLEAN OUT	
SANITARY SEWER MANHOLE	
STORM SEWER CLEAN OUT	
STORM SEWER CATCH BASIN	
STORM SEWER CURB INLET	
STORM SEWER MANHOLE	
STORM SEWER AREA DRAIN	AD
MAILBOX	MB
GAS RISER BOX	GB
GAS METER	GM
GAS VALVE	
GUY WIRE ANCHOR	
UTILITY POLE	
POWER VAULT	P
ELECTRICAL METER	EM
POWER JUNCTION BOX	EB
HVAC UNIT	AC
POWER TRANSFORMER	TFR
STREET LIGHT	
TELEPHONE/TELEVISION VAULT	T
TELEPHONE/TELEVISION JUNCTION BOX	
TELEPHONE/TELEVISION RISER	
TELEPHONE/TELEVISION MANHOLE	
BICYCLE RACK	
SIGN	
BUILDING COLUMN	
FOUND SURVEY MONUMENT	
RIGHT-OF-WAY LINE	
BOUNDARY LINE	
PROPERTY LINE	
CENTERLINE	
DITCH	
CURB	
EDGE OF PAVEMENT	
EASEMENT	
FENCE LINE	
GRAVEL EDGE	
POWER LINE	PWR
OVERHEAD WIRE	OHW
TELEPHONE LINE	TEL
TELEVISION LINE	TV
GAS LINE	GAS
STORM SEWER LINE	STM
SANITARY SEWER LINE	SAN
WATER LINE	WAT
WETLAND BOUNDARY	WTB

NORTHWEST SURVEYING, INC.
1815 NW 169th PLACE, SUITE 2090
BEAVERTON, OR. 97006
PH:(503) 848-2127 FAX:(503) 848-2179
EMAIL: nwsurveying@nwsrvy.com

LOCATED IN THE NE 1/4 OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 1 WEST, W.M., CITY OF TUALATIN, WASHINGTON COUNTY, OREGON

20400 SW CIPOLE ROAD TOPOGRAPHIC SURVEY

TUALATIN, OREGON
TAX LOT 100 TAX MAP 2S-1-28A

DRAWING NO.:	2288 TOPO
SCALE:	AS NOTED
DRAWING GENERATED BY LD2004	
DRAWN BY:	BJA
CHECKED BY:	CHS

PREPARED FOR:
SPECHT DEVELOPMENT, INC.
10260 SW GREENBURG ROAD
SUITE 170
PORTLAND, OR 97223

REVISIONS:
PRELIM. RELEASE: JUNE 9, 2021
INITIAL RELEASE: JUNE 18, 2021
REVISED: JULY 12, 2021

JOB NUMBER
2288

SHEET
1 OF 5

AR RE-SUBMITTAL SET - 09 / 24 / 21

SCALE 1" = 30 FEET

TAX LOT 201
MAP 2S-1-28DD

MATCH - SHEET 5

MATCH - SHEET 3

MATCH - SHEET 4

N89°34'13"E 548.06'

N69°42'41"E 359.16'

N00°11'25"E 400.68'

N01°17'05"W 313.17'

15.00' SANITARY SEWER EASEMENT PER DOC. NO. 95-03330

10' CHAIN LINK FENCE

15.00' UTILITY EASEMENT PER DOC. NO. 94-022216

15.00' STORM DRAIN EASEMENT PER DOC. NO. 95-03331

20.00' WATER LINE AND SANITARY SEWER EASEMENT PER DOC. NO. 96-061519

20.00' STORM DRAIN EASEMENT PER DOC. NO. 95-023332

VARIABLE WIDTH SLOPE EASEMENT PER DOC. NO. 95-023329

6' CHAIN LINK FENCE

BRUSH LINE (TYPICAL)

GATE

CONCRETE LINED POND

RETAINING WALL

STORM VAULT WITH GRATE

IRRIGATION PUMP

DIRT PATH

VARIABLE WIDTH SLOPE AND PUBLIC UTILITY EASEMENT PER DOC. NO. 2006-152666

SW 124TH AVENUE

LANDSCAPED MEDIAN

FOG LINE WHITE SKIP STRIPE

SOLID YELLOW STRIPE

6' CHAIN LINK FENCE WITH BARBED WIRE

NORTHWEST SURVEYING, INC.
1815 NW 169th PLACE, SUITE 2090
BEAVERTON, OR. 97006
PH:(503) 848-2127 FAX:(503) 848-2179
EMAIL: nwsurveying@nwsrvy.com

LOCATED IN THE NE 1/4 OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 1 WEST, W.M., CITY OF TUALATIN, WASHINGTON COUNTY, OREGON

20400 SW CIPOLE ROAD TOPOGRAPHIC SURVEY

TUALATIN, OREGON

TAX LOT 100

TAX MAP 2S-1-28A

DRAWING NO.:	2288 TOPO
SCALE:	AS NOTED
DRAWING GENERATED BY LD2004	
DRAWN BY:	BJA
CHECKED BY:	CHS

PREPARED FOR:
SPECHT DEVELOPMENT, INC.
10260 SW GREENBURG ROAD
SUITE 170
PORTLAND, OR 97223

REVISIONS:
PRELIM. RELEASE: JUNE 9, 2021
INITIAL RELEASE: JUNE 18, 2021
REVISED: JULY 12, 2021

JOB NUMBER
2288

SHEET
2 OF 5

AR RE-SUBMITTAL SET - 09 / 24 / 21

TREE INFORMATION

1	9" COTTONWOOD	133	17" COTTONWOOD
2	13" FIR	133	17" COTTONWOOD
3	20" FIR	134	14" COTTONWOOD
4	20" FIR	135	8" COTTONWOOD
5	16" CEDAR	136	19" FIR
6	10" CEDAR	137	18" COTTONWOOD
7	26" FIR	138	15" FIR
8	18" FIR	139	9" COTTONWOOD
9	20" FIR	140	10" COTTONWOOD
10	16" SPRUCE	141	15" COTTONWOOD
11	22" SPRUCE	142	11" COTTONWOOD
12	17" FIR	143	13" COTTONWOOD
13	20" FIR	144	10" COTTONWOOD
14	19" CEDAR	145	8" COTTONWOOD
15	20" CEDAR	146	24" COTTONWOOD
16	14" SPRUCE	147	22" COTTONWOOD
17	36" FIR	148	11" COTTONWOOD
18	17" CEDAR	149	14" COTTONWOOD
19	17" CEDAR	150	22" COTTONWOOD
20	8" CEDAR	151	20" COTTONWOOD
21	12" CEDAR	152	16" FIR
22	8" CEDAR	153	11" CEDAR
23	15" CEDAR	154	20" COTTONWOOD
24	17" CEDAR	155	20" COTTONWOOD
25	14" SPRUCE	156	17" COTTONWOOD
26	13" SPRUCE	157	18" COTTONWOOD
27	18" CEDAR	158	11" COTTONWOOD
28	12" CEDAR	159	18" COTTONWOOD
29	30" CEDAR	160	13" MAPLE
30	16" CEDAR	161	13" ALDER
31	19" CEDAR	162	17" COTTONWOOD
32	SPLIT AVG 9" CEDAR	163	12" COTTONWOOD
33	SPLIT AVG 8" CEDAR	164	10" COTTONWOOD
34	18" FIR	165	10" COTTONWOOD
35	17" FIR	166	11" COTTONWOOD
36	15" SPRUCE	167	9" COTTONWOOD
37	14" SPRUCE	168	14" COTTONWOOD
38	13" SPRUCE	169	13" COTTONWOOD
39	16" COTTONWOOD	170	8" COTTONWOOD
40	16" CEDAR	171	12" COTTONWOOD
41	14" CEDAR	172	14" COTTONWOOD
42	22" FIR	173	17" COTTONWOOD
43	21" FIR	174	10" COTTONWOOD
44	16" SPRUCE	175	16" COTTONWOOD
45	12" SPRUCE	176	8" MADRONE
46	22" FIR	177	23" COTTONWOOD
47	18" FIR	178	13" COTTONWOOD
48	14" CEDAR	179	11" COTTONWOOD
49	16" CEDAR	180	16" COTTONWOOD
50	14" CEDAR	181	8" COTTONWOOD
51	16" CEDAR	182	11" COTTONWOOD
52	11" SPRUCE	183	8" COTTONWOOD
53	13" SPRUCE	184	8" COTTONWOOD
54	9" SPRUCE	185	8" COTTONWOOD
55	16" FIR	186	13" COTTONWOOD
56	16" CEDAR	187	13" COTTONWOOD
57	SPLIT AVG 5" CEDAR	188	9" COTTONWOOD
58	10" CEDAR	189	9" COTTONWOOD
59	17" FIR	190	9" COTTONWOOD
60	21" CEDAR	191	13" COTTONWOOD
61	24" CEDAR	192	19" COTTONWOOD
62	38" FIR	193	11" COTTONWOOD
63	28" FIR	194	13" COTTONWOOD
64	9" SPRUCE	195	10" COTTONWOOD
65	21" CEDAR	196	17" COTTONWOOD
66	24" FIR	197	9" COTTONWOOD
67	26" FIR	198	10" COTTONWOOD
68	15" SPRUCE	199	8" COTTONWOOD
69	25" FIR	200	11" COTTONWOOD
70	19" FIR	201	14" COTTONWOOD
71	53" FIR	202	14" COTTONWOOD
72	33" FIR	203	35" FIR
73	16" FIR	204	16" COTTONWOOD
74	28" FIR	205	25" COTTONWOOD
75	19" FIR	206	18" COTTONWOOD
76	33" FIR	207	15" COTTONWOOD
77	11" FIR	208	10" COTTONWOOD
78	8" FIR	209	12" COTTONWOOD
79	12" FIR	210	14" COTTONWOOD
80	38" FIR	211	14" COTTONWOOD
81	29" FIR	212	12" FIR
82	30" FIR	213	17" COTTONWOOD
83	20" FIR	214	18" COTTONWOOD
84	31" FIR	215	12" MAPLE
85	13" MADRONE	216	21" FIR
86	11" FIR	217	14" MAPLE
87	12" FIR	218	10" MAPLE
88	18" FIR	219	8" MAPLE
89	37" FIR	220	12" MAPLE
90	15" FIR	221	12" COTTONWOOD
91	15" FIR	222	9" MAPLE
92	12" FIR	223	11" COTTONWOOD
93	15" FIR	224	16" COTTONWOOD
94	25" FIR	225	18" COTTONWOOD
95	16" FIR	226	25" COTTONWOOD
96	17" FIR	227	9" COTTONWOOD
97	36" FIR	228	12" COTTONWOOD
98	21" FIR	229	13" COTTONWOOD
99	19" FIR	230	12" COTTONWOOD
100	15" FIR	231	19" COTTONWOOD
101	19" FIR	232	15" FIR
102	15" FIR	233	13" WILLOW
103	18" MADRONE	234	13" WILLOW
104	16" SPRUCE	235	10" WILLOW
105	14" SPRUCE	236	27" FIR
106	20" FIR	237	24" FIR
107	24" FIR	238	26" FIR
108	25" FIR	239	24" FIR
109	25" CEDAR	240	27" FIR
110	12" SPRUCE	241	17" FIR
111	26" CEDAR	242	32" FIR
112	30" CEDAR	243	SPLIT AVG 7" WILLOW
113	19" CEDAR	244	SPLIT AVG 5" WILLOW
114	15" FIR	245	19" CEDAR
115	27" FIR	246	40" PLUME CRYPTOMERIA
116	15" CEDAR	247	40" PLUME CRYPTOMERIA
117	40" CEDAR	248	26" FIR
118	13" FIR	249	26" FIR
119	20" COTTONWOOD	249	26" FIR
120	9" FIR	250	19" FIR
121	14" FIR	250	19" FIR
122	25" COTTONWOOD	251	10" PEAR
123	14" COTTONWOOD	251	10" FIR
124	11" COTTONWOOD	252	11" MADRONE
125	10" WILLOW	253	14" FIR
126	8" COTTONWOOD	253	45" FIR
127	12" COTTONWOOD	255	34" FIR
128	14" COTTONWOOD	256	9" FIR
129	13" COTTONWOOD	257	23" FIR
130	14" FIR	258	31" FIR
131	15" FIR	259	45" FIR
132	19" COTTONWOOD	260	19" MADRONE
		261	20" MAPLE

SANITARY SEWER INFORMATION

(SS15) MANHOLE
RIM = 152.38'
8" I.E. IN (S) = 142.2'
8" I.E. OUT (N) = 142.1'

STORM SEWER INFORMATION

(SD1) CPP CULVERT
15" I.E. OUT (SW) = 168.2'

(SD2) CONCRETE CULVERT
10" I.E. IN (SE) = 169.2'
10" I.E. OUT (NW) = 167.0'

(SD3) CONCRETE CULVERT
15" I.E. IN (SE) = 166.9'
15" I.E. OUT (NW) = 160.4'

(SD4) CONCRETE CULVERT
10" I.E. IN (SE) = 459.2'
10" I.E. OUT (NW) = 159.9'

(SD5) CONCRETE CULVERT
15" I.E. OUT (NE) = 157.2'

(SD6) CMP CULVERT
36" I.E. IN (NE) = 157.6'
36" I.E. OUT (SW) = 157.2'

(SD7) CMP CULVERT
18" IN (W)
18" I.E. OUT (E) = 157.1'

(SD8) CONCRETE CULVERT
36" I.E. IN (W) = 155.1'
36" I.E. OUT (E) = 153.2'

(SD10) LYNCH STYLE CURB INLET
RIM = 160.30'
TRAP (E)

(SD11) LYNCH STYLE CURB INLET
RIM = 158.24'
TRAP (SE)

(SD31) OVERSIZED DITCH INLET
RIM TOP = 160.11'
RIM BOTTOM = 158.76'
18" I.E. IN (W) = 157.8'
36" I.E. OUT (E) = 155.0'

SCALE 1" = 30 FEET

KEY NOTES:

1. ADA RAMP
2. 3' HIGH VINYL RAIL FENCE
3. MASONRY GATE COLUMN
4. 5' HIGH WROUGHT IRON FENCE
5. 5' HIGH CHAIN LINK FENCE
6. 6' HIGH CHAIN LINK FENCE WITH BARBED WIRE
7. TRASH ENCLOSURE WITH 6' HIGH WOOD FENCE & WALLS
8. BUILDING OVERHANG
9. METAL POST WITH "DISABLED PARKING ONLY" SIGN
10. 6' HIGH CHAIN LINK FENCE
11. GATE MOTOR
12. VARIABLE HIEGHT CONCRETE BLOCK WALL
13. METAL POST WITH "EVACUATION AREA" SIGN
14. METAL POST WITH ROAD TURNS ARRROW SIGN
15. METAL POST WITH "SPEED 35" SIGN
16. METAL POST WITH DIVIDED LANES SIGN
17. METAL POST WITH REFLECTOR
18. MINIATURE GOLF COURSE (SEE NOTE 7)
19. 15' HIGH METAL POLES WITH NETTING

MATCH – SHEET 2

MATCH – SHEET 4

TAX LOT 200
MAP 2S-1-28A

TAX LOT 102
MAP 2S-1-28A

BARN

ONE STORY CLUB HOUSE

PUMP HOUSE

SAND TRAP

SW IPOLK ROAD

N41°41'01"W 315.41'

N39°36'26"W 181.47'

N10°29'10"E 120.97'

S82°53'05"W 18.83'

N89°40'09"W 96.35'

N82°06'13"E 190.61'

S89°45'27"W 756.29'

N89°40'09"W 267.75'

16.00' RIGHT-OF-WAY DEDICATION PER DOC. NO. 94-063613 AND DOC. NO. 94-079308

1' WIDE NON-ACCESS RESERVE STRIP EXCEPT AT THE DRIVEWAY PER DOC. NO. 94079309

12" WATER LINE

1" GAS LINE

APPROXIMATE LOCATION 1" GAS LINE PER MAP PROVIDED BY NW NATURAL

4' HIGH MASONRY SIGN "TUALATIN ISLAND GREENS"

25' HIGH ARBORVITAE HEDGE

6' CHAIN LINK FENCE

COVERED CONCRETE SUPPORT WALL

PARKING STRIPE (TYPICAL)

ASPHALT PATH

EXTRUDED CURB

ASPHALT

GRAVEL

DOUBLE YELLOW STRIPE

4" HIGH PRESSURE GAS LINE

FOG LINE

GUY ANCHOR POLE

POLE WITH TRASFORMER

POLE WITH DROP

POLE WITH DROP AND METER

HYDRANT WITH 3 VALVES

GATE

STORM VAULT WITH GRATE

4" PVC

NORTHWEST SURVEYING, INC.
1815 NW 169th PLACE, SUITE 2090
BEAVERTON, OR. 97006
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EMAIL: nwsurveying@nwsrvy.com

20400 SW CIPOLE ROAD
TOPOGRAPHIC SURVEY
TUALATIN, OREGON
TAX MAP 2S-1-28A
TAX LOT 100

LOCATED IN THE NE 1/4 OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 1 WEST, W.M., CITY OF TUALATIN, WASHINGTON COUNTY, OREGON

DRAWING NO.:	2288 TOPO
SCALE:	AS NOTED
DRAWING GENERATED BY LD2004	
DRAWN BY:	BJA
CHECKED BY:	CHS

PREPARED FOR:
SPECHT DEVELOPMENT, INC.
10260 SW GREENBURG ROAD
SUITE 170
PORTLAND, OR 97223

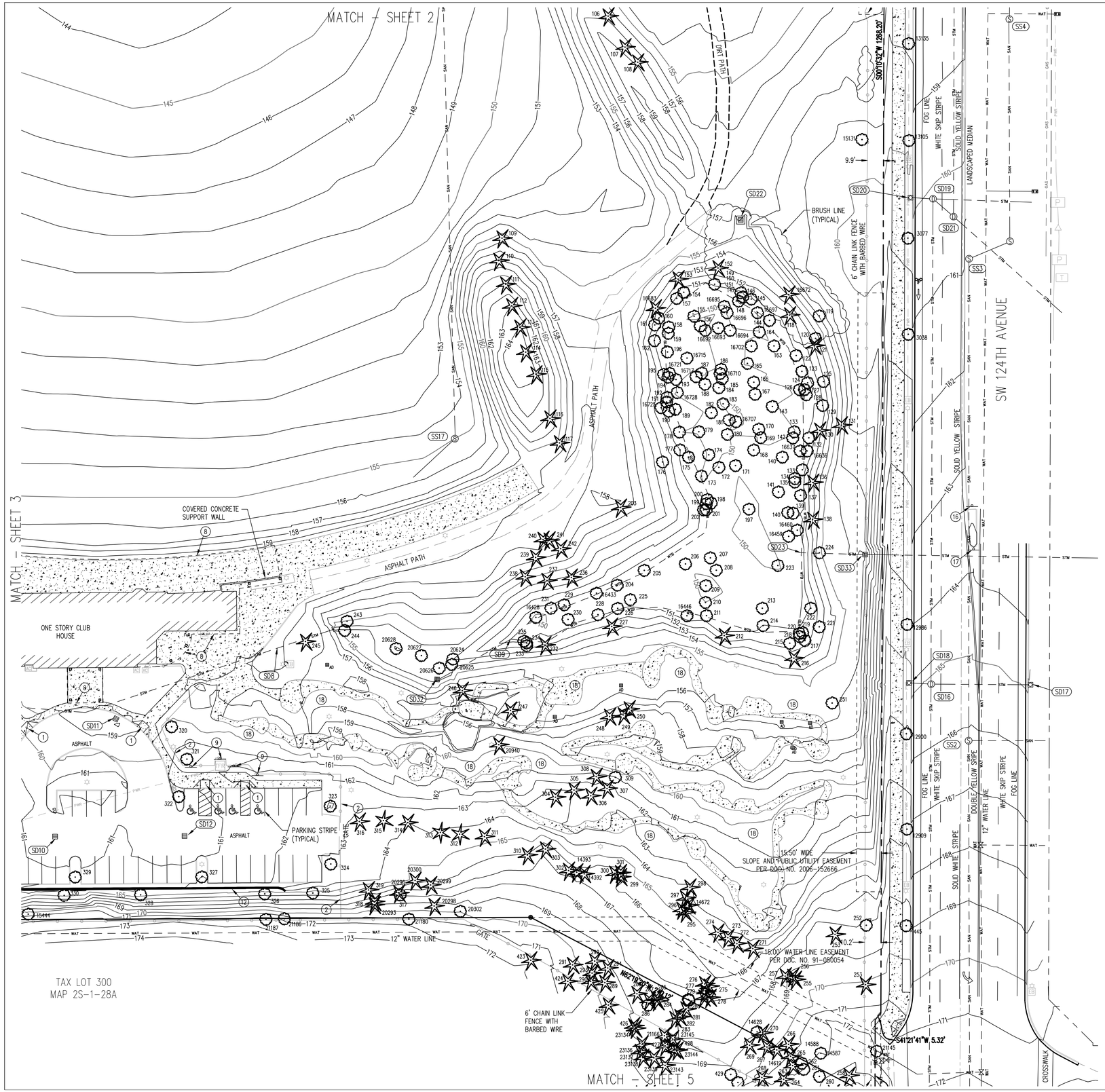
REVISIONS:

PRELIM. RELEASE: JUNE 9, 2021
INITIAL RELEASE: JUNE 18, 2021
REVISED: JULY 12, 2021

JOB NUMBER
2288

SHEET
3 OF 5

AR RE-SUBMITTAL SET - 09 / 24 / 21



TREE INFORMATION

262	8" MADRONE	394	19" FIR
263	32" FIR	395	21" FIR
264	20" FIR	395	21" FIR
265	11" FIR	396	21" FIR
266	20" FIR	397	11" SPRUCE
267	24" FIR	397	11" SPRUCE
268	41" FIR	398	15" SPRUCE
269	18" FIR	399	31" CEDAR
270	8" FIR	399	31" CEDAR
271	11" FIR	400	15" CEDAR
272	12" FIR	401	16" CEDAR
273	11" FIR	401	16" CEDAR
274	10" FIR	402	23" CEDAR
275	22" FIR	403	18" CEDAR
276	9" FIR	403	18" CEDAR
277	10" FIR	404	13" SPRUCE
278	12" FIR	405	16" SPRUCE
279	24" FIR	406	16" CEDAR
280	14" MAPLE	407	13" CEDAR
281	21" FIR	408	19" CEDAR
282	14" FIR	409	20" FIR
283	11" FIR	410	25" FIR
284	8" FIR	411	18" CEDAR
285	9" MAPLE	412	15" CEDAR
286	9" MAPLE	413	14" CEDAR
287	18" FIR	414	16" SPRUCE
288	25" FIR	415	14" SPRUCE
289	15" FIR	416	9" COTTONWOOD
290	9" FIR	417	25" MAPLE
291	16" FIR	418	12" COTTONWOOD
292	25" FIR	418	20" MAPLE
293	8" FIR	420	10" MAPLE
294	30" FIR	421	32" MAPLE
295	22" FIR	422	20" CEDAR
296	24" FIR	423	34" FIR
297	12" FIR	424	16" FIR
298	28" FIR	425	14" FIR
299	29" FIR	426	14" FIR
300	26" FIR	427	10" FIR
301	8" FIR	428	18" FIR
302	8" CEDAR	429	16" MADRONE
303	27" FIR	430	12" MADRONE
304	41" FIR	431	17" FIR
305	25" FIR	432	11" FIR
306	18" FIR	433	13" FIR
307	29" FIR	434	11" FIR
308	20" FIR	435	8" CEDAR
309	9" MADRONE	436	15" FIR
310	8" CEDAR	437	16" FIR
311	9" CEDAR	438	17" FIR
312	8" CEDAR	439	15" FIR
313	9" CEDAR	440	15" FIR
314	9" CEDAR	441	12" FIR
315	9" CEDAR	442	9" FIR
316	10" CEDAR	443	11" FIR
317	8" MADRONE	444	19" OAK
318	8" FIR	445	8" OAK
319	14" FIR	446	10" OAK
320	20" MAPLE	447	11" COTTONWOOD
321	20" MAPLE	10764	7" DECIDUOUS
322	14" MAPLE	12900	6" OAK
323	23" MAPLE	12909	6" OAK
324	15" MAPLE	12986	4" OAK
325	8" PEAR	13038	6" OAK
326	12" MAPLE	13077	4" OAK
327	9" MAPLE	13105	6" OAK
328	9" MAPLE	13135	5" OAK
329	9" MAPLE	13428	4" OAK
330	8" PEAR	13453	6" OAK
331	13" MAPLE	13546	5" OAK
332	12" PEAR	13600	5" OAK
333	15" MAPLE	13632	5" OAK
334	16" MAPLE	13723	8" ALDER
335	12" PEAR	13781	10" ALDER
336	12" MAPLE	14163	7" ALDER
337	13" PEAR	14263	10" ALDER
338	9" MAPLE	14392	6" CEDAR
339	8" PEAR	14393	6" CEDAR
340	11" MAPLE	14587	6" CHERRY
341	13" PEAR	14588	6" CHERRY
342	25" MAPLE	14619	6" FIR
343	13" PEAR	14628	6" MAPLE
344	17" PEAR	14672	7" FIR
345	13" PEAR	15131	7" MAPLE
346	19" ASH	15444	LAUREL
347	22" ASH	16428	6" DECIDUOUS
348	13" ASH	16433	7" COTTONWOOD
349	18" ASH	16446	7" ALDER
350	18" ASH	16459	COTTONWOOD STUMP
351	19" ASH	16460	7" COTTONWOOD
352	8" MAPLE	16636	6" COTTONWOOD
353	10" FIR	16637	7" COTTONWOOD
354	30" MAPLE	16672	6" FIR
355	33" FIR	16683	6" CEDAR
356	11" FIR	16692	6" COTTONWOOD
357	15" MAPLE	16693	7" COTTONWOOD
358	21" MAPLE	16694	7" COTTONWOOD
359	25" MAPLE	16695	7" COTTONWOOD
360	19" MAPLE	16696	7" COTTONWOOD
361	16" MAPLE	16697	7" COTTONWOOD
362	14" MAPLE	16702	7" COTTONWOOD
363	23" MAPLE	16707	6" COTTONWOOD
364	24" MAPLE	16710	7" COTTONWOOD
365	12" MAPLE	16715	6" COTTONWOOD
366	23" MAPLE	16715	6" COTTONWOOD
367	22" MAPLE	16717	6" COTTONWOOD
368	17" MAPLE	16721	6" COTTONWOOD
369	15" PINE	16725	7" COTTONWOOD
370	10" PINE	16728	7" COTTONWOOD
371	9" PINE	20285	CEDAR
372	13" PINE	20288	CEDAR
373	12" PINE	20289	CEDAR
374	8" PINE	20290	CEDAR
375	11" PINE	20293	7" FIR
376	14" SPRUCE	20296	6" FIR
377	11" SPRUCE	20298	7" FIR
378	12" SPRUCE	20299	7" FIR
379	12" HEMLOCK	20300	7" FIR
380	26" FIR	20302	6" MADRONE
381	14" SPRUCE	20624	7" DECIDUOUS
382	16" SPRUCE	20625	7" DECIDUOUS
383	15" SPRUCE	20626	7" DECIDUOUS
384	26" FIR	20627	7" DECIDUOUS
385	28" FIR	20628	7" DECIDUOUS
386	11" SPRUCE	20940	6" HOLLY
387	16" SPRUCE	21138	5" OAK
388	15" SPRUCE	21141	6" OAK
389	9" SPRUCE	21142	4" OAK
390	13" SPRUCE	21145	6" MADRONE
391	10" SPRUCE	21166	6" FIR
392	23" CEDAR	21180	6" DECIDUOUS
393	23" FIR	21186	7" CHERRY
		21187	7" CHERRY

STORM SEWER INFORMATION

(SD9) PVC OUTFALL
12" I.E. OUT (NE) = 150.5'

(SD12) LYNCH STYLE CURB INLET
RIM = 160.24'
TRAP (N)

(SD16) MANHOLE
RIM = 165.16'
12" I.E. IN (E) = 161.0'
12" I.E. IN (W) = 159.7'
12" I.E. IN (S) = 159.6'
12" I.E. OUT (N) = 159.5'

(SD17) CURB INLET
RIM = 165.30'
12" I.E. OUT (W) = 161.3'

(SD18) CURB INLET
RIM = 165.24'
12" I.E. OUT (E) = 161.0'

(SD19) MANHOLE
RIM = 160.18'
12" I.E. IN (E) = 156.1'
12" I.E. IN (W) = 156.4'
12" I.E. IN (S) = 156.1'
12" I.E. OUT (SE) = 153.0'

(SD20) CURB INLET
RIM = 160.31'
12" I.E. OUT (E) = 157.0'

(SD21) MANHOLE
RIM = 160.42'
12" I.E. IN (NW) =151.7'
12" I.E. IN (N) = 149.8'
12" I.E. OUT (SE) = 149.8'

(SD22) CISTERN WITH GRATE
RIM TOP = 156.23'
RIM BOTTOM = 155.77'
SUMP =147.5'

(SD23) CONCRETE INLET
24" OUT (E) = 150.4'

(SD32) DITCH INLET
RIM TOP = 154.35'
RIM BOTTOM = 153.14'
12" I.E. OUT (NE) = 153.8'

(SD33) DITCH INLET
RIM TOP = 156.39'
RIM BOTTOM = 155.73'
12" I.E. IN (W) = 149.4'
12" I.E. OUT (E) = 149.3'

SANITARY SEWER INFORMATION

(SS1) MANHOLE
RIM = 172.46'
10" I.E. IN (W) = 164.3'
10" I.E. IN (S) = 163.7'
10" I.E. IN (E) = 163.7'
8" I.E. OUT (N) = 163.4'

(SS2) MANHOLE
RIM = 166.21'
10" IN (E)
8" (S TO N)
FLOW LINE = 159.9'

(SS3) MANHOLE
RIM = 161.52'
8" (S TO NE)
FLOW LINE = 154.8'

(SS4) MANHOLE
RIM = 158.22'
8" I.E. IN (SW)
10" I.E. OUT (N)

(SS16) MANHOLE
RIM = 146.85'
6" (S TO NE)
FLOW LINE = 142.3'

(SS17) MANHOLE
RIM = 155.02'
6" (NE TO N)
FLOW LINE = 145.5'

NORTHWEST SURVEYING, INC.
1815 NW 169th PLACE, SUITE 2090
BEAVERTON, OR. 97006
PH:(503) 848-2127 FAX:(503) 848-2179
EMAIL: nwsurveying@nwsrvy.com

LOCATED IN THE NE 1/4 OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 1 WEST, W.M., CITY OF TUALATIN, WASHINGTON COUNTY, OREGON

20400 SW CIPOLE ROAD TOPOGRAPHIC SURVEY

TUALATIN, OREGON
TAX LOT 100
TAX MAP 2S-1-28A

DRAWING NO.:	2288 TOPO
SCALE:	AS NOTED
DRAWING GENERATED BY LD2004	
DRAWN BY:	BJA
CHECKED BY:	CHS

PREPARED FOR:
SPECHT DEVELOPMENT, INC.
10260 SW GREENBURG ROAD
SUITE 170
PORTLAND, OR 97223

REVISIONS:
PRELIM. RELEASE: JUNE 9, 2021
INITIAL RELEASE: JUNE 18, 2021
REVISED: JULY 12, 2021

JOB NUMBER
2288

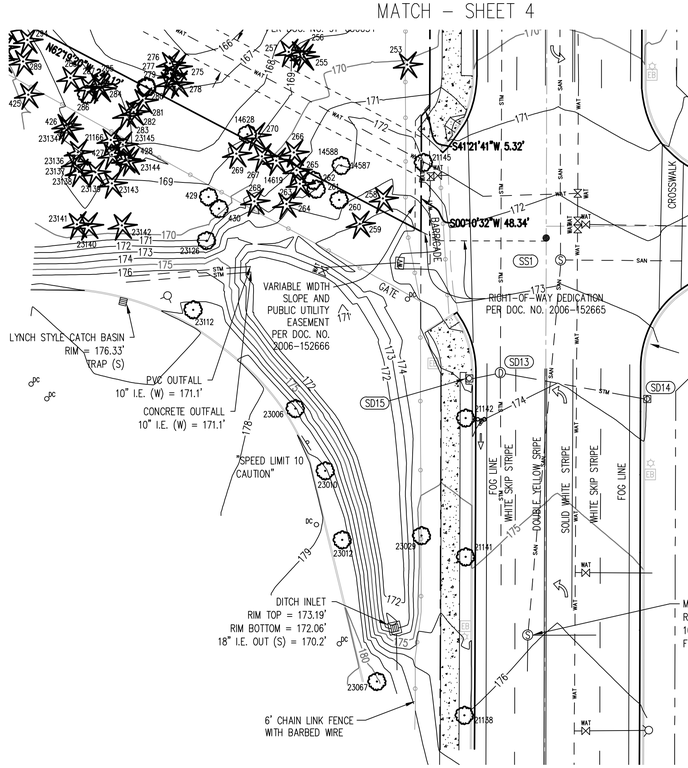
SHEET
4 OF 5

AR RE-SUBMITTAL SET - 09 / 24 / 21

OFF-SITE TREE INFORMATION

23006	12" DECIDUOUS
23010	SPLIT 7" AVG DECIDUOUS
23012	15" DECIDUOUS
23029	6" MAPLE
23067	SPLIT 6" AVG DECIDUOUS
23112	12" DECIDUOUS
23126	SPLIT (2) 7" HAWTHORNE
23134	10" FIR
23136	12" FIR
23137	9" FIR
23138	14" FIR
23139	8" FIR
32140	28" FIR
23141	31" FIR
23142	20" FIR
23143	20" FIR
23144	22" FIR
23145	10" FIR

SCALE 1" = 30 FEET

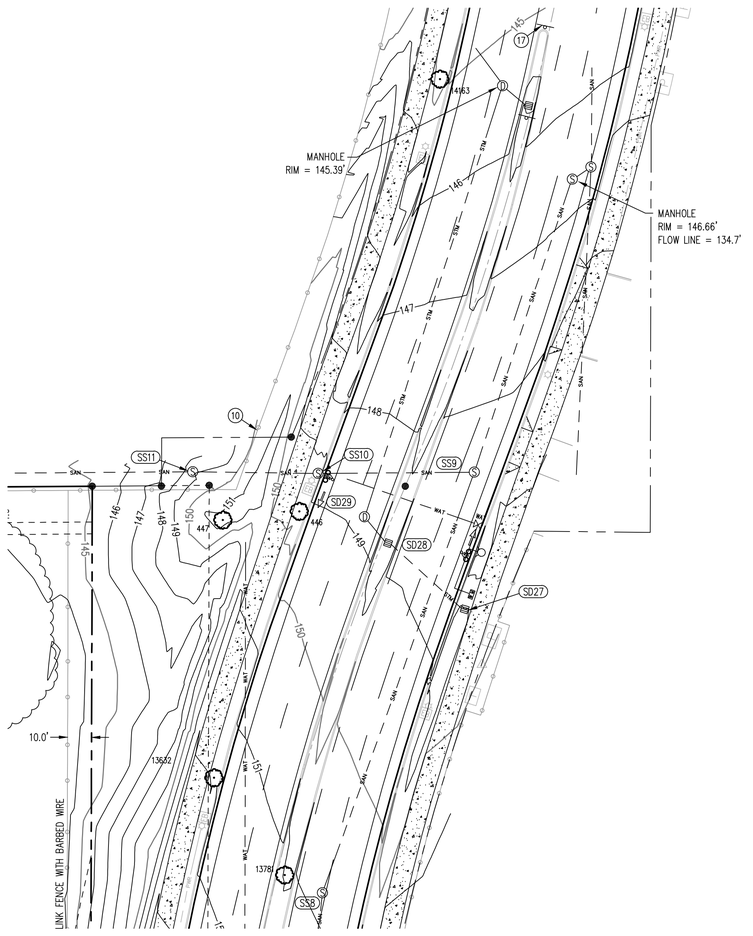


STORM SEWER INFORMATION

(SD13) MANHOLE
RIM = 173.66'
12" I.E. IN (S) = 168.2'
12" I.E. IN (E) 168.1'
12" I.E. IN (W) = 168.1'
12" I.E. OUT (N) = 168.0'

(SD14) CURB INLET
RIM = 174.08'
12" I.E. OUT (W) = 168.7'

(SD15) CURB INLET
RIM = 173.87'
12" I.E. OUT (E) = 168.2'



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20400 SW CIPOLE ROAD TOPOGRAPHIC SURVEY

TUALATIN, OREGON

TAX MAP 2S-1-28A

TAX LOT 100

DRAWING NO.:	2288 TOPO
SCALE:	AS NOTED
DRAWING GENERATED BY LD2004	
DRAWN BY:	BJA
CHECKED BY:	CHS

PREPARED FOR:
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JOB NUMBER
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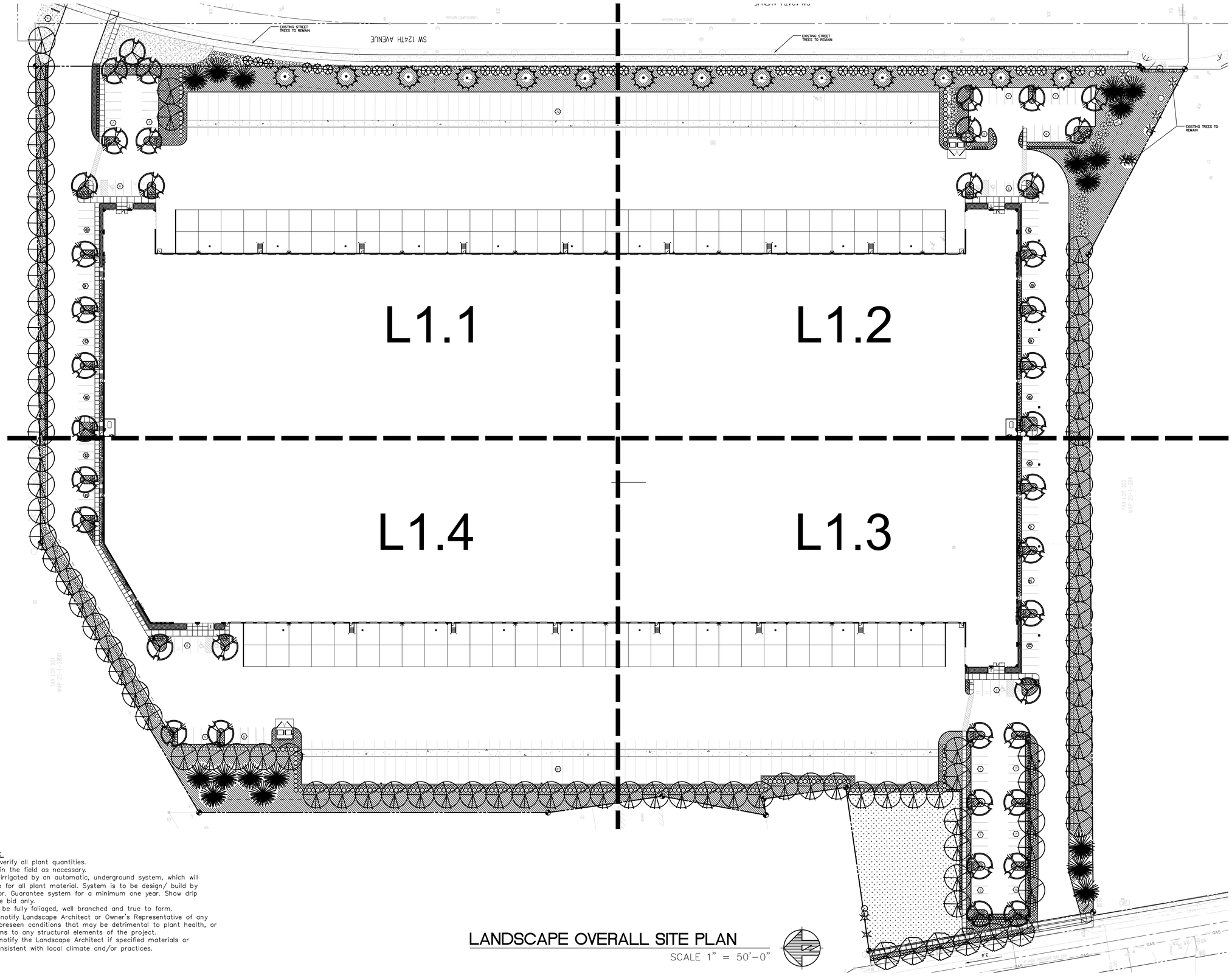
SHEET
5 OF 5

AR RE-SUBMITTAL SET - 09 / 24 / 21



GENERAL NOTES:

1. Contractor is to verify all plant quantities.
2. Adjust plantings in the field as necessary.
3. Project is to be irrigated by an automatic, underground system, which will provide full coverage for all plant material. System is to be design/ build by Landscape Contractor. Guarantee system for a minimum one year. Show drip systems as alternate bid only.
4. All plants are to be fully foliaged, well branched and true to form.
5. Contractor is to notify Landscape Architect or Owner's Representative of any site changes or unforeseen conditions that may be detrimental to plant health, or cause future problems to any structural elements of the project.
6. Contractor shall notify the Landscape Architect if specified materials or methods are not consistent with local climate and/or practices.

LANDSCAPE OVERALL SITE PLAN

SCALE 1" = 50'-0"

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PROJECT NAME

TUALATIN
LOGISTICS PARK

XXXX SW 124th Avenue
TUALATIN, OREGON 97062
EXP. 5/31/21

REVISIONS

	DATE	DESCRIPTION

REGISTERED LANDSCAPE ARCHITECT
LA793
ERIN HOLSONBACK
OREGON
5/10/2013

DATE: APRIL 2021	
SCALE: AS NOTED	PROJ. NO.: 20190311
DRAWN: MPL	CHECKED: EH

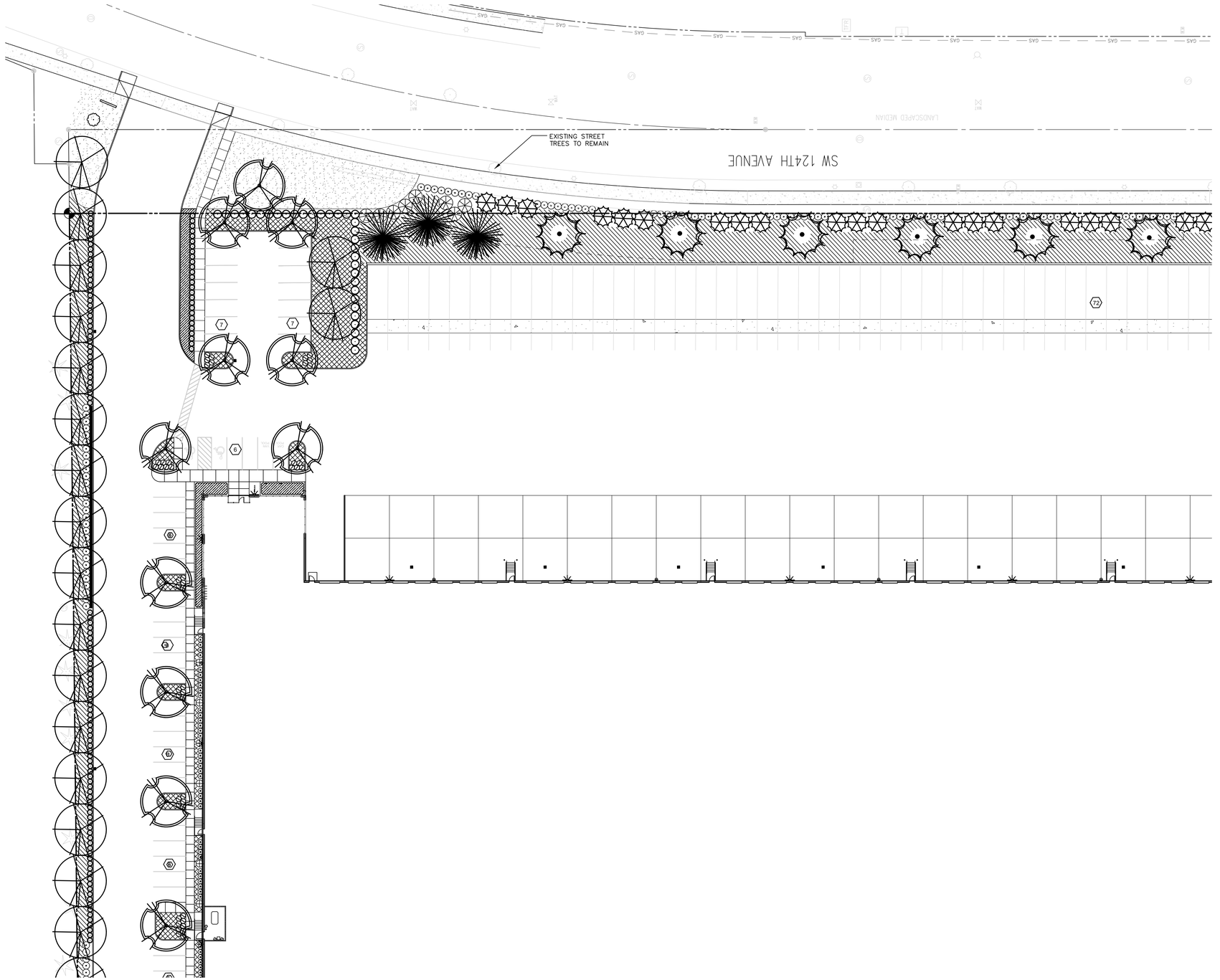
OVERALL
LANDSCAPE
SITE PLAN

L1.0

AR RE-SUBMITTAL SET - 09 / 24 / 21

PLANT LIST: GENERAL LANDSCAPING

SYMBOL	QTY.	LATIN NAME / Common Name	SIZE	SPACING
TREES				
	94	FRAXINUS PENN. "MARSHALL" Marshall Seedless Ash	2" cal.	As Shown
	14	PICEA ABIES Norway Spruce	8'–10' ht.	As Shown
	18	CEDRUS DEODARA Deodar Cedar	8'–10' ht.	As Shown
	44	THUJA PLICATA 'FASTIGIATA' Hogan Cedar	6–7' ht.	As Shown
	40	ZELKOVA SERRATA 'VILLAGE GREEN' Village Green Zelkova	2" cal.	As Shown
	6	TILIA CORDATA 'GREENSPIRE' Greenspire Little Leaf Linden	2" cal.	As Shown
SHRUBS				
	89	ABELIA X 'ROSE CREEK' Variegated Boxwood	5 gal.	3' o.c.
	308	BUXUS SEMERVIRENS 'VARIEGATA' Variegated Boxwood	5 gal.	3' o.c.
	80	PIERIS JAPONICA 'LITTLE HEATH' Little Heath Lily Of The Valley	5 gal.	3 o.c.
	232	PRUNUS LAUROCERASUS 'NANA' English Laurel	4'–5' ht.	5' o.c.
	113	SPIRAEA JAPONICA 'GOLMOUND' Goldmound Spirea	2 gal.	3' o.c.
	25	TAXUS x MEDIA 'HICKSII' Hick's Yew	5 gal.	4' o.c.
	254	VIBURNUM DAVIDII David Viburnum	5 gal.	3' o.c.
	26	VIBURNUM PLIC. TOM. 'MARIESII' Mariesii Doublefile Viburnum	5 gal.	8' o.c.
	499	VIBURNUM TINUS "SPRING BOUQUET" Spring Bouquet Laurustinus	5 gal.	4' o.c.
		FLOWERING SHRUBS	5 gal.	Varies
GROUNDCOVER				
	2,295	ARCTOSTAPHYLOS UVA–URSI "MASS." Massachusetts Kinnikinnick	1 gal.	3' o.c.
	3,346	COTONEASTER DAMMERI 'MONER' Canadian Creeper Cotoneaster	1 gal.	5' o.c.
SEEDED AREAS				
		FINE LAWN See Specifications		
		ROUGH SEED See Specifications		



LANDSCAPE PLAN

SCALE 1" = 30'–0"

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PROJECT NAME
TUALATIN
LOGISTICS PARK

XXXX SW 124th Avenue
TUALATIN, OREGON 97062
EXP. 5/31/21

REVISIONS

	DATE	DESCRIPTION

REGISTERED LA793 ERIN HOLSONBACK OREGON 5/10/2013 LANDSCAPE ARCHITECT

DATE: APRIL 2021	
SCALE: AS NOTED	PROJ. NO.: 20190311
DRAWN: MPL	CHECKED: EH

LANDSCAPE PLAN

L1.1

AR RE-SUBMITTAL SET - 09 / 24 / 21

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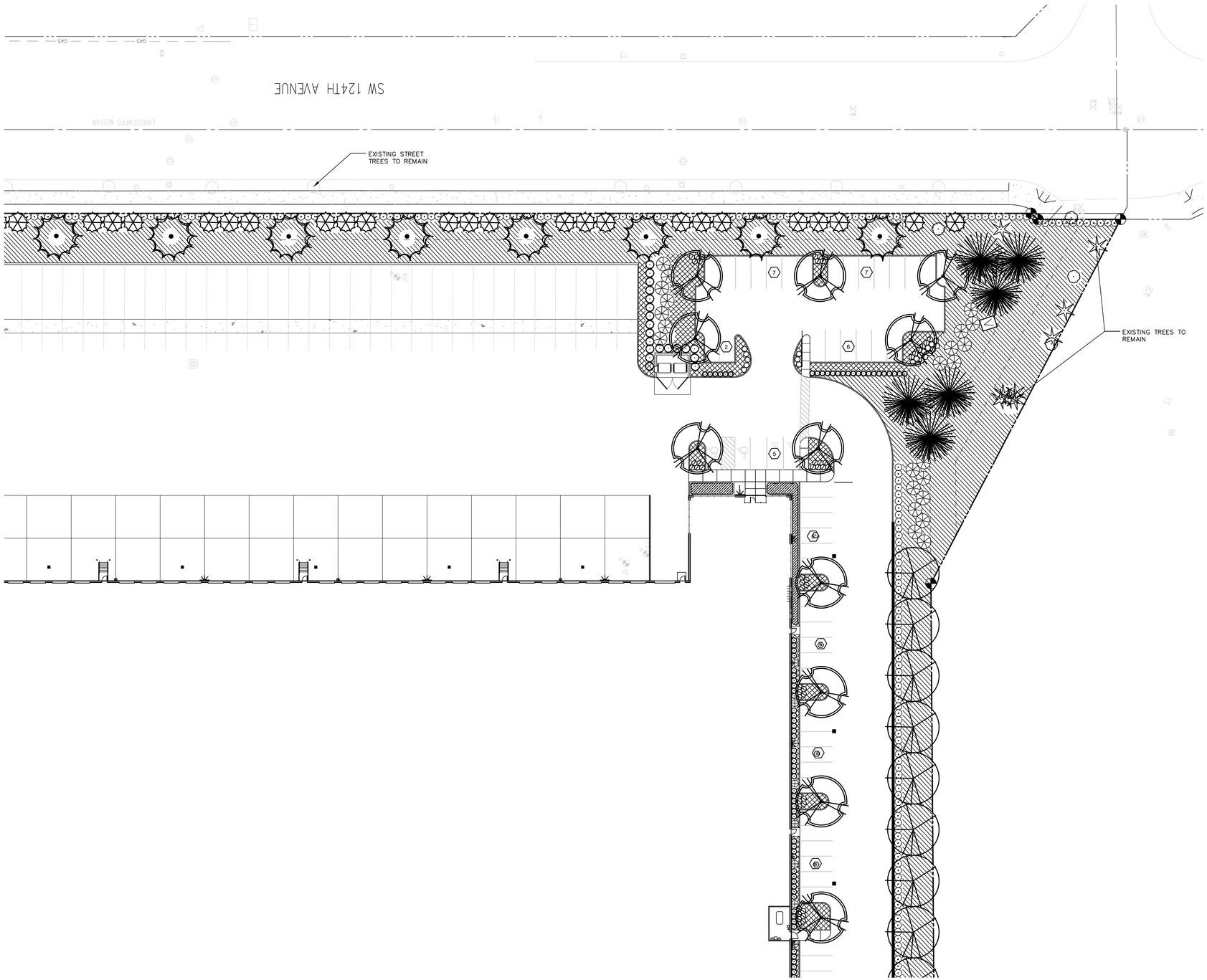

LANDSCAPE PLAN

SCALE 1" = 30'-0"

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LOGISTICS PARK

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EXP. 5/31/21

REVISIONS

	DATE	DESCRIPTION

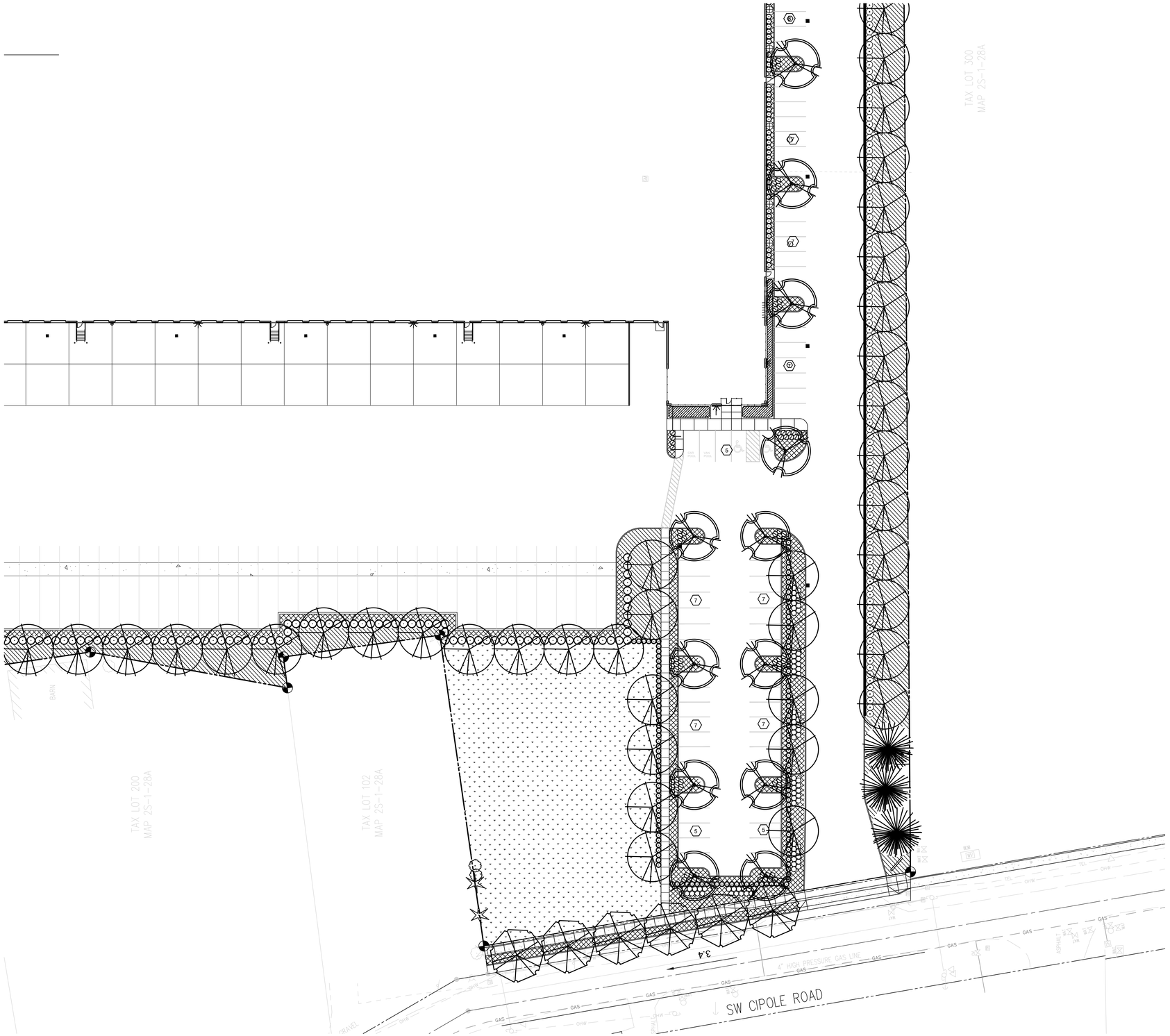
REGISTERED LANDSCAPE ARCHITECT
LA793
ERIN HOLSONBACK
OREGON
5/10/2013

DATE: APRIL 2021	
SCALE: AS NOTED	PROJ. NO.: 20190311
DRAWN: MPL	CHECKED: EH

LANDSCAPE PLAN

L1.2

AR RE-SUBMITTAL SET - 09 / 24 / 21



LANDSCAPE PLAN

SCALE 1" = 30'-0"

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PROJECT NAME

TUALATIN
LOGISTICS PARK

XXXX SW 124th Avenue
TUALATIN, OREGON 97062

EXP. 5/31/21

REVISIONS

	DATE	DESCRIPTION

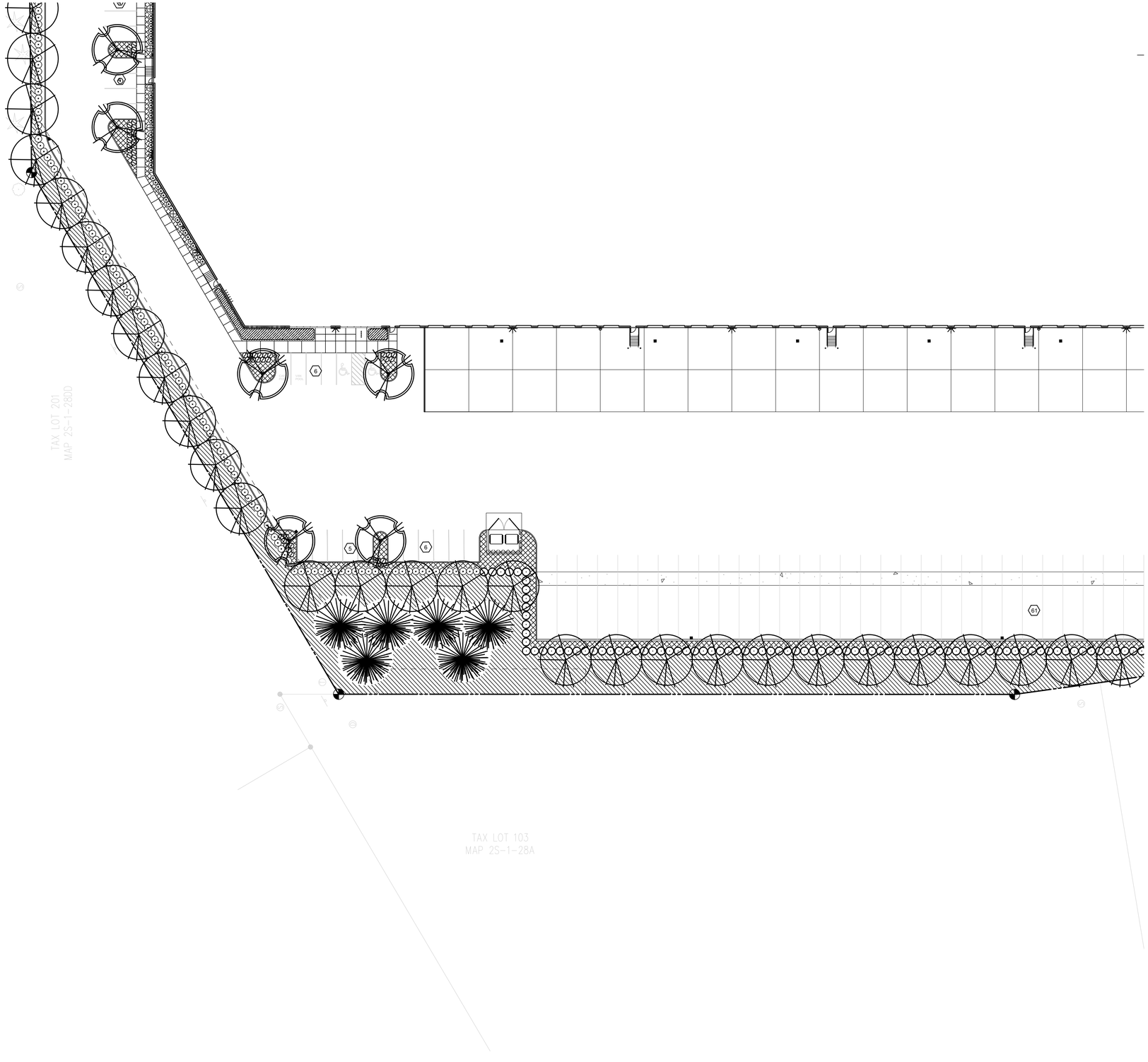
REGISTERED LANDSCAPE ARCHITECT
LA793
ERIN HOLSONBACK
OREGON
5/10/2013

DATE: APRIL 2021	
SCALE: AS NOTED	PROJ. NO.: 20190311
DRAWN: MPL	CHECKED: EH

LANDSCAPE
PLAN

L1.3

AR RE-SUBMITTAL SET - 09 / 24 / 21



LANDSCAPE PLAN

SCALE 1" = 30'-0"

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PROJECT NAME
TUALATIN
LOGISTICS PARK

XXXX SW 124th Avenue
TUALATIN, OREGON 97062
EXP. 5/31/21

REVISIONS

	DATE	DESCRIPTION

REGISTERED LANDSCAPE ARCHITECT
LA793
ERIN HOLSONBACK
OREGON
5/10/2013

DATE
APRIL 2021

SCALE	PROJ. NO.
AS NOTED	20190311
DRAWN	CHECKED
MPL	EH

LANDSCAPE
PLAN

L1.4

AR RE-SUBMITTAL SET - 09 / 24 / 21

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OUTLINE SPECIFICATIONS PLANTING AND SEEDING:

GENERAL: All plants shall conform to all applicable standards of the latest edition of the "American Association of Nurserymen Standards", A.N.S.I. Z60.1 – 1973. Meet or exceed the regulations and laws of Federal, State, and County regulations, regarding the inspection of plant materials, certified as free from hazardous insects, disease, and noxious weeds, and certified fit for sale in Oregon.

The apparent silence of the Specifications and Plans as to any detail, or the apparent omission from them of a detailed description concerning any point, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of first quality are to be used. All interpretations of these Specifications shall be made upon the basis above stated.

Landscape contractor shall perform a site visit prior to bidding to view existing conditions.

PERFORMANCE QUALITY ASSURANCE: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary horticultural practices and who are completely familiar with the specified requirements and methods needed for the proper performance of the work of this section.

NOTIFICATION: Give Landscape Architect minimum of 2 days advance notice of times for inspections. Inspections at growing site does not preclude Landscape Architect's right of rejection of deficient materials at project site. Each plant failing to meet the above mentioned "Standards" or otherwise failing to meet the specified requirements as set forth shall be rejected and removed immediately from the premises by the Contractor and at his expense, and replaced with satisfactory plants or trees conforming to the specified requirements.

SUBSTITUTIONS: Only as approved by the Landscape Architect or the Owner's Representative.

GUARANTEE AND REPLACEMENT: All plant material shall be guaranteed from final acceptance for one full growing season or one year, whichever is longer. During this period the Contractor shall replace any plant material that is not in good condition and producing new growth (except that material damaged by severe weather conditions, due to Owner's negligence, normally unforeseen peculiarities of the planting site, or lost due to vandalism). Guarantee to replace, at no cost to Owner, unacceptable plant materials with plants of same variety, age, size and quality as plant originally specified. Conditions of guarantee on replacement plant shall be same as for original plant.

Landscape Contractor shall keep on site for Owner's Representative's inspection, all receipts for soil amendment and topsoil deliveries.

PROTECTION: Protect existing roads, sidewalks, and curbs, landscaping, and other features remaining as final work. Verify location of underground utilities prior to doing work. Repair and make good any damage to service lines, existing features, etc. caused by landscaping installation.

PLANT QUALITY ASSURANCE: Deliver direct from nursery. Maintain and protect roots of plant material from drying or other possible injury. Store plants in shade and protect them from weather immediately upon delivery, if not to be planted within four hours.

Nursery stock shall be healthy, well branched and rooted, formed true to variety and species, full foliaged, free of disease, injury, defects, insects, weeds, and weed roots. Trees shall have straight trunks, symmetrical tips, and have an intact single leader. Any trees with double leaders will be rejected upon inspection. All Plants: True to name, with one of each bundle or lot tagged with the common and botanical name and size of the plants in accordance with standards of practice of the American Association of Nurserymen, and shall conform to the Standardized Plant Names, 1942 Edition.

Container grown stock: Small container–grown plants, furnished in removable containers, shall be well rooted to ensure healthy growth. **Grow container plants in containers a minimum of one year** prior to delivery, with roots filling container but not root bound. Bare root stock: Roots well–branched and fibrous. Balled and burlapped (B&B): Ball shall be of natural size to ensure healthy growth. Ball shall be firm and the burlap sound. No loose or made ball will be acceptable.

TOPSOIL AND FINAL GRADES: Landscape Contractor is to supply and place 12" of topsoil in planting beds and 6" in lawn areas. Landscape Contractor is to verify with the General Contractor if the on–site topsoil is or is not conducive to proper plant growth. The topsoil shall be a sandy loam, free of all weeds and debris inimical to lawn or plant growth. Furnish soil analysis by a qualified soil testing laboratory stating percentages of organic matter; gradation of sand, silt and clay content; cation exchange capacity; deleterious material; pH; and plant nutrient content of the topsoil. Report suitablility of topsoil for plant growth and recommended quantities of nitrogen, phosphorus and potash nutrients and soil amendments (including compost) to be added to produce satisfactory topsoil. If stockpiled topsoil on site is not conducive to proper plant growth, the Landscape Contractor shall import the required amount.

Landscaping shall include finished grades and even distribution of topsoil to meet planting requirements. Grades and slopes shall be as indicated. Planting bed grades shall be approximately 3" below adjacent walks, paving, finished grade lines, etc., to allow for bark application. Finish grading shall remove all depressions or low areas to provide positive drainage throughout the area.

PLANTING SPECIFICATIONS:

HERBICIDES: Prior to soil preparation, all areas showing any undesirable weed or grass growth shall be treated with Round–up in strict accordance with the manufacturer's instructions.

SOIL PREPARATION: Work all areas by rototilling to a minimum depth of 8". Remove all stones (over 1½" size), sticks, mortar, large clumps of vegetation, roots, debris, or extraneous matter turned up in working. Soil shall be of a homogeneous fine texture. Level, smooth and lightly compact area to plus or minus .10 of required grades.

In groundcover areas add 2" of compost (or as approved) and till in to the top 6" of soil.

PLANTING HOLE: Lay out all plant locations and excavate all soils from planting holes to 2 1/2 times the root ball or root system width. Loosen soil inside bottom of plant hole. Dispose of any "subsoil" or debris from excavation. Check drainage of planting hole with water, and adjust any area showing drainage problems.

SOIL MIX: Prepare soil mix in each planting hole by mixing:
2 part native topsoil (no subsoil)
1 part compost (as approved)

Thoroughly mix in planting hole and add fertilizers at the following rates:
Small shrubs – 1/8 lb./ plant
Shrubs – 1/3 to 1/2 lb./ plant
Trees – 1/3 to 1 lb./ plant

FERTILIZER: For trees and shrubs use Commercial Fertilizer "A" Inorganic (5–4–3) with micro–nutrients and 50% slow releasing nitrogen. For initial application in fine seed lawn areas use Commercial Fertilizer "B" (8–16–8) with micro–nutrients and 50% slow–releasing nitrogen. For lawn maintenance use Commercial Fertilizer "C" (22–16–8) with micro–nutrients and 50% slow–releasing nitrogen.

PLANTING TREES AND SHRUBS: Plant upright and face to give best appearance or relationship to adjacent plants and structures. Place 6" minimum, lightly compacted layer of prepared planting soil under root system. Loosen and remove twine binding and burlap from top 1/2 of root balls. Cut off cleanly all broken or frayed roots, and spread roots out. Stagger Plants in rows. Backfill planting hole with soil mix while working each layer to eliminate voids.

When approximately 2/3 full, water thoroughly, then allow water to soak away. Place remaining backfill and dish surface around plant to hold water. Final grade should keep root ball slightly above surrounding grade, not to exceed 1". Water again until no more water is absorbed. Initial watering by irrigation system is not allowed.

STAKING OF TREES: Stake or guy all trees. Stakes shall be 2" X 2" (nom.) quality tree stakes with point. They shall be of Douglas Fir, clear and sturdy. Stake to be minimum 2/3 the height of the tree, not to exceed 8'–0". Drive stake firmly 1'–6" below the planting hole. Tree ties for deciduous trees shall be "Chainlock" (or better). For Evergreen trees use "Gro–Strait" Tree Ties (or a reinforced rubber hose and guy wires) with guy wires of a minimum 2 strand twisted 12 ga. wire. Staking and guying shall be loose enough to allow movement of tree while holding tree upright.

MULCHING OF PLANTINGS: Mulch planting areas with dark, aged, medium grind fir or hemlock bark (aged at least 6 months) to a depth of 2" in ground cover areas and 2½" in shrub beds. Apply evenly, not higher than grade of plant as it came from the nursery, and rake to a smooth finish. Water thoroughly, then hose down planting area with fine spray to wash leaves of plants.

FINE LAWN AREAS: In fine lawn area apply Commercial Fertilizer Mix "B" at 4.5 lbs. Per 1,000 sq.ft. and rake into soil surface. Establish an even, fine textured seedbed meeting grades, surfaces and texture. Sow seed with a mechanical spreader at the uniform rates as noted below. Rake seed lightly to provide cover.

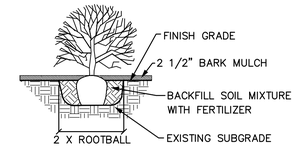
ROUGH SEED AREA: In rough seeded area, establish an evenly graded seedbed. Sow seed with a mechanical spreader at the uniform rates as noted below. Rake seed lightly to provide cover.

SEED: Bluetag grass seed conforming to applicable State laws. No noxious weed seeds. Submit Guaranteed analysis.
Fine Lawn Seed Mix: To contain 50% Top Hat Perennial Ryegrass, 30% Derby Supreme Ryegrass, 20% Longfellow Chewings Fescue (Hobbs and Hopkins Pro–Time 303 Lawn Mix or as approved) Sow Seed at 5 lbs. / 1000 sq. ft.
Rough Seed Mix: To Contain: 60% Perennial Ryegrass, 15% Eureka Hard Fescue, and 20% Herbaceous Plants and Clover (Hobbs and Hopkins Pro–Time 705 PDX, or approved equal). Sow at 2 lbs. Per 1,000 sq.ft.

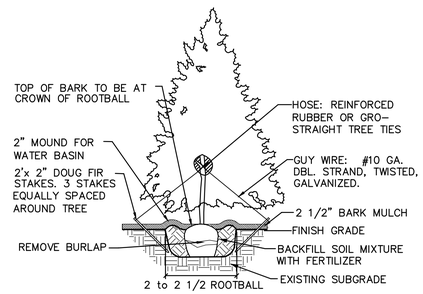
MAINTENANCE OF SEEDED AREAS:
Fine Lawn Areas: The lawn areas shall be maintained by watering, mowing, reseeding, and weeding for a minimum of 60 days after seeding. After 30 days, or after the second mowing, apply Commercial Fertilizer Mix "C" at 5 lbs. per 1,000 sq. ft. Mow and keep at 1½" to 2" in height. Remove clippings and dispose of off site.

GENERAL MAINTENANCE: Protect and maintain work described in these specifications against all defects of materials and workmanship, through final acceptance. Replace plants not in normal healthy condition at the end of this period. Water, weed, cultivate, mulch, reset plants to proper grade or upright position, remove dead wood and do necessary standard maintenance operations. Irrigate when necessary to avoid drying out of plant materials, and to promote healthy growth.

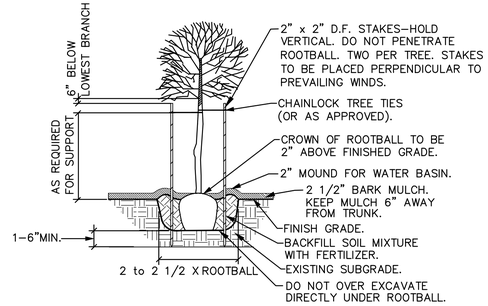
CLEAN–UP: At completion of each division of work all extra material, supplies, equipment, etc., shall be removed from the site. All walks, paving, or other surfaces shall be swept clean, mulch areas shall have debris removed and any soil cleared from surface. All areas of the project shall be kept clean, orderly and complete.



SHRUB PLANTING DETAIL
NOT TO SCALE



EVERGREEN TREE STAKING DETAIL
NOT TO SCALE



NOTE: ANY PROPOSED CHANGES TO OUR SPECIFICATION OR DETAIL SHOULD BE APPROVED BY THE LANDSCAPE ARCHITECT. LIKEWISE, IN ACCORDANCE WITH BEST PRACTICES OF LOCAL LANDSCAPE INSTALLATION, SHOULD THE LANDSCAPE CONTRACTOR FIND A PREFERRED ALTERNATE METHOD, THE LANDSCAPE ARCHITECT MAY BE SO ADVISED.

GENERAL DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE

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Portland, OR, 97239
(503) 972-0311
www.ottenla.com

10260 SW Greenburg Road
Suite 170
Portland, Oregon 97223
503.646.2202
SPECHTPROP.COM

PROJECT NAME
TUALATIN
LOGISTICS PARK

XXXX SW 124th Avenue
TUALATIN, OREGON 97062
EXP. 5/31/21

REVISIONS

⚠	DATE	DESCRIPTION

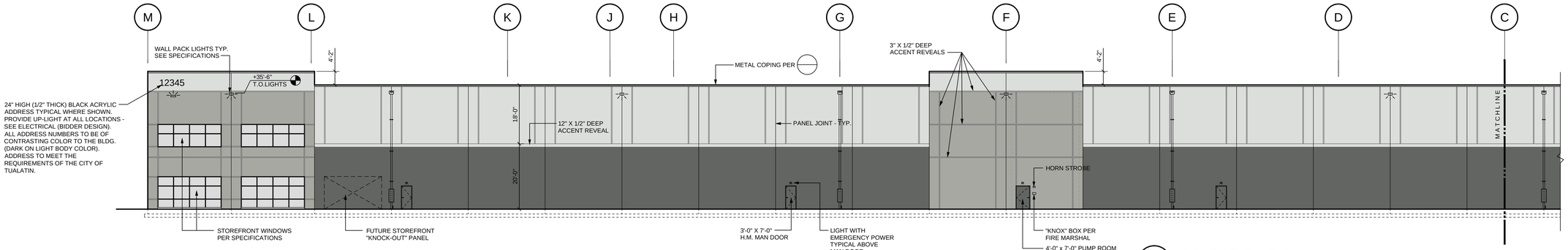
REGISTERED LA793 ERIN HOLSONBACK OREGON 5/10/2013 LANDSCAPE ARCHITECT

DATE: APRIL 2021
SCALE: AS NOTED
PROJ. NO.: 20190311
DRAWN: MPL
CHECKED: EH

LANDSCAPE
DETAILS & SPECS

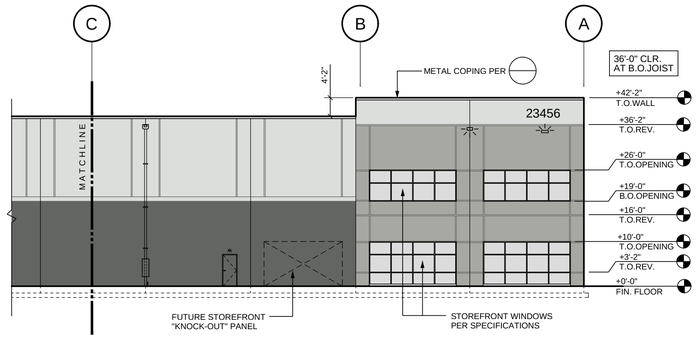
L2.0

AR RE-SUBMITTAL SET - 09 / 24 / 21



A A2.1 SOUTH ELEVATION

1/16" = 1'-0"



B A2.1 SOUTH ELEVATION (CONTINUED)

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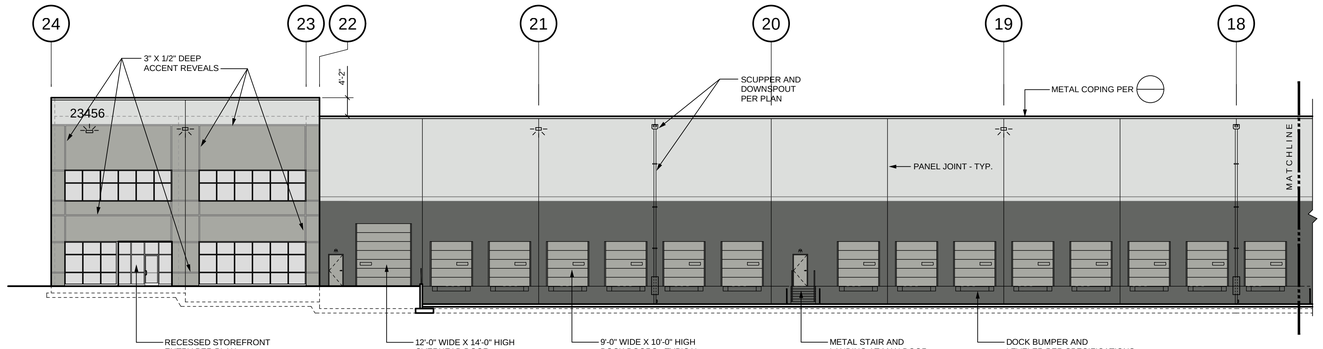
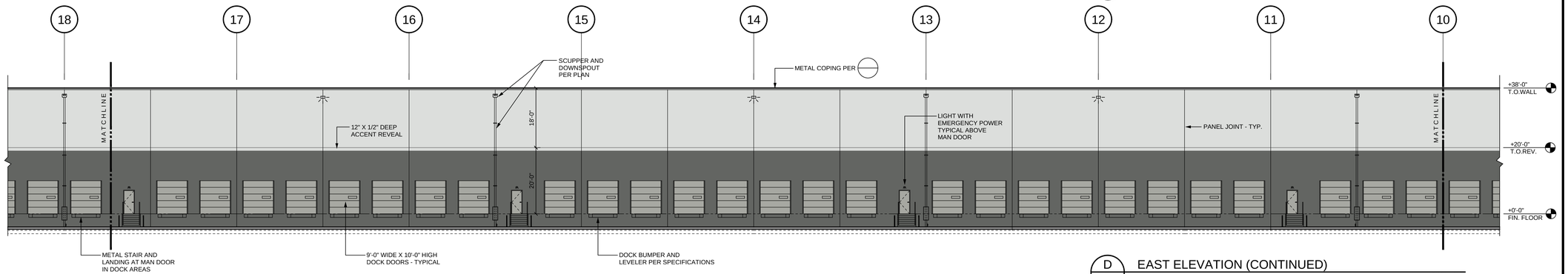


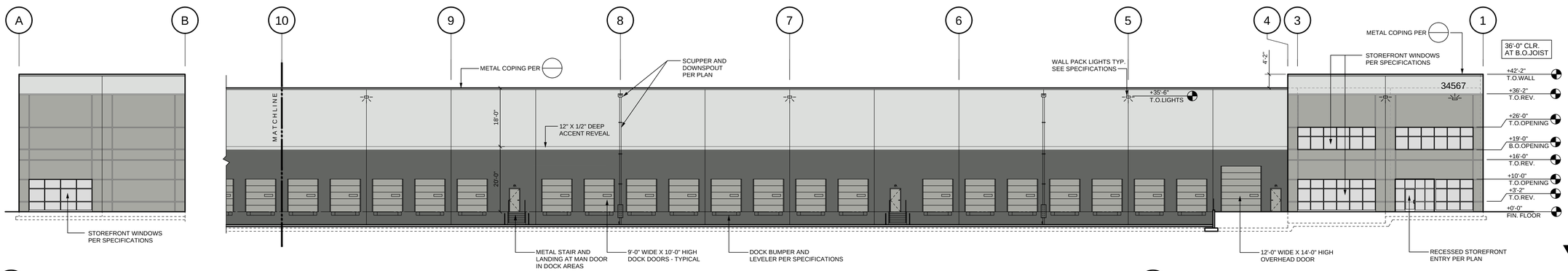
C A2.1 EAST ELEVATION

1/16" = 1'-0"



D A2.1 EAST ELEVATION (CONTINUED)

1/16" = 1'-0"



F A2.1 SOUTHEAST BUMP OUT

1/16" = 1'-0"

E A2.1 EAST ELEVATION (CONTINUED)

1/16" = 1'-0"

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SPECHTPROP.COM

PROJECT NAME

TUALATIN LOGISTICS PARK

20400 SW Cipole Road
TUALATIN, OREGON 97062

REVISIONS

	DATE	DESCRIPTION
1		

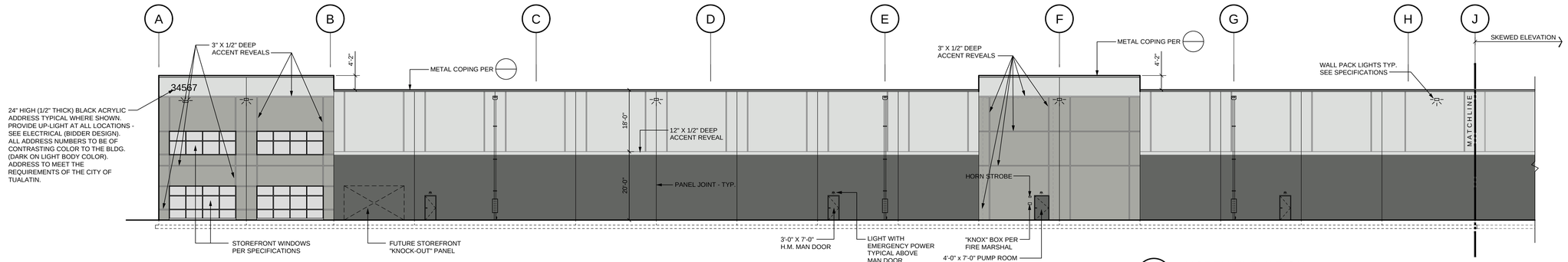
DATE APRIL 2021

SCALE	PROJ. NO.
AS NOTED	20190311
DRAWN KAN	CHECKED HGK

ENLARGED EXTERIOR ELEVATIONS

A2.1

AR RE-SUBMITTAL SET - 09 / 24 / 21



A A2.2 NORTH ELEVATION

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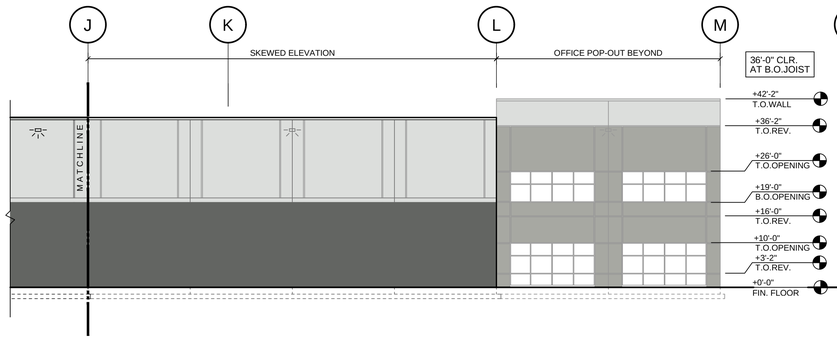

B A2.2 NORTH ELEVATION (CONTINUED)

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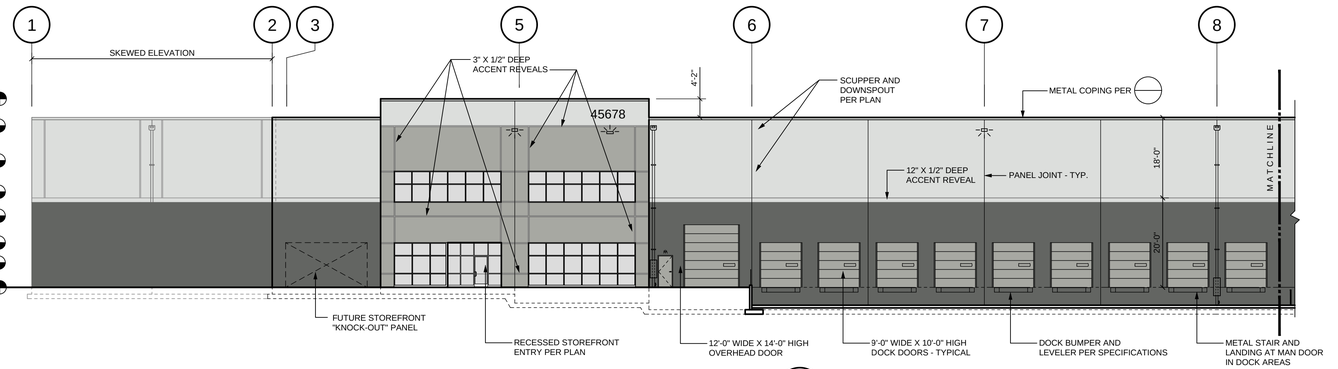

C A2.2 WEST ELEVATION

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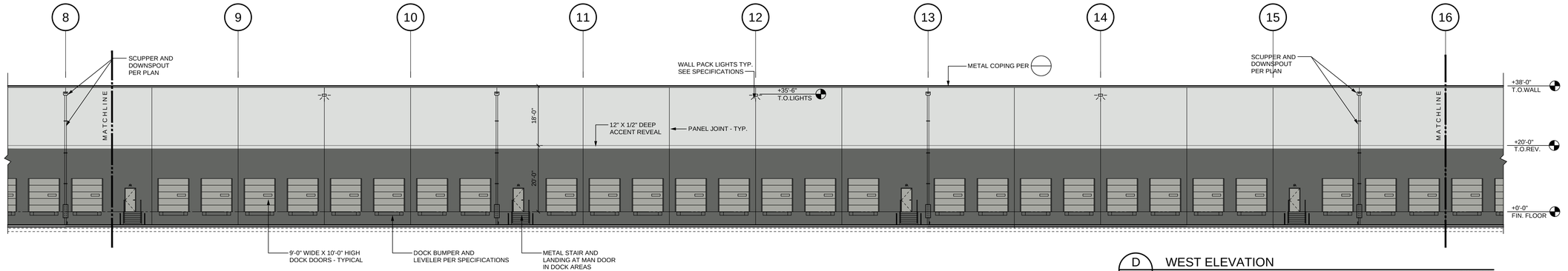
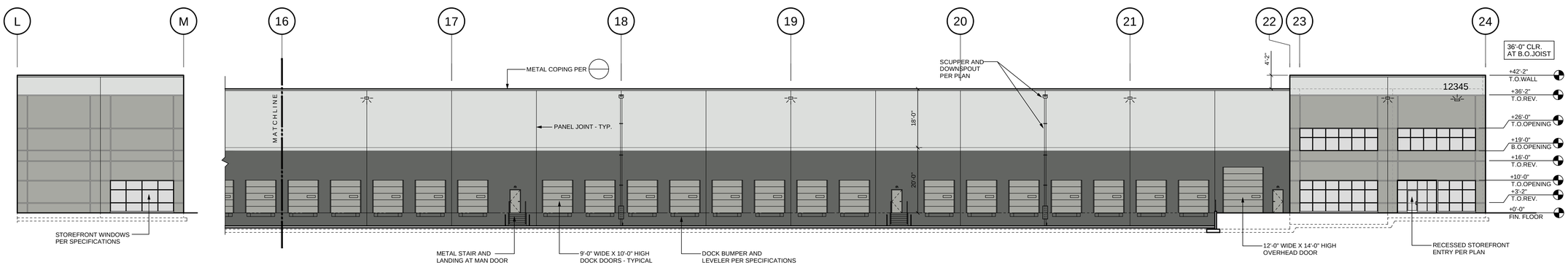


D A2.2 WEST ELEVATION

1/16" = 1'-0"



F A2.2 SOUTHWEST BUMP OUT

1/16" = 1'-0"

E A2.2 WEST ELEVATION (CONTINUED)

1/16" = 1'-0"

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PROJECT NAME
TUALATIN LOGISTICS PARK

20400 SW Cipole Road
TUALATIN, OREGON 97062

REVISIONS

	DATE	DESCRIPTION

DATE APRIL 2021

SCALE	PROJ. NO.
AS NOTED	20190311
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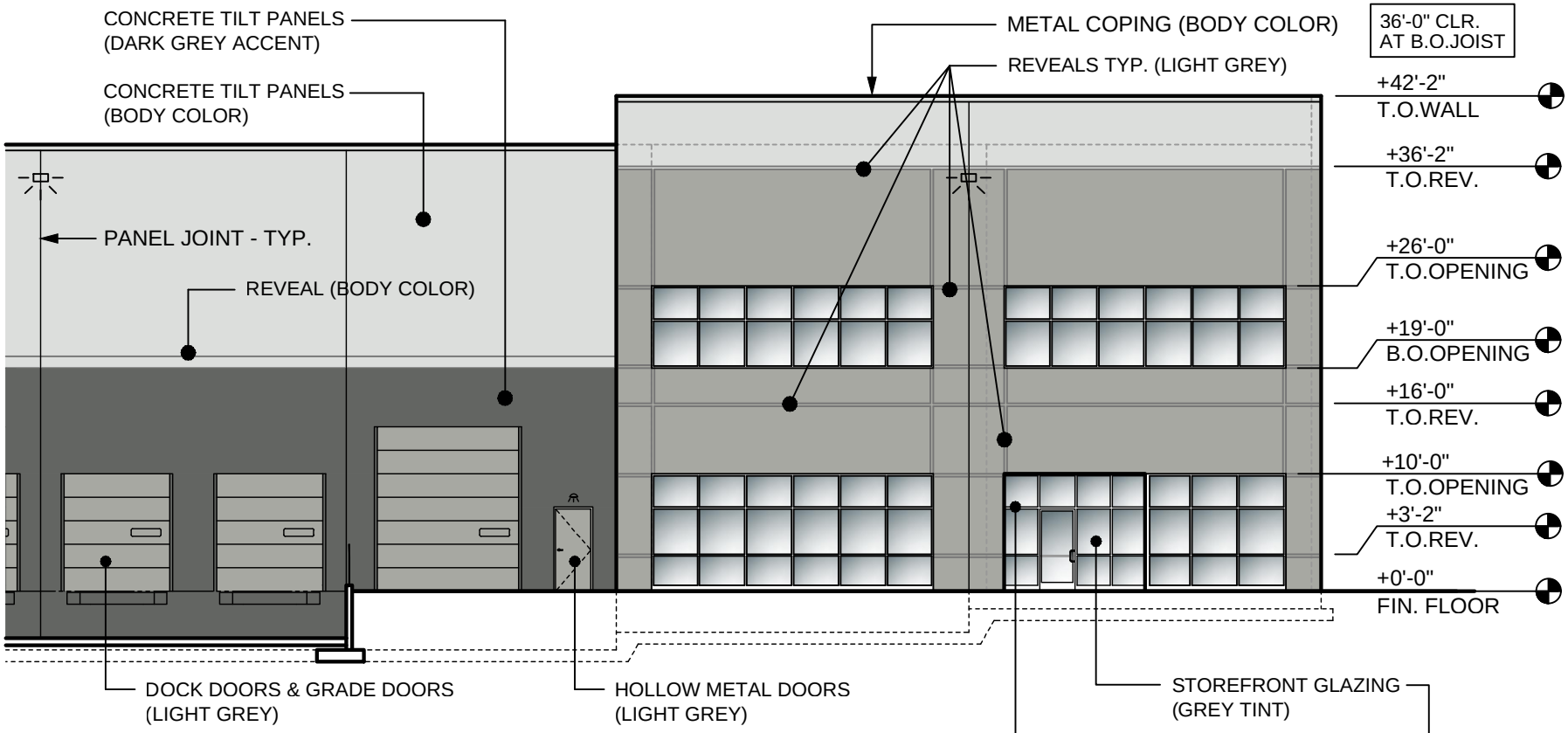
ENLARGED EXTERIOR ELEVATIONS

A2.2

AR RE-SUBMITTAL SET - 09 / 24 / 21



Sherwin Williams
"SITE WHITE"
SW 7070
"Body Color"

Sherwin Williams
"GRAY MATTERS"
SW 7066
"Light-Grey"

Sherwin Williams
"GRIZZLE GRAY"
SW 7068
"Dark Grey Accent"

Aluminum Storefront Framing
Class II Clear Anodized

Storefront Glazing
Solarban 60
"Solar Gray"

Tualatin Logistics Park

JULY 2021

VLMK ENGINEERING + DESIGN
3933 S Kelly Avenue Portland, Oregon 97239 | tel: 503.222.4453 | fax: 503.248.9263 | www.vlmk.com

TERAGAN & ASSOCIATES, INC.
ARBORICULTURAL CONSULTANTS

July 30, 2021

Tyler Reeves
Specht Development, Inc.
10260 SW Greenburg Rd.
Ste. 170
Portland, OR 97223

Re: Tree Assessment Report for Tualatin Logistics Park
20400 SW Cipole Rd., Tualatin, OR 97062

Summary

Teragan & Associates, Inc. was contacted by Specht Development, Inc. to assist with the tree inventory and tree preservation plan for the proposed development at 20400 SW Cipole Rd. A total of 447 trees over 8 inches DBH were inventoried. A total of 415 trees are proposed for removal (387 trees on the property, two (2) boundary trees, and 26 trees off of the property (in the southeast corner)). Some tree protection fencing is proposed to preserve and protect trees on the property line and trees on neighboring properties from construction impacts, specifically grading.

Assignment

My assignment was to inventory trees over 8-inches in diameter and prepare a tree assessment report for retained trees per City of Tualatin Development Code Section 33.110 Tree Removal Permit/Review requirements.

Background

The property is zoned general manufacturing (MG). The property is not located in the Natural Resource Protection Overlay District (NRPO). The property is not located in the Wetlands Protection Area (WPA) of the Wetlands Protection District (WPD). There are no heritage trees on the property.

Observations

I conducted the tree inventory over several days in mid to late June 2021. The following information was recorded for 447 trees (five (5) of which are boundary trees and 53 of which are off the property but may be impacted by development) over 8-inches in diameter: tree number, tree species, size, physical and structural conditions of the trees, property status (on/off), treatment (remove/preserve), and additional necessary comments (Appendix 3). All accessible trees were tagged with aluminum tags that correspond to the tree number in the inventory.

Discussion & Recommendations

Section 33.110 Tree Removal Permit/Review requirements.

It is necessary to remove 415 trees to construct proposed improvements (33.110.(5)(iii)). The proposed development maximizes the developable area in an MG zone. As such, the footprint of the building,

parking lot, and driveways in addition to the grading required to develop the site, makes tree preservation difficult.

TDC 73B.080. - Minimum Landscaping Standards for All Zones (3) Tree Preservation
Thirty (30) trees that are either on the property line or off the property are proposed for preservation. Two (2) trees on the property are proposed for preservation. Tree protection fencing will protect several of these shared and off-property trees when their root zone at 6x (6-feet of protection for every inch of diameter) encroaches the area of development (trees 353-358,417,421,431,432,434,436-439,442).

Recommendations

Based on the proposed development and City code, I recommend the following tree preservation measures:

1. Trees slated for removal shall be removed prior to the installation of tree protection fencing.
2. Tree protection fencing shall consist of 4-foot-tall chain-link fencing secured with metal posts or 6-foot tall chain link fence panels. Fencing must be sturdy and placed per the tree preservation plan (Appendix 4).
3. Top soil storage and construction material storage must not be located within the drip line of trees designated to be preserved.
4. Inform the project arborist if grade changes occur that would impact this tree preservation plan.

Conclusion

The proposed development requires the removal of 415 trees over 8-inches in diameter. Trees on the property lines and off the property but with encroaching roots can be adequately protected from the proposed grade changes with tree protection fencing.

Sincerely,

Christine Johnson

Christine Johnson, MS
ISA Certified Arborist, PN-8730A
E: christine@teragan.com | C:971.978.9381

Enclosures:

Appendix 1: Certification of Performance
Appendix 2: Assumptions and Limiting Conditions
Appendix 3: Tree Inventory
Appendix 4: Tree Preservation Plan

Appendix 1: Certification of Performance

I, Christine Johnson, Certify:

- That a representative of Teragan & Associates, Inc., has inspected the tree(s) and/or the property referred to in this report. The extent of the evaluation is stated in the attached report.
- That Teragan & Associates, Inc. has no current or prospective interest in the vegetation of the property that is the subject of this report, and Teragan & Associates, Inc. has no personal interest or bias with respect to the parties involved.
- That Teragan & Associates, Inc.'s compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, or upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.
- That the analysis, opinions, and conclusions that were developed as part of this report have been prepared according to commonly accepted arboricultural practices.
- That a Board-Certified Master Arborist has overseen the gathering of data.

Appendix 2: Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Teragan and Associates, Inc. checked the species identification and tree diameters in the field.
2. It is assumed that this property is not in violation of any codes, statutes, ordinances, or other governmental regulations.
3. The consultant is not responsible for information gathered from others involved in various activities pertaining to this project. Care has been taken to obtain information from reliable sources.
4. Loss or alteration of any part of this delivered report invalidates the entire report.
5. Drawings and information contained in this report may not be to scale and are intended to be used as display points of reference only.
6. The consultants' role is only to make recommendations. Inaction on the part of those receiving the report is not the responsibility of the consultant.
7. This report is to certify the trees that are on site, their size and condition and create a tree plan. Tree plan to include the measures necessary to protect trees that are to be retained during the construction process.

Appendix 3: Tree Inventory

Tree No.	Common Name	Botanical Name	DBH* (in)	Condition**	Structure**	On Property	Remove or Preserve	Comments
1	Cottonwood	*Populus trichocarpa*	9	Good	Good	Yes	Remove	
2	Douglas fir	*Pseudotsuga menziesii*	13	Good	Good	Yes	Remove	
3	Douglas fir	*Pseudotsuga menziesii*	20	Good	Good	Yes	Remove	
4	Douglas fir	*Pseudotsuga menziesii*	20	Good	Good	Yes	Remove	
5	Western redcedar	*Thuja plicata*	16	Good	Good	Yes	Remove	7" WRC to the S.
6	Western redcedar	*Thuja plicata*	10	Good	Good	Yes	Remove	
7	Douglas fir	*Pseudotsuga menziesii*	26	Good	Good	Yes	Remove	Large lateral limb on S side.
8	Douglas fir	*Pseudotsuga menziesii*	18	Good	Good	Yes	Remove	
9	Douglas fir	*Pseudotsuga menziesii*	20	Good	Good	Yes	Remove	
10	Colorado blue spruce	*Pinus pungens*	16	Good	Good	Yes	Remove	
11	Douglas fir	*Pseudotsuga menziesii*	22	Good	Good	Yes	Remove	
12	Douglas fir	*Pseudotsuga menziesii*	17	Good	Good	Yes	Remove	
13	Douglas fir	*Pseudotsuga menziesii*	20	Good	Good	Yes	Remove	
14	Western redcedar	*Thuja plicata*	19	Good	Good	Yes	Remove	Three leaders: 12,12,8.
15	Western redcedar	*Thuja plicata*	20	Good	Good	Yes	Remove	
16	Colorado blue spruce	*Pinus pungens*	14	Good	Good	Yes	Remove	Break in row of trees.
17	Douglas fir	*Pseudotsuga menziesii*	36	Good	Good	Yes	Remove	Large lateral limb at 4'.
18	Western redcedar	*Thuja plicata*	17	Good	Good	Yes	Remove	
19	Western redcedar	*Thuja plicata*	17	Good	Good	Yes	Remove	Two leaders: 12,12.
20	Western redcedar	*Thuja plicata*	8	Good	Good	Yes	Remove	Growing directly E of 19.
21	Western redcedar	*Thuja plicata*	12	Good	Good	Yes	Remove	
22	Western redcedar	*Thuja plicata*	8	Good	Good	Yes	Remove	
23	Western redcedar	*Thuja plicata*	15	Good	Good	Yes	Remove	
24	Western redcedar	*Thuja plicata*	17	Good	Good	Yes	Remove	Two leaders: 14,10.
25	Colorado blue spruce	*Pinus pungens*	14	Good	Good	Yes	Remove	
26	Colorado blue spruce	*Pinus pungens*	13	Good	Good	Yes	Remove	
27	Western redcedar	*Thuja plicata*	18	Good	Good	Yes	Remove	Two leaders: 16, 9.
28	Western redcedar	*Thuja plicata*	12	Good	Good	Yes	Remove	
29	Western redcedar	*Thuja plicata*	30	Good	Good	Yes	Remove	Exaggerated trunk flare with large lower limbs turning up.
30	Western redcedar	*Thuja plicata*	16	Good	Good	Yes	Remove	Three leaders: 12,8,6.
31	Western redcedar	*Thuja plicata*	19	Good	Good	Yes	Remove	Two leaders: 15,10; 6" lateral limbs that may have been confused for leaders.
32	Western redcedar	*Thuja plicata*	Avg. 9	Good	Fair	Yes	Remove	8 leaders.
33	Western redcedar	*Thuja plicata*	Avg. 8	Good	Fair	Yes	Remove	6 leaders.
34	Douglas fir	*Pseudotsuga menziesii*	18	Good	Good	Yes	Remove	
35	Douglas fir	*Pseudotsuga menziesii*	17	Good	Good	Yes	Remove	Madrone to E.
36	Colorado blue spruce	*Pinus pungens*	15	Good	Good	Yes	Remove	
37	Colorado blue spruce	*Pinus pungens*	14	Good	Good	Yes	Remove	
38	Colorado blue spruce	*Pinus pungens*	13	Good	Good	Yes	Remove	
39	Cottonwood	*Populus trichocarpa*	16	Poor	Fair	Yes	Remove	Two leaders: 7,8,8,9.
40	Western redcedar	*Thuja plicata*	16	Good	Good	Yes	Remove	Three leaders: 11,8,8
41	Western redcedar	*Thuja plicata*	14	Good	Good	Yes	Remove	Large lateral branch on N side.
42	Douglas fir	*Pseudotsuga menziesii*	22	Good	Good	Yes	Remove	
43	Douglas fir	*Pseudotsuga menziesii*	21	Good	Good	Yes	Remove	
44	Colorado blue spruce	*Pinus pungens*	16	Good	Good	Yes	Remove	
45	Colorado blue spruce	*Pinus pungens*	12	Good	Good	Yes	Remove	
46	Douglas fir	*Pseudotsuga menziesii*	22	Good	Good	Yes	Remove	
47	Douglas fir	*Pseudotsuga menziesii*	18	Good	Good	Yes	Remove	
48	Western redcedar	*Thuja plicata*	14	Fair	Fair	Yes	Remove	Five leaders: 10,6,6,4,3; thinning from top down.
49	Western redcedar	*Thuja plicata*	16	Fair	Fair	Yes	Remove	Three leaders: 10,9,8; thinning from top down
50	Western redcedar	*Thuja plicata*	14	Good	Good	Yes	Remove	Two leaders: 11,9.
51	Western redcedar	*Thuja plicata*	16	Good	Good	Yes	Remove	Exaggerated trunk swell.
52	Colorado blue spruce	*Pinus pungens*	11	Good	Good	Yes	Remove	
53	Colorado blue spruce	*Pinus pungens*	13	Good	Good	Yes	Remove	
54	Colorado blue spruce	*Pinus pungens*	9	Fair	Good	Yes	Remove	Suppressed.
55	Douglas fir	*Pseudotsuga menziesii*	28	Good	Good	Yes	Remove	

Tree No.	Common Name	Botanical Name	DBH* (in)	Condition**	Structure**	On Property	Remove or Preserve	Comments
56	Western redcedar	*Thuja plicata*	16	Fair	Good	Yes	Remove	Two leaders: 13,10; thinning from top down; listed as a madrone on survey.
57	Western redcedar	*Thuja plicata*	Avg. 5	Fair	Good	Yes	Remove	More than 20 leaders; thinning from top down.
58	Western redcedar	*Thuja plicata*	10	Fair	Good	Yes	Remove	Thinning from top down.
59	Douglas fir	*Pseudotsuga menziesii*	17	Good	Good	Yes	Remove	
60	Western redcedar	*Thuja plicata*	21	Good	Good	Yes	Remove	Two leaders: 16,14.
61	Western redcedar	*Thuja plicata*	24	Good	Good	Yes	Remove	Two leaders: 19,14.
62	Douglas fir	*Pseudotsuga menziesii*	38	Good	Good	Yes	Remove	
63	Douglas fir	*Pseudotsuga menziesii*	28	Good	Good	Yes	Remove	
64	Colorado blue spruce	*Pinus pungens*	9	Good	Good	Yes	Remove	
65	Western redcedar	*Thuja plicata*	21	Good	Good	Yes	Remove	Two leaders: 15,15.
66	Douglas fir	*Pseudotsuga menziesii*	24	Good	Good	Yes	Remove	
67	Douglas fir	*Pseudotsuga menziesii*	26	Good	Good	Yes	Remove	
68	Colorado blue spruce	*Pinus pungens*	15	Good	Good	Yes	Remove	
69	Douglas fir	*Pseudotsuga menziesii*	25	Good	Good	Yes	Remove	
70	Douglas fir	*Pseudotsuga menziesii*	19	Good	Fair	Yes	Remove	Suppressed growth under 71.
71	Douglas fir	*Pseudotsuga menziesii*	53	Good	Good	Yes	Remove	Diameter at 2.5 AGL; codominant leaders split at 8'.
72	Douglas fir	*Pseudotsuga menziesii*	33	Good	Good	Yes	Remove	
73	Douglas fir	*Pseudotsuga menziesii*	16	Good	Good	Yes	Remove	
74	Douglas fir	*Pseudotsuga menziesii*	28	Good	Good	Yes	Remove	
75	Douglas fir	*Pseudotsuga menziesii*	19	Good	Good	Yes	Remove	
76	Douglas fir	*Pseudotsuga menziesii*	33	Good	Good	Yes	Remove	
77	Douglas fir	*Pseudotsuga menziesii*	11	Good	Good	Yes	Remove	
78	Douglas fir	*Pseudotsuga menziesii*	8	Good	Good	Yes	Remove	
79	Douglas fir	*Pseudotsuga menziesii*	12	Good	Good	Yes	Remove	
80	Douglas fir	*Pseudotsuga menziesii*	38	Good	Good	Yes	Remove	
81	Douglas fir	*Pseudotsuga menziesii*	29	Good	Good	Yes	Remove	
82	Douglas fir	*Pseudotsuga menziesii*	30	Good	Good	Yes	Remove	
83	Douglas fir	*Pseudotsuga menziesii*	20	Good	Good	Yes	Remove	
84	Douglas fir	*Pseudotsuga menziesii*	31	Good	Good	Yes	Remove	
85	Pacific madrone	*Arbutus menziesii*	13	Good	Fair	Yes	Remove	Extreme phototropism to the NW.
86	Douglas fir	*Pseudotsuga menziesii*	11	Good	Good	Yes	Remove	
87	Douglas fir	*Pseudotsuga menziesii*	12	Good	Good	Yes	Remove	
88	Douglas fir	*Pseudotsuga menziesii*	18	Good	Good	Yes	Remove	
89	Douglas fir	*Pseudotsuga menziesii*	37	Good	Good	Yes	Remove	
90	Douglas fir	*Pseudotsuga menziesii*	15	Good	Good	Yes	Remove	
91	Douglas fir	*Pseudotsuga menziesii*	15	Good	Good	Yes	Remove	
92	Douglas fir	*Pseudotsuga menziesii*	12	Good	Fair	Yes	Remove	Broken and regrew top.
93	Douglas fir	*Pseudotsuga menziesii*	15	Good	Good	Yes	Remove	
94	Douglas fir	*Pseudotsuga menziesii*	25	Good	Good	Yes	Remove	
95	Douglas fir	*Pseudotsuga menziesii*	16	Fair	Good	Yes	Remove	Red ring rot conks on E side of trunk.
96	Douglas fir	*Pseudotsuga menziesii*	17	Good	Good	Yes	Remove	
97	Douglas fir	*Pseudotsuga menziesii*	36	Good	Good	Yes	Remove	Poison oak.
98	Douglas fir	*Pseudotsuga menziesii*	21	Good	Good	Yes	Remove	
99	Douglas fir	*Pseudotsuga menziesii*	19	Snag	Snag	Yes	Remove	Snag at 25'.
100	Douglas fir	*Pseudotsuga menziesii*	15	Good	Good	Yes	Remove	
101	Douglas fir	*Pseudotsuga menziesii*	19	Good	Good	Yes	Remove	
102	Douglas fir	*Pseudotsuga menziesii*	15	Good	Good	Yes	Remove	
103	Pacific madrone	*Arbutus menziesii*	18	Good	Good	Yes	Remove	Two leaders: 13,12.
104	Colorado blue spruce	*Pinus pungens*	16	Good	Good	Yes	Remove	
105	Colorado blue spruce	*Pinus pungens*	14	Good	Good	Yes	Remove	
106	Douglas fir	*Pseudotsuga menziesii*	20	Good	Good	Yes	Remove	
107	Douglas fir	*Pseudotsuga menziesii*	24	Good	Good	Yes	Remove	
108	Douglas fir	*Pseudotsuga menziesii*	25	Good	Good	Yes	Remove	
109	Western redcedar	*Thuja plicata*	25	Good	Good	Yes	Remove	Three leaders: 17,15,11.
110	Colorado blue spruce	*Pinus pungens*	12	Fair	Good	Yes	Remove	Suppressed.

Tree No.	Common Name	Botanical Name	DBH* (in)	Condition**	Structure**	On Property	Remove or Preserve	Comments
111	Western redcedar	*Thuja plicata*	26	Good	Good	Yes	Remove	Three leaders: 16,16,13.
112	Western redcedar	*Thuja plicata*	30	Good	Good	Yes	Remove	Three leaders: 20,17,14.
113	Western redcedar	*Thuja plicata*	19	Good	Fair	Yes	Remove	6 leaders surrounding main trunk.
114	Douglas fir	*Pseudotsuga menziesii*	15	Fair	Good	Yes	Remove	Suppressed.
115	Douglas fir	*Pseudotsuga menziesii*	27	Good	Good	Yes	Remove	
116	Western redcedar	*Thuja plicata*	15	Good	Good	Yes	Remove	
117	Western redcedar	*Thuja plicata*	40	Good	Good	Yes	Remove	Fused codominant leaders and large lateral leaders.
118	Douglas fir	*Pseudotsuga menziesii*	13	Fair	Good	Yes	Remove	
119	Cottonwood	*Populus trichocarpa*	20	Good	Good	Yes	Remove	Thin and discolored foliage.
120	Douglas fir	*Pseudotsuga menziesii*	9	Good	Good	Yes	Remove	16672 is less than 8"; wrong icon on survey.
121	Douglas fir	*Pseudotsuga menziesii*	14	Good	Good	Yes	Remove	
122	Cottonwood	*Populus trichocarpa*	25	Good	Good	Yes	Remove	Two leaders: 18, 18; high crown.
123	Cottonwood	*Populus trichocarpa*	14	Good	Good	Yes	Remove	High crown.
124	Cottonwood	*Populus trichocarpa*	11	Good	Good	Yes	Remove	High crown.
125	Willow	*Salix sp.*	10	Fair	Good	Yes	Remove	One leader dead.
126	Cottonwood	*Populus trichocarpa*	8	Dead	Dead	Yes	Remove	
127	Cottonwood	*Populus trichocarpa*	12	Good	Good	Yes	Remove	High crown.
128	Cottonwood	*Populus trichocarpa*	14	Dead	Dead	Yes	Remove	
129	Cottonwood	*Populus trichocarpa*	13	Good	Good	Yes	Remove	High crown; failed multistem willow to E.
130	Douglas fir	*Pseudotsuga menziesii*	14	Good	Good	Yes	Remove	
131	Douglas fir	*Pseudotsuga menziesii*	15	Good	Good	Yes	Remove	
132	Cottonwood	*Populus trichocarpa*	19	Good	Good	Yes	Remove	
133	Cottonwood	*Populus trichocarpa*	17	Good	Good	Yes	Remove	7" to N and W. #36 and #37 less than 8".
134	Cottonwood	*Populus trichocarpa*	14	Dead	Dead	Yes	Remove	Snag at 10'.
135	Cottonwood	*Populus trichocarpa*	8	Dead	Dead	Yes	Remove	
136	Douglas fir	*Pseudotsuga menziesii*	19	Good	Good	Yes	Remove	
137	Cottonwood	*Populus trichocarpa*	18	Good	Good	Yes	Remove	
138	Douglas fir	*Pseudotsuga menziesii*	15	Fair	Good	Yes	Remove	Thinning foliage.
139	Cottonwood	*Populus trichocarpa*	9	Good	Fair	Yes	Remove	Leaning E; dead tree less than 8" to W.
140	Cottonwood	*Populus trichocarpa*	10	Dead	Dead	Yes	Remove	Snag at 20'.
141	Cottonwood	*Populus trichocarpa*	15	Good	Good	Yes	Remove	High crown.
142	Cottonwood	*Populus trichocarpa*	11	Good	Good	Yes	Remove	
143	Cottonwood	*Populus trichocarpa*	13	Good	Good	Yes	Remove	
144	Cottonwood	*Populus trichocarpa*	10	Good	Good	Yes	Remove	
145	Cottonwood	*Populus trichocarpa*	8	Fair	Fair	Yes	Remove	Suppressed; upper canopy leans NE.
146	Cottonwood	*Populus trichocarpa*	24	Good	Good	Yes	Remove	
147	Cottonwood	*Populus trichocarpa*	22	Good	Good	Yes	Remove	
148	Cottonwood	*Populus trichocarpa*	11	Good	Good	Yes	Remove	
149	Cottonwood	*Populus trichocarpa*	14	Good	Fair	Yes	Remove	High crown; suppressed side leader.
150	Cottonwood	*Populus trichocarpa*	22	Good	Good	Yes	Remove	
151	Cottonwood	*Populus trichocarpa*	20	Good	Good	Yes	Remove	Two leaders: 15,13.
152	Douglas fir	*Pseudotsuga menziesii*	16	Good	Good	Yes	Remove	
153	Western redcedar	*Thuja plicata*	11	Good	Good	Yes	Remove	Two leaders: 9,6.
154	Cottonwood	*Populus trichocarpa*	20	Good	Good	Yes	Remove	
155	Cottonwood	*Populus trichocarpa*	20	Good	Good	Yes	Remove	Several trees less than 8" to S.
156	Cottonwood	*Populus trichocarpa*	17	Good	Good	Yes	Remove	
157	Cottonwood	*Populus trichocarpa*	18	Good	Good	Yes	Remove	Small western redcedar to N.
158	Cottonwood	*Populus trichocarpa*	11	Good	Good	Yes	Remove	
159	Cottonwood	*Populus trichocarpa*	18	Good	Good	Yes	Remove	
160	Bigleaf maple	*Acer macrophyllum*	13	Good	Good	Yes	Remove	Fused codominant leaders.
161	Red alder	*Alnus rubra*	13	Good	Good	Yes	Remove	
162	Cottonwood	*Populus trichocarpa*	17	Good	Good	Yes	Remove	
163	Cottonwood	*Populus trichocarpa*	12	Good	Good	Yes	Remove	High crown.
164	Cottonwood	*Populus trichocarpa*	11	Good	Good	Yes	Remove	High crown.
165	Cottonwood	*Populus trichocarpa*	10	Good	Good	Yes	Remove	

Tree No.	Common Name	Botanical Name	DBH* (in)	Condition**	Structure**	On Property	Remove or Preserve	Comments
166	Cottonwood	*Populus trichocarpa*	11	Good	Good	Yes	Remove	High crown.
167	Cottonwood	*Populus trichocarpa*	9	Good	Good	Yes	Remove	High crown.
168	Cottonwood	*Populus trichocarpa*	14	Good	Good	Yes	Remove	High crown.
169	Cottonwood	*Populus trichocarpa*	13	Good	Good	Yes	Remove	High crown.
170	Cottonwood	*Populus trichocarpa*	8	Good	Good	Yes	Remove	High crown.
171	Cottonwood	*Populus trichocarpa*	12	Good	Good	Yes	Remove	High crown.
172	Cottonwood	*Populus trichocarpa*	14	Good	Good	Yes	Remove	High crown.
173	Cottonwood	*Populus trichocarpa*	17	Good	Good	Yes	Remove	High crown.
174	Cottonwood	*Populus trichocarpa*	10	Good	Good	Yes	Remove	
175	Cottonwood	*Populus trichocarpa*	16	Good	Good	Yes	Remove	
176	Pacific madrone	*Arbutus menziesii*	8	Good	Good	Yes	Remove	
177	Cottonwood	*Populus trichocarpa*	23	Good	Good	Yes	Remove	
178	Cottonwood	*Populus trichocarpa*	13	Good	Good	Yes	Remove	
179	Cottonwood	*Populus trichocarpa*	11	Good	Good	Yes	Remove	Lean to N
180	Cottonwood	*Populus trichocarpa*	16	Good	Good	Yes	Remove	
181	Cottonwood	*Populus trichocarpa*	8	Good	Good	Yes	Remove	High crown; 16807 less than 8".
182	Cottonwood	*Populus trichocarpa*	11	Good	Good	Yes	Remove	High crown.
183	Cottonwood	*Populus trichocarpa*	8	Good	Good	Yes	Remove	High and narrow crown.Change all high crowns to high and narrow crown.
184	Cottonwood	*Populus trichocarpa*	8	Good	Good	Yes	Remove	High and narrow crown.
185	Cottonwood	*Populus trichocarpa*	8	Good	Good	Yes	Remove	High and narrow crown; 16712 6" snag.
186	Cottonwood	*Populus trichocarpa*	13	Good	Good	Yes	Remove	High and narrow crown;tree less than 8" to SW.
187	Cottonwood	*Populus trichocarpa*	13	Good	Good	Yes	Remove	
188	Cottonwood	*Populus trichocarpa*	9	Good	Good	Yes	Remove	16717 less than 8".
189	Cottonwood	*Populus trichocarpa*	9	Dead	Dead	Yes	Remove	
190	Cottonwood	*Populus trichocarpa*	9	Good	Good	Yes	Remove	Lean to W; 16725 less than 8".
191	Cottonwood	*Populus trichocarpa*	13	Good	Good	Yes	Remove	
192	Cottonwood	*Populus trichocarpa*	19	Good	Good	Yes	Remove	16728 less than 8.
193	Cottonwood	*Populus trichocarpa*	11	Good	Good	Yes	Remove	
194	Cottonwood	*Populus trichocarpa*	13	Good	Fair	Yes	Remove	16621 less than 8"; unbalanced canopy to the W.
195	Cottonwood	*Populus trichocarpa*	10	Good	Fair	Yes	Remove	Unbalanced canopy to the W; 16715 less than 8".
196	Cottonwood	*Populus trichocarpa*	17	Good	Fair	Yes	Remove	Unbalanced canopy to the W.
197	Cottonwood	*Populus trichocarpa*	9	Good	Fair	Yes	Remove	Lost top; surrounded by fallen trees.
198	Cottonwood	*Populus trichocarpa*	10	Fair	Very poor	Yes	Remove	Failed.
199	Cottonwood	*Populus trichocarpa*	8	Fair	Very poor	Yes	Remove	Failed.
200	Cottonwood	*Populus trichocarpa*	11	Fair	Very poor	Yes	Remove	Failed.
201	Cottonwood	*Populus trichocarpa*	14	Fair	Very poor	Yes	Remove	Failed.
202	Cottonwood	*Populus trichocarpa*	14	Fair	Very poor	Yes	Remove	Failed.
203	Douglas fir	*Pseudotsuga menziesii*	35	Good	Good	Yes	Remove	
204	Cottonwood	*Populus trichocarpa*	16	Good	Fair	Yes	Remove	Unbalanced canopy to the NW.
205	Cottonwood	*Populus trichocarpa*	25	Good	Fair	Yes	Remove	Unbalanced canopy to the W; lean W; dead tree leaning on upper canopy.
206	Cottonwood	*Populus trichocarpa*	18	Good	Fair	Yes	Remove	High and narrow crown.
207	Cottonwood	*Populus trichocarpa*	15	Poor	Very poor	Yes	Remove	Partially uprooted and falling W.
208	Cottonwood	*Populus trichocarpa*	10	Dead	Dead	Yes	Remove	Failed into 206.
209	Cottonwood	*Populus trichocarpa*	12	Poor	Very poor	Yes	Remove	Snag at 15'.
210	Cottonwood	*Populus trichocarpa*	14	Good	Good	Yes	Remove	High and narrow crown.
211	Cottonwood	*Populus trichocarpa*	14	Good	Fair	Yes	Remove	Unbalanced to SW.
212	Douglas fir	*Pseudotsuga menziesii*	12	Good	Good	Yes	Remove	
213	Cottonwood	*Populus trichocarpa*	17	Fair	Very poor	Yes	Remove	Snag at 40'.
214	Cottonwood	*Populus trichocarpa*	18	Good	Fair	Yes	Remove	Unbalanced canopy to the SE.
215	Bigleaf maple	*Acer macrophyllum*	12	Good	Good	Yes	Remove	
216	Douglas fir	*Pseudotsuga menziesii*	21	Good	Good	Yes	Remove	
217	Bigleaf maple	*Acer macrophyllum*	14	Good	Good	Yes	Remove	Two leaders: 10, 10.
218	Bigleaf maple	*Acer macrophyllum*	10	Good	Good	Yes	Remove	
219	Bigleaf maple	*Acer macrophyllum*	8	Good	Good	Yes	Remove	4" side leader.
220	Bigleaf maple	*Acer macrophyllum*	12	Good	Good	Yes	Remove	Three leaders: 7,7,7.

Tree No.	Common Name	Botanical Name	DBH* (in)	Condition**	Structure**	On Property	Remove or Preserve	Comments
221	Cottonwood	*Populus trichocarpa*	12	Good	Good	Yes	Remove	
222	Bigleaf maple	*Acer macrophyllum*	9	Good	Fair	Yes	Remove	Unbalanced to E.
223	Cottonwood	*Populus trichocarpa*	11	Good	Fair	Yes	Remove	Unbalanced to SE; 7" tree to S.
224	Cottonwood	*Populus trichocarpa*	16	Good	Fair	Yes	Remove	Unbalanced to the SE.
225	Cottonwood	*Populus trichocarpa*	18	Good	Fair	Yes	Remove	Unbalanced to the SE.
226	Cottonwood	*Populus trichocarpa*	25	Good	Good	Yes	Remove	
227	Douglas fir	*Pseudotsuga menziesii*	9	Fair	Fair	Yes	Remove	Suppressed.
228	Cottonwood	*Populus trichocarpa*	12	Good	Fair	Yes	Remove	Lean to W; high crown.
229	Cottonwood	*Populus trichocarpa*	13	Good	Good	Yes	Remove	
230	Cottonwood	*Populus trichocarpa*	12	Good	Fair	Yes	Remove	Lean to SW.
231	Cottonwood	*Populus trichocarpa*	19	Good	Good	Yes	Remove	16428 less than 8".
232	Douglas fir	*Pseudotsuga menziesii*	15	Good	Good	Yes	Remove	
233	Willow	*Salix sp.*	13	Poor	Very poor	Yes	Remove	Failed S and hacked back, still rooted and sprouting.
234	Willow	*Salix sp.*	13	Good	Good	Yes	Remove	Two leaders: 10,9; 7" to W.
235	Willow	*Salix sp.*	10	Fair	Fair	Yes	Remove	Three leaders: 7,6,5; decaying leaders.
236	Douglas fir	*Pseudotsuga menziesii*	27	Good	Good	Yes	Remove	
237	Douglas fir	*Pseudotsuga menziesii*	24	Good	Good	Yes	Remove	
238	Douglas fir	*Pseudotsuga menziesii*	26	Good	Good	Yes	Remove	
239	Douglas fir	*Pseudotsuga menziesii*	24	Good	Good	Yes	Remove	
240	Douglas fir	*Pseudotsuga menziesii*	27	Good	Good	Yes	Remove	
241	Douglas fir	*Pseudotsuga menziesii*	17	Good	Good	Yes	Remove	Diameter measured at 5'.
242	Douglas fir	*Pseudotsuga menziesii*	32	Good	Good	Yes	Remove	
243	Willow	*Salix sp.*	Avg. 7	Good	Good	Yes	Remove	8 leaders.
244	Willow	*Salix sp.*	Avg. 5.	Good	Good	Yes	Remove	6 leaders.
245	Deodar cedar	*Cedrus deodara*	19	Fair	Good	Yes	Remove	Poor branch growth and taper.
246	Plume cryptomeria	*Cryptomeria japonica* 'Elegans'	40	Fair	Fair	Yes	Remove	
247	Plume cryptomeria	*Cryptomeria japonica* 'Elegans'	40	Fair	Fair	Yes	Remove	
248	Douglas fir	*Pseudotsuga menziesii*	26	Good	Good	Yes	Remove	
249	Douglas fir	*Pseudotsuga menziesii*	26	Good	Good	Yes	Remove	
250	Douglas fir	*Pseudotsuga menziesii*	19	Good	Good	Yes	Remove	
251	Pear	*Pyrus calleryana*	10	Good	Good	Yes	Remove	Diameter at 3'.
252	Pacific madrone	*Arbutus menziesii*	11	Good	Good	Yes	Remove	E side of fence.
253	Douglas fir	*Pseudotsuga menziesii*	45	Good	Good	Yes	Remove	
254	Douglas fir	*Pseudotsuga menziesii*	14	Good	Good	Yes	Remove	E side of fence.
255	Douglas fir	*Pseudotsuga menziesii*	34	Good	Good	Yes	Remove	Two leaders: 22,26; fused with 256.
256	Douglas fir	*Pseudotsuga menziesii*	9	Good	Good	Yes	Remove	
257	Douglas fir	*Pseudotsuga menziesii*	23	Good	Good	Yes	Remove	
258	Douglas fir	*Pseudotsuga menziesii*	31	Good	Good	Yes	Remove	
259	Douglas fir	*Pseudotsuga menziesii*	45	Good	Good	No	Remove	
260	Pacific madrone	*Arbutus menziesii*	19	Fair	Fair	No	Remove	Extreme phototropism to the S.
261	Bigleaf maple	*Acer macrophyllum*	20	Fair	Fair	No	Remove	Broken branches; suppressed.
262	Pacific madrone	*Arbutus menziesii*	8	Good	Fair	No	Remove	Leaders extreme phototropism to N and S.
263	Douglas fir	*Pseudotsuga menziesii*	32	Good	Good	No	Remove	
264	Douglas fir	*Pseudotsuga menziesii*	20	Good	Good	No	Remove	
265	Douglas fir	*Pseudotsuga menziesii*	11	Good	Good	No	Remove	
266	Douglas fir	*Pseudotsuga menziesii*	20	Good	Good	Yes	Remove	
267	Douglas fir	*Pseudotsuga menziesii*	24	Good	Good	No	Remove	
268	Douglas fir	*Pseudotsuga menziesii*	41	Good	Good	No	Remove	14619 less than 8".
269	Douglas fir	*Pseudotsuga menziesii*	18	Good	Good	No	Remove	
270	Douglas fir	*Pseudotsuga menziesii*	8	Poor	Poor	Yes	Remove	Suppressed, searching for light.
271	Douglas fir	*Pseudotsuga menziesii*	11	Good	Good	Yes	Remove	
272	Douglas fir	*Pseudotsuga menziesii*	12	Good	Good	Yes	Remove	
273	Douglas fir	*Pseudotsuga menziesii*	11	Good	Good	Yes	Remove	
274	Douglas fir	*Pseudotsuga menziesii*	10	Good	Good	Yes	Remove	
275	Douglas fir	*Pseudotsuga menziesii*	22	Good	Good	Yes	Remove	

Tree No.	Common Name	Botanical Name	DBH* (in)	Condition**	Structure**	On Property	Remove or Preserve	Comments
276	Douglas fir	*Pseudotsuga menziesii*	9	Poor	Poor	Yes	Remove	Suppressed, unbalanced to the N.
277	Douglas fir	*Pseudotsuga menziesii*	10	Good	Good	Yes	Remove	
278	Douglas fir	*Pseudotsuga menziesii*	12	Good	Good	Yes	Remove	
279	Douglas fir	*Pseudotsuga menziesii*	24	Good	Good	Boundary tree	Remove	
280	Bigleaf maple	*Acer macrophyllum*	14	Good	Good	No	Remove	Fir stump to W.
281	Douglas fir	*Pseudotsuga menziesii*	21	Good	Fair	No	Remove	High crown.
282	Douglas fir	*Pseudotsuga menziesii*	14	Good	Fair	No	Remove	High crown.
283	Douglas fir	*Pseudotsuga menziesii*	11	Fair	Fair	No	Remove	Thin; high crown.
284	Douglas fir	*Pseudotsuga menziesii*	8	Poor	Poor	No	Remove	Suppressed.
285	Bigleaf maple	*Acer macrophyllum*	9	Good	Fair	No	Remove	Unbalanced to N.
286	Bigleaf maple	*Acer macrophyllum*	9	Good	Good	No	Remove	
287	Douglas fir	*Pseudotsuga menziesii*	18	Poor	Fair	No	Remove	Thin; discolored foliage; high crown.
288	Douglas fir	*Pseudotsuga menziesii*	25	Good	Good	No	Remove	
289	Douglas fir	*Pseudotsuga menziesii*	15	Fair	Fair	No	Remove	High crown ; low LCR.
290	Douglas fir	*Pseudotsuga menziesii*	9	Fair	Fair	No	Remove	Suppressed.
291	Douglas fir	*Pseudotsuga menziesii*	16	Good	Fair	No	Off property, preserve	Unbalanced to the W.
292	Douglas fir	*Pseudotsuga menziesii*	25	Good	Fair	No	Remove	Unbalanced to NW.
293	Douglas fir	*Pseudotsuga menziesii*	8	Dead	Dead	No	Remove	
294	Douglas fir	*Pseudotsuga menziesii*	30	Good	Fair	No	Remove	High crown.
295	Douglas fir	*Pseudotsuga menziesii*	22	Good	Good	Yes	Remove	
296	Douglas fir	*Pseudotsuga menziesii*	24	Good	Good	Yes	Remove	
297	Douglas fir	*Pseudotsuga menziesii*	12	Good	Good	Yes	Remove	7" tree to SE.
298	Douglas fir	*Pseudotsuga menziesii*	28	Good	Good	Yes	Remove	
299	Douglas fir	*Pseudotsuga menziesii*	29	Good	Good	Yes	Remove	
300	Douglas fir	*Pseudotsuga menziesii*	26	Good	Good	Yes	Remove	
301	Douglas fir	*Pseudotsuga menziesii*	8	Fair	Fair	Yes	Remove	Suppressed.
302	Western redcedar	*Thuja plicata*	8	Good	Good	Yes	Remove	
303	Douglas fir	*Pseudotsuga menziesii*	27	Good	Good	Yes	Remove	
304	Douglas fir	*Pseudotsuga menziesii*	41	Good	Good	Yes	Remove	
305	Douglas fir	*Pseudotsuga menziesii*	25	Good	Good	Yes	Remove	
306	Douglas fir	*Pseudotsuga menziesii*	18	Good	Good	Yes	Remove	
307	Douglas fir	*Pseudotsuga menziesii*	29	Good	Good	Yes	Remove	
308	Douglas fir	*Pseudotsuga menziesii*	20	Good	Good	Yes	Remove	
309	Pacific madrone	*Arbutus menziesii*	9	Good	Good	Yes	Remove	
310	Western redcedar	*Thuja plicata*	8	Good	Good	Yes	Remove	Fifth redcedar from E.
311	Western redcedar	*Thuja plicata*	9	Good	Good	Yes	Remove	Two leaders: 7,5.
312	Western redcedar	*Thuja plicata*	8	Good	Good	Yes	Remove	
313	Western redcedar	*Thuja plicata*	9	Good	Good	Yes	Remove	Two leaders: 7,6.
314	Western redcedar	*Thuja plicata*	9	Good	Good	Yes	Remove	
315	Western redcedar	*Thuja plicata*	9	Good	Good	Yes	Remove	Two leaders: 7,5.
316	Western redcedar	*Thuja plicata*	10	Good	Good	Yes	Remove	Last in stand.
317	Pacific madrone	*Arbutus menziesii*	8	Good	Good	Yes	Remove	
318	Douglas fir	*Pseudotsuga menziesii*	8	Good	Good	Yes	Remove	
319	Douglas fir	*Pseudotsuga menziesii*	14	Good	Good	Yes	Remove	Fused leaders.
320	Maple	*Acer rubrum* 'Armstrong'	20	Good	Good	Yes	Remove	Diameter at 3.5' AGL.
321	Maple	*Acer rubrum* 'Armstrong'	20	Good	Good	Yes	Remove	
322	Maple	*Acer rubrum* 'Armstrong'	14	Good	Good	Yes	Remove	
323	Maple	*Acer rubrum* 'Armstrong'	23	Good	Good	Yes	Remove	
324	Maple	*Acer rubrum* 'Armstrong'	15	Good	Good	Yes	Remove	
325	Pear	*Pyrus calleryana*	8	Good	Fair	Yes	Remove	Unbalanced to the N.
326	Maple	*Acer rubrum* 'Armstrong'	12	Good	Good	Yes	Remove	
327	Maple	*Acer rubrum* 'Armstrong'	9	Good	Good	Yes	Remove	
328	Maple	*Acer rubrum* 'Armstrong'	9	Good	Good	Yes	Remove	
329	Maple	*Acer rubrum* 'Armstrong'	9	Good	Good	Yes	Remove	
330	Pear	*Pyrus calleryana*	8	Good	Fair	Yes	Remove	Unbalanced to the N.

Tree No.	Common Name	Botanical Name	DBH* (in)	Condition**	Structure**	On Property	Remove or Preserve	Comments
331	Maple	*Acer rubrum* 'Armstrong'	13	Good	Good	Yes	Remove	
332	Pear	*Pyrus calleryana*	12	Good	Fair	Yes	Remove	Splits into 3 leaders at 5'.
333	Maple	*Acer rubrum* 'Armstrong'	15	Good	Good	Yes	Remove	
334	Maple	*Acer rubrum* 'Armstrong'	16	Good	Good	Yes	Remove	
335	Pear	*Pyrus calleryana*	12	Fair	Fair	Yes	Remove	Unbalanced to the N.
336	Maple	*Acer rubrum* 'Armstrong'	12	Good	Good	Yes	Remove	
337	Pear	*Pyrus calleryana*	13	Good	Fair	Yes	Remove	Unbalanced to the NW.
338	Maple	*Acer rubrum* 'Armstrong'	9	Good	Good	Yes	Remove	
339	Pear	*Pyrus calleryana*	8	Good	Good	Yes	Remove	
340	Maple	*Acer rubrum* 'Armstrong'	11	Good	Good	Yes	Remove	
341	Pear	*Pyrus calleryana*	13	Good	Fair	Yes	Remove	Wound from broken leader on NWside ~5'.
342	Maple	*Acer rubrum* 'Armstrong'	25	Good	Good	Yes	Remove	
343	Pear	*Pyrus calleryana*	13	Good	Good	Yes	Remove	Diameter measured at 3.5' AGL.
344	Pear	*Pyrus calleryana*	17	Good	Good	Yes	Remove	Diameter measured at 4.0' AGL.
345	Pear	*Pyrus calleryana*	13	Good	Good	Yes	Remove	Diameter measured at 3.5' AGL.
346	Raywood ash	*Fraxinus oxycarpa* 'Raywood'	19	Good	Fair	Yes	Remove	Wound on NW leader. Probable likelihood of failure.
347	Raywood ash	*Fraxinus oxycarpa* 'Raywood'	22	Good	Fair	Yes	Remove	6' by 2' wound on NE trunk; good wound wood response; 50% of circumference.
348	Raywood ash	*Fraxinus oxycarpa* 'Raywood'	13	Good	Good	Yes	Remove	
349	Raywood ash	*Fraxinus oxycarpa* 'Raywood'	18	Good	Good	Yes	Remove	
350	Raywood ash	*Fraxinus oxycarpa* 'Raywood'	18	Good	Good	Yes	Remove	
351	Raywood ash	*Fraxinus oxycarpa* 'Raywood'	19	Good	Good	Yes	Remove	
352	Norway maple	*Acer platanoides*	8	Good	Good	Yes	Remove	Failed tree to S.
353	Douglas fir	*Pseudotsuga menziesii*	10	Good	Fair	No	Off property, protect from grading	Growing up and into 354.
354	Norway maple	*Acer platanoides*	30	Good	Good	No	Off property, protect from grading	Diameter measured at 2.0' AGL.
355	Douglas fir	*Pseudotsuga menziesii*	33	Good	Good	Boundary tree	Preserve	
356	Douglas fir	*Pseudotsuga menziesii*	11	Good	Good	Boundary tree	Preserve	
357	Bigleaf maple	*Acer macrophyllum*	15	Poor	Poor	Yes	Preserve	Deadwood, missing bark; sprouting.
358	Bigleaf maple	*Acer macrophyllum*	21	Good	Good	Yes	Preserve	
359	Maple	*Acer rubrum* 'Armstrong'	25	Good	Good	Yes	Remove	
360	Maple	*Acer rubrum* 'Armstrong'	19	Good	Good	Yes	Remove	
361	Maple	*Acer rubrum* 'Armstrong'	16	Good	Good	Yes	Remove	
362	Maple	*Acer rubrum* 'Armstrong'	14	Good	Good	Yes	Remove	
363	Maple	*Acer rubrum* 'Armstrong'	23	Good	Good	Yes	Remove	
364	Maple	*Acer rubrum* 'Armstrong'	24	Good	Good	Yes	Remove	
365	Maple	*Acer rubrum* 'Armstrong'	12	Good	Good	Yes	Remove	
366	Maple	*Acer rubrum* 'Armstrong'	23	Good	Good	Yes	Remove	
367	Maple	*Acer rubrum* 'Armstrong'	22	Good	Good	Yes	Remove	
368	Maple	*Acer rubrum* 'Armstrong'	17	Good	Good	Yes	Remove	
369	Pine	*Pinus monticola*	15	Fair	Good	Yes	Remove	Thin.
370	Coast pine	*Pinus contorta*	10	Good	Good	Yes	Remove	
371	Coast pine	*Pinus contorta*	9	Good	Good	Yes	Remove	Moderate sequoia pitch moth.
372	Coast pine	*Pinus contorta*	13	Good	Good	Yes	Remove	
373	Coast pine	*Pinus contorta*	12	Good	Good	Yes	Remove	
374	Coast pine	*Pinus contorta*	8	Good	Good	Yes	Remove	
375	Coast pine	*Pinus contorta*	11	Good	Good	Yes	Remove	Moderate sequoia pitch moth.
376	Colorado blue spruce	*Pinus pungens*	14	Good	Good	Yes	Remove	
377	Colorado blue spruce	*Pinus pungens*	11	Good	Good	Yes	Remove	
378	Colorado blue spruce	*Pinus pungens*	12	Good	Good	Yes	Remove	
379	Western hemlock	*Tsuga heterophylla*	12	Good	Good	Yes	Remove	
380	Douglas fir	*Pseudotsuga menziesii*	26	Good	Good	Yes	Remove	
381	Colorado blue spruce	*Pinus pungens*	14	Good	Good	Yes	Remove	
382	Colorado blue spruce	*Pinus pungens*	16	Good	Good	Yes	Remove	
383	Colorado blue spruce	*Pinus pungens*	15	Good	Good	Yes	Remove	
384	Douglas fir	*Pseudotsuga menziesii*	26	Good	Good	Yes	Remove	
385	Douglas fir	*Pseudotsuga menziesii*	28	Good	Good	Yes	Remove	

Tree No.	Common Name	Botanical Name	DBH* (in)	Condition**	Structure**	On Property	Remove or Preserve	Comments
386	Colorado blue spruce	*Pinus pungens*	11	Good	Good	Yes	Remove	
387	Colorado blue spruce	*Pinus pungens*	16	Good	Good	Yes	Remove	
388	Colorado blue spruce	*Pinus pungens*	15	Good	Good	Yes	Remove	
389	Colorado blue spruce	*Pinus pungens*	9	Poor	Good	Yes	Remove	Suppressed.
390	Colorado blue spruce	*Pinus pungens*	13	Good	Good	Yes	Remove	
391	Colorado blue spruce	*Pinus pungens*	10	Good	Good	Yes	Remove	
392	Western redcedar	*Thuja plicata*	23	Good	Good	Yes	Remove	Two leaders: 17,15.
393	Western redcedar	*Thuja plicata*	23	Good	Good	Yes	Remove	Two leaders: 16,17.
394	Douglas fir	*Pseudotsuga menziesii*	19	Good	Good	Yes	Remove	
395	Douglas fir	*Pseudotsuga menziesii*	21	Good	Good	Yes	Remove	
396	Douglas fir	*Pseudotsuga menziesii*	21	Good	Good	Yes	Remove	
397	Colorado blue spruce	*Pinus pungens*	11	Fair	Good	Yes	Remove	Suppressed , not tagged, blackberry
398	Colorado blue spruce	*Pinus pungens*	15	Good	Good	Yes	Remove	
399	Western redcedar	*Thuja plicata*	31	Good	Good	Yes	Remove	Three leaders: 22,20,9.
400	Western redcedar	*Thuja plicata*	15	Good	Good	Yes	Remove	
401	Western redcedar	*Thuja plicata*	16	Good	Good	Yes	Remove	Three lateral leaders 7" to SE; not tagged; blackberry.
402	Western redcedar	*Thuja plicata*	23	Good	Good	Yes	Remove	Two leaders: 15,14,12; small leader to the N.
403	Western redcedar	*Thuja plicata*	18	Good	Good	Yes	Remove	
404	Colorado blue spruce	*Pinus pungens*	13	Good	Good	Yes	Remove	
405	Colorado blue spruce	*Pinus pungens*	16	Good	Good	Yes	Remove	
406	Western redcedar	*Thuja plicata*	16	Fair	Good	Yes	Remove	Two leaders: 12, 11; small leader to NW; thinning from top down .
407	Western redcedar	*Thuja plicata*	13	Fair	Good	Yes	Remove	Two leaders: 11, 7; thinning from top down.
408	Western redcedar	*Thuja plicata*	19	Fair	Good	Yes	Remove	Two leaders: 14, 13; thinning from top down.
409	Douglas fir	*Pseudotsuga menziesii*	20	Good	Good	Yes	Remove	
410	Douglas fir	*Pseudotsuga menziesii*	25	Good	Good	Yes	Remove	
411	Western redcedar	*Thuja plicata*	18	Good	Good	Yes	Remove	
412	Western redcedar	*Thuja plicata*	15	Good	Good	Yes	Remove	
413	Western redcedar	*Thuja plicata*	14	Good	Good	Yes	Remove	
414	Colorado blue spruce	*Pinus pungens*	16	Good	Good	Yes	Remove	
415	Colorado blue spruce	*Pinus pungens*	14	Good	Good	Yes	Remove	
416	Cottonwood	*Populus trichocarpa*	9	Good	Good	Yes	Remove	
417	Bigleaf maple	*Acer macrophyllum*	25	Good	Good	No	Off property, protect from grading	Two leaders: 18, 17; south of barn.
418	Cottonwood	*Populus trichocarpa*	12	Good	Good	Yes	Remove	Narrow crown.
419	Bigleaf maple	*Acer macrophyllum*	20	Good	Good	Yes	Remove	Three leaders:13,9,12.
420	Bigleaf maple	*Acer macrophyllum*	10	Dead	Dead	Yes	Remove	
421	Bigleaf maple	*Acer macrophyllum*	~32	Fair	Fair	Boundary tree	Preserve	Off property; unable to estimate diameter.
422	Port Orford cedar	*Chamaecyparis lawsoniana*	20	Good	Good	Boundary tree	Remove	Behind chain link, DF to the west~35
423	Douglas fir	*Pseudotsuga menziesii*	34	Good	Good	No	Off property, preserve	
424	Douglas fir	*Pseudotsuga menziesii*	16	Good	Good	No	Off property, preserve	High and narrow crown.
425	Douglas fir	*Pseudotsuga menziesii*	14	Fair	Fair	No	Off property, preserve	High and narrow crown.
426	Douglas fir	*Pseudotsuga menziesii*	14	Dead	Dead	No	Off property, preserve	Leaning to N.
427	Douglas fir	*Pseudotsuga menziesii*	10	Poor	Fair	No	Off property, preserve	21166 dead and less than 8; thin, high and narrow crown.
428	Douglas fir	*Pseudotsuga menziesii*	18	Good	Fair	No	Off property, preserve	Unbalanced to the SE.
429	Pacific madrone	*Arbutus menziesii*	16	Good	Fair	No	Remove	Phototropism to S.
430	Pacific madrone	*Arbutus menziesii*	12	Good	Fair	No	Remove	Phototropism to S.
431	Douglas fir	*Pseudotsuga menziesii*	17	Good	Good	No	Off property, protect from grading	
432	Douglas fir	*Pseudotsuga menziesii*	11	Good	Good	No	Off property, protect from grading	
433	Douglas fir	*Pseudotsuga menziesii*	13	Good	Good	No	Off property, preserve	
434	Douglas fir	*Pseudotsuga menziesii*	11	Good	Good	No	Off property, protect from grading	
435	Weeping Alaskan cedar	*Chamaecyparis nootkatensis* 'Pendula'	8	Good	Good	No	Off property, preserve	Two leaders: 7,5.
436	Douglas fir	*Pseudotsuga menziesii*	15	Good	Good	No	Off property, protect from grading	
437	Douglas fir	*Pseudotsuga menziesii*	16	Good	Good	No	Off property, protect from grading	
438	Douglas fir	*Pseudotsuga menziesii*	15	Good	Good	No	Off property, protect from grading	
439	Douglas fir	*Pseudotsuga menziesii*	15	Good	Good	No	Off property, protect from grading	
440	Douglas fir	*Pseudotsuga menziesii*	15	Good	Good	No	Off property, preserve	

Tree No.	Common Name	Botanical Name	DBH* (in)	Condition**	Structure**	On Property	Remove or Preserve	Comments
441	Douglas fir	*Pseudotsuga menziesii*	12	Good	Good	No	Off property, preserve	
442	Douglas fir	*Pseudotsuga menziesii*	13	Good	Good	No	Off property, protect from grading	
443	Douglas fir	*Pseudotsuga menziesii*	11	Good	Good	No	Off property, preserve	
444	Scarlet oak	*Quercus coccinea*	19	Good	Good	No	Off property, preserve	6 red maples less than 8 " to E.
445	Northern red oak	*Quercus rubra*	8	Good	Good	No/ROW	Preserve	Southern most street tree.
446	Northern red oak	*Quercus rubra*	10	Good	Good	No/ROW	Preserve	6" Oregon white to E; northern most street tree.
447	Cottonwood	*Populus trichocarpa*	11	Good	Good	No/ROW	Preserve	Two leaders: 9,8; in between street and fence.

* DBH (Diameter at Breast Height). The trunk diameter measured at industry standard, 4.5 feet above ground.

** Condition and Structure ratings range from Good, Fair, Poor, Very Poor, to Dead.

APPENDIX 4: TREE PRESERVATION PLAN

TREE LEGEND

X TREE PROPOSED FOR REMOVAL

TREE PROTECTION FENCING

TREE MAP PREPARED BY TERAGAN & ASSOCIATES, INC.
CHRISTINE JOHNSON, PN-8730A | 971.978.9381 | 7.30.2021

FILL NOT TO EXCEED 4.0-IN THE TREE PROTECTION ZONE FOR 431, 432, 434, 436-439, AND 442.

431, 17" DOUGLAS FIR
432, 11" DOUGLAS FIR
434, 11" DOUGLAS FIR
436, 15" DOUGLAS FIR
437, 16" DOUGLAS FIR
438, 15" DOUGLAS FIR
439, 15" DOUGLAS FIR
442, 13" DOUGLAS FIR

PROPOSED BUILDING

BLDG. AREA = 452,795 SQ. FT.

FIN. FLOOR = 152.5

SW 124TH AVENUE

LESS THAN 8" DBH

TOPPED BIGLEAF MAPLE <8" DBH

118-202

81-102

43-59

60-66

376-387

391-405

406-415

2-35

GR | 7 DOCK DOORS | 8 DOCK DOORS | 8 DOCK DOORS | 8 DOCK DOORS | 1050' | 8 DOCK DOORS | 8 DOCK DOORS | 8 DOCK DOORS | 6 DOCK DOORS | GR

GR | 9 DOCK DOORS | 8 DOCK DOORS | 8 DOCK DOORS | 8 DOCK DOORS | 8 DOCK DOORS | 8 DOCK DOORS | 7 DOCK DOORS | GR

OFFICE

185'-0"

FILL NOT TO EXCEED 4.0-IN THE TREE PROTECTION ZONE FOR 417 AND 421.

417 -25" DBH BIGLEAF MAPLE

421 -32" DBH BIGLEAF MAPLE

FILL NOT TO EXCEED 4.0-IN IN THE TREE PROTECTION ZONE FOR 353-358.

353, 10" DOUGLAS FIR
354, 30" NORWAY MAPLE
355, 33" DOUGLAS FIR
356, 11" DOUGLAS FIR
357, 15" BIGLEAF MAPLE
358, 21" BIGLEAF MAPLE

TAX LOT 103 MAP 2S-1-28A

TAX LOT 201 MAP 2S-1-28DD

TAX LOT 200 MAP 2S-1-28A

TAX LOT 102 MAP 2S-1-28A

TAX LOT 300 MAP 2S-1-28A

A G1.0 SITE PLAN

1" = 50'-0"

SUMMARY

SITE AREA: 1,052,202± (24.16 AC)
TOTAL BUILDING AREA 452,795 SQFT
LANDSCAPE 133,567.00 SQFT 3.07 ACRES (12.7%)
PARKING 213 SPACES (0.5 / TH)
TRAILER PARKING 141 SPACES
DOCK DOORS 117
GRADE DOORS 4

VLMK
ENGINEERING + DESIGN

3933 S Kelly Avenue
Portland, Oregon 97239
503.222.4453
VLMK.COM

10260 SW Greenburg Road
Suite 170
Portland, Oregon 97223
503.646.2202
SPECHTPROP.COM

PROJECT NAME

TUALATIN LOGISTICS PARK

XXXX SW 124th Avenue
TUALATIN, OREGON 97062

REVISIONS

	DATE	DESCRIPTION

DATE
APRIL 2021

SCALE	PROJ. NO.
AS NOTED	20190311
DRAWN: KAN	CHECKED: HGK

SITE PLAN

G1.0

G:\Acad\2019\20190311\0-Drawing\100 G1.0 Site Plan.dwg/7/16/2021 12:04 PM

lancaster mobley

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

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Executive Summary

1. The proposed Tualatin Logistics Park is a 452,795-square-foot, flexible space warehouse with approximately 197 passenger vehicle parking spaces, 133 trailer parking spaces, 115 dock doors, and 4 grade doors that would replace the existing Tualatin Island Greens, a 43-tee driving range and 18-hole miniature golf park.
2. The project site (Tax Lot 2S128A 100) is approximately 24.16 acres and is zoned General Manufacturing (MG). Located between SW Cipole Road and SW 124th Avenue approximately 800 feet north of SW Tualatin-Sherwood Road, the property is surrounded by homogenous land uses, consisting of predominantly industrial warehouses or undeveloped land.
3. Four access scenarios on SW 124th Avenue are evaluated as part of this TIA.
    - Each includes the existing full access driveway along SW Cipole Road at the southern boundary of the site, approximately 1,100 feet north of SW Tualatin-Sherwood Road.
    - Scenario 1 includes a potential full access driveway directly across SW 124th Avenue at the SW Cimino Street intersection.
    - Scenario 2 includes a potential right-in/right-out access at the northern boundary of the site, approximately 545 feet south of Myslony Street.
    - Scenario 3 includes a potential full access at the northern boundary of the site, approximately 545 feet south of Myslony Street.
    - Scenario 4 includes a potential full access driveway directly across SW 124th Avenue at the SW Cimino Street intersection and a potential right-in/right-out access at the northern boundary of the site, approximately 545 feet south of Myslony Street.
4. The proposed development is speculative with flexible space that could accommodate a single tenant or multiple tenants. Specht has developed similar properties in the Portland metropolitan area with less than 20 percent of the 1.87 million square of space in manufacturing uses and more than 80 percent in warehousing uses. However, a much more conservative assumption of general light industrial is assumed for this TIA.
5. Considering the existing site use, 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.
6. Based on a review of the most recent five years of available crash data, no significant trends or crash patterns were identified at any of the study intersections that do not already have planned and funded improvements.
7. Left-turn lane warrants are not met for either peak hour under the 2025 buildout scenario for the proposed SW Access to SW Cipole Road.
8. Preliminary traffic signal warrants are not met at any of the proposed site driveways (regardless of location) for either peak hour under buildout conditions.

9. Based on the sight distance analysis, all site access options are expected to operate safely. No mitigation pertaining to sight distance is required; however, trimming of some of the lower tree branches that extend over fencing into the public right-of-way could improve sight lines for the NE Access proposed in Scenarios 2 and 3.
10. The SW Access to SW Cipole Road will meet Washington County access spacing standards and no alternative is proposed.
11. While the SE Access to SW 124th Avenue in Scenario 1 would meet the TDC 75.140 specifications for an access at least 800 feet north of SW Tualatin-Sherwood Road, opposite SW Cimino Street, it has few significant systemic advantages and poses significant disadvantages to development of the subject site. A site access at the NE corner of the site is the preferred option with a full-movement access (Scenario 3) as the desired configuration and a right-in/right-out access (Scenario 2) as an acceptable alternative. If access is required at the SE corner of the site, a right-in/right-out access at the NE corner (Scenario 4) would offer some benefits with few impacts to the system; however, this option is not preferred.
12. All proposed driveways can accommodate trucks entering and exiting from the north or south.
13. All study area intersections are anticipated to operate within the acceptable jurisdictional standards. Therefore, no mitigation for traffic operations is required or recommended. The access configuration options have little effect on study area operations.
14. An analysis of queuing for key study intersections shows that the queues in the southbound left-turn lanes on SW 124th Avenue at SW Tualatin-Sherwood Road are expected to exceed the available storage. This condition is expected with the 2025 background condition and will worsen with all four buildout scenarios. All other queuing can be accommodated within the available storage.
15. An option to improve operations at the SW Tualatin-Sherwood Road & SW 124th Avenue intersection is to restripe the southbound approach to provide two lanes with outer lane serving both through and right-turn movements. The alternative lane striping would result in a small reduction in the average delay per vehicle, particularly in the morning. The 95th percentile queues would be reduced so that no spillback into the adjacent through lane is likely.
16. With Scenarios 2 and 3, the access opposite SW Cimino Street could potentially be limited access (right-in/right-out plus possible left out). Columbia Corrugated Box has indicated they are amenable to a limited access at this location. This change would allow the northbound left-turn lane to be removed and much longer southbound left-turn lanes to be constructed on SW 124th Avenue at SW Tualatin-Sherwood Road.

Project Description

Introduction

The proposed Tualatin Logistics Park is a 452,795-square-foot, flexible space warehouse with approximately 197 passenger vehicle parking spaces, 133 trailer parking spaces, 115 dock doors, and 4 grade doors to be located at 20400 SW Cipole Road. The development would replace the existing Tualatin Island Greens, a 43-tee driving range and 18-hole miniature golf park.

Four access scenarios on SW 124th Avenue are evaluated as part of this TIA. Scenario 1 considers an access alignment at the SE corner of the site, opposite SW Cimino Street as indicated in Tualatin Development Code. Scenario 2 considers a right-in/right-out access at the NE corner of the site. This second scenario is proposed as an alternative to the SE corner access for several reasons. Significant grade differences will exist between the site and SW 124th Avenue. The curb cut on SW 124th Avenue spans the tax lots of the subject property and the property to the south (Columbia Corrugated Box). Providing access to both tax lots from SW 124th significantly impacts what can be developed on the southeast corner of the site. Scenario 3 considers how the site would operation if the access at the NE corner of the site is permitted to have full access. Scenario 4 assumes that the access issues to SW 124th Avenue opposite SW Cimino Street can be resolved and considers a right-in/right-out access at the NE corner of the site to provide optimal internal site circulation.

The purpose of this study is to determine whether the transportation system within the vicinity of the site is capable of safely and efficiently supporting the proposed development and to determine any mitigation that may be necessary to do so.

Based on prior scoping coordination with the City of Tualatin and Washington County, the report includes safety and capacity analyses at 12 intersections:

1. SW Tualatin-Sherwood Road & SW Oregon Street
2. SW Tualatin-Sherwood Road & SW Cipole Road
3. SW Tualatin-Sherwood Road & SW 124th Avenue
4. SW Tualatin-Sherwood Road & SW 120th Avenue
5. SW Tualatin-Sherwood Road & SW 115th Avenue
6. SW Tualatin-Sherwood Road & SW Avery Street/112th Avenue
7. SW Cipole Road & Site Access
8. SW Cipole Road & SW Herman Road
9. SW 124th Avenue & SW Cimino Street/Site Access for Scenario 1
10. SW 124th Avenue & Site Access for Scenarios 2 and 3
11. SW 124th Avenue & SW Myslony Road
12. SW 124th Avenue & SW Herman Road

Detailed information on traffic counts, trip generation calculations, safety analyses, and level of service calculations are included in the appendix to this report.

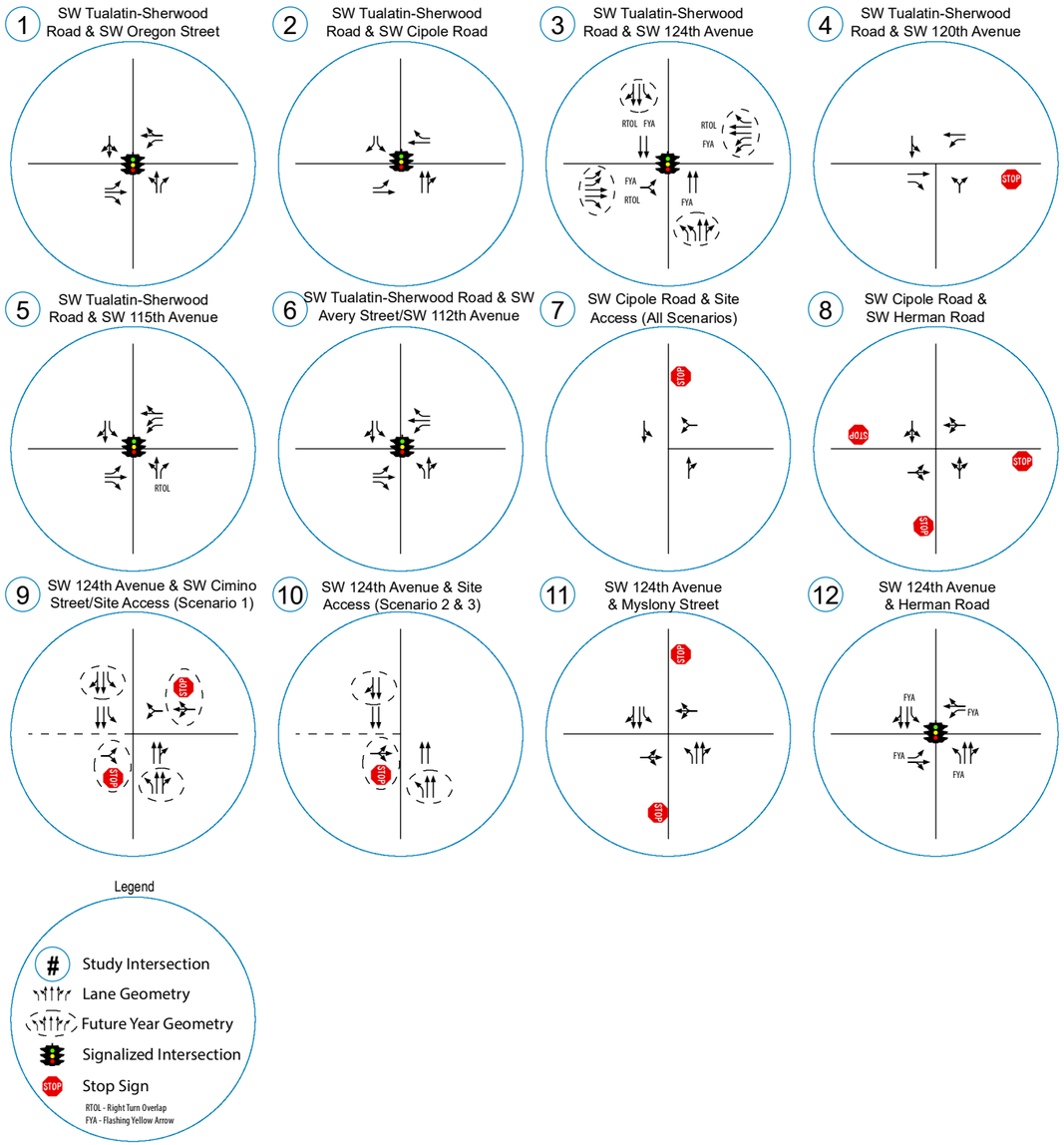
Location Description

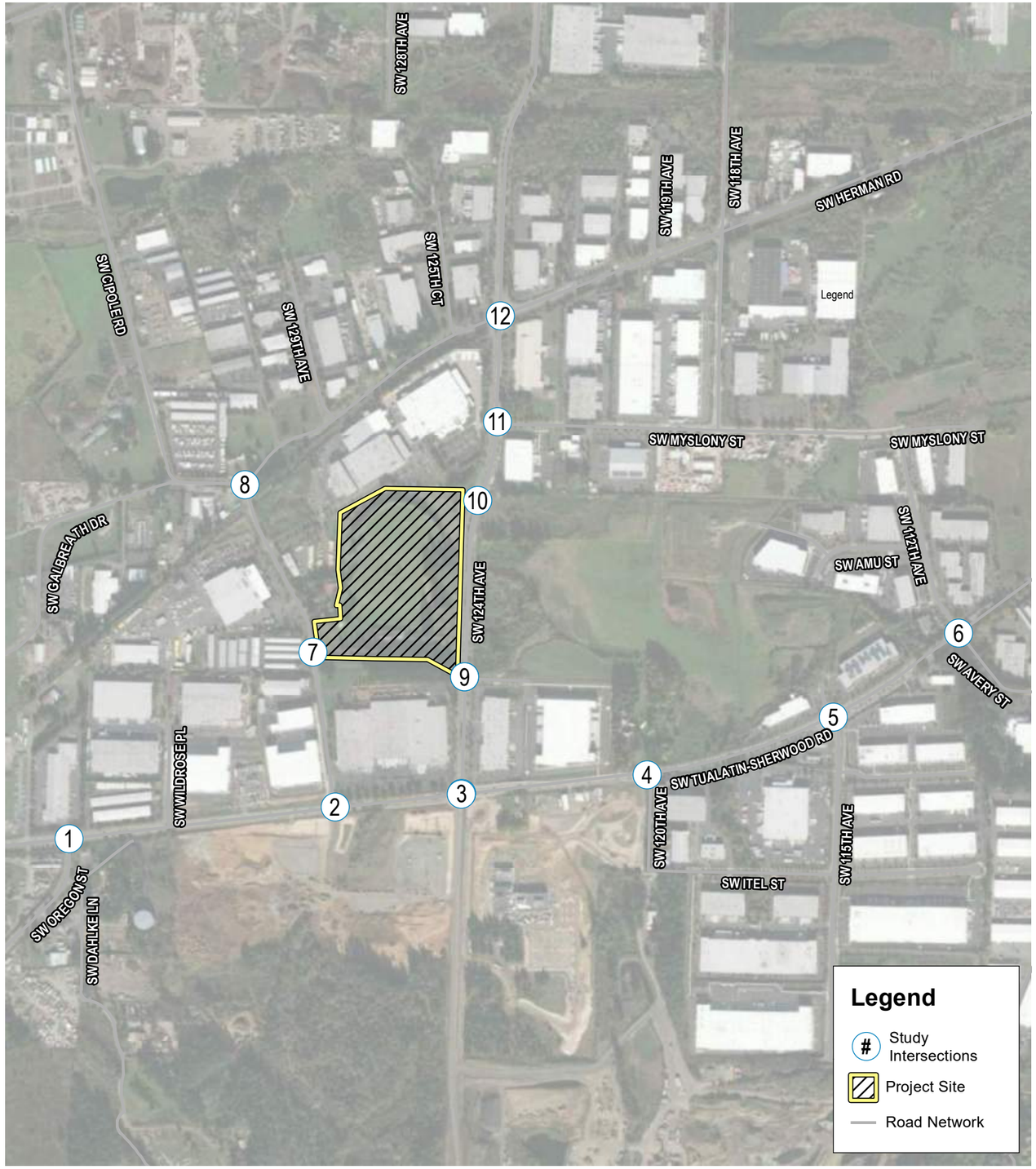
The project site (Tax Lot 2S128A 100) is approximately 24.16 acres and is zoned General Manufacturing (MG). Located between SW Cipole Road and SW 124th Avenue approximately 800 feet north of SW Tualatin-Sherwood Road, the property is surrounded by homogenous land uses consisting of predominantly industrial warehouses or undeveloped land.

All three scenarios consider two access point for the site:

- Each includes the existing full access driveway along SW Cipole Road at the southern boundary of the site, approximately 1,100 feet north of SW Tualatin-Sherwood Road.
- Scenario 1 includes a potential full access driveway directly across SW 124th Avenue at the SW Cimino Street intersection.
- Scenario 2 includes a potential right-in/right-out access at the northern boundary of the site, approximately 545 feet south of Myslony Street.
- Scenario 3 includes a potential full access at the northern boundary of the site, approximately 545 feet south of Myslony Street.
- Scenario 4 includes a potential full access driveway directly across SW 124th Avenue at the SW Cimino Street intersection and a potential right-in/right-out access at the northern boundary of the site, approximately 545 feet south of Myslony Street.

A site plan is included in the appendix and the site location is shown in Figure 1.





lancaster mobley

Vicinity Map &
Intersection Lane Geometry

NOT TO SCALE

Figure 1
Tualatin Logistics Park TIA
12/6/2021

Vicinity Streets

The characteristics of roadways expected to be impacted by the proposed development are summarized in Table 1.

Table 1: Roadway Characteristics

Street Name	Jurisdiction	Functional Classification	Travel Lanes	Posted Speed	Curbs & Sidewalks	On-Street Parking	Bicycle Facilities
SW Tualatin-Sherwood Road	Washington County	Major Arterial	3-4*	45 mph	Partial Both Sides	Prohibited	Bike Lanes
SW Oregon Street	Washington County	Arterial	2-3	35 mph	Partial Both Sides	Prohibited	Partial Bike Lanes
SW Cipole Road	Washington County	Major Collector	2	45 mph	Partial Both Sides	Prohibited	None
SW 124th Avenue	City of Tualatin (adjacent to site)	Major Arterial	4-5	45 mph	Partial Both Sides	Prohibited	Bike Lanes
SW 120th Avenue	City of Tualatin	Connector	2-	Not Posted	None	Prohibited	None
SW 115th Avenue	City of Tualatin	Major Collector	2-4	Not Posted	Both Sides	Prohibited	Partial Bike Lanes
SW 112th Avenue	City of Tualatin	Major Collector	2-3	Not Posted	Both Sides	Prohibited	Bike Lanes
SW Avery Street	City of Tualatin	Minor Arterial	2-3	35 mph	Both Sides	Prohibited	Partial Bike Lanes
SW Myslony Street	City of Tualatin	Major Collector	2-3	Not Posted	Partial Both Sides	Partially Permitted	Partial Bike Lanes
SW Herman Road	City of Tualatin	Minor Arterial	2-3	45 mph	North Side	Prohibited	Bike Lanes

** The Tualatin-Sherwood Road expansion project is a Washington County Capital Improvement Program (CIP) Project intends to expand the roadway to five lanes, improve bicycle and pedestrian facilities, improve storm drainage, and install street lighting.*

Study Intersections

Through coordination with the City of Tualatin and Washington County, 12 study intersections were identified for evaluation. The existing characteristics of these intersections are summarized in Table 2. A vicinity map showing the project site, vicinity streets, and study intersection configurations is shown in Figure 1.

Table 2: Vicinity Intersection Descriptions

	Intersection	Geometry	Traffic Control	Phasing/Stopped Approaches
1	SW Tualatin-Sherwood Road & SW Oregon Street	Four Legs	Signal	EB/WB Protected/Permitted NB/SB Permitted NB Right-Turn Overlap
2	SW Tualatin-Sherwood Road & SW Cipole Road	Three Legs	Signal	EB Protected/Permitted SB Permitted1
3	SW 124th Avenue & SW Tualatin-Sherwood Road	Four Legs	Signal	All Protected/Permitted Left EB/WB/SB Right-Turn Overlap
4	SW Tualatin-Sherwood Road & SW 120th Avenue	Three Legs	Stop Controlled	NB Stop Sign
5	SW Tualatin-Sherwood Road & SW 115th Avenue	Four Legs	Signal	EB Protected/Permitted WB Protected Dual Left NB Right-Turn Overlap
6	SW Tualatin-Sherwood Road & SW Avery Street/112th Avenue	Four Legs	Signal	EB/WB Protected/Permitted NB/SB Protected
7	SW Cipole Road & Site Access (All Scenarios)	Three Legs	Stop Controlled	WB Stop Sign
8	SW Cipole Road & SW Herman Road	Four Legs	Stop Controlled	All-Way Stop Signs
9	SW 124th Avenue & SW Cimino Street/Site Access for Scenario 1	Four Legs[1]	Stop Controlled	EB/WB Stop Signs[1]
10	SW 124th Avenue & Site Access for Scenarios 2, 3 and 4	Three Legs[2]	Stop Controlled	EB Stop Sign[2]
11	SW 124th Avenue & SW Myslony Road	Four Legs	Unsignalized	EB/WB Stop-Controlled
12	SW 124th Avenue & SW Herman Road	Four Legs	Signalized	All Protected/Permitted Left

Notes:

1. The eastbound leg will be constructed under Scenario 1 by the project and will be stop controlled.

2. The eastbound leg will be constructed under Scenario 2 or 4 as right-in/right-out or Scenario 3 as full access and will be stop controlled.

Public Transit

The project is located near one transit line that has stops within an approximate one-half mile walking/biking distance of the southern part of the site.

Route 97 – Tualatin-Sherwood Road provides weekday rush-hour service between W Langer Dr/Sherwood Plaza and the Tualatin WES Station. The nearest bus stops to the site are located near the intersection of SW Cipole Road and SW Tualatin-Sherwood Road. Weekday service is scheduled with four westbound and three eastbound trips in the morning at approximately 60-minute headways. Afternoon service is scheduled with four eastbound and three westbound trips at approximately 60-minute headways. There is currently no weekend or holiday service.

Site Trips

Trip Generation

To estimate trips that will be generated by the redevelopment, trip rates from the *Trip Generation Manual*[1] were used based on the number of existing driving range tees, number of golf holes, and the proposed square footage.

Existing Site Development

The site is currently occupied by Tualatin Island Greens Golf Center and Grill. The golf facilities include a driving range and an 18-hole miniature golf course. The driving range includes 43 tees with synthetic mats for year-round use and additional grass tees available in the spring and summer. These facilities are open from 9:00 AM to 8:00 PM, September through March, and from 9:00 AM to 9:00 PM, April through August. The site also includes a restaurant with hours from 10:30 to 6:30 PM, September through March, and 10:30 AM to 7:30 PM, April 9:00 AM to 8:00 PM from September to March through August.

Trip generation was estimated based on the golf facilities; the restaurant is assumed to be used primarily by the golfing customers. Trip data for both types of golf facilities are limited; therefore, the following assumptions were made to estimate trips for the site:

- The trip data for the miniature golf land use code (ITE LUC 431) is limited to a single survey during the weekday PM peak period. No activity is assumed during the morning peak hour. The weekday PM peak hour trip rate is very low and may vary over the year with more activity during summer months and less during winter months. However, we suggest that credit for the facility should be included in the trip generation for the site. No daily data is available; therefore, the weekday rate was assumed to be 10 times the daily rate.
- The trip data for a driving range (ITE LUC 432) is limited to a single survey for the morning and weekday periods but has seven surveys for the weekday PM peak period. While the driving range does not open until 9:00 AM, retail and maintenance staff need to be on site before 9:00 AM. Two of the ITE survey sites also had staff data available with counts of 14 and 15 employees. Additionally, food service deliveries also typically occur in the morning. Therefore, the morning peak hour trips were included in the trip generation estimates. Trip estimates were prepared based on the 43 year-round tees.

One of the concerns that was raised about prior trip generation estimates is that the golf site peaks may occur later than the peaks of the street traffic or the peaks of industrial development. To acknowledge this may be the case for the traffic study, a 20 percent discount in peak hour trips is proposed.

The resulting trip generation is presented in Table 3.

[1] Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, 2021.

Table 3: Trip Generation Summary – Existing Land Uses

Land Use	ITE Code	Size	AM Peak Hour			PM Peak Hour			Weekday Total
			In	Out	Total	In	Out	Total	
Driving Range	432	43 Tees	10	7	17	24	30	54	586
Miniature Golf	431	18 Holes	0	0	0	2	4	6	60
20% Discount for Offset Peak Hour			*-2*	*-1*	*-3*	*-5*	*-7*	*-12*	*-130*
Total			8	6	14	21	27	48	516

Proposed Site Development

Specht Properties, Inc. proposes to redevelop the site with a single industrial building enclosing 452,795 SF of gross floor area with 115 dock doors and 4 grade doors. As proposed, the site includes 197 parking spaces and 133 trailer parking spaces. Some accessory office space is included in the building layout.

The proposed development is speculative with flexible space that could accommodate a single tenant or multiple tenants. Specht has developed similar properties in the Portland metropolitan area. The locations, sizes, and tenant descriptions are attached to this memorandum, each with a recent photo of the site. The sites range from a single 290,000-SF building to three buildings totaling more than 733,000 SF. Only two of the sites have any manufacturing tenants and a portion of those operations are warehousing and distribution. Of the total 1.87 million SF of space, approximately 18 percent is leased to tenants whose operations include manufacturing.

A range of potential industrial land use assumptions was considered to estimate the trip generation for the site. Trip estimates were lowest for ITE LUC 154, High-Cube Transload and Short-Term Storage Warehouse, and highest for LUC 110, General Light Industrial, and LUC 156, High-Cube Parcel Hub Warehouse. Table 4 summarizes the total and truck trip generation for the range of industrial uses.

While the original traffic scoping suggested a mix of 85 percent warehouse and 15 percent manufacturing based on the available site parking, a much more conservative assumption of general light industrial is assumed for this TIA. A parcel hub warehouse would generate the same number of trips but with a substantially different directional distribution from other industrial uses. The truck trip generation of general light industrial is slightly lower than other uses; however, the variation in the number of trucks generated during the peak hours for the industrial uses is small and the percentage of overall site-generated traffic is very low. Truck percentages for the trip generation were compared with those on the existing roadway and were found to be very similar to the truck percentages on the adjacent roadways.

Table 4: Trip Generation Summary – Potential Industrial Land Uses

Land Use	ITE Code	AM Peak Hour			PM Peak Hour			Weekday Total	Employee Equivalent*
		In	Out	Total	In	Out	Total		
Total Vehicle Trips based on 452,795 SF Industrial Building									
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
Truck Trips based on 452,795 SF Industrial 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	-

** 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)

Land Use	AM Peak Hour			PM Peak Hour			Weekday Total
	In	Out	Total	In	Out	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 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 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 124th 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 124th 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 124th 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

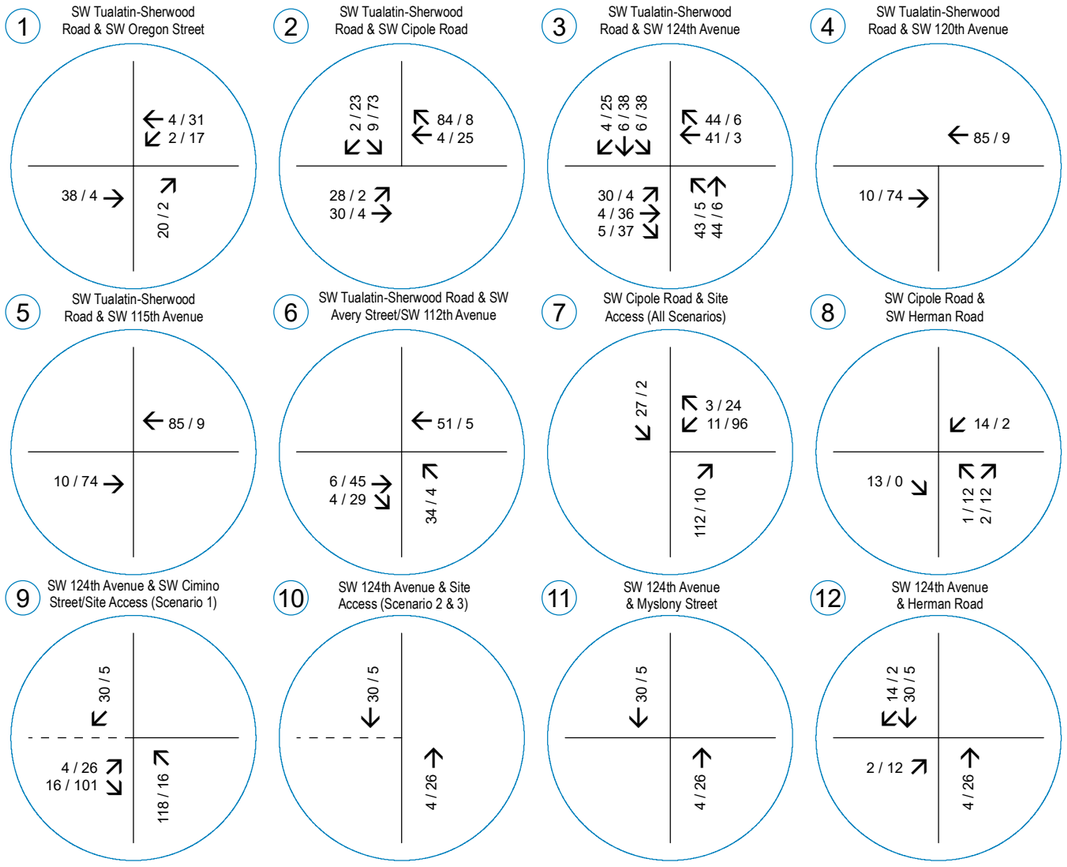
With the third scenario assuming a full access on SW 124th Avenue at the northeast corner of the site, the split of traffic is assumed to be approximately 65 percent using the SW Cipole Road access and 35 percent using the access on SW 124th Avenue.

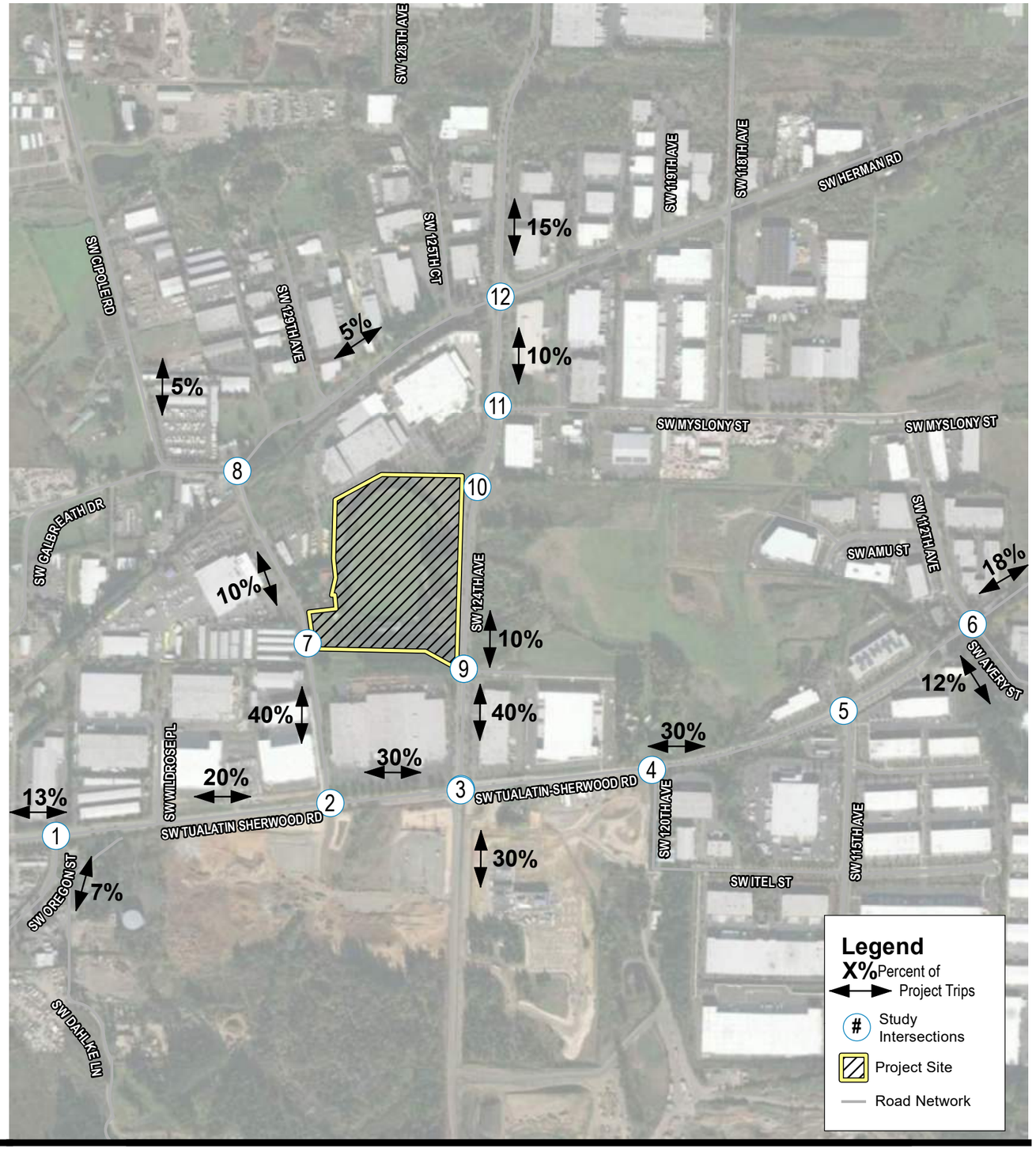
The resulting trip assignment is shown in Figure 4.

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 124th 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 124th 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.

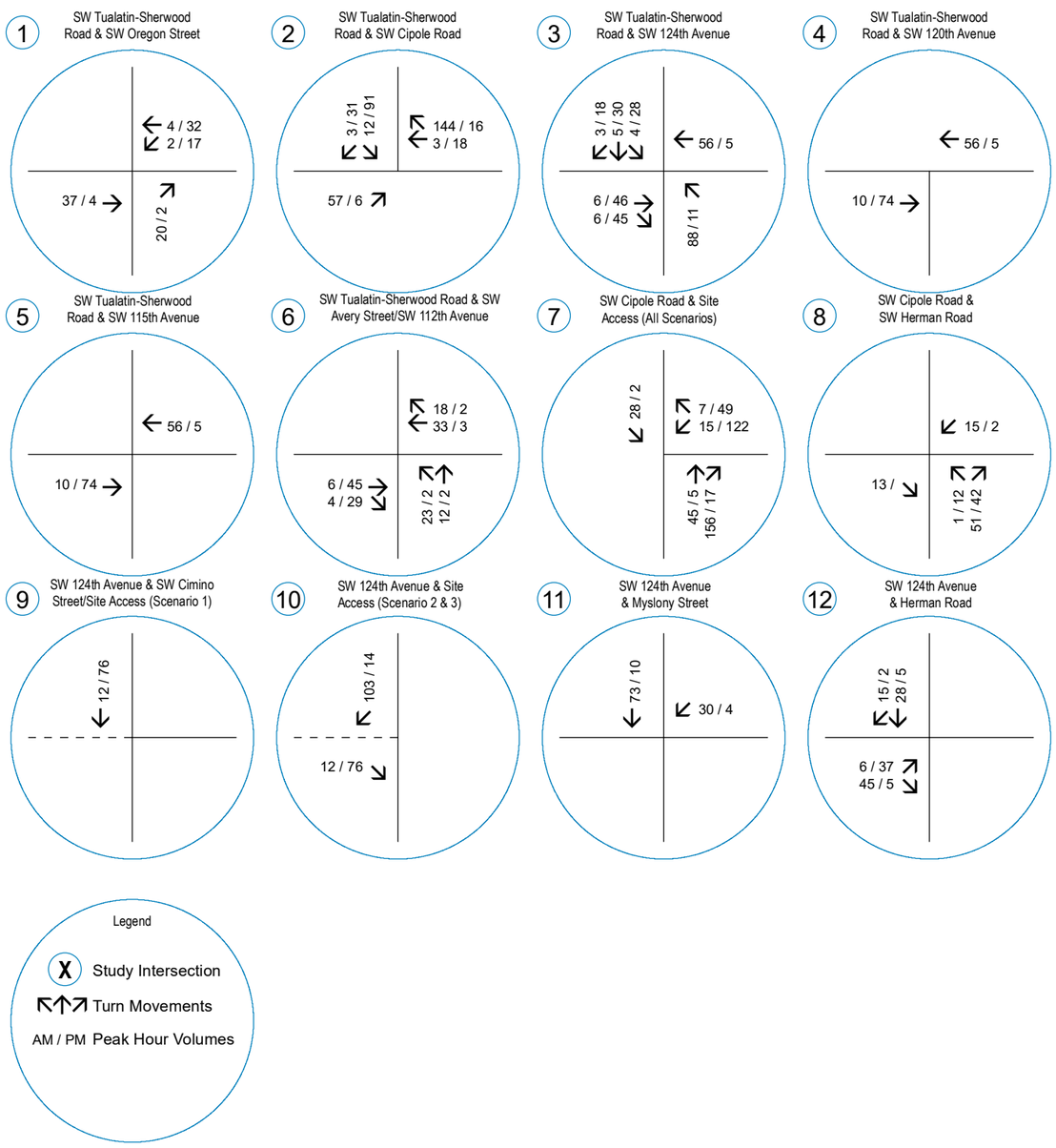


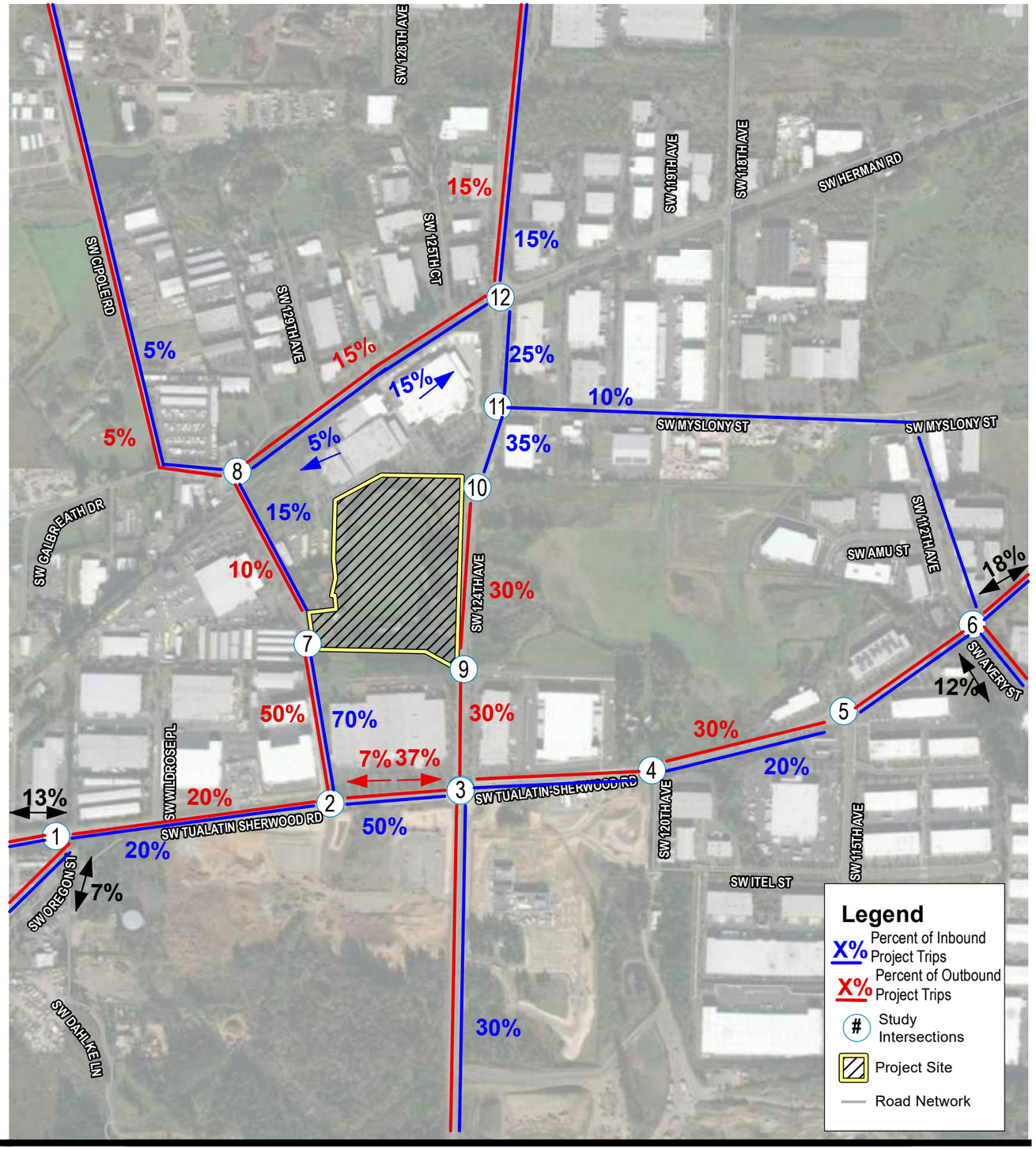


TRAFFIC VOLUMES
Trip Distribution & Assignment: Scenario 1
AM & PM Peak Hour

NOT TO SCALE

Figure 2
Tualatin Logistics Park TIA
12/6/2021





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TRAFFIC VOLUMES

Trip Distribution & Assignment: Scenario 2

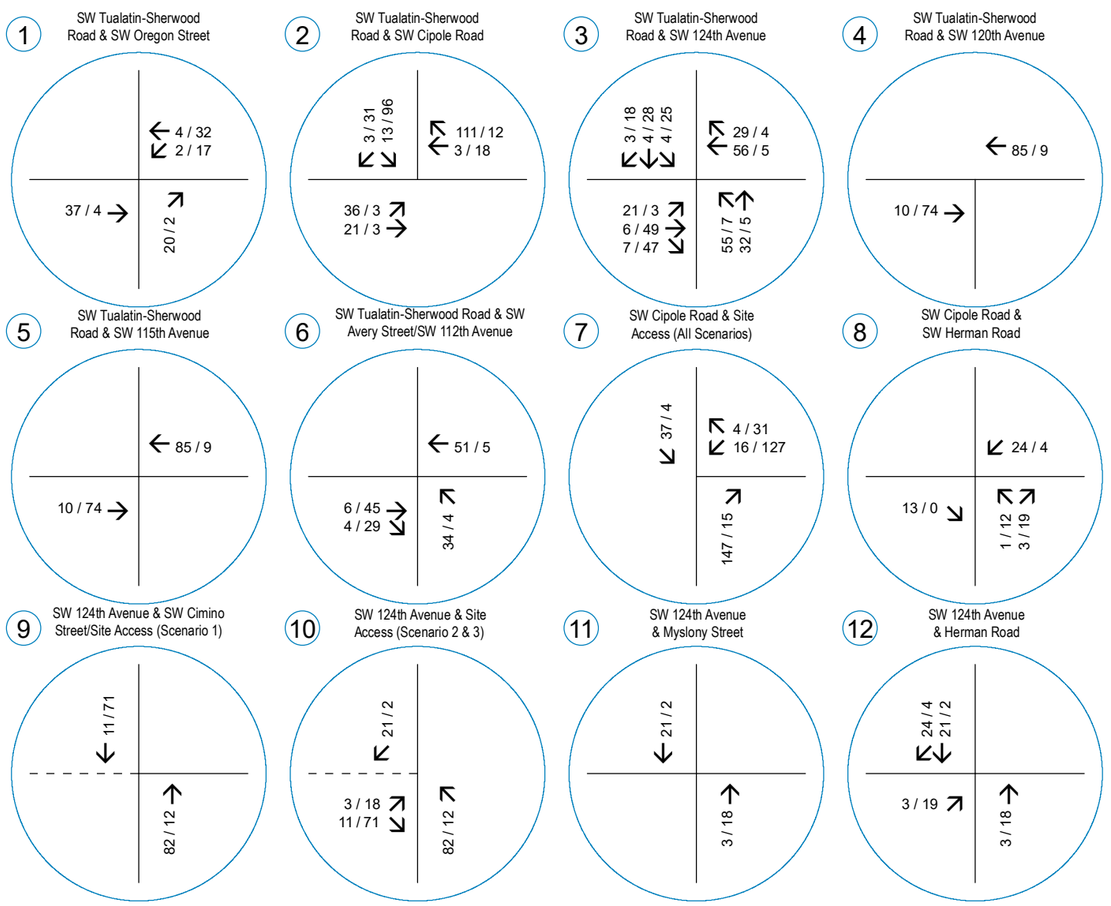
AM & PM Peak Hour

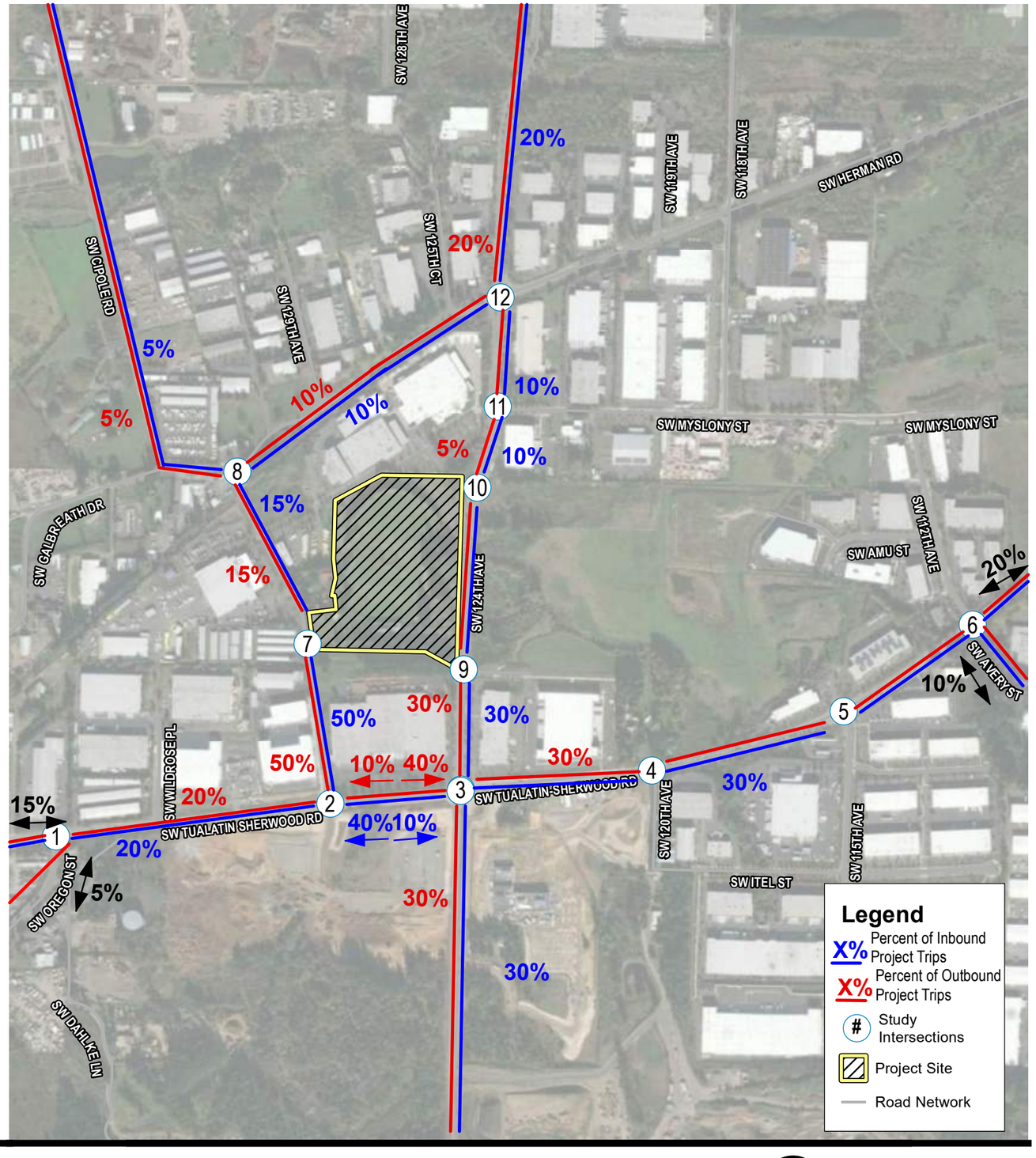
NOT TO SCALE

Figure 3

Tualatin Logistics Park TIA

12/6/2021





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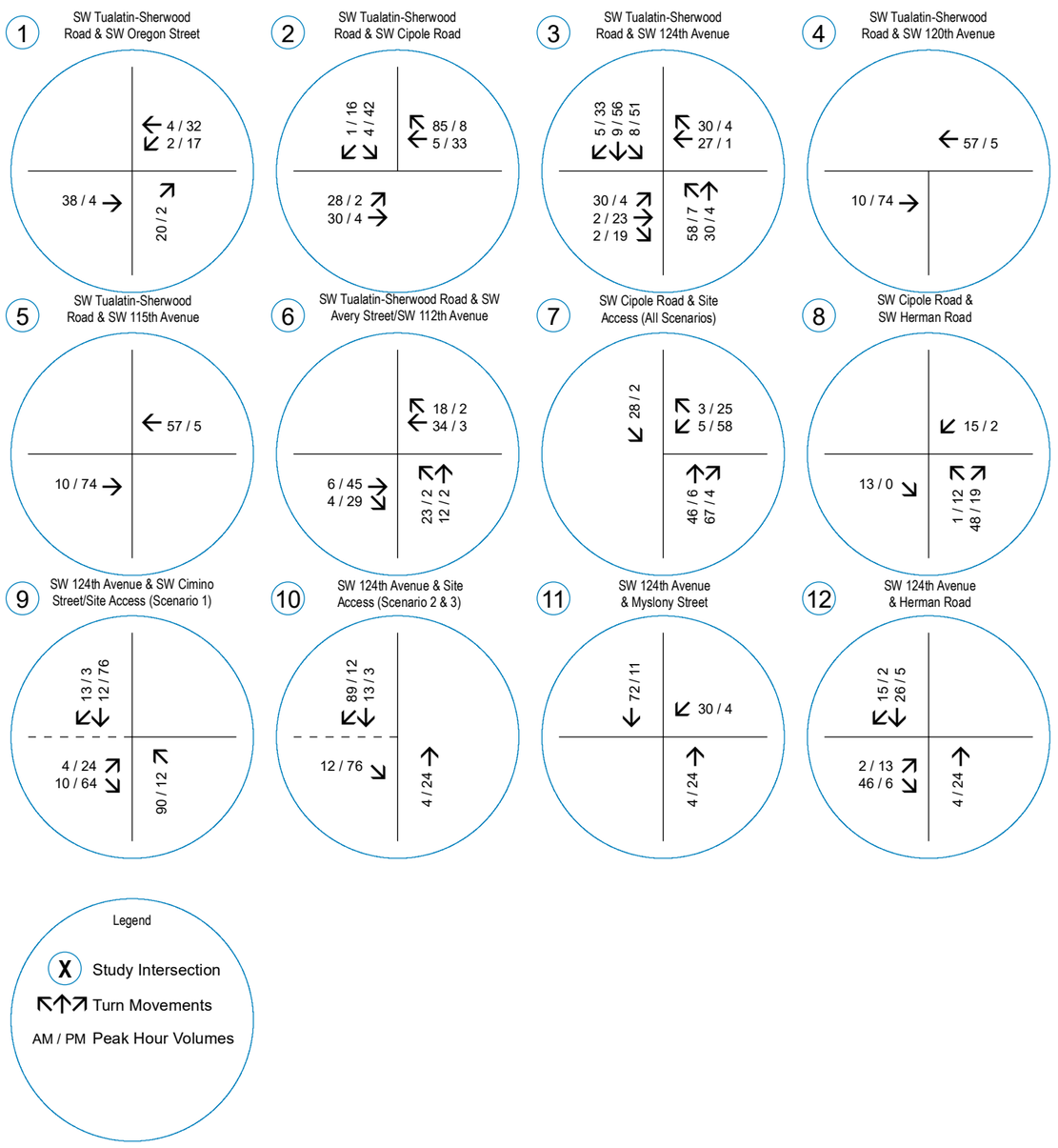
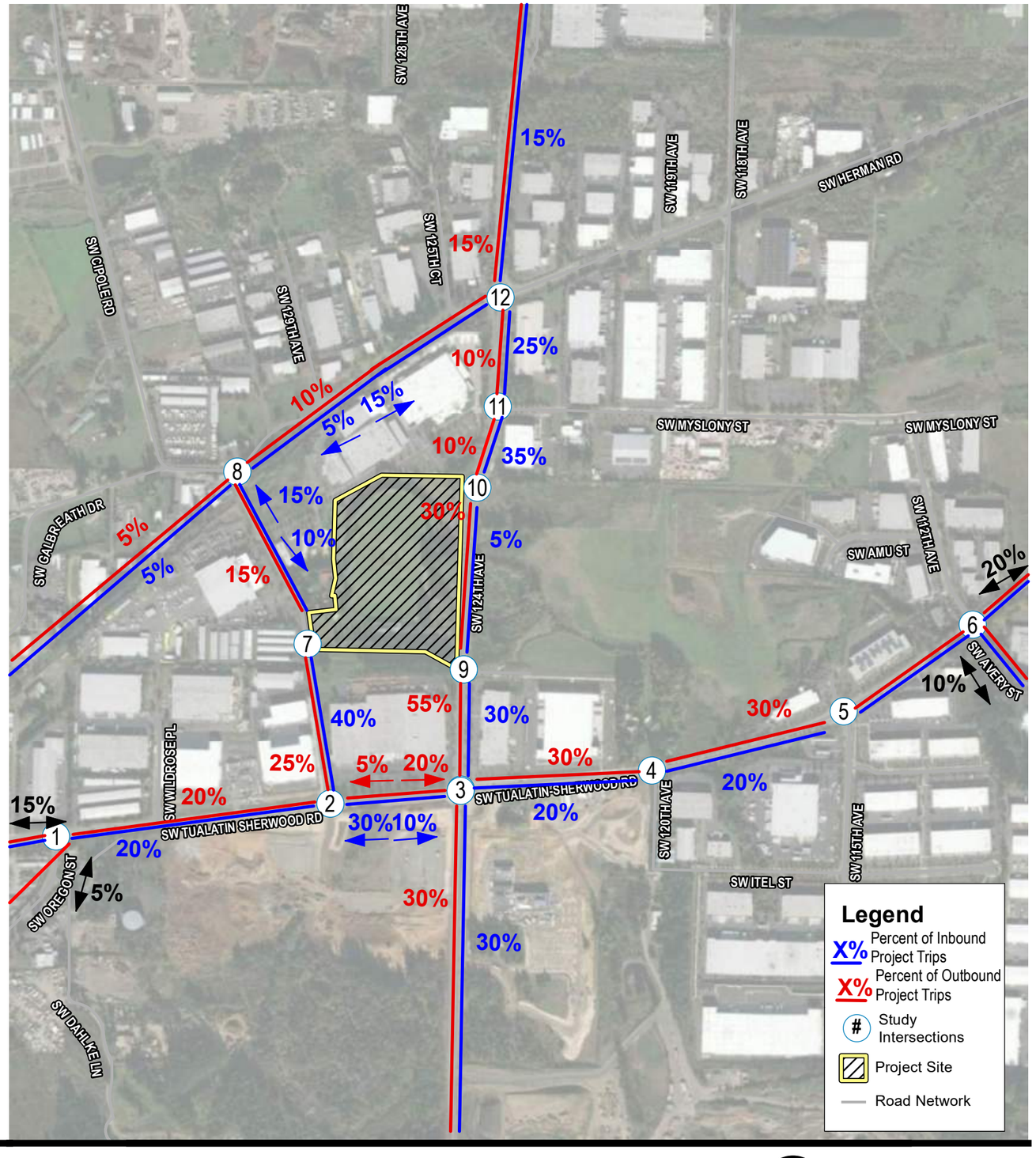
TRAFFIC VOLUMES
Trip Distribution & Assignment: Scenario 3
AM & PM Peak Hour

NOT TO SCALE

Figure 4
Tualatin Logistics Park TIA
12/6/2021





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TRAFFIC VOLUMES
Trip Distribution & Assignment: Scenario 4
AM & PM Peak Hour

NOT TO SCALE

Figure 5
Tualatin Logistics Park TIA
12/13/2021

Traffic Volumes

Existing Conditions

The COVID-19 pandemic initiated a significant decrease in traffic due to policies on social distancing that have closed or limited business operations, reduced commuting as many people work from home, and shifted schools to distance learning. Data collection under these altered conditions does not reflect normal volumes on the study area roadways. Historical traffic data was available at some locations, but many of the study area intersections did not have counts in the past five years or were not reflective of the current roadway network. The recently constructed continuation of SW 124th Avenue, south of Tualatin-Sherwood Road, has significantly changed traffic patterns within the immediate study area. Therefore, a combination of current counts and historical traffic counts were used to approximate year 2021 existing conditions.

The mostly recent historical counts were collected as part of the approved TIA for the T-S Corporate Park located in the southwest corner of the SW Tualatin-Sherwood Road intersection with SW 124th Avenue. That TIA estimated 2021 background conditions by applying a 1.5 percent annual growth rate and adding trips generated by the following approved projects:

- Parkway Village South (SW Langer Farms Parkway)
- Spring Creek Industrial
- Four-S Corporate Warehouse
- IPT Tualatin
- Majestic SW 115th Avenue Industrial Park
- Hedges C Building
- Tualatin Business Park

These adjusted volumes were generally used for the intersections along SW Tualatin-Sherwood Road. A comparison with the 2021 traffic counts shows that the volumes on SW 124th Avenue were generally higher than the estimates for the T-S Corporate Park. Therefore, the through volumes and some of the turning volumes were increased slightly to reflect this pattern. The adjustments were carried through to other intersections as appropriate.

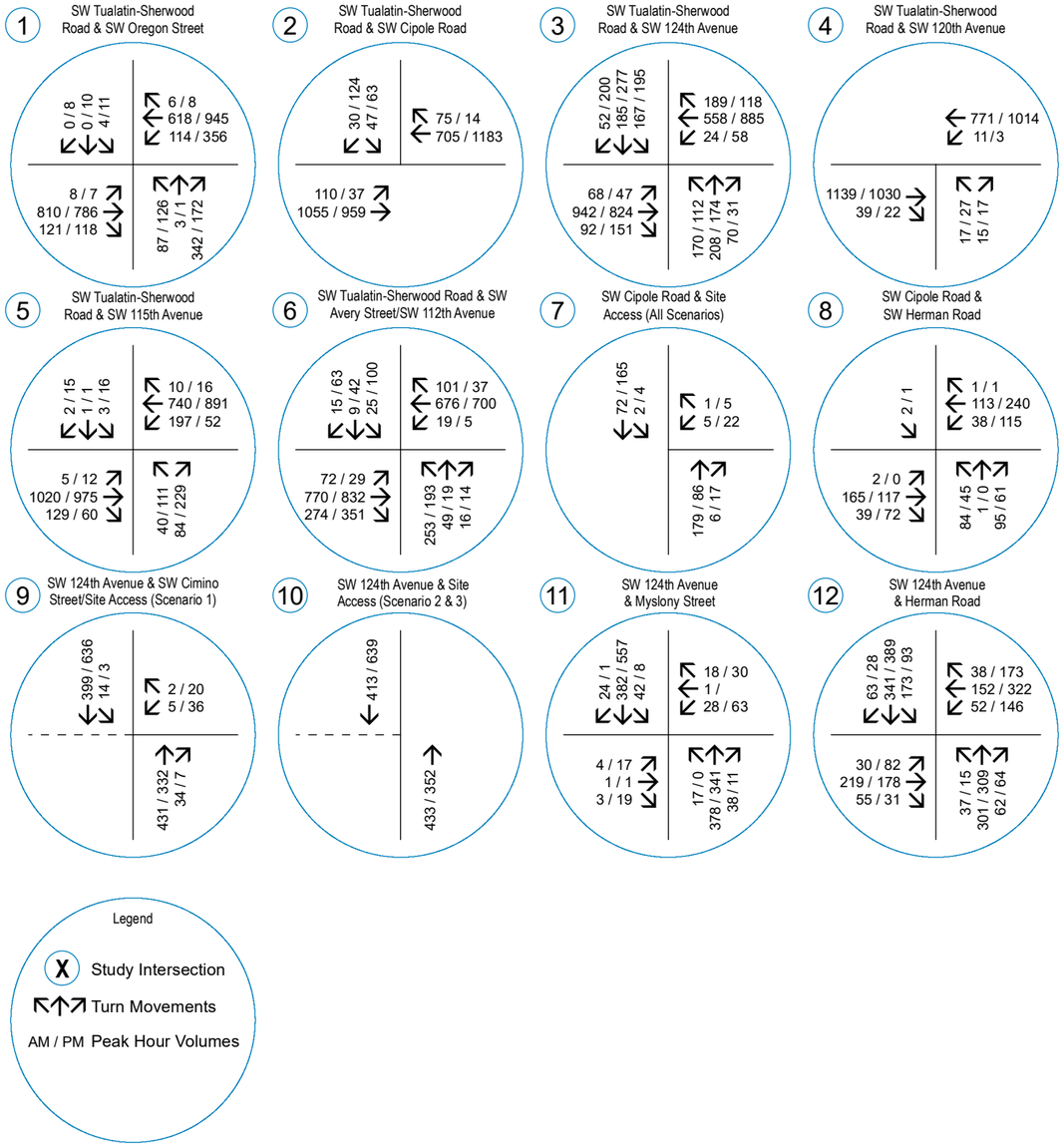
For intersections that have historical counts but were not part of the study area for the T-S Corporate Park, the same growth methodology was applied.

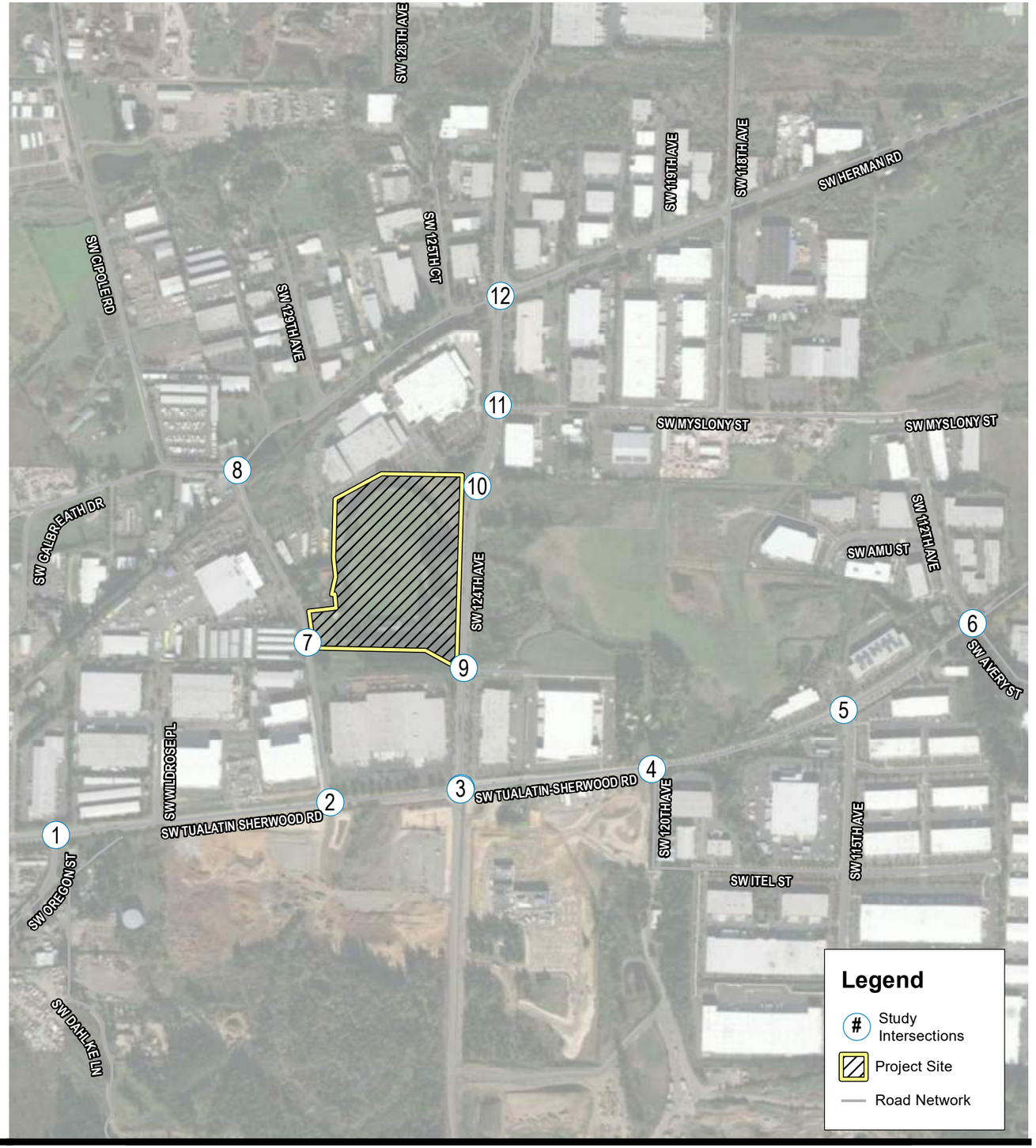
For intersections where historical traffic counts are not available, the 2021 count volumes were compared with adjusted 2021 volumes to develop adjustment factors to account for the pandemic impacts.

Table 6 summarizes the data used and the adjustment methodology. The resulting 2021 existing condition traffic volumes during the morning and evening peak hours are displayed in Figure 6.

Table 6: Year 2021 Existing Condition Traffic Volume Development

Intersection		Historical Counts	New Counts	Adjustment Method
1	SW Tualatin-Sherwood Road & SW Oregon Street	2/13/2019	-	• Used 2021 Background Traffic Estimates from the T-S Corporate Park TIA • Balanced with adjustments at SW 124th Avenue
2	SW Tualatin-Sherwood Road & SW Cipole Road	2/13/2019 10/23/2018	-	• Used 2021 Background Traffic Estimates from the T-S Corporate Park TIA • Balanced with adjustments at SW 124th Avenue
3	SW 124th Avenue & SW Tualatin-Sherwood Road	2/13/2019 2/6&7/2019 10/23/2018	11/18/2021	• Used 2021 Background Traffic Estimates from the T-S Corporate Park TIA • Adjusted volumes upward on SW 124th based on 2021 Count
4	SW Tualatin-Sherwood Road & SW 120th Avenue	2/13/2019 2/6&7/2019 10/23/2018	-	• Used 2021 Background Traffic Estimates from the T-S Corporate Park TIA • Balanced with adjustments at SW 124th Avenue
5	SW Tualatin-Sherwood Road & SW 115th Avenue	2/13/2019 2/6&7/2019 10/23/2018	-	• Used 2021 Background Traffic Estimates from the T-S Corporate Park TIA • Balanced with adjustments at SW 124th Avenue
6	SW Tualatin-Sherwood Road & SW Avery Street/112th Avenue	2/13/2019 2/6&7/2019 10/23/2018	-	• Use 2021 Background Traffic Estimates from the T-S Corporate Park TIA • Balanced with adjustments at SW 124th Avenue
7	SW Cipole Road & Site Access (All Scenarios)	-	11/18/2021	• Compared SW Cipole Rd link volumes with Intersection 2 • Balanced volumes with Intersection 2
8	SW Cipole Road & SW Herman Road	-	11/18/2021	• Compared link volumes with Intersections 7 and 11 and developed adjustment factor
9	SW 124th Avenue & SW Cimino Street/Site Access for Scenario 1	7/12/2017	6/15/2021	• Compared link volumes with Intersection 3 • Balanced volumes with Intersection 3
10	SW 124th Avenue & Site Access for Scenarios 2, 3, and 4	-	-	• Balanced with Intersection 9
11	SW 124th Avenue & SW Myslony Road	7/10/2018	-	• Adjusted volumes to be consistent with the methodology from T-S Corporate Park TIA • Balanced volumes with Intersection 10
12	SW 124th Avenue & SW Herman Road	8/16/2018	-	• Adjust volumes to be consistent with the methodology from T-S Corporate Park TIA • Balanced volumes with Intersection 11





TRAFFIC VOLUMES
Existing Conditions
AM & PM Peak Hour

NOT TO SCALE

Figure 6
Tualatin Logistics Park TIA
12/13/2021

Background Year 2025 Conditions

To provide analysis of the impact of the proposed development on the nearby transportation facilities, an estimate of future traffic volumes is required. Two components were included in the background traffic estimates: 1) general growth and 2) growth associated with planned developments. Although the buildout is targeted for the summer of 2023, an analysis year of 2025 was evaluated to correspond with completion of the improvements along SW Tualatin-Sherwood Road.

For the background growth, an annual growth rate of 1.5 percent per year, consistent with the growth rate used in the T-S Corporate Park study, was applied to the adjusted year 2021 existing traffic volumes. This growth rate is generally consistent with historical growth rates on study area roadways.

In addition to the background growth, two nearby projects are currently under construction that are planned to be fully operational at the time of project buildout. These include:

- PGE Integrated Operations Center – this project is located on the southeast corner of SW Tualatin-Sherwood Road & SW 124th Avenue and is planned to be fully operational by 2022.
- T-S Corporate Park – this project is located on the southwest corner of SW Tualatin-Sherwood Road & SW 124th Avenue and is planned to be fully operational by the end of 2021.

Therefore, trip assignment associated with both nearby developments were included in the background year scenario. Detailed project information can be found in the appendix to this document.

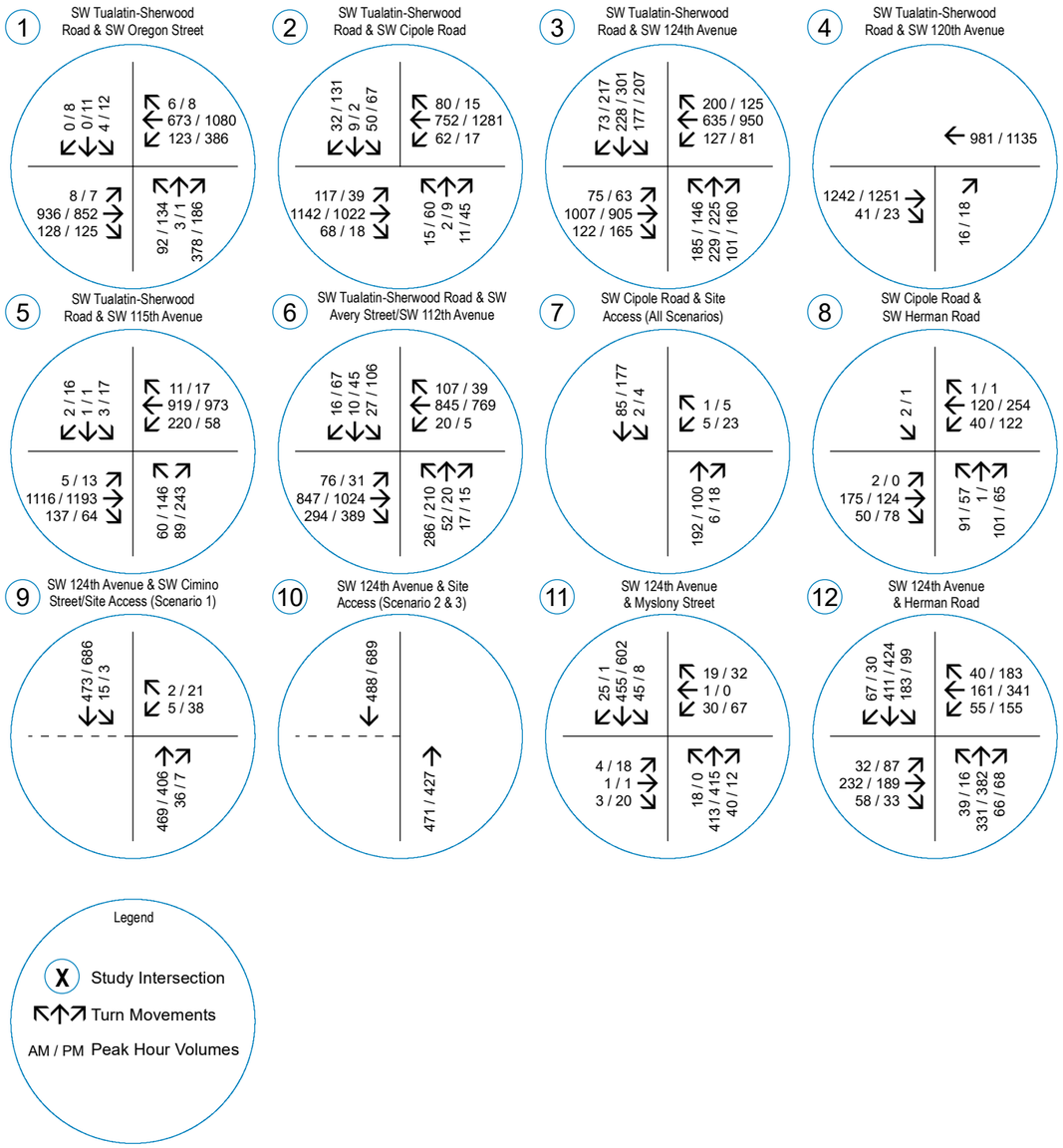
Figure 7 displays the Year 2025 background volumes which include the general growth and growth from planned developments.

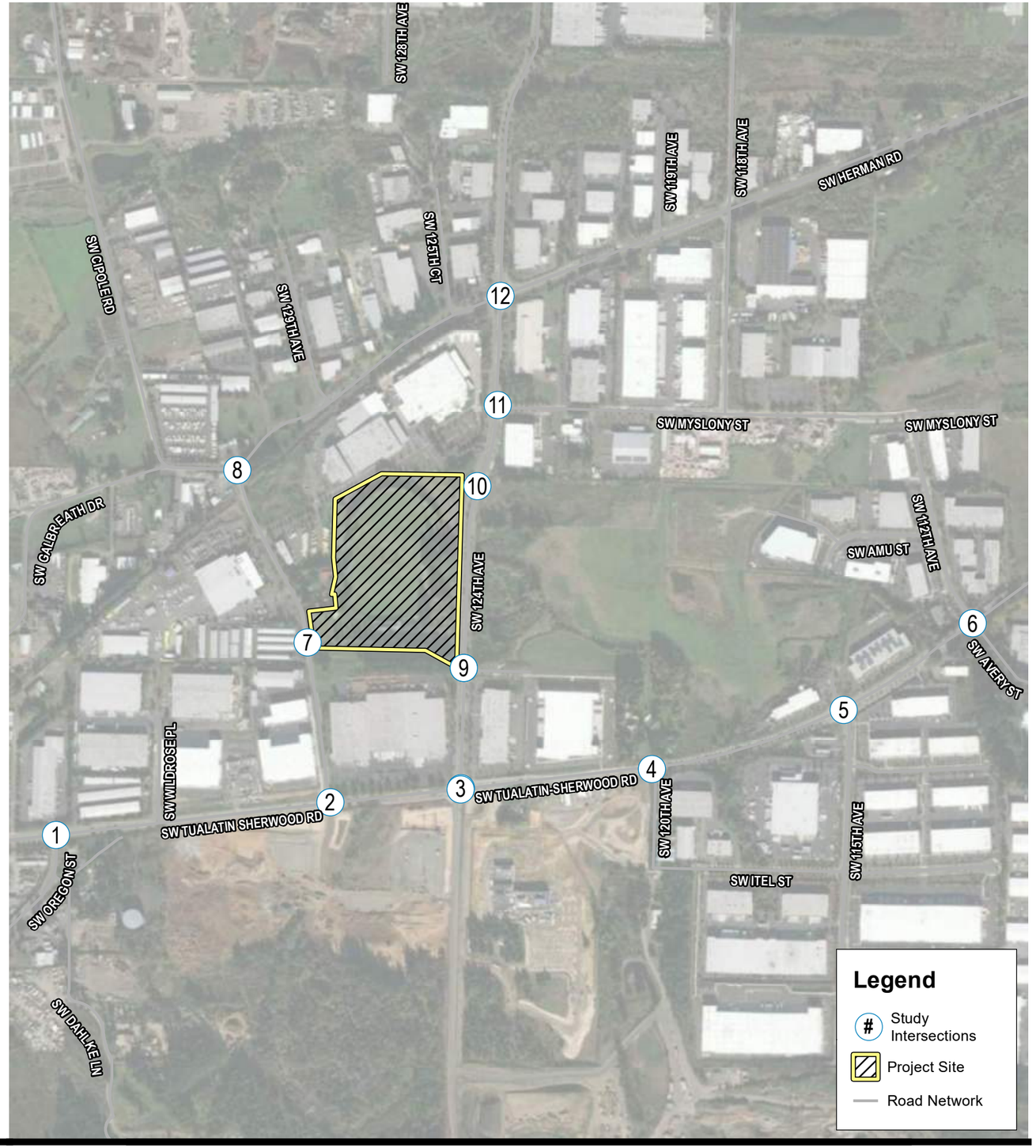
Tualatin-Sherwood Road (Langer Farms Parkway to Teton Avenue)
The Tualatin-Sherwood Road expansion project is a Washington County Capital Improvement Program (CIP) Project intends to expand the roadway to five lanes, improve bicycle and pedestrian facilities, improve storm drainage, and install street lighting. This project is currently applying for permits and starting the right-of-way acquisition process. Construction is planned to break ground late Summer 2022, with a target completion of the in the fall of 2025. Thus, this project was assumed as part of the Background conditions.

Note, traffic forecasts were not available for the opening year of this project, so the background volumes shown in Figure 7 do not reflect any shifts in traffic due to latent demand that may occur with increased capacity on SW Tualatin-Sherwood Road.

Buildout Year 2025 Conditions

Peak hour trips calculated to be generated by the proposed development, as described earlier within the *Site Trips* section, were added to the Year 2025 background volumes to obtain the expected Year 2025 buildout conditions. Year 2025 buildout volumes which include the additional site trips projected to be generated by the proposed development are shown in Figure 8 for Access Scenario 1, Figure 9 for Access Scenario 2, Figure 10 for Access Scenario 3, and Figure 11 of Access Scenario 4.

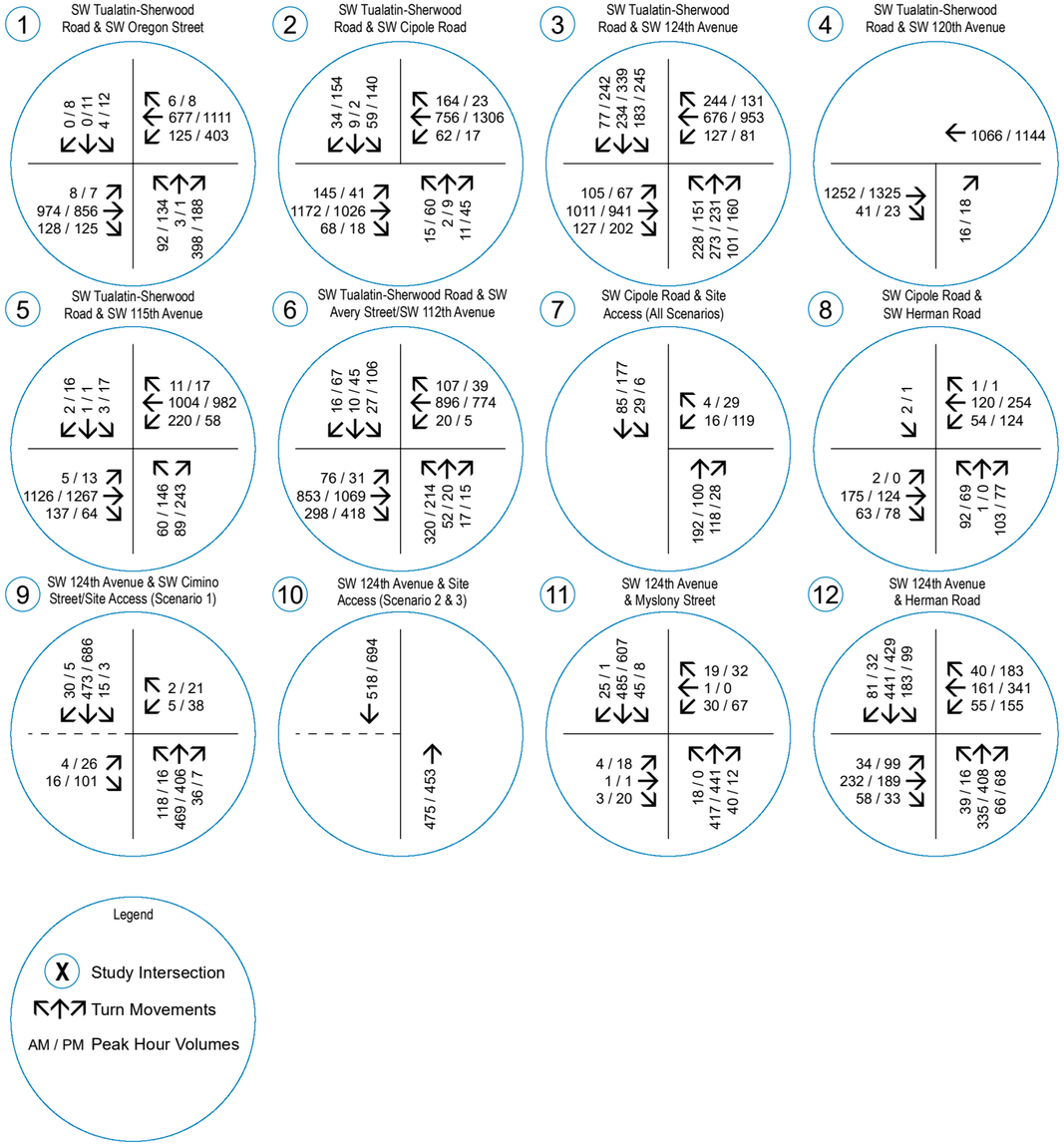


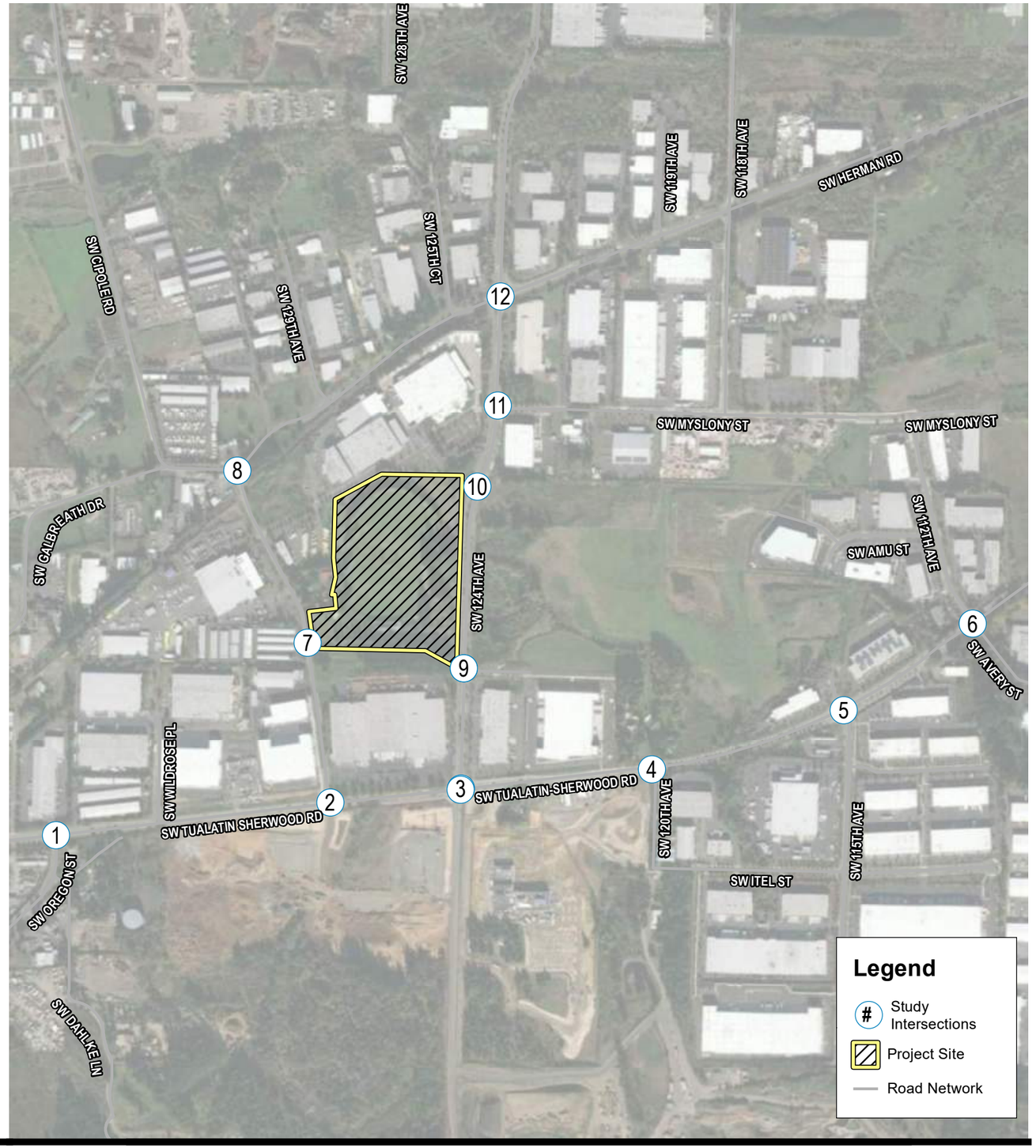


TRAFFIC VOLUMES
Background Conditions
AM & PM Peak Hour

NOT TO SCALE

Figure 7
Tualatin Logistics Park TIA
12/13/2021

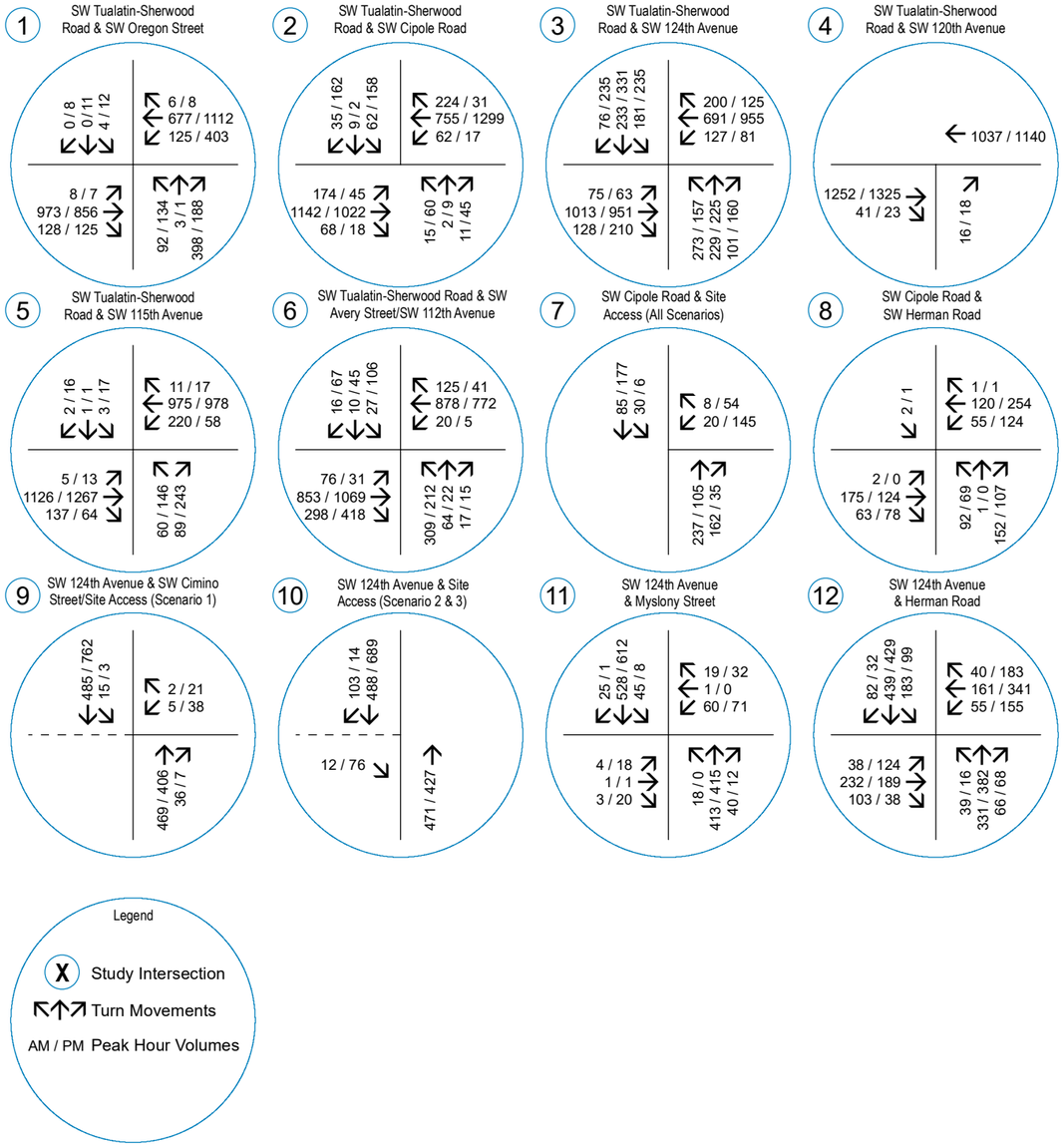


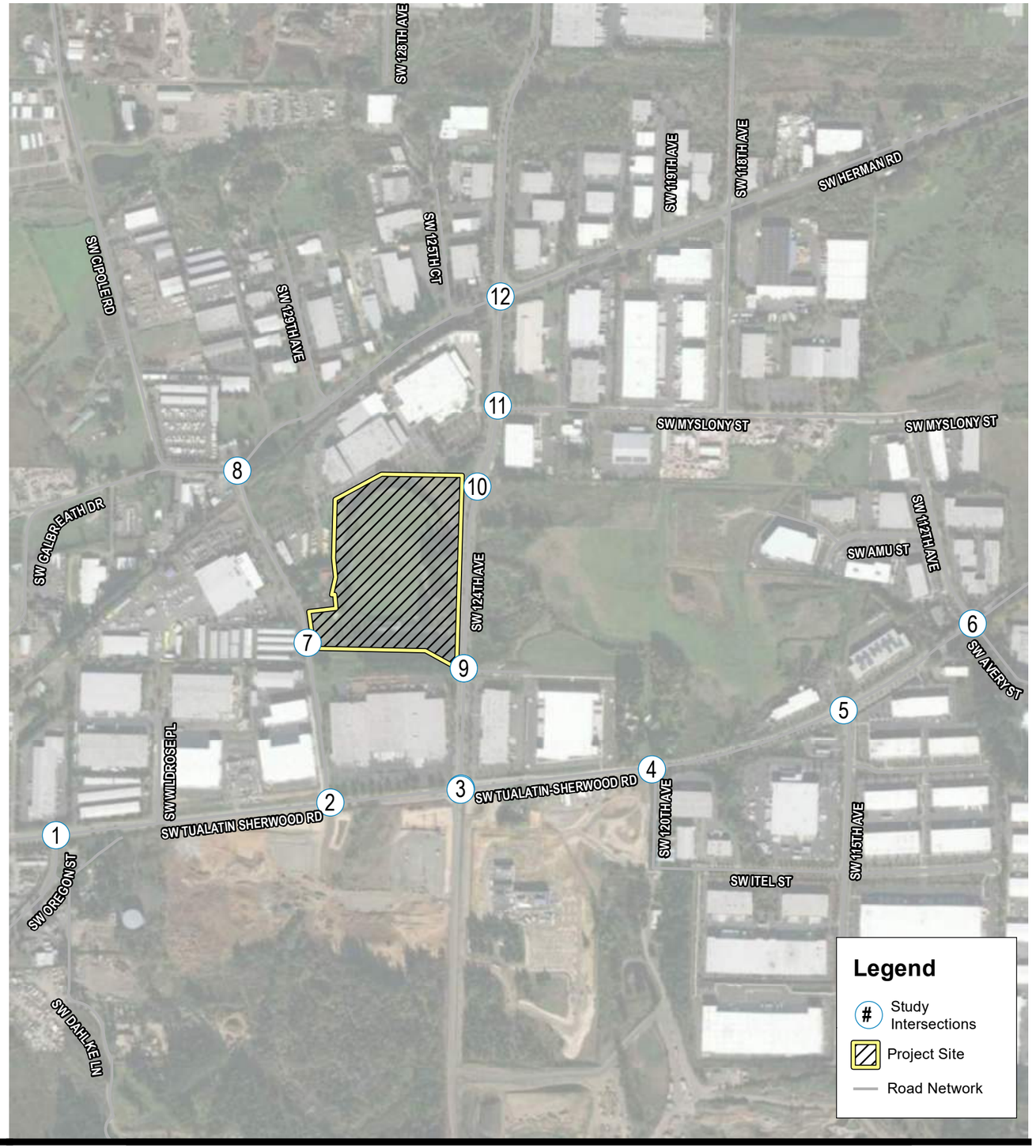


TRAFFIC VOLUMES
2025 Buildout Conditions: Scenario 1
AM & PM Peak Hour

NOT TO SCALE

Figure 8
Tualatin Logistics Park TIA
12/13/2021

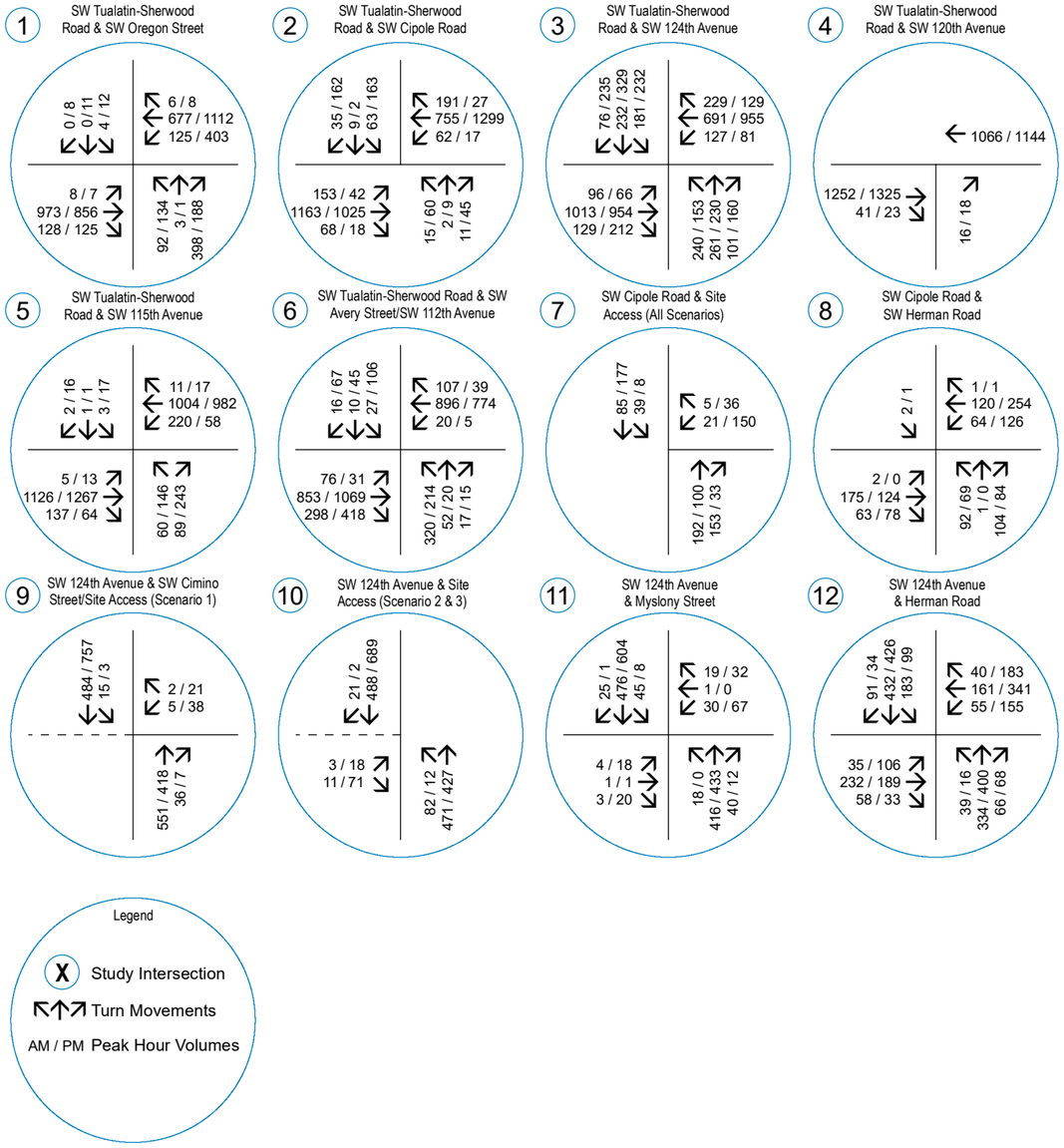


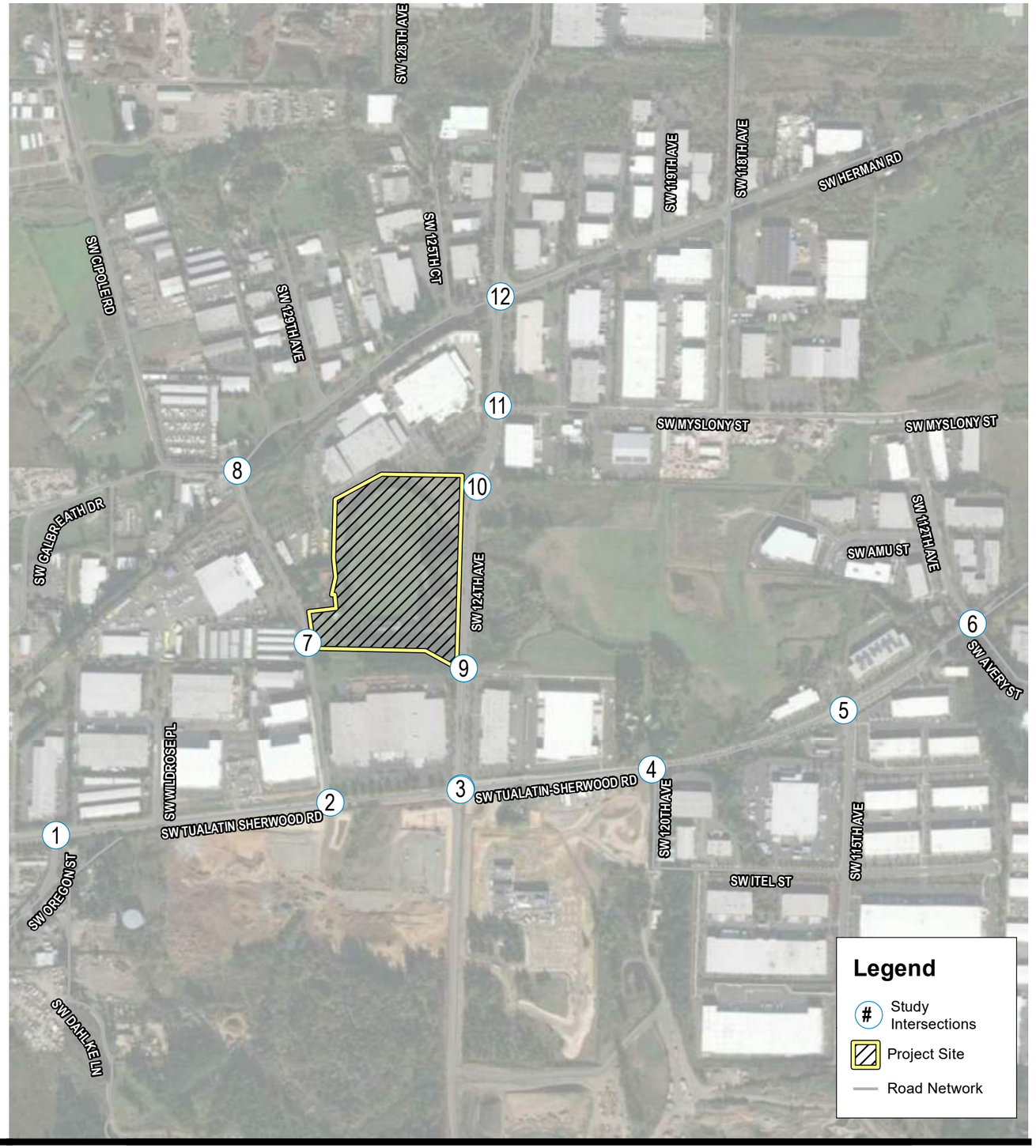


TRAFFIC VOLUMES
2025 Buildout Conditions: Scenario 2
AM & PM Peak Hour

NOT TO SCALE

Figure 9
Tualatin Logistics Park TIA
12/13/2021

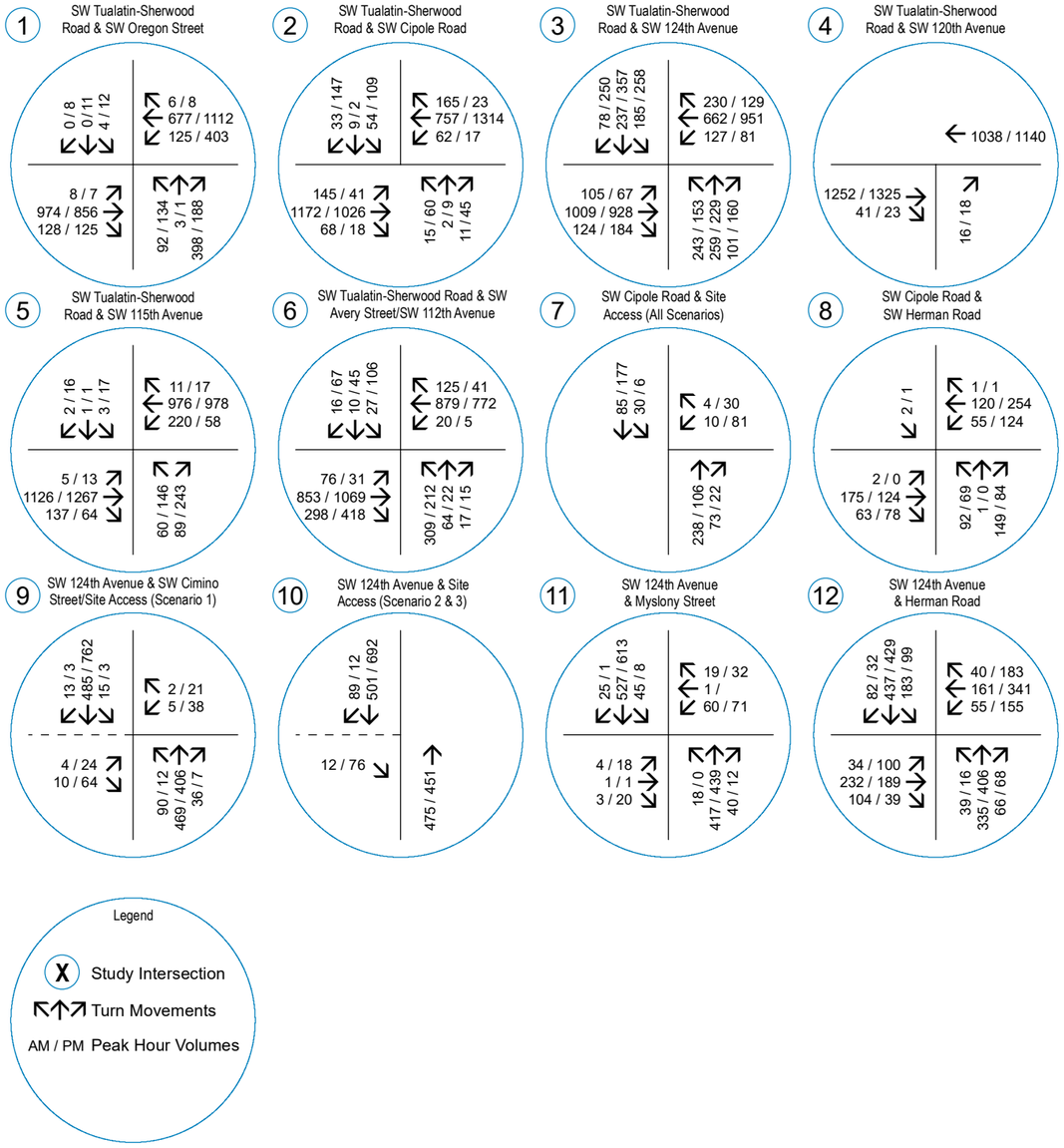


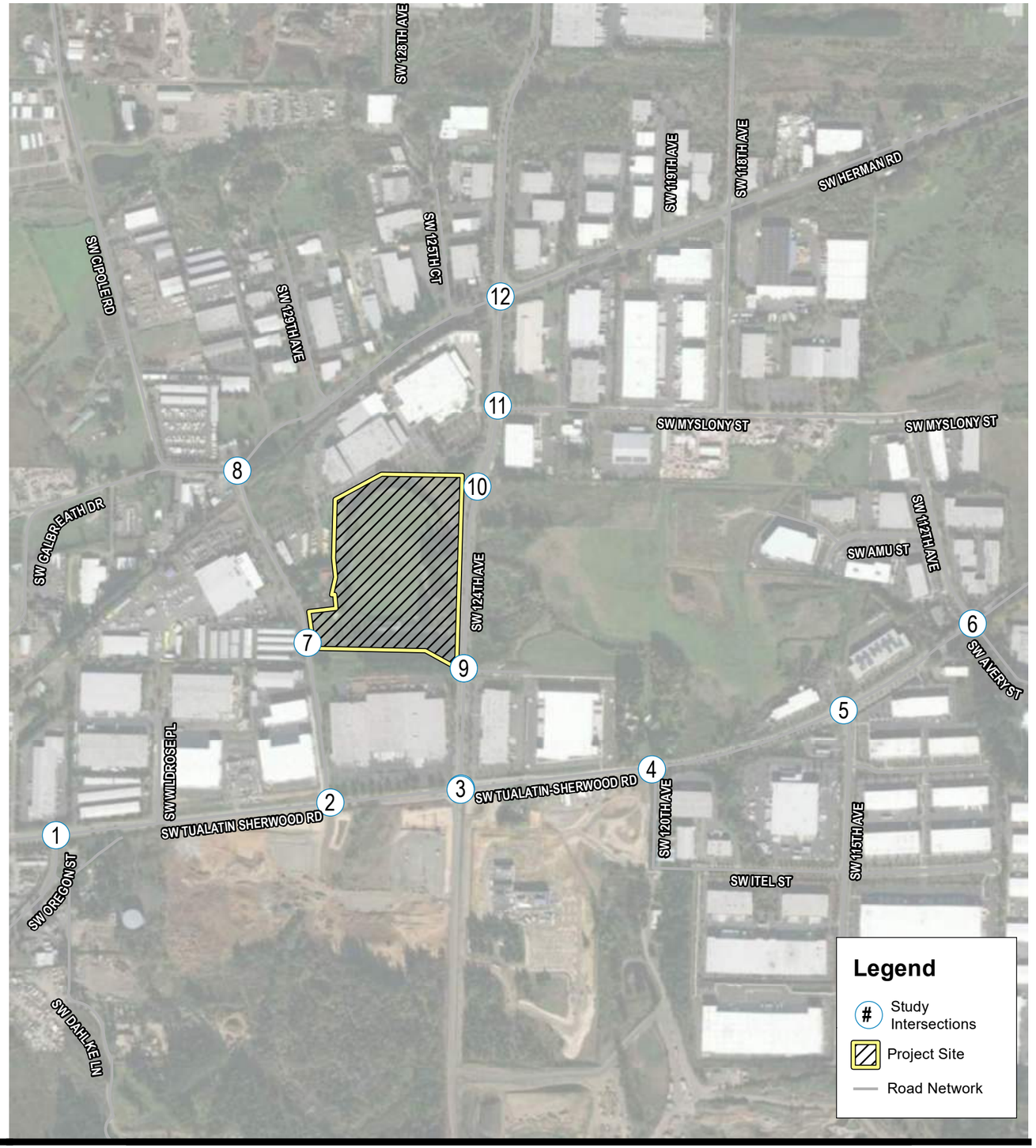


TRAFFIC VOLUMES
2025 Buildout Conditions: Scenario 3
AM & PM Peak Hour

NOT TO SCALE

Figure 10
Tualatin Logistics Park TIA
12/13/2021





TRAFFIC VOLUMES
2025 Buildout Conditions: Scenario 4
AM & PM Peak Hour

NOT TO SCALE

Figure 11
Tualatin Logistics Park TIA
12/13/2021

Safety Analysis

Crash History Review

Using data obtained from ODOT's Crash Data System, a review of approximately five years of the most recent available crash history (January 2015 through December 2019) was performed at the study intersections. The crash data was evaluated based on the number of crashes, the type of collisions, and the severity of the collisions. Crash severity is based on injuries sustained by people involved in the crash, and includes five categories:

- Property Damage Only (PDO)
- Possible Injury (Injury C)
- Non-Incapacitating Injury (Injury B)
- Incapacitating Injury (Injury A)
- Fatality or Fatal Injury

Crash rates provide the ability to compare safety risks at different intersections by accounting for both the number of crashes that have occurred during the study period and the number of vehicles that typically travel through the intersection. Crash rates were calculated using the common assumption that traffic counted during the evening peak period represents approximately 10 percent of the average daily traffic (ADT) at the intersection.

Table 7 provides a summary of crash types while Table 8 summarizes crash severities and rates for each of the study intersections. Detailed ODOT crash reports are included in the technical appendix to this report.

Pedestrian and Bicycle Collisions

One crash reported at the intersection of SW Tualatin-Sherwood Road & SW 112th Avenue/SW Avery Street involved a bicyclist who rear-ended a vehicle on SW Tualatin-Sherwood Road.

No collisions with a pedestrian were reported during the five-year analysis period.

Crash Severity

None of the intersection crashes reported in the five-year analysis period resulted in a fatality but four of the crashes resulted in an incapacitating injury (Type A):

- A rear-end collision between two eastbound vehicles on SW Tualatin-Sherwood Road just west of SW Oregon Street resulted a Type A injury to the driver of the vehicle that was struck.
- A fixed-object collision on SW Tualatin-Sherwood Road resulted in two Type A injuries. The vehicle was traveling eastbound approximately 220 feet east of SW Cipole Road. The crash was reported to be the result of a physical illness.
- A rear-end collision involving three westbound vehicles on SW Tualatin-Sherwood Road just west of SW 112th Avenue resulted in Type A injury to the driver of the vehicle at fault. One Type B and two Type C injuries were also reported.
- An angle collision between a northbound vehicle on SW 124th Avenue and a westbound vehicle on SW Herman Road resulted in a Type A injury to the driver who disregarded the signal and two Type B injuries in the vehicle that was struck.

Table 7: Crash Type Summary

Intersection		Crash Type						Total Crashes
		Rear End	Turning/ Angle	Fixed Object	Side-swipe	Bike/ Ped	Other	
1	SW Tualatin-Sherwood Road & SW Oregon Street	52	18	1	2	0	1	74
2	SW Tualatin-Sherwood Road & SW Cipole Road	23	0	1	0	0	0	24
3	SW 124th Avenue & SW Tualatin-Sherwood Road	81	6	1	1	0	1	90
4	SW Tualatin-Sherwood Road & SW 120th Avenue	17	1	0	0	0	2	20
5	SW Tualatin-Sherwood Road & SW 115th Avenue	28	1	0	0	0	0	29
6	SW Tualatin-Sherwood Road & SW Avery Street/112th Avenue	68	10	1	2	1	0	82
7	SW Cipole Road & Site Access (All Scenarios)	0	0	0	0	0	0	0
8	SW Cipole Road & SW Herman Road	0	0	0	0	0	0	0
9	SW 124th Avenue & SW Cimino Street/Site Access for Scenario 1	1	0	0	0	0	0	1
10	SW 124th Avenue & Site Access for Scenarios 2 and 3	-	-	-	-	-	-	-
11	SW 124th Avenue & SW Myslony Road	0	2	0	1	0	0	3
12	SW 124th Avenue & SW Herman Road	4	7	0	0	0	1	12

Table 8: Crash Severity and Rate Summary

Intersection		Crash Severity					Total Crashes	PHV	Crash Rate	90th % Rate
		PDO	C	B	A	Fatal				
1	SW Tualatin-Sherwood Road & SW Oregon Street	25	38	10	1	0	74	2,548	1.591	0.860
2	SW Tualatin-Sherwood Road & SW Cipole Road	6	15	2	1	0	24	2,380	0.553	0.509
3	SW 124th Avenue & SW Tualatin-Sherwood Road	40	43	7	0	0	90	3,072	1.605	0.860
4	SW Tualatin-Sherwood Road & SW 120th Avenue	10	9	1	0	0	20	2,113	0.519	0.293
5	SW Tualatin-Sherwood Road & SW 115th Avenue	9	19	1	0	0	29	2,378	0.668	0.860
6	SW Tualatin-Sherwood Road & SW Avery Street/112th Avenue	37	36	8	1	0	82	2,385	1.884	0.860
7	SW Cipole Road & Site Access (All Scenarios)	0	0	0	0	0	0	299	0.000	0.293
8	SW Cipole Road & SW Herman Road	0	0	0	0	0	0	652	0.000	0.408
9	SW 124th Avenue & SW Cimino Street/Site Access for Scenario 1	1	0	0	0	0	1	1,034	0.053	0.293
10	SW 124th Avenue & Site Access for Scenarios 2 and 3	0	0	0	0	0	0	991	0.000	0.293
11	SW 124th Avenue & SW Myslony Road	1	1	1	0	0	3	1,048	0.157	0.408
12	SW 124th Avenue & SW Herman Road	9	2	0	1	0	12	1,830	0.359	0.860

ODOT 90th Percentile Crash Rates

Intersection crash rates were compared to the published statewide 90th percentile crash rates within ODOT's Analysis Procedures Manual (APM). According to Exhibit 4-1: Intersection Crash Rates per MEV by Land Type and Traffic Control in the APM, intersections which experience crash rates in excess of 90th percentile crash rates should be "flagged for further analysis".

Five of the intersections along SW Tualatin-Sherwood Road were identified as having a crash rate that exceeds the ODOT 90th percentile threshold. Historically, this corridor has experienced significant queuing that begins at the intersection with OR Highway 99W in Sherwood and often extends into Tualatin. Many of the rear-end collisions in the corridor occurred hundreds of feet from the associated intersection.

Washington County has two planned improvements along SW Tualatin-Sherwood Road that will help to relieve the congestion and should consequently reduce the crash rates in this corridor:

- The first is the project at SW Tualatin-Sherwood Road and Highway 99W in Sherwood. This project will add significant capacity to the highway intersection and widen SW Tualatin-Sherwood Road to SW Olds Place. Construction began in September 2021 and is expected be completed in the spring of 2025.
- The second is the project on SW Tualatin-Sherwood Road from Langer Farms Parkway to Teton Avenue. This project will widen SW Tualatin-Sherwood Road to provide two through travel lanes in each direction and will add turn lanes to some intersections.

Reducing congestion will have a particularly strong influence on reducing rear-end type collisions, which accounted for nearly 85% of the crashes in the corridor. Therefore, no additional mitigation is recommended.

Washington County SPIS List

Six of the study area intersections is listed in the Washington County 2015-2017 SPIS List:

1. SW Tualatin-Sherwood Road & SW Oregon Street - #13 of 365 based on 46 crashes in a 3-year period
2. SW Tualatin-Sherwood Road & SW Cipole Road - #30 of 365 based on 32 crashes in a 3-year period
3. SW Tualatin-Sherwood Road & SW 124th Avenue - #20 of 365 based on 45 crashes in a 3-year period
4. SW Tualatin-Sherwood Road & SW 120th Avenue - #288 of 365 based on 12 crashes in a 3-year period
5. SW Tualatin-Sherwood Road & SW 115th Avenue - #160 of 365 based on 18 crashes in a 3-year period
6. SW Tualatin-Sherwood Road & SW Avery Street/112th Avenue - #22 of 365 based on 43 crashes in a 3-year period

These listings are consistent with the crash rate findings and should be similarly improved with the Washington County planned and funded improvements in the corridor.

Conclusion

Based on a review of the most recent five years of available crash data, no significant trends or crash patterns were identified at any of the study intersections that do not already have planned and funded improvements.

Warrant Analysis

Turn lane warrants and preliminary traffic signal warrants were examined for the study intersections where such treatments would be applicable.

Left-Turn Lane Warrants

Left-turn lane warrants were examined at the existing site access on SW Cipole Road using the methodology outlined in the National Cooperative Highway Research Program Report (NCHRP) 457, published by the Transportation Research Board in 2001. These turn-lane warrants are evaluated based on the number of left-turning vehicles, the number of advancing and opposing vehicles, and the roadway travel speed.

Left-turn lane warrants are not met for the southbound approach for either peak hour under 2025 buildout scenario. Detailed information on the warrant analysis is included in the appendix.

Preliminary Traffic Signal Warrants

Preliminary traffic signal warrants were examined for the site accesses for 2025 buildout conditions and all access scenarios to determine whether the installation of a new traffic signal will be warranted at these intersections upon completion of the proposed development.

Traffic signal warrants are not met at any of these intersections for either peak hour under 2025 buildout scenario. Detailed information on the warrant analysis is included in the appendix.

Sight Distance

A sight distance analysis was performed for the planned project driveways. Both intersection sight distance (ISD) and stopping sight distance (SSD) are assessed. The ISD is an operational measure, intended to provide sufficient line of sight along the major street so that a driver could turn from the minor street without impeding traffic flow. The SSD is the minimum requirement to ensure safe operation of the roadway. Stopping sight distance allows an oncoming driver to see a hazard in the roadway, react, and come to a complete stop if necessary to avoid a collision. As long as the available intersection sight distance is at least equal to the minimum required stopping sight distance for the design speed of the roadway, adequate sight distance is available for safe operation of the intersection.

Intersection Sight Distance

Because SW 124th Avenue is under City of Tualatin jurisdiction and SW Cipole Road is under Washington County jurisdiction, different ISD standards are applicable.

For SW 124th Avenue, sight distance is measured and evaluated in accordance with standards established in *A Policy on Geometric Design of Highway and Streets*[2]. For intersection sight distance, the driver's eye is assumed to be 14.5 feet from the near edge of the nearest travel lane of the intersecting street and at a height of 3.5 feet above the minor-street approach pavement. The oncoming vehicle driver's eye height along the major-street approach is assumed to be 3.5 feet above the cross-street pavement. A speed study on SW 124th Avenue south of SW Myslony Street measured the northbound 85th percentile speed at 52 mph and the southbound 85th percentile speed at 48 mph.

For SW Cipole Road, sight distance is measured and evaluated in accordance with standards established in *Washington County Code Section 501-8.5*. For intersection sight distance, the driver's eye is assumed to be 15 feet from the near edge of the nearest travel lane of the intersecting street and at a height of 3.5 feet above the minor-street approach pavement. The oncoming vehicle driver's eye height along the major-street approach is assumed to be 4.25 feet above the cross-street pavement. Intersection sight distance is required to be ten times the roadway design speed, 85th percentile speed, or the posted speed limit plus 5 mph. In this instance, the posted speed of 45 mph plus 5 mph was used for a total speed requirement of 50 mph.

Stopping Sight Distance

Stopping sight distance (SSD) is considered the minimum requirement to ensure safe operation of the driveway access. This distance allows the driver of a vehicle traveling on the major street to react to a turning vehicle or other object in the roadway and come to a complete stop to avoid a collision. To ensure safe operation of a

[2] American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 7th Edition, 2018.

driveway, the available sight distance must at least equal the minimum required stopping sight distance. SSD is the same for both passenger vehicles and trucks.

Available Sight Distance

Table 9 compares the available sight distance measured in the field with the calculated recommendations and requirements for the traffic movements at the site driveways.

Table 9: Sight Distance Comparison

Access	Recommended ISD		Required SSD		Available Sight Distance	
	To North	To South	To North	To South	To North	To South
SW Access to SW Cipole Road	500 ft	500 ft	425 ft	425 ft	>1,000 ft	>1,000 ft
SE Access to SW 124th Avenue (Scenarios 1 & 4)	625 ft	625 ft	425 ft	425 ft	>1,000 ft	~800 ft
NE Access to SW 124th Avenue (Scenarios 2 & 4)	460 ft	-	400 ft	-	550 ft	>1,000 ft
NE Access to SW 124th Avenue (Scenario 3)	600 ft	650 ft	400 ft	455 ft	550 ft	>1,000 ft

SW Access to SW Cipole Road

The SW Access to SW Cipole Road has sight distance exceeding 1,000 feet in both directions, which meets the ISD recommendations and SSD requirements for the driveway intersection.

SE Access to SW 124th Avenue (Scenarios 1 & 4)

The SE Access to SW 124th Avenue in Scenario 1 (opposite SW Cimino Street has an existing curb cut that is built to City of Tualatin standards along a straight, flat roadway. Sight lines to the north meet the ISD recommendations and SSD requirements for the driveway and sight lines to the south meet the ISD recommendations.

NE Access to SW 124th Avenue (Scenarios 2 & 4)

The NE Access to SW 124th Avenue in Scenario 2 would be limited to right-turn movements. Sight lines to the north meet the ISD recommendations and SSD requirements for the driveways. Sight lines to the south are not necessary.

NE Access to SW 124th Avenue (Scenario 3)

With full access to SW 124th Avenue on the NE corner of the site, the driveway would meet the ISD recommendations and SSD requirements looking to the south but has limited sight distance due to a horizontal curve with a landscaping berm and trees fronting the neighboring property to the north. The berm blocks sight distance for passenger vehicles and the lower branches from the trees block the sight lines for taller vehicles. Sight distance was measured to exceed 550 feet, which meets the SSD requirements for the driveway intersection.

Note, the ISD calculations presented in Table 9, are the recommendations for vehicles making a left turn. The recommendation for vehicles making a right turn is 460 feet looking to the north. This recommendation is met and the majority (80 percent) of the vehicles exiting this driveway are expected to turn right.

As discussed above, ISD is an operational measure, intended to provide sufficient line of sight along the major street so that a driver could turn from the minor street without impeding traffic flow. More specifically, the ISD for vehicles making a left-turn movement is intended to allow sufficient sight distance for vehicles from a minor street to cross one or more major street travel lanes, with traffic coming from the left, and then pull into the closest travel lane of the major street, with traffic coming from the right, without requiring oncoming drivers to slow to less than 70 percent of their approach speed. The same ISD calculation is typically applied looking in both directions, but the crossing portion of the movement actually requires a shorter sight line than the turning portion of the movement.

If the left-turn movement is permitted, it would entail crossing three lanes (two southbound plus the center median lane) to enter the closest northbound through lane. With traffic approaching from the north at 48 mph, the crossing portion of the movement would require about 530 feet of sight distance to avoid impeding traffic while the turning portion of the movement would require 650 feet of sight distance to avoid impeding the northbound traffic approaching at 52 mph.

One final consideration is the object height used in the sight distance measurements. The driver's eye is assumed to be 3.5 feet and the object height they must be able to see is also 3.5 feet. However, very few vehicles on the roadway are as short as 3.5 feet. Many are considerably taller and would be visible over the berm that restricts sight lines for objects at a height of 3.5 feet.

Considering these factors, the available sight distance for a full access driveway to SW 124th Avenue at the NE corner of the sight appears adequate; however, trimming of the lower tree branches that extend over the fencing into the public right-of-way could improve sight lines.

Conclusion

Based on the sight distance analysis, all site accesses are expected to operate safely. No mitigation pertaining to sight distance is required.

Access Spacing

The site accesses on SW 124th Avenue fall under the City of Tualatin access spacing standards while the access on SW Cipole Road falls under Washington County jurisdiction.

SW Cipole Road Site Access

For SW Cipole Road with a Washington County collector classification, the access spacing standard is 100 feet measured between the edge of travel lanes or easements on both sides of the roadway. The SW Access to SW Cipole Road will meet this standard.

SW 124th Avenue Site Access

Tualatin Development Code (TDC) 75.140 (6)(iv) indicates one driveway on the west side of SW 124th Avenue between SW Tualatin-Sherwood Road and SW Myslony Road to be located at least 800 feet north of SW Tualatin-Sherwood Road, approximately opposite SW Cimino Street. However, TDC 75.020 allows for application of new or alternative driveway approaches.

SE Access to SW 124th Avenue (Scenario 1)

The SE Access to SW 124th Avenue in Scenario 1 would meet the TDC 75.140 specifications for an access at least 800 feet north of SW Tualatin-Sherwood Road, approximately opposite SW Cimino Street.

Advantages of this access location include:

- The SE Access location meets the TDC code specifications.
- The curb cut on SW 124th Avenue spans the tax lots of the subject property and the property to the south (Columbia Corrugated Box). A shared driveway could serve both the proposed development and Columbia Corrugated Box site.
- The SE Access location does not affect potential driveway locations for the two undeveloped parcels located on the east side of SW 124th Avenue.

Disadvantages of this access location include:

- Significant grade differences will exist between the site, the Columbia Corrugated Box site, and SW 124th Avenue. Providing access to both tax lots from SW 124th significantly impacts what can be developed on the southeast corner of the subject site.
- The access will require a northbound left-turn lane which was constructed with the five-lane section of SW 124th Avenue. This northbound left-turn lane restricts the length of turn lanes that can be provided on SW 124th Avenue at SW Tualatin-Sherwood Road.
- The proposed development is designed to accommodate multiple tenants with truck courts provided on the east and west building frontages and employee parking provided around the north and south ends of the building. The intermixing of the on-site truck activity and the employee vehicles is a safety concern for the site operations. Access at the SE corner of the site would require employees to drive through the truck courts to access the parking on the north side of the building.

NE Limited Access to SW 124th Avenue (Scenario 2)

The NE Access to SW 124th Avenue is proposed as an alternative to the southeast corner access. This driveway is proposed to be located approximately 1,265 feet north of the intersection of SW 124th Avenue at SW Cimino Street and 545 feet south of the intersection of SW 124th Avenue and SW Myslony Street. The location of is somewhat restricted by topography of the land adjacent to SW 124th Avenue and the turning needs of trucks entering the truck court within the site. In Scenario 2, the NE Access would be limited to right-turn movements.

Advantages of this access location and configuration include:

- Under existing conditions, there are no active accesses on the west side of SW 124th Avenue between SW Tualatin-Sherwood Road and SW Myslony Road. The subject site is the only undeveloped parcel on the west side of SW 124th Avenue. Whether the driveway is located at the NE corner or SE corner of the site, it will be the only site access along SW 124th Avenue.
- The NE Access would locate the driveway activity much further away from the busy signalized intersection of SW 124th Avenue & SW Tualatin-Sherwood Road.
- Even if Columbia Corrugated Box were to construct a driveway opposite SW Cimino Street, only two access would be present on the west side between SW Tualatin-Sherwood Road and SW Myslony Street. The average access spacing on this segment would average more than 800 feet.
- With the access limited to right turns, the center median on SW 124th Avenue would remain intact.

- Access at the NE corner of the site would provide a direct connection to the parking on the north side of the building. The intermixing of the on-site truck activity and the employee vehicles could be reduced making for safer on-site operations.
- Access at the NE corner of the site allows for maximum use of the property because the grades differential between SW 124th Avenue and the subject site is much less at the northern boundary.
- The NE Access location with turn limitations does not affect potential driveway locations for the two undeveloped parcels located on the east side of SW 124th Avenue.
- Eliminating access for the proposed development opposite SW Cimino Street would allow for some different access options to be considered at this intersection. Columbia Corrugated Box has indicated they are amenable to a limited access at this location. This change would allow the northbound left-turn lane to be removed and much longer southbound left-turn lanes to be constructed on SW 124th Avenue at SW Tualatin-Sherwood Road.

Disadvantages of this access location and configuration include:

- The NE Access to SW 124th Avenue does not meet the TDC 75.140 specifications. It would be a new driveway approach and would need to follow the procedures and criteria in TDC 75.020.
- Access at the NE corner of the site does not allow for a potential shared access with Columbia Corrugated Box.
- This proposal could result in two accesses rather on the west side of SW 124th Avenue rather than a single access.
- By limiting the access to right-turn movements, some traffic will need to take more circuitous routes to/from the site. This will likely add traffic to SW 112th Avenue, SW Myslony Street, SW Herman Road, and SW Cipole Road.
- By limiting the access to right-turn movements, some employees will likely travel through the truck courts to use the SW Access onto SW Cipole Road.

NE Access to SW 124th Avenue (Scenario 3)

With Scenario 3, the NE Access to SW 124th Avenue is proposed to be a full-movement driveway at the same location as Scenario 2. The driveway would require removal of 300 to 350 feet of the center median to allow for vehicle deceleration and queue storage in the northbound direction.

Advantages of this access location and configuration include:

- Under existing conditions, there are no active accesses on the west side of SW 124th Avenue between SW Tualatin-Sherwood Road and SW Myslony Road. The subject site is the only undeveloped parcel on the west side of SW 124th Avenue. Whether the driveway is located at the NE corner or SE corner of the site, it will be the only site access along SW 124th Avenue.
- The NE Access would locate the driveway activity much further away from the busy signalized intersection of SW 124th Avenue & SW Tualatin-Sherwood Road.

- Even if Columbia Corrugated Box were to construct a driveway opposite SW Cimino Street, only two access would be present on the west side between SW Tualatin-Sherwood Road and SW Myslony Street. The average access spacing on this segment would average more than 800 feet.
- Access at the NE corner of the site allows for maximum use of the property because the grades differential between SW 124th Avenue and the subject site is much less at the northern boundary.
- Access at the NE corner of the site would provide a direct connection to the parking on the north side of the building. The intermixing of the on-site truck activity and the employee vehicles could be reduced making for safer on-site operations.
- The NE Access would be located approximately 160 feet south of the right-in/right-out driveway on the east side of SW 124th Avenue. Vehicles entering and exiting the NE Access would have no conflicts with this existing driveway.
- Eliminating access for the proposed development opposite SW Cimino Street would allow for some different access options to be considered at this intersection. Columbia Corrugated Box has indicated they are amenable to a limited access at this location. This change would allow the northbound left-turn lane to be removed and much longer southbound left-turn lanes to be constructed on SW 124th Avenue at SW Tualatin-Sherwood Road.

Disadvantages of this access location and configuration include:

- The NE Access to SW 124th Avenue does not meet the TDC 75.140 specifications. It would be a new driveway approach and would need to follow the procedures and criteria in TDC 75.020.
- Access at the NE corner of the site does not allow for a potential shared access with Columbia Corrugated Box.
- This proposal could result in two accesses rather on the west side of SW 124th Avenue rather than a single access.
- A full-movement access at the NE corner of the site would require removal of 300 to 350 feet of the center median to allow for vehicle deceleration and queue storage in the northbound direction.
- A full-movement access at the NE corner of the site would affect the potential access configurations for the two undeveloped parcels on the east side of SW 124th Avenue although it would not preclude providing a full-movement access to these parcels currently under joint ownership.

Note, no known application has been submitted for either property on the east side of SW 124th Avenue at this time. A significant portion of these properties are wetlands, which limits the potential for an access connection to SW Cimino Street. A study conducted for the northern of the two parcels suggested a full access located at the property line between the parcels would be the best location; however, the study did not consider the development of the two properties as a single proposal. Under those conditions, a full access further south would likely be considered more desirable because of proximity to SW Tualatin-Sherwood Road and a location with good sight lines along a straight section of roadway.

The proposed driveway could not be located further to the south to align opposite a potential shared, full-access driveway on the property line of the two parcels on the east side of SW 124th Avenue. However, the

proposed location would be compatible with a full-access driveway to those parcels located 600 to 800 feet to the south (approximately 460 to 660 feet north of SW Cimino Street). Full access driveways that are offset by approximately 600 feet could operate more safely than one driveway.

One industry metric of safety is the number of conflict points at an intersection. Intersections with a greater number of conflict points tend to have a higher number of crashes. A four-leg intersection has 32 conflict points while two three-leg intersections have a combined 18 conflict points. Thus, two driveways aligned to form a four-leg intersection have a higher potential for crashes than two offset, three-leg intersections.

SE Access Plus NE Limited Access to SW 124th Avenue (Scenario 4)

The NE Access to SW 124th Avenue is proposed as an alternative to the southeast corner access. This driveway is proposed to be located approximately 1,265 feet north of the intersection of SW 124th Avenue at SW Cimino Street and 545 feet south of the intersection of SW 124th Avenue and SW Myslony Street. The location of is somewhat restricted by topography of the land adjacent to SW 124th Avenue and the turning needs of trucks entering the truck court within the site. In Scenario 2, the NE Access would be limited to right-turn movements.

Advantages of this access location and configuration include:

- The SE Access location meets the TDC code specifications.
- The curb cut on SW 124th Avenue spans the tax lots of the subject property and the property to the south (Columbia Corrugated Box). A shared driveway could serve both the proposed development and Columbia Corrugated Box site.
- Only two access would be present on the west side between SW Tualatin-Sherwood Road and SW Myslony Street. The average access spacing on this segment would average more than 800 feet.
- Neither access location would affect potential driveway locations for the two undeveloped parcels located on the east side of SW 124th Avenue.
- The NE Access would locate some driveway activity much further away from the busy signalized intersection of SW 124th Avenue & SW Tualatin-Sherwood Road.
- Access at the NE corner of the site would provide a direct connection to the parking on the north side of the building. The intermixing of the on-site truck activity and the employee vehicles would be almost completely unnecessary making for safer on-site operations.

Disadvantages of this access location and configuration include:

- The NE Access to SW 124th Avenue does not meet the TDC 75.140 specifications. It would be a new driveway approach and would need to follow the procedures and criteria in TDC 75.020.
- This proposal could result in two accesses rather on the west side of SW 124th Avenue rather than a single access.
- By limiting the access to right-turn movements, some traffic will need to take more circuitous routes to/from the site. This will likely add traffic to SW 112th Avenue, SW Myslony Street, SW Herman Road, and SW Cipole Road.

- The access will require a northbound left-turn lane which was constructed with the five-lane section of SW 124th Avenue. This northbound left-turn lane restricts the length of turn lanes that can be provided on SW 124th Avenue at SW Tualatin-Sherwood Road.

Conclusion

The SW Access to SW Cipole Road will meet Washington County access spacing standards and no alternative is proposed.

While the SE Access to SW 124th Avenue in Scenario 1 would meet the TDC 75.140 specifications for an access at least 800 feet north of SW Tualatin-Sherwood Road, approximately opposite SW Cimino Street, it has few significant systemic advantages and poses significant disadvantages to development of the subject site. A site access at the NE corner of the site is the preferred option with a full-movement access (Scenario 3) as the desired configuration and a right-in/right-out access (Scenario 2) as an acceptable alternative.

Truck Access

Truck turning templates for the site driveways are included in drawing *TT1.0 Truck Turning at Driveways* of the application packet. All driveways can accommodate trucks entering and exiting from the north or south.

Operational Analysis

Methodology

An operational analysis was conducted for each of the study intersections per the signalized and unsignalized intersection analysis methodologies in the *Highway Capacity Manual* (HCM)[3]. Intersections are generally evaluated based on the average control delay experienced by vehicles and are assigned a grade according to their operation. The level of service (LOS) of an intersection can range from LOS A, which indicates very little, or no delay experienced by vehicles, to LOS F, which indicates a high degree of congestion and delay. The volume-to-capacity (v/c) ratio is a measure that compares the traffic volumes (demand) against the available capacity of an intersection. The analysis was performed using the Synchro (version 10.3.122.0) software which applies the HCM6 methodologies.

Performance Standards

The following agency performance standards are applicable in the study area:

- The City of Tualatin requires intersections to operate at a minimum D and E for signalized and unsignalized intersections, respectively.
- Washington County requires intersections to operate with a v/c ratio of 0.99 or less.

Delay & Capacity Analysis

The LOS, delay, and v/c results of the capacity analysis are shown in Table 10 for the morning and evening peak hours and three scenarios. Traffic signal timing along SW Tualatin-Sherwood Road was optimized and coordinated for the new lane configuration. Detailed calculations as well as tables showing the relationship between delay and LOS are included in the appendix to this report.

As shown in Table 10, all study area intersections are anticipated to operate within the acceptable jurisdictional standards for all four buildout scenarios. Therefore, no mitigation for traffic operations is required or recommended.

Note, the access configuration options have little effect on the overall study area operations.

[3] Transportation Research Board, *Highway Capacity Manual 6th Edition*, 2016.

Table 10: Capacity Analysis Summary

Intersection & Scenario	Performance Standard	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
1. SW Tualatin-Sherwood Road & SW Oregon Street							
2021 Existing	0.99	B	16	0.77	C	25	0.81
2025 Background		B	14	0.60	B	20	0.71
2025 Buildout Scenario 1		B	16	0.63	B	20	0.72
2025 Buildout Scenario 2		B	16	0.63	B	20	0.72
2025 Buildout Scenario 3		B	16	0.63	B	20	0.72
2025 Buildout Scenario 4		B	16	0.63	B	20	0.72
2. SW Tualatin-Sherwood Road & SW Cipole Road							
2021 Existing	0.99	A	5	0.73	A	7	0.85
2025 Background		A	4	0.52	B	17	0.55
2025 Buildout Scenario 1		A	4	0.55	B	19	0.62
2025 Buildout Scenario 2		A	4	0.55	B	19	0.64
2025 Buildout Scenario 3		A	4	0.56	B	19	0.64
2025 Buildout Scenario 4		A	4	0.54	B	18	0.60
3. SW Tualatin-Sherwood Road & SW 124th Avenue							
2021 Existing	0.99	D	38	0.95	C	22	0.82
2025 Background		C	28	0.68	C	23	0.61
2025 Buildout Scenario 1		C	30	0.70	C	25	0.64
2025 Buildout Scenario 2		C	30	0.71	C	25	0.64
2025 Buildout Scenario 3		C	30	0.71	C	25	0.64
2025 Buildout Scenario 4		C	30	0.71	C	26	0.66
4. SW Tualatin-Sherwood Road & SW 120th Avenue							
2021 Existing	0.99	E	41	0.25	D	29	0.24
2025 Background		C	21	0.07	B	14	0.05
2025 Buildout Scenario 1		C	21	0.07	B	15	0.05
2025 Buildout Scenario 2		C	21	0.07	B	15	0.05
2025 Buildout Scenario 3		C	21	0.07	B	15	0.05
2025 Buildout Scenario 4		C	21	0.07	B	15	0.05

Table 10: Capacity Analysis Summary

Intersection & Scenario	Performance Standard	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
5. SW Tualatin-Sherwood Road & SW 115th Avenue							
2021 Existing	0.99	B	18	0.80	C	26	0.74
2025 Background		B	13	0.55	C	29	0.57
2025 Buildout Scenario 1		B	13	0.56	C	25	0.59
2025 Buildout Scenario 2		B	13	0.56	C	25	0.59
2025 Buildout Scenario 3		B	13	0.56	C	25	0.59
2025 Buildout Scenario 4		B	13	0.56	C	25	0.59
6. SW Tualatin-Sherwood Road & SW Avery Street/112th Avenue							
2021 Existing	0.99	D	45	0.77	E	58	0.73
2025 Background		D	47	0.63	C	32	0.55
2025 Buildout Scenario 1		D	49	0.68	C	31	0.57
2025 Buildout Scenario 2		D	49	0.68	C	31	0.57
2025 Buildout Scenario 3		D	49	0.68	C	31	0.57
2025 Buildout Scenario 4		D	49	0.67	C	31	0.57
7. SW Cipole Road & Site Access							
2021 Existing	0.99	B	10	0.01	B	10	0.05
2025 Background		B	11	0.01	B	11	0.05
2025 Buildout Scenario 1		B	12	0.05	B	13	0.27
2025 Buildout Scenario 2		B	13	0.08	B	13	0.36
2025 Buildout Scenario 3		B	13	0.07	B	13	0.35
2025 Buildout Scenario 4		B	12	0.04	B	12	0.20
8. SW Cipole Road & SW Herman Road							
2021 Existing	0.99	B	11	0.39	B	13	0.55
2025 Background		B	12	0.44	B	15	0.59
2025 Buildout Scenario 1		B	13	0.47	C	15	0.61
2025 Buildout Scenario 2		B	14	0.49	C	16	0.63
2025 Buildout Scenario 3		B	13	0.47	C	15	0.61
2025 Buildout Scenario 4		B	14	0.49	C	15	0.61

Table 10: Capacity Analysis Summary

Intersection & Scenario	Performance Standard	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
9. SW 124th Avenue & SW Cimino Street/Site Access for Scenario 1							
2021 Existing	LOS E	C	18	0.03	C	16	0.17
2025 Background		C	20	0.03	C	19	0.21
2025 Buildout Scenario 1		D	33	0.06	C	24	0.37
2025 Buildout Scenario 2		C	20	0.03	C	20	0.22
2025 Buildout Scenario 3		C	23	0.04	C	20	0.22
2025 Buildout Scenario 4		D	29	0.05	C	24	0.32
10. SW 124th Avenue & Site Access for Scenarios 2 and 3							
2025 Buildout Scenario 2	E	B	11	0.02	B	12	0.15
2025 Buildout Scenario 3		B	13	0.10	C	16	0.23
2025 Buildout Scenario 4		B	11	0.02	B	12	0.15
11. SW 124th Avenue & SW Myslony Road							
2021 Existing	LOS E	C	23	0.22	D	26	0.39
2025 Background		D	28	0.27	E	36	0.51
2025 Buildout Scenario 1		D	29	0.29	E	40	0.54
2025 Buildout Scenario 2		E	48	0.55	E	38	0.54
2025 Buildout Scenario 3		D	29	0.28	E	39	0.53
2025 Buildout Scenario 4		E	49	0.55	E	42	0.57
12. SW 124th Avenue & SW Herman Road							
2021 Existing	LOS D	B	16	0.52	B	17	0.68
2025 Background		B	17	0.54	B	19	0.70
2025 Buildout Scenario 1		B	17	0.54	B	19	0.72
2025 Buildout Scenario 2		B	17	0.57	B	19	0.72
2025 Buildout Scenario 3		B	17	0.54	B	19	0.72
2025 Buildout Scenario 4		B	17	0.57	B	19	0.72

Locations that do not meet standards are BOLDED.

Queuing Analysis

An analysis of queuing was conducted for key study intersections. The analysis was conducted using the Synchro/SimTraffic software, with the reported values representing 95th percentile queue lengths. The 95th percentile queue is a statistical measurement which indicates there is a 5 percent chance that the queue may exceed this length during the analysis period; however, given this is a probability, the 95th percentile queue

length may not be frequently observed in the field. Note, this analysis does not account for upstream congestion outside of the study area.

The effective storage for the turning lanes was obtained from the Washington County plans for the SW Tualatin-Sherwood Road improvements from SW Langer Farms Parkway to SW Teton Avenue, the site plan, or from Google Earth. Where dual left-turn lanes are planned, the storage for each lane is estimated.

The resulting 95th percentile queue estimates are summarized in Table 11.

Table 11: Queuing Analysis Summary

Movement	Effective Storage	95th Percentile Queue (AM/PM)				
		2025 Background	2025 Buildout Scenario 1	2025 Buildout Scenario 2	2025 Buildout Scenario 3	2025 Buildout Scenario 4
2. SW Tualatin-Sherwood Road & SW Cipole Road						
EB L	350 ft	100/50 ft	125/75 ft	175/75 ft	125/75 ft	125/50 ft
WB L	285 ft	100/50 ft	125/50 ft	75/50 ft	100/50 ft	100/50 ft
NB L	150 ft	50/100 ft	50/100 ft	50/100 ft	50/100 ft	50/100 ft
SB L	300 ft	125/125 ft	125/175 ft	150/200 ft	150/200 ft	150/150 ft
3. SW Tualatin-Sherwood Road & SW 124th Avenue						
EB L1	275 ft	75/50 ft	75/50 ft	75/50 ft	100/50 ft	100/75 ft
EB L2	350 ft	100/75 ft	125/75 ft	150/125 ft	150/75 ft	150/100 ft
EB R	350 ft	75/75 ft	125/75 ft	100/75 ft	125/75 ft	125/75 ft
WB L1	380 ft	100/75 ft	125/75 ft	100/75 ft	100/75 ft	100/50 ft
WB L2	470 ft	125/75 ft	150/75 ft	100/100 ft	125/75 ft	125/75 ft
WB R	380 ft	100/50 ft	125/50 ft	100/75 ft	125/75 ft	125/75 ft
NB L1	300 ft	125/125 ft	200/100 ft	225/100 ft	200/125 ft	200/100 ft
NB L2	300 ft	175/150 ft	225/150 ft	250/150 ft	225/150 ft	225/150 ft
SB L1	100 ft	125/125 ft	150/150 ft	150/150 ft	150/150 ft	150/150 ft
SB L2	200 ft	200/200 ft	175/225 ft	200/250 ft	175/225 ft	225/250 ft
SB R	250 ft	50/125 ft	75/175 ft	75/150 ft	75/150 ft	75/150 ft
7. SW Cipole Road & Site Access						
WB LR	225 ft	25/50 ft	50/75 ft	50/100 ft	50/100 ft	50/75 ft
SB LT	325 ft	25/25 ft	50/25 ft	50/25 ft	50/25 ft	50/25 ft

Table 11: Queuing Analysis Summary

Movement	Effective Storage	95th Percentile Queue (AM/PM)				
		2025 Background	2025 Buildout Scenario 1	2025 Buildout Scenario 2	2025 Buildout Scenario 3	2025 Buildout Scenario 4
9. SW 124th Avenue & SW Cimino Street/Site Access for Scenario 1						
EB LTR	200 ft	-	50/75 ft	-	-	50/100 ft
WB LTR	140 ft	50/75 ft	50/75 ft	50/75 ft	50/75 ft	50/75 ft
NB L	100 ft	-	75/25 ft	-	-	75/25 ft
SB L	110 ft	25/25 ft	25/25 ft	25/25 ft	25/25 ft	25/25 ft
10. SW 124th Avenue & Site Access for Scenarios 2 and 3						
EB LR	150 ft	-	-	50/75 ft	50/75 ft	50/75 ft
NB L	TBD	-	-	-	75/25 ft	-

The analysis shows that the queues in the southbound left-turn lanes on SW 124th Avenue at SW Tualatin-Sherwood Road are expected to exceed the available storage. This queue estimate may be arising from queues in the adjacent through travel lane which occasionally block access to the left-turn lanes. This condition is expected with the 2025 background condition and will worsen with all four buildout scenarios. The variation between the scenarios is generally only one vehicle which is within the variation associated with the simulation process.

Potential Improvements

Although mitigation is not specifically required, an option to improve operations at the SW Tualatin-Sherwood Road & SW 124th Avenue intersection is to restripe the southbound approach. Instead of one southbound through lane and one right-turn lane, the approach could be restriped to provide two lanes with outer lane serving both through and right-turn movements. This striping condition is possible with the widening of SW 124th Avenuehie on the south side of SW Tualatin-Sherwood Road that is part of the T-S Corporate Park frontage improvements.

The operational and queuing results of these changes are summarized in Table 12.

The alternative lane striping would result in a decrease in small reduction in the average delay per vehicle, particularly in the morning. However, the 95th percentile queues would be reduced so that no spillback into the adjacent through lane is likely. Additionally, the 95th percentile queues in the adjacent through lane will not block access to the left-turn lanes in the morning and will only affect access to the turn lanes in the evening.

Table 12: Operations & Queuing with Southbound Lane Revisions on SW 124th Avenue

Measure	Standard	Operations (AM/PM)				
		2025 Background	2025 Buildout Scenario 1	2025 Buildout Scenario 2	2025 Buildout Scenario 3	2025 Buildout Scenario 4
3. SW Tualatin-Sherwood Road & SW 124th Avenue						
LOS	0.99	C/B	C/C	C/C	C/C	C/C
Delay (s)		28/20	29/25	29/25	29/25	29/26
V/C		0.62/0.56	0.67/0.59	0.65/0.59	0.66/0.59	0.66/0.60
Movement	**Effective Storage**	**95th Percentile Queue (AM/PM)**				
		2025 Background	2025 Buildout Scenario 1	2025 Buildout Scenario 2	2025 Buildout Scenario 3	2025 Buildout Scenario 4
3. SW Tualatin-Sherwood Road & SW 124th Avenue						
SB L1	100 ft	150/125 ft	150/150 ft	150/150 ft	150/150 ft	150/150 ft
SB L2	200 ft	150/150 ft	150/175 ft	175/150 ft	175/175 ft	150/175 ft

Conclusions

Key findings of this study include:

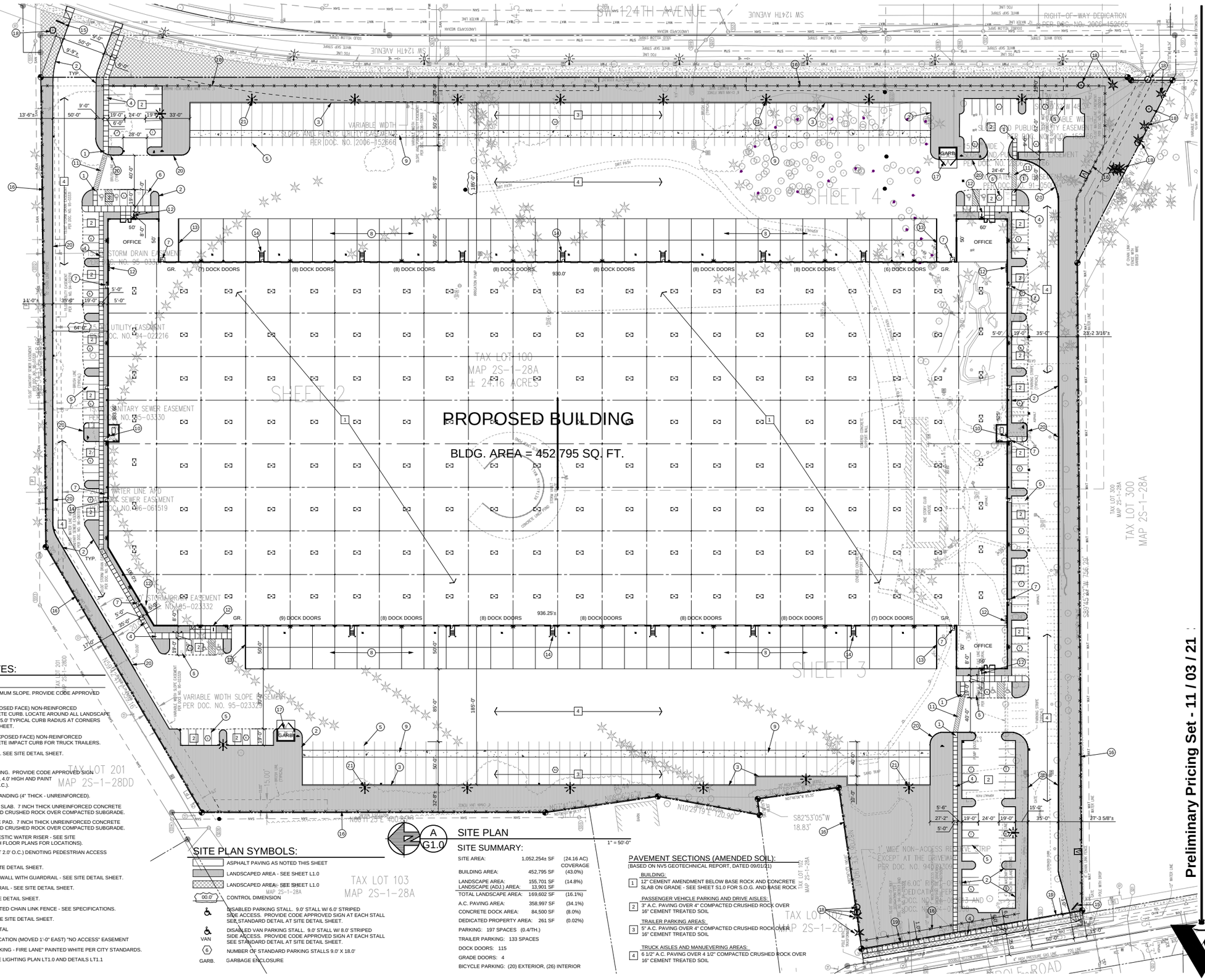
- Based on a review of the most recent five years of available crash data, no significant trends or crash patterns were identified at any of the study intersections that do not already have planned and funded improvements.
- Left-turn lane warrants are not met for either peak hour under the 2025 buildout scenario for the proposed SW Access to SW Cipole Road.
- Preliminary traffic signal warrants are not met at either of the proposed site driveways (regardless of location) for either peak hour under buildout conditions.
- Based on the sight distance analysis, all site access options are expected to operate safely. No mitigation pertaining to sight distance is required; however, trimming of some of the lower tree branches that extend into the public right-of-way could improve sight lines for the NE Access proposed in Scenarios 2 to 4.
- The SW Access to SW Cipole Road will meet Washington County access spacing standards and no alternative is proposed.
- While the SE Access to SW 124th Avenue in Scenario 1 would meet the TDC 75.140 specifications for an access at least 800 feet north of SW Tualatin-Sherwood Road, opposite SW Cimino Street, it has few significant systemic advantages and poses significant disadvantages to development of the subject site. A site access at the NE corner of the site is the preferred option with a full-movement access (Scenario 3) as the desired configuration and a right-in/right-out access (Scenario 2) as an acceptable alternative. If access is required at the SE corner of the site, a right-in/right-out access at the NE corner (Scenario 4) would offer some benefits with few impacts to the system; however, this option is not preferred.
- All proposed driveways can accommodate trucks entering and exiting from the north or south.
- All study area intersections are anticipated to operate within the acceptable jurisdiction standards. Therefore, no mitigation for traffic operations is required or recommended. The access configuration options have little effect on study area operations.
- An analysis of queuing for key study intersections shows that the queues in the southbound left-turn lanes on SW 124th Avenue at SW Tualatin-Sherwood Road are expected to exceed the available storage. This condition is expected with the 2025 background condition and will worsen with all four buildout scenarios. All other queuing can be accommodated within the available storage.
- An option to improve operations at the SW Tualatin-Sherwood Road & SW 124th Avenue intersection is to restripe the southbound approach to provide two lanes with outer lane serving both through and right-turn movements. The alternative lane striping would result in a small reduction in the average delay per vehicle, particularly in the morning. The 95th percentile queues would be reduced so that no spillback into the adjacent through lane is likely.
- With Scenarios 2 and 3, the access opposite SW Cimino Street could potentially be limited access (right-in/right-out plus possible left out). Columbia Corrugated Box has indicated they are amenable to a limited access at this location. This change would allow the northbound left-turn lane to be removed and much longer southbound left-turn lanes to be constructed on SW 124th Avenue at SW Tualatin-Sherwood Road.

Appendix A – Site Information

Site Plan

Trip Generation Calculations

Scoping Memo



SITE PLAN KEYNOTES:

MARK	DESCRIPTION
1	SIDEWALK RAMP. 1:12 MAXIMUM SLOPE. PROVIDE CODE APPROVED DETECTABLE WARNING.
2	6" THICK X 16" HIGH (6" EXPOSED FACE) NON-REINFORCED POURED-IN-PLACE CONCRETE CURB. LOCATE AROUND ALL LANDSCAPE AREAS AS SHOWN (U.N.O.). 5.0' TYPICAL CURB RADIUS AT CORNERS (U.N.O.). SEE SITE DETAIL SHEET.
3	12" THICK X 30" HIGH (12" EXPOSED FACE) NON-REINFORCED POURED-IN-PLACE CONCRETE IMPACT CURB FOR TRUCK TRAILERS.
4	NEW CONCRETE SIDEWALK. SEE SITE DETAIL SHEET.
5	3" WIDE PAINT STRIPE.
6	CARPOOL / VANPOOL PARKING. PROVIDE CODE APPROVED SIGN ON A 1 1/2" DIA. STEEL PIPE, 4.0' HIGH AND PAINT "CARPOOL" (IN SPACE ON A.C.).
7	5.0' X 5.0' MIN. CONCRETE LANDING (4" THICK - UNREINFORCED).
8	LOADING DOCK CONCRETE SLAB. 7 INCH THICK UNREINFORCED CONCRETE OVER 6 INCHES COMPACTED CRUSHED ROCK OVER COMPACTED SUBGRADE.
9	TRUCK TRAILER CONCRETE PAD. 7 INCH THICK UNREINFORCED CONCRETE OVER 6 INCHES COMPACTED CRUSHED ROCK OVER COMPACTED SUBGRADE.
10	FIRE SPRINKLER AND DOMESTIC WATER RISER - SEE SITE UTILITY PLAN. (VERIFY WITH FLOOR PLANS FOR LOCATIONS).
11	PAINT STRIPING (3" WIDE AT 2.0' O.C.) DENOTING PEDESTRIAN ACCESS WALKWAY OR NO PARKING.
12	BICYCLE PARKING - SEE SITE DETAIL SHEET.
13	LOADING DOCK RETAINING WALL WITH GUARDRAIL - SEE SITE DETAIL SHEET.
14	METAL STAIR WITH GUARDRAIL - SEE SITE DETAIL SHEET.
15	MONUMENT SIGN - SEE SITE DETAIL SHEET.
16	6.0' HIGH BLACK VINYL COATED CHAIN LINK FENCE - SEE SPECIFICATIONS.
17	GARBAGE ENCLOSURE - SEE SITE DETAIL SHEET.
18	TREES TO REMAIN - (18) TOTAL
19	NEW PROPERTY LINE DEDICATION (MOVED 1'-0" EAST) "NO ACCESS" EASEMENT
20	PAINT CURB RED - "NO PARKING - FIRE LANE" PAINTED WHITE PER CITY STANDARDS.
21	NEW LIGHT POLE - SEE SITE LIGHTING PLAN LT1.0 AND DETAILS LT1.1

SITE PLAN SYMBOLS:

	ASPHALT PAVING AS NOTED THIS SHEET
	LANDSCAPED AREA - SEE SHEET L1.0
	LANDSCAPED AREA - SEE SHEET L1.0
00.0'	CONTROL DIMENSION
	DISABLED PARKING STALL. 9.0' STALL W/ 6.0' STRIPED SIDE ACCESS. PROVIDE CODE APPROVED SIGN AT EACH STALL SEE STANDARD DETAIL AT SITE DETAIL SHEET.
VAN	DISABLED VAN PARKING STALL. 9.0' STALL W/ 8.0' STRIPED SIDE ACCESS. PROVIDE CODE APPROVED SIGN AT EACH STALL SEE STANDARD DETAIL AT SITE DETAIL SHEET.
6	NUMBER OF STANDARD PARKING STALLS 9.0' X 18.0'
GARB.	GARBAGE ENCLOSURE

A G1.0

SITE PLAN

1" = 50'-0"

SITE SUMMARY:

SITE AREA:	1,052,254± SF	(24.16 AC)
BUILDING AREA:	452,795 SF	COVERAGE (43.0%)
LANDSCAPE AREA:	155,701 SF	(14.8%)
LANDSCAPE (ADJ.) AREA:	13,901 SF	
TOTAL LANDSCAPE AREA:	169,602 SF	(16.1%)
A.C. PAVING AREA:	358,997 SF	(34.1%)
CONCRETE DOCK AREA:	84,500 SF	(8.0%)
DEDICATED PROPERTY AREA:	261 SF	(0.02%)

PARKING: 197 SPACES (0.4/TH.)

TRAILER PARKING: 133 SPACES

DOCK DOORS: 115

GRADE DOORS: 4

BICYCLE PARKING: (20) EXTERIOR, (26) INTERIOR

PAVEMENT SECTIONS (AMENDED SOIL):

(BASED ON NV5 GEOTECHNICAL REPORT, DATED 09/01/21)

BUILDING:

1 12" CEMENT AMENDMENT BELOW BASE ROCK AND CONCRETE SLAB ON GRADE - SEE SHEET S1.0 FOR S.O.G. AND BASE ROCK

PASSENGER VEHICLE PARKING AND DRIVE AISLES:

2 3" A.C. PAVING OVER 4" COMPACTED CRUSHED ROCK OVER 16" CEMENT TREATED SOIL

TRAILER PARKING AREAS:

3 5" A.C. PAVING OVER 4" COMPACTED CRUSHED ROCK OVER 16" CEMENT TREATED SOIL

TRUCK AISLES AND MANUEVERING AREAS:

4 6 1/2" A.C. PAVING OVER 4 1/2" COMPACTED CRUSHED ROCK OVER 16" CEMENT TREATED SOIL

G:\Acad\2019\20190311\0-Drawing\100 G1.0 Site Plan.dwg 11/4/2021 10:00 AM

VLMK
ENGINEERING + DESIGN
3933 S Kelly Avenue
Portland, Oregon 97239
503.222.4453
VLMK.COM

SPECHT
10260 SW Greenburg Road
Suite 170
Portland, Oregon 97223
503.646.2202
SPECHTPROP.COM

PROJECT NAME

TUALATIN
LOGISTICS PARK

20400 SW Cipole Road
TUALATIN, OREGON 97062

REVISIONS

	DATE	DESCRIPTION

Preliminary Pricing Set - 11 / 03 / 21

DATE	APRIL 2021
SCALE	AS NOTED
PROJ. NO.	20190311
DRAWN	KAN
CHECKED	HGK

SITE PLAN

G1.0

NOT FOR CONSTRUCTION

TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition

Land Use: General Light Industrial
Land Use Code: 110
Land Use Subcategory: All Sites
Setting/Location General Urban/Suburban
Variable: 1000 SF GFA
Trip Type: Vehicle
Variable Quantity: 452.795

WARNING: Variable Quantity is greater than Maximum Survey Size for Peak Hours

AM PEAK HOUR

Trip Rate: 0.74

	Enter	Exit	Total
Directional Split	88%	12%	
Trip Ends	295	40	335

PM PEAK HOUR

Trip Rate: 0.65

	Enter	Exit	Total
Directional Split	14%	86%	
Trip Ends	41	253	294

WEEKDAY

Trip Rate: 4.87

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	1,103	1,103	2,206

SATURDAY

Trip Rate: 0.69

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	156	156	312

TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition

Land Use: General Light Industrial
Land Use Code: 110
Land Use Subcategory: All Sites
Setting/Location General Urban/Suburban
Variable: 1000 SF GFA
Trip Type: Truck
Variable Quantity: 452.795

WARNING: Variable Quantity is greater than Maximum Survey Size for Peak Hours

AM PEAK HOUR

Trip Rate: 0.01

	Enter	Exit	Total
Directional Split	60%	40%	
Trip Ends	3	2	5

PM PEAK HOUR

Trip Rate: 0.01

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	3	3	5

WEEKDAY

Trip Rate: 0.25

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	57	57	114

SATURDAY

Trip Rate: 0

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	NA	NA	NA

TRIP GENERATION CALCULATIONS

Source: Trip Generation Manual, 11th Edition

Land Use: Miniature Golf Course
Land Use Code: 431
Setting/Location General Urban/Suburban
Variable: Holes
Variable Value: 18

PM PEAK HOUR

Trip Rate: 0.33

	Enter	Exit	Total
Directional Distribution	33%	67%	
Trip Ends	2	4	6

Note: Only one survey sample

WEEKDAY

Trip Rate: 3.30

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	30	30	60

Note: Weekday rate assumed to be ten times the PM peak hour.

TRIP GENERATION CALCULATIONS

Source: Trip Generation Manual, 11th Edition

Land Use: Golf Driving Range
Land Use Code: 432
Setting/Location General Urban/Suburban
Variable: Tees/Driving Positions
Variable Value: 43

AM PEAK HOUR

Trip Rate: 0.4

	Enter	Exit	Total
Directional Distribution	61%	39%	
Trip Ends	10	7	17

Note: Only one survey sample

PM PEAK HOUR

Trip Rate: 1.25

	Enter	Exit	Total
Directional Distribution	45%	55%	
Trip Ends	24	30	54

WEEKDAY

Trip Rate: 13.65

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	293	293	586

Note: Only one survey sample

SATURDAY

Trip Rate: 17.68

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	380	380	760

Note: Only one survey sample

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Memorandum

To: **Mike McCarthy, Tony Doran, City of Tualatin**
Naomi Vogel, Jinde Zhu, Washington County

Copy: **Peter Skei, Specht Properties, Inc.**
Havlin Kemp, VLMK Engineering + Design

From: **Jennifer Danziger, PE**

Date: **November 18, 2021**

Subject: **Tualatin Logistics Traffic Study Scoping Memorandum – Revision 2**

This memorandum proposes a revised scope of work for the transportation impact analysis (TIA) of the 452,795-square-foot (SF) industrial project in Tualatin, Oregon.

Project Description

The proposed Tualatin Logistics Park site includes the redevelopment of the existing Tualatin Island Greens driving range (43 tees) and miniature golf course (18 holes) to a 452,795 square-foot warehouse. The site is located east of SW Cipole Road, west of SW 124th Avenue, and north and south of other commercial warehouse properties. The site will take access via the existing driveway along SW Cipole Road and a second access along SW 124th Avenue.

Two access scenarios on SW 124th Avenue will be evaluated as part of the TIA. One scenario will consider an access alignment at the southeast corner of the site, opposite SW Cimino Street as indicated in Tualatin Development Code. A second scenario will consider a right-in/right-out access at the northeast corner of the site. This second scenario is proposed as an alternative to the southeast corner access for several reasons. Significant grade differences will exist between the site and SW 124th Avenue. The curb cut on SW 124th Avenue spans the tax lots of the subject property and the property to the south (Columbia Corrugated Box). Providing access to both tax lots from SW 124th significantly impacts what can be developed on the southeast corner of the site.

Trip Generation

To estimate trips that will be generated by the redevelopment, trip rates from the *Trip Generation Manual*[1] were used based on the number of existing driving range tees, number of golf holes, and the proposed square footage.

1 Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, 2021.

Existing Site Development

The site is currently occupied by Tualatin Island Greens Golf Center and Grill. The golf facilities include a driving range and an 18-hole miniature golf course. The driving range includes 43 tees with synthetic mats for year-round use and additional grass tees available in the spring and summer. These facilities are open from 9:00 AM to 8:00 PM, September through March, and from 9:00 AM to 9:00 PM, April through August. The site also includes a restaurant with hours from 10:30 to 6:30 PM, September through March, and 10:30 AM to 7:30 PM, April 9:00 AM to 8:00 PM from September to March through August.

Trip generation was estimated based on the golf facilities; the restaurant is assumed to be used primarily by the golfing customers. Trip data for both types of golf facilities are limited; therefore, the following assumptions were made to estimate trips for the site:

- The trip data for the miniature golf land use code (ITE LUC 431) is limited to a single survey during the weekday PM peak period. No activity is assumed during the morning peak hour. The weekday PM peak hour trip rate is very low and may vary over the year with more activity during summer months and less during winter months. However, we suggest that credit for the facility should be included in the trip generation for the site. No daily data is available; therefore, the weekday rate was assumed to be 10 times the daily rate.
- The trip data for a driving range (ITE LUC 432) is limited to a single survey for the morning and weekday periods but has seven surveys for the weekday PM peak period. While the driving range does not open until 9:00 AM, retail and maintenance staff need to be on site before 9:00 AM. Two of the ITE survey sites also had staff data available with counts of 14 and 15 employees. Additionally, food service deliveries also typically occur in the morning. Therefore, the morning peak hour trips were included in the trip generation estimates. Trip estimates were prepared based on the 43 year-round tees.

One of the concerns that was raised about prior trip generation estimates is that the golf site peaks may occur later than the peaks of the street traffic or the peaks of industrial development. To acknowledge this may be the case for the traffic study, a 20 percent discount in peak hour trips is proposed.

The resulting trip generation is presented in Table 1.

Table 1: Trip Generation Summary – Existing Land Uses

Land Use	ITE Code	Size	AM Peak Hour			PM Peak Hour			Weekday Total
			In	Out	Total	In	Out	Total	
Driving Range	432	43 Tees	10	7	17	24	30	54	586
Miniature Golf	431	18 Holes	0	0	0	2	4	6	60
20% Discount for Offset Peak Hour			*-2*	*-1*	*-3*	*-5*	*-7*	*-12*	*-130*
Total			8	6	14	21	27	48	516

Proposed Site Development

Specht Properties, Inc. proposes to redevelop the site with a single industrial building enclosing 452,795 SF of gross floor area with 115 dock doors and 4 grade doors. As proposed, the site includes 197 parking spaces and 133 trailer parking spaces. Some accessory office space is included in the building layout.

The proposed development is speculative with flexible space that could accommodate a single tenant or multiple tenants. Specht has developed similar properties in the Portland metropolitan area. The locations, sizes, and tenant descriptions are attached to this memorandum, each with a recent photo of the site. The sites range from a single 290,000-SF building to three buildings totalling more than 733,000 SF. Only two of the sites have any manufacturing tenants and a portion of those operations are warehousing and distribution. Of the total 1.87 million SF of space, approximately 18 percent is leased to tenants whose operations include manufacturing.

A range of potential industrial land use assumptions was considered to estimate the trip generation for the site. Trip estimates were lowest for ITE LUC 154, High-Cube Transload and Short-Term Storage Warehouse, and highest for LUC 110, General Light Industrial, and LUC 156, High-Cube Parcel Hub Warehouse. Table 2 summarizes the total and truck trip generation for the range of industrial uses.

Table 2: Trip Generation Summary – Potential Industrial Land Uses (452,795 SF)

Land Use	ITE Code	AM Peak Hour			PM Peak Hour			Weekday Total	Employee Equivalent*
		In	Out	Total	In	Out	Total		
Total Vehicle Trips									
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
Truck Trips									
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	-

** Estimated as average number of employees needed to generate the equivalent number of vehicle trips based on KSF*

While the original traffic scoping suggested a mix of 85 percent warehouse and 15 percent manufacturing based on the available site parking, this memorandum suggests using the much more conservative assumption of general light industrial. A parcel hub warehouse would generate the same number of trips but with a substantially different directional distribution from other industrial uses. The truck trip generation of general light

industrial is slightly lower than other uses; however, the variation in the number of trucks generated during the peak hours for the industrial uses is small and the percentage of overall site-generated traffic is very low.

Total Site Trip Generation

Table 3 summarizes the estimated net trip generation of the site with the land use assumptions discussed above.

Table 3: Trip Generation Summary (Warehousing)

Land Use	AM Peak Hour			PM Peak Hour			Weekday Total
	In	Out	Total	In	Out	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

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 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 124th Avenue

Trip distribution at the site accesses will depend on the location and configuration of the accesses. With the first scenario assuming an access on SW 124th Avenue at the southeast corner of the site, the split of traffic between the two accesses is assumed to be about 50 percent at each access. With the second scenario assuming a limited access on SW 124th 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 124th Avenue.

Three figures displaying the proposed distribution are attached to this memorandum. One figure shows the distribution for the first access scenario. Because of the limited access (right-in/right-out on 124th Avenue) with the second access scenario, distribution in the immediate area of the site will differ for inbound and outbound trips. Thus, two figures show the distribution with the second access scenario, one for inbound and one for outbound traffic.

Study Intersections

The proposed project lies within the City of Tualatin's planning area boundary, but traffic is also anticipated to affect Washington County roadway facilities. Tualatin Development Code (TDC) 74.440 does not establish criteria for determining the study area traffic studies; the need for a traffic study and the study area are determined by city staff. However, staff have provided a general guideline of 60 peak hour trips and 500 daily trips through an intersection. Washington County (Resolution & Order 86-95) defines the impact area for developments as "those road links where site-generated traffic equals or exceeds 10% of existing average daily traffic" (ADT).

Using the trip generation and distribution and the criteria discussed above, the following list of intersections are proposed for the study area:

1. SW Tualatin-Sherwood Road & SW Oregon Street
2. SW Tualatin-Sherwood Road & SW Cipole Road
3. SW Tualatin-Sherwood Road & SW 124th Avenue
4. SW Tualatin-Sherwood Road & SW 120th Avenue
5. SW Tualatin-Sherwood Road & SW 115th Avenue
6. SW Tualatin-Sherwood Road & SW Avery Street/112th Avenue
7. SW Cipole Road & Site Access
8. SW Cipole Road & SW Herman Road
9. SW 124th Avenue & SW Cimino Street/Site Access
10. SW 124th Avenue & SW Myslony Road
11. SW 124th Avenue & SW Herman Road

The specific calculations for each access scenario are attached to this memorandum.

Existing Traffic Volumes

The ongoing pandemic has initiated a significant decrease in traffic due to policies on social distancing that have closed or limited business operations and reduced commuting as many people work from home. Although some restrictions have been lifted and schools are open, adjustments are still needed to reflect "normal" traffic conditions.

Historical data is available at most of the study area intersections, as summarized in Table 4. These counts were collected for a variety of TIAs that have been prepared in recent years. Where historical counts are not available, new count data was or will be collected in 2021.

Table 4: Historical Counts and Proposed Adjustment Methodology

Intersection	Historical Counts	New Counts	Adjustment Method Proposed
1. SW Tualatin-Sherwood Rd & SW Oregon St	2/13/2019	-	Used 2021 Background Traffic Estimates from the T-S Corporate Park TIA
2. SW Tualatin-Sherwood Rd & SW Cipole Rd	2/13/2019 10/23/2018	-	Used 2021 Background Traffic Estimates from the T-S Corporate Park TIA
3. SW Tualatin-Sherwood Rd & SW 124th Ave	2/13/2019 2/6&7/2019 10/23/2018	11/17/2021	Used 2021 Background Traffic Estimates from the T-S Corporate Park TIA
4. SW Tualatin-Sherwood Rd & SW 120th Ave	2/13/2019 2/6&7/2019 10/23/2018	-	Used 2021 Background Traffic Estimates from the T-S Corporate Park TIA
5. SW Tualatin-Sherwood Rd & SW 115th Ave	2/13/2019 2/6&7/2019 10/23/2018	-	Used 2021 Background Traffic Estimates from the T-S Corporate Park TIA
6. SW Tualatin-Sherwood Rd & SW Avery St/112th Ave	2/13/2019 2/6&7/2019 10/23/2018	-	Used 2021 Background Traffic Estimates from the T-S Corporate Park TIA
7. SW Cipole Rd & Site Access	-	11/17/2021	Compare SW Cipole Rd volumes with Intersection 2 and develop adjustment factor
8. SW Cipole Rd & SW Herman Rd	-	11/17/2021	Compare SW Herman Rd volumes with Intersection 11 and develop adjustment factor
9. SW 124th Ave & SW Cimino Street/Site Access	7/12/2017	6/15/2021	Compare SW 124th Ave volumes with Intersection 3 and develop adjustment factor
10. SW 124th Ave & SW Myslony Rd	7/10/2018	-	Adjust volumes consistently with the methodology from T-S Corporate Park TIA
11. SW 124th Ave & SW Herman Rd	8/16/2018	-	Adjust volumes consistently with the methodology from T-S Corporate Park TIA

The mostly recent historical counts were collected as part of the approved TIA for the T-S Corporate Park located in the southwest corner of the SW Tualatin-Sherwood Road intersection with SW 124th Avenue. That TIA estimated 2021 background conditions by applying a 1.5 percent annual growth rate and adding trips generated by the following approved projects:

- Parkway Village South (SW Langer Farms Parkway)
- Spring Creek Industrial
- Four-S Corporate Warehouse
- IPT Tualatin
- Majestic SW 115th Avenue Industrial Park
- Hedges C Building

- Tualatin Business Park

We propose using these adjusted volumes for the intersections along SW Tualatin-Sherwood Road and following the same methodology for the intersections with historical counts available.

For intersections where historical traffic counts are not available, we propose to compare the 2021 count volumes with adjusted 2021 volumes and develop adjustment factors to account for the pandemic impacts.

Traffic Volume Projections

To develop future volumes, we propose using a background growth rate of 2 percent per year plus the traffic volumes from approved projects. The projects to be included in the background condition are:

- T-S Corporate Park – this project is planned to be fully operational by the end of 2021. The trip assignment with the extension of SW Cipole Road into the site will be used.
- PGE Integrated Operations Center – this project is planned to be fully operational by 2022.

Although the buildout of the proposed project is targeted for the summer of 2023, an analysis year of 2024 was evaluated to correspond with completion of the improvements along SW Tualatin-Sherwood Road.

The Tualatin-Sherwood Road expansion project is a Washington County Capital Improvement Program (CIP) Project intends to expand the roadway to five lanes, improve bicycle and pedestrian facilities, improve storm drainage, and install street lighting. This project is currently applying for permits and starting the right-of-way acquisition process. Construction is planned to break ground late Summer 2021, with a target completion of the nearby roadway segment in late 2024. Thus, this project was assumed as part of the Background conditions. The most recent lane configurations for this project have been obtained from Washington County's design team.

Summary of Scoping Proposal

Please review our proposed scope of analysis and confirm the following:

- Trip generation using general light industrial for the proposal and the existing golf use is acceptable.
- Our approach to developing normalized traffic volumes is acceptable.
- Our background growth rate of 2 percent per year is acceptable.

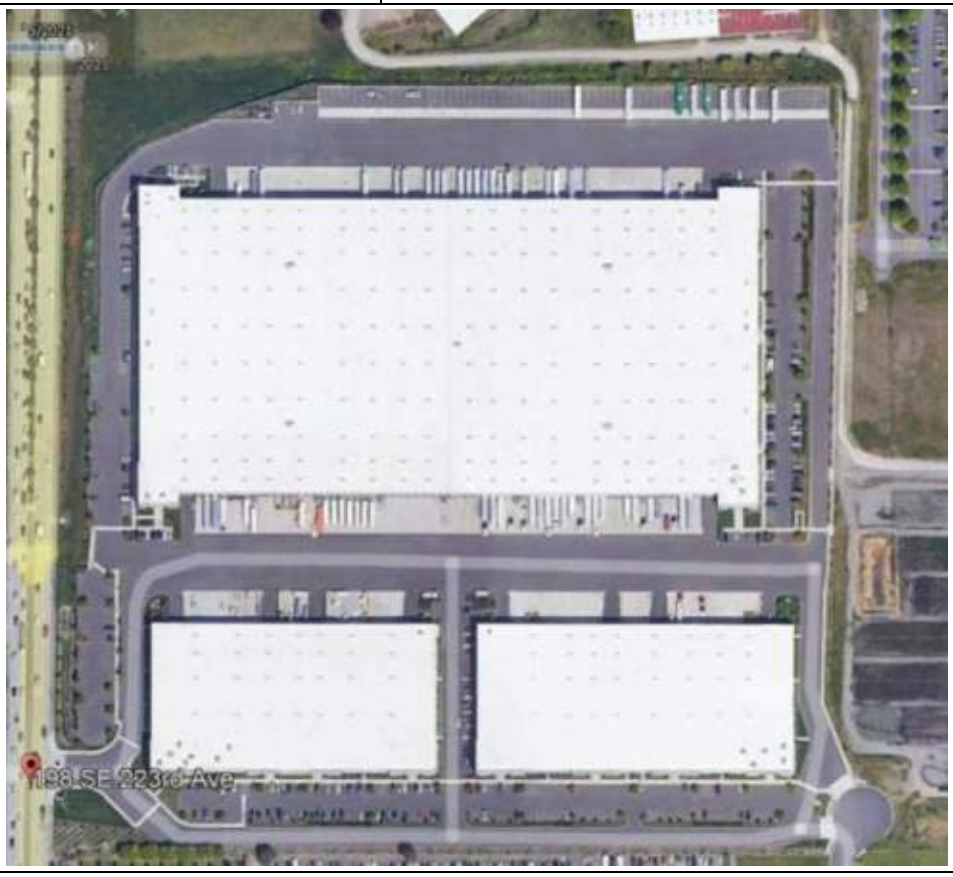
Note, the trip distribution has already been confirmed as acceptable by email.

Portside Logistics Park - 2600 NW Lower River Road, Vancouver, Washington	
Project Square Footage ("SF"): 289,737 SF Year Completed: 2020 Project Type: Speculative Industrial Employee Parking Spaces: ~207 Current Occupied Space: 100%	Tenant Mix: • Nuna ○ Company Type/Use: Warehouse/distribution with a substantial office component. ○ Lease SF: 289,737 SF. ○ % of Overall Project SF: 100%.

© Google Earth

Vista Logistics Park - 32-198 SE 223rd Ave, Gresham, Oregon	

Project Square Footage ("SF"): 733,232 SF (via three buildings)
Year Completed: 2017
Project Type: Speculative Industrial
Employee Parking Spaces: ~443
Current Occupied Space: 73%
 	
© Google Earth
	Tenant Mix:
	• Imperial Brown, Inc.
	  ○ Company Type/Use: Design and manufacturing of walk-in coolers and freezers. Headquarter office located in same facility.
	  ○ Lease SF: ~113,144 SF (of which ~8,000 SF is office).
	  ○ % of Overall Project SF: ~15%.
	• Medline Industries, Inc.
	  ○ Company Type/Use: Warehousing, distribution, and packaging of medical supply products.
	  ○ Lease SF: ~297,501 SF (of which ~5k SF is office).
	  ○ % of Overall Project SF: ~41%.
	• Samuel, Son & Co.
	  ○ Company Type/Use: Integrated metal manufacturing, processing, and distribution services.
	  ○ Lease SF: ~125,624 (of which ~5,500 is office).
	  ○ % of Overall Project SF: ~17%.
	• Unoccupied at time of property sale
	  ○ Lease SF: 196,963



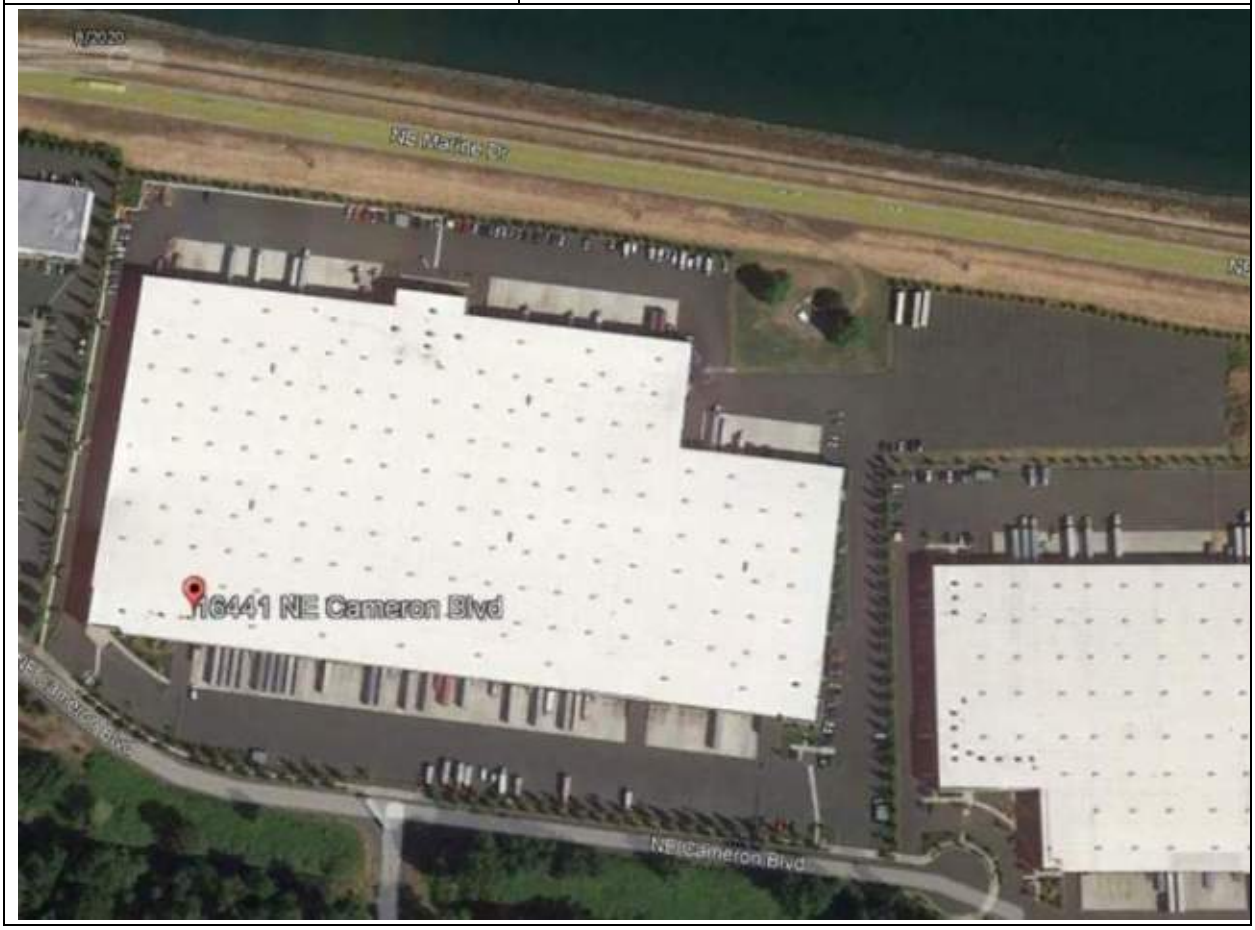
Portside Industrial Park - 3665 NW 32nd Avenue, Vancouver, Washington	

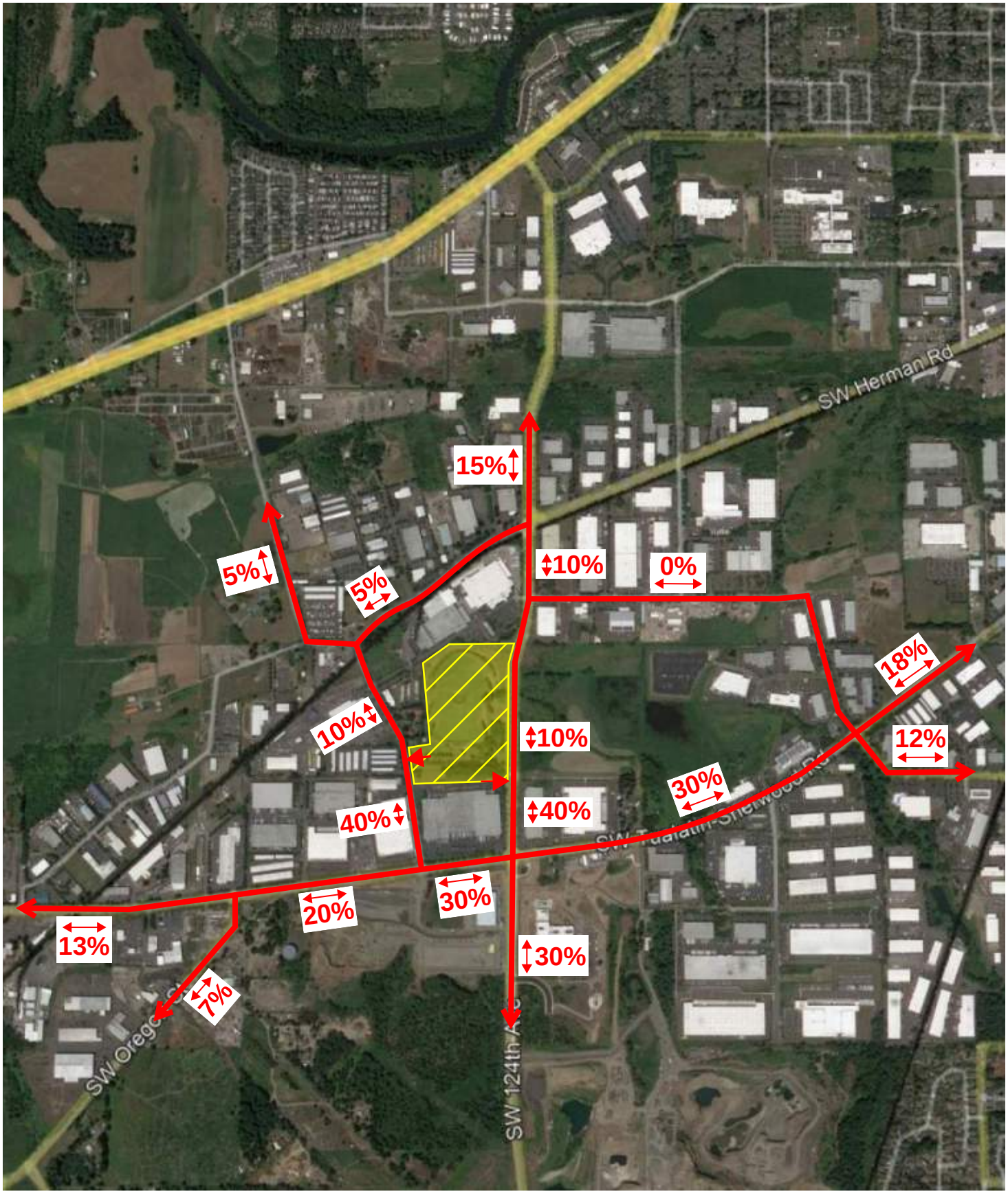
Project Square Footage ("SF"): 352,560 SF (via two buildings)
Year Completed: 2017
Project Type: Speculative Industrial
Employee Parking Spaces: ~264
Current Occupied Space: 100%
	Tenant Mix:
	• Express Messenger Systems, Inc., DBA OnTrac.
	  ○ Company Type/Use: Parcel logistics warehousing and distribution.
	  ○ Lease SF: ~162,240 SF (of which ~9,343 SF is office).
	  ○ % of Overall Project SF: ~46%.
	• Laclede Chain Manufacturing Company
	  ○ Company Type/Use: Chain manufacturer and distribution/supplier with limited on-site assembly/repair; primarily warehouse/distribution.
	  ○ Lease SF: ~94,281 SF (of which ~3,940k SF is office).
	  ○ % of Overall Project SF: ~27%.
	• Sunlight Supply, Inc.
	  ○ Company Type/Use: Warehousing and storage of specialty gardening supplies.
	  ○ Lease SF: ~95,265 (of which ~1,609 is office).
	  ○ % of Overall Project SF: ~27%.

© Google Earth

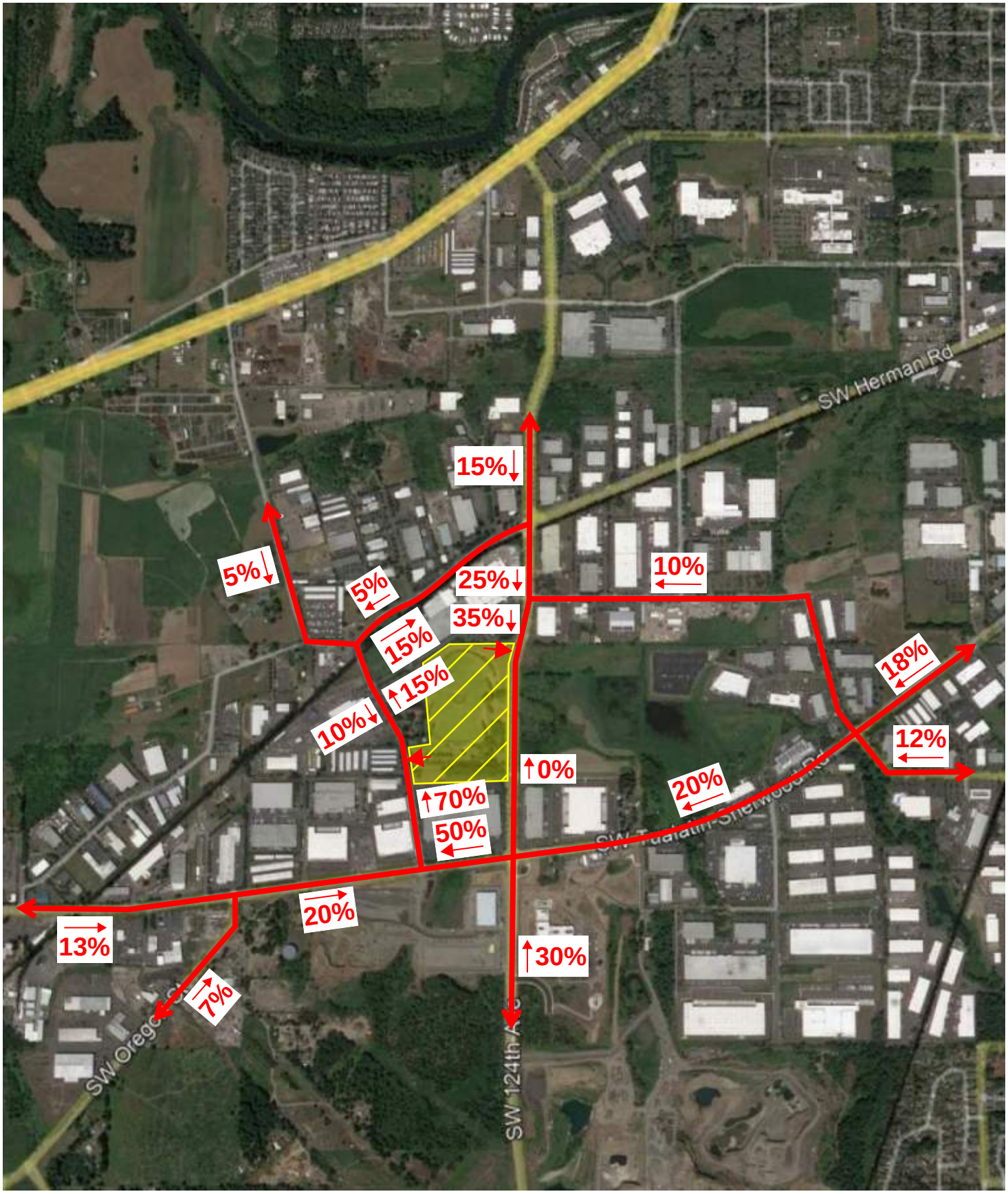
Interstate Crossroads Distribution Center - 16441 NE Cameron Blvd, Portland, Oregon	

Project Square Footage ("SF"): 492,554 SF
Year Completed: 2015
Project Type: Speculative Industrial
Employee Parking Spaces: ~157
Current Occupied Space: 100%
 	
© Google Earth
	Tenant Mix:
	• Keystone Automotive Industries, Inc./LKQ Corporation
	  ○ Company Type/Use: Storage and Distribution of auto and truck parts.
	  ○ Lease SF: 229,141 SF (of which ~10,212 is office)
	  ○ % of Overall Project SF: 47%
	• Staples Contract & Commercial, Inc.
	  ○ Company Type/Use: Storage and distribution of office products.
	  ○ Lease SF: 263,413 SF
	  ○ % of Overall Project SF: 53%.

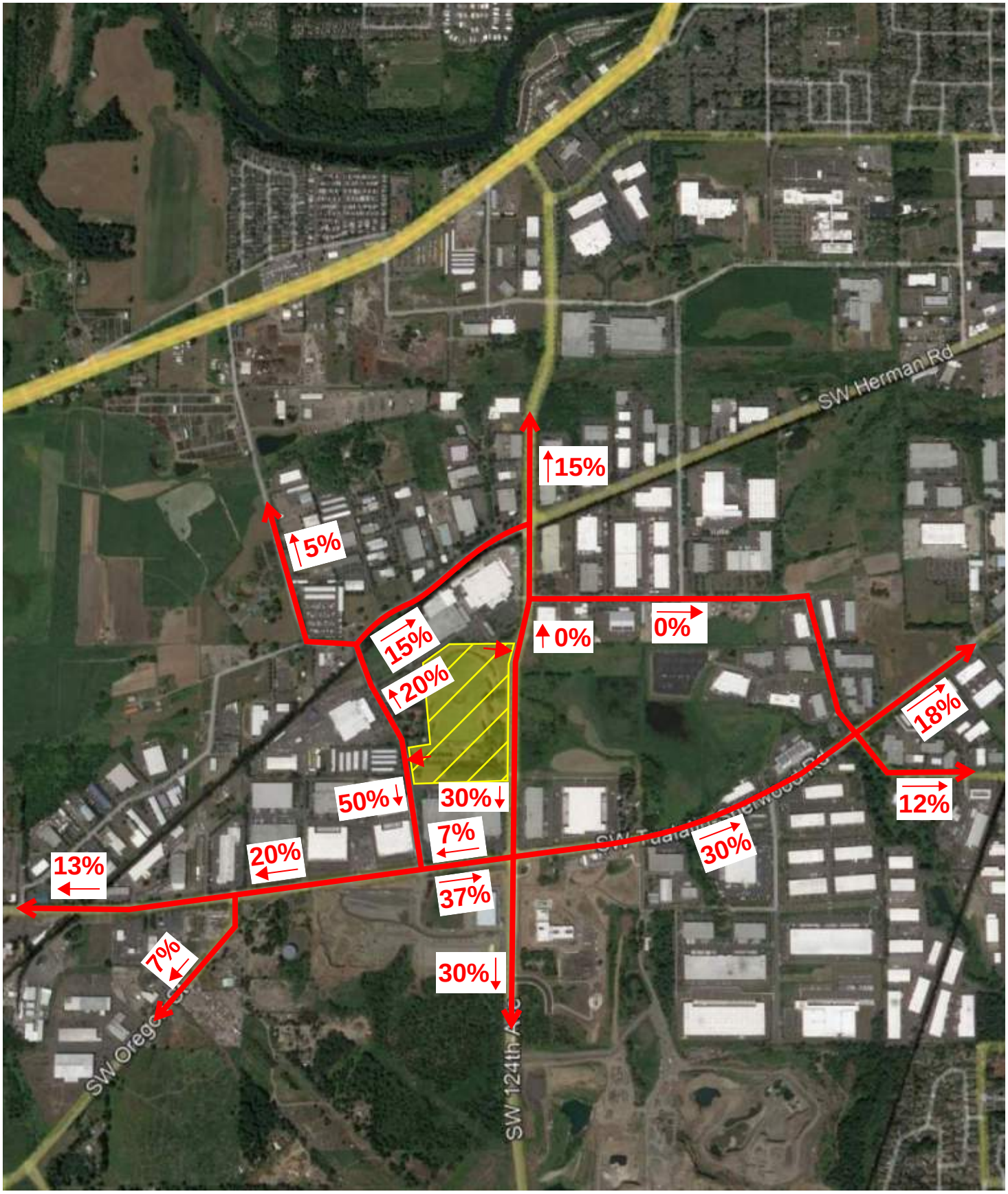




Tualatin Logistics Park
Proposed Distribution
Access Scenario 1



Tualatin Logistics Park
Proposed Distribution
Access Scenario 2 - Inbound



Tualatin Logistics Park
Proposed Distribution
Access Scenario 2 - Outbound

Access Scenario 1 (Southeast at 124th)	Distribution		AM Peak			PM Peak			Daily		
	In	Out	287	34	321	20	227	247	845	845	1,690
SW Tualatin-Sherwood Rd & SW Oregon St	20%	20%	57	7	64	4	45	49	169	169	338
SW Tualatin-Sherwood Rd & SW Cipole Rd	60%	60%	172	20	192	12	136	148	507	507	1,014
SW Tualatin-Sherwood Rd & SW 124th Ave	70%	70%	201	24	225	14	159	173	592	592	1,184
SW Tualatin-Sherwood Rd & SW 120th Ave	30%	30%	86	10	96	6	68	74	254	254	508
SW Tualatin-Sherwood Rd & SW 115th Ave	30%	30%	86	10	96	6	68	74	254	254	508
SW Tualatin-Sherwood Rd & SW Avery St/112th Ave	30%	30%	86	10	96	6	68	74	254	254	508
SW Cipole Rd & SW Herman Rd	10%	10%	29	3	32	2	23	25	85	85	170
SW 124th Ave & SW Myslony Rd	10%	10%	29	3	32	2	23	25	85	85	170
SW 124th Ave & SW Herman Rd	15%	15%	43	5	48	3	34	37	127	127	254

Access Scenario 1 (Southeast at 124th)	Distribution		AM Peak			PM Peak			Daily			2019	2019	%
	In	Out	287	34	321	20	227	247	845	845	1,690	WaCo	OTMS	AADT
SW Tualatin-Sherwood Rd														
West of SW Oregon St	13%	13%	37	4	41	3	30	33	110	110	220		23,746	1%
SW Oregon St to SW Cipole Rd	20%	20%	57	7	64	4	45	49	169	169	338			
SW Cipole Rd to SW 124th Ave	30%	30%	86	10	96	6	68	74	254	254	508		22,407	2%
SW 124th Ave to SW 120th Ave	30%	30%	86	10	96	6	68	74	254	254	508		29,914	2%
SW 120th Ave to SW 115th Ave	30%	30%	86	10	96	6	68	74	254	254	508			
SW 115th Ave to SW Avery/112th Ave	30%	30%	86	10	96	6	68	74	254	254	508			
East of SW Avery/112th Ave	18%	18%	52	6	58	4	41	45	152	152	304			
SW Oregon St														
South of SW Tualatin-Sherwood Rd	7%	7%	20	2	22	1	16	17	59	59	118	9,006		1%
SW Cipole Rd														
SW Tualatin-Sherwood Rd-Site Access	40%	40%	115	14	129	8	91	99	338	338	676	3,464		20%
Site Access-SW Herman Rd	10%	10%	29	3	32	2	23	25	85	85	170		4,564	4%
North of SW Herman Rd	5%	5%	14	2	16	1	11	12	42	42	84			
SW 124th Avenue														
South of SW Tualatin-Sherwood Rd	30%	30%	86	10	96	6	68	74	254	254	508	7,761		7%
SW Tualatin-Sherwood Rd-Site Access	40%	40%	115	14	129	8	91	99	338	338	676			
Site Access-SW Myslony Rd	10%	10%	29	3	32	2	23	25	85	85	170			
SW Myslony Rd-SW Herman Rd	10%	10%	29	3	32	2	23	25	85	85	170		6,073	3%
North of SW Herman Rd	15%	15%	43	5	48	3	34	37	127	127	254			
SW Avery St/112th Ave														
South of SW Tualatin-Sherwood Rd	12%	12%	34	4	38	2	27	29	101	101	202			
North of SW Tualatin-Sherwood Rd	0%	0%	0	0	0	0	0	0	0	0	0			

Access Scenario 2 (Northeast RIRO at 124th)	Distribution		AM Peak			PM Peak			Daily		
	In	Out	287	34	321	20	227	247	845	845	1,690
SW Tualatin-Sherwood Rd & SW Oregon St	20%	20%	57	7	64	4	45	49	169	169	338
SW Tualatin-Sherwood Rd & SW Cipole Rd	70%	57%	201	19	220	14	129	143	592	482	1,074
SW Tualatin-Sherwood Rd & SW 124th Ave	50%	67%	144	23	167	10	152	162	423	566	989
SW Tualatin-Sherwood Rd & SW 120th Ave	20%	30%	57	10	67	4	68	72	169	254	423
SW Tualatin-Sherwood Rd & SW 115th Ave	20%	30%	57	10	67	4	68	72	169	254	423
SW Tualatin-Sherwood Rd & SW Avery St/112th Ave	30%	30%	86	10	96	6	68	74	254	254	508
SW Cipole Rd & SW Herman Rd	25%	20%	72	7	79	5	45	50	211	169	380
SW 124th Ave & SW Myslony Rd	35%	0%	100	0	100	7	0	7	296	0	296
SW 124th Ave & SW Herman Rd	25%	15%	72	5	77	5	34	39	211	127	338

Access Scenario 2 (Northeast RIRO at 124th)	Distribution		AM Peak			PM Peak			Daily			2019	2019	%
	In	Out	287	34	321	20	227	247	845	845	1,690	WaCo	OTMS	AADT
SW Tualatin-Sherwood Rd														
West of SW Oregon St	13%	13%	37	4	41	3	30	33	110	110	220		23,746	1%
SW Oregon St to SW Cipole Rd	20%	20%	57	7	64	4	45	49	169	169	338			
SW Cipole Rd to SW 124th Ave	50%	42%	144	14	158	10	95	105	423	355	778		22,407	3%
SW 124th Ave to SW 120th Ave	20%	30%	57	10	67	4	68	72	169	254	423		29,914	1%
SW 120th Ave to SW 115th Ave	20%	30%	57	10	67	4	68	72	169	254	423			
SW 115th Ave to SW Avery/112th Ave	20%	30%	57	10	67	4	68	72	169	254	423			
East of SW Avery/112th Ave	18%	18%	52	6	58	4	41	45	152	152	304			
SW Oregon St														
South of SW Tualatin-Sherwood Rd	7%	7%	20	2	22	1	16	17	59	59	118	9,006		1%
SW Cipole Rd														
SW Tualatin-Sherwood Rd-Site Access	70%	50%	201	17	218	14	114	128	592	423	1,015	3,464		29%
Site Access-SW Herman Rd	25%	20%	72	7	79	5	45	50	211	169	380		4,564	8%
North of SW Herman Rd	5%	5%	14	2	16	1	11	12	42	42	84			
SW 124th Avenue														
South of SW Tualatin-Sherwood Rd	30%	30%	86	10	96	6	68	74	254	254	508	7,761		7%
SW Tualatin-Sherwood Rd-Site Access	0%	30%	0	10	10	0	68	68	0	254	254			
Site Access-SW Myslony Rd	35%	0%	100	0	100	7	0	7	296	0	296			
SW Myslony Rd-SW Herman Rd	25%	0%	72	0	72	5	0	5	211	0	211		6,073	3%
North of SW Herman Rd	15%	15%	43	5	48	3	34	37	127	127	254			
SW Avery St/112th Ave														
South of SW Tualatin-Sherwood Rd	12%	12%	34	4	38	2	27	29	101	101	202			
North of SW Tualatin-Sherwood Rd	10%	0%	29	0	29	2	0	2	85	0	85			

Appendix B – Traffic Data

Turning Movement Counts

Speed Data

In-Process Projects

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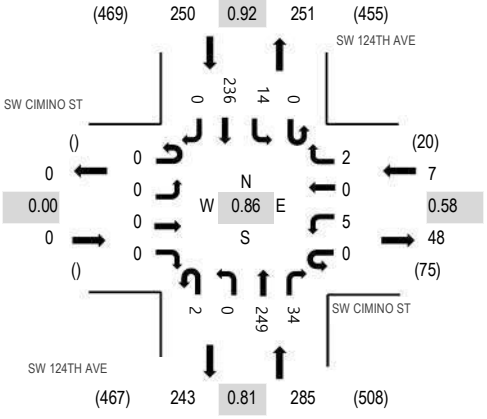
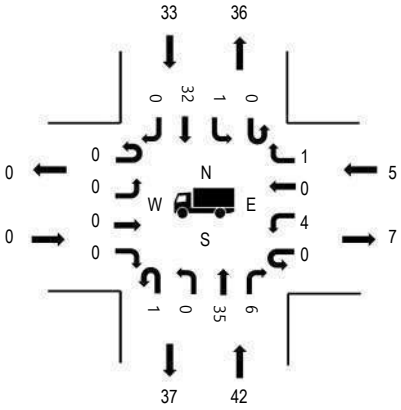
Location: 1 SW 124TH AVE & SW CIMINO ST AM
Date: Tuesday, June 15, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour

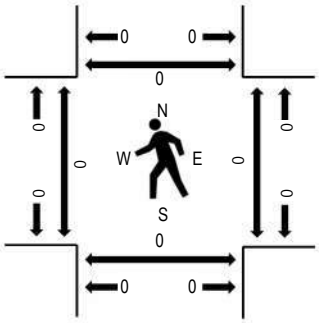
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	71.4%	0.58
NB	14.7%	0.81
SB	13.2%	0.92
All	14.8%	0.86

Traffic Counts - Motorized Vehicles

Interval Start Time	SW CIMINO ST Eastbound				SW CIMINO ST Westbound				SW 124TH AVE Northbound				SW 124TH AVE Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	19	1	0	2	17	0	39	542
7:05 AM	0	0	0	0	0	2	0	0	0	0	23	6	0	0	15	0	46	542
7:10 AM	0	0	0	0	0	0	0	0	0	0	14	1	0	1	22	0	38	538
7:15 AM	0	0	0	0	0	0	0	1	0	0	24	4	0	0	25	0	54	540
7:20 AM	0	0	0	0	0	1	0	0	0	0	11	0	0	0	19	0	31	530
7:25 AM	0	0	0	0	0	0	0	0	0	0	22	1	0	1	12	0	36	538
7:30 AM	0	0	0	0	0	0	0	0	2	0	19	5	0	2	22	0	50	542
7:35 AM	0	0	0	0	0	1	0	0	0	0	23	1	0	1	23	0	49	526
7:40 AM	0	0	0	0	0	0	0	0	0	0	19	2	0	0	21	0	42	513
7:45 AM	0	0	0	0	0	1	0	0	0	0	23	4	0	1	18	0	47	507
7:50 AM	0	0	0	0	0	0	0	0	0	0	20	2	0	5	23	0	50	504
7:55 AM	0	0	0	0	0	0	0	1	0	0	32	7	0	1	19	0	60	486
8:00 AM	0	0	0	0	0	0	0	0	0	0	15	3	0	0	21	0	39	455
8:05 AM	0	0	0	0	0	2	0	0	1	0	22	2	0	0	15	0	42	
8:10 AM	0	0	0	0	0	0	0	0	0	0	13	2	0	2	23	0	40	
8:15 AM	0	0	0	0	0	1	0	0	0	0	21	1	0	0	21	0	44	
8:20 AM	0	0	0	0	0	0	0	1	0	0	15	3	0	0	20	0	39	
8:25 AM	0	0	0	0	0	2	0	1	0	0	18	2	0	1	16	0	40	
8:30 AM	0	0	0	0	0	1	0	0	0	0	19	1	0	0	13	0	34	
8:35 AM	0	0	0	0	0	2	0	0	0	0	16	0	0	1	17	0	36	
8:40 AM	0	0	0	0	0	1	0	0	0	0	17	2	0	0	16	0	36	
8:45 AM	0	0	0	0	0	1	0	0	0	0	19	2	0	1	21	0	44	
8:50 AM	0	0	0	0	0	0	0	1	0	0	11	1	0	1	18	0	32	
8:55 AM	0	0	0	0	0	0	0	0	0	0	15	2	0	0	12	0	29	
Count Total	0	0	0	0	0	15	0	5	3	0	450	55	0	20	449	0	997	
Peak Hour	0	0	0	0	0	5	0	2	2	0	249	34	0	14	236	0	542	

Location: 1 SW 124TH AVE & SW CIMINO ST AM

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	2	0	2	4	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	4	2	1	7	7:05 AM	0	0	0	1	1	7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	2	2	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	6	0	1	7	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	0	1	5	6	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	4	0	4	8	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	5	0	6	11	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	2	0	3	5	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	5	0	1	6	7:40 AM	0	1	0	0	1	7:40 AM	0	0	0	0	0
7:45 AM	0	4	1	2	7	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	0	4	0	3	7	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	0	6	1	3	10	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	3	0	4	7	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	0	6	2	1	9	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	0	0	0	1	1	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	0	2	0	3	5	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	1	0	2	3	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	1	1	2	4	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	0	2	0	1	3	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	0	2	0	3	5	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	0	3	0	0	3	8:40 AM	0	0	0	0	0	8:40 AM	0	0	1	0	1
8:45 AM	0	2	0	2	4	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	2	0	3	5	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	0	4	0	1	5	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	0	70	8	56	134	Count Total	0	1	0	1	2	Count Total	0	0	1	0	1
Peak Hour	0	42	5	33	80	Peak Hour	0	1	0	1	2	Peak Hour	0	0	0	0	0

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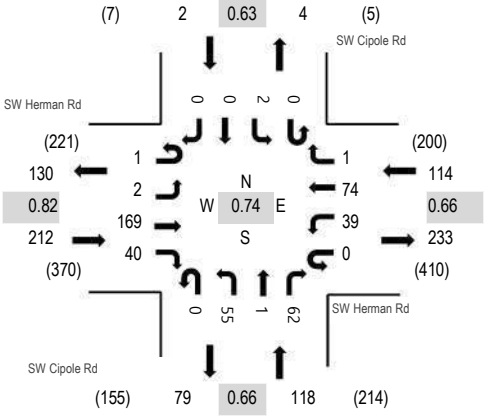
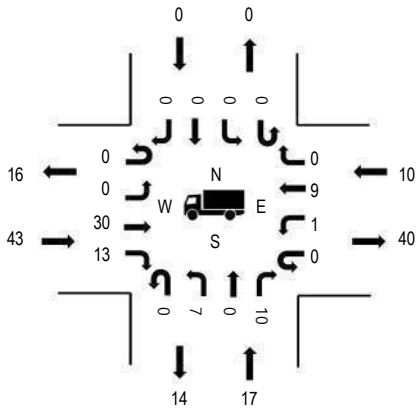
Location: 1 SW Cipole Rd & SW Herman Rd AM
Date: Thursday, November 18, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:40 AM - 07:55 AM

Peak Hour

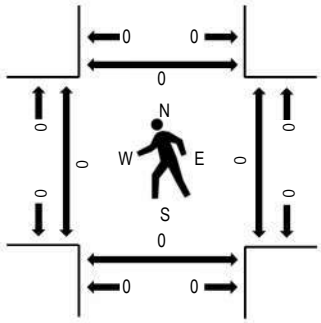
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	20.3%	0.82
WB	8.8%	0.66
NB	14.4%	0.66
SB	0.0%	0.63
All	15.7%	0.74

Traffic Counts - Motorized Vehicles

Interval Start Time	SW Herman Rd Eastbound				SW Herman Rd Westbound				SW Cipole Rd Northbound				SW Cipole Rd Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
7:00 AM	0	0	8	5	0	3	5	1	0	9	0	2	0	1	0	0	34	446
7:05 AM	1	0	16	3	0	3	0	0	0	5	0	5	0	0	0	0	33	441
7:10 AM	0	0	8	2	0	3	9	0	0	2	0	3	0	0	0	0	27	440
7:15 AM	0	1	12	7	0	1	3	0	0	3	1	5	0	0	0	0	33	439
7:20 AM	0	0	9	3	0	1	3	0	0	4	0	7	0	0	0	0	27	442
7:25 AM	0	1	15	0	0	2	6	0	0	3	0	2	0	1	0	0	30	439
7:30 AM	0	0	14	2	0	1	6	0	0	3	0	4	0	0	0	0	30	435
7:35 AM	0	0	16	4	0	6	8	0	0	4	0	9	0	0	0	0	47	428
7:40 AM	0	0	15	3	0	5	7	0	0	8	0	11	0	0	0	0	49	422
7:45 AM	0	0	19	3	0	3	10	0	0	4	0	9	0	0	0	0	48	396
7:50 AM	0	0	23	4	0	7	11	0	0	6	0	3	0	0	0	0	54	385
7:55 AM	0	0	14	4	0	4	6	0	0	4	0	2	0	0	0	0	34	350
8:00 AM	0	0	16	2	0	1	3	0	0	1	0	6	0	0	0	0	29	345
8:05 AM	0	0	11	4	0	3	1	0	0	4	0	8	0	1	0	0	32	
8:10 AM	0	0	10	2	0	0	9	0	0	3	0	1	0	1	0	0	26	
8:15 AM	0	0	19	7	0	2	1	1	0	1	0	5	0	0	0	0	36	
8:20 AM	0	0	10	2	0	3	4	0	0	0	0	4	0	1	0	0	24	
8:25 AM	0	0	7	1	0	2	7	0	0	3	0	6	0	0	0	0	26	
8:30 AM	0	0	6	3	0	3	2	0	0	3	0	6	0	0	0	0	23	
8:35 AM	0	0	9	7	0	5	6	0	0	5	0	8	0	0	1	0	41	
8:40 AM	0	0	7	6	0	1	4	0	0	3	0	2	0	0	0	0	23	
8:45 AM	0	0	9	8	0	3	6	0	0	3	0	7	0	1	0	0	37	
8:50 AM	0	0	4	3	0	2	5	0	0	4	0	1	0	0	0	0	19	
8:55 AM	0	0	4	1	0	4	8	0	0	5	0	7	0	0	0	0	29	
Count Total	1	2	281	86	0	68	130	2	0	90	1	123	0	6	1	0	791	
Peak Hour	1	2	169	40	0	39	74	1	0	55	1	62	0	2	0	0	446	

Location: 1 SW Cipole Rd & SW Herman Rd AM

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	5	1	0	0	6	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	4	1	0	0	5	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	4	1	5	0	10	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	7	2	1	0	10	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	2	1	1	0	4	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	3	0	0	0	3	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	2	1	1	0	4	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	6	2	0	0	8	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	2	5	0	0	7	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	2	1	1	0	4	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	4	1	1	0	6	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	2	1	0	0	3	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	1	0	0	1	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	4	0	0	0	4	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	3	0	0	0	3	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	1	1
8:20 AM	1	0	2	0	3	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	1	1	1	0	3	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	1	1	2	0	4	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	5	1	2	0	8	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	4	0	2	0	6	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	5	0	0	0	5	8:45 AM	1	0	0	0	1	8:45 AM	0	0	0	0	0
8:50 AM	1	0	1	0	2	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	2	0	3	0	5	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	70	21	23	0	114	Count Total	1	0	0	0	1	Count Total	0	0	0	1	1
Peak Hour	43	17	10	0	70	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

Location: 2 SW Cipole Rd & Tualatin Island Greens AM

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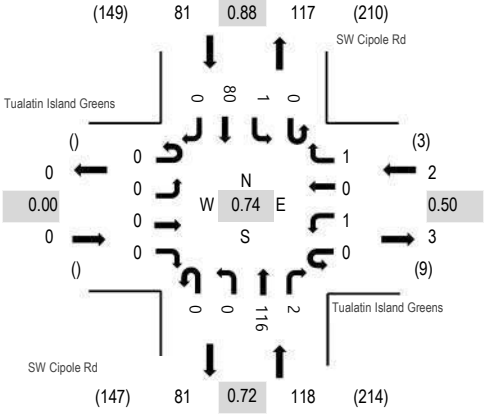
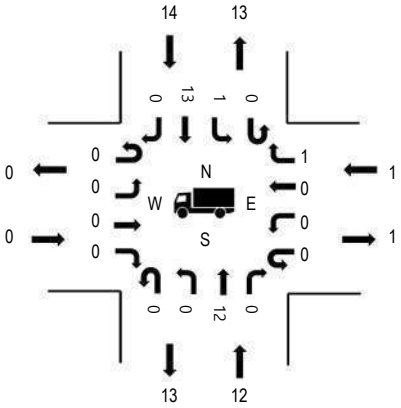
Location: 2 SW Cipole Rd & Tualatin Island Greens AM
Date: Thursday, November 18, 2021
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:40 AM - 07:55 AM

Peak Hour

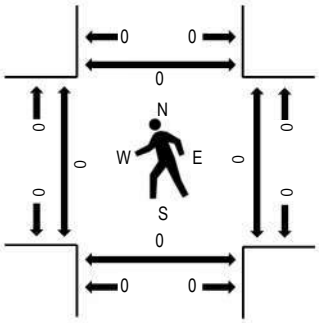
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	50.0%	0.50
NB	10.2%	0.72
SB	17.3%	0.88
All	13.4%	0.74

Traffic Counts - Motorized Vehicles

Interval Start Time	Tualatin Island Greens Eastbound				Tualatin Island Greens Westbound				SW Cipole Rd Northbound				SW Cipole Rd Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	0	0	0	0	0	0	0	0	0	11	0	0	0	7	0	18	195
7:05 AM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	5	0	14	192
7:10 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	3	0	9	199
7:15 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	14	193
7:20 AM	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11	199
7:25 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	10	199
7:30 AM	0	0	0	0	0	0	0	0	0	0	13	0	0	0	3	0	16	201
7:35 AM	0	0	0	0	0	0	0	0	0	0	11	2	0	0	8	0	21	200
7:40 AM	0	0	0	0	0	0	0	0	0	0	17	0	0	0	8	0	25	198
7:45 AM	0	0	0	0	0	1	0	0	0	0	13	0	0	0	6	0	20	182
7:50 AM	0	0	0	0	0	0	0	0	0	0	12	0	0	0	11	0	23	181
7:55 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	8	0	14	170
8:00 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	5	0	15	171
8:05 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	11	0	21	
8:10 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	
8:15 AM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	11	0	20	
8:20 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	1	5	0	11	
8:25 AM	0	0	0	0	0	0	0	1	0	0	7	0	0	0	4	0	12	
8:30 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	8	0	15	
8:35 AM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	10	0	19	
8:40 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	4	0	9	
8:45 AM	0	0	0	0	0	0	0	0	0	0	10	2	0	0	7	0	19	
8:50 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	12	
8:55 AM	0	0	0	0	0	0	0	1	0	0	5	2	0	2	5	0	15	
Count Total	0	0	0	0	0	1	0	2	0	0	208	6	0	3	146	0	366	
Peak Hour	0	0	0	0	0	1	0	1	0	0	116	2	0	1	80	0	201	

Location: 2 SW Cipole Rd & Tualatin Island Greens AM

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	0	3	3	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	1	0	2	3	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	2	2	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	1	0	3	4	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	0	0	1	1	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	2	0	0	2	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	1	0	2	3	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	2	0	0	2	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	0	0	0	1	1	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	0	2	0	1	3	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	0	0	0	1	1	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	1	0	1	2	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	0	0	0	4	4	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	0	2	0	1	3	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	1	0	2	3	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	1	1	1	3	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	0	0	0	1	1	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	0	1	0	2	3	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	0	0	0	1	1	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	0	1	0	0	1	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	1	0	0	1	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	0	0	1	1	2	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	0	17	2	30	49	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	0	12	1	14	27	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

Location: 3 SW 124th Ave & SW Tualatin Sherwood Rd AM

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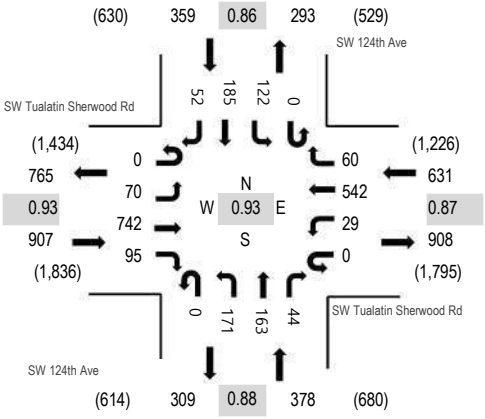
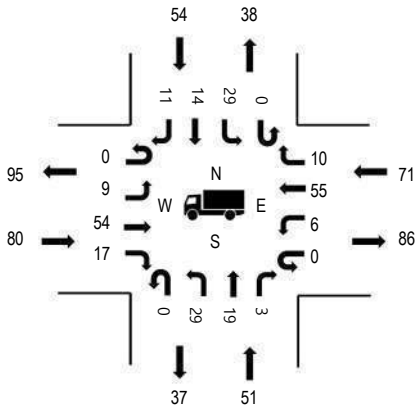
Location: 3 SW 124th Ave & SW Tualatin Sherwood Rd AM
Date: Thursday, November 18, 2021
Peak Hour: 07:35 AM - 08:35 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour

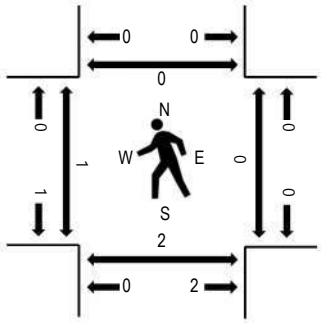
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	8.8%	0.93
WB	11.3%	0.87
NB	13.5%	0.88
SB	15.0%	0.86
All	11.3%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	SW Tualatin Sherwood Rd Eastbound				SW Tualatin Sherwood Rd Westbound				SW 124th Ave Northbound				SW 124th Ave Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
7:00 AM	0	3	65	11	0	3	40	2	0	13	19	3	0	3	14	4	180	2,191
7:05 AM	0	1	63	9	0	2	36	6	0	13	6	4	0	7	5	1	153	2,195
7:10 AM	0	3	61	12	0	6	47	6	0	7	7	3	0	7	15	2	176	2,216
7:15 AM	0	8	75	5	0	2	36	2	0	16	7	6	0	3	6	2	168	2,208
7:20 AM	0	7	78	6	0	0	37	6	0	5	2	2	0	2	7	2	154	2,230
7:25 AM	0	9	55	9	0	6	53	9	0	16	18	5	0	8	7	2	197	2,233
7:30 AM	0	3	62	7	0	4	47	2	0	15	11	8	0	1	14	3	177	2,266
7:35 AM	0	8	67	6	0	4	53	5	0	17	12	3	0	10	12	3	200	2,275
7:40 AM	0	7	75	1	0	2	36	3	0	14	13	5	0	3	9	5	173	2,263
7:45 AM	0	1	69	6	0	2	51	4	0	18	11	7	0	9	11	4	193	2,239
7:50 AM	0	7	62	5	0	1	51	4	0	19	18	4	0	11	18	6	206	2,231
7:55 AM	0	7	66	11	0	1	56	9	0	14	16	3	0	15	7	9	214	2,209
8:00 AM	0	6	63	12	0	2	36	6	0	8	18	4	0	10	16	3	184	2,181
8:05 AM	0	6	59	7	0	2	46	0	0	10	12	6	0	9	14	3	174	
8:10 AM	0	9	55	11	0	1	36	3	0	5	12	0	0	8	24	4	168	
8:15 AM	0	3	63	8	0	4	46	8	0	14	7	2	0	10	21	4	190	
8:20 AM	0	5	52	11	0	2	31	3	0	12	11	3	0	10	16	1	157	
8:25 AM	0	4	66	7	0	2	55	7	0	29	22	4	0	12	18	4	230	
8:30 AM	0	7	45	10	0	6	45	8	0	11	11	3	0	15	19	6	186	
8:35 AM	0	6	66	7	0	0	47	5	0	7	10	4	0	6	28	2	188	
8:40 AM	0	9	41	9	0	4	23	6	0	11	4	2	0	8	31	1	149	
8:45 AM	0	1	62	14	0	3	44	4	0	15	10	3	0	12	12	5	185	
8:50 AM	0	2	69	11	0	2	51	4	0	5	11	4	0	9	13	3	184	
8:55 AM	0	4	67	9	0	1	44	5	0	8	18	4	0	9	11	6	186	
Count Total	0	126	1,506	204	0	62	1,047	117	0	302	286	92	0	197	348	85	4,372	
Peak Hour	0	70	742	95	0	29	542	60	0	171	163	44	0	122	185	52	2,275	

Location: 3 SW 124th Ave & SW Tualatin Sherwood Rd AM

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	13	2	2	2	19	7:00 AM	1	0	0	0	1	7:00 AM	0	1	0	0	1
7:05 AM	8	1	4	6	19	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	10	1	6	4	21	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	5	5	2	3	15	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	7	3	6	2	18	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	5	8	6	1	20	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	1	3	3	2	9	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	1	1
7:35 AM	6	6	4	4	20	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	4	6	3	6	19	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	3	2	10	2	17	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	8	4	7	1	20	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	5	6	8	7	26	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	11	3	3	4	21	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	5	2	4	5	16	8:05 AM	0	0	0	0	0	8:05 AM	0	1	0	0	1
8:10 AM	3	1	5	4	13	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	6	3	8	8	25	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	12	5	1	4	22	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	10	9	11	5	35	8:25 AM	0	0	0	0	0	8:25 AM	1	1	0	0	2
8:30 AM	7	4	7	4	22	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	9	5	7	6	27	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	5	6	2	5	18	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	6	6	7	2	21	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	5	5	5	6	21	8:50 AM	0	0	0	0	0	8:50 AM	0	1	0	0	1
8:55 AM	6	3	9	6	24	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	160	99	130	99	488	Count Total	1	0	0	0	1	Count Total	1	4	0	1	6
Peak Hour	80	51	71	54	256	Peak Hour	0	0	0	0	0	Peak Hour	1	2	0	0	3

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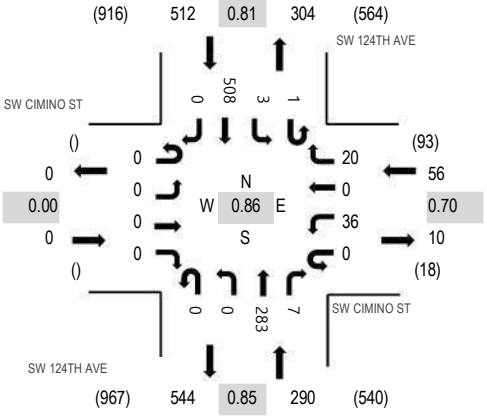
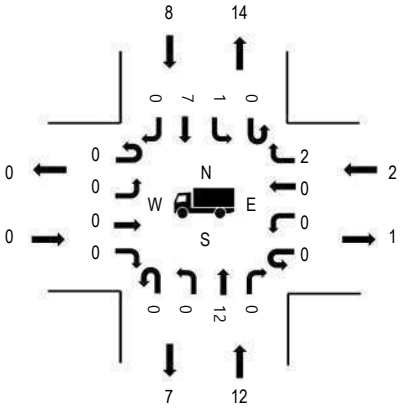
Location: 1 SW 124TH AVE & SW CIMINO ST PM
Date: Tuesday, June 15, 2021
Peak Hour: 04:20 PM - 05:20 PM
Peak 15-Minutes: 05:05 PM - 05:20 PM

Peak Hour

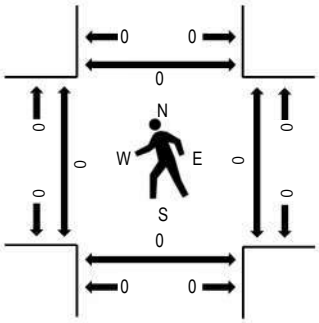
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	3.6%	0.70
NB	4.1%	0.85
SB	1.6%	0.81
All	2.6%	0.86

Traffic Counts - Motorized Vehicles

Interval Start Time	SW CIMINO ST Eastbound				SW CIMINO ST Westbound				SW 124TH AVE Northbound				SW 124TH AVE Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	0	0	0	0	0	3	0	0	26	0	0	2	39	0	70	800
4:05 PM	0	0	0	0	0	4	0	2	0	0	22	0	0	0	36	0	64	800
4:10 PM	0	0	0	0	0	3	0	1	0	0	21	0	0	0	33	0	58	817
4:15 PM	0	0	0	0	0	2	0	1	0	0	30	2	0	0	35	0	70	830
4:20 PM	0	0	0	0	0	1	0	0	0	0	32	0	1	0	35	0	69	858
4:25 PM	0	0	0	0	0	1	0	0	0	0	24	2	0	0	25	0	52	852
4:30 PM	0	0	0	0	0	3	0	3	0	0	16	2	0	0	52	0	76	857
4:35 PM	0	0	0	0	0	11	0	4	0	0	21	1	0	1	46	0	84	850
4:40 PM	0	0	0	0	0	1	0	0	0	0	23	0	0	0	38	0	62	817
4:45 PM	0	0	0	0	0	3	0	1	0	0	25	1	0	0	39	0	69	805
4:50 PM	0	0	0	0	0	1	0	0	0	0	20	0	0	0	40	0	61	788
4:55 PM	0	0	0	0	0	4	0	0	0	0	23	0	0	0	38	0	65	771
5:00 PM	0	0	0	0	0	2	0	4	0	0	29	0	0	0	35	0	70	749
5:05 PM	0	0	0	0	0	4	0	2	0	0	32	1	0	1	41	0	81	
5:10 PM	0	0	0	0	0	2	0	0	0	0	17	0	0	0	52	0	71	
5:15 PM	0	0	0	0	0	3	0	6	0	0	21	0	0	1	67	0	98	
5:20 PM	0	0	0	0	0	2	0	1	0	0	32	0	0	0	28	0	63	
5:25 PM	0	0	0	0	0	4	0	1	0	0	9	0	0	1	42	0	57	
5:30 PM	0	0	0	0	0	4	0	1	0	0	26	0	0	0	38	0	69	
5:35 PM	0	0	0	0	0	1	0	1	0	0	24	1	0	1	23	0	51	
5:40 PM	0	0	0	0	0	2	0	0	0	0	19	0	0	0	29	0	50	
5:45 PM	0	0	0	0	0	2	0	1	0	0	17	0	0	0	32	0	52	
5:50 PM	0	0	0	0	0	0	0	1	0	0	12	0	0	0	31	0	44	
5:55 PM	0	0	0	0	0	0	0	0	0	0	9	0	0	1	33	0	43	
Count Total	0	0	0	0	0	60	0	33	0	0	530	10	1	8	907	0	1,549	
Peak Hour	0	0	0	0	0	36	0	20	0	0	283	7	1	3	508	0	858	

Location: 1 SW 124TH AVE & SW CIMINO ST PM

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	1	0	3	4	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	1	1	0	2	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	1	0	1	2	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1	4:15 PM	0	1	0	0	1	4:15 PM	0	0	0	0	0
4:20 PM	0	4	0	0	4	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	1	0	0	1	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	2	1	2	5	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	1	0	1	2	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	1	1	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	1	0	1	2	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	2	0	1	3	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	2	2	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	1	1	0	2	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	1	1	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	2	2	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	1	0	0	1	5:40 PM	0	0	0	1	1	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	0	17	3	15	35	Count Total	0	1	0	1	2	Count Total	0	0	0	0	0
Peak Hour	0	12	2	8	22	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

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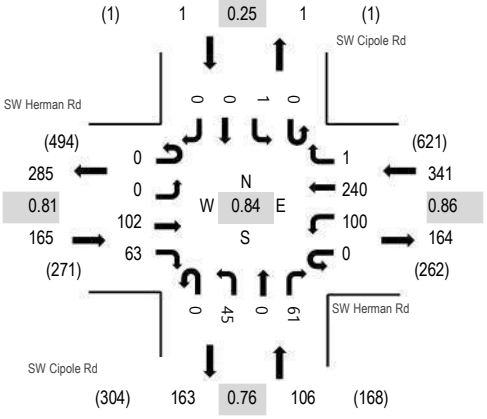
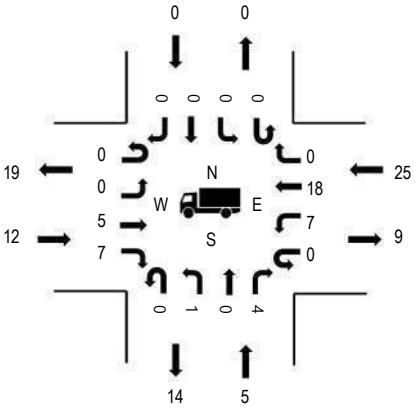
Location: 1 SW Cipole Rd & SW Herman Rd PM
Date: Thursday, November 18, 2021
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour

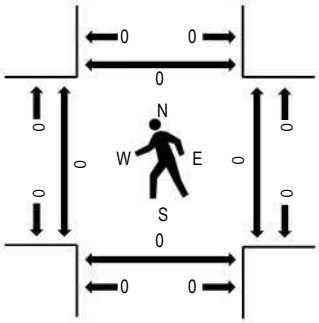
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	7.3%	0.81
WB	7.3%	0.86
NB	4.7%	0.76
SB	0.0%	0.25
All	6.9%	0.84

Traffic Counts - Motorized Vehicles

Interval Start Time	SW Herman Rd Eastbound				SW Herman Rd Westbound				SW Cipole Rd Northbound				SW Cipole Rd Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	10	5	0	11	21	0	0	5	0	6	0	0	0	0	58	613
4:05 PM	0	0	13	7	0	12	25	0	0	9	0	6	0	0	0	0	72	600
4:10 PM	0	0	9	5	0	10	20	0	0	6	0	2	0	0	0	0	52	588
4:15 PM	0	0	9	3	0	8	18	1	0	0	0	7	0	0	0	0	46	585
4:20 PM	0	0	6	6	0	5	20	0	0	2	0	6	0	0	0	0	45	577
4:25 PM	0	0	6	4	0	11	16	0	0	1	0	1	0	0	0	0	39	572
4:30 PM	0	0	10	6	0	6	25	0	0	6	0	10	0	0	0	0	63	574
4:35 PM	0	0	1	3	0	5	20	0	0	5	0	3	0	0	0	0	37	537
4:40 PM	0	0	11	8	0	5	25	0	0	4	0	7	0	0	0	0	60	535
4:45 PM	0	0	7	4	0	8	24	0	0	1	0	5	0	1	0	0	50	509
4:50 PM	0	0	13	8	0	7	10	0	0	0	0	2	0	0	0	0	40	494
4:55 PM	0	0	7	4	0	12	16	0	0	6	0	6	0	0	0	0	51	475
5:00 PM	0	0	8	4	0	7	14	0	0	7	0	5	0	0	0	0	45	448
5:05 PM	0	0	13	8	0	11	19	0	0	4	0	5	0	0	0	0	60	
5:10 PM	0	0	7	2	0	10	24	0	0	2	0	4	0	0	0	0	49	
5:15 PM	0	0	5	3	0	10	16	0	0	1	0	3	0	0	0	0	38	
5:20 PM	0	0	5	4	0	8	20	0	0	1	0	2	0	0	0	0	40	
5:25 PM	0	0	4	4	0	14	17	0	0	1	0	1	0	0	0	0	41	
5:30 PM	0	0	5	2	0	4	9	0	0	3	0	3	0	0	0	0	26	
5:35 PM	0	0	3	3	0	7	17	0	0	4	0	1	0	0	0	0	35	
5:40 PM	0	0	4	2	0	6	18	0	0	2	0	2	0	0	0	0	34	
5:45 PM	0	0	5	4	0	10	12	0	0	3	0	1	0	0	0	0	35	
5:50 PM	0	0	3	3	0	6	7	0	0	1	0	1	0	0	0	0	21	
5:55 PM	0	0	3	2	0	7	7	0	0	0	0	5	0	0	0	0	24	
Count Total	0	0	167	104	0	200	420	1	0	74	0	94	0	1	0	0	1,061	
Peak Hour	0	0	102	63	0	100	240	1	0	45	0	61	0	1	0	0	613	

Location: 1 SW Cipole Rd & SW Herman Rd PM

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1	0	2	0	3	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	3	0	3	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	1	0	3	0	4	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	1	2	0	0	3	4:15 PM	1	0	0	0	1	4:15 PM	0	0	0	0	0
4:20 PM	2	1	1	0	4	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	1	1	3	0	5	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	1	0	2	0	3	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	2	0	2	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	1	0	1	4:40 PM	1	0	0	0	1	4:40 PM	0	0	0	0	0
4:45 PM	0	1	3	0	4	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	3	0	1	0	4	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	2	0	4	0	6	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	1	0	1	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	2	1	3	0	6	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	3	0	3	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	0	1	0	2	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	1	0	0	0	1	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	3	0	3	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	1	0	1	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	1	0	1	0	2	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	1	0	0	0	1	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	1	0	1	0	2	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	1	0	1	0	2	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	20	6	40	0	66	Count Total	2	0	0	0	2	Count Total	0	0	0	0	0
Peak Hour	12	5	25	0	42	Peak Hour	2	0	0	0	2	Peak Hour	0	0	0	0	0

Location: 2 SW Cipole Rd & Tualatin Island Greens PM

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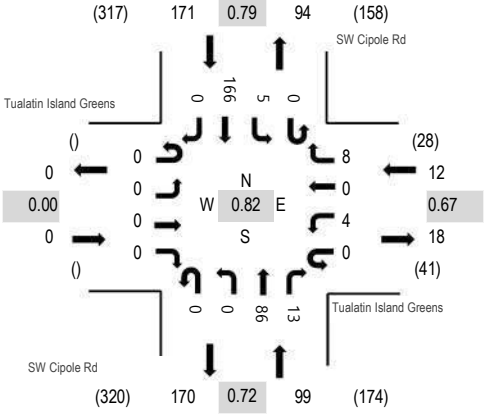
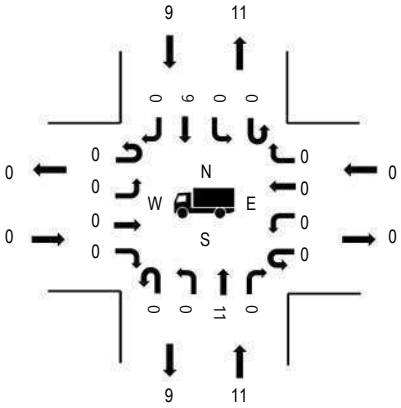
Location: 2 SW Cipole Rd & Tualatin Island Greens PM
Date: Thursday, November 18, 2021
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour

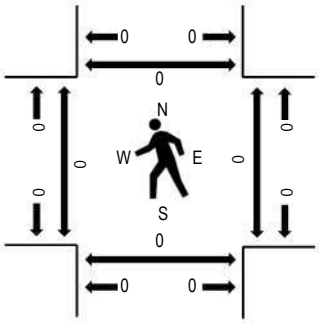
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	0.0%	0.67
NB	11.1%	0.72
SB	5.3%	0.79
All	7.1%	0.82

Traffic Counts - Motorized Vehicles

Interval Start Time	Tualatin Island Greens Eastbound				Tualatin Island Greens Westbound				SW Cipole Rd Northbound				SW Cipole Rd Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	0	0	0	1	0	1	0	0	13	2	0	0	13	0	30	282
4:05 PM	0	0	0	0	0	0	0	0	0	0	12	1	0	2	19	0	34	281
4:10 PM	0	0	0	0	0	0	0	2	0	0	4	0	0	1	15	0	22	270
4:15 PM	0	0	0	0	0	1	0	0	0	0	8	2	0	0	11	0	22	268
4:20 PM	0	0	0	0	0	0	0	0	0	0	5	2	0	0	12	0	19	267
4:25 PM	0	0	0	0	0	0	0	1	0	0	7	0	0	0	13	0	21	265
4:30 PM	0	0	0	0	0	0	0	0	0	0	11	2	0	1	12	0	26	267
4:35 PM	0	0	0	0	0	1	0	0	0	0	3	1	0	0	9	0	14	260
4:40 PM	0	0	0	0	0	0	0	1	0	0	9	3	0	1	8	0	22	264
4:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	0	0	21	0	26	254
4:50 PM	0	0	0	0	0	1	0	0	0	0	2	0	0	0	17	0	20	246
4:55 PM	0	0	0	0	0	0	0	1	0	0	9	0	0	0	16	0	26	243
5:00 PM	0	0	0	0	0	1	0	0	0	0	16	3	0	1	8	0	29	237
5:05 PM	0	0	0	0	0	0	0	0	0	0	6	2	0	3	12	0	23	
5:10 PM	0	0	0	0	0	1	0	0	0	0	6	1	0	1	11	0	20	
5:15 PM	0	0	0	0	0	2	0	0	0	0	4	2	0	2	11	0	21	
5:20 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	14	0	17	
5:25 PM	0	0	0	0	0	2	0	0	0	0	3	0	0	1	17	0	23	
5:30 PM	0	0	0	0	0	2	0	2	0	0	5	0	0	0	10	0	19	
5:35 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	11	0	18	
5:40 PM	0	0	0	0	0	1	0	0	0	0	2	1	0	1	7	0	12	
5:45 PM	0	0	0	0	0	2	0	0	0	0	4	1	0	1	10	0	18	
5:50 PM	0	0	0	0	0	1	0	0	0	0	1	2	0	0	13	0	17	
5:55 PM	0	0	0	0	0	2	0	0	0	0	5	1	0	0	12	0	20	
Count Total	0	0	0	0	0	18	0	10	0	0	148	26	0	15	302	0	519	
Peak Hour	0	0	0	0	0	4	0	8	0	0	86	13	0	5	166	0	282	

Location: 2 SW Cipole Rd & Tualatin Island Greens PM

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	1	1	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	2	2	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	3	0	1	4	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	1	0	2	3	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	2	0	1	3	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	1	0	2	3	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	3	0	0	3	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	1	0	0	1	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	1	1	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	1	1	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	1	0	2	3	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	1	1	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	2	2	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	0	12	0	17	29	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	0	11	0	9	20	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

Location: 3 SW 124th Ave & SW Tualatin Sherwood Rd PM

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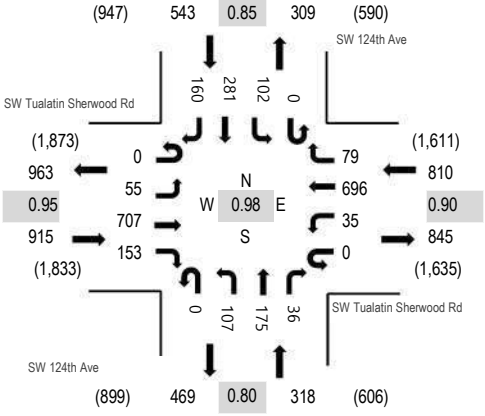
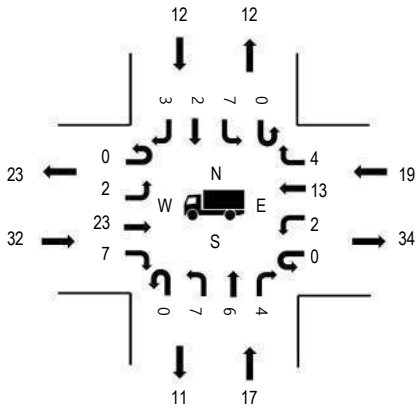
Location: 3 SW 124th Ave & SW Tualatin Sherwood Rd PM
Date: Thursday, November 18, 2021
Peak Hour: 04:25 PM - 05:25 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour

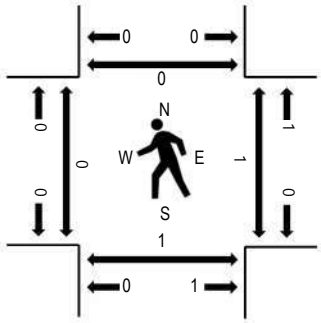
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	3.5%	0.95
WB	2.3%	0.90
NB	5.3%	0.80
SB	2.2%	0.85
All	3.1%	0.98

Traffic Counts - Motorized Vehicles

Interval Start Time	SW Tualatin Sherwood Rd Eastbound				SW Tualatin Sherwood Rd Westbound				SW 124th Ave Northbound				SW 124th Ave Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	4	67	15	0	7	54	8	0	6	29	3	0	4	14	12	223	2,573
4:05 PM	0	4	70	16	0	3	59	13	0	5	16	4	0	4	28	9	231	2,554
4:10 PM	0	4	64	14	0	5	49	8	0	10	29	2	0	6	22	10	223	2,530
4:15 PM	0	8	58	11	0	1	58	4	0	6	16	3	0	5	23	13	206	2,546
4:20 PM	0	3	44	13	0	4	45	6	0	10	9	4	0	7	14	11	170	2,547
4:25 PM	0	2	60	10	0	5	69	6	0	4	12	5	0	5	26	6	210	2,586
4:30 PM	0	4	57	14	0	1	64	9	0	6	13	2	0	7	20	11	208	2,572
4:35 PM	0	1	51	18	0	4	59	9	0	13	13	5	0	14	24	17	228	2,560
4:40 PM	0	2	64	11	0	2	68	4	0	12	16	3	0	5	19	6	212	2,529
4:45 PM	0	4	66	18	0	6	62	3	0	4	5	1	0	7	26	11	213	2,515
4:50 PM	0	5	57	18	0	1	49	5	0	13	12	2	0	14	32	22	230	2,489
4:55 PM	0	2	60	10	0	3	57	8	0	14	20	5	0	9	19	12	219	2,431
5:00 PM	0	7	55	14	0	1	54	5	0	7	19	3	0	7	18	14	204	2,424
5:05 PM	0	8	61	8	0	5	68	8	0	4	11	1	0	4	22	7	207	
5:10 PM	0	8	65	11	0	2	48	6	0	7	21	4	0	9	34	24	239	
5:15 PM	0	2	59	12	0	2	60	8	0	12	19	2	0	11	11	9	207	
5:20 PM	0	10	52	9	0	3	38	8	0	11	14	3	0	10	30	21	209	
5:25 PM	0	3	53	18	0	6	61	4	0	4	10	0	0	3	22	12	196	
5:30 PM	0	6	54	15	0	4	60	5	0	11	7	1	0	7	15	11	196	
5:35 PM	0	2	60	22	0	2	60	7	0	10	6	3	0	5	10	10	197	
5:40 PM	0	4	55	8	0	7	67	3	0	4	12	2	0	3	21	12	198	
5:45 PM	0	1	58	11	0	0	53	4	0	19	11	1	0	7	13	9	187	
5:50 PM	0	4	53	9	0	2	62	2	0	4	6	1	0	7	13	9	172	
5:55 PM	0	3	67	17	0	3	59	6	0	8	14	2	0	3	22	8	212	
Count Total	0	101	1,410	322	0	79	1,383	149	0	204	340	62	0	163	498	286	4,997	
Peak Hour	0	55	707	153	0	35	696	79	0	107	175	36	0	102	281	160	2,586	

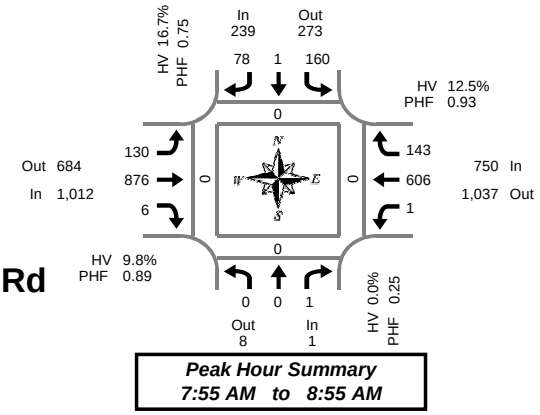
Location: 3 SW 124th Ave & SW Tualatin Sherwood Rd PM

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	2	4	0	2	8	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	6	3	4	2	15	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	2	0	3	2	7	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	2	3	1	1	7	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	2	1	1	2	6	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	5	2	3	0	10	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	4	1	1	1	7	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	4	3	2	1	10	4:35 PM	0	0	0	0	0	4:35 PM	0	1	0	0	1
4:40 PM	4	0	1	1	6	4:40 PM	0	0	0	0	0	4:40 PM	0	0	1	0	1
4:45 PM	1	0	1	1	3	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	2	1	2	2	7	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	1	1	3	1	6	4:55 PM	0	1	0	0	1	4:55 PM	0	0	0	0	0
5:00 PM	1	3	0	1	5	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	3	2	2	1	8	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	2	0	1	1	4	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	2	1	2	6	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	4	2	2	0	8	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	1	1	5	1	8	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	2	1	2	1	6	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	4	0	1	1	6	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	3	2	1	0	6	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	2	1	3	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	4	0	3	1	8	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	5	1	6	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	60	32	47	27	166	Count Total	0	1	0	0	1	Count Total	0	1	1	0	2
Peak Hour	32	17	19	12	80	Peak Hour	0	1	0	0	1	Peak Hour	0	1	1	0	2

Total Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Tualatin Sherwood Rd

Tuesday, October 23, 2018
7:00 AM to 9:00 AM

Peak Hour Summary
7:55 AM to 8:55 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	0	0	0	13	0	4	0	12	91	0	0	0	39	11	0	170	0	0	0	0
7:05 AM	0	0	0	0	20	0	4	0	7	85	0	0	0	48	12	0	176	0	0	0	0
7:10 AM	0	0	0	0	4	0	7	0	10	101	0	0	0	60	13	1	195	0	0	0	0
7:15 AM	0	0	0	0	26	0	8	0	11	77	0	0	0	57	10	0	189	0	1	0	0
7:20 AM	0	0	0	0	14	0	1	0	7	87	0	0	0	55	5	0	169	0	0	0	0
7:25 AM	0	0	0	0	13	0	7	0	9	64	0	1	0	45	12	0	150	0	0	0	0
7:30 AM	0	0	0	0	19	0	7	0	9	61	0	0	0	35	15	0	146	0	0	0	0
7:35 AM	0	0	0	0	17	0	5	0	2	60	0	0	0	46	13	0	143	0	0	0	0
7:40 AM	0	0	0	0	18	0	4	0	5	59	0	0	0	44	13	0	143	0	0	0	0
7:45 AM	0	0	0	0	27	0	6	0	10	42	0	0	0	51	12	0	148	0	0	0	0
7:50 AM	0	0	0	0	8	0	5	0	6	73	0	0	0	52	10	0	154	0	0	0	0
7:55 AM	0	0	0	0	27	0	4	0	11	63	0	0	0	46	15	0	166	0	0	0	0
8:00 AM	0	0	0	0	13	1	9	0	5	78	0	0	0	56	10	1	172	0	0	0	0
8:05 AM	0	0	0	0	20	0	6	0	10	71	0	0	0	49	15	0	171	0	0	0	0
8:10 AM	0	0	0	0	11	0	4	0	15	84	0	0	0	54	14	0	182	0	0	0	0
8:15 AM	0	0	0	0	18	0	9	0	9	74	0	0	0	53	14	0	177	0	0	0	0
8:20 AM	0	0	0	0	3	0	8	0	9	94	0	0	0	52	15	0	181	0	0	0	0
8:25 AM	0	0	0	0	9	0	10	0	9	65	0	0	1	40	10	0	144	0	0	0	0
8:30 AM	0	0	0	0	15	0	4	0	11	70	0	0	0	41	8	0	149	0	0	0	0
8:35 AM	0	0	0	0	13	0	6	0	8	56	2	0	0	52	10	0	147	0	0	0	0
8:40 AM	0	0	1	0	8	0	2	0	12	62	2	0	0	65	9	0	161	0	0	0	0
8:45 AM	0	0	0	0	17	0	10	0	15	67	1	0	0	47	13	0	170	0	0	0	0
8:50 AM	0	0	0	0	6	0	6	0	16	92	1	0	0	51	10	0	182	0	0	0	0
8:55 AM	0	0	0	0	11	0	9	0	13	65	0	0	0	52	10	0	160	0	0	0	0
Total Survey	0	0	1	0	350	1	145	0	231	1,741	6	1	1	1,190	279	2	3,945	0	1	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	0	0	0	37	0	15	0	29	277	0	0	0	147	36	1	541	0	0	0	0
7:15 AM	0	0	0	0	53	0	16	0	27	228	0	1	0	157	27	0	508	0	1	0	0
7:30 AM	0	0	0	0	54	0	16	0	16	180	0	0	0	125	41	0	432	0	0	0	0
7:45 AM	0	0	0	0	62	0	15	0	27	178	0	0	0	149	37	0	468	0	0	0	0
8:00 AM	0	0	0	0	44	1	19	0	30	233	0	0	0	159	39	1	525	0	0	0	0
8:15 AM	0	0	0	0	30	0	27	0	27	233	0	0	1	145	39	0	502	0	0	0	0
8:30 AM	0	0	1	0	36	0	12	0	31	188	4	0	0	158	27	0	457	0	0	0	0
8:45 AM	0	0	0	0	34	0	25	0	44	224	2	0	0	150	33	0	512	0	0	0	0
Total Survey	0	0	1	0	350	1	145	0	231	1,741	6	1	1	1,190	279	2	3,945	0	1	0	0

Peak Hour Summary
7:55 AM to 8:55 AM

By Approach	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	1	8	9	0	239	273	512	0	1,012	684	1,696	0	750	1,037	1,787	1	2,002	0	0	0	0
%HV	0.0%				16.7%				9.8%				12.5%				11.6%				
PHF	0.25				0.75				0.89				0.93				0.93				

By Movement	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	1	1	160	1	78	239	130	876	6	1,012	1	606	143	750	2,002
%HV	0.0%	0.0%	0.0%	0.0%	15.0%	0.0%	20.5%	16.7%	12.3%	9.0%	66.7%	9.8%	0.0%	11.1%	18.9%	12.5%	11.6%
PHF	0.00	0.00	0.25	0.25	0.67	0.25	0.72	0.75	0.76	0.87	0.30	0.89	0.25	0.92	0.83	0.93	0.93

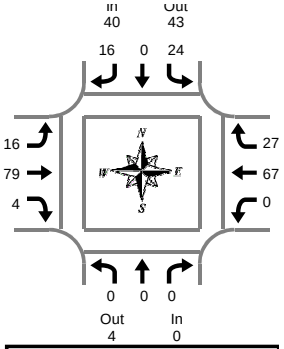
Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	0	0	0	206	0	62	0	99	863	0	1	0	578	141	1	1,949	0	1	0	0
7:15 AM	0	0	0	0	213	1	66	0	100	819	0	1	0	590	144	1	1,933	0	1	0	0
7:30 AM	0	0	0	0	190	1	77	0	100	824	0	0	1	578	156	1	1,927	0	0	0	0
7:45 AM	0	0	1	0	172	1	73	0	115	832	4	0	1	611	142	1	1,952	0	0	0	0
8:00 AM	0	0	1	0	144	1	83	0	132	878	6	0	1	612	138	1	1,996	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740

Out 83
In 99



SW 124th Ave & SW Tualatin Sherwood Rd

Tuesday, October 23, 2018
7:00 AM to 9:00 AM

Peak Hour Summary
7:55 AM to 8:55 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	3	0	1	4	1	7	0	8	0	2	1	3	15
7:05 AM	0	0	0	0	1	0	0	1	0	13	0	13	0	7	2	9	23
7:10 AM	0	0	0	0	0	0	0	0	0	8	0	8	0	6	1	7	15
7:15 AM	0	0	0	0	2	0	3	5	2	4	0	6	0	8	2	10	21
7:20 AM	0	0	0	0	1	0	1	2	0	5	0	5	0	9	1	10	17
7:25 AM	0	0	0	0	3	0	1	4	0	5	0	5	0	13	1	14	23
7:30 AM	0	0	0	0	1	0	1	2	3	11	0	14	0	9	2	11	27
7:35 AM	0	0	0	0	4	0	0	4	0	2	0	2	0	6	0	6	12
7:40 AM	0	0	0	0	2	0	3	5	0	2	0	2	0	5	2	7	14
7:45 AM	0	0	0	0	2	0	2	4	1	6	0	7	0	3	1	4	15
7:50 AM	0	0	0	0	3	0	1	4	2	6	0	8	0	5	2	7	19
7:55 AM	0	0	0	0	1	0	0	1	3	8	0	11	0	3	1	4	16
8:00 AM	0	0	0	0	3	0	1	4	1	6	0	7	0	7	2	9	20
8:05 AM	0	0	0	0	4	0	3	7	1	6	0	7	0	3	1	4	18
8:10 AM	0	0	0	0	1	0	0	1	2	13	0	15	0	9	2	11	27
8:15 AM	0	0	0	0	2	0	3	5	1	6	0	7	0	3	4	7	19
8:20 AM	0	0	0	0	0	0	1	1	1	10	0	11	0	4	3	7	19
8:25 AM	0	0	0	0	0	0	3	3	1	2	0	3	0	5	4	9	15
8:30 AM	0	0	0	0	3	0	2	5	2	6	0	8	0	6	1	7	20
8:35 AM	0	0	0	0	3	0	2	5	2	5	2	9	0	5	4	9	23
8:40 AM	0	0	0	0	2	0	0	2	0	5	1	6	0	6	2	8	16
8:45 AM	0	0	0	0	4	0	1	5	1	4	1	6	0	5	1	6	17
8:50 AM	0	0	0	0	1	0	0	1	1	8	0	9	0	11	2	13	23
8:55 AM	0	0	0	0	1	0	2	3	2	4	0	6	0	5	2	7	16
Total Survey	0	0	0	0	47	0	31	78	27	152	4	183	0	145	44	189	450

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	4	0	1	5	1	28	0	29	0	15	4	19	53
7:15 AM	0	0	0	0	6	0	5	11	2	14	0	16	0	30	4	34	61
7:30 AM	0	0	0	0	7	0	4	11	3	15	0	18	0	20	4	24	53
7:45 AM	0	0	0	0	6	0	3	9	6	20	0	26	0	11	4	15	50
8:00 AM	0	0	0	0	8	0	4	12	4	25	0	29	0	19	5	24	65
8:15 AM	0	0	0	0	2	0	7	9	3	18	0	21	0	12	11	23	53
8:30 AM	0	0	0	0	8	0	4	12	4	16	3	23	0	17	7	24	59
8:45 AM	0	0	0	0	6	0	3	9	4	16	1	21	0	21	5	26	56
Total Survey	0	0	0	0	47	0	31	78	27	152	4	183	0	145	44	189	450

Heavy Vehicle Peak Hour Summary
7:55 AM to 8:55 AM

By Approach	Northbound Approach			Southbound SW 124th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	4	4	40	43	83	99	83	182	94	103	197	233
PHF	0.00			0.77			0.75			0.87			0.90

By Movement	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	24	0	16	40	16	79	4	99	0	67	27	94	233
PHF	0.00	0.00	0.00	0.00	0.67	0.00	0.57	0.77	0.80	0.68	0.25	0.75	0.00	0.76	0.61	0.87	0.90

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

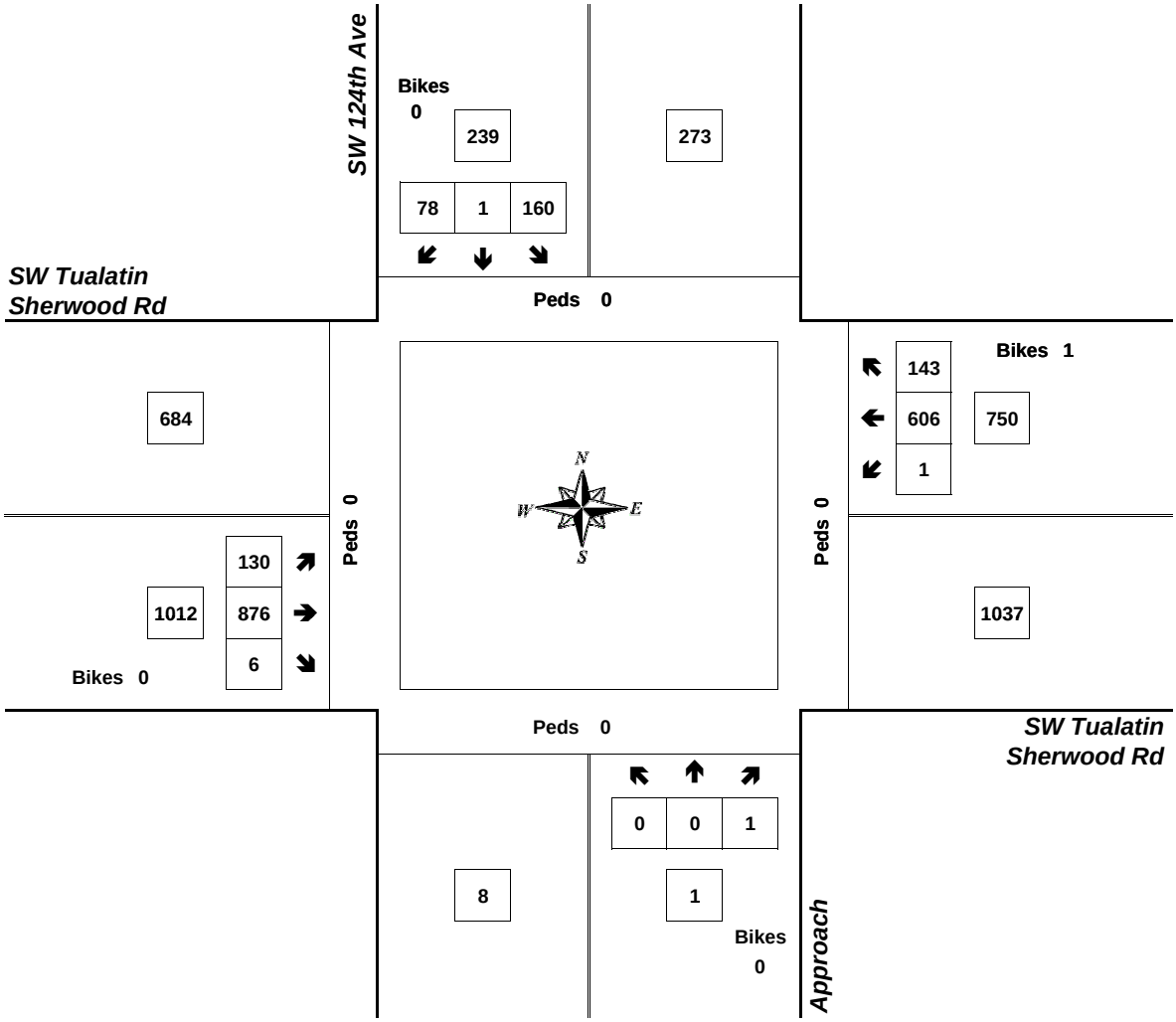
Interval Start Time	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	23	0	13	36	12	77	0	89	0	76	16	92	217
7:15 AM	0	0	0	0	27	0	16	43	15	74	0	89	0	80	17	97	229
7:30 AM	0	0	0	0	23	0	18	41	16	78	0	94	0	62	24	86	221
7:45 AM	0	0	0	0	24	0	18	42	17	79	3	99	0	59	27	86	227
8:00 AM	0	0	0	0	24	0	18	42	15	75	4	94	0	69	28	97	233

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 124th Ave & SW Tualatin Sherwood Rd

7:55 AM to 8:55 AM
Tuesday, October 23, 2018

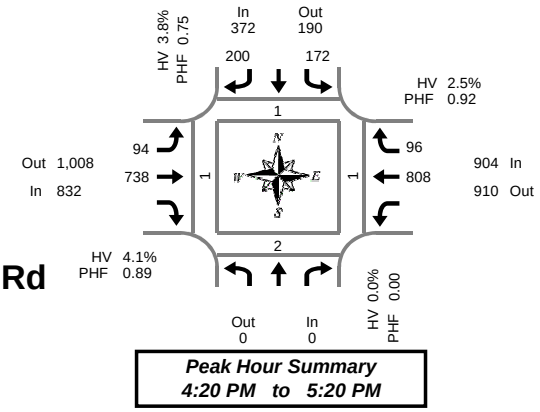


Approach	PHF	HV%	Volume
EB	0.89	9.8%	1,012
WB	0.93	12.5%	750
NB	0.25	0.0%	1
SB	0.75	16.7%	239
Intersection	0.93	11.6%	2,002

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Tualatin Sherwood Rd

Tuesday, October 23, 2018
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
				Bikes	L		R	Bikes	L	T		Bikes		T	R	Bikes		North	South	East	West
4:00 PM				0	11		14	0	7	65		2		53	7	0	157	0	0	0	0
4:05 PM				0	24		21	0	5	50		0		74	8	0	182	0	0	0	0
4:10 PM				0	7		10	0	6	65		1		59	12	0	159	0	0	0	0
4:15 PM				0	8		24	0	5	48		1		74	4	0	163	0	0	0	0
4:20 PM				0	10		19	0	11	74		0		76	8	0	198	0	0	0	0
4:25 PM				0	20		18	0	2	57		0		69	6	0	172	0	0	0	0
4:30 PM				0	6		11	0	5	77		2		67	5	0	171	0	0	0	0
4:35 PM				0	18		23	0	14	60		0		72	9	1	196	0	0	0	0
4:40 PM				0	8		15	0	8	69		0		79	13	0	192	0	0	0	0
4:45 PM				0	17		20	0	10	52		0		58	8	0	165	0	0	0	0
4:50 PM				0	6		11	0	2	48		0		82	5	0	154	0	0	0	0
4:55 PM				0	11		13	0	7	58		0		69	8	0	166	0	0	0	0
5:00 PM				0	9		13	0	14	61		0		33	8	1	138	1	2	1	1
5:05 PM				0	25		16	0	7	44		0		57	8	0	157	0	0	0	0
5:10 PM				0	21		14	0	6	87		0		85	10	0	223	0	0	0	0
5:15 PM				0	21		27	0	8	51		0		61	8	0	176	0	0	0	0
5:20 PM				0	11		13	0	8	74		0		81	5	1	192	0	0	0	0
5:25 PM				0	15		18	1	2	62		0		55	6	0	158	0	0	0	0
5:30 PM				0	15		17	1	5	70		0		68	10	0	185	0	0	0	0
5:35 PM				0	10		23	0	3	63		0		70	11	1	180	0	0	0	0
5:40 PM				0	6		20	0	4	65		0		69	6	0	170	0	0	0	0
5:45 PM				0	9		12	0	9	59		0		78	7	0	174	0	0	0	0
5:50 PM				0	9		17	0	9	67		0		72	10	0	184	0	0	0	0
5:55 PM				0	10		7	0	6	64		0		60	7	0	154	0	0	0	0
Total Survey				0	307		396	2	163	1,490		6		1,621	189	4	4,166	1	2	1	1

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
				Bikes	L		R	Bikes	L	T		Bikes		T	R	Bikes		North	South	East	West
4:00 PM				0	42		45	0	18	180		3		186	27	0	498	0	0	0	0
4:15 PM				0	38		61	0	18	179		1		219	18	0	533	0	0	0	0
4:30 PM				0	32		49	0	27	206		2		218	27	1	559	0	0	0	0
4:45 PM				0	34		44	0	19	158		0		209	21	0	485	0	0	0	0
5:00 PM				0	55		43	0	27	192		0		175	26	1	518	1	2	1	1
5:15 PM				0	47		58	1	18	187		0		197	19	1	526	0	0	0	0
5:30 PM				0	31		60	1	12	198		0		207	27	1	535	0	0	0	0
5:45 PM				0	28		36	0	24	190		0		210	24	0	512	0	0	0	0
Total Survey				0	307		396	2	163	1,490		6		1,621	189	4	4,166	1	2	1	1

Peak Hour Summary
4:20 PM to 5:20 PM

By Approach	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	0	0	0	0	372	190	562	0	832	1,008	1,840	2	904	910	1,814	2	2,108	1	2	1	1
%HV	0.0%				3.8%				4.1%				2.5%				3.4%				
PHF	0.00				0.75				0.89				0.92				0.94				

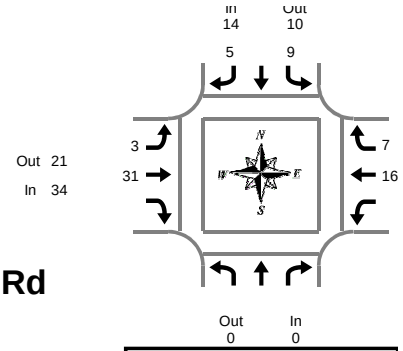
By Movement	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
				Total	L		R	Total	L	T		Total		T	R	Total	
Volume				0	172		200	372	94	738		832		808	96	904	2,108
%HV	NA	NA	NA	0.0%	5.2%	NA	2.5%	3.8%	3.2%	4.2%	NA	4.1%	NA	2.0%	7.3%	2.5%	3.4%
PHF				0.00	0.64		0.86	0.75	0.73	0.89		0.89		0.92	0.80	0.92	0.94

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
				Bikes	L		R	Bikes	L	T		Bikes		T	R	Bikes		North	South	East	West
4:00 PM				0	146		199	0	82	723		6		832	93	1	2,075	0	0	0	0
4:15 PM				0	159		197	0	91	735		3		821	92	2	2,095	1	2	1	1
4:30 PM				0	168		194	1	91	743		2		799	93	3	2,088	1	2	1	1
4:45 PM				0	167		205	2	76	735		0		788	93	3	2,064	1	2	1	1
5:00 PM				0	161		197	2	81	767		0		789	96	3	2,091	1	2	1	1

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Tualatin Sherwood Rd

Tuesday, October 23, 2018
4:00 PM to 6:00 PM

Peak Hour Summary
4:20 PM to 5:20 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
				Total	L		R	Total	L	T		Total		T	R	Total	
4:00 PM				0	2		0	2	0	3		3		5	0	5	10
4:05 PM				0	2		0	2	1	2		3		1	0	1	6
4:10 PM				0	1		0	1	1	1		2		2	0	2	5
4:15 PM				0	0		3	3	0	2		2		4	0	4	9
4:20 PM				0	0		1	1	0	5		5		1	1	2	8
4:25 PM				0	3		2	5	0	4		4		2	0	2	11
4:30 PM				0	0		0	0	0	1		1		1	1	2	3
4:35 PM				0	1		0	1	0	1		1		0	0	0	2
4:40 PM				0	0		0	0	1	2		3		1	2	3	6
4:45 PM				0	2		0	2	1	1		2		2	1	3	7
4:50 PM				0	0		1	1	0	3		3		4	0	4	8
4:55 PM				0	0		0	0	0	3		3		2	0	2	5
5:00 PM				0	1		0	1	0	2		2		1	1	2	5
5:05 PM				0	2		1	3	1	2		3		0	1	1	7
5:10 PM				0	0		0	0	0	4		4		2	0	2	6
5:15 PM				0	0		0	0	0	3		3		0	0	0	3
5:20 PM				0	1		0	1	0	2		2		3	1	4	7
5:25 PM				0	1		0	1	0	3		3		0	0	0	4
5:30 PM				0	0		0	0	0	2		2		1	1	2	4
5:35 PM				0	0		1	1	0	1		1		0	0	0	2
5:40 PM				0	1		0	1	0	1		1		0	1	1	3
5:45 PM				0	0		0	0	1	3		4		2	0	2	6
5:50 PM				0	0		0	0	0	2		2		0	0	0	2
5:55 PM				0	0		1	1	0	1		1		2	1	3	5
Total Survey				0	17		10	27	6	54		60		36	11	47	134

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
				Total	L		R	Total	L	T		Total		T	R	Total	
4:00 PM				0	5		0	5	2	6		8		8	0	8	21
4:15 PM				0	3		6	9	0	11		11		7	1	8	28
4:30 PM				0	1		0	1	1	4		5		2	3	5	11
4:45 PM				0	2		1	3	1	7		8		8	1	9	20
5:00 PM				0	3		1	4	1	8		9		3	2	5	18
5:15 PM				0	2		0	2	0	8		8		3	1	4	14
5:30 PM				0	1		1	2	0	4		4		1	2	3	9
5:45 PM				0	0		1	1	1	6		7		4	1	5	13
Total Survey				0	17		10	27	6	54		60		36	11	47	134

Heavy Vehicle Peak Hour Summary
4:20 PM to 5:20 PM

By Approach	Northbound Approach			Southbound SW 124th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	14	10	24	34	21	55	23	40	63	71
PHF	0.00			0.58			0.85			0.58			0.81

By Movement	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
				Total	L		R	Total	L	T		Total		T	R	Total	
Volume				0	9		5	14	3	31		34		16	7	23	71
PHF				0.00	0.56		0.42	0.58	0.38	0.78		0.85		0.50	0.58	0.58	0.81

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

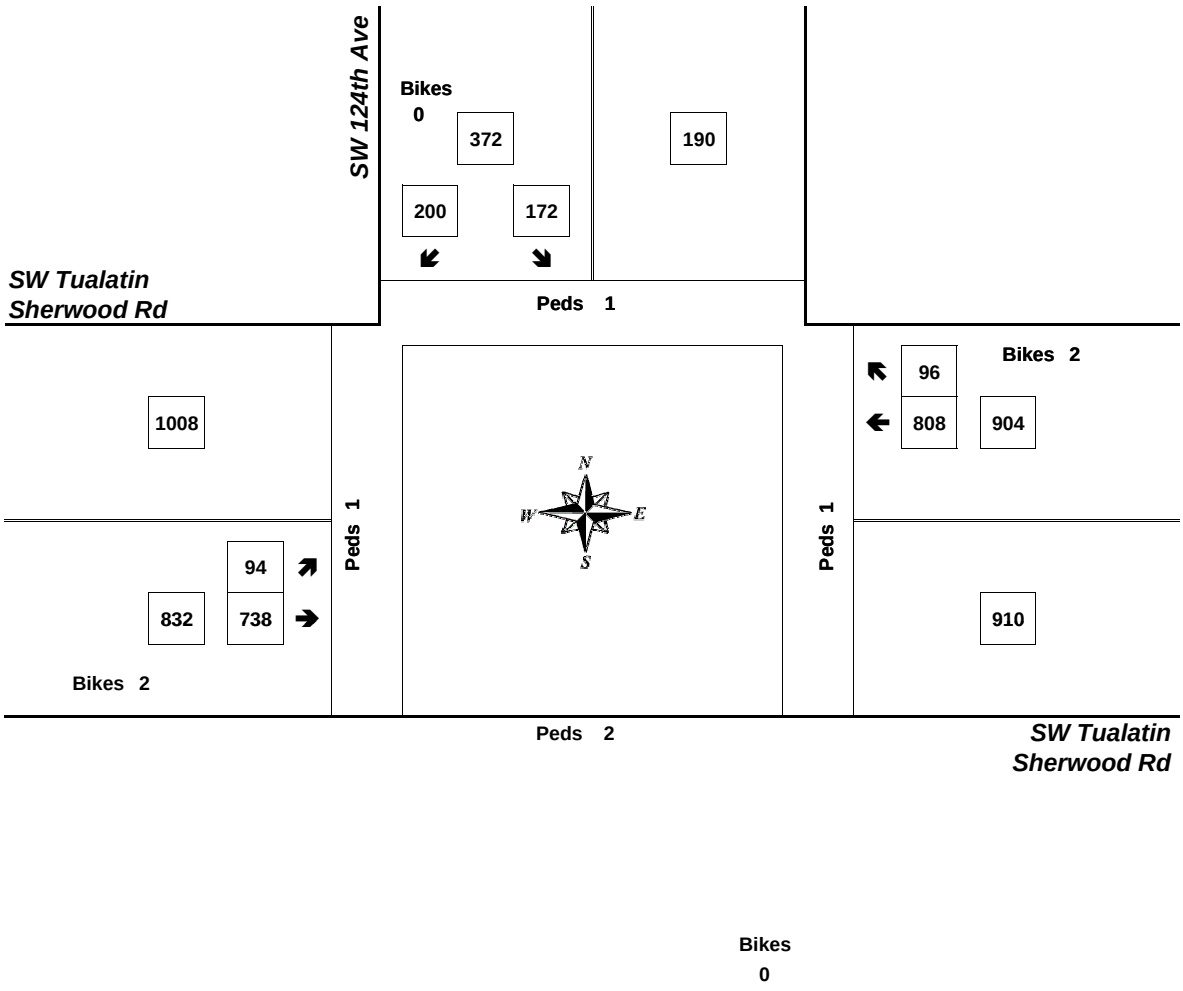
Interval Start Time	Northbound Approach				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
				Total	L		R	Total	L	T		Total		T	R	Total	
4:00 PM				0	11		7	18	4	28		32		25	5	30	80
4:15 PM				0	9		8	17	3	30		33		20	7	27	77
4:30 PM				0	8		2	10	3	27		30		16	7	23	63
4:45 PM				0	8		3	11	2	27		29		15	6	21	61
5:00 PM				0	6		3	9	2	26		28		11	6	17	54

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 124th Ave & SW Tualatin Sherwood Rd

4:20 PM to 5:20 PM
Tuesday, October 23, 2018



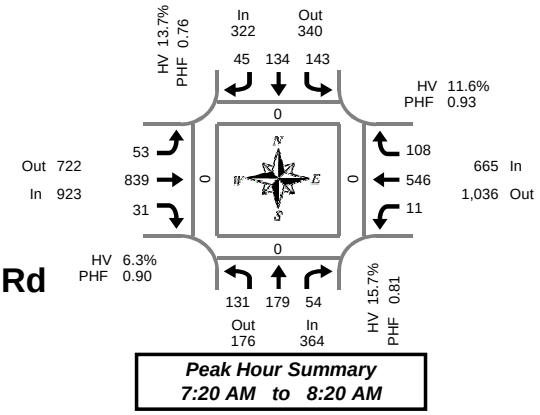
Bikes 0

Approach	PHF	HV%	Volume
EB	0.89	4.1%	832
WB	0.92	2.5%	904
NB	0.00	0.0%	0
SB	0.75	3.8%	372
Intersection	0.94	3.4%	2,108

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

Clay Carney
(503) 833-2740



Peak Hour Summary
7:20 AM to 8:20 AM

SW 124th Ave & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	5	8	2	0	5	7	4	0	5	87	5	0	0	40	7	0	175	0	0	0	0
7:05 AM	13	12	3	0	19	8	3	0	2	69	5	0	0	31	4	0	169	0	0	0	0
7:10 AM	5	10	5	0	3	5	3	0	9	75	1	0	0	39	4	0	159	0	0	0	0
7:15 AM	6	9	6	0	8	4	4	0	9	77	0	0	0	42	5	0	170	0	0	0	0
7:20 AM	15	11	6	0	8	9	0	0	6	71	3	0	1	38	6	0	174	0	0	0	0
7:25 AM	16	7	3	0	20	11	4	0	3	63	1	0	0	48	7	0	183	0	0	0	0
7:30 AM	6	15	2	0	4	3	3	0	4	85	2	1	0	51	10	0	185	0	0	0	0
7:35 AM	8	16	4	0	18	16	2	0	5	64	4	0	2	48	8	0	195	0	0	0	0
7:40 AM	14	15	7	0	11	20	2	0	4	65	4	0	1	47	6	0	196	0	0	0	0
7:45 AM	8	18	8	0	12	23	1	0	4	65	1	0	1	39	10	0	190	0	0	0	0
7:50 AM	9	19	8	0	13	20	4	0	4	67	1	0	0	48	9	0	202	0	0	0	0
7:55 AM	11	23	1	0	16	11	4	0	3	64	2	0	1	53	8	0	197	0	0	0	0
8:00 AM	18	15	8	0	14	9	10	0	6	62	3	0	2	42	16	0	205	0	0	0	0
8:05 AM	11	14	1	0	9	3	2	0	3	82	2	0	1	44	6	0	178	0	0	0	0
8:10 AM	8	14	4	0	10	5	5	0	6	75	5	0	0	43	11	0	186	0	0	0	0
8:15 AM	7	12	2	0	8	4	8	0	5	76	3	0	2	45	11	0	183	0	0	0	0
8:20 AM	3	5	2	0	14	6	5	0	9	91	2	0	0	29	4	0	170	0	0	0	0
8:25 AM	11	9	2	0	4	5	6	0	5	70	8	0	2	49	6	0	177	0	0	0	0
8:30 AM	15	14	2	0	5	5	4	0	3	59	7	0	1	45	7	0	167	0	0	0	0
8:35 AM	3	11	2	0	8	6	6	0	4	69	6	0	1	47	8	0	171	0	0	0	0
8:40 AM	7	8	3	0	7	7	4	0	12	84	8	0	0	59	4	0	203	0	0	0	0
8:45 AM	2	15	0	0	6	2	2	0	9	74	2	0	3	46	5	0	166	0	0	0	0
8:50 AM	6	10	1	0	7	13	3	0	5	73	3	0	0	51	7	0	179	0	0	0	0
8:55 AM	3	9	1	0	9	8	6	0	9	68	2	0	1	56	5	0	177	0	0	0	0
Total Survey	210	299	83	0	238	210	95	0	134	1,735	80	1	19	1,080	174	0	4,357	0	0	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	23	30	10	0	27	20	10	0	16	231	11	0	0	110	15	0	503	0	0	0	0
7:15 AM	37	27	15	0	36	24	8	0	18	211	4	0	1	128	18	0	527	0	0	0	0
7:30 AM	28	46	13	0	33	39	7	0	13	214	10	1	3	146	24	0	576	0	0	0	0
7:45 AM	28	60	17	0	41	54	9	0	11	196	4	0	2	140	27	0	589	0	0	0	0
8:00 AM	37	43	13	0	33	17	17	0	15	219	10	0	3	129	33	0	569	0	0	0	0
8:15 AM	21	26	6	0	26	15	19	0	19	237	13	0	4	123	21	0	530	0	0	0	0
8:30 AM	25	33	7	0	20	18	14	0	19	212	21	0	2	151	19	0	541	0	0	0	0
8:45 AM	11	34	2	0	22	23	11	0	23	215	7	0	4	153	17	0	522	0	0	0	0
Total Survey	210	299	83	0	238	210	95	0	134	1,735	80	1	19	1,080	174	0	4,357	0	0	0	0

Peak Hour Summary
7:20 AM to 8:20 AM

By Approach	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	364	176	540	0	322	340	662	0	923	722	1,645	1	665	1,036	1,701	0	2,274	0	0	0	0
%HV	15.7%				13.7%				6.3%				11.6%				10.4%				
PHF	0.81				0.76				0.90				0.93				0.94				

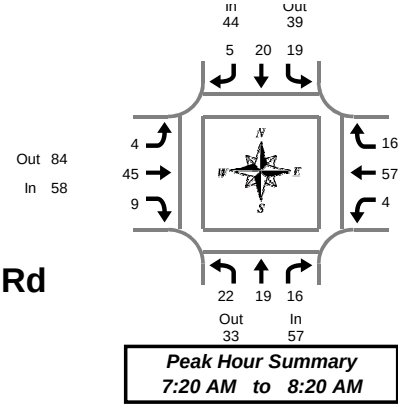
By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	131	179	54	364	143	134	45	322	53	839	31	923	11	546	108	665	2,274
%HV	16.8%	10.6%	29.6%	15.7%	13.3%	14.9%	11.1%	13.7%	7.5%	5.4%	29.0%	6.3%	36.4%	10.4%	14.8%	11.6%	10.4%
PHF	0.82	0.75	0.59	0.81	0.83	0.53	0.63	0.76	0.88	0.90	0.78	0.90	0.69	0.93	0.82	0.93	0.94

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	116	163	55	0	137	137	34	0	58	852	29	1	6	524	84	0	2,195	0	0	0	0
7:15 AM	130	176	58	0	143	134	41	0	57	840	28	1	9	543	102	0	2,261	0	0	0	0
7:30 AM	114	175	49	0	133	125	52	0	58	866	37	1	12	538	105	0	2,264	0	0	0	0
7:45 AM	111	162	43	0	120	104	59	0	64	864	48	0	11	543	100	0	2,229	0	0	0	0
8:00 AM	94	136	28	0	101	73	61	0	76	883	51	0	13	556	90	0	2,162	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:20 AM to 8:20 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	1	1	2	1	1	0	2	1	5	0	6	0	4	0	4	14
7:05 AM	1	1	2	4	1	0	0	1	0	2	0	2	0	2	0	2	9
7:10 AM	1	0	0	1	0	0	1	1	1	8	0	9	0	6	0	6	17
7:15 AM	0	1	2	3	0	1	0	1	0	5	0	5	0	1	3	4	13
7:20 AM	5	0	1	6	0	2	0	2	1	1	1	3	1	4	1	6	17
7:25 AM	0	1	1	2	1	0	1	2	0	7	0	7	0	4	1	5	16
7:30 AM	0	3	2	5	0	2	1	3	1	5	2	8	0	7	2	9	25
7:35 AM	0	4	1	5	3	3	0	6	0	5	2	7	0	4	1	5	23
7:40 AM	3	2	1	6	0	3	1	4	0	2	1	3	0	10	3	13	26
7:45 AM	3	2	1	6	1	2	0	3	1	6	0	7	0	5	0	5	21
7:50 AM	3	0	2	5	1	3	0	4	0	3	0	3	0	0	0	0	12
7:55 AM	1	1	0	2	1	2	0	3	0	5	0	5	0	3	3	6	16
8:00 AM	5	1	4	10	4	2	0	6	0	2	0	2	1	4	2	7	25
8:05 AM	0	0	0	0	2	0	0	2	1	2	0	3	1	7	1	9	14
8:10 AM	2	4	3	9	3	0	1	4	0	3	3	6	0	8	0	8	27
8:15 AM	0	1	0	1	3	1	1	5	0	4	0	4	1	1	2	4	14
8:20 AM	0	1	2	3	2	2	0	4	0	9	0	9	0	3	0	3	19
8:25 AM	0	0	2	2	1	1	1	3	0	4	2	6	1	7	0	8	19
8:30 AM	4	1	0	5	1	1	1	3	0	0	2	2	1	8	0	9	19
8:35 AM	2	0	0	2	3	1	0	4	1	11	1	13	0	3	2	5	24
8:40 AM	0	0	1	1	0	1	2	3	1	3	0	4	0	9	1	10	18
8:45 AM	2	3	0	5	1	1	1	3	0	6	1	7	1	6	0	7	22
8:50 AM	1	0	1	2	3	4	1	8	0	8	0	8	0	8	0	8	26
8:55 AM	0	3	1	4	2	3	0	5	1	8	0	9	0	7	1	8	26
Total Survey	33	30	28	91	34	36	12	82	9	114	15	138	7	121	23	151	462

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	2	2	3	7	2	1	1	4	2	15	0	17	0	12	0	12	40
7:15 AM	5	2	4	11	1	3	1	5	1	13	1	15	1	9	5	15	46
7:30 AM	3	9	4	16	3	8	2	13	1	12	5	18	0	21	6	27	74
7:45 AM	7	3	3	13	3	7	0	10	1	14	0	15	0	8	3	11	49
8:00 AM	7	5	7	19	9	2	1	12	1	7	3	11	2	19	3	24	66
8:15 AM	0	2	4	6	6	4	2	12	0	17	2	19	2	11	2	15	52
8:30 AM	6	1	1	8	4	3	3	10	2	14	3	19	1	20	3	24	61
8:45 AM	3	6	2	11	6	8	2	16	1	22	1	24	1	21	1	23	74
Total Survey	33	30	28	91	34	36	12	82	9	114	15	138	7	121	23	151	462

Heavy Vehicle Peak Hour Summary
7:20 AM to 8:20 AM

By Approach	Northbound SW 124th Ave			Southbound SW 124th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	57	33	90	44	39	83	58	84	142	77	80	157	236
PHF	0.75			0.85			0.66			0.71			0.80

By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	22	19	16	57	19	20	5	44	4	45	9	58	4	57	16	77	236
PHF	0.61	0.53	0.57	0.75	0.53	0.63	0.63	0.85	0.50	0.66	0.45	0.66	0.50	0.68	0.67	0.71	0.80

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

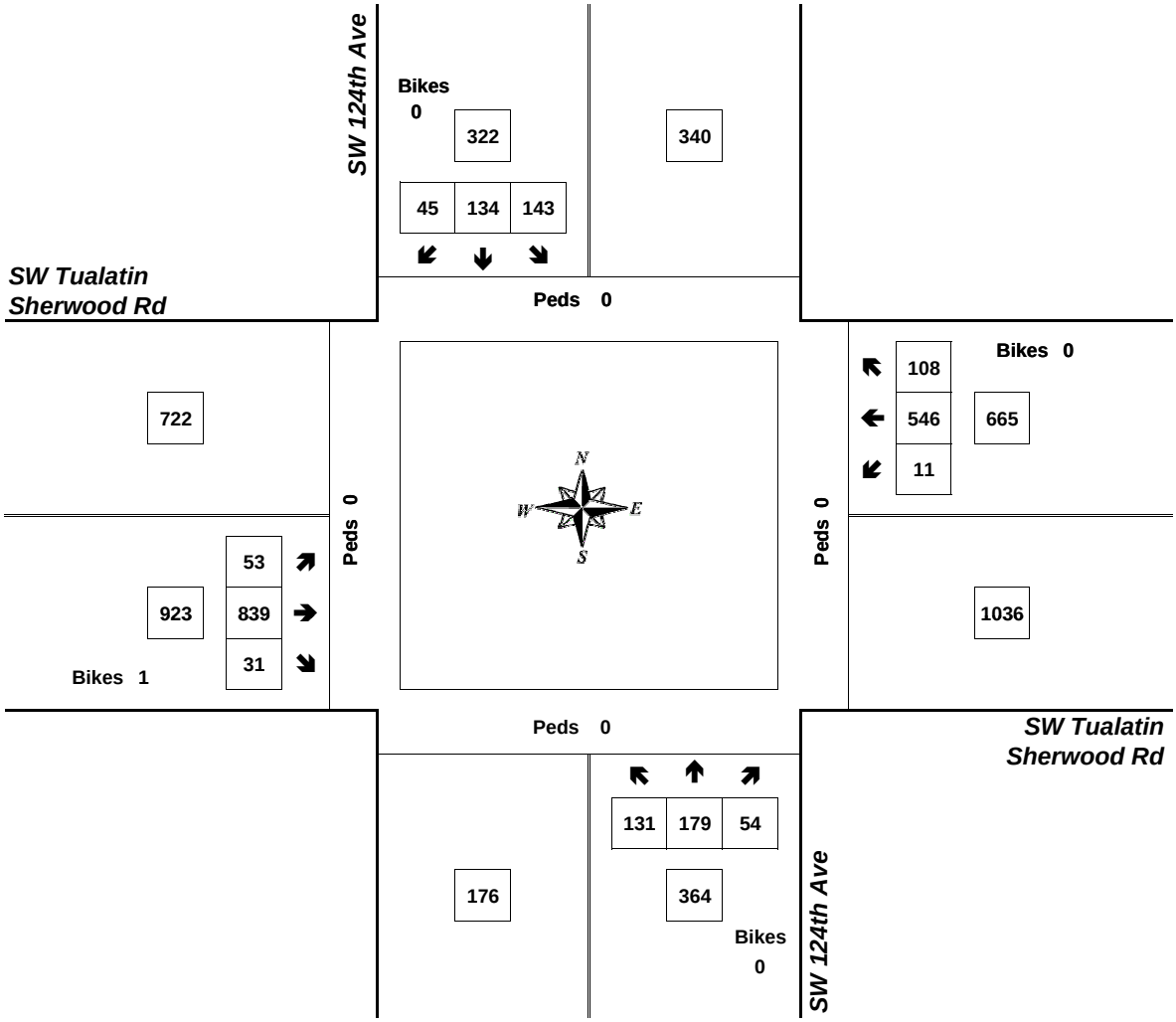
Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	17	16	14	47	9	19	4	32	5	54	6	65	1	50	14	65	209
7:15 AM	22	19	18	59	16	20	4	40	4	46	9	59	3	57	17	77	235
7:30 AM	17	19	18	54	21	21	5	47	3	50	10	63	4	59	14	77	241
7:45 AM	20	11	15	46	22	16	6	44	4	52	8	64	5	58	11	74	228
8:00 AM	16	14	14	44	25	17	8	50	4	60	9	73	6	71	9	86	253

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 124th Ave & SW Tualatin Sherwood Rd

7:20 AM to 8:20 AM
Thursday, February 07, 2019



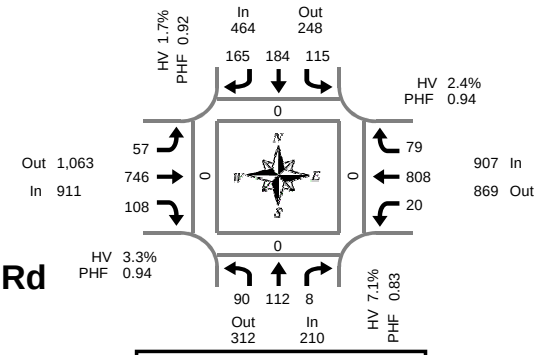
Approach	PHF	HV%	Volume
EB	0.90	6.3%	923
WB	0.93	11.6%	665
NB	0.81	15.7%	364
SB	0.76	13.7%	322
Intersection	0.94	10.4%	2,274

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740



SW 124th Ave & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
4:20 PM to 5:20 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	5	4	0	0	13	21	11	0	5	61	6	0	2	72	12	0	212	0	0	0	0
4:05 PM	4	10	2	0	1	20	9	0	6	67	17	0	6	60	7	0	209	0	0	0	0
4:10 PM	11	13	3	0	4	14	14	0	6	58	9	0	5	66	12	0	215	0	0	0	0
4:15 PM	5	10	0	0	2	11	18	0	1	56	8	0	3	74	6	0	194	0	0	0	0
4:20 PM	14	9	0	0	16	19	11	0	5	66	11	0	1	61	7	0	220	0	0	0	0
4:25 PM	7	7	0	0	7	7	9	0	1	55	9	0	2	70	5	0	179	0	0	0	0
4:30 PM	6	11	0	0	7	13	15	0	7	58	10	0	1	76	4	0	208	0	0	0	0
4:35 PM	5	11	0	0	9	17	16	0	6	62	8	0	1	70	13	0	218	0	0	0	0
4:40 PM	6	7	1	0	10	20	13	0	9	51	4	0	2	64	8	0	195	0	0	0	0
4:45 PM	7	7	1	0	13	16	12	0	2	69	12	0	2	70	6	0	217	0	0	0	0
4:50 PM	12	10	3	0	10	11	10	0	5	52	11	0	1	67	5	0	197	0	0	0	0
4:55 PM	8	15	0	0	6	17	17	0	6	61	7	0	0	56	5	0	198	0	0	0	0
5:00 PM	6	5	0	0	9	16	14	0	5	66	10	0	1	71	6	0	209	0	0	0	0
5:05 PM	5	9	1	0	5	14	17	0	3	60	4	0	6	66	5	0	195	0	0	0	0
5:10 PM	9	12	1	0	12	19	14	0	2	78	10	0	1	73	9	0	240	0	0	0	0
5:15 PM	5	9	1	0	11	15	17	0	6	68	12	0	2	64	6	0	216	0	0	0	0
5:20 PM	10	8	0	0	14	16	24	0	2	62	9	1	0	53	3	0	201	0	0	0	0
5:25 PM	6	5	0	0	1	7	14	0	4	60	6	0	2	82	8	0	195	0	0	0	0
5:30 PM	1	10	0	0	4	7	14	0	6	75	7	0	2	81	4	0	211	0	0	0	0
5:35 PM	8	13	0	0	11	10	15	0	3	48	10	0	1	68	12	1	199	0	0	0	0
5:40 PM	11	7	1	0	9	12	14	0	4	63	14	0	1	65	8	0	209	0	0	0	0
5:45 PM	3	4	2	0	4	5	16	0	2	64	4	0	1	97	6	0	208	0	0	0	0
5:50 PM	4	12	1	0	8	7	10	0	1	57	7	0	0	63	3	0	173	0	0	0	0
5:55 PM	3	7	0	0	9	10	5	0	3	69	4	0	2	69	7	0	188	0	0	0	0
Total Survey	161	215	17	0	195	324	329	0	100	1,486	209	1	45	1,658	167	1	4,906	0	0	0	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	20	27	5	0	18	55	34	0	17	186	32	0	13	198	31	0	636	0	0	0	0
4:15 PM	26	26	0	0	25	37	38	0	7	177	28	0	6	205	18	0	593	0	0	0	0
4:30 PM	17	29	1	0	26	50	44	0	22	171	22	0	4	210	25	0	621	0	0	0	0
4:45 PM	27	32	4	0	29	44	39	0	13	182	30	0	3	193	16	0	612	0	0	0	0
5:00 PM	20	26	2	0	26	49	45	0	10	204	24	0	8	210	20	0	644	0	0	0	0
5:15 PM	21	22	1	0	26	38	55	0	12	190	27	1	4	199	17	0	612	0	0	0	0
5:30 PM	20	30	1	0	24	29	43	0	13	186	31	0	4	214	24	1	619	0	0	0	0
5:45 PM	10	23	3	0	21	22	31	0	6	190	15	0	3	229	16	0	569	0	0	0	0
Total Survey	161	215	17	0	195	324	329	0	100	1,486	209	1	45	1,658	167	1	4,906	0	0	0	0

Peak Hour Summary
4:20 PM to 5:20 PM

By Approach	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	210	312	522	0	464	248	712	0	911	1,063	1,974	0	907	869	1,776	0	2,492	0	0	0	0
%HV	7.1%				1.7%				3.3%				2.4%				3.0%				
PHF	0.83				0.92				0.94				0.94				0.96				

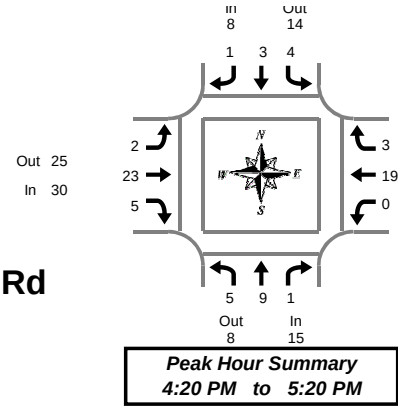
By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	90	112	8	210	115	184	165	464	57	746	108	911	20	808	79	907	2,492
%HV	5.6%	8.0%	12.5%	7.1%	3.5%	1.6%	0.6%	1.7%	3.5%	3.1%	4.6%	3.3%	0.0%	2.4%	3.8%	2.4%	3.0%
PHF	0.83	0.88	0.40	0.83	0.87	0.87	0.86	0.92	0.65	0.91	0.90	0.94	0.56	0.94	0.73	0.94	0.96

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	90	114	10	0	98	186	155	0	59	716	112	0	26	806	90	0	2,462	0	0	0	0
4:15 PM	90	113	7	0	106	180	166	0	52	734	104	0	21	818	79	0	2,470	0	0	0	0
4:30 PM	85	109	8	0	107	181	183	0	57	747	103	1	19	812	78	0	2,489	0	0	0	0
4:45 PM	88	110	8	0	105	160	182	0	48	762	112	1	19	816	77	1	2,487	0	0	0	0
5:00 PM	71	101	7	0	97	138	174	0	41	770	97	1	19	852	77	1	2,444	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
4:20 PM to 5:20 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	1	3	0	4	0	2	1	3	0	0	2	2	9
4:05 PM	0	1	0	1	0	4	0	4	0	5	0	5	0	3	0	3	13
4:10 PM	2	1	1	4	0	0	0	0	0	3	1	4	0	3	1	4	12
4:15 PM	0	2	0	2	0	2	0	2	0	2	2	4	0	1	0	1	9
4:20 PM	0	1	0	1	1	0	0	1	0	3	0	3	0	3	0	3	8
4:25 PM	0	1	0	1	0	1	0	1	0	3	2	5	0	0	0	0	7
4:30 PM	1	1	0	2	1	0	0	1	0	1	1	2	0	2	1	3	8
4:35 PM	0	1	0	1	1	0	0	1	0	1	0	1	0	0	0	0	3
4:40 PM	2	2	0	4	1	1	0	2	1	0	0	1	0	4	0	4	11
4:45 PM	1	0	0	1	0	1	0	1	0	2	0	2	0	0	1	1	5
4:50 PM	0	0	1	1	0	0	0	0	0	1	1	2	0	2	0	2	5
4:55 PM	0	2	0	2	0	0	1	1	0	0	0	0	0	3	0	3	6
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2	3
5:05 PM	1	0	0	1	0	0	0	0	0	3	0	3	0	2	0	2	6
5:10 PM	0	1	0	1	0	0	0	0	0	3	1	4	0	1	0	1	6
5:15 PM	0	0	0	0	0	0	0	0	1	5	0	6	0	1	0	1	7
5:20 PM	1	1	0	2	0	0	0	0	0	0	1	1	0	1	0	1	4
5:25 PM	0	0	0	0	0	0	0	0	1	3	1	5	0	0	0	0	5
5:30 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	3
5:35 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
5:40 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
5:45 PM	0	0	0	0	2	0	0	2	0	3	0	3	0	0	0	0	5
5:50 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
5:55 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	2	0	2	4
Total Survey	8	14	2	24	9	12	1	22	3	48	11	62	0	35	6	41	149

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	2	2	1	5	1	7	0	8	0	10	2	12	0	6	3	9	34
4:15 PM	0	4	0	4	1	3	0	4	0	8	4	12	0	4	0	4	24
4:30 PM	3	4	0	7	3	1	0	4	1	2	1	4	0	6	1	7	22
4:45 PM	1	2	1	4	0	1	1	2	0	3	1	4	0	5	1	6	16
5:00 PM	1	1	0	2	0	0	0	0	0	7	1	8	0	4	1	5	15
5:15 PM	1	1	0	2	0	0	0	0	2	8	2	12	0	2	0	2	16
5:30 PM	0	0	0	0	1	0	0	1	0	4	0	4	0	4	0	4	9
5:45 PM	0	0	0	0	3	0	0	3	0	6	0	6	0	4	0	4	13
Total Survey	8	14	2	24	9	12	1	22	3	48	11	62	0	35	6	41	149

Heavy Vehicle Peak Hour Summary
4:20 PM to 5:20 PM

By Approach	Northbound SW 124th Ave			Southbound SW 124th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	15	8	23	8	14	22	30	25	55	22	28	50	75
PHF	0.54			0.50			0.58			0.79			0.82

By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	5	9	1	15	4	3	1	8	2	23	5	30	0	19	3	22	75
PHF	0.42	0.56	0.25	0.54	0.33	0.38	0.25	0.50	0.50	0.52	0.42	0.58	0.00	0.79	0.75	0.79	0.82

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

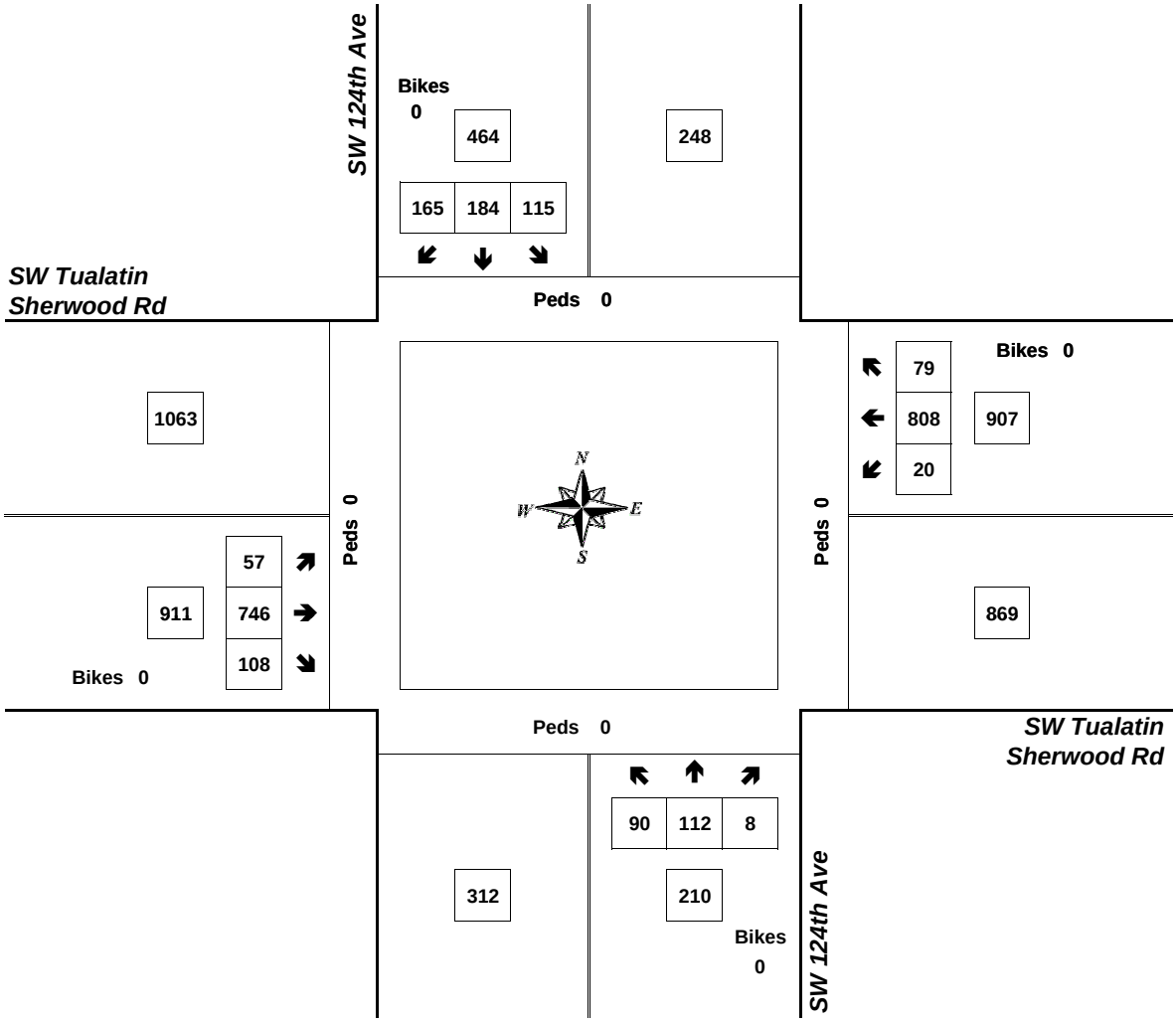
Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	6	12	2	20	5	12	1	18	1	23	8	32	0	21	5	26	96
4:15 PM	5	11	1	17	4	5	1	10	1	20	7	28	0	19	3	22	77
4:30 PM	6	8	1	15	3	2	1	6	3	20	5	28	0	17	3	20	69
4:45 PM	3	4	1	8	1	1	1	3	2	22	4	28	0	15	2	17	56
5:00 PM	2	2	0	4	4	0	0	4	2	25	3	30	0	14	1	15	53

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 124th Ave & SW Tualatin Sherwood Rd

4:20 PM to 5:20 PM
Wednesday, February 06, 2019

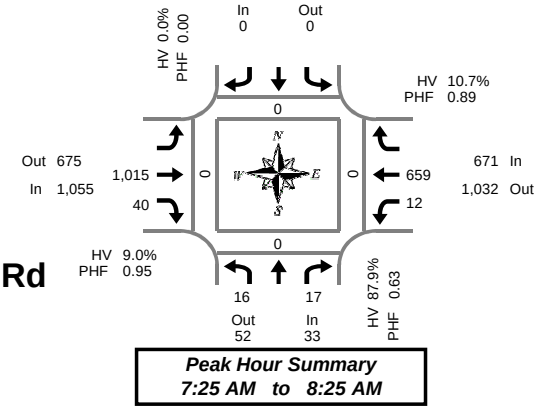


Approach	PHF	HV%	Volume
EB	0.94	3.3%	911
WB	0.94	2.4%	907
NB	0.83	7.1%	210
SB	0.92	1.7%	464
Intersection	0.96	3.0%	2,492

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

Clay Carney
(503) 833-2740



SW 120th Ave & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:25 AM to 8:25 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes		T	R	Bikes	L	T		Bikes		North	South	East	West
7:00 AM	0		1	0				0		93	1	0	2	32		0	129	0	0	0	0
7:05 AM	1		1	0				0		87	4	0	3	37		0	133	0	0	0	0
7:10 AM	0		0	0				0		83	1	0	2	48		0	134	0	0	0	0
7:15 AM	2		2	0				0		88	3	0	0	49		0	144	0	0	0	0
7:20 AM	2		1	0				0		83	1	0	2	35		0	124	0	0	0	0
7:25 AM	1		0	0				0		83	2	0	4	76		0	166	0	0	0	0
7:30 AM	4		2	0				0		84	3	0	1	48		0	142	0	0	0	0
7:35 AM	0		2	0				0		85	4	0	0	60		0	151	0	0	0	0
7:40 AM	3		2	0				0		79	1	0	0	51		0	136	0	0	0	0
7:45 AM	3		1	0				0		84	6	0	1	64		0	159	0	0	0	0
7:50 AM	0		2	0				0		83	3	0	0	52		0	140	0	0	0	0
7:55 AM	0		2	0				0		81	2	0	1	58		0	144	0	0	0	0
8:00 AM	1		3	0				0		72	9	0	0	62		0	147	0	0	0	0
8:05 AM	0		1	0				0		94	2	0	1	51		0	149	0	0	0	0
8:10 AM	1		0	0				0		86	3	0	1	46		0	137	0	0	0	0
8:15 AM	3		0	0				0		85	2	0	2	46		0	138	0	0	0	0
8:20 AM	0		2	0				0		99	3	0	1	45		0	150	0	0	0	0
8:25 AM	3		2	0				0		71	3	0	0	44		0	123	0	0	0	0
8:30 AM	1		3	0				0		64	2	0	2	59		0	131	0	0	0	0
8:35 AM	3		0	0				0		75	5	0	1	53		0	137	0	0	0	0
8:40 AM	2		0	0				0		92	2	0	2	64		0	162	0	0	0	0
8:45 AM	1		2	0				0		79	1	0	1	55		0	139	0	0	0	0
8:50 AM	3		1	0				0		75	4	0	5	52		0	140	0	0	0	0
8:55 AM	0		3	0				0		74	5	0	0	58		0	140	0	0	0	0
Total Survey	34		33	0				0		1,979	72	0	32	1,245		0	3,395	0	0	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes		T	R	Bikes	L	T		Bikes		North	South	East	West
7:00 AM	1		2	0				0		263	6	0	7	117		0	396	0	0	0	0
7:15 AM	5		3	0				0		254	6	0	6	160		0	434	0	0	0	0
7:30 AM	7		6	0				0		248	8	0	1	159		0	429	0	0	0	0
7:45 AM	3		5	0				0		248	11	0	2	174		0	443	0	0	0	0
8:00 AM	2		4	0				0		252	14	0	2	159		0	433	0	0	0	0
8:15 AM	6		4	0				0		255	8	0	3	135		0	411	0	0	0	0
8:30 AM	6		3	0				0		231	9	0	5	176		0	430	0	0	0	0
8:45 AM	4		6	0				0		228	10	0	6	165		0	419	0	0	0	0
Total Survey	34		33	0				0		1,979	72	0	32	1,245		0	3,395	0	0	0	0

Peak Hour Summary
7:25 AM to 8:25 AM

By Approach	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	33	52	85	0	0	0	0	0	1,055	675	1,730	0	671	1,032	1,703	0	1,759	0	0	0	0
%HV	87.9%				0.0%				9.0%				10.7%				11.1%				
PHF	0.63				0.00				0.95				0.89				0.96				

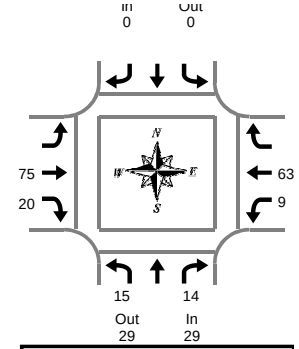
By Movement	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L		R	Total				Total		T	R	Total	L	T		Total	
Volume	16		17	33				0		1,015	40	1,055	12	659		671	1,759
%HV	93.8%	NA	82.4%	87.9%	NA	NA	NA	0.0%	NA	7.4%	50.0%	9.0%	75.0%	9.6%	NA	10.7%	11.1%
PHF	0.57		0.61	0.63				0.00		0.94	0.71	0.95	0.60	0.90		0.89	0.96

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes		T	R	Bikes	L	T		Bikes		North	South	East	West
7:00 AM	16		16	0				0		1,013	31	0	16	610		0	1,702	0	0	0	0
7:15 AM	17		18	0				0		1,002	39	0	11	652		0	1,739	0	0	0	0
7:30 AM	18		19	0				0		1,003	41	0	8	627		0	1,716	0	0	0	0
7:45 AM	17		16	0				0		986	42	0	12	644		0	1,717	0	0	0	0
8:00 AM	18		17	0				0		966	41	0	16	635		0	1,693	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 120th Ave & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:25 AM to 8:25 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L		R	Total				Total		T	R	Total	L	T		Total	
7:00 AM	0		0	0				0		9	1	10	1	3		4	14
7:05 AM	1		0	1				0		3	2	5	2	2		4	10
7:10 AM	0		0	0				0		8	1	9	2	6		8	17
7:15 AM	2		2	4				0		5	1	6	0	4		4	14
7:20 AM	2		1	3				0		4	0	4	1	3		4	11
7:25 AM	1		0	1				0		6	2	8	3	7		10	19
7:30 AM	4		2	6				0		6	2	8	1	4		5	19
7:35 AM	0		2	2				0		9	2	11	0	5		5	18
7:40 AM	3		2	5				0		2	0	2	0	9		9	16
7:45 AM	2		1	3				0		8	2	10	1	4		5	18
7:50 AM	0		2	2				0		4	1	5	0	3		3	10
7:55 AM	0		1	1				0		7	0	7	1	10		11	19
8:00 AM	1		1	2				0		5	5	10	0	3		3	15
8:05 AM	0		1	1				0		3	1	4	1	7		8	13
8:10 AM	1		0	1				0		8	2	10	1	6		7	18
8:15 AM	3		0	3				0		7	1	8	0	2		2	13
8:20 AM	0		2	2				0		10	2	12	1	3		4	18
8:25 AM	3		2	5				0		4	3	7	0	4		4	16
8:30 AM	1		1	2				0		0	1	1	2	6		8	11
8:35 AM	2		0	2				0		10	4	14	0	6		6	22
8:40 AM	2		0	2				0		5	0	5	1	4		5	12
8:45 AM	1		2	3				0		7	0	7	1	5		6	16
8:50 AM	3		1	4				0		7	3	10	1	6		7	21
8:55 AM	0		1	1				0		7	3	10	0	5		5	16
Total Survey	32		24	56				0		144	39	183	20	117		137	376

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L		R	Total				Total		T	R	Total	L	T		Total	
7:00 AM	1		0	1				0		20	4	24	5	11		16	41
7:15 AM	5		3	8				0		15	3	18	4	14		18	44
7:30 AM	7		6	13				0		17	4	21	1	18		19	53
7:45 AM	2		4	6				0		19	3	22	2	17		19	47
8:00 AM	2		2	4				0		16	8	24	2	16		18	46
8:15 AM	6		4	10				0		21	6	27	1	9		10	47
8:30 AM	5		1	6				0		15	5	20	3	16		19	45
8:45 AM	4		4	8				0		21	6	27	2	16		18	53
Total Survey	32		24	56				0		144	39	183	20	117		137	376

Heavy Vehicle Peak Hour Summary
7:25 AM to 8:25 AM

By Approach	Northbound SW 120th Ave			Southbound SW 120th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	29	29	58	0	0	0	95	78	173	72	89	161	196
PHF	0.56			0.00			0.79			0.82			0.88

By Movement	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L		R	Total				Total		T	R	Total	L	T		Total	
Volume	15		14	29				0		75	20	95	9	63		72	196
PHF	0.54		0.58	0.56				0.00		0.75	0.63	0.79	0.56	0.79		0.82	0.88

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

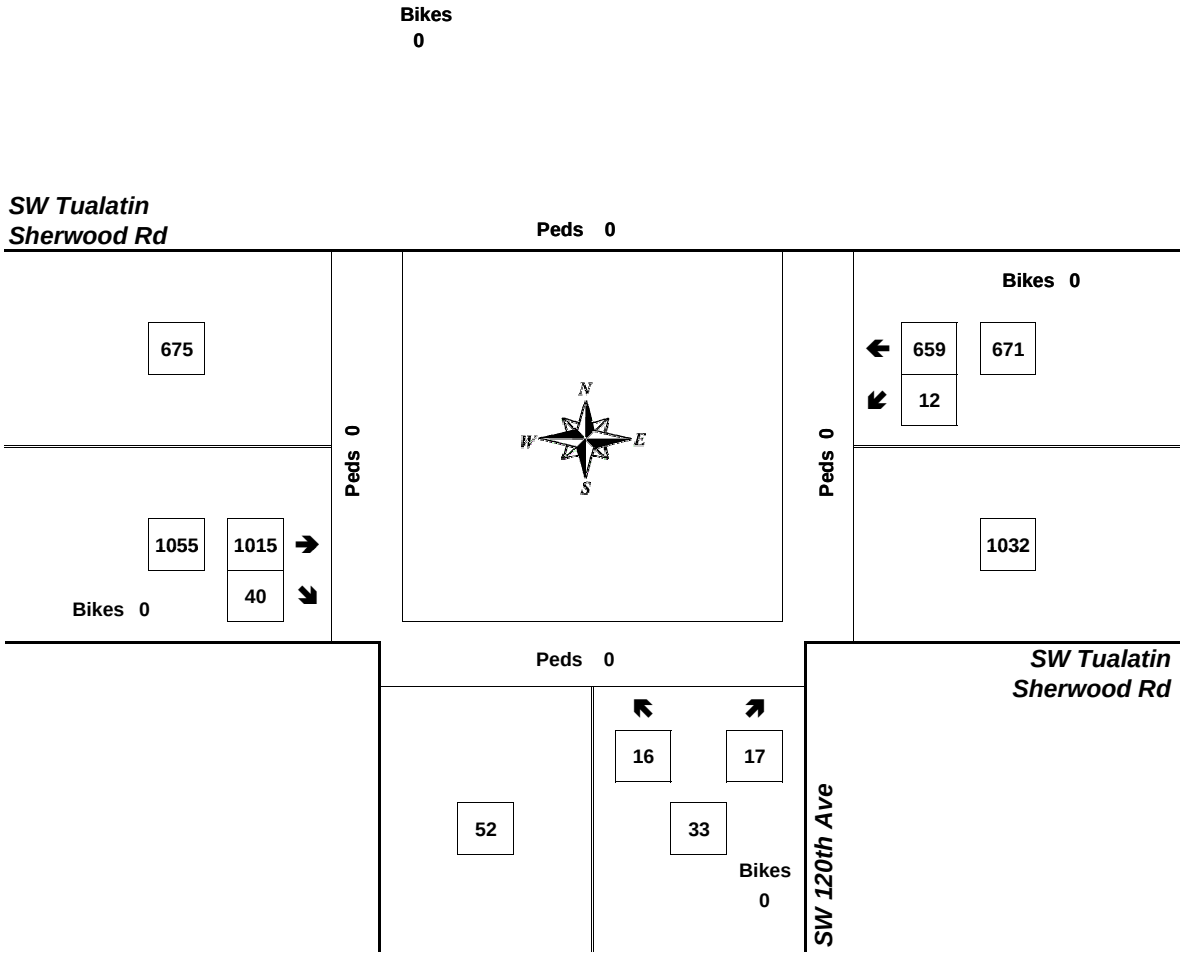
Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L		R	Total				Total		T	R	Total	L	T		Total	
7:00 AM	15		13	28				0		71	14	85	12	60		72	185
7:15 AM	16		15	31				0		67	18	85	9	65		74	190
7:30 AM	17		16	33				0		73	21	94	6	60		66	193
7:45 AM	15		11	26				0		71	22	93	8	58		66	185
8:00 AM	17		11	28				0		73	25	98	8	57		65	191

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 120th Ave & SW Tualatin Sherwood Rd

7:25 AM to 8:25 AM
Thursday, February 07, 2019

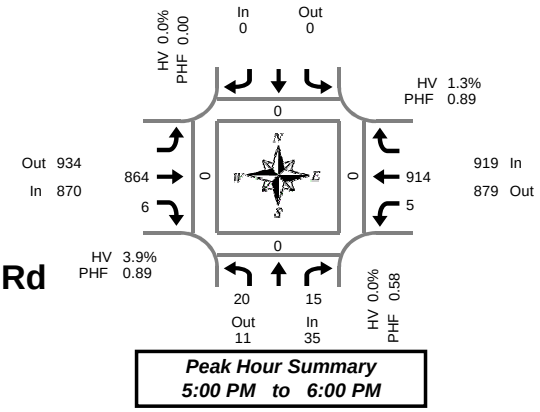


Approach	PHF	HV%	Volume
EB	0.95	9.0%	1,055
WB	0.89	10.7%	671
NB	0.63	87.9%	33
SB	0.00	0.0%	0
Intersection	0.96	11.1%	1,759

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

Clay Carney
(503) 833-2740



SW 120th Ave & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
5:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes		T	R	Bikes	L	T		Bikes		North	South	East	West
4:00 PM	4		2	0				0		73	1	0	0	79		0	159	0	0	0	0
4:05 PM	3		1	0				0		67	2	0	0	68		0	141	0	0	0	0
4:10 PM	2		2	0				0		63	1	0	1	81		0	150	0	0	0	0
4:15 PM	1		1	0				0		61	0	0	0	86		0	149	0	0	0	0
4:20 PM	1		1	0				0		79	1	0	1	59		0	142	0	0	0	0
4:25 PM	2		2	0				0		63	1	0	0	81		0	149	0	0	0	0
4:30 PM	2		2	0				0		60	3	0	1	79		0	147	0	0	0	0
4:35 PM	1		1	0				0		70	0	0	3	84		0	159	0	0	0	0
4:40 PM	1		1	0				0		63	1	0	2	72		0	140	0	0	0	0
4:45 PM	1		3	0				0		84	0	0	1	72		0	161	0	0	0	0
4:50 PM	0		0	0				0		60	1	0	0	74		0	135	0	0	0	0
4:55 PM	1		2	0				0		67	1	0	1	67		0	139	0	0	0	0
5:00 PM	4		1	0				0		74	0	0	0	69		0	148	0	0	0	0
5:05 PM	1		1	0				0		65	1	0	0	75		0	143	0	0	0	0
5:10 PM	1		1	0				0		88	1	1	0	76		0	167	0	0	0	0
5:15 PM	5		2	0				0		80	0	0	0	70		0	157	0	0	0	0
5:20 PM	0		1	0				0		76	0	0	1	64		0	142	0	0	0	0
5:25 PM	0		0	0				0		63	0	0	0	78		0	141	0	0	0	0
5:30 PM	6		6	0				0		75	0	0	1	87		0	175	0	0	0	0
5:35 PM	1		2	0				0		63	0	0	0	86		0	152	0	0	0	0
5:40 PM	0		0	0				0		71	1	0	0	84		1	156	0	0	0	0
5:45 PM	0		0	0				0		66	1	0	0	87		0	154	0	0	0	0
5:50 PM	1		1	0				0		66	0	0	2	63		0	133	0	0	0	0
5:55 PM	1		0	0				0		77	2	0	1	75		2	156	0	0	0	0
Total Survey	39		33	0				0		1,674	18	1	15	1,816		3	3,595	0	0	0	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes		T	R	Bikes	L	T		Bikes		North	South	East	West
4:00 PM	9		5	0				0		203	4	0	1	228		0	450	0	0	0	0
4:15 PM	4		4	0				0		203	2	0	1	226		0	440	0	0	0	0
4:30 PM	4		4	0				0		193	4	0	6	235		0	446	0	0	0	0
4:45 PM	2		5	0				0		211	2	0	2	213		0	435	0	0	0	0
5:00 PM	6		3	0				0		227	2	1	0	220		0	458	0	0	0	0
5:15 PM	5		3	0				0		219	0	0	1	212		0	440	0	0	0	0
5:30 PM	7		8	0				0		209	1	0	1	257		1	483	0	0	0	0
5:45 PM	2		1	0				0		209	3	0	3	225		2	443	0	0	0	0
Total Survey	39		33	0				0		1,674	18	1	15	1,816		3	3,595	0	0	0	0

Peak Hour Summary
5:00 PM to 6:00 PM

By Approach	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	35	11	46	0	0	0	0	0	870	934	1,804	1	919	879	1,798	3	1,824	0	0	0	0
%HV	0.0%				0.0%				3.9%				1.3%				2.5%				
PHF	0.58				0.00				0.89				0.89				0.94				

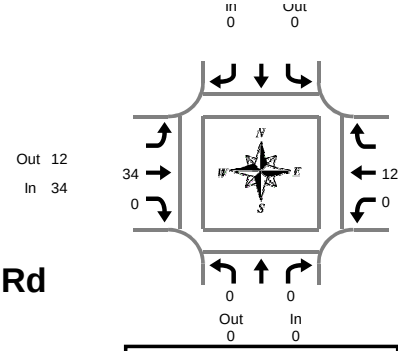
By Movement	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L		R	Total				Total		T	R	Total	L	T		Total	
Volume	20		15	35				0		864	6	870	5	914		919	1,824
%HV	0.0%	NA	0.0%	0.0%	NA	NA	NA	0.0%	NA	3.9%	0.0%	3.9%	0.0%	1.3%	NA	1.3%	2.5%
PHF	0.71		0.47	0.58				0.00		0.89	0.50	0.89	0.42	0.89		0.89	0.94

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes		T	R	Bikes	L	T		Bikes		North	South	East	West
4:00 PM	19		18	0				0		810	12	0	10	902		0	1,771	0	0	0	0
4:15 PM	16		16	0				0		834	10	1	9	894		0	1,779	0	0	0	0
4:30 PM	17		15	0				0		850	8	1	9	880		0	1,779	0	0	0	0
4:45 PM	20		19	0				0		866	5	1	4	902		1	1,816	0	0	0	0
5:00 PM	20		15	0				0		864	6	1	5	914		3	1,824	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 120th Ave & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
5:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L		R	Total				Total		T	R	Total	L	T		Total	
4:00 PM	0		0	0				0		4	0	4	0	5		5	9
4:05 PM	0		0	0				0		4	0	4	0	1		1	5
4:10 PM	0		0	0				0		2	0	2	0	4		4	6
4:15 PM	0		0	0				0		2	0	2	0	1		1	3
4:20 PM	0		0	0				0		3	1	4	0	3		3	7
4:25 PM	0		0	0				0		3	0	3	0	1		1	4
4:30 PM	0		0	0				0		2	0	2	0	2		2	4
4:35 PM	0		0	0				0		1	0	1	0	2		2	3
4:40 PM	0		0	0				0		1	0	1	0	2		2	3
4:45 PM	0		0	0				0		2	0	2	0	1		1	3
4:50 PM	0		0	0				0		1	0	1	0	5		5	6
4:55 PM	0		0	0				0		1	0	1	0	1		1	2
5:00 PM	0		0	0				0		1	0	1	0	2		2	3
5:05 PM	0		0	0				0		3	0	3	0	1		1	4
5:10 PM	0		0	0				0		2	0	2	0	2		2	4
5:15 PM	0		0	0				0		7	0	7	0	0		0	7
5:20 PM	0		0	0				0		1	0	1	0	1		1	2
5:25 PM	0		0	0				0		3	0	3	0	0		0	3
5:30 PM	0		0	0				0		4	0	4	0	2		2	6
5:35 PM	0		0	0				0		3	0	3	0	1		1	4
5:40 PM	0		0	0				0		1	0	1	0	0		0	1
5:45 PM	0		0	0				0		5	0	5	0	0		0	5
5:50 PM	0		0	0				0		2	0	2	0	2		2	4
5:55 PM	0		0	0				0		2	0	2	0	1		1	3
Total Survey	0		0	0				0		60	1	61	0	40		40	101

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L		R	Total				Total		T	R	Total	L	T		Total	
4:00 PM	0		0	0				0		10	0	10	0	10		10	20
4:15 PM	0		0	0				0		8	1	9	0	5		5	14
4:30 PM	0		0	0				0		4	0	4	0	6		6	10
4:45 PM	0		0	0				0		4	0	4	0	7		7	11
5:00 PM	0		0	0				0		6	0	6	0	5		5	11
5:15 PM	0		0	0				0		11	0	11	0	1		1	12
5:30 PM	0		0	0				0		8	0	8	0	3		3	11
5:45 PM	0		0	0				0		9	0	9	0	3		3	12
Total Survey	0		0	0				0		60	1	61	0	40		40	101

Heavy Vehicle Peak Hour Summary
5:00 PM to 6:00 PM

By Approach	Northbound SW 120th Ave			Southbound SW 120th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	0	0	0	34	12	46	12	34	46	46
PHF	0.00			0.00			0.71			0.60			0.77

By Movement	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L		R	Total				Total		T	R	Total	L	T		Total	
Volume	0		0	0				0		34	0	34	0	12		12	46
PHF	0.00		0.00	0.00				0.00		0.71	0.00	0.71	0.00	0.60		0.60	0.77

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

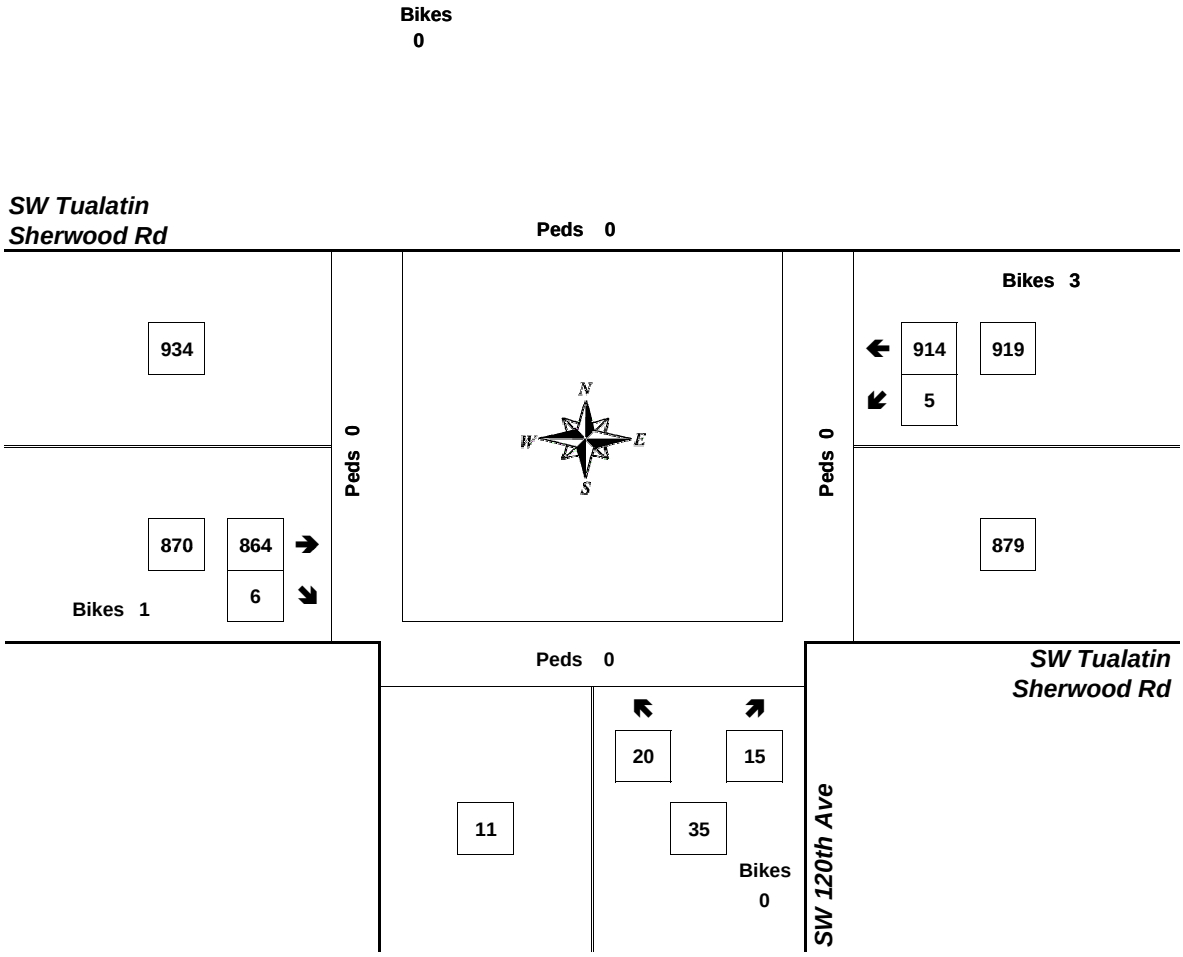
Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L		R	Total				Total		T	R	Total	L	T		Total	
4:00 PM	0		0	0				0		26	1	27	0	28		28	55
4:15 PM	0		0	0				0		22	1	23	0	23		23	46
4:30 PM	0		0	0				0		25	0	25	0	19		19	44
4:45 PM	0		0	0				0		29	0	29	0	16		16	45
5:00 PM	0		0	0				0		34	0	34	0	12		12	46

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 120th Ave & SW Tualatin Sherwood Rd

5:00 PM to 6:00 PM
Wednesday, February 06, 2019

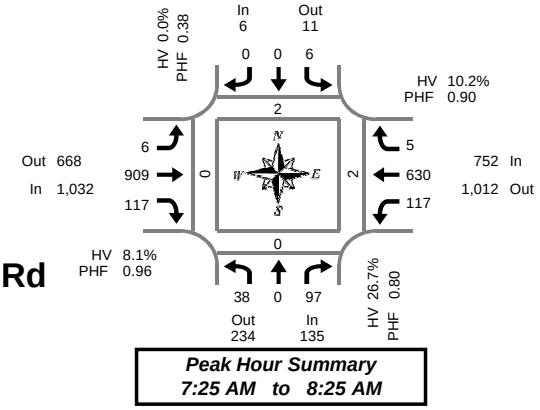


Approach	PHF	HV%	Volume
EB	0.89	3.9%	870
WB	0.89	1.3%	919
NB	0.58	0.0%	35
SB	0.00	0.0%	0
Intersection	0.94	2.5%	1,824

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

Clay Carney
(503) 833-2740



SW 115th Ave & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:25 AM to 8:25 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	3	0	7	0	0	0	0	0	0	84	9	0	6	31	0	0	140	0	0	0	0
7:05 AM	4	0	11	0	0	0	1	0	1	83	15	0	8	37	1	0	161	0	0	0	0
7:10 AM	2	1	10	0	1	0	0	0	0	69	11	0	6	45	0	0	145	0	0	0	0
7:15 AM	3	0	7	0	2	1	0	0	0	70	7	0	8	51	1	0	150	0	0	0	0
7:20 AM	2	0	5	0	0	0	0	0	0	69	11	1	8	39	0	0	134	0	0	0	0
7:25 AM	3	0	5	0	2	0	0	0	0	75	12	0	14	73	1	0	185	0	0	2	0
7:30 AM	2	0	8	0	2	0	0	0	0	74	14	0	11	42	0	0	153	0	0	0	0
7:35 AM	4	0	9	0	0	0	0	0	0	82	6	0	5	62	0	0	168	0	0	0	0
7:40 AM	2	0	9	0	0	0	0	0	0	85	7	0	10	43	0	0	156	0	0	0	0
7:45 AM	3	0	6	0	0	0	0	0	0	71	11	0	9	63	0	0	163	0	0	0	0
7:50 AM	6	0	13	0	0	0	0	0	0	68	12	0	12	51	1	0	163	0	0	0	0
7:55 AM	3	0	9	0	0	0	0	0	3	68	11	0	13	55	1	0	163	2	0	0	0
8:00 AM	4	0	7	0	0	0	0	0	0	73	11	0	7	57	1	0	160	0	0	0	0
8:05 AM	4	0	4	0	0	0	0	0	1	73	11	0	14	49	0	0	156	0	0	0	0
8:10 AM	4	0	7	0	2	0	0	0	0	79	8	0	7	46	0	0	153	0	0	0	0
8:15 AM	1	0	14	0	0	0	0	0	1	78	6	0	7	44	0	0	151	0	0	0	0
8:20 AM	2	0	6	0	0	0	0	0	1	83	8	0	8	45	1	0	154	0	0	0	0
8:25 AM	3	0	13	0	0	0	0	0	2	70	3	0	8	42	3	0	144	0	0	2	0
8:30 AM	7	0	5	0	0	0	0	0	1	63	1	0	11	61	2	0	151	0	0	0	0
8:35 AM	5	0	5	0	0	0	1	0	0	73	4	0	6	47	0	0	141	0	0	0	0
8:40 AM	3	0	9	0	1	0	0	0	1	90	6	0	3	64	0	0	177	0	0	0	0
8:45 AM	4	0	2	0	0	0	0	0	1	75	2	0	10	49	1	0	144	0	0	0	0
8:50 AM	3	0	4	0	0	0	0	0	1	79	5	0	9	51	4	0	156	0	0	0	0
8:55 AM	4	0	5	0	2	0	1	0	1	59	3	0	5	55	3	0	138	0	0	0	0
Total Survey	81	1	180	0	12	1	3	0	14	1,793	194	1	205	1,202	20	0	3,706	2	0	4	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	9	1	28	0	1	0	1	0	1	236	35	0	20	113	1	0	446	0	0	0	0
7:15 AM	8	0	17	0	4	1	0	0	0	214	30	1	30	163	2	0	469	0	0	2	0
7:30 AM	8	0	26	0	2	0	0	0	0	241	27	0	26	147	0	0	477	0	0	0	0
7:45 AM	12	0	28	0	0	0	0	0	3	207	34	0	34	169	2	0	489	2	0	0	0
8:00 AM	12	0	18	0	2	0	0	0	1	225	30	0	28	152	1	0	469	0	0	0	0
8:15 AM	6	0	33	0	0	0	0	0	4	231	17	0	23	131	4	0	449	0	0	2	0
8:30 AM	15	0	19	0	1	0	1	0	2	226	11	0	20	172	2	0	469	0	0	0	0
8:45 AM	11	0	11	0	2	0	1	0	3	213	10	0	24	155	8	0	438	0	0	0	0
Total Survey	81	1	180	0	12	1	3	0	14	1,793	194	1	205	1,202	20	0	3,706	2	0	4	0

Peak Hour Summary
7:25 AM to 8:25 AM

By Approach	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	135	234	369	0	6	11	17	0	1,032	668	1,700	0	752	1,012	1,764	0	1,925	2	0	2	0
%HV	26.7%				0.0%				8.1%				10.2%				10.2%				
PHF	0.80				0.38				0.96				0.90				0.95				

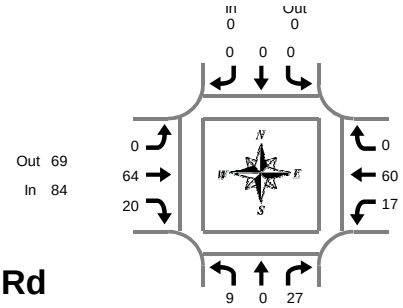
By Movement	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	38	0	97	135	6	0	0	6	6	909	117	1,032	117	630	5	752	1,925
%HV	23.7%	0.0%	27.8%	26.7%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	17.1%	8.1%	14.5%	9.5%	0.0%	10.2%	10.2%
PHF	0.73	0.00	0.84	0.80	0.38	0.00	0.00	0.38	0.38	0.94	0.86	0.96	0.86	0.89	0.42	0.90	0.95

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	37	1	99	0	7	1	1	0	4	898	126	1	110	592	5	0	1,881	2	0	2	0
7:15 AM	40	0	89	0	8	1	0	0	4	887	121	1	118	631	5	0	1,904	2	0	2	0
7:30 AM	38	0	105	0	4	0	0	0	8	904	108	0	111	599	7	0	1,884	2	0	2	0
7:45 AM	45	0	98	0	3	0	1	0	10	889	92	0	105	624	9	0	1,876	2	0	2	0
8:00 AM	44	0	81	0	5	0	2	0	10	895	68	0	95	610	15	0	1,825	0	0	2	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 115th Ave & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:25 AM to 8:25 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	0	1	2	0	0	0	0	0	7	2	9	0	3	0	3	14
7:05 AM	0	0	5	5	0	0	0	0	0	4	1	5	1	4	0	5	15
7:10 AM	1	0	2	3	0	0	0	0	0	4	2	6	0	6	0	6	15
7:15 AM	2	0	3	5	0	0	0	0	0	7	1	8	2	2	0	4	17
7:20 AM	0	0	1	1	0	0	0	0	0	3	1	4	0	5	0	5	10
7:25 AM	1	0	3	4	0	0	0	0	0	3	3	6	1	7	0	8	18
7:30 AM	1	0	2	3	0	0	0	0	0	1	5	6	1	4	0	5	14
7:35 AM	1	0	3	4	0	0	0	0	0	12	2	14	1	6	0	7	25
7:40 AM	1	0	3	4	0	0	0	0	0	3	0	3	0	6	0	6	13
7:45 AM	2	0	3	5	0	0	0	0	0	8	0	8	2	1	0	3	16
7:50 AM	2	0	2	4	0	0	0	0	0	4	2	6	2	2	0	4	14
7:55 AM	0	0	2	2	0	0	0	0	0	7	1	8	0	9	0	9	19
8:00 AM	0	0	0	0	0	0	0	0	0	2	2	4	0	7	0	7	11
8:05 AM	0	0	0	0	0	0	0	0	0	4	1	5	0	7	0	7	12
8:10 AM	1	0	3	4	0	0	0	0	0	3	2	5	3	5	0	8	17
8:15 AM	0	0	3	3	0	0	0	0	0	7	1	8	5	2	0	7	18
8:20 AM	0	0	3	3	0	0	0	0	0	10	1	11	2	4	0	6	20
8:25 AM	1	0	4	5	0	0	0	0	0	4	0	4	2	5	0	7	16
8:30 AM	1	0	3	4	0	0	0	0	0	3	1	4	5	10	0	15	23
8:35 AM	3	0	1	4	0	0	0	0	0	8	1	9	1	3	0	4	17
8:40 AM	1	0	2	3	0	0	0	0	0	5	1	6	0	7	0	7	16
8:45 AM	1	0	0	1	0	0	0	0	0	9	0	9	2	5	0	7	17
8:50 AM	0	0	2	2	0	0	0	0	0	8	1	9	3	6	0	9	20
8:55 AM	2	0	3	5	0	0	0	0	0	7	1	8	2	5	0	7	20
Total Survey	22	0	54	76	0	0	0	0	0	133	32	165	35	121	0	156	397

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	2	0	8	10	0	0	0	0	0	15	5	20	1	13	0	14	44
7:15 AM	3	0	7	10	0	0	0	0	0	13	5	18	3	14	0	17	45
7:30 AM	3	0	8	11	0	0	0	0	0	16	7	23	2	16	0	18	52
7:45 AM	4	0	7	11	0	0	0	0	0	19	3	22	4	12	0	16	49
8:00 AM	1	0	3	4	0	0	0	0	0	9	5	14	3	19	0	22	40
8:15 AM	1	0	10	11	0	0	0	0	0	21	2	23	9	11	0	20	54
8:30 AM	5	0	6	11	0	0	0	0	0	16	3	19	6	20	0	26	56
8:45 AM	3	0	5	8	0	0	0	0	0	24	2	26	7	16	0	23	57
Total Survey	22	0	54	76	0	0	0	0	0	133	32	165	35	121	0	156	397

Heavy Vehicle Peak Hour Summary
7:25 AM to 8:25 AM

By Approach	Northbound SW 115th Ave			Southbound SW 115th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	36	37	73	0	0	0	84	69	153	77	91	168	197
PHF	0.69			0.00			0.81			0.84			0.86

By Movement	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	9	0	27	36	0	0	0	0	0	64	20	84	17	60	0	77	197
PHF	0.45	0.00	0.75	0.69	0.00	0.00	0.00	0.00	0.00	0.70	0.50	0.81	0.43	0.65	0.00	0.84	0.86

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

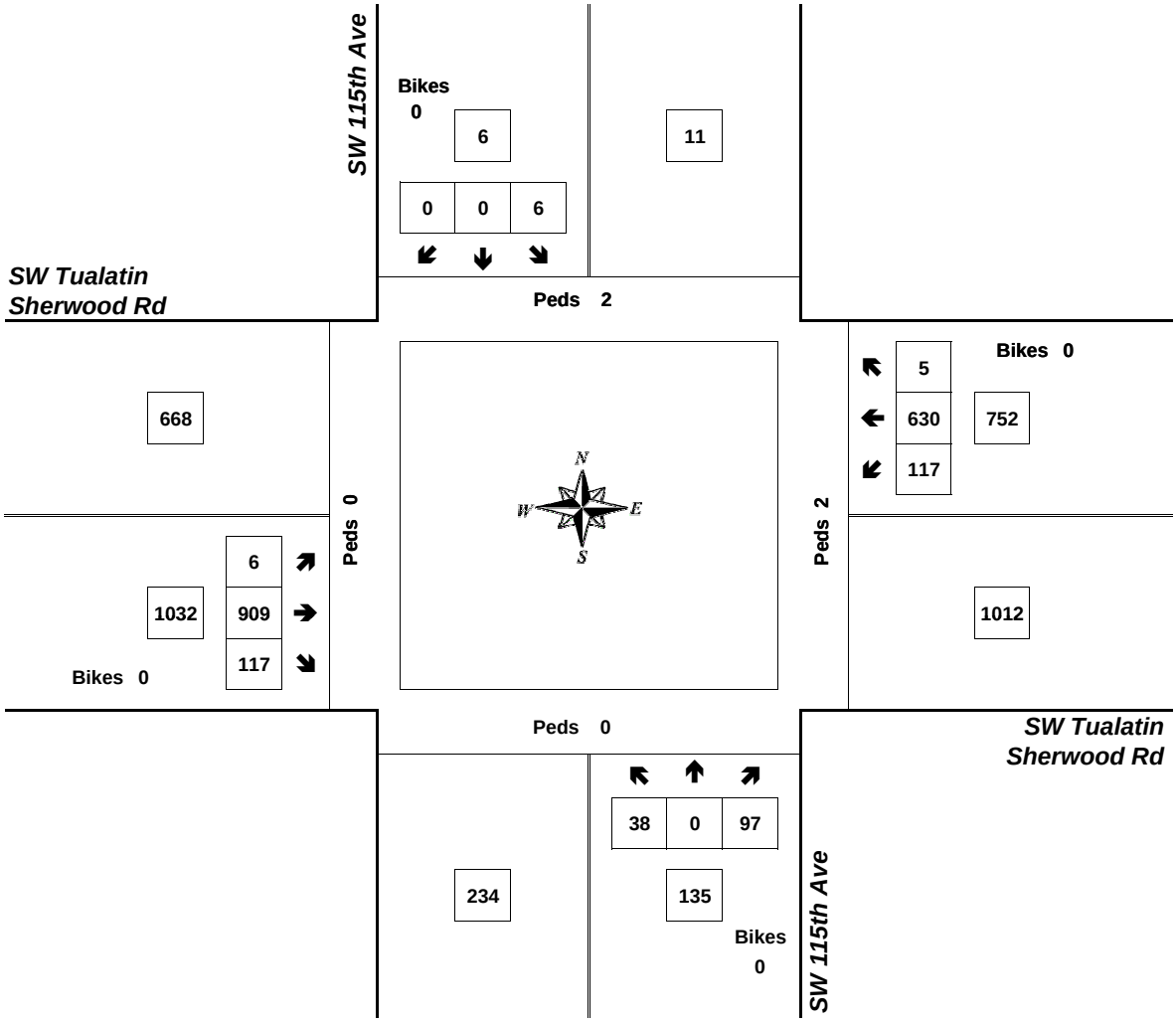
Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	12	0	30	42	0	0	0	0	0	63	20	83	10	55	0	65	190
7:15 AM	11	0	25	36	0	0	0	0	0	57	20	77	12	61	0	73	186
7:30 AM	9	0	28	37	0	0	0	0	0	65	17	82	18	58	0	76	195
7:45 AM	11	0	26	37	0	0	0	0	0	65	13	78	22	62	0	84	199
8:00 AM	10	0	24	34	0	0	0	0	0	70	12	82	25	66	0	91	207

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 115th Ave & SW Tualatin Sherwood Rd

7:25 AM to 8:25 AM
Thursday, February 07, 2019



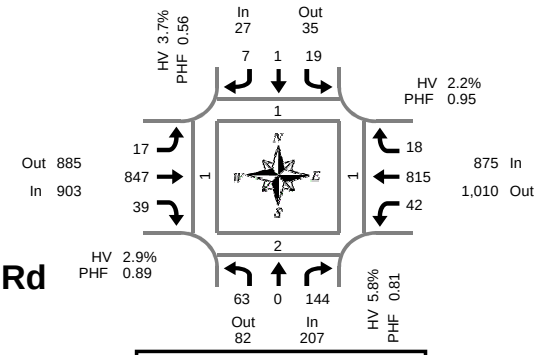
Approach	PHF	HV%	Volume
EB	0.96	8.1%	1,032
WB	0.90	10.2%	752
NB	0.80	26.7%	135
SB	0.38	0.0%	6
Intersection	0.95	10.2%	1,925

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740



SW 115th Ave & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
4:45 PM to 5:45 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	3	1	23	0	2	0	0	0	1	64	3	0	2	64	0	0	163	0	0	0	0
4:05 PM	13	0	21	0	1	0	1	0	1	67	3	0	3	63	1	0	174	0	0	0	0
4:10 PM	10	0	19	0	0	0	0	0	0	53	6	0	8	67	1	0	164	0	0	0	0
4:15 PM	5	1	12	0	2	0	2	0	1	62	3	0	0	73	0	0	161	0	0	0	0
4:20 PM	4	0	6	0	0	0	1	0	2	69	5	0	5	56	2	0	150	0	0	0	0
4:25 PM	5	0	13	0	0	0	0	0	0	69	4	0	4	75	1	0	171	0	0	0	0
4:30 PM	13	0	16	0	2	0	2	0	0	51	2	0	3	61	1	0	151	0	0	0	0
4:35 PM	14	0	13	0	0	0	0	0	0	71	5	0	7	80	1	0	191	0	0	0	0
4:40 PM	10	0	7	0	1	0	1	0	2	48	2	0	0	62	1	0	134	0	0	0	0
4:45 PM	2	0	11	0	0	0	0	0	2	83	2	0	3	72	1	0	176	0	0	0	0
4:50 PM	1	0	16	0	0	1	0	0	1	70	7	0	5	66	3	0	170	0	0	0	0
4:55 PM	4	0	7	0	2	0	0	0	1	60	3	0	6	65	1	0	149	0	0	0	0
5:00 PM	10	0	17	0	4	0	0	0	1	67	4	0	3	61	1	0	168	0	0	0	0
5:05 PM	2	0	12	0	0	0	2	0	1	63	3	0	6	77	2	0	168	0	0	1	0
5:10 PM	9	0	14	0	0	0	0	0	1	74	3	0	6	59	0	0	166	0	0	0	0
5:15 PM	4	0	6	0	1	0	0	0	4	90	3	0	3	72	1	0	184	0	1	0	0
5:20 PM	3	0	10	0	3	0	0	0	2	74	3	0	2	57	2	0	156	1	0	0	0
5:25 PM	8	0	8	0	0	0	2	0	0	59	3	0	2	66	2	0	150	0	0	0	0
5:30 PM	8	0	21	0	4	0	0	0	1	66	2	0	4	79	2	0	187	0	0	0	0
5:35 PM	7	0	9	0	3	0	3	0	1	81	2	0	1	67	3	0	177	0	1	0	1
5:40 PM	5	0	13	0	2	0	0	0	2	60	4	0	1	74	0	0	161	0	0	0	0
5:45 PM	5	0	6	0	1	0	0	0	0	73	4	0	3	80	3	0	175	0	0	0	0
5:50 PM	6	0	12	0	1	0	0	0	0	54	1	0	4	65	0	0	143	0	0	0	0
5:55 PM	5	0	9	0	0	0	2	0	1	83	2	0	1	70	0	0	173	0	0	0	0
Total Survey	156	2	301	0	29	1	16	0	25	1,611	79	0	82	1,631	29	0	3,962	1	2	1	1

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	26	1	63	0	3	0	1	0	2	184	12	0	13	194	2	0	501	0	0	0	0
4:15 PM	14	1	31	0	2	0	3	0	3	200	12	0	9	204	3	0	482	0	0	0	0
4:30 PM	37	0	36	0	3	0	3	0	2	170	9	0	10	203	3	0	476	0	0	0	0
4:45 PM	7	0	34	0	2	1	0	0	4	213	12	0	14	203	5	0	495	0	0	0	0
5:00 PM	21	0	43	0	4	0	2	0	3	204	10	0	15	197	3	0	502	0	0	1	0
5:15 PM	15	0	24	0	4	0	2	0	6	223	9	0	7	195	5	0	490	1	1	0	0
5:30 PM	20	0	43	0	9	0	3	0	4	207	8	0	6	220	5	0	525	0	1	0	1
5:45 PM	16	0	27	0	2	0	2	0	1	210	7	0	8	215	3	0	491	0	0	0	0
Total Survey	156	2	301	0	29	1	16	0	25	1,611	79	0	82	1,631	29	0	3,962	1	2	1	1

Peak Hour Summary
4:45 PM to 5:45 PM

By Approach	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	207	82	289	0	27	35	62	0	903	885	1,788	0	875	1,010	1,885	0	2,012	1	2	1	1
%HV	5.8%				3.7%				2.9%				2.2%				2.9%				
PHF	0.81				0.56				0.89				0.95				0.96				

By Movement	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	63	0	144	207	19	1	7	27	17	847	39	903	42	815	18	875	2,012
%HV	3.2%	0.0%	6.9%	5.8%	0.0%	#####	0.0%	3.7%	0.0%	3.0%	2.6%	2.9%	16.7%	1.3%	5.6%	2.2%	2.9%
PHF	0.68	0.00	0.84	0.81	0.53	0.25	0.35	0.56	0.61	0.89	0.70	0.89	0.70	0.93	0.64	0.95	0.96

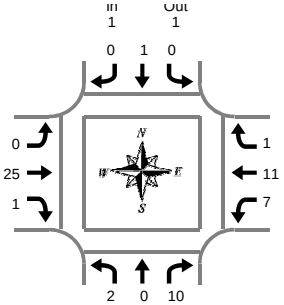
Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	84	2	164	0	10	1	7	0	11	767	45	0	46	804	13	0	1,954	0	0	0	0
4:15 PM	79	1	144	0	11	1	8	0	12	787	43	0	48	807	14	0	1,955	0	0	1	0
4:30 PM	80	0	137	0	13	1	7	0	15	810	40	0	46	798	16	0	1,963	1	1	1	0
4:45 PM	63	0	144	0	19	1	7	0	17	847	39	0	42	815	18	0	2,012	1	2	1	1
5:00 PM	72	0	137	0	19	0	9	0	14	844	34	0	36	827	16	0	2,008	1	2	1	1

Heavy Vehicle Summary

Clay Carney
(503) 833-2740

Out 13
In 26



SW 115th Ave & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
4:45 PM to 5:45 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
4:05 PM	1	0	1	2	0	0	0	0	0	6	0	6	2	1	0	3	11
4:10 PM	0	0	1	1	0	0	0	0	0	2	1	3	2	3	0	5	9
4:15 PM	0	0	2	2	0	0	0	0	0	1	0	1	0	1	0	1	4
4:20 PM	1	0	0	1	0	0	0	0	0	5	1	6	0	2	0	2	9
4:25 PM	1	0	0	1	0	0	0	0	0	4	0	4	1	1	0	2	7
4:30 PM	1	0	2	3	0	0	1	1	0	0	1	1	1	0	0	1	6
4:35 PM	0	0	0	0	0	0	0	0	0	2	1	3	1	3	0	4	7
4:40 PM	2	0	1	3	0	0	0	0	0	1	0	1	0	1	0	1	5
4:45 PM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	1	1	4
4:50 PM	0	0	2	2	0	1	0	1	0	1	1	2	1	2	0	3	8
4:55 PM	1	0	0	1	0	0	0	0	0	1	0	1	1	2	0	3	5
5:00 PM	0	0	2	2	0	0	0	0	0	1	0	1	0	2	0	2	5
5:05 PM	0	0	0	0	0	0	0	0	0	3	0	3	2	1	0	3	6
5:10 PM	1	0	0	1	0	0	0	0	0	3	0	3	0	1	0	1	5
5:15 PM	0	0	0	0	0	0	0	0	0	4	0	4	1	0	0	1	5
5:20 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	2	3
5:25 PM	0	0	1	1	0	0	0	0	0	3	0	3	1	0	0	1	5
5:30 PM	0	0	1	1	0	0	0	0	0	3	0	3	0	1	0	1	5
5:35 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
5:40 PM	0	0	2	2	0	0	0	0	0	2	0	2	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	4	1	5	1	0	0	1	6
5:50 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	2	0	3	4
5:55 PM	0	0	1	1	0	0	0	0	0	2	1	3	0	1	0	1	5
Total Survey	8	0	18	26	0	1	1	2	0	54	7	61	16	28	1	45	134

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	0	2	3	0	0	0	0	0	9	1	10	4	6	0	10	23
4:15 PM	2	0	2	4	0	0	0	0	0	10	1	11	1	4	0	5	20
4:30 PM	3	0	3	6	0	0	1	1	0	3	2	5	2	4	0	6	18
4:45 PM	1	0	3	4	0	1	0	1	0	4	1	5	2	4	1	7	17
5:00 PM	1	0	2	3	0	0	0	0	0	7	0	7	2	4	0	6	16
5:15 PM	0	0	2	2	0	0	0	0	0	7	0	7	3	1	0	4	13
5:30 PM	0	0	3	3	0	0	0	0	0	7	0	7	0	2	0	2	12
5:45 PM	0	0	1	1	0	0	0	0	0	7	2	9	2	3	0	5	15
Total Survey	8	0	18	26	0	1	1	2	0	54	7	61	16	28	1	45	134

Heavy Vehicle Peak Hour Summary
4:45 PM to 5:45 PM

By Approach	Northbound SW 115th Ave			Southbound SW 115th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	12	9	21	1	1	2	26	13	39	19	35	54	58
PHF	0.60			0.25			0.65			0.59			0.81

By Movement	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	2	0	10	12	0	1	0	1	0	25	1	26	7	11	1	19	58
PHF	0.50	0.00	0.63	0.60	0.00	0.25	0.00	0.25	0.00	0.63	0.25	0.65	0.58	0.46	0.25	0.59	0.81

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

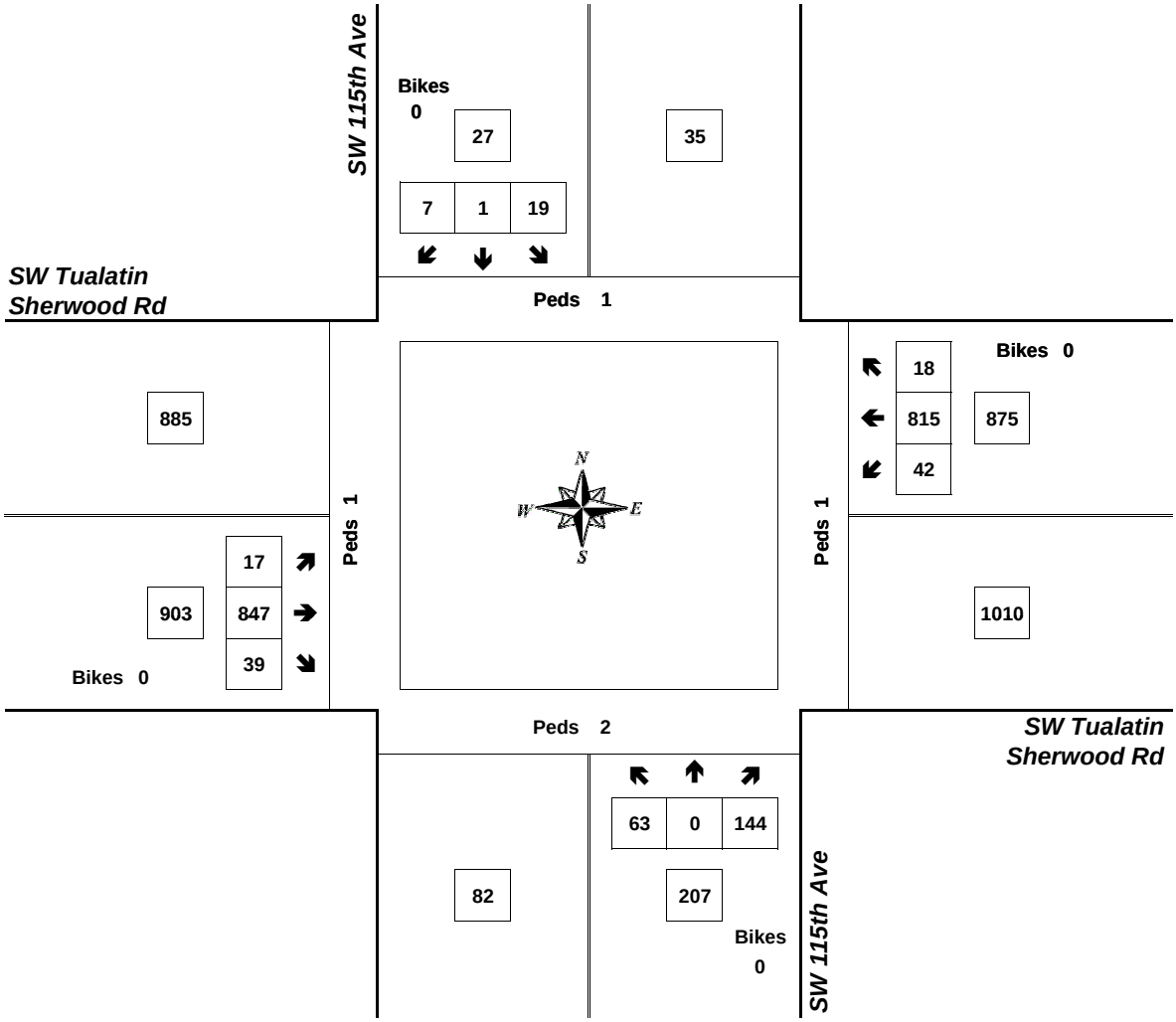
Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	7	0	10	17	0	1	1	2	0	26	5	31	9	18	1	28	78
4:15 PM	7	0	10	17	0	1	1	2	0	24	4	28	7	16	1	24	71
4:30 PM	5	0	10	15	0	1	1	2	0	21	3	24	9	13	1	23	64
4:45 PM	2	0	10	12	0	1	0	1	0	25	1	26	7	11	1	19	58
5:00 PM	1	0	8	9	0	0	0	0	0	28	2	30	7	10	0	17	56

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 115th Ave & SW Tualatin Sherwood Rd

4:45 PM to 5:45 PM
Wednesday, February 06, 2019

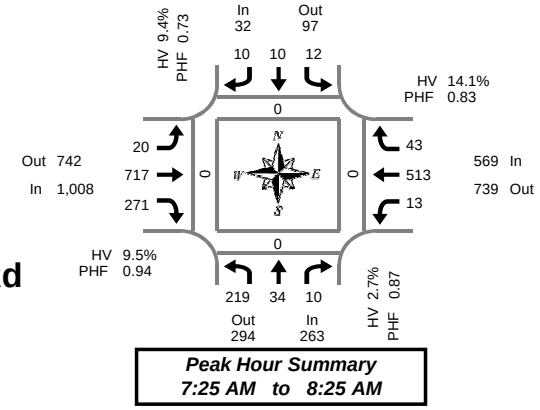


Approach	PHF	HV%	Volume
EB	0.89	2.9%	903
WB	0.95	2.2%	875
NB	0.81	5.8%	207
SB	0.56	3.7%	27
Intersection	0.96	2.9%	2,012

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

Clay Carney
(503) 833-2740



SW Avery St & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:25 AM to 8:25 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	10	4	0	0	0	0	2	0	2	75	14	0	0	26	4	0	137	0	0	0	0
7:05 AM	12	6	0	0	0	0	0	0	1	67	20	0	1	37	4	0	148	0	0	0	0
7:10 AM	12	4	2	0	0	0	0	0	2	56	26	0	0	36	1	0	139	0	0	0	0
7:15 AM	22	3	0	0	3	0	1	0	6	59	13	0	1	34	3	0	145	0	0	0	0
7:20 AM	19	2	1	0	1	1	0	0	4	60	12	0	0	21	9	0	130	0	0	0	0
7:25 AM	14	2	0	0	0	2	2	0	2	57	19	0	2	68	11	0	179	0	0	0	0
7:30 AM	21	6	1	0	0	1	1	0	1	61	26	0	1	25	2	0	146	0	0	0	0
7:35 AM	15	0	1	0	1	0	0	0	0	64	26	0	2	52	3	0	164	0	0	0	0
7:40 AM	20	3	1	0	1	2	1	0	2	59	30	0	1	35	3	0	158	0	0	0	0
7:45 AM	21	2	2	0	3	1	1	0	0	46	29	0	0	58	2	1	165	0	0	0	0
7:50 AM	17	7	1	0	0	1	1	0	4	63	18	0	2	43	4	0	161	0	0	0	0
7:55 AM	21	4	1	0	0	1	2	0	1	61	18	0	1	58	3	0	171	0	0	0	0
8:00 AM	22	1	1	0	1	1	1	0	4	56	23	0	1	29	3	0	143	0	0	0	0
8:05 AM	19	3	1	0	0	0	0	0	0	55	22	0	2	40	4	0	146	0	0	0	0
8:10 AM	17	1	1	0	0	0	0	0	1	59	26	0	0	39	3	0	147	0	0	0	0
8:15 AM	16	3	0	0	2	1	1	0	3	69	16	0	1	28	2	0	142	0	0	0	0
8:20 AM	16	2	0	0	4	0	0	0	2	67	18	0	0	38	3	0	150	0	0	0	0
8:25 AM	11	0	1	0	0	1	1	0	1	75	18	0	3	44	4	0	159	0	0	0	0
8:30 AM	9	0	0	0	3	0	0	0	1	66	6	0	0	52	2	0	139	0	0	0	0
8:35 AM	14	0	1	0	3	0	0	0	0	59	18	0	1	51	4	0	151	0	0	0	0
8:40 AM	13	1	0	0	1	0	0	0	0	86	18	0	2	41	0	0	162	0	0	0	0
8:45 AM	13	0	3	0	0	0	0	0	0	59	17	0	0	49	6	0	147	0	0	0	0
8:50 AM	19	3	0	0	0	1	0	0	1	60	18	0	1	44	3	0	150	0	0	0	0
8:55 AM	16	2	0	0	0	1	0	0	0	46	18	0	1	50	6	0	140	0	0	0	0
Total Survey	389	59	18	0	23	14	14	0	38	1,485	469	0	23	998	89	1	3,619	0	0	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	34	14	2	0	0	0	2	0	5	198	60	0	1	99	9	0	424	0	0	0	0
7:15 AM	55	7	1	0	4	3	3	0	12	176	44	0	3	123	23	0	454	0	0	0	0
7:30 AM	56	9	3	0	2	3	2	0	3	184	82	0	4	112	8	0	468	0	0	0	0
7:45 AM	59	13	4	0	3	3	4	0	5	170	65	0	3	159	9	1	497	0	0	0	0
8:00 AM	58	5	3	0	1	1	1	0	5	170	71	0	3	108	10	0	436	0	0	0	0
8:15 AM	43	5	1	0	6	2	2	0	6	211	52	0	4	110	9	0	451	0	0	0	0
8:30 AM	36	1	1	0	7	0	0	0	1	211	42	0	3	144	6	0	452	0	0	0	0
8:45 AM	48	5	3	0	0	2	0	0	1	165	53	0	2	143	15	0	437	0	0	0	0
Total Survey	389	59	18	0	23	14	14	0	38	1,485	469	0	23	998	89	1	3,619	0	0	0	0

Peak Hour Summary
7:25 AM to 8:25 AM

By Approach	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	263	294	557	0	32	97	129	0	1,008	742	1,750	0	569	739	1,308	1	1,872	0	0	0	0
%HV	2.7%				9.4%				9.5%				14.1%				9.9%				
PHF	0.87				0.73				0.94				0.83				0.94				

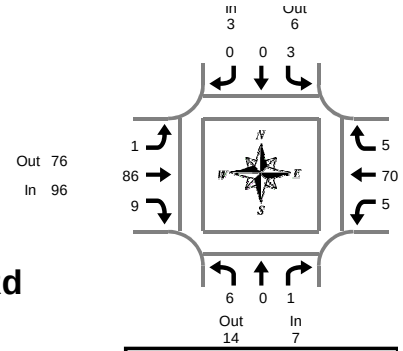
By Movement	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	219	34	10	263	12	10	10	32	20	717	271	1,008	13	513	43	569	1,872
%HV	2.7%	0.0%	10.0%	2.7%	25.0%	0.0%	0.0%	9.4%	5.0%	12.0%	3.3%	9.5%	38.5%	13.6%	11.6%	14.1%	9.9%
PHF	0.88	0.65	0.63	0.87	0.50	0.63	0.63	0.73	0.56	0.92	0.80	0.94	0.65	0.81	0.67	0.83	0.94

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	204	43	10	0	9	9	11	0	25	728	251	0	11	493	49	1	1,843	0	0	0	0
7:15 AM	228	34	11	0	10	10	10	0	25	700	262	0	13	502	50	1	1,855	0	0	0	0
7:30 AM	216	32	11	0	12	9	9	0	19	735	270	0	14	489	36	1	1,852	0	0	0	0
7:45 AM	196	24	9	0	17	6	7	0	17	762	230	0	13	521	34	1	1,836	0	0	0	0
8:00 AM	185	16	8	0	14	5	3	0	13	757	218	0	12	505	40	0	1,776	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW Avery St & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:25 AM to 8:25 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	7	1	8	0	4	0	4	12
7:05 AM	0	0	0	0	0	0	0	0	0	10	0	10	0	5	0	5	15
7:10 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	5	0	5	9
7:15 AM	0	0	0	0	1	0	0	1	0	11	0	11	0	4	0	4	16
7:20 AM	4	0	0	4	0	0	0	0	0	3	0	3	0	2	1	3	10
7:25 AM	0	0	0	0	0	0	0	0	0	7	1	8	1	9	1	11	19
7:30 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	4	0	4	7
7:35 AM	1	0	0	1	1	0	0	1	0	10	2	12	1	7	1	9	23
7:40 AM	1	0	0	1	0	0	0	0	0	8	1	9	0	6	0	6	16
7:45 AM	0	0	0	0	0	0	0	0	0	7	0	7	0	3	0	3	10
7:50 AM	0	0	0	0	0	0	0	0	1	7	1	9	2	5	0	7	16
7:55 AM	0	0	0	0	0	0	0	0	0	11	0	11	0	7	0	7	18
8:00 AM	1	0	1	2	1	0	0	1	0	3	0	3	0	7	0	7	13
8:05 AM	2	0	0	2	0	0	0	0	0	4	0	4	0	6	1	7	13
8:10 AM	0	0	0	0	0	0	0	0	0	7	1	8	0	8	0	8	16
8:15 AM	0	0	0	0	1	0	0	1	0	6	2	8	1	4	1	6	15
8:20 AM	1	0	0	1	0	0	0	0	0	13	1	14	0	4	1	5	20
8:25 AM	3	0	0	3	0	0	0	0	0	6	2	8	0	8	0	8	19
8:30 AM	0	0	0	0	0	0	0	0	0	8	0	8	0	9	0	9	17
8:35 AM	0	0	1	1	1	0	0	1	0	8	1	9	0	4	1	5	16
8:40 AM	0	0	0	0	0	0	0	0	0	6	0	6	0	7	0	7	13
8:45 AM	1	0	0	1	0	0	0	0	0	7	1	8	0	9	1	10	19
8:50 AM	0	0	0	0	0	1	0	1	0	7	2	9	0	6	1	7	17
8:55 AM	0	0	0	0	0	0	0	0	0	7	1	8	0	7	0	7	15
Total Survey	14	0	2	16	5	1	0	6	1	170	17	188	5	140	9	154	364

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	21	1	22	0	14	0	14	36
7:15 AM	4	0	0	4	1	0	0	1	0	21	1	22	1	15	2	18	45
7:30 AM	2	0	0	2	1	0	0	1	0	21	3	24	1	17	1	19	46
7:45 AM	0	0	0	0	0	0	0	0	1	25	1	27	2	15	0	17	44
8:00 AM	3	0	1	4	1	0	0	1	0	14	1	15	0	21	1	22	42
8:15 AM	4	0	0	4	1	0	0	1	0	25	5	30	1	16	2	19	54
8:30 AM	0	0	1	1	1	0	0	1	0	22	1	23	0	20	1	21	46
8:45 AM	1	0	0	1	0	1	0	1	0	21	4	25	0	22	2	24	51
Total Survey	14	0	2	16	5	1	0	6	1	170	17	188	5	140	9	154	364

Heavy Vehicle Peak Hour Summary
7:25 AM to 8:25 AM

By Approach	Northbound SW Avery St			Southbound SW Avery St			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	7	14	21	3	6	9	96	76	172	80	90	170	186
PHF	0.44			0.75			0.80			0.83			0.91

By Movement	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	6	0	1	7	3	0	0	3	1	86	9	96	5	70	5	80	186
PHF	0.50	0.00	0.25	0.44	0.75	0.00	0.00	0.75	0.25	0.83	0.56	0.80	0.63	0.83	0.63	0.83	0.91

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

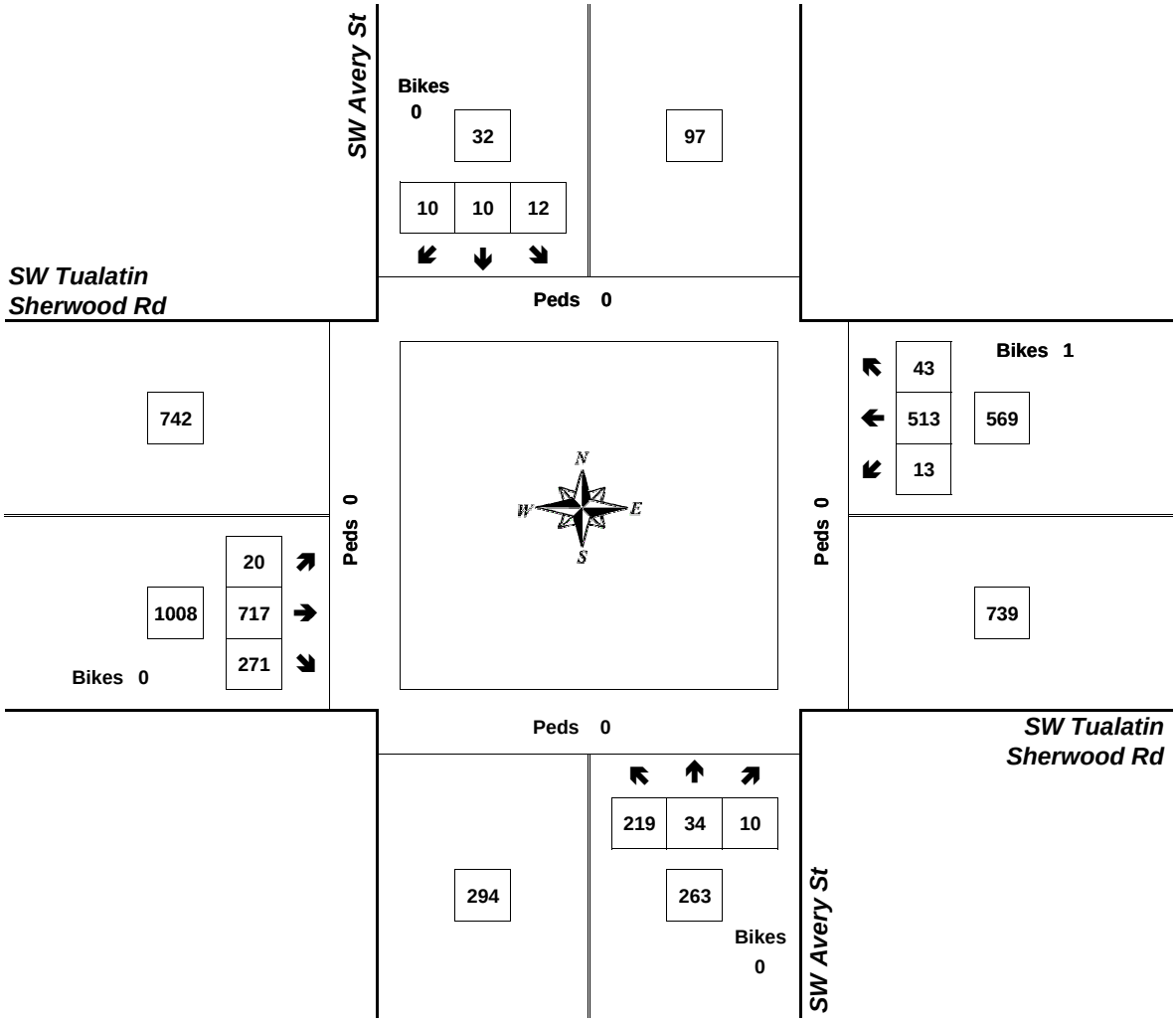
Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	6	0	0	6	2	0	0	2	1	88	6	95	4	61	3	68	171
7:15 AM	9	0	1	10	3	0	0	3	1	81	6	88	4	68	4	76	177
7:30 AM	9	0	1	10	3	0	0	3	1	85	10	96	4	69	4	77	186
7:45 AM	7	0	2	9	3	0	0	3	1	86	8	95	3	72	4	79	186
8:00 AM	8	0	2	10	3	1	0	4	0	82	11	93	1	79	6	86	193

Peak Hour Summary

Clay Carney
(503) 833-2740

SW Avery St & SW Tualatin Sherwood Rd

7:25 AM to 8:25 AM
Thursday, February 07, 2019

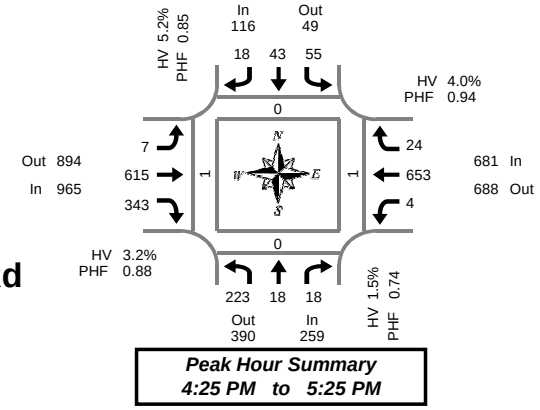


Approach	PHF	HV%	Volume
EB	0.94	9.5%	1,008
WB	0.83	14.1%	569
NB	0.87	2.7%	263
SB	0.73	9.4%	32
Intersection	0.94	9.9%	1,872

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

Clay Carney
(503) 833-2740



SW Avery St & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	25	0	2	0	8	4	3	0	0	53	25	0	0	46	4	0	170	0	0	0	0
4:05 PM	13	2	1	0	1	2	1	0	3	66	23	0	0	47	5	0	164	0	0	1	0
4:10 PM	22	1	2	0	7	0	0	0	1	51	26	1	0	54	1	0	165	0	0	0	0
4:15 PM	10	1	0	0	4	3	3	0	2	52	24	1	0	67	1	0	167	0	0	0	0
4:20 PM	16	1	0	0	5	0	1	0	0	49	21	0	0	52	2	0	147	0	0	0	0
4:25 PM	11	3	3	0	7	3	3	0	0	51	26	0	0	59	1	0	167	0	0	0	0
4:30 PM	25	2	2	0	4	2	1	0	0	41	28	0	0	55	0	0	160	0	0	0	0
4:35 PM	26	2	3	0	6	7	1	0	0	57	22	0	0	61	2	0	187	0	0	0	0
4:40 PM	24	1	3	0	4	4	3	0	1	39	21	0	1	51	2	0	154	0	0	0	0
4:45 PM	14	1	1	0	1	2	0	0	2	62	25	0	1	54	2	0	165	0	0	1	0
4:50 PM	20	2	0	0	6	6	0	0	1	56	29	0	0	56	4	0	180	0	0	0	0
4:55 PM	12	2	1	0	2	1	1	0	1	44	23	0	0	64	1	0	152	0	0	0	0
5:00 PM	25	2	0	0	9	4	2	0	0	51	33	0	1	41	4	0	172	0	0	0	0
5:05 PM	18	0	2	0	3	2	2	0	1	54	24	0	0	52	4	0	162	0	0	0	1
5:10 PM	25	3	3	0	2	2	2	0	0	57	35	0	0	50	1	0	180	0	0	0	0
5:15 PM	10	0	0	0	4	6	3	0	1	53	39	0	0	62	3	0	181	0	0	0	0
5:20 PM	13	0	0	0	7	4	0	0	0	50	38	0	1	48	0	0	161	0	0	0	0
5:25 PM	8	2	1	0	5	4	0	0	1	44	26	0	1	63	2	0	157	0	0	0	0
5:30 PM	19	1	2	0	5	0	1	0	3	47	33	0	0	50	1	0	162	0	0	0	1
5:35 PM	11	4	1	0	4	0	1	0	3	68	30	0	0	61	1	0	184	0	0	0	0
5:40 PM	24	3	1	0	5	0	0	0	0	40	25	0	0	58	3	0	159	0	0	0	0
5:45 PM	14	3	0	0	2	0	2	0	1	63	22	0	0	56	0	0	163	0	0	0	0
5:50 PM	18	1	1	0	2	1	1	0	2	53	18	0	1	61	1	0	160	0	0	0	0
5:55 PM	14	1	0	0	4	1	1	0	6	59	22	0	0	56	4	0	168	0	0	0	0
Total Survey	417	38	29	0	107	58	32	0	29	1,260	638	2	6	1,324	49	0	3,987	0	0	2	2

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	60	3	5	0	16	6	4	0	4	170	74	1	0	147	10	0	499	0	0	1	0
4:15 PM	37	5	3	0	16	6	7	0	2	152	71	1	0	178	4	0	481	0	0	0	0
4:30 PM	75	5	8	0	14	13	5	0	1	137	71	0	1	167	4	0	501	0	0	0	0
4:45 PM	46	5	2	0	9	9	1	0	4	162	77	0	1	174	7	0	497	0	0	1	0
5:00 PM	68	5	5	0	14	8	6	0	1	162	92	0	1	143	9	0	514	0	0	0	1
5:15 PM	31	2	1	0	16	14	3	0	2	147	103	0	2	173	5	0	499	0	0	0	0
5:30 PM	54	8	4	0	14	0	2	0	6	155	88	0	0	169	5	0	505	0	0	0	1
5:45 PM	46	5	1	0	8	2	4	0	9	175	62	0	1	173	5	0	491	0	0	0	0
Total Survey	417	38	29	0	107	58	32	0	29	1,260	638	2	6	1,324	49	0	3,987	0	0	2	2

Peak Hour Summary
4:25 PM to 5:25 PM

By Approach	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	259	390	649	0	116	49	165	0	965	894	1,859	0	681	688	1,369	0	2,021	0	0	1	1
%HV	1.5%				5.2%				3.2%				4.0%				3.4%				
PHF	0.74				0.85				0.88				0.94				0.97				

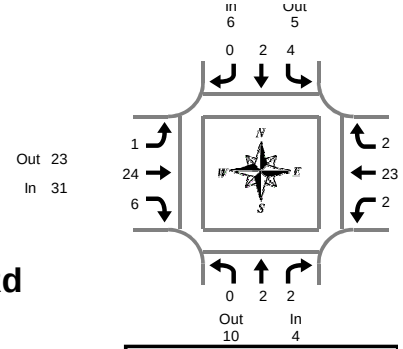
By Movement	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	223	18	18	259	55	43	18	116	7	615	343	965	4	653	24	681	2,021
%HV	0.0%	11.1%	11.1%	1.5%	7.3%	4.7%	0.0%	5.2%	14.3%	3.9%	1.7%	3.2%	50.0%	3.5%	8.3%	4.0%	3.4%
PHF	0.74	0.64	0.56	0.74	0.81	0.83	0.64	0.85	0.44	0.94	0.77	0.88	0.50	0.93	0.67	0.94	0.97

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	218	18	18	0	55	34	17	0	11	621	293	2	2	666	25	0	1,978	0	0	2	0
4:15 PM	226	20	18	0	53	36	19	0	8	613	311	1	3	662	24	0	1,993	0	0	1	1
4:30 PM	220	17	16	0	53	44	15	0	8	608	343	0	5	657	25	0	2,011	0	0	1	1
4:45 PM	199	20	12	0	53	31	12	0	13	626	360	0	4	659	26	0	2,015	0	0	1	2
5:00 PM	199	20	11	0	52	24	15	0	18	639	345	0	4	658	24	0	2,009	0	0	0	2

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW Avery St & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
4:25 PM to 5:25 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	1	1	0	1	1	2	0	2	0	2	5
4:05 PM	0	0	0	0	0	0	0	0	0	7	0	7	0	4	0	4	11
4:10 PM	1	0	0	1	1	0	0	1	1	2	0	3	0	4	0	4	9
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	3	0	3	5
4:20 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
4:25 PM	0	1	0	1	0	0	0	0	0	2	1	3	0	1	0	1	5
4:30 PM	0	0	0	0	0	0	0	0	0	2	1	3	0	1	0	1	4
4:35 PM	0	0	0	0	2	0	0	2	0	1	0	1	0	4	0	4	7
4:40 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	3
4:45 PM	0	0	1	1	0	1	0	1	0	3	0	3	1	1	0	2	7
4:50 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	5	0	5	7
4:55 PM	0	0	0	0	0	0	0	0	1	1	1	3	0	4	0	4	7
5:00 PM	0	1	0	1	0	0	0	0	0	1	1	2	1	1	1	3	6
5:05 PM	0	0	1	1	0	0	0	0	0	4	0	4	0	1	0	1	6
5:10 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
5:15 PM	0	0	0	0	1	1	0	2	0	4	1	5	0	2	0	2	9
5:20 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	2	0	2	4
5:25 PM	0	0	0	0	0	0	0	0	0	4	1	5	0	1	0	1	6
5:30 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1	4
5:35 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1	4
5:40 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
5:45 PM	0	0	0	0	0	0	0	0	0	5	1	6	0	1	0	1	7
5:50 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	2	1	4	5
5:55 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	2	3	6
Total Survey	1	2	2	5	5	2	1	8	2	58	10	70	3	44	5	52	135

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	0	0	1	1	0	1	2	1	10	1	12	0	10	0	10	25
4:15 PM	0	1	0	1	0	0	0	0	0	5	2	7	0	4	0	4	12
4:30 PM	0	0	0	0	2	0	0	2	0	4	2	6	0	5	1	6	14
4:45 PM	0	0	1	1	0	1	0	1	1	6	1	8	1	10	0	11	21
5:00 PM	0	1	1	2	0	0	0	0	0	7	1	8	1	3	1	5	15
5:15 PM	0	0	0	0	2	1	0	3	0	9	2	11	0	5	0	5	19
5:30 PM	0	0	0	0	0	0	0	0	0	8	0	8	0	3	0	3	11
5:45 PM	0	0	0	0	0	0	0	0	0	9	1	10	1	4	3	8	18
Total Survey	1	2	2	5	5	2	1	8	2	58	10	70	3	44	5	52	135

Heavy Vehicle Peak Hour Summary
4:25 PM to 5:25 PM

By Approach	Northbound SW Avery St			Southbound SW Avery St			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	4	10	14	6	5	11	31	23	54	27	30	57	68
PHF	0.50			0.50			0.70			0.56			0.81

By Movement	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	2	2	4	4	2	0	6	1	24	6	31	2	23	2	27	68
PHF	0.00	0.50	0.50	0.50	0.50	0.50	0.00	0.50	0.25	0.60	0.75	0.70	0.50	0.58	0.50	0.56	0.81

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

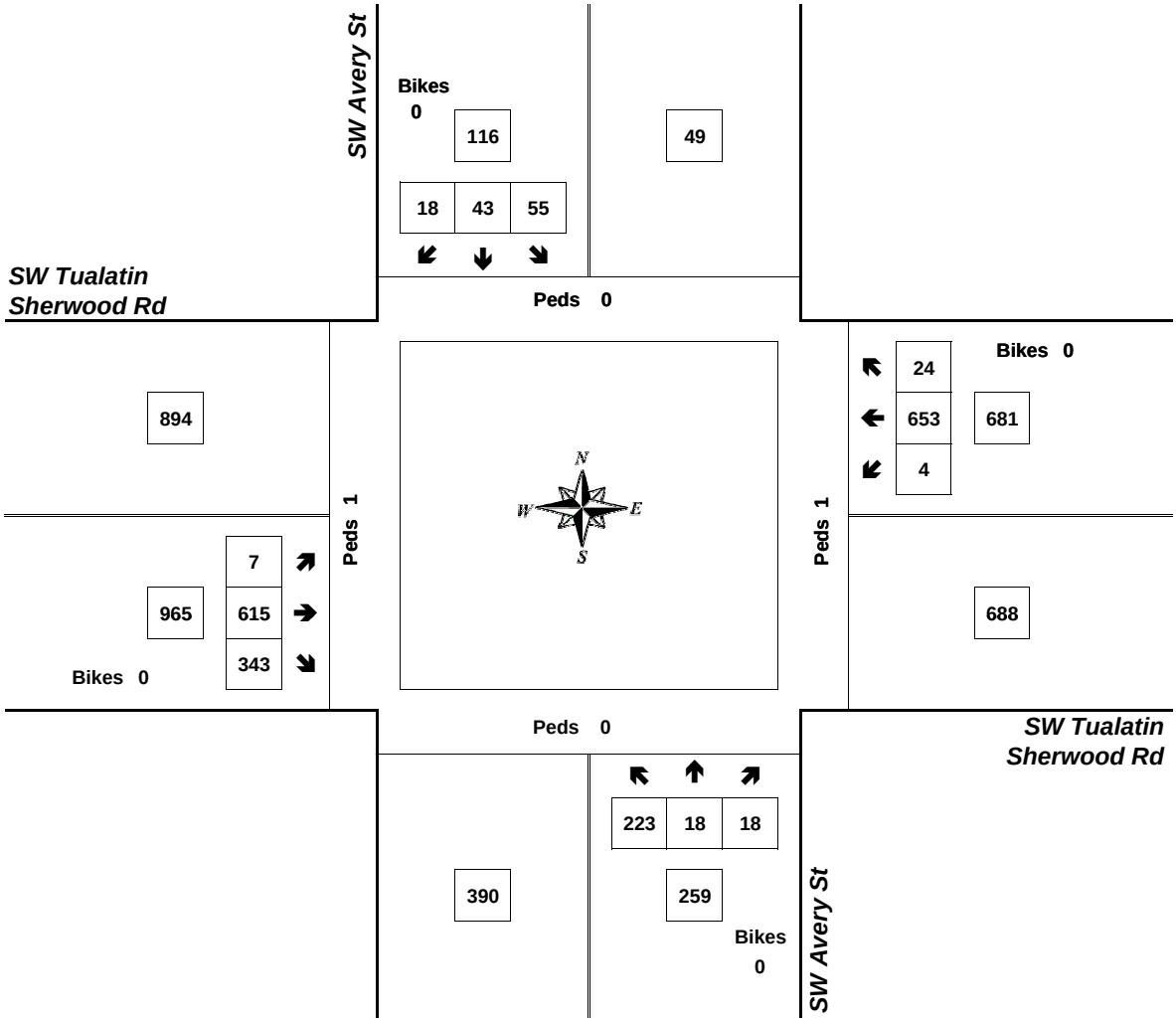
Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	1	1	3	3	1	1	5	2	25	6	33	1	29	1	31	72
4:15 PM	0	2	2	4	2	1	0	3	1	22	6	29	2	22	2	26	62
4:30 PM	0	1	2	3	4	2	0	6	1	26	6	33	2	23	2	27	69
4:45 PM	0	1	2	3	2	2	0	4	1	30	4	35	2	21	1	24	66
5:00 PM	0	1	1	2	2	1	0	3	0	33	4	37	2	15	4	21	63

Peak Hour Summary

Clay Carney
(503) 833-2740

SW Avery St & SW Tualatin Sherwood Rd

4:25 PM to 5:25 PM
Wednesday, February 06, 2019

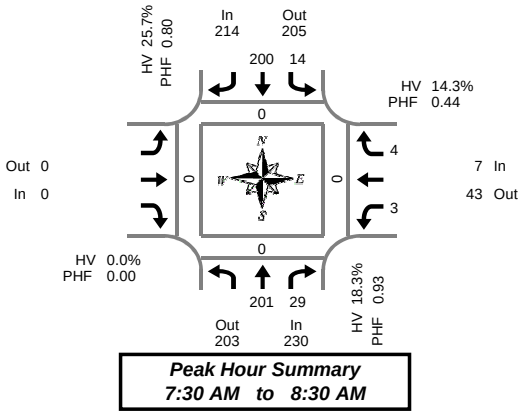


Approach	PHF	HV%	Volume
EB	0.88	3.2%	965
WB	0.94	4.0%	681
NB	0.74	1.5%	259
SB	0.85	5.2%	116
Intersection	0.97	3.4%	2,021

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Cimino St

Thursday, July 13, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:30 AM to 8:30 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T	Bikes		L	R	Bikes		North	South	East	West					
7:00 AM	19	2	0		1	18	0		0		0		0	0	0		40	0	0	0	0
7:05 AM	11	2	0		0	18	0		0		0		0	0	0		31	0	0	0	0
7:10 AM	12	1	0		2	11	0		0		0		0	0	0		26	1	0	0	0
7:15 AM	14	3	0		0	8	0		0		0		0	1	0		26	0	0	0	0
7:20 AM	25	4	0		3	10	0		0		0		0	2	0		44	0	0	0	0
7:25 AM	14	2	1		0	6	0		0		0		0	0	0		22	0	0	0	0
7:30 AM	17	4	0		2	11	0		0		0		0	0	0		34	0	0	0	0
7:35 AM	13	3	0		1	17	0		0		0		0	0	0		34	0	0	0	0
7:40 AM	16	2	0		1	18	0		0		0		0	0	0		37	0	0	0	0
7:45 AM	17	1	0		2	28	0		0		0		0	0	0		48	0	0	0	0
7:50 AM	19	2	0		0	14	0		0		0		0	1	0		36	0	0	0	0
7:55 AM	19	3	0		1	10	0		0		0		0	1	0		34	0	0	0	0
8:00 AM	13	3	0		1	19	0		0		0		0	0	0		36	0	0	0	0
8:05 AM	14	4	1		4	19	0		0		0		1	0	0		42	0	0	0	0
8:10 AM	16	2	0		0	13	0		0		0		0	0	0		31	0	0	0	0
8:15 AM	17	1	0		1	18	0		0		0		1	1	0		39	0	0	0	0
8:20 AM	21	1	0		1	15	0		0		0		1	0	0		39	0	0	0	0
8:25 AM	19	3	0		0	18	0		0		0		0	1	0		41	0	0	0	0
8:30 AM	4	1	0		0	11	0		0		0		0	0	0		16	0	0	0	0
8:35 AM	12	2	0		0	9	0		0		0		2	1	0		26	0	0	0	0
8:40 AM	21	0	0		1	19	0		0		0		0	0	0		41	0	0	0	0
8:45 AM	8	0	0		1	21	0		0		0		0	0	0		30	0	0	0	0
8:50 AM	20	3	0		0	15	0		0		0		0	1	0		39	0	0	0	0
8:55 AM	11	2	0		3	15	0		0		0		0	0	0		31	0	0	0	0
Total Survey	372	51	2		25	361	0		0		0		5	9	0		823	1	0	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T	Bikes		L	R	Bikes		North	South	East	West					
7:00 AM	42	5	0		3	47	0		0		0		0	0	0		97	1	0	0	0
7:15 AM	53	9	1		3	24	0		0		0		0	3	0		92	0	0	0	0
7:30 AM	46	9	0		4	46	0		0		0		0	0	0		105	0	0	0	0
7:45 AM	55	6	0		3	52	0		0		0		0	2	0		118	0	0	0	0
8:00 AM	43	9	1		5	51	0		0		0		1	0	0		109	0	0	0	0
8:15 AM	57	5	0		2	51	0		0		0		2	2	0		119	0	0	0	0
8:30 AM	37	3	0		1	39	0		0		0		2	1	0		83	0	0	0	0
8:45 AM	39	5	0		4	51	0		0		0		0	1	0		100	0	0	0	0
Total Survey	372	51	2		25	361	0		0		0		5	9	0		823	1	0	0	0

Peak Hour Summary
7:30 AM to 8:30 AM

By Approach	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	230	203	433	1	214	205	419	0	0	0	0	0	7	43	50	0	451	0	0	0	0
%HV	18.3%				25.7%				0.0%				14.3%				21.7%				
PHF	0.93				0.80				0.00				0.44				0.93				

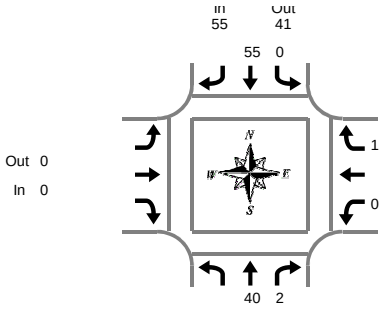
By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Total
	T	R	Total		L	T		Total				Total	L		R	Total	
Volume	201	29	230		14	200		214				0	3		4	7	451
%HV	NA	19.9%	6.9%	18.3%	0.0%	27.5%	NA	25.7%	NA	NA	NA	0.0%	0.0%	NA	25.0%	14.3%	21.7%
PHF		0.88	0.73	0.93	0.58	0.79		0.80				0.00	0.38		0.50	0.44	0.93

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T	Bikes		L	R	Bikes		North	South	East	West					
7:00 AM	196	29	1		13	169	0		0		0		0	5	0		412	1	0	0	0
7:15 AM	197	33	2		15	173	0		0		0		1	5	0		424	0	0	0	0
7:30 AM	201	29	1		14	200	0		0		0		3	4	0		451	0	0	0	0
7:45 AM	192	23	1		11	193	0		0		0		5	5	0		429	0	0	0	0
8:00 AM	176	22	1		12	192	0		0		0		5	4	0		411	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Cimino St

Thursday, July 13, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:30 AM to 8:30 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Interval Total
	T	R	Total		L	T		Total				Total	L		R	Total	
7:00 AM	2	0	2		0	2		2				0	0		0	0	4
7:05 AM	2	0	2		0	5		5				0	0		0	0	7
7:10 AM	2	0	2		0	3		3				0	0		0	0	5
7:15 AM	4	0	4		0	3		3				0	0		0	0	7
7:20 AM	3	0	3		0	1		1				0	0		0	0	4
7:25 AM	1	0	1		0	2		2				0	0		0	0	3
7:30 AM	2	0	2		0	4		4				0	0		0	0	6
7:35 AM	4	0	4		0	3		3				0	0		0	0	7
7:40 AM	3	0	3		0	5		5				0	0		0	0	8
7:45 AM	3	0	3		0	8		8				0	0		0	0	11
7:50 AM	2	1	3		0	3		3				0	0		0	0	6
7:55 AM	2	0	2		0	3		3				0	0		1	1	6
8:00 AM	2	0	2		0	9		9				0	0		0	0	11
8:05 AM	4	0	4		0	5		5				0	0		0	0	9
8:10 AM	8	0	8		0	6		6				0	0		0	0	14
8:15 AM	4	0	4		0	2		2				0	0		0	0	6
8:20 AM	4	0	4		0	3		3				0	0		0	0	7
8:25 AM	2	1	3		0	4		4				0	0		0	0	7
8:30 AM	1	0	1		0	1		1				0	0		0	0	2
8:35 AM	1	0	1		0	2		2				0	0		0	0	3
8:40 AM	2	0	2		0	6		6				0	0		0	0	8
8:45 AM	1	0	1		0	4		4				0	0		0	0	5
8:50 AM	0	0	0		0	1		1				0	0		0	0	1
8:55 AM	4	0	4		0	2		2				0	0		0	0	6
Total Survey	63	2	65		0	87		87				0	0		1	1	153

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Interval Total
	T	R	Total		L	T		Total				Total	L		R	Total	
7:00 AM	6	0	6		0	10		10				0	0		0	0	16
7:15 AM	8	0	8		0	6		6				0	0		0	0	14
7:30 AM	9	0	9		0	12		12				0	0		0	0	21
7:45 AM	7	1	8		0	14		14				0	0		1	1	23
8:00 AM	14	0	14		0	20		20				0	0		0	0	34
8:15 AM	10	1	11		0	9		9				0	0		0	0	20
8:30 AM	4	0	4		0	9		9				0	0		0	0	13
8:45 AM	5	0	5		0	7		7				0	0		0	0	12
Total Survey	63	2	65		0	87		87				0	0		1	1	153

Heavy Vehicle Peak Hour Summary
7:30 AM to 8:30 AM

By Approach	Northbound SW 124th Ave			Southbound SW 124th Ave			Eastbound SW Cimino St			Westbound SW Cimino St			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	42	55	97	55	41	96	0	0	0	1	2	3	98
PHF	0.66			0.69			0.00			0.25			0.72

By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Total
	T	R	Total		L	T		Total				Total	L		R	Total	
Volume	40	2	42		0	55		55				0	0		1	1	98
PHF	0.63	0.50	0.66		0.00	0.69		0.69				0.00	0.00		0.25	0.25	0.72

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

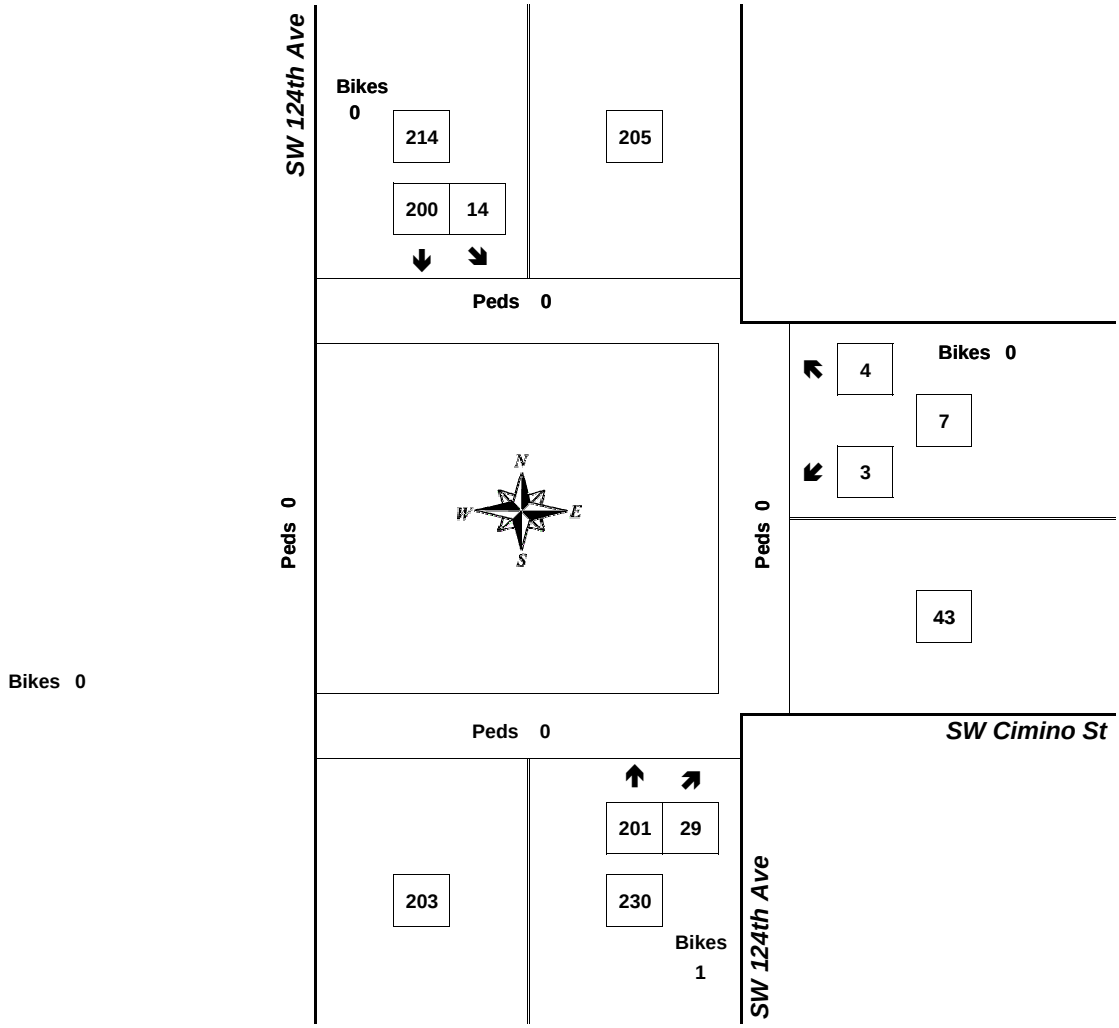
Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Interval Total
	T	R	Total		L	T		Total				Total	L		R	Total	
7:00 AM	30	1	31		0	42		42				0	0		1	1	74
7:15 AM	38	1	39		0	52		52				0	0		1	1	92
7:30 AM	40	2	42		0	55		55				0	0		1	1	98
7:45 AM	35	2	37		0	52		52				0	0		1	1	90
8:00 AM	33	1	34		0	45		45				0	0		0	0	79

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 124th Ave & SW Cimino St

7:30 AM to 8:30 AM
Thursday, July 13, 2017

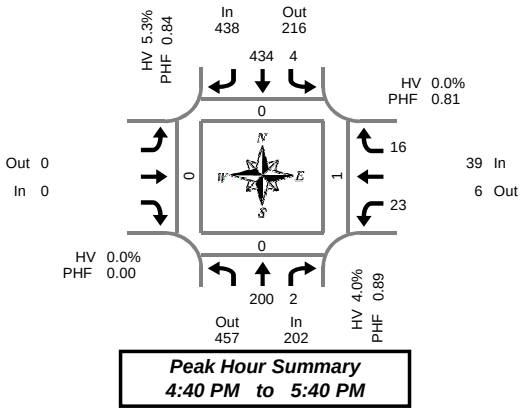


Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.44	14.3%	7
NB	0.93	18.3%	230
SB	0.80	25.7%	214
Intersection	0.93	21.7%	451

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Cimino St

Wednesday, July 12, 2017
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T	Bikes		L	R	Bikes		North	South	East	West					
4:00 PM	14	1	0		0	32	0				0		1	1	0		49	0	0	0	0
4:05 PM	22	0	0		0	26	0				0		7	3	0		58	0	0	0	0
4:10 PM	18	0	0		0	31	0				0		3	1	0		53	0	0	1	0
4:15 PM	16	2	0		0	23	0				0		1	3	0		45	0	0	1	0
4:20 PM	13	0	0		0	17	0				0		0	0	0		30	0	0	0	0
4:25 PM	9	0	0		0	28	0				0		3	1	0		41	0	0	0	0
4:30 PM	15	0	0		0	27	0				0		5	1	0		48	0	0	0	0
4:35 PM	12	0	0		0	28	0				0		2	2	0		44	0	0	0	0
4:40 PM	20	0	0		1	32	0				0		2	1	0		56	0	0	0	0
4:45 PM	21	0	0		0	35	0				0		1	2	0		59	0	0	0	0
4:50 PM	11	0	0		0	29	0				0		2	0	0		42	0	0	0	0
4:55 PM	14	0	0		1	34	1				0		2	2	0		53	0	0	0	0
5:00 PM	18	1	0		0	40	0				0		2	1	0		62	0	0	0	0
5:05 PM	14	1	0		0	48	1				0		1	3	0		67	0	0	0	0
5:10 PM	14	0	0		2	40	0				0		5	0	0		61	0	0	0	0
5:15 PM	20	0	0		0	31	0				0		1	2	0		54	0	0	0	0
5:20 PM	20	0	0		0	45	0				0		3	1	0		69	0	0	0	0
5:25 PM	17	0	0		0	33	0				0		0	1	0		51	0	0	0	0
5:30 PM	17	0	0		0	35	2				0		3	1	0		56	0	0	0	0
5:35 PM	14	0	0		0	32	0				0		1	2	0		49	0	0	1	0
5:40 PM	13	0	0		0	26	2				0		0	1	0		40	0	0	0	0
5:45 PM	18	0	0		0	37	0				0		2	1	0		58	0	0	0	0
5:50 PM	10	0	0		1	19	0				0		2	1	0		33	0	0	0	0
5:55 PM	16	0	0		0	22	0				0		0	0	0		38	0	0	0	0
Total Survey	376	5	0		5	750	6				0		49	31	0		1,216	0	0	3	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T	Bikes		L	R	Bikes		North	South	East	West					
4:00 PM	54	1	0		0	89	0				0		11	5	0		160	0	0	1	0
4:15 PM	38	2	0		0	68	0				0		4	4	0		116	0	0	1	0
4:30 PM	47	0	0		1	87	0				0		9	4	0		148	0	0	0	0
4:45 PM	46	0	0		1	98	1				0		5	4	0		154	0	0	0	0
5:00 PM	46	2	0		2	128	1				0		8	4	0		190	0	0	0	0
5:15 PM	57	0	0		0	109	0				0		4	4	0		174	0	0	0	0
5:30 PM	44	0	0		0	93	4				0		4	4	0		145	0	0	1	0
5:45 PM	44	0	0		1	78	0				0		4	2	0		129	0	0	0	0
Total Survey	376	5	0		5	750	6				0		49	31	0		1,216	0	0	3	0

Peak Hour Summary
4:40 PM to 5:40 PM

By Approach	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	202	457	659	0	438	216	654	4	0	0	0	0	39	6	45	0	679	0	0	1	0
%HV	4.0%				5.3%				0.0%				0.0%				4.6%				
PHF	0.89				0.84				0.00				0.81				0.89				

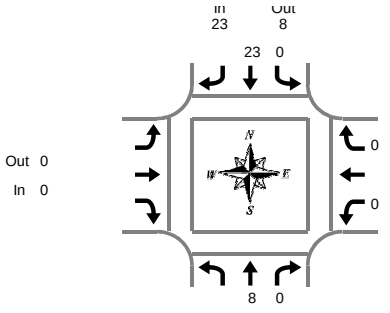
By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Total
		T	R	Total	L	T		Total				Total	L		R	Total	
Volume		200	2	202	4	434		438				0	23		16	39	679
%HV	NA	4.0%	0.0%	4.0%	0.0%	5.3%	NA	5.3%	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	4.6%
PHF		0.88	0.25	0.89	0.50	0.85		0.84				0.00	0.64		0.67	0.81	0.89

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T	Bikes		L	R	Bikes		North	South	East	West					
4:00 PM	185	3	0		2	342	1				0		29	17	0		578	0	0	2	0
4:15 PM	177	4	0		4	381	2				0		26	16	0		608	0	0	1	0
4:30 PM	196	2	0		4	422	2				0		26	16	0		666	0	0	0	0
4:45 PM	193	2	0		3	428	6				0		21	16	0		663	0	0	1	0
5:00 PM	191	2	0		3	408	5				0		20	14	0		638	0	0	1	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Cimino St

Wednesday, July 12, 2017
4:00 PM to 6:00 PM

Peak Hour Summary
4:40 PM to 5:40 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
4:00 PM		2	0	2	0	2		2				0	0		0	0	4
4:05 PM		0	0	0	0	2		2				0	0		0	0	2
4:10 PM		1	0	1	0	0		0				0	0		0	0	1
4:15 PM		1	0	1	0	2		2				0	0		0	0	3
4:20 PM		0	0	0	0	5		5				0	0		0	0	5
4:25 PM		0	0	0	0	2		2				0	0		0	0	2
4:30 PM		1	0	1	0	1		1				0	0		0	0	2
4:35 PM		1	0	1	0	1		1				0	0		0	0	2
4:40 PM		1	0	1	0	0		0				0	0		0	0	1
4:45 PM		0	0	0	0	2		2				0	0		0	0	2
4:50 PM		1	0	1	0	2		2				0	0		0	0	3
4:55 PM		0	0	0	0	4		4				0	0		0	0	4
5:00 PM		1	0	1	0	1		1				0	0		0	0	2
5:05 PM		0	0	0	0	1		1				0	0		0	0	1
5:10 PM		0	0	0	0	3		3				0	0		0	0	3
5:15 PM		0	0	0	0	2		2				0	0		0	0	2
5:20 PM		1	0	1	0	3		3				0	0		0	0	4
5:25 PM		0	0	0	0	3		3				0	0		0	0	3
5:30 PM		3	0	3	0	1		1				0	0		0	0	4
5:35 PM		1	0	1	0	1		1				0	0		0	0	2
5:40 PM		0	0	0	0	1		1				0	0		0	0	1
5:45 PM		1	0	1	0	2		2				0	0		0	0	3
5:50 PM		0	0	0	0	0		0				0	0		0	0	0
5:55 PM		2	0	2	0	0		0				0	0		0	0	2
Total Survey		17	0	17	0	41		41				0	0		0	0	58

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
4:00 PM		3	0	3	0	4		4				0	0		0	0	7
4:15 PM		1	0	1	0	9		9				0	0		0	0	10
4:30 PM		3	0	3	0	2		2				0	0		0	0	5
4:45 PM		1	0	1	0	8		8				0	0		0	0	9
5:00 PM		1	0	1	0	5		5				0	0		0	0	6
5:15 PM		1	0	1	0	8		8				0	0		0	0	9
5:30 PM		4	0	4	0	3		3				0	0		0	0	7
5:45 PM		3	0	3	0	2		2				0	0		0	0	5
Total Survey		17	0	17	0	41		41				0	0		0	0	58

Heavy Vehicle Peak Hour Summary
4:40 PM to 5:40 PM

By Approach	Northbound SW 124th Ave			Southbound SW 124th Ave			Eastbound SW Cimino St			Westbound SW Cimino St			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	8	23	31	23	8	31	0	0	0	0	0	0	31
PHF	0.50			0.72			0.00			0.00			0.70

By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Total
		T	R	Total	L	T		Total				Total	L		R	Total	
Volume		8	0	8	0	23		23				0	0		0	0	31
PHF		0.50	0.00	0.50	0.00	0.72		0.72				0.00	0.00		0.00	0.00	0.70

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

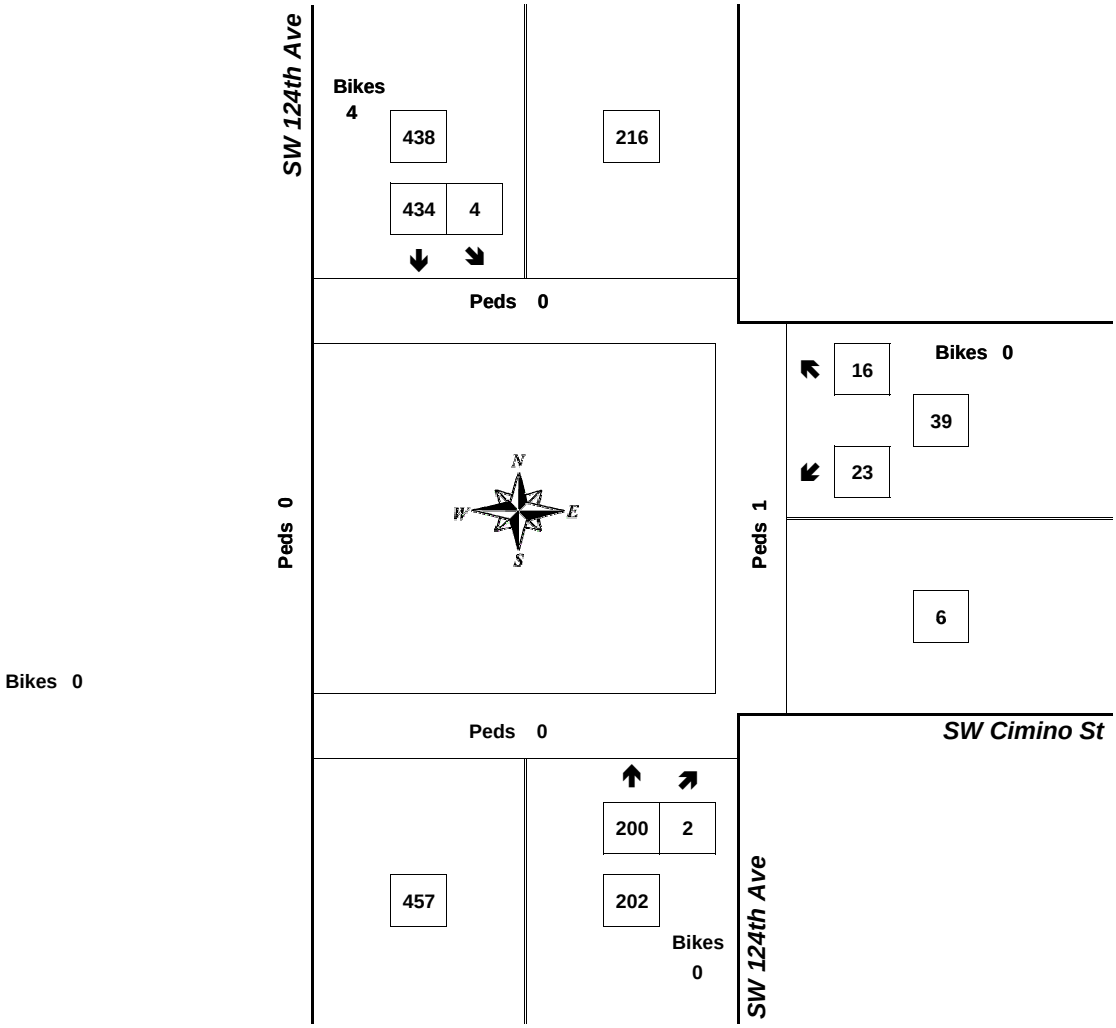
Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Cimino St				Westbound SW Cimino St				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
4:00 PM		8	0	8	0	23		23				0	0		0	0	31
4:15 PM		6	0	6	0	24		24				0	0		0	0	30
4:30 PM		6	0	6	0	23		23				0	0		0	0	29
4:45 PM		7	0	7	0	24		24				0	0		0	0	31
5:00 PM		9	0	9	0	18		18				0	0		0	0	27

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 124th Ave & SW Cimino St

4:40 PM to 5:40 PM
Wednesday, July 12, 2017



Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.81	0.0%	39
NB	0.89	4.0%	202
SB	0.84	5.3%	438
Intersection	0.89	4.6%	679

Count Period: 4:00 PM to 6:00 PM

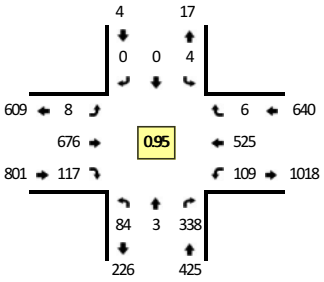
Type of peak hour being reported: User-Defined

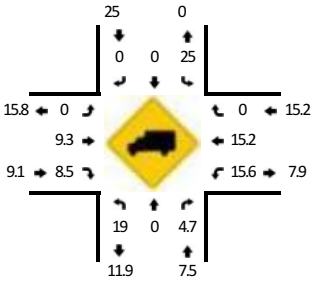
Method for determining peak hour: Total Entering Volume

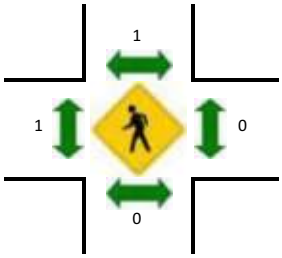
LOCATION: Oregon St -- Tualatin-Sherwood Rd
CITY/STATE: Washington, OR

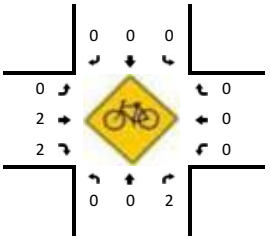
QC JOB #: 14898001
DATE: Wed, Feb 13 2019

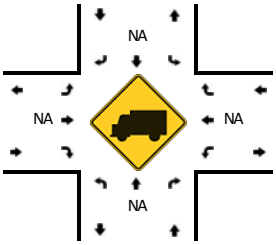
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:20 AM -- 7:35 AM

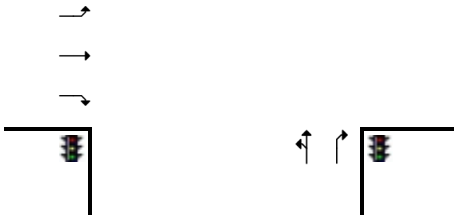


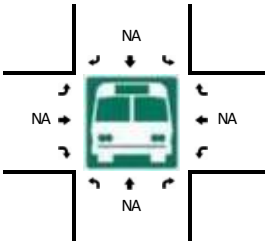












5-Min Count Period Beginning At	Oregon St (Northbound)				Oregon St (Southbound)				Tualatin-Sherwood Rd (Eastbound)				Tualatin-Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	0	35	0	0	0	0	0	0	73	9	0	9	37	0	0	167	
7:05 AM	9	0	37	0	0	0	1	0	0	45	5	0	8	37	0	0	142	
7:10 AM	2	0	24	0	1	0	0	0	1	69	9	0	1	42	0	0	149	
7:15 AM	7	1	45	0	0	0	0	0	0	47	10	0	10	29	0	0	149	
7:20 AM	5	0	34	0	0	0	0	0	2	60	7	0	12	35	0	0	155	
7:25 AM	9	1	17	0	0	0	0	0	0	61	13	0	10	60	0	0	171	
7:30 AM	5	0	25	0	1	0	0	0	0	63	18	0	8	45	0	0	165	
7:35 AM	9	0	29	0	0	0	0	0	0	43	11	0	9	32	0	0	133	
7:40 AM	6	0	29	0	0	0	0	0	0	64	4	0	5	41	2	0	151	
7:45 AM	7	0	27	0	0	0	0	0	2	44	13	0	13	50	0	0	156	
7:50 AM	8	0	33	0	0	0	0	0	2	61	5	0	11	44	1	0	165	
7:55 AM	8	1	33	0	0	0	0	0	1	62	7	0	10	39	0	0	161	1864
8:00 AM	11	1	28	0	0	0	0	0	0	58	12	0	6	42	3	0	161	1858
8:05 AM	5	0	34	0	2	0	0	0	1	54	8	0	10	49	0	0	163	1879
8:10 AM	8	0	22	0	0	0	0	0	0	62	6	0	3	40	0	0	141	1871
8:15 AM	3	0	27	0	1	0	0	0	0	44	13	0	12	48	0	0	148	1870
8:20 AM	7	0	16	0	0	0	0	0	0	62	12	0	3	39	1	0	140	1855
8:25 AM	8	0	19	0	1	0	0	0	0	60	10	0	16	34	4	0	152	1836
8:30 AM	5	0	24	0	0	1	0	0	0	54	8	0	15	44	1	0	152	1823
8:35 AM	7	1	21	0	0	0	0	0	0	62	7	0	8	41	0	0	147	1837
8:40 AM	12	0	18	0	0	0	0	0	0	56	5	0	7	54	2	0	154	1840
8:45 AM	6	0	39	0	0	0	0	0	1	53	8	0	8	43	0	0	158	1842
8:50 AM	6	0	24	0	0	0	0	0	0	45	4	0	11	42	1	0	133	1810
8:55 AM	8	1	8	0	0	0	0	0	1	58	1	0	7	43	1	0	128	1777

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	76	4	304	0	4	0	0	0	8	736	152	0	120	560	0	0	1964
Heavy Trucks	12	0	8		4	0	0		0	72	20		16	88	0		220
Pedestrians		0				4				4				0			8
Bicycles	0	0	1		0	0	0		0	1	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/26/2019 10:12 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: Oregon St -- Tualatin-Sherwood Rd

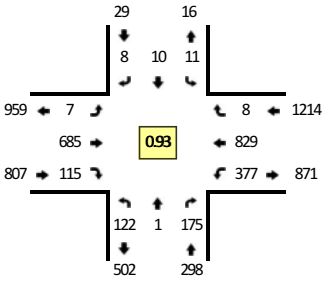
CITY/STATE: Washington, OR

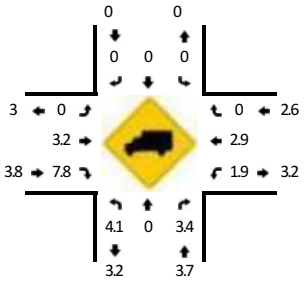
QC JOB #: 14898002

DATE: Wed, Feb 13 2019

Peak-Hour: 4:45 PM -- 5:45 PM

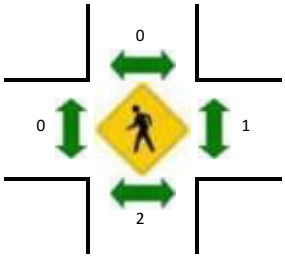
Peak 15-Min: 5:00 PM -- 5:15 PM

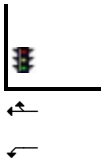


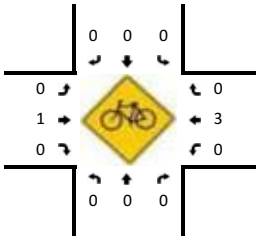


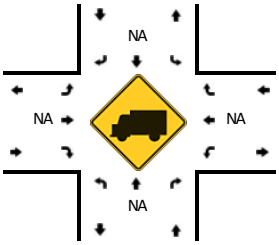
Quality Counts

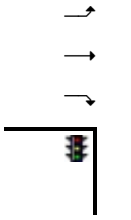
DATA THAT DRIVES COMMUNITIES

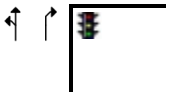


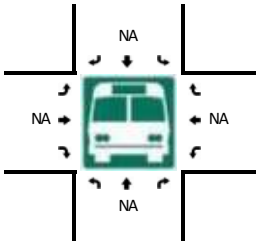












5-Min Count Period Beginning At	Oregon St (Northbound)				Oregon St (Southbound)				Tualatin-Sherwood Rd (Eastbound)				Tualatin-Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	5	0	11	0	0	0	1	0	0	62	11	0	25	70	0	0	185	
4:05 PM	12	0	15	0	0	1	0	0	0	58	11	0	20	55	0	0	172	
4:10 PM	12	0	22	0	3	1	0	0	0	49	8	0	29	65	0	0	189	
4:15 PM	6	0	7	0	2	0	0	0	1	64	7	0	24	63	0	0	174	
4:20 PM	9	0	14	0	1	0	0	0	0	42	13	0	29	68	0	0	176	
4:25 PM	6	1	9	0	0	1	2	0	0	43	11	0	26	62	2	0	163	
4:30 PM	6	0	7	0	1	0	0	0	0	57	9	0	33	78	0	0	191	
4:35 PM	11	0	12	0	0	0	0	0	0	62	13	0	22	55	0	0	175	
4:40 PM	6	1	13	0	1	0	1	0	1	46	9	0	36	77	0	0	191	
4:45 PM	12	0	20	0	1	0	0	0	0	46	11	0	25	64	1	0	180	
4:50 PM	13	0	8	0	1	0	0	0	0	54	12	0	31	70	0	0	189	
4:55 PM	13	0	14	0	1	1	0	0	0	58	7	0	29	61	0	0	184	2169
5:00 PM	5	0	12	0	4	2	0	0	0	64	12	0	28	67	0	0	194	2178
5:05 PM	10	0	23	0	0	1	1	0	0	74	17	0	27	62	2	0	217	2223
5:10 PM	10	0	22	0	3	4	2	0	1	68	9	0	28	74	1	0	222	2256
5:15 PM	10	0	19	0	0	0	1	0	1	58	7	0	32	59	0	0	187	2269
5:20 PM	8	0	11	0	0	0	1	0	0	52	9	0	37	79	1	0	198	2291
5:25 PM	9	0	8	0	0	0	0	0	1	50	9	0	31	76	0	0	184	2312
5:30 PM	10	1	15	0	1	2	1	0	1	50	12	0	35	66	3	0	197	2318
5:35 PM	16	0	11	0	0	0	1	0	1	54	7	0	34	69	0	0	193	2336
5:40 PM	6	0	12	0	0	0	1	0	2	57	3	0	40	82	0	0	203	2348
5:45 PM	5	0	13	0	0	0	0	0	0	46	6	0	32	66	1	0	169	2337
5:50 PM	11	0	13	0	1	0	0	0	0	45	4	0	27	64	1	0	166	2314
5:55 PM	7	0	14	0	1	0	0	0	1	52	6	0	17	74	1	0	173	2303

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	100	0	228	0	28	28	12	0	4	824	152	0	332	812	12	0	2532
Heavy Trucks	4	0	8		0	0	0		0	40	20		4	8	0		84
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/26/2019 10:13 AM

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

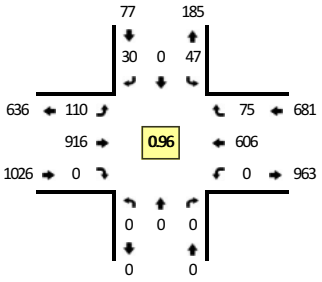
Type of peak hour being reported: User-Defined

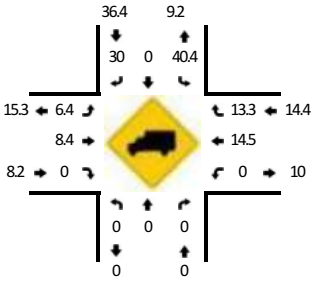
Method for determining peak hour: Total Entering Volume

LOCATION: Cipole Rd -- Tualatin-Sherwood Rd
CITY/STATE: Washington, OR

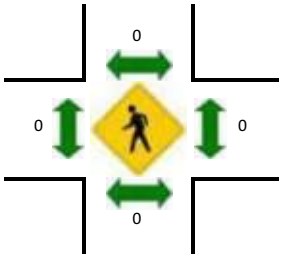
QC JOB #: 14898005
DATE: Wed, Feb 13 2019

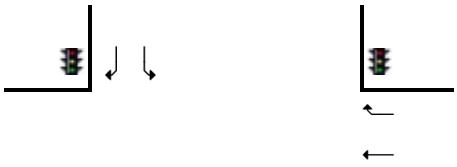
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

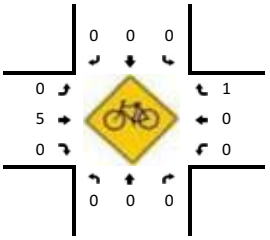


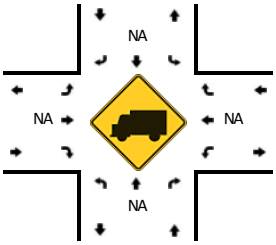


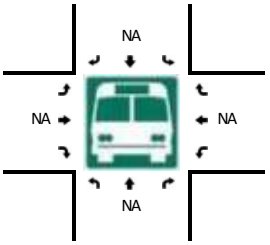
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	Cipole Rd (Northbound)				Cipole Rd (Southbound)				Tualatin-Sherwood Rd (Eastbound)				Tualatin-Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	3	0	2	0	8	91	0	0	0	39	13	0	156	
7:05 AM	0	0	0	0	7	0	4	0	8	73	0	0	0	45	4	0	141	
7:10 AM	0	0	0	0	3	0	1	0	2	85	0	0	0	44	10	0	145	
7:15 AM	0	0	0	0	3	0	3	0	9	83	0	0	0	43	9	0	150	
7:20 AM	0	0	0	0	6	0	5	0	8	86	0	0	0	47	5	0	157	
7:25 AM	0	0	0	0	5	0	0	0	5	75	0	0	0	59	5	0	149	
7:30 AM	0	0	0	0	4	0	2	0	10	79	0	0	0	45	6	0	146	
7:35 AM	0	0	0	0	7	0	1	0	10	67	0	0	0	36	10	0	131	
7:40 AM	0	0	0	0	2	0	2	0	11	82	0	0	0	50	11	0	158	
7:45 AM	0	0	0	0	4	0	4	0	10	68	0	0	0	59	4	0	149	
7:50 AM	0	0	0	0	4	0	2	0	7	79	0	0	0	56	9	0	157	
7:55 AM	0	0	0	0	5	0	3	0	11	65	0	0	0	53	5	0	142	1781
8:00 AM	0	0	0	0	2	0	1	0	12	84	0	0	0	59	7	0	165	1790
8:05 AM	0	0	0	0	3	0	5	0	7	78	0	0	0	41	3	0	137	1786
8:10 AM	0	0	0	0	1	0	3	0	8	79	0	0	0	49	5	0	145	1786
8:15 AM	0	0	0	0	4	0	2	0	11	74	0	0	0	52	5	0	148	1784
8:20 AM	0	0	0	0	1	0	3	0	7	88	0	0	0	43	7	0	149	1776
8:25 AM	0	0	0	0	1	0	9	0	6	73	0	0	0	49	1	0	139	1766
8:30 AM	0	0	0	0	3	0	4	0	8	69	0	0	0	47	9	0	140	1760
8:35 AM	0	0	0	0	3	0	1	0	4	72	0	0	0	62	3	0	145	1774
8:40 AM	0	0	0	0	4	0	3	0	4	71	0	0	0	54	8	0	144	1760
8:45 AM	0	0	0	0	4	0	5	0	6	84	0	0	0	45	11	0	155	1766
8:50 AM	0	0	0	0	3	0	1	0	4	77	0	0	0	56	0	0	141	1750
8:55 AM	0	0	0	0	3	0	2	0	4	63	0	0	0	43	2	0	117	1725

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	40	0	32	0	112	916	0	0	0	660	96	0	1856
Heavy Trucks	0	0	0		16	0	8		12	60	0		0	44	12		152
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/26/2019 10:13 AM

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

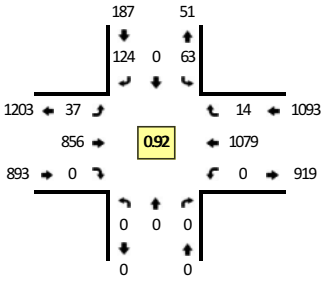
Type of peak hour being reported: User-Defined

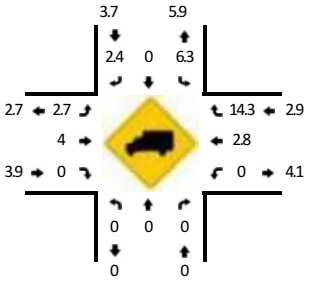
Method for determining peak hour: Total Entering Volume

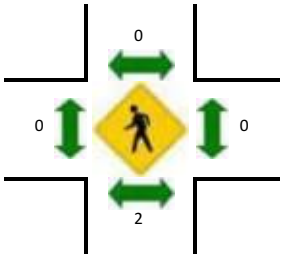
LOCATION: Cipole Rd -- Tualatin-Sherwood Rd
CITY/STATE: Washington, OR

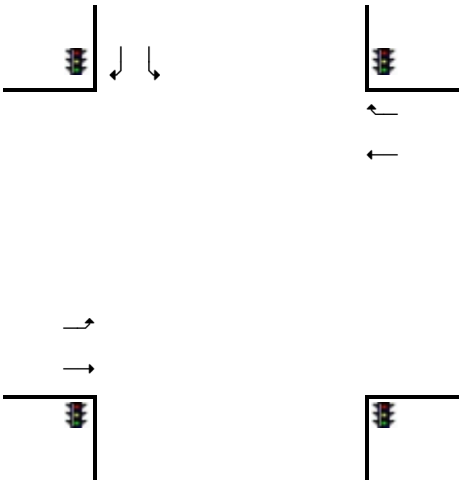
QC JOB #: 14898006
DATE: Wed, Feb 13 2019

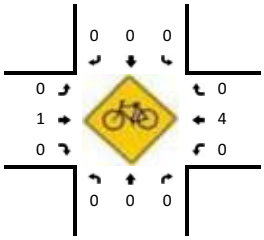
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

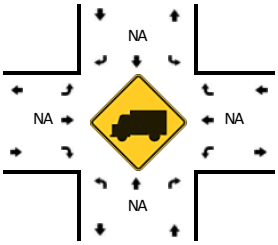


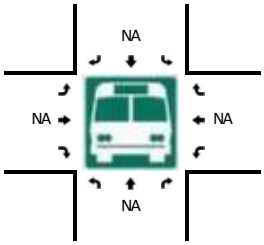












5-Min Count Period Beginning At	Cipole Rd (Northbound)				Cipole Rd (Southbound)				Tualatin-Sherwood Rd (Eastbound)				Tualatin-Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	22	0	14	0	4	66	0	0	0	75	3	0	184	
4:05 PM	0	0	0	0	18	0	12	0	5	62	0	0	0	73	2	0	172	
4:10 PM	0	0	0	0	10	0	16	0	2	78	0	0	0	71	7	0	184	
4:15 PM	0	0	0	0	11	0	14	0	6	72	0	0	0	77	2	0	182	
4:20 PM	0	0	0	0	9	0	6	0	3	50	0	0	0	81	4	0	153	
4:25 PM	0	0	0	0	5	0	8	0	3	68	0	0	0	92	2	0	178	
4:30 PM	0	0	0	0	6	0	12	0	1	62	0	0	0	90	1	0	172	
4:35 PM	0	0	0	0	3	0	8	0	2	67	0	0	0	86	3	0	169	
4:40 PM	0	0	0	0	7	0	12	0	4	58	0	0	0	87	4	0	172	
4:45 PM	0	0	0	0	10	0	9	0	3	64	0	0	0	85	1	0	172	
4:50 PM	0	0	0	0	5	0	7	0	1	70	0	0	0	85	4	0	172	
4:55 PM	0	0	0	0	6	0	11	0	5	71	0	0	0	89	1	0	183	2093
5:00 PM	0	0	0	0	8	0	12	0	2	65	0	0	0	77	0	0	164	2073
5:05 PM	0	0	0	0	9	0	15	0	8	81	0	0	0	82	1	0	196	2097
5:10 PM	0	0	0	0	3	0	11	0	7	92	0	0	0	86	2	0	201	2114
5:15 PM	0	0	0	0	7	0	11	0	4	86	0	0	0	87	0	0	195	2127
5:20 PM	0	0	0	0	2	0	12	0	3	63	0	0	0	94	1	0	175	2149
5:25 PM	0	0	0	0	3	0	8	0	1	69	0	0	0	95	1	0	177	2148
5:30 PM	0	0	0	0	3	0	11	0	1	53	0	0	0	102	0	0	170	2146
5:35 PM	0	0	0	0	4	0	8	0	1	78	0	0	0	100	1	0	192	2169
5:40 PM	0	0	0	0	3	0	9	0	1	64	0	0	0	97	2	0	176	2173
5:45 PM	0	0	0	0	1	0	8	0	0	63	0	0	0	90	3	0	165	2166
5:50 PM	0	0	0	0	5	0	7	0	3	58	0	0	0	89	1	0	163	2157
5:55 PM	0	0	0	0	1	0	4	0	1	67	0	0	0	91	0	0	164	2138

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	76	0	148	0	76	1036	0	0	0	1020	12	0	2368
Heavy Trucks	0	0	0		8	0	0		4	52	0		0	24	8		96
Pedestrians		8				0				0				0			8
Bicycles	0	0	0		0	0	0		0	1	0		0	1	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/26/2019 10:14 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: 124th Ave -- Tualatin-Sherwood Rd

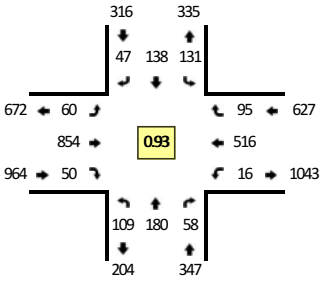
CITY/STATE: Washington, OR

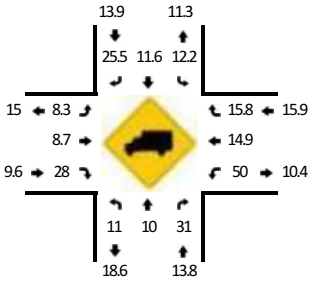
QC JOB #: 14898007

DATE: Wed, Feb 13 2019

Peak-Hour: 7:20 AM -- 8:20 AM

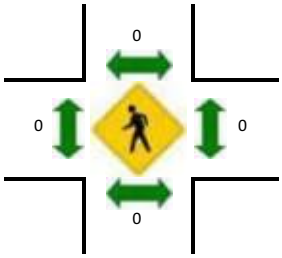
Peak 15-Min: 7:40 AM -- 7:55 AM

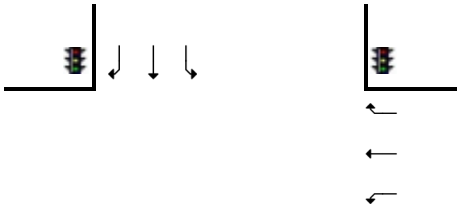


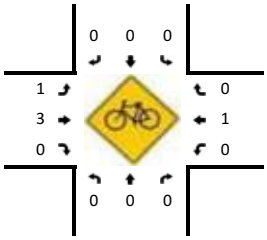


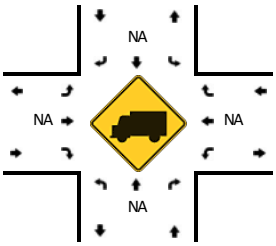
Quality Counts

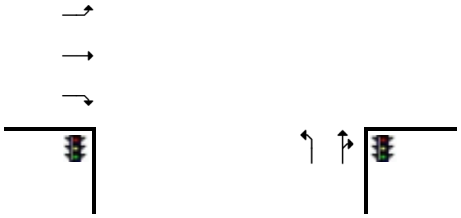
DATA THAT DRIVES COMMUNITIES

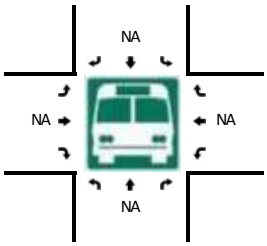












5-Min Count Period Beginning At	124th Ave (Northbound)				124th Ave (Southbound)				Tualatin-Sherwood Rd (Eastbound)				Tualatin-Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	8	15	8	0	10	8	3	0	6	81	6	0	0	42	5	0	192	
7:05 AM	10	21	3	0	8	3	0	0	9	60	4	0	1	39	8	0	166	
7:10 AM	5	10	4	0	6	8	1	0	16	81	1	0	0	51	9	0	192	
7:15 AM	10	5	4	0	9	9	2	0	7	80	4	0	1	42	8	0	181	
7:20 AM	11	9	5	0	8	15	2	0	7	80	4	0	0	41	6	0	188	
7:25 AM	9	15	7	0	11	16	4	0	7	71	3	0	2	50	6	0	201	
7:30 AM	5	17	5	0	11	9	2	0	3	65	5	0	0	39	6	0	167	
7:35 AM	10	13	3	0	20	20	3	0	5	67	5	0	1	31	5	0	183	
7:40 AM	11	24	6	0	11	12	3	0	2	66	7	0	0	47	13	0	202	
7:45 AM	15	14	7	0	13	14	4	0	8	74	1	0	2	53	10	0	215	
7:50 AM	10	15	7	0	8	10	7	0	7	68	5	0	1	43	6	0	187	
7:55 AM	8	17	5	0	13	15	9	0	5	69	2	0	3	42	14	0	202	2276
8:00 AM	11	16	3	0	6	8	5	0	3	79	8	0	1	45	7	0	192	2276
8:05 AM	5	13	3	0	9	7	4	0	7	68	4	0	1	33	11	0	165	2275
8:10 AM	7	15	2	0	9	8	2	0	4	73	2	0	1	48	6	0	177	2260
8:15 AM	7	12	5	0	12	4	2	0	2	74	4	0	4	44	5	0	175	2254
8:20 AM	7	9	1	0	8	6	2	0	9	75	5	0	0	41	8	0	171	2237
8:25 AM	9	16	0	0	11	11	4	0	4	65	2	0	0	40	8	0	170	2206
8:30 AM	4	14	3	0	3	3	4	0	7	68	7	0	1	44	9	0	167	2206
8:35 AM	5	8	4	0	8	7	5	1	5	61	7	0	0	61	4	0	176	2199
8:40 AM	14	9	2	0	4	6	5	0	12	55	3	0	2	38	5	0	155	2152
8:45 AM	8	11	0	0	6	6	5	0	14	70	4	0	0	46	7	0	177	2114
8:50 AM	5	13	2	0	11	8	5	0	9	67	4	0	0	45	6	0	175	2102
8:55 AM	4	15	1	0	10	3	4	0	4	63	3	0	1	35	8	0	151	2051

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	144	212	80	0	128	144	56	0	68	832	52	0	12	572	116	0	2416
Heavy Trucks	8	16	12		12	8	12		0	56	12		4	48	4		192
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/26/2019 10:20 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: 124th Ave -- Tualatin-Sherwood Rd

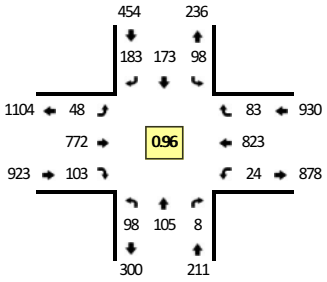
CITY/STATE: Washington, OR

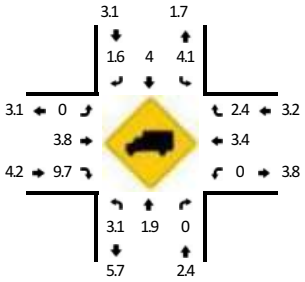
QC JOB #: 14898008

DATE: Wed, Feb 13 2019

Peak-Hour: 4:45 PM -- 5:45 PM

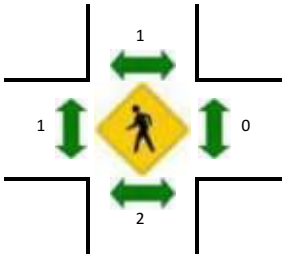
Peak 15-Min: 5:10 PM -- 5:25 PM

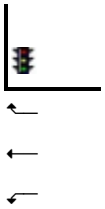


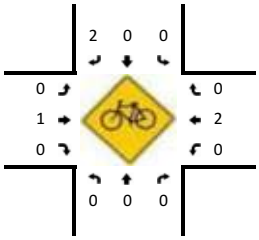


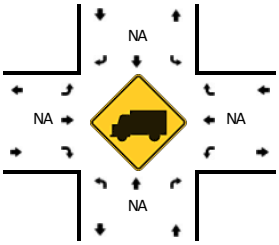
Quality Counts

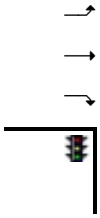
DATA THAT DRIVES COMMUNITIES

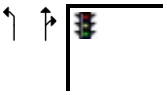


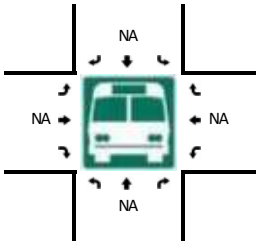












5-Min Count Period Beginning At	124th Ave (Northbound)				124th Ave (Southbound)				Tualatin-Sherwood Rd (Eastbound)				Tualatin-Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	7	1	0	5	12	11	0	4	66	9	0	3	62	3	0	190	
4:05 PM	9	4	1	0	10	13	15	0	5	68	15	0	2	58	5	0	205	
4:10 PM	9	11	0	0	8	12	11	0	8	63	13	0	4	63	10	0	212	
4:15 PM	8	6	1	0	5	13	8	0	4	73	12	0	2	61	10	0	203	
4:20 PM	9	16	0	0	13	11	15	1	3	50	8	0	3	57	6	0	192	
4:25 PM	4	9	2	0	5	7	8	0	3	58	13	0	8	83	7	0	207	
4:30 PM	4	5	1	0	9	12	16	0	1	58	10	0	2	81	4	0	203	
4:35 PM	8	6	1	0	9	22	18	0	6	58	3	0	1	61	11	0	204	
4:40 PM	11	8	3	0	12	18	20	0	10	46	9	0	4	57	12	0	210	
4:45 PM	7	2	1	0	9	20	17	0	7	63	12	0	3	63	6	0	210	
4:50 PM	12	17	0	0	16	15	11	0	1	48	9	0	1	70	6	0	206	
4:55 PM	8	9	0	0	9	14	16	0	5	80	7	0	1	69	7	0	225	2467
5:00 PM	6	4	1	0	10	16	11	0	6	53	10	0	1	65	8	0	191	2468
5:05 PM	5	5	2	0	10	14	12	0	4	81	9	0	1	64	8	0	215	2478
5:10 PM	8	11	0	0	8	17	16	0	5	80	14	0	1	69	13	0	242	2508
5:15 PM	4	11	1	0	2	13	17	0	8	63	9	0	4	53	9	0	194	2499
5:20 PM	10	9	0	0	7	11	22	0	3	73	6	0	2	75	2	0	220	2527
5:25 PM	8	10	1	0	5	11	13	0	2	56	9	0	4	69	4	0	192	2512
5:30 PM	20	10	0	0	10	14	16	0	2	56	4	0	3	70	4	0	209	2518
5:35 PM	5	6	1	0	8	9	10	0	0	62	8	0	2	84	11	0	206	2520
5:40 PM	5	11	1	0	4	19	22	0	5	57	6	0	1	72	5	0	208	2518
5:45 PM	9	11	3	0	6	14	12	0	2	53	7	0	2	68	6	0	193	2501
5:50 PM	8	4	0	0	3	6	3	0	3	57	10	0	0	85	7	0	186	2481
5:55 PM	4	6	0	0	2	10	9	0	0	62	3	0	0	92	4	0	192	2448

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	88	124	4	0	68	164	220	0	64	864	116	0	28	788	96	0	2624
Heavy Trucks	0	4	0		0	4	4		0	40	16		0	48	0		116
Pedestrians		8				0				0				0			8
Bicycles	0	0	0		0	0	1		0	1	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/26/2019 10:20 AM

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

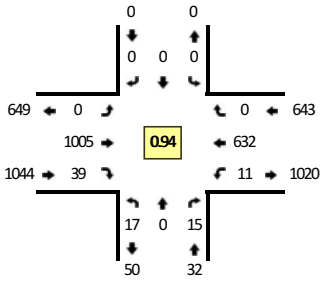
Type of peak hour being reported: User-Defined

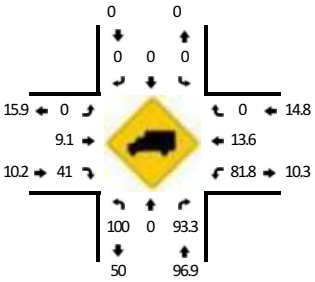
Method for determining peak hour: Total Entering Volume

LOCATION: 120th Ave -- Tualatin-Sherwood Rd
CITY/STATE: Washington, OR

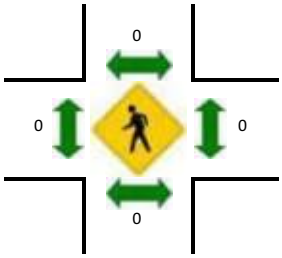
QC JOB #: 14898009
DATE: Wed, Feb 13 2019

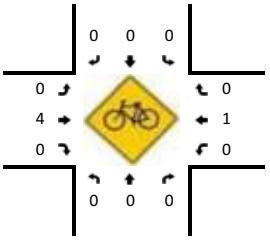
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

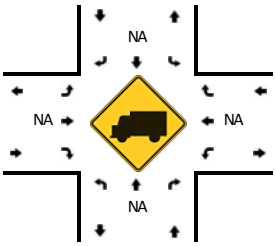


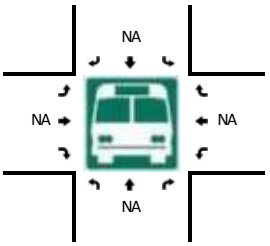


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	120th Ave (Northbound)				120th Ave (Southbound)				Tualatin-Sherwood Rd (Eastbound)				Tualatin-Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	0	0	0	0	0	0	0	0	86	6	0	2	42	0	0	137	
7:05 AM	0	0	0	0	0	0	0	0	0	79	3	0	1	54	0	0	137	
7:10 AM	2	0	1	0	0	0	0	0	0	74	6	0	0	49	0	0	132	
7:15 AM	1	0	1	0	0	0	0	0	0	97	1	0	0	52	0	0	152	
7:20 AM	3	0	2	0	0	0	0	0	0	74	4	0	1	47	0	0	131	
7:25 AM	3	0	0	0	0	0	0	0	0	93	3	0	0	61	0	0	160	
7:30 AM	2	0	0	0	0	0	0	0	0	87	1	0	1	38	0	0	129	
7:35 AM	1	0	1	0	0	0	0	0	0	87	1	0	0	42	0	0	132	
7:40 AM	0	0	3	0	0	0	0	0	0	85	2	0	1	63	0	0	154	
7:45 AM	1	0	0	0	0	0	0	0	0	84	4	0	2	60	0	0	151	
7:50 AM	0	0	0	0	0	0	0	0	0	80	6	0	4	61	0	0	151	
7:55 AM	1	0	1	0	0	0	0	0	0	75	8	0	0	56	0	0	141	1707
8:00 AM	1	0	1	0	0	0	0	0	0	91	2	0	0	46	0	0	141	1711
8:05 AM	1	0	4	0	0	0	0	0	0	76	1	0	0	48	0	0	130	1704
8:10 AM	2	0	2	0	0	0	0	0	0	76	4	0	2	55	0	0	141	1713
8:15 AM	2	0	1	0	0	0	0	0	0	97	3	0	0	55	0	0	158	1719
8:20 AM	1	0	2	0	0	0	0	0	0	86	2	0	1	39	0	0	131	1719
8:25 AM	1	0	0	0	0	0	0	0	0	76	0	0	1	55	0	0	133	1692
8:30 AM	1	0	4	0	0	0	0	0	0	71	4	0	1	51	0	0	132	1695
8:35 AM	0	0	1	0	0	0	0	0	0	72	3	0	1	60	0	0	137	1700
8:40 AM	2	0	3	0	0	0	0	0	0	61	1	0	3	52	0	0	122	1668
8:45 AM	2	0	0	0	0	0	0	0	0	65	3	0	1	46	0	0	117	1634
8:50 AM	2	0	1	0	0	0	0	0	0	76	0	0	2	46	0	0	127	1610
8:55 AM	1	0	1	0	0	0	0	0	0	74	4	0	1	52	0	0	133	1602

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	12	0	0	0	0	0	0	996	48	0	28	736	0	0	1824
Heavy Trucks	4	0	12		0	0	0		0	68	12		24	64	0		184
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/26/2019 10:20 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: 120th Ave -- Tualatin-Sherwood Rd

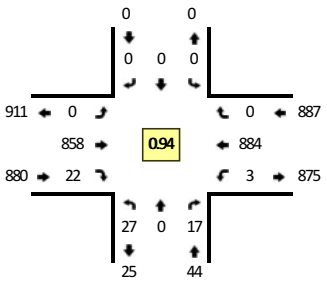
CITY/STATE: Washington, OR

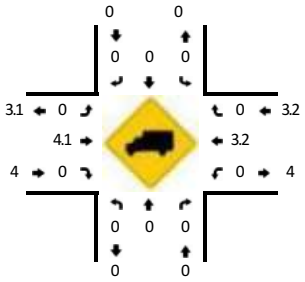
QC JOB #: 14898010

DATE: Wed, Feb 13 2019

Peak-Hour: 4:45 PM -- 5:45 PM

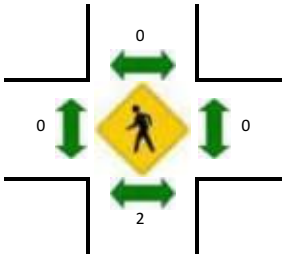
Peak 15-Min: 5:05 PM -- 5:20 PM

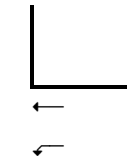


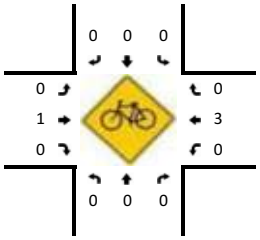


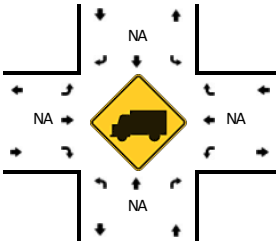
Quality Counts

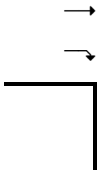
DATA THAT DRIVES COMMUNITIES

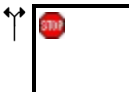


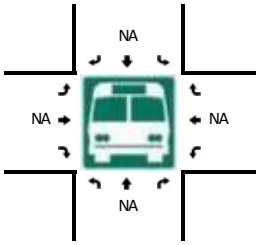












5-Min Count Period Beginning At	120th Ave (Northbound)				120th Ave (Southbound)				Tualatin-Sherwood Rd (Eastbound)				Tualatin-Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	0	4	0	0	0	0	0	0	62	1	0	0	67	0	0	142	
4:05 PM	0	0	3	0	0	0	0	0	0	78	2	0	1	61	0	0	145	
4:10 PM	3	0	2	0	0	0	0	0	0	70	0	0	0	61	0	0	136	
4:15 PM	1	0	0	0	0	0	0	0	0	83	4	0	0	73	0	0	161	
4:20 PM	3	0	0	0	0	0	0	0	0	65	0	0	0	65	0	0	133	
4:25 PM	1	0	0	0	0	0	0	0	0	55	2	0	0	92	0	0	150	
4:30 PM	1	0	1	0	0	0	0	0	0	63	3	0	1	81	0	0	150	
4:35 PM	4	0	2	0	0	0	0	0	0	65	2	0	1	73	0	0	147	
4:40 PM	2	0	1	0	0	0	0	0	0	64	1	0	0	75	0	0	143	
4:45 PM	2	0	2	0	0	0	0	0	0	70	2	0	0	69	0	0	145	
4:50 PM	4	0	0	0	0	0	0	0	0	57	0	0	1	62	0	0	124	
4:55 PM	1	0	1	0	0	0	0	0	0	89	0	0	0	83	0	0	174	1750
5:00 PM	2	0	1	0	0	0	0	0	0	58	3	0	0	72	0	0	136	1744
5:05 PM	1	0	3	0	0	0	0	0	0	92	4	0	0	64	0	0	164	1763
5:10 PM	2	0	2	0	0	0	0	0	0	87	4	0	0	71	0	0	166	1793
5:15 PM	4	0	2	0	0	0	0	0	0	71	4	0	1	68	0	0	150	1782
5:20 PM	3	0	0	0	0	0	0	0	0	72	2	0	1	76	0	0	154	1803
5:25 PM	1	0	0	0	0	0	0	0	0	55	2	0	0	80	0	0	138	1791
5:30 PM	3	0	4	0	0	0	0	0	0	67	0	0	0	79	0	0	153	1794
5:35 PM	4	0	2	0	0	0	0	0	0	70	1	0	0	80	0	0	157	1804
5:40 PM	0	0	0	0	0	0	0	0	0	70	0	0	0	80	0	0	150	1811
5:45 PM	3	0	0	0	0	0	0	0	0	62	1	0	1	78	0	0	145	1811
5:50 PM	0	0	0	0	0	0	0	0	0	53	3	0	1	82	0	0	139	1826
5:55 PM	1	0	1	0	0	0	0	0	0	54	3	0	0	78	0	0	137	1789

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	0	28	0	0	0	0	0	0	1000	48	0	4	812	0	0	1920
Heavy Trucks	0	0	0		0	0	0		0	48	0		0	36	0		84
Pedestrians		8				0				0				0			8
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad Stopped Buses																	

Comments:

Report generated on 2/26/2019 10:20 AM

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

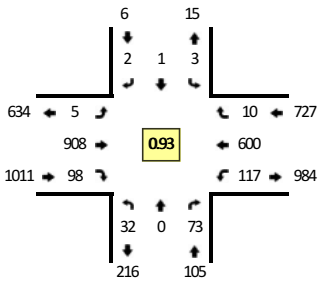
Type of peak hour being reported: User-Defined

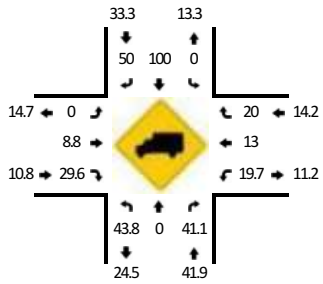
Method for determining peak hour: Total Entering Volume

LOCATION: 115th Ave -- Tualatin-Sherwood Rd
CITY/STATE: Washington, OR

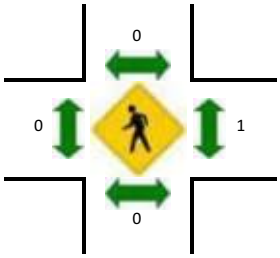
QC JOB #: 14898011
DATE: Wed, Feb 13 2019

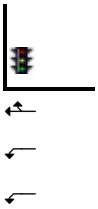
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

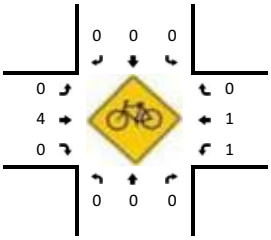


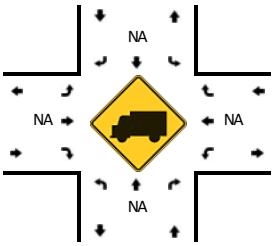


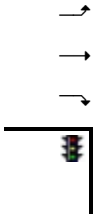
Quality Counts
DATA THAT DRIVES COMMUNITIES

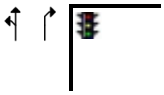


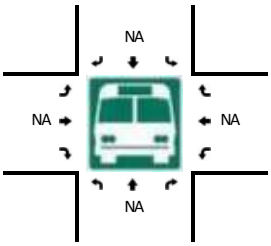












5-Min Count Period Beginning At	115th Ave (Northbound)				115th Ave (Southbound)				Tualatin-Sherwood Rd (Eastbound)				Tualatin-Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	0	5	0	1	0	0	0	0	75	10	0	10	42	1	0	146	
7:05 AM	1	0	5	0	0	0	1	0	0	75	11	0	7	54	0	0	154	
7:10 AM	3	0	8	0	3	0	1	0	0	61	6	0	5	37	0	0	124	
7:15 AM	3	0	5	0	1	0	0	0	0	86	11	0	7	49	0	0	162	
7:20 AM	4	0	10	0	0	0	0	0	0	63	10	0	9	49	0	0	145	
7:25 AM	2	0	4	0	2	0	0	0	0	70	14	0	19	59	1	0	171	
7:30 AM	2	0	6	0	0	0	0	0	0	88	12	0	5	35	1	0	149	
7:35 AM	2	0	8	0	0	0	0	0	0	68	12	0	10	40	0	0	140	
7:40 AM	5	0	7	0	0	0	0	0	1	86	4	0	14	58	0	0	175	
7:45 AM	4	0	4	0	0	0	0	0	1	90	5	0	10	59	1	0	174	
7:50 AM	3	0	4	0	0	0	0	0	2	61	7	0	11	56	2	0	146	
7:55 AM	3	0	7	0	0	0	1	0	0	69	8	0	5	46	1	0	140	1826
8:00 AM	1	0	5	0	1	0	0	0	1	65	8	0	15	53	2	0	151	1831
8:05 AM	2	0	8	0	0	1	0	0	0	89	2	0	4	40	0	0	146	1823
8:10 AM	2	0	4	0	0	0	1	0	0	72	6	0	14	50	1	0	150	1849
8:15 AM	2	0	6	0	0	0	0	0	0	87	10	0	1	55	1	0	162	1849
8:20 AM	4	0	5	0	2	0	1	0	4	78	5	0	3	36	2	0	140	1844
8:25 AM	0	0	4	0	0	0	0	0	0	70	7	0	3	55	0	0	139	1812
8:30 AM	5	0	6	0	0	0	0	0	0	63	6	0	5	49	0	0	134	1797
8:35 AM	2	0	9	0	0	0	1	0	4	70	7	0	6	55	1	0	155	1812
8:40 AM	6	0	8	0	0	0	0	0	0	65	3	0	5	51	0	0	138	1775
8:45 AM	1	0	7	0	1	0	0	0	1	55	4	0	6	42	0	0	117	1718
8:50 AM	3	0	8	0	0	0	0	0	1	83	3	0	4	45	2	0	149	1721
8:55 AM	4	0	3	0	4	0	0	0	0	66	2	0	2	52	3	0	136	1717

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	48	0	60	0	0	0	0	0	16	948	64	0	140	692	12	0	1980
Heavy Trucks	16	0	16		0	0	0		0	64	12		20	76	4		208
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		1	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/26/2019 10:20 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: 115th Ave -- Tualatin-Sherwood Rd

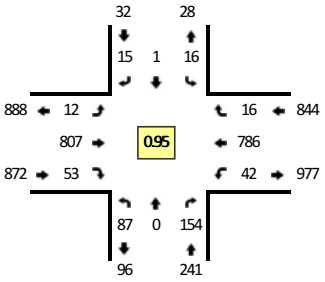
CITY/STATE: Washington, OR

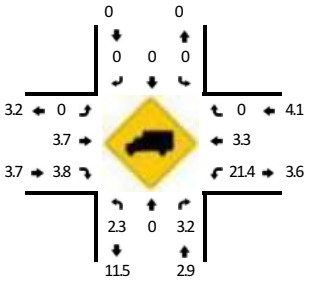
QC JOB #: 14898012

DATE: Wed, Feb 13 2019

Peak-Hour: 4:45 PM -- 5:45 PM

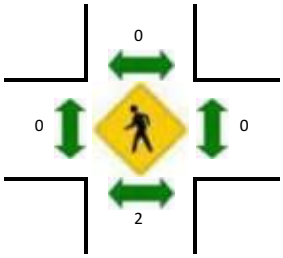
Peak 15-Min: 5:05 PM -- 5:20 PM

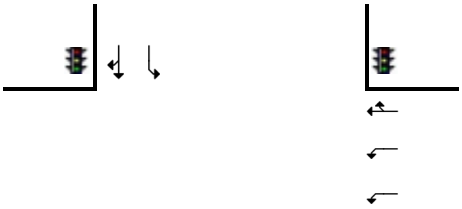


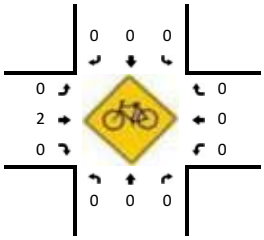


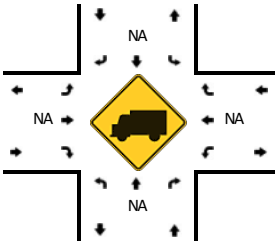
Quality Counts

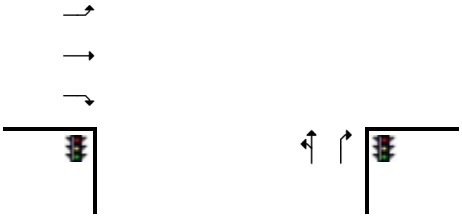
DATA THAT DRIVES COMMUNITIES

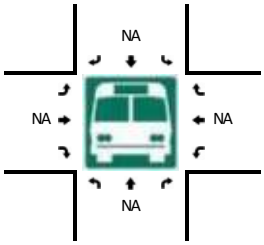












5-Min Count Period Beginning At	115th Ave (Northbound)				115th Ave (Southbound)				Tualatin-Sherwood Rd (Eastbound)				Tualatin-Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	4	0	13	0	1	0	1	0	0	65	2	0	2	66	2	0	156	
4:05 PM	15	0	31	0	3	0	2	0	1	63	4	0	0	47	1	0	167	
4:10 PM	7	0	9	0	0	0	0	0	0	76	1	0	0	51	1	0	145	
4:15 PM	5	0	12	0	2	0	1	0	2	79	3	0	8	72	1	0	185	
4:20 PM	2	1	6	0	0	0	0	0	1	67	5	0	2	61	0	0	145	
4:25 PM	10	0	14	0	2	0	1	0	0	56	2	0	4	75	2	0	166	
4:30 PM	6	0	13	0	2	0	1	0	0	56	2	0	3	80	0	0	163	
4:35 PM	17	0	12	0	0	0	0	0	1	59	4	0	4	63	1	0	161	
4:40 PM	8	0	10	0	1	0	1	0	3	68	2	0	4	61	1	0	159	
4:45 PM	9	0	7	0	0	0	1	0	2	60	7	0	5	64	1	0	156	
4:50 PM	3	0	11	0	2	0	1	0	0	56	6	0	1	58	3	0	141	
4:55 PM	3	0	12	0	1	0	3	0	2	82	5	0	4	75	2	0	189	1933
5:00 PM	4	0	13	0	1	0	1	0	0	57	1	0	3	70	1	0	151	1928
5:05 PM	14	0	17	0	2	0	2	0	0	68	8	0	6	50	1	0	168	1929
5:10 PM	7	0	20	0	1	0	2	0	2	89	6	0	2	52	1	0	182	1966
5:15 PM	10	0	12	0	0	0	0	0	1	72	3	0	3	72	0	0	173	1954
5:20 PM	2	0	11	0	0	1	1	0	1	70	3	0	1	70	3	0	163	1972
5:25 PM	7	0	13	0	3	0	1	0	0	59	1	0	2	71	2	0	159	1965
5:30 PM	3	0	9	0	1	0	1	0	1	60	5	0	4	72	1	0	157	1959
5:35 PM	18	0	14	0	2	0	2	0	2	53	4	0	7	53	0	0	155	1953
5:40 PM	7	0	15	0	3	0	0	0	1	81	4	0	4	79	1	0	195	1989
5:45 PM	8	0	12	0	0	0	1	0	0	62	2	0	0	74	1	0	160	1993
5:50 PM	2	0	7	0	0	0	1	0	1	44	3	0	3	80	2	0	143	1995
5:55 PM	2	0	6	0	1	0	0	0	3	59	0	0	4	60	1	0	136	1942

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	124	0	196	0	12	0	16	0	12	916	68	0	44	696	8	0	2092
Heavy Trucks	8	0	4		0	0	0		0	40	4		4	32	0		92
Pedestrians		8				0				0				0			8
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/26/2019 10:23 AM

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

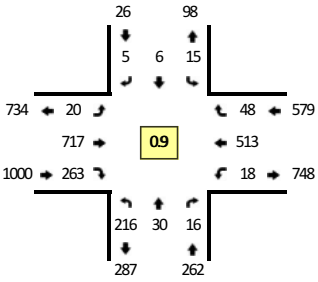
Type of peak hour being reported: User-Defined

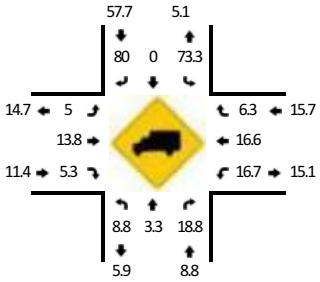
Method for determining peak hour: Total Entering Volume

LOCATION: 112th Ave/Avery St -- Tualatin-Sherwood Rd
CITY/STATE: Washington, OR

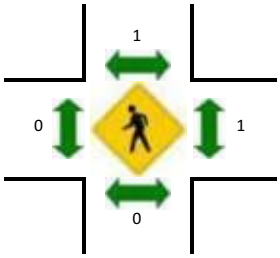
QC JOB #: 14898013
DATE: Wed, Feb 13 2019

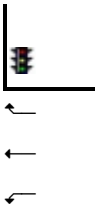
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

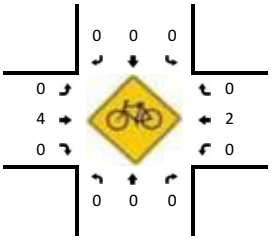


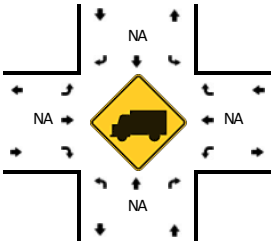


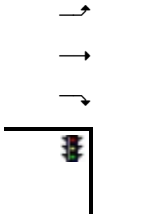
Quality Counts
DATA THAT DRIVES COMMUNITIES

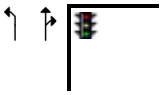


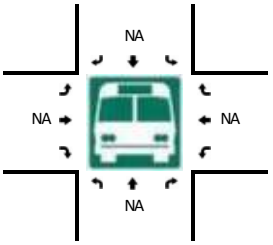












5-Min Count Period Beginning At	112th Ave/Avery St (Northbound)				112th Ave/Avery St (Southbound)				Tualatin-Sherwood Rd (Eastbound)				Tualatin-Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	15	4	1	0	0	1	0	0	4	61	19	0	0	45	1	0	151	
7:05 AM	13	3	1	0	0	0	0	0	1	49	23	0	0	49	4	0	143	
7:10 AM	18	4	0	0	0	0	0	0	1	63	13	0	0	21	3	0	123	
7:15 AM	16	3	0	0	0	0	1	0	3	63	22	0	0	39	4	0	151	
7:20 AM	16	2	1	0	0	0	0	0	2	61	18	0	0	47	3	0	150	
7:25 AM	28	0	0	0	2	0	0	0	1	50	22	0	2	48	5	0	158	
7:30 AM	9	5	1	0	1	2	0	0	0	68	22	0	0	30	2	0	140	
7:35 AM	11	3	0	0	1	1	1	0	3	58	21	0	1	42	4	0	146	
7:40 AM	21	2	2	0	2	0	0	0	2	53	38	0	2	56	3	0	181	
7:45 AM	16	2	1	0	1	1	0	0	3	57	34	0	1	45	8	0	169	
7:50 AM	24	2	3	0	3	1	2	0	1	52	17	0	2	53	11	0	171	
7:55 AM	26	3	2	0	0	0	0	0	1	53	25	0	2	31	1	0	144	1827
8:00 AM	19	3	3	0	2	0	0	0	1	58	13	0	1	47	4	0	151	1827
8:05 AM	16	6	2	0	0	0	0	0	1	79	21	0	2	28	2	0	157	1841
8:10 AM	19	1	1	0	2	0	2	0	3	54	8	0	4	39	2	0	135	1853
8:15 AM	11	1	0	0	1	1	0	0	2	74	24	0	1	47	3	0	165	1867
8:20 AM	15	2	0	0	1	0	0	0	1	72	13	0	0	30	0	0	134	1851
8:25 AM	9	0	1	0	2	1	1	0	0	51	15	0	1	44	7	0	132	1825
8:30 AM	15	0	0	0	0	1	1	0	1	63	8	0	0	46	2	0	137	1822
8:35 AM	9	1	0	0	1	0	0	0	2	56	18	0	1	50	0	0	138	1814
8:40 AM	11	0	2	0	1	1	2	0	0	71	9	0	0	43	4	0	144	1777
8:45 AM	8	0	0	0	1	0	1	0	1	46	17	0	3	39	5	0	121	1729
8:50 AM	10	3	1	0	2	0	3	0	0	69	20	0	0	39	4	0	151	1709
8:55 AM	11	2	1	0	2	2	2	0	0	56	13	0	1	44	5	0	139	1704

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	244	24	24	0	24	8	8	0	24	648	356	0	20	616	88	0	2084
Heavy Trucks	8	0	4		16	0	8		0	76	16		8	88	0		224
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/26/2019 10:23 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: 112th Ave/Avery St -- Tualatin-Sherwood Rd

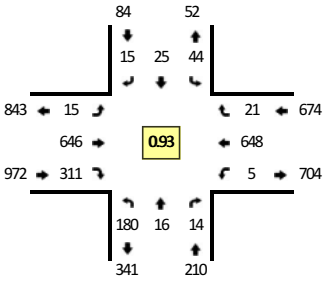
QC JOB #: 14898014

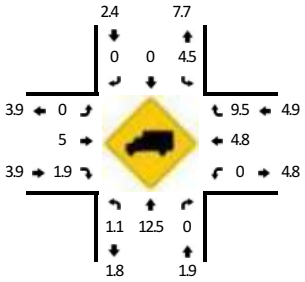
CITY/STATE: Washington, OR

DATE: Wed, Feb 13 2019

Peak-Hour: 4:45 PM -- 5:45 PM

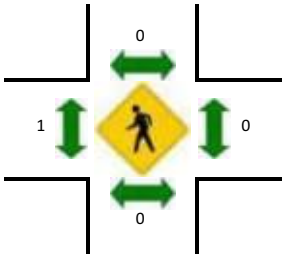
Peak 15-Min: 5:10 PM -- 5:25 PM

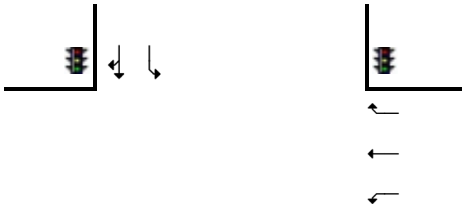


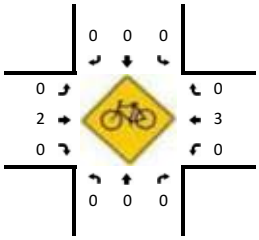


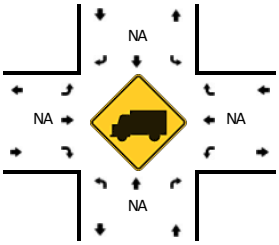
Quality Counts

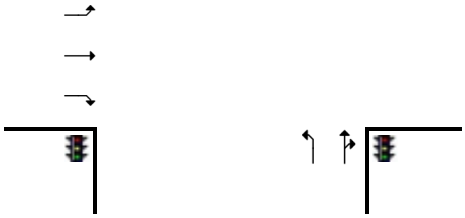
DATA THAT DRIVES COMMUNITIES

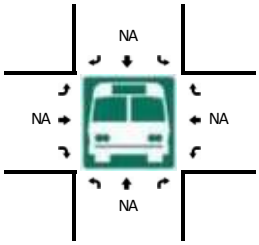












5-Min Count Period Beginning At	112th Ave/Avery St (Northbound)				112th Ave/Avery St (Southbound)				Tualatin-Sherwood Rd (Eastbound)				Tualatin-Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	11	0	0	0	7	2	0	0	1	46	23	0	0	54	1	0	145	
4:05 PM	24	1	0	0	5	4	3	0	2	55	34	0	0	37	0	0	165	
4:10 PM	15	1	2	0	1	1	1	0	1	63	23	0	1	31	2	0	142	
4:15 PM	15	3	1	0	0	3	2	0	2	72	26	0	1	53	3	0	181	
4:20 PM	11	2	0	0	2	2	1	0	3	48	22	0	0	58	5	0	154	
4:25 PM	20	0	1	0	5	3	0	0	1	45	28	0	0	55	5	0	163	
4:30 PM	13	0	0	0	4	3	4	0	0	56	19	0	1	64	2	0	166	
4:35 PM	38	4	6	0	8	6	1	0	0	44	23	0	0	37	1	0	168	
4:40 PM	19	1	1	0	3	4	1	0	1	61	25	0	0	41	3	0	160	
4:45 PM	25	1	0	0	1	2	1	0	0	37	25	0	0	43	0	0	135	
4:50 PM	10	4	1	0	4	2	0	0	0	44	27	0	0	52	3	0	147	
4:55 PM	12	0	1	0	5	2	1	0	0	55	30	0	1	61	0	0	168	1894
5:00 PM	13	2	0	0	4	0	1	0	1	50	25	0	2	67	5	0	170	1919
5:05 PM	28	1	2	0	6	4	4	0	3	57	23	0	0	36	1	0	165	1919
5:10 PM	12	0	2	0	6	2	1	0	1	76	32	0	0	32	1	0	165	1942
5:15 PM	22	4	1	0	6	2	0	0	2	53	25	0	1	56	3	0	175	1936
5:20 PM	11	2	2	0	4	2	5	0	0	58	34	0	0	58	5	0	181	1963
5:25 PM	13	1	2	0	2	0	1	0	1	55	24	0	0	61	1	0	161	1961
5:30 PM	8	0	2	0	2	2	0	0	3	47	18	0	0	62	0	0	144	1939
5:35 PM	11	1	0	0	3	6	0	0	2	43	21	0	1	53	1	0	142	1913
5:40 PM	15	0	1	0	1	1	1	0	2	71	27	0	0	67	1	0	187	1940
5:45 PM	22	1	1	0	1	3	1	0	1	41	31	0	0	48	2	0	152	1957
5:50 PM	19	1	0	0	3	0	0	0	0	44	13	0	1	58	1	0	140	1950
5:55 PM	15	2	1	0	3	0	4	0	0	47	14	0	0	45	4	0	135	1917

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	180	24	20	0	64	24	24	0	12	748	364	0	4	584	36	0	2084
Heavy Trucks	4	4	0		8	0	0		0	48	8		0	44	4		120
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

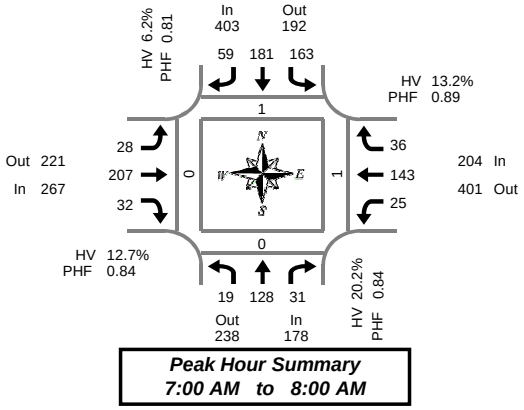
Comments:

Report generated on 2/26/2019 10:20 AM

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

Total Vehicle Summary

Clay Carney
(503) 833-2740



Peak Hour Summary
7:00 AM to 8:00 AM

SW 124th Ave & SW Herman Rd

Thursday, July 13, 2017
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	5	8	5	0	14	24	6	0	1	14	1	0	1	18	5	0	102	1	0	1	0
7:05 AM	1	11	1	0	13	4	7	0	6	15	2	0	3	8	3	0	74	0	0	0	0
7:10 AM	0	4	0	0	11	15	6	0	0	15	4	0	4	13	1	0	73	0	0	0	0
7:15 AM	1	13	3	0	8	14	4	0	3	15	2	0	0	12	2	0	77	0	0	0	0
7:20 AM	0	17	4	0	13	14	4	0	4	21	3	0	2	16	4	0	102	0	0	0	0
7:25 AM	1	6	3	0	18	9	4	0	3	16	6	0	1	16	3	0	86	0	0	0	0
7:30 AM	3	14	5	0	6	14	3	0	2	11	2	0	4	7	4	0	75	0	0	0	0
7:35 AM	1	9	1	0	13	20	3	1	2	25	1	0	2	8	2	0	87	0	0	0	0
7:40 AM	0	10	2	0	23	25	5	0	2	19	3	0	2	12	3	0	106	0	0	0	0
7:45 AM	4	8	2	0	15	16	5	0	1	23	3	0	2	16	1	0	96	0	0	0	0
7:50 AM	3	12	3	0	13	16	6	0	2	19	2	0	4	8	7	0	95	0	0	0	0
7:55 AM	0	16	2	0	16	10	6	0	2	14	3	0	0	9	1	0	79	0	0	0	0
8:00 AM	1	6	4	0	9	21	7	0	3	15	2	0	3	9	3	0	83	0	0	0	0
8:05 AM	0	9	2	0	9	12	7	0	3	19	2	0	2	9	4	0	78	0	0	0	0
8:10 AM	2	10	3	0	7	16	1	0	6	9	3	0	4	6	2	0	69	0	0	0	0
8:15 AM	2	9	6	0	10	13	2	0	0	17	1	0	2	2	3	0	67	0	0	0	0
8:20 AM	1	12	5	0	6	15	2	1	2	14	3	0	4	5	5	0	74	0	0	0	0
8:25 AM	3	9	4	0	10	16	5	0	3	15	1	0	0	5	4	0	75	0	0	0	0
8:30 AM	0	4	1	0	5	13	3	0	1	12	4	0	1	9	4	0	57	0	0	0	0
8:35 AM	2	7	4	0	6	10	2	0	2	10	3	0	3	10	6	0	65	0	0	0	0
8:40 AM	0	14	4	0	2	13	4	1	2	14	4	0	4	6	4	0	71	0	0	0	0
8:45 AM	1	9	2	0	5	15	2	0	2	12	2	1	1	9	1	0	61	0	0	0	0
8:50 AM	2	11	5	0	4	13	2	0	2	8	3	0	4	10	2	0	66	0	0	0	0
8:55 AM	0	6	4	0	5	12	0	0	6	11	2	0	3	10	6	0	65	0	0	0	0
Total Survey	33	234	75	0	241	350	96	3	60	363	62	1	56	233	80	0	1,883	1	0	1	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	6	23	6	0	38	43	19	0	7	44	7	0	8	39	9	0	249	1	0	1	0
7:15 AM	2	36	10	0	39	37	12	0	10	52	11	0	3	44	9	0	265	0	0	0	0
7:30 AM	4	33	8	0	42	59	11	1	6	55	6	0	8	27	9	0	268	0	0	0	0
7:45 AM	7	36	7	0	44	42	17	0	5	56	8	0	6	33	9	0	270	0	0	0	0
8:00 AM	3	25	9	0	25	49	15	0	12	43	7	0	9	24	9	0	230	0	0	0	0
8:15 AM	6	30	15	0	26	44	9	1	5	46	5	0	6	12	12	0	216	0	0	0	0
8:30 AM	2	25	9	0	13	36	9	1	5	36	11	0	8	25	14	0	193	0	0	0	0
8:45 AM	3	26	11	0	14	40	4	0	10	31	7	1	8	29	9	0	192	0	0	0	0
Total Survey	33	234	75	0	241	350	96	3	60	363	62	1	56	233	80	0	1,883	1	0	1	0

Peak Hour Summary
7:00 AM to 8:00 AM

By Approach	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Total
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	178	238	416	0	403	192	595	1	267	221	488	0	204	401	605	0	1,052
%HV	20.2%				6.2%				12.7%				13.2%				11.6%
PHF	0.84				0.81				0.84				0.89				0.89

Pedestrians Crosswalk			
North	South	East	West
1	0	1	0

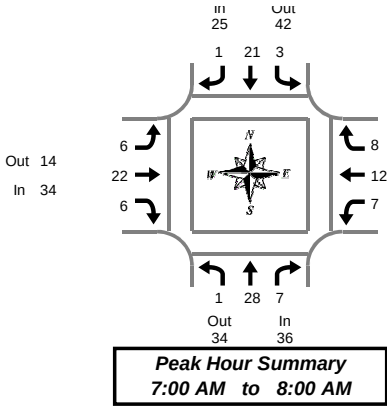
By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	19	128	31	178	163	181	59	403	28	207	32	267	25	143	36	204	1,052
%HV	5.3%	21.9%	22.6%	20.2%	1.8%	11.6%	1.7%	6.2%	21.4%	10.6%	18.8%	12.7%	28.0%	8.4%	22.2%	13.2%	11.6%
PHF	0.68	0.86	0.65	0.84	0.80	0.74	0.78	0.81	0.70	0.77	0.73	0.84	0.78	0.81	0.82	0.89	0.89

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	19	128	31	0	163	181	59	1	28	207	32	0	25	143	36	0	1,052	1	0	1	0
7:15 AM	16	130	34	0	150	187	55	1	33	206	32	0	26	128	36	0	1,033	0	0	0	0
7:30 AM	20	124	39	0	137	194	52	2	28	200	26	0	29	96	39	0	984	0	0	0	0
7:45 AM	18	116	40	0	108	171	50	2	27	181	31	0	29	94	44	0	909	0	0	0	0
8:00 AM	14	106	44	0	78	169	37	2	32	156	30	1	31	90	44	0	831	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Herman Rd

Thursday, July 13, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:00 AM to 8:00 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	2	1	3	0	3	0	3	1	1	0	2	0	2	1	3	11
7:05 AM	0	1	0	1	0	0	0	0	3	1	0	4	2	1	1	4	9
7:10 AM	0	1	0	1	0	1	0	1	0	2	1	3	1	0	0	1	6
7:15 AM	0	3	1	4	0	3	0	3	1	2	1	4	0	2	0	2	13
7:20 AM	0	3	1	4	0	1	0	1	1	0	0	1	1	4	1	6	12
7:25 AM	0	1	1	2	0	1	1	2	0	0	2	2	1	0	0	1	7
7:30 AM	0	5	0	5	0	2	0	2	0	1	0	1	0	1	1	2	10
7:35 AM	0	3	1	4	1	2	0	3	0	8	0	8	1	0	1	2	17
7:40 AM	0	2	0	2	0	4	0	4	0	3	1	4	1	1	2	4	14
7:45 AM	1	2	0	3	0	2	0	2	0	3	0	3	0	0	0	0	8
7:50 AM	0	3	0	3	2	1	0	3	0	1	0	1	0	1	1	2	9
7:55 AM	0	2	2	4	0	1	0	1	0	0	1	1	0	0	0	0	6
8:00 AM	0	1	1	2	0	8	0	8	1	1	1	3	1	0	0	1	14
8:05 AM	0	4	1	5	1	1	0	2	1	3	0	4	2	0	0	2	13
8:10 AM	0	6	1	7	0	1	0	1	0	2	0	2	3	1	0	4	14
8:15 AM	1	3	0	4	0	1	0	1	0	1	0	1	1	0	1	2	8
8:20 AM	1	0	2	3	0	1	0	1	0	2	0	2	1	2	1	4	10
8:25 AM	0	1	1	2	0	3	1	4	1	2	0	3	0	0	3	3	12
8:30 AM	0	1	0	1	0	0	1	1	0	1	0	1	0	1	1	2	5
8:35 AM	1	1	0	2	0	3	0	3	0	0	1	1	0	1	4	5	11
8:40 AM	0	1	1	2	0	2	0	2	1	1	0	2	0	2	3	5	11
8:45 AM	0	3	1	4	0	2	0	2	0	1	0	1	1	1	1	3	10
8:50 AM	0	0	0	0	0	1	0	1	1	1	0	2	0	0	1	1	4
8:55 AM	0	3	0	3	0	1	0	1	1	2	0	3	1	0	2	3	10
Total Survey	4	52	15	71	4	45	3	52	12	39	8	59	17	20	25	62	244

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	4	1	5	0	4	0	4	4	4	1	9	3	3	2	8	26
7:15 AM	0	7	3	10	0	5	1	6	2	2	3	7	2	6	1	9	32
7:30 AM	0	10	1	11	1	8	0	9	0	12	1	13	2	2	4	8	41
7:45 AM	1	7	2	10	2	4	0	6	0	4	1	5	0	1	1	2	23
8:00 AM	0	11	3	14	1	10	0	11	2	6	1	9	6	1	0	7	41
8:15 AM	2	4	3	9	0	5	1	6	1	5	0	6	2	2	5	9	30
8:30 AM	1	3	1	5	0	5	1	6	1	2	1	4	0	4	8	12	27
8:45 AM	0	6	1	7	0	4	0	4	2	4	0	6	2	1	4	7	24
Total Survey	4	52	15	71	4	45	3	52	12	39	8	59	17	20	25	62	244

Heavy Vehicle Peak Hour Summary
7:00 AM to 8:00 AM

By Approach	Northbound SW 124th Ave			Southbound SW 124th Ave			Eastbound SW Herman Rd			Westbound SW Herman Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	36	34	70	25	42	67	34	14	48	27	32	59	122
PHF	0.82			0.69			0.57			0.75			0.74

By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	1	28	7	36	3	21	1	25	6	22	6	34	7	12	8	27	122
PHF	0.25	0.70	0.58	0.82	0.38	0.66	0.25	0.69	0.38	0.39	0.50	0.57	0.58	0.50	0.50	0.75	0.74

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

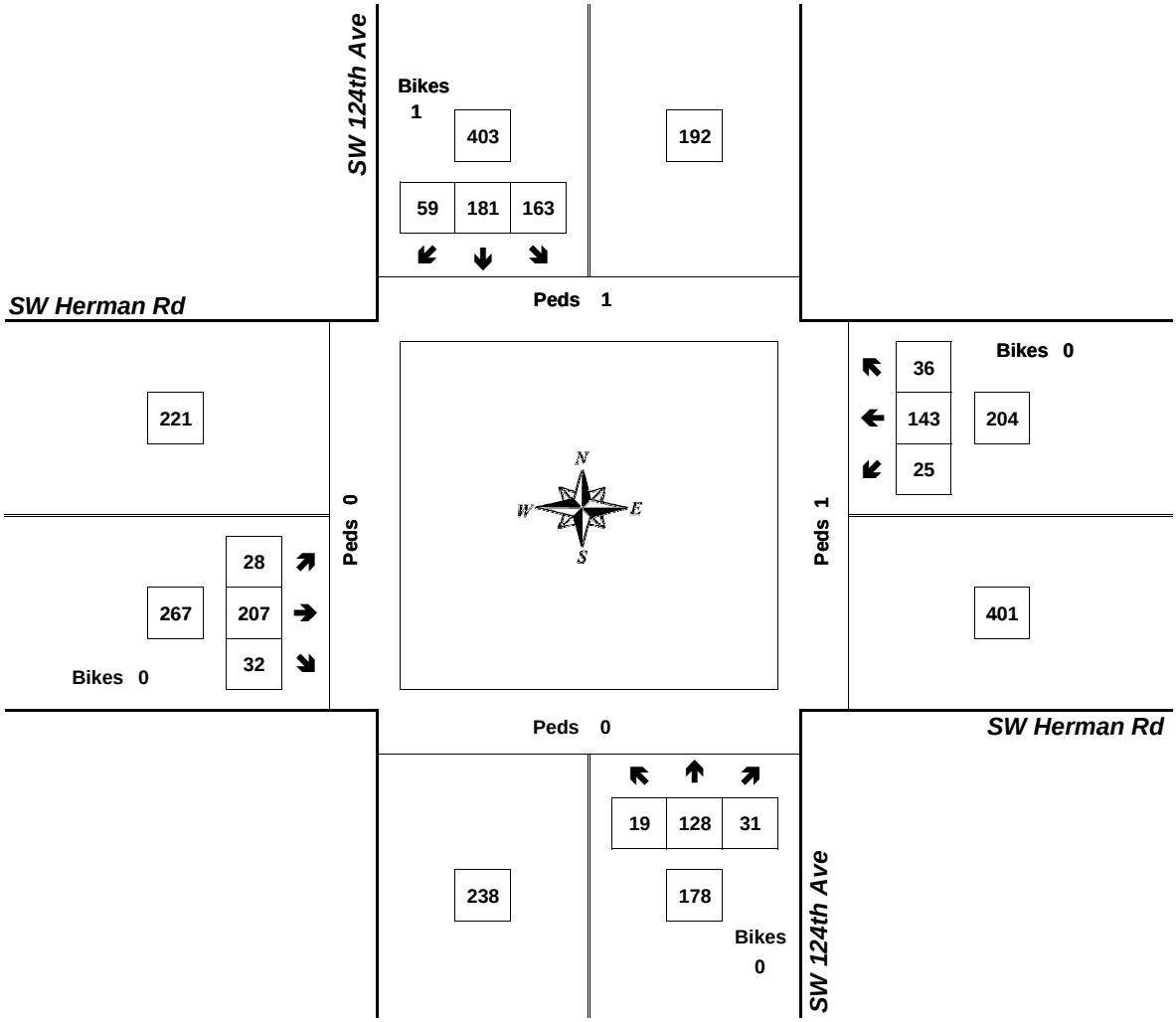
Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	28	7	36	3	21	1	25	6	22	6	34	7	12	8	27	122
7:15 AM	1	35	9	45	4	27	1	32	4	24	6	34	10	10	6	26	137
7:30 AM	3	32	9	44	4	27	1	32	3	27	3	33	10	6	10	26	135
7:45 AM	4	25	9	38	3	24	2	29	4	17	3	24	8	8	14	30	121
8:00 AM	3	24	8	35	1	24	2	27	6	17	2	25	10	8	17	35	122

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 124th Ave & SW Herman Rd

7:00 AM to 8:00 AM
Thursday, July 13, 2017

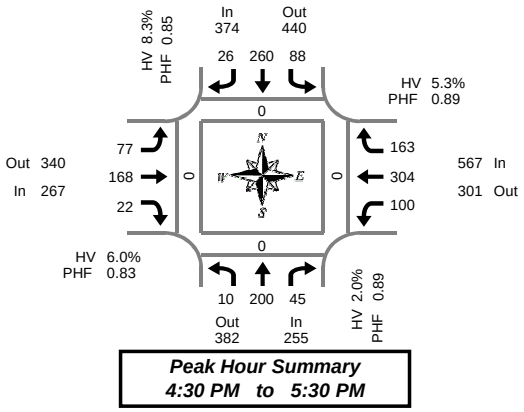


Approach	PHF	HV%	Volume
EB	0.84	12.7%	267
WB	0.89	13.2%	204
NB	0.84	20.2%	178
SB	0.81	6.2%	403
Intersection	0.89	11.6%	1,052

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

Clay Carney
(503) 833-2740



Peak Hour Summary
4:30 PM to 5:30 PM

SW 124th Ave & SW Herman Rd

Wednesday, July 12, 2017
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	1	17	3	0	8	15	1	0	7	21	3	0	6	26	16	0	124	0	0	1	0
4:05 PM	1	28	10	0	4	15	2	0	11	19	1	0	6	20	21	0	138	0	0	0	0
4:10 PM	1	26	3	0	3	17	0	0	11	12	4	0	12	20	10	0	119	0	0	1	0
4:15 PM	1	18	3	0	8	15	2	0	5	13	1	0	2	28	7	0	103	0	0	1	0
4:20 PM	2	13	3	0	5	9	1	0	1	12	2	0	6	36	13	0	103	0	0	0	0
4:25 PM	2	7	2	0	5	19	3	0	3	8	2	0	3	23	9	0	86	0	0	1	0
4:30 PM	0	20	1	0	8	20	2	0	12	11	2	0	6	24	14	0	120	0	0	0	0
4:35 PM	3	16	4	0	2	18	1	0	4	18	1	0	10	31	21	0	129	0	0	0	0
4:40 PM	1	19	3	0	11	17	1	0	5	16	1	1	10	26	17	0	127	0	0	0	0
4:45 PM	0	21	5	0	8	21	1	0	3	18	4	0	13	19	12	0	125	0	0	0	0
4:50 PM	1	11	2	0	11	26	6	0	2	17	1	0	6	26	10	0	119	0	0	0	0
4:55 PM	0	12	3	0	8	23	3	1	3	9	3	0	7	22	10	0	103	0	0	0	0
5:00 PM	1	19	4	0	5	17	1	1	9	18	0	0	8	24	12	0	118	0	0	0	0
5:05 PM	2	17	5	0	11	31	3	0	11	14	4	0	5	19	22	0	144	0	0	0	0
5:10 PM	0	18	3	0	5	25	5	0	9	15	0	0	9	21	17	0	127	0	0	0	0
5:15 PM	1	14	2	0	3	26	1	0	10	14	1	0	6	40	13	1	131	0	0	0	0
5:20 PM	1	15	8	0	10	15	2	0	7	9	4	0	9	27	6	0	113	0	0	0	0
5:25 PM	0	18	5	0	6	21	0	0	2	9	1	0	11	25	9	0	107	0	0	0	0
5:30 PM	1	11	4	0	7	30	1	1	7	7	2	0	6	26	10	0	112	0	0	0	0
5:35 PM	2	18	4	0	3	20	1	0	4	6	1	0	8	21	9	0	97	0	0	0	0
5:40 PM	1	13	1	0	7	18	0	1	6	10	1	0	8	16	14	1	95	0	0	0	1
5:45 PM	0	14	3	0	9	22	3	0	4	6	0	0	10	21	8	0	100	0	0	0	0
5:50 PM	1	9	4	0	4	13	2	0	2	12	2	0	3	23	6	0	81	1	0	0	0
5:55 PM	0	18	0	0	9	25	1	0	1	7	1	0	4	18	4	0	88	0	0	1	0
Total Survey	23	392	85	0	160	478	43	4	139	301	42	1	174	582	290	2	2,709	1	0	5	1

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	3	71	16	0	15	47	3	0	29	52	8	0	24	66	47	0	381	0	0	2	0
4:15 PM	5	38	8	0	18	43	6	0	9	33	5	0	11	87	29	0	292	0	0	2	0
4:30 PM	4	55	8	0	21	55	4	0	21	45	4	1	26	81	52	0	376	0	0	0	0
4:45 PM	1	44	10	0	27	70	10	1	8	44	8	0	26	67	32	0	347	0	0	0	0
5:00 PM	3	54	12	0	21	73	9	1	29	47	4	0	22	64	51	0	389	0	0	0	0
5:15 PM	2	47	15	0	19	62	3	0	19	32	6	0	26	92	28	1	351	0	0	0	0
5:30 PM	4	42	9	0	17	68	2	2	17	23	4	0	22	63	33	1	304	0	0	0	1
5:45 PM	1	41	7	0	22	60	6	0	7	25	3	0	17	62	18	0	269	1	0	1	0
Total Survey	23	392	85	0	160	478	43	4	139	301	42	1	174	582	290	2	2,709	1	0	5	1

Peak Hour Summary
4:30 PM to 5:30 PM

By Approach	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	255	382	637	0	374	440	814	2	267	340	607	1	567	301	868	1	1,463	0	0	0	0
%HV	2.0%				8.3%				6.0%				5.3%				5.6%				
PHF	0.89				0.85				0.83				0.89				0.91				

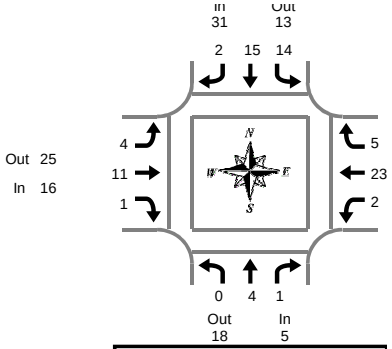
By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	10	200	45	255	88	260	26	374	77	168	22	267	100	304	163	567	1,463
%HV	0.0%	2.0%	2.2%	2.0%	15.9%	5.8%	7.7%	8.3%	5.2%	6.5%	4.5%	6.0%	2.0%	7.6%	3.1%	5.3%	5.6%
PHF	0.63	0.89	0.75	0.89	0.73	0.79	0.65	0.85	0.64	0.81	0.69	0.83	0.76	0.83	0.78	0.89	0.91

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	13	208	42	0	81	215	23	1	67	174	25	1	87	301	160	0	1,396	0	0	4	0
4:15 PM	13	191	38	0	87	241	29	2	67	169	21	1	85	299	164	0	1,404	0	0	2	0
4:30 PM	10	200	45	0	88	260	26	2	77	168	22	1	100	304	163	1	1,463	0	0	0	0
4:45 PM	10	187	46	0	84	273	24	4	73	146	22	0	96	286	144	2	1,391	0	0	0	1
5:00 PM	10	184	43	0	79	263	20	3	72	127	17	0	87	281	130	2	1,313	1	0	1	1

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Herman Rd

Wednesday, July 12, 2017
4:00 PM to 6:00 PM

Peak Hour Summary
4:30 PM to 5:30 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	1	0	1	1	1	1	3	0	2	1	3	0	3	2	5	12
4:05 PM	0	0	0	0	1	2	0	3	0	1	0	1	0	1	0	1	5
4:10 PM	0	1	0	1	1	1	0	2	1	2	1	4	0	3	0	3	10
4:15 PM	1	1	0	2	3	1	0	4	1	1	0	2	1	3	0	4	12
4:20 PM	0	0	0	0	0	1	0	1	0	0	0	0	2	3	0	5	6
4:25 PM	0	0	0	0	0	2	0	2	1	0	1	2	0	7	0	7	11
4:30 PM	0	0	0	0	2	1	0	3	1	1	0	2	0	2	0	2	7
4:35 PM	0	0	1	1	0	0	0	0	1	0	0	1	0	2	2	4	6
4:40 PM	0	1	0	1	1	0	0	1	0	2	0	2	0	0	1	1	5
4:45 PM	0	1	0	1	1	1	1	3	0	3	0	3	1	4	0	5	12
4:50 PM	0	0	0	0	2	3	1	6	0	2	0	2	0	1	1	2	10
4:55 PM	0	0	0	0	2	1	0	3	0	0	0	0	1	2	0	3	6
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	1	3	4
5:05 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	3
5:10 PM	0	0	0	0	2	3	0	5	0	1	0	1	0	0	0	0	6
5:15 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	4	0	4	6
5:20 PM	0	0	0	0	3	2	0	5	1	1	1	3	0	3	0	3	11
5:25 PM	0	1	0	1	1	2	0	3	0	0	0	0	0	2	0	2	6
5:30 PM	0	1	0	1	0	2	0	2	1	0	0	1	0	2	0	2	6
5:35 PM	0	1	1	2	2	0	0	2	0	0	1	1	0	1	0	1	6
5:40 PM	0	0	0	0	2	1	0	3	0	1	0	1	0	3	1	4	8
5:45 PM	0	1	0	1	1	1	0	2	0	0	0	0	0	1	0	1	4
5:50 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
5:55 PM	0	2	0	2	1	0	0	1	0	0	0	0	0	1	0	1	4
Total Survey	1	12	2	15	26	28	3	57	8	19	5	32	5	52	8	65	169

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	2	0	2	3	4	1	8	1	5	2	8	0	7	2	9	27
4:15 PM	1	1	0	2	3	4	0	7	2	1	1	4	3	13	0	16	29
4:30 PM	0	1	1	2	3	1	0	4	2	3	0	5	0	4	3	7	18
4:45 PM	0	1	0	1	5	5	2	12	0	5	0	5	2	7	1	10	28
5:00 PM	0	0	0	0	2	4	0	6	1	2	0	3	0	3	1	4	13
5:15 PM	0	2	0	2	4	5	0	9	1	1	1	3	0	9	0	9	23
5:30 PM	0	2	1	3	4	3	0	7	1	1	1	3	0	6	1	7	20
5:45 PM	0	3	0	3	2	2	0	4	0	1	0	1	0	3	0	3	11
Total Survey	1	12	2	15	26	28	3	57	8	19	5	32	5	52	8	65	169

Heavy Vehicle Peak Hour Summary
4:30 PM to 5:30 PM

By Approach	Northbound SW 124th Ave			Southbound SW 124th Ave			Eastbound SW Herman Rd			Westbound SW Herman Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	5	18	23	31	13	44	16	25	41	30	26	56	82
PHF	0.42			0.65			0.57			0.75			0.73

By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	4	1	5	14	15	2	31	4	11	1	16	2	23	5	30	82
PHF	0.00	0.50	0.25	0.42	0.70	0.63	0.25	0.65	0.50	0.39	0.25	0.57	0.25	0.64	0.42	0.75	0.73

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

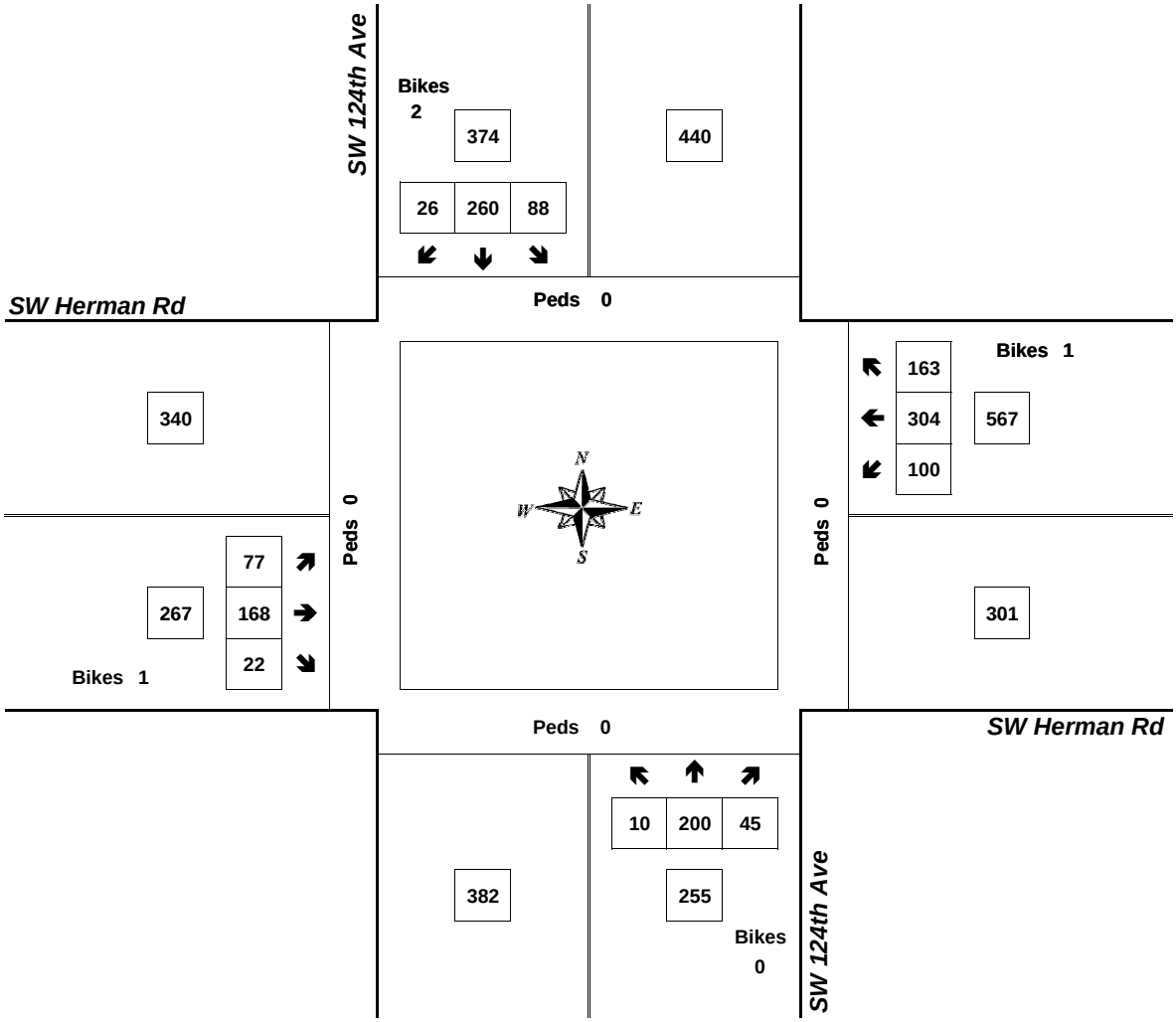
Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Herman Rd				Westbound SW Herman Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	5	1	7	14	14	3	31	5	14	3	22	5	31	6	42	102
4:15 PM	1	3	1	5	13	14	2	29	5	11	1	17	5	27	5	37	88
4:30 PM	0	4	1	5	14	15	2	31	4	11	1	16	2	23	5	30	82
4:45 PM	0	5	1	6	15	17	2	34	3	9	2	14	2	25	3	30	84
5:00 PM	0	7	1	8	12	14	0	26	3	5	2	10	0	21	2	23	67

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 124th Ave & SW Herman Rd

4:30 PM to 5:30 PM
Wednesday, July 12, 2017



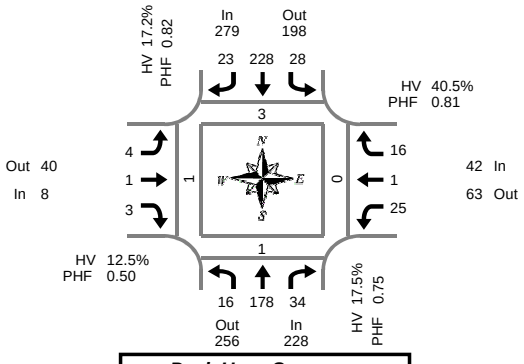
Approach	PHF	HV%	Volume
EB	0.83	6.0%	267
WB	0.89	5.3%	567
NB	0.89	2.0%	255
SB	0.85	8.3%	374
Intersection	0.91	5.6%	1,463

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740



Peak Hour Summary
7:30 AM to 8:30 AM

SW 124th Ave & SW Myslony Rd

Tuesday, July 10, 2018
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	2	5	6	0	7	17	4	0	0	0	1	0	2	0	0	0	44	0	0	0	1
7:05 AM	2	11	5	0	6	14	1	0	0	0	0	0	0	0	2	0	41	0	0	1	0
7:10 AM	2	13	5	0	5	11	2	0	2	0	2	0	1	2	0	0	45	0	0	0	0
7:15 AM	2	10	9	0	7	10	2	0	0	0	0	0	0	0	1	0	41	1	1	1	10
7:20 AM	0	7	1	0	2	13	4	0	1	1	0	0	1	0	0	0	30	1	1	1	0
7:25 AM	1	10	3	0	3	8	2	1	1	0	1	0	4	0	1	0	34	1	0	0	10
7:30 AM	1	11	4	0	4	14	3	0	1	0	1	0	2	0	1	0	42	0	0	0	0
7:35 AM	3	8	2	0	2	20	1	0	0	0	0	0	4	0	5	0	45	0	0	0	1
7:40 AM	2	10	1	0	1	14	2	0	1	0	1	0	1	0	0	0	33	0	0	0	0
7:45 AM	1	15	4	0	1	18	2	0	0	0	0	0	0	0	2	0	43	0	0	0	0
7:50 AM	2	11	4	0	3	29	3	0	0	0	0	0	2	1	3	0	58	0	0	0	0
7:55 AM	0	25	4	0	7	15	6	0	0	0	0	0	3	0	1	0	61	0	0	0	0
8:00 AM	0	16	4	0	4	15	3	0	1	0	0	0	2	0	1	0	46	0	1	0	0
8:05 AM	2	21	4	0	1	18	2	0	1	0	0	0	4	0	0	0	53	0	0	0	0
8:10 AM	2	20	1	0	1	14	0	0	0	0	0	0	1	0	2	0	41	0	0	0	0
8:15 AM	1	14	2	0	1	22	0	0	0	1	0	0	2	0	1	0	44	1	0	0	0
8:20 AM	1	15	3	0	2	24	1	0	0	0	1	0	3	0	0	0	50	1	0	0	0
8:25 AM	1	12	1	0	1	25	0	0	0	0	0	0	1	0	0	0	41	1	0	0	0
8:30 AM	0	18	1	0	0	13	0	0	0	0	0	0	2	0	1	0	35	0	0	1	0
8:35 AM	0	12	6	0	1	14	1	0	1	0	0	0	3	0	1	0	39	0	0	0	0
8:40 AM	1	15	3	0	1	15	0	0	0	0	0	0	1	0	0	0	36	0	0	0	0
8:45 AM	0	17	3	0	3	22	0	1	0	0	0	0	2	0	0	0	47	0	0	0	0
8:50 AM	0	20	1	0	2	20	0	0	1	0	0	0	1	0	0	0	45	0	0	0	0
8:55 AM	0	12	4	0	1	13	0	0	0	0	0	0	2	0	1	0	33	0	0	1	0
Total Survey	26	328	81	0	66	398	39	2	10	2	7	0	44	3	23	0	1,027	6	3	5	22

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	6	29	16	0	18	42	7	0	2	0	3	0	3	2	2	0	130	0	0	1	1
7:15 AM	3	27	13	0	12	31	8	1	2	1	1	0	5	0	2	0	105	3	2	2	20
7:30 AM	6	29	7	0	7	48	6	0	2	0	2	0	7	0	6	0	120	0	0	0	1
7:45 AM	3	51	12	0	11	62	11	0	0	0	0	0	5	1	6	0	162	0	0	0	0
8:00 AM	4	57	9	0	6	47	5	0	2	0	0	0	7	0	3	0	140	0	1	0	0
8:15 AM	3	41	6	0	4	71	1	0	0	1	1	0	6	0	1	0	135	3	0	0	0
8:30 AM	1	45	10	0	2	42	1	0	1	0	0	0	6	0	2	0	110	0	0	1	0
8:45 AM	0	49	8	0	6	55	0	1	1	0	0	0	5	0	1	0	125	0	0	1	0
Total Survey	26	328	81	0	66	398	39	2	10	2	7	0	44	3	23	0	1,027	6	3	5	22

Peak Hour Summary
7:30 AM to 8:30 AM

By Approach	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	228	256	484	0	279	198	477	0	8	40	48	0	42	63	105	0	557	3	1	0	1
%HV	17.5%				17.2%				12.5%				40.5%				19.0%				
PHF	0.75				0.82				0.50				0.81				0.84				

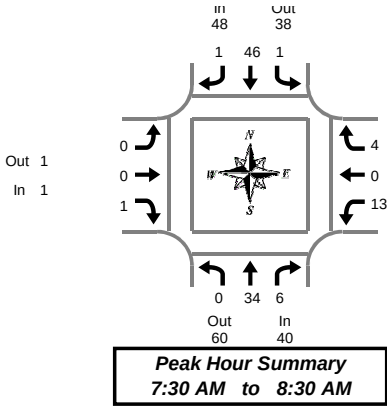
By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	16	178	34	228	28	228	23	279	4	1	3	8	25	1	16	42	557
%HV	0.0%	19.1%	17.6%	17.5%	3.6%	20.2%	4.3%	17.2%	0.0%	0.0%	33.3%	12.5%	52.0%	0.0%	25.0%	40.5%	19.0%
PHF	0.67	0.72	0.71	0.75	0.50	0.80	0.48	0.82	0.50	0.25	0.38	0.50	0.69	0.25	0.57	0.81	0.84

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	18	136	48	0	48	183	32	1	6	1	6	0	20	3	16	0	517	3	2	3	22
7:15 AM	16	164	41	0	36	188	30	1	6	1	3	0	24	1	17	0	527	3	3	2	21
7:30 AM	16	178	34	0	28	228	23	0	4	1	3	0	25	1	16	0	557	3	1	0	1
7:45 AM	11	194	37	0	23	222	18	0	3	1	1	0	24	1	12	0	547	3	1	1	0
8:00 AM	8	192	33	0	18	215	7	1	4	1	1	0	24	0	7	0	510	3	1	2	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Myslony Rd

Tuesday, July 10, 2018
7:00 AM to 9:00 AM

Peak Hour Summary
7:30 AM to 8:30 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	1	2	0	3	0	0	0	0	2	0	0	2	5
7:05 AM	0	2	1	3	0	2	0	2	0	0	0	0	0	0	0	0	5
7:10 AM	0	2	0	2	0	4	0	4	0	0	1	1	1	2	0	3	10
7:15 AM	0	4	0	4	1	0	0	1	0	0	0	0	0	0	0	0	5
7:20 AM	0	3	0	3	0	4	0	4	1	0	0	1	0	0	0	0	8
7:25 AM	0	2	0	2	0	1	0	1	1	0	0	1	1	0	1	2	6
7:30 AM	0	5	1	6	0	1	0	1	0	0	1	1	2	0	0	2	10
7:35 AM	0	0	0	0	0	5	0	5	0	0	0	0	2	0	1	3	8
7:40 AM	0	2	1	3	0	2	0	2	0	0	0	0	1	0	0	1	6
7:45 AM	0	2	1	3	0	3	0	3	0	0	0	0	0	0	1	1	7
7:50 AM	0	3	0	3	0	4	0	4	0	0	0	0	0	0	1	1	8
7:55 AM	0	3	1	4	1	6	0	7	0	0	0	0	1	0	0	1	12
8:00 AM	0	2	1	3	0	3	1	4	0	0	0	0	0	0	1	1	8
8:05 AM	0	7	0	7	0	2	0	2	0	0	0	0	4	0	0	4	13
8:10 AM	0	5	0	5	0	2	0	2	0	0	0	0	1	0	0	1	8
8:15 AM	0	0	1	1	0	6	0	6	0	0	0	0	0	0	0	0	7
8:20 AM	0	1	0	1	0	6	0	6	0	0	0	0	1	0	0	1	8
8:25 AM	0	4	0	4	0	6	0	6	0	0	0	0	1	0	0	1	11
8:30 AM	0	6	1	7	0	3	0	3	0	0	0	0	1	0	0	1	11
8:35 AM	0	7	3	10	0	3	0	3	0	0	0	0	0	0	1	1	14
8:40 AM	1	3	1	5	0	2	0	2	0	0	0	0	0	0	0	0	7
8:45 AM	0	2	1	3	0	6	0	6	0	0	0	0	1	0	0	1	10
8:50 AM	0	5	0	5	1	0	0	1	1	0	0	1	1	0	0	1	8
8:55 AM	0	3	0	3	0	4	0	4	0	0	0	0	1	0	1	2	9
Total Survey	1	73	13	87	4	77	1	82	3	0	2	5	21	2	7	30	204

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	4	1	5	1	8	0	9	0	0	1	1	3	2	0	5	20
7:15 AM	0	9	0	9	1	5	0	6	2	0	0	2	1	0	1	2	19
7:30 AM	0	7	2	9	0	8	0	8	0	0	1	1	5	0	1	6	24
7:45 AM	0	8	2	10	1	13	0	14	0	0	0	0	1	0	2	3	27
8:00 AM	0	14	1	15	0	7	1	8	0	0	0	0	5	0	1	6	29
8:15 AM	0	5	1	6	0	18	0	18	0	0	0	0	2	0	0	2	26
8:30 AM	1	16	5	22	0	8	0	8	0	0	0	0	1	0	1	2	32
8:45 AM	0	10	1	11	1	10	0	11	1	0	0	1	3	0	1	4	27
Total Survey	1	73	13	87	4	77	1	82	3	0	2	5	21	2	7	30	204

Heavy Vehicle Peak Hour Summary
7:30 AM to 8:30 AM

By Approach	Northbound SW 124th Ave			Southbound SW 124th Ave			Eastbound SW Myslony Rd			Westbound SW Myslony Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	40	60	100	48	38	86	1	1	2	17	7	24	106
PHF	0.67			0.67			0.25			0.71			0.80

By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	34	6	40	1	46	1	48	0	0	1	1	13	0	4	17	106
PHF	0.00	0.61	0.75	0.67	0.25	0.64	0.25	0.67	0.00	0.00	0.25	0.25	0.65	0.00	0.50	0.71	0.80

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

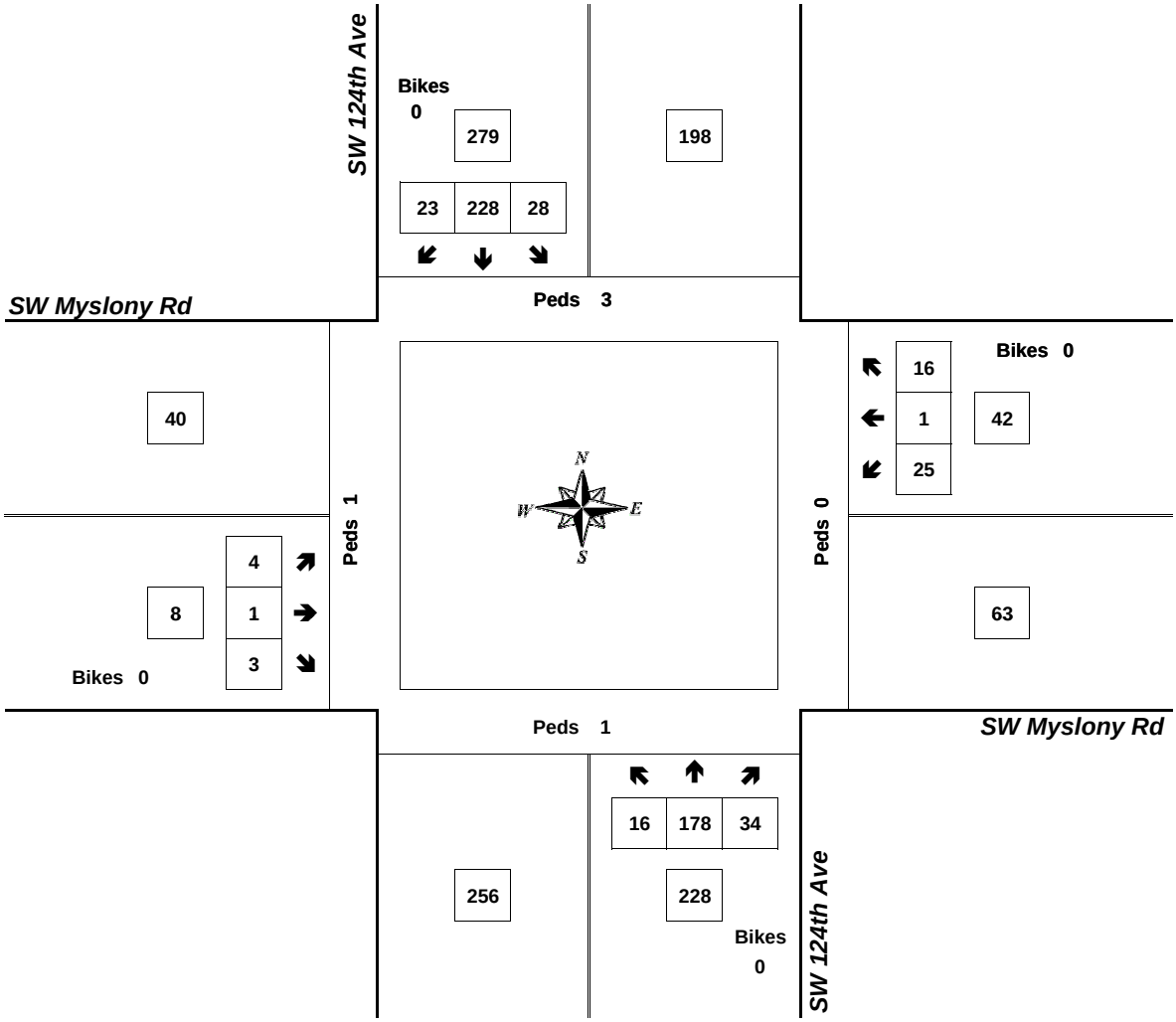
Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	28	5	33	3	34	0	37	2	0	2	4	10	2	4	16	90
7:15 AM	0	38	5	43	2	33	1	36	2	0	1	3	12	0	5	17	99
7:30 AM	0	34	6	40	1	46	1	48	0	0	1	1	13	0	4	17	106
7:45 AM	1	43	9	53	1	46	1	48	0	0	0	0	9	0	4	13	114
8:00 AM	1	45	8	54	1	43	1	45	1	0	0	1	11	0	3	14	114

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 124th Ave & SW Myslony Rd

7:30 AM to 8:30 AM
Tuesday, July 10, 2018

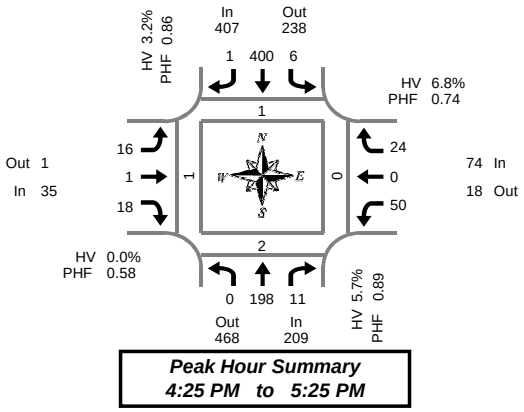


Approach	PHF	HV%	Volume
EB	0.50	12.5%	8
WB	0.81	40.5%	42
NB	0.75	17.5%	228
SB	0.82	17.2%	279
Intersection	0.84	19.0%	557

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Myslony Rd

Tuesday, July 10, 2018
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	11	0	0	0	23	1	0	5	0	1	0	6	0	7	0	54	0	1	0	0
4:05 PM	0	16	0	0	0	34	0	0	1	0	2	0	13	0	1	0	67	0	0	0	0
4:10 PM	0	18	2	0	0	14	0	0	2	0	1	0	7	0	1	0	45	0	0	0	0
4:15 PM	0	13	0	0	1	29	0	0	1	0	1	0	5	0	2	0	52	0	0	0	0
4:20 PM	0	19	2	0	0	24	0	0	1	0	1	0	3	0	0	0	50	0	0	0	0
4:25 PM	0	13	1	0	1	29	1	0	0	0	1	0	8	0	0	0	54	0	0	0	0
4:30 PM	0	25	0	0	0	33	0	0	3	0	2	0	4	0	2	0	69	0	0	0	0
4:35 PM	0	18	2	0	3	44	0	0	3	0	2	0	4	0	3	0	79	0	0	0	0
4:40 PM	0	13	1	1	2	32	0	0	0	0	5	0	3	0	0	0	56	0	1	0	0
4:45 PM	0	12	0	0	0	37	0	0	2	0	1	0	1	0	3	0	56	0	0	0	0
4:50 PM	0	19	1	0	0	34	0	0	1	0	2	0	5	0	2	0	64	0	1	0	1
4:55 PM	0	11	0	0	0	21	0	0	1	0	1	0	4	0	2	0	40	0	0	0	0
5:00 PM	0	17	0	0	0	23	0	0	0	0	0	0	1	0	4	0	45	1	0	0	0
5:05 PM	0	19	2	0	0	39	0	0	1	0	1	0	7	0	4	1	73	0	0	0	0
5:10 PM	0	17	2	0	0	37	0	0	2	0	3	0	5	0	2	1	68	0	0	0	0
5:15 PM	0	18	1	0	0	30	0	0	2	1	0	0	5	0	2	0	59	0	0	0	0
5:20 PM	0	16	1	0	0	41	0	0	1	0	0	0	3	0	0	1	62	0	0	0	0
5:25 PM	0	14	1	0	1	28	0	0	0	0	0	0	1	0	3	0	48	0	0	0	0
5:30 PM	0	15	1	0	1	26	0	0	3	1	1	0	2	0	1	0	51	0	0	0	0
5:35 PM	0	17	1	0	0	27	0	0	1	0	1	0	3	0	3	0	53	0	0	0	0
5:40 PM	0	7	0	0	2	21	0	0	1	0	0	0	2	0	2	0	35	0	0	0	0
5:45 PM	1	13	0	0	4	23	0	0	0	0	0	0	1	0	2	0	44	0	0	0	0
5:50 PM	0	8	0	0	0	25	0	0	0	0	0	0	4	0	3	0	40	0	0	0	0
5:55 PM	0	11	0	0	0	29	0	0	1	0	1	0	4	0	2	0	48	0	0	0	0
Total Survey	1	360	18	1	15	703	2	0	32	2	27	0	101	0	51	3	1,312	1	3	0	1

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	45	2	0	0	71	1	0	8	0	4	0	26	0	9	0	166	0	1	0	0
4:15 PM	0	45	3	0	2	82	1	0	2	0	3	0	16	0	2	0	156	0	0	0	0
4:30 PM	0	56	3	1	5	109	0	0	6	0	9	0	11	0	5	0	204	0	1	0	0
4:45 PM	0	42	1	0	0	92	0	0	4	0	4	0	10	0	7	0	160	0	1	0	1
5:00 PM	0	53	4	0	0	99	0	0	3	0	4	0	13	0	10	2	186	1	0	0	0
5:15 PM	0	48	3	0	1	99	0	0	3	1	0	0	9	0	5	1	169	0	0	0	0
5:30 PM	0	39	2	0	3	74	0	0	5	1	2	0	7	0	6	0	139	0	0	0	0
5:45 PM	1	32	0	0	4	77	0	0	1	0	1	0	9	0	7	0	132	0	0	0	0
Total Survey	1	360	18	1	15	703	2	0	32	2	27	0	101	0	51	3	1,312	1	3	0	1

Peak Hour Summary
4:25 PM to 5:25 PM

By Approach	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	209	468	677	1	407	238	645	0	35	1	36	0	74	18	92	3	725	1	2	0	1
%HV	5.7%				3.2%				0.0%				6.8%				4.1%				
PHF	0.89				0.86				0.58				0.74				0.89				

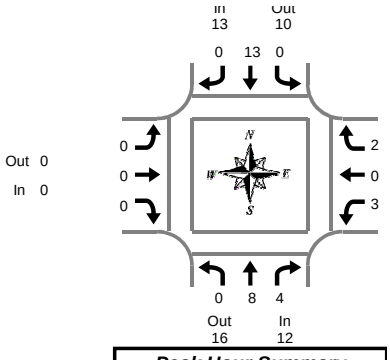
By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	198	11	209	6	400	1	407	16	1	18	35	50	0	24	74	725
%HV	0.0%	4.0%	36.4%	5.7%	0.0%	3.3%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	6.0%	0.0%	8.3%	6.8%	4.1%
PHF	0.00	0.88	0.55	0.89	0.30	0.88	0.25	0.86	0.67	0.25	0.50	0.58	0.74	0.00	0.60	0.74	0.89

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	188	9	1	7	354	2	0	20	0	20	0	63	0	23	0	686	0	3	0	1
4:15 PM	0	196	11	1	7	382	1	0	15	0	20	0	50	0	24	2	706	1	2	0	1
4:30 PM	0	199	11	1	6	399	0	0	16	1	17	0	43	0	27	3	719	1	2	0	1
4:45 PM	0	182	10	0	4	364	0	0	15	2	10	0	39	0	28	3	654	1	1	0	1
5:00 PM	1	172	9	0	8	349	0	0	12	2	7	0	38	0	28	3	626	1	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 124th Ave & SW Myslony Rd

Tuesday, July 10, 2018
4:00 PM to 6:00 PM

Peak Hour Summary
4:25 PM to 5:25 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
4:05 PM	0	1	0	1	0	2	0	2	0	0	0	0	1	0	0	1	4
4:10 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
4:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	2	3
4:20 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:25 PM	0	0	1	1	0	1	0	1	0	0	0	0	2	0	0	2	4
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:35 PM	0	1	1	2	0	3	0	3	0	0	0	0	1	0	0	1	6
4:40 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
4:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
4:50 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
4:55 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:05 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:10 PM	0	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
5:20 PM	0	2	1	3	0	2	0	2	0	0	0	0	0	0	0	0	5
5:25 PM	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	1	0	1	0	3	0	3	0	0	0	0	1	0	1	2	6
5:40 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	3
5:50 PM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	2	3
5:55 PM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
Total Survey	0	13	6	19	5	22	0	27	0	0	0	0	8	0	5	13	59

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	2	1	3	0	4	0	4	0	0	0	0	1	0	0	1	8
4:15 PM	0	2	1	3	0	1	0	1	0	0	0	0	3	0	1	4	8
4:30 PM	0	2	1	3	0	6	0	6	0	0	0	0	1	0	0	1	10
4:45 PM	0	3	0	3	0	1	0	1	0	0	0	0	0	0	1	1	5
5:00 PM	0	1	1	2	0	3	0	3	0	0	0	0	0	0	0	0	5
5:15 PM	0	2	2	4	1	2	0	3	0	0	0	0	0	0	1	1	8
5:30 PM	0	1	0	1	1	3	0	4	0	0	0	0	1	0	1	2	7
5:45 PM	0	0	0	0	3	2	0	5	0	0	0	0	2	0	1	3	8
Total Survey	0	13	6	19	5	22	0	27	0	0	0	0	8	0	5	13	59

Heavy Vehicle Peak Hour Summary
4:25 PM to 5:25 PM

By Approach	Northbound SW 124th Ave			Southbound SW 124th Ave			Eastbound SW Myslony Rd			Westbound SW Myslony Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	12	16	28	13	10	23	0	0	0	5	4	9	30
PHF	0.75			0.54			0.00			0.42			0.68

By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	8	4	12	0	13	0	13	0	0	0	0	3	0	2	5	30
PHF	0.00	0.67	0.50	0.75	0.00	0.54	0.00	0.54	0.00	0.00	0.00	0.00	0.25	0.00	0.50	0.42	0.68

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

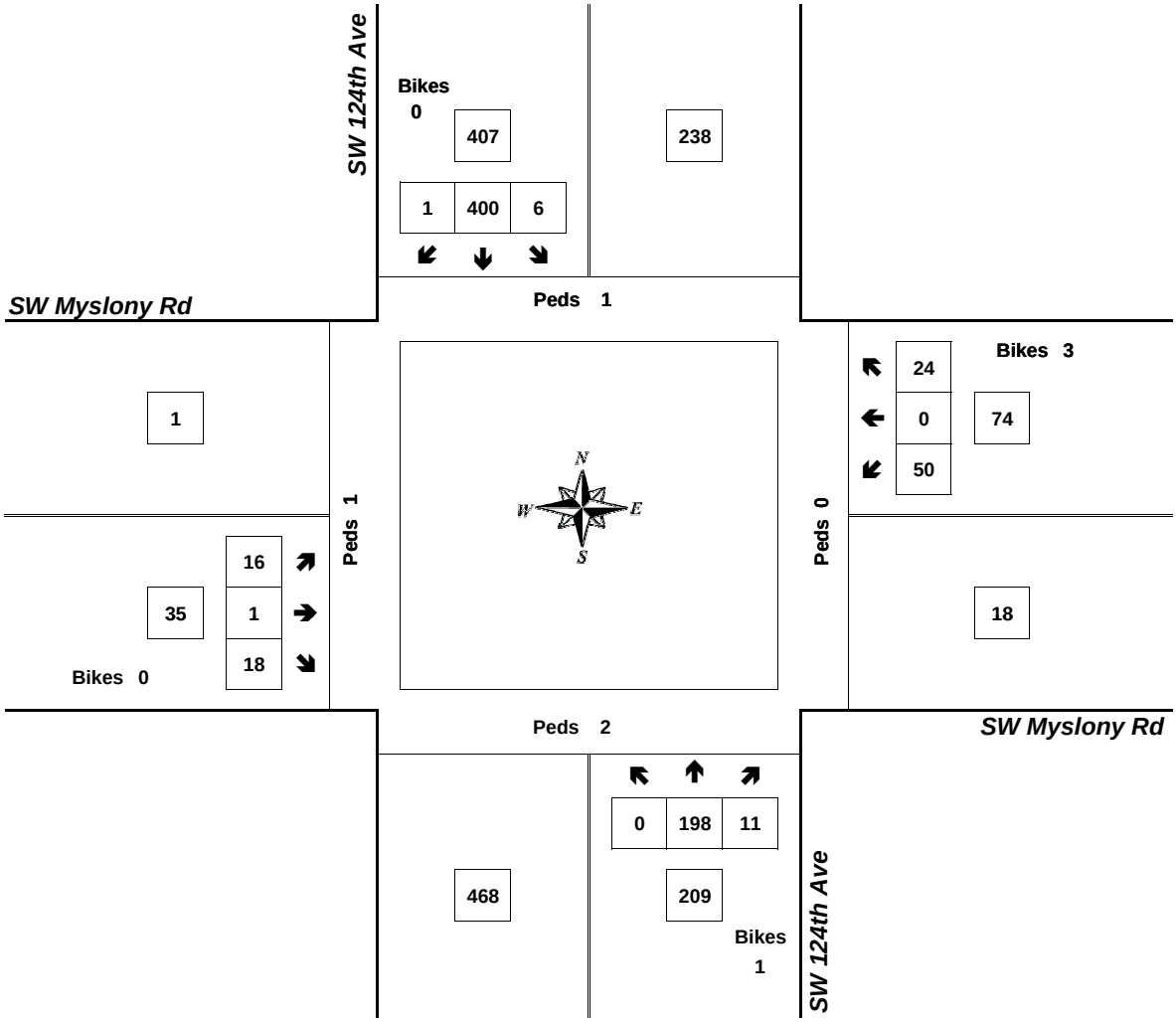
Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Myslony Rd				Westbound SW Myslony Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	9	3	12	0	12	0	12	0	0	0	0	5	0	2	7	31
4:15 PM	0	8	3	11	0	11	0	11	0	0	0	0	4	0	2	6	28
4:30 PM	0	8	4	12	1	12	0	13	0	0	0	0	1	0	2	3	28
4:45 PM	0	7	3	10	2	9	0	11	0	0	0	0	1	0	3	4	25
5:00 PM	0	4	3	7	5	10	0	15	0	0	0	0	3	0	3	6	28

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 124th Ave & SW Myslony Rd

4:25 PM to 5:25 PM
Tuesday, July 10, 2018



Approach	PHF	HV%	Volume
EB	0.58	0.0%	35
WB	0.74	6.8%	74
NB	0.89	5.7%	209
SB	0.86	3.2%	407
Intersection	0.89	4.1%	725

Count Period: 4:00 PM to 6:00 PM

All Traffic Data Services, LLC
alltrafficdata.net

Date Start: 15-Jul-21
Date End: 16-Jul-21
SW 124th Ave S-O SW Myslony St
Site Code: 1

NB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	85th Percent	95th Percent
07/15/21	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	1	**2**	1	**7**	15	30	53	76	33	12	3	0	0	0	233	51	56
15:00	1	0	**4**	4	**20**	**35**	**96**	102	53	8	1	1	**1**	0	326	51	54
16:00	**5**	0	2	2	6	12	71	**144**	**93**	16	4	1	0	0	**356**	53	56
17:00	3	0	2	1	5	15	73	116	75	**21**	**9**	**2**	0	0	322	53	58
18:00	0	0	0	0	1	15	45	64	40	17	4	1	0	0	187	54	58
19:00	0	0	1	1	3	4	25	37	20	7	1	0	0	0	99	53	57
20:00	2	0	0	0	3	1	35	39	33	11	0	0	0	**1**	125	53	57
21:00	1	0	0	1	0	13	26	30	12	6	1	0	0	0	90	52	57
22:00	1	1	0	0	1	4	12	25	8	2	1	0	0	0	55	51	55
23:00	0	0	0	3	2	3	11	9	4	3	4	0	0	0	39	56	62
Total	14	3	10	19	56	132	447	642	371	103	28	5	1	1	1832		
Percent	0.8%	0.2%	0.5%	1.0%	3.1%	7.2%	24.4%	35.0%	20.3%	5.6%	1.5%	0.3%	0.1%	0.1%			
AM Peak Vol.																	
PM Peak Vol.	16:00 5	14:00 2	15:00 4	14:00 7	15:00 20	15:00 35	15:00 96	16:00 144	16:00 93	17:00 21	17:00 9	17:00 2	15:00 1	20:00 1	16:00 356		

All Traffic Data Services, LLC
alltrafficdata.net

Date Start: 15-Jul-21
Date End: 16-Jul-21
SW 124th Ave S-O SW Myslony St
Site Code: 1

NB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	85th Percent	95th Percent
07/16/21	0	0	0	1	0	3	4	11	2	0	0	0	0	0	21	49	52
01:00	0	0	0	0	0	2	8	9	3	1	0	0	0	0	23	50	54
02:00	1	0	0	0	0	1	7	2	3	0	0	1	0	0	15	52	66
03:00	0	**1**	0	2	10	10	4	8	7	1	1	0	0	0	44	51	54
04:00	1	0	1	**12**	**33**	21	15	20	9	1	0	0	0	0	113	48	52
05:00	1	0	1	5	12	21	20	45	27	**15**	**3**	**3**	0	0	153	54	59
06:00	**4**	1	0	3	15	31	31	53	31	14	3	1	0	0	187	53	58
07:00	3	0	**3**	7	15	29	32	61	**40**	15	0	2	0	0	**207**	53	57
08:00	2	0	1	5	9	14	49	**70**	30	9	1	0	0	0	190	51	55
09:00	3	0	2	4	3	29	**65**	52	22	12	3	0	0	0	195	51	57
10:00	0	0	1	7	10	32	53	69	18	3	1	0	0	0	194	49	53
11:00	4	0	2	3	10	**36**	49	56	27	5	3	0	0	0	195	51	54
12 PM	**4**	0	**2**	**7**	**10**	**30**	**64**	71	**35**	**3**	**2**	0	0	0	**228**	50	54
13:00	3	0	0	6	10	27	56	**98**	22	3	1	0	0	0	226	49	53
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	26	2	13	62	137	286	457	625	276	82	18	7	0	0	1991		
Percent	1.3%	0.1%	0.7%	3.1%	6.9%	14.4%	23.0%	31.4%	13.9%	4.1%	0.9%	0.4%	0.0%	0.0%			
AM Peak	06:00	03:00	07:00	04:00	04:00	11:00	09:00	08:00	07:00	05:00	05:00	05:00			07:00		
Vol.	4	1	3	12	33	36	65	70	40	15	3	3			207		
PM Peak	12:00		12:00	12:00	12:00	12:00	12:00	13:00	12:00	12:00	12:00				12:00		
Vol.	4		2	7	10	30	64	98	35	3	2				228		
Grand Total	40	5	23	81	193	418	904	1267	647	185	46	12	1	1	3823		
Percent	1.0%	0.1%	0.6%	2.1%	5.0%	10.9%	23.6%	33.1%	16.9%	4.8%	1.2%	0.3%	0.0%	0.0%			

15th Percentile :	37 MPH
50th Percentile :	45 MPH
85th Percentile :	52 MPH
95th Percentile :	56 MPH

Statistics

10 MPH Pace Speed :	41-50 MPH
Number in Pace :	2171
Percent in Pace :	56.8%
Number of Vehicles > 55 MPH :	245
Percent of Vehicles > 55 MPH :	6.4%
Mean Speed(Average) :	46 MPH

All Traffic Data Services, LLC
alltrafficdata.net

Date Start: 19-Jul-21
Date End: 20-Jul-21
SW 124th Ave S-O SW Myslony St
Site Code: 1

NB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	85th Percent	95th Percent
07/19/21	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	**3**	0	1	**13**	**31**	**67**	**166**	**115**	**46**	4	**2**	0	0	0	**448**	49	53
17:00	1	1	**2**	13	18	67	130	89	27	**5**	1	0	0	0	354	48	52
18:00	0	0	2	7	13	33	70	54	18	2	0	**1**	0	0	200	49	53
19:00	1	0	1	3	3	9	34	45	10	3	0	0	0	**1**	110	49	53
20:00	0	1	1	0	10	16	30	39	9	1	1	0	0	0	108	49	53
21:00	0	**2**	2	5	5	10	26	17	8	1	1	0	0	0	77	49	53
22:00	0	0	0	1	2	5	16	18	5	1	0	0	0	0	48	49	53
23:00	0	0	0	0	1	5	8	9	3	0	1	0	0	0	27	49	54
Total	5	4	9	42	83	212	480	386	126	17	6	1	0	1	1372		
Percent	0.4%	0.3%	0.7%	3.1%	6.0%	15.5%	35.0%	28.1%	9.2%	1.2%	0.4%	0.1%	0.0%	0.1%			
AM Peak Vol.																	
PM Peak Vol.	16:00 3	21:00 2	17:00 2	16:00 13	16:00 31	16:00 67	16:00 166	16:00 115	16:00 46	17:00 5	16:00 2	18:00 1		19:00 1	16:00 448		

All Traffic Data Services, LLC
alltrafficdata.net

Date Start: 19-Jul-21
Date End: 20-Jul-21
SW 124th Ave S-O SW Myslony St
Site Code: 1

NB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	85th Percent	95th Percent
07/20/21	0	0	0	1	1	6	6	3	4	0	0	0	0	0	21	51	53
01:00	0	0	1	4	0	1	7	7	1	0	0	0	0	0	21	48	49
02:00	0	0	3	11	8	7	8	3	0	0	0	0	0	0	40	43	46
03:00	0	0	0	0	1	3	12	5	2	1	0	0	0	0	24	49	54
04:00	0	0	0	1	2	12	16	27	10	0	0	1	0	0	69	50	53
05:00	0	0	0	1	4	14	23	49	24	6	**1**	0	0	0	122	52	55
06:00	2	0	4	3	2	20	41	48	26	**9**	0	0	**1**	0	156	52	56
07:00	2	0	3	9	14	31	84	**100**	**28**	7	0	0	0	0	**278**	49	53
08:00	**3**	**5**	3	9	15	47	78	56	8	1	0	0	0	0	225	47	49
09:00	0	0	1	**13**	13	46	77	42	10	2	0	0	0	0	204	47	50
10:00	2	3	**7**	10	18	47	71	52	15	2	1	**2**	0	0	230	48	52
11:00	0	3	4	11	**29**	**51**	**92**	52	13	0	0	1	0	0	256	47	50
12 PM	**4**	**4**	6	11	23	52	98	56	12	2	**1**	0	**1**	0	270	47	51
13:00	1	0	5	4	25	27	86	82	18	**7**	0	0	0	0	255	49	53
14:00	2	2	2	19	36	68	137	65	19	4	1	0	0	0	355	47	51
15:00	2	2	**11**	**35**	**56**	**78**	**147**	**97**	**21**	2	1	0	0	0	**452**	47	50
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	18	19	50	142	247	510	983	744	211	43	5	4	2	0	2978		
Percent	0.6%	0.6%	1.7%	4.8%	8.3%	17.1%	33.0%	25.0%	7.1%	1.4%	0.2%	0.1%	0.1%	0.0%			
AM Peak	08:00	08:00	10:00	09:00	11:00	11:00	11:00	07:00	07:00	06:00	05:00	10:00	06:00		07:00		
Vol.	3	5	7	13	29	51	92	100	28	9	1	2	1		278		
PM Peak	12:00	12:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	13:00	12:00		12:00		15:00		
Vol.	4	4	11	35	56	78	147	97	21	7	1		1		452		
Grand Total	23	23	59	184	330	722	1463	1130	337	60	11	5	2	1	4350		
Percent	0.5%	0.5%	1.4%	4.2%	7.6%	16.6%	33.6%	26.0%	7.7%	1.4%	0.3%	0.1%	0.0%	0.0%			

15th Percentile :	35 MPH
50th Percentile :	42 MPH
85th Percentile :	48 MPH
95th Percentile :	52 MPH

Statistics

10 MPH Pace Speed :	41-50 MPH
Number in Pace :	2593
Percent in Pace :	59.6%
Number of Vehicles > 55 MPH :	79
Percent of Vehicles > 55 MPH :	1.8%
Mean Speed(Average) :	43 MPH

AM PEAK HOUR

PM PEAK HOUR

1 SW LANGER FARMS PKWY/ SW TUALATIN-SHERWOOD RD

AM: 11 / 820 / 193 → LOS=C, Del=24.1, V/C=0.78 ← 36 / 486 / 71; 7 / 58 / 97 ↓; 112 / 112 / 123 ↑

PM: 13 / 644 / 255 → LOS=C, Del=32.1, V/C=0.92 ← 14 / 863 / 197; 13 / 151 / 30 ↓; 208 / 137 / 107 ↑

2 SW OREGON ST/ SW TUALATIN-SHERWOOD RD

AM: 8 / 775 / 121 → LOS=B, Del=16.4, V/C=0.84 ← 6 / 583 / 99; 0 / 0 / 4 ↓; 87 / 3 / 327 ↑

PM: 7 / 751 / 118 → LOS=D, Del=35.5, V/C=>1.0 ← 8 / 945 / 356; 8 / 10 / 11 ↓; 126 / 157 ↑

3 SW WILDROSE PL/ SW TUALATIN-SHERWOOD RD

AM: 10 / 1110 → CM=SB, LOS=D, Del=30.2, V/C=0.04 ← 10 / 693; 3 / 6 ↓

PM: 3 / 927 → CM=SB, LOS=F, Del=>50, V/C=0.28 ← 3 / 1293; 18 / 12 ↓

4 SW CIPOLE RD/ SW TUALATIN-SHERWOOD RD

AM: 110 / 1005 → LOS=A, Del=8.2, V/C=0.71 ← 75 / 655; 30 / 47 ↓

PM: 37 / 909 → LOS=B, Del=19.4, V/C=0.89 ← 14 / 1183; 124 / 63 ↓

5 SW 124TH AVE/ SW TUALATIN-SHERWOOD RD

AM: 68 / 942 / 42 → LOS=E, Del=58.1, V/C=0.98 ← 189 / 558 / 24; 52 / 155 / 167 ↓; 120 / 208 / 70 ↑

PM: 47 / 824 / 101 → LOS=C, Del=34.6, V/C=0.79 ← 118 / 885 / 58; 200 / 197 / 195 ↓; 112 / 124 / 11 ↑

6 SW 120TH AVE/ SW TUALATIN-SHERWOOD RD

AM: 1139 / 39 → CM=NB, LOS=D, Del=32.6, V/C=0.11 ← 771 / 11; 17 / 15 ↑

PM: 1010 / 22 → CM=NB, LOS=C, Del=22.8, V/C=0.13 ← 1014 / 3; 27 / 17 ↑

7 SW 115TH AVE/ SW TUALATIN-SHERWOOD RD

AM: 5 / 1020 / 129 → LOS=B, Del=18.2, V/C=0.82 ← 10 / 740 / 197; 2 / 1 / 3 ↓; 40 / 0 / 84 ↑

PM: 12 / 955 / 60 → LOS=B, Del=18.8, V/C=0.74 ← 16 / 891 / 52; 15 / 16 ↓; 111 / 0 / 229 ↑

8 SW 112TH AVE-SW AVERY ST/ SW TUALATIN-SHERWOOD RD

AM: 72 / 770 / 274 → LOS=C, Del=31.9, V/C=0.82 ← 101 / 679 / 19; 15 / 9 / 25 ↓; 253 / 49 / 16 ↑

PM: 29 / 817 / 346 → LOS=C, Del=27.3, V/C=0.77 ← 37 / 700 / 5; 63 / 42 / 100 ↓; 193 / 19 / 14 ↑

10 SW MURDOCK RD/ SW OREGON ST

AM: 354 / 55 → LOS=A, Del=9.0, V/C=0.60 ← 163 / 81; 77 / 372 ↑

PM: 184 / 83 → LOS=A, Del=9.8, V/C=0.67 ← 403 / 391; 86 / 152 ↑

9 SW TONQUIN RD/ SW OREGON ST

AM: 399 / 326 → CM=NB, LOS=C, Del=15.2, V/C=0.30 ← 109 / 100; 135 / 80 ↑

PM: 187 / 149 → CM=NB, LOS=F, Del=>50, V/C=0.98 ← 434 / 128; 360 / 86 ↑

12 SW CIPOLE RD/ BLAKE RD (SUPPLEMENTAL ANALYSIS)

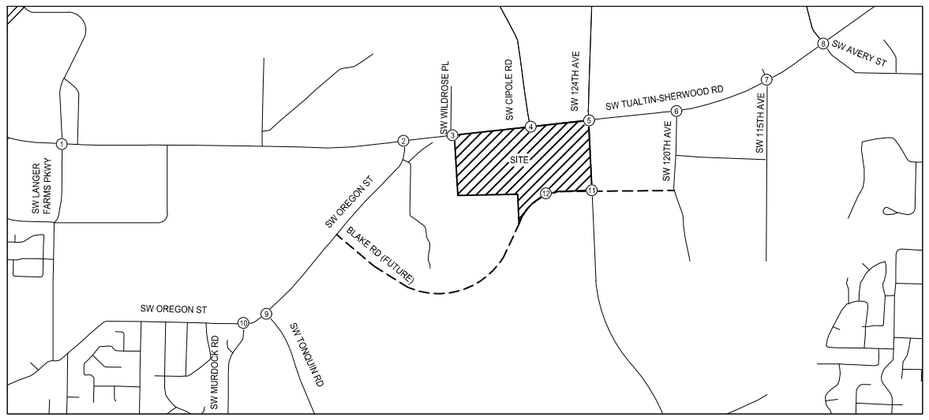
AM: 53 → ← 16

PM: 26 → ← 58

11 SW 124TH AVE/ BLAKE RD (FUTURE)

AM: 23 / 10 / 20 → CM=EB, LOS=B, Del=12.2, V/C=0.05 ← 2 / 4 / 4; 193 / 16 ↓; 0 / 373 / 24 ↑

PM: 11 / 5 / 10 → CM=EB, LOS=B, Del=11.2, V/C=0.02 ← 16 / 14 / 22; 44 / 310 / 2 ↓; 0 / 229 / 3 ↑

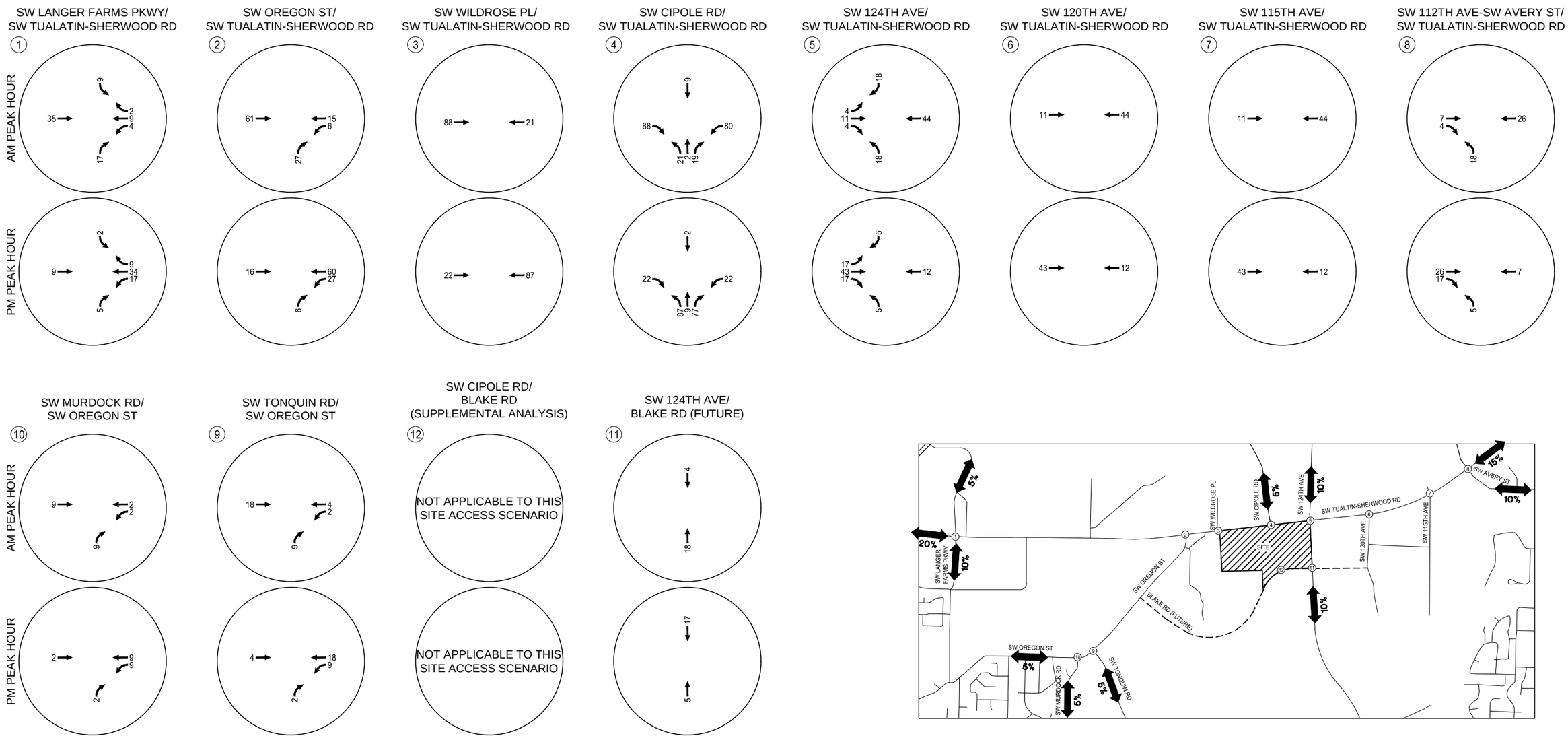


CM = Critical Movement (Unsignalized)
LOS = Intersection Level of Service (Signalized) / Critical Movement Level of Service (Unsignalized)
Del = Intersection Average Control Delay (Signalized) / Critical Movement Control Delay (Unsignalized)
V/C = Volume-to-Capacity Ratio

Year 2021 Background Traffic Conditions Weekday AM and PM Peak Hours Sherwood, Oregon

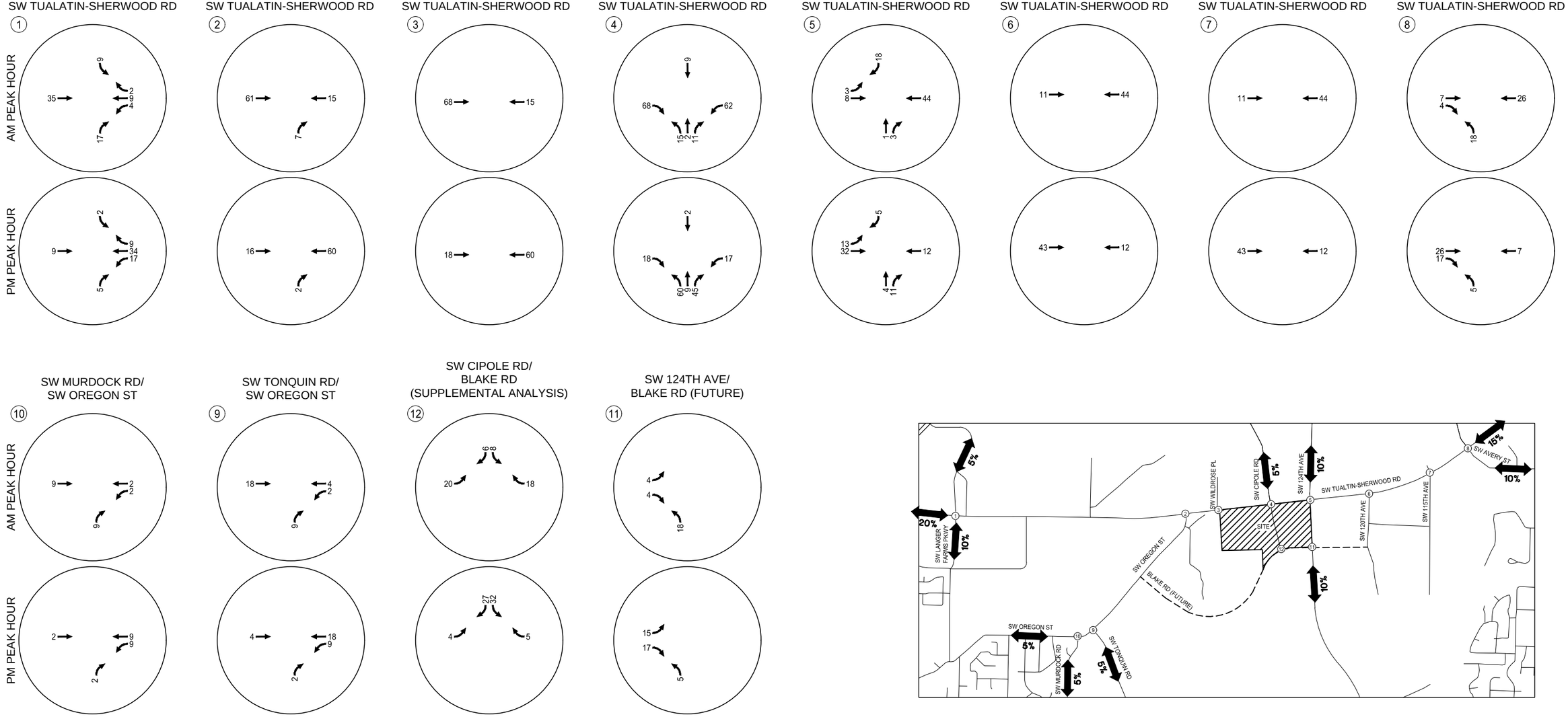
Figure 5

KITTELSON & ASSOCIATES



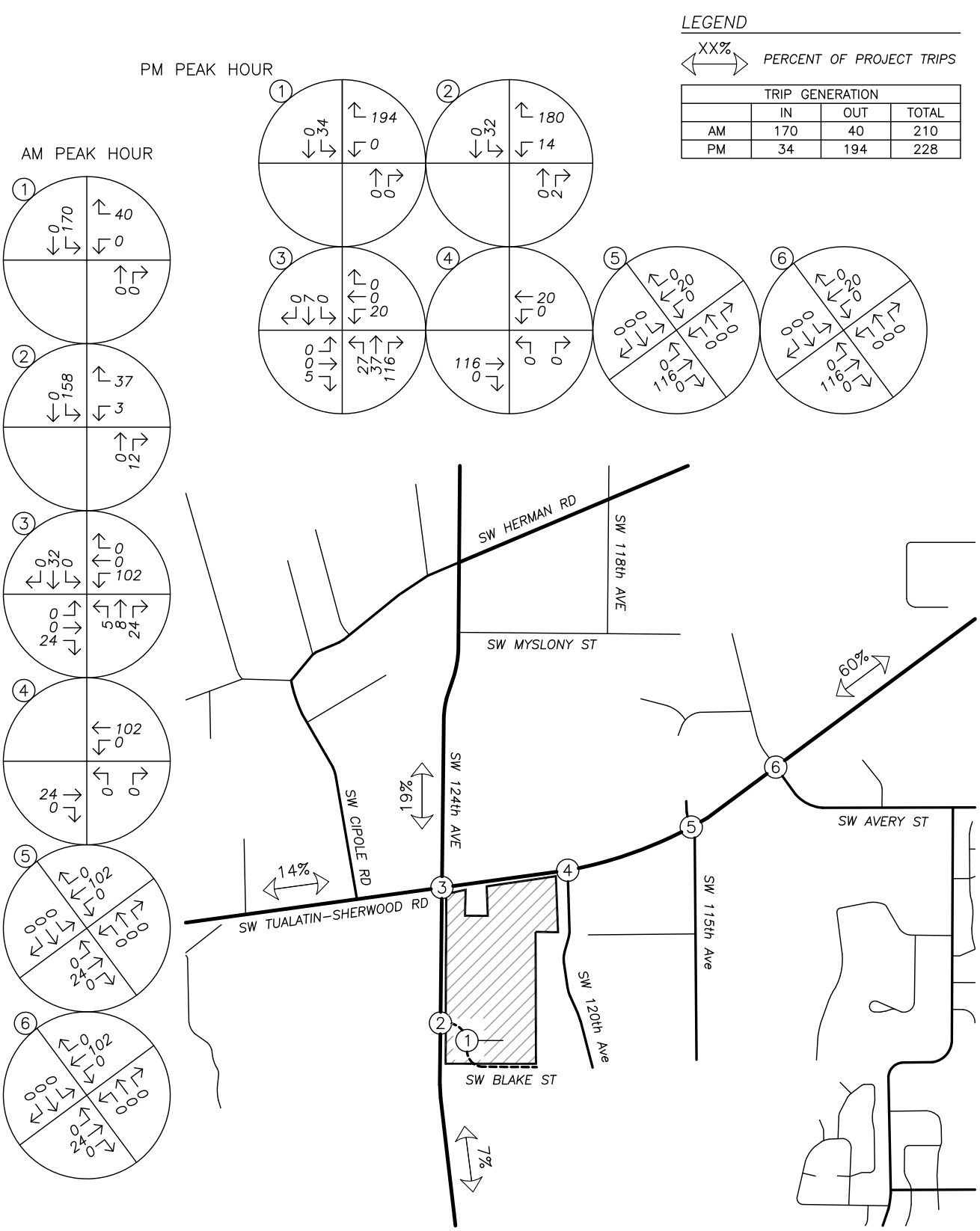
Site Trip Distribution
Weekday AM and PM Peak Hours
Sherwood, Oregon

Figure
6



Site Trip Distribution - Alternative Access Scenario
Weekday AM and PM Peak Hours
Sherwood, Oregon

Figure
11



TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Site Trips
AM & PM Peak Hours

no scale

FIGURE 4

Appendix C – Safety

Crash Reports

Left-Turn Lane Warrant Analysis

Preliminary Signal Warrant Analysis

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and OREGON ST, City of Sherwood, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2019														
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	1	0	1	0	1	0	1
REAR-END	0	8	2	10	0	16	0	9	1	7	3	4	1	0
SIDESWIPE - OVERTAKING	0	0	1	1	0	0	0	1	0	1	0	0	0	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	0	1	1	0	1	0	0
YEAR 2019 TOTAL	**0**	**10**	**3**	**13**	**0**	**18**	**0**	**11**	**2**	**10**	**3**	**6**	**1**	**1**
YEAR: 2018														
REAR-END	0	4	3	7	0	7	0	6	1	6	1	2	1	0
YEAR 2018 TOTAL	**0**	**4**	**3**	**7**	**0**	**7**	**0**	**6**	**1**	**6**	**1**	**2**	**1**	**0**
YEAR: 2017														
REAR-END	0	8	3	11	0	13	1	7	4	10	1	5	0	0
TURNING MOVEMENTS	0	3	6	9	0	7	4	8	1	6	3	9	0	0
YEAR 2017 TOTAL	**0**	**11**	**9**	**20**	**0**	**20**	**5**	**15**	**5**	**16**	**4**	**14**	**0**	**0**
YEAR: 2016														
HEAD-ON	0	1	0	1	0	2	0	1	0	0	1	1	0	0
REAR-END	0	10	2	12	0	12	1	10	2	8	4	3	5	1
TURNING MOVEMENTS	0	3	3	6	0	4	2	3	3	5	1	6	0	0
YEAR 2016 TOTAL	**0**	**14**	**5**	**19**	**0**	**18**	**3**	**14**	**5**	**13**	**6**	**10**	**5**	**1**
YEAR: 2015														
REAR-END	0	8	4	12	0	16	2	8	4	9	3	3	1	0
SIDESWIPE - OVERTAKING	0	0	1	1	0	0	0	1	0	1	0	0	0	0

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and OREGON ST, City of Sherwood, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
TURNING MOVEMENTS	0	2	0	2	0	5	0	2	0	1	1	2	0	0
YEAR 2015 TOTAL	**0**	**10**	**5**	**15**	**0**	**21**	**2**	**11**	**4**	**11**	**4**	**5**	**1**	**0**
FINAL TOTAL	**0**	**49**	**25**	**74**	**0**	**84**	**10**	**57**	**17**	**56**	**18**	**37**	**8**	**2**

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and OREGON ST, City of Sherwood, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	MAJOR INJURY CRASHES	MODERATE INJURY CRASHES	MINOR INJURY CRASHES	PROP DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	MAJOR INJURIES	MODERATE INJURIES	MINOR INJURIES
YEAR: 2019										
FIXED / OTHER OBJECT	0	0	0	1	0	1	0	0	0	1
REAR-END	0	0	0	8	2	10	0	0	0	16
SIDESWIPE - OVERTAKING	0	0	0	0	1	1	0	0	0	0
TURNING MOVEMENTS	0	0	0	1	0	1	0	0	0	1
2019 TOTAL	**0**	**0**	**0**	**10**	**3**	**13**	**0**	**0**	**0**	**18**
YEAR: 2018										
REAR-END	0	0	1	3	3	7	0	0	2	5
2018 TOTAL	**0**	**0**	**1**	**3**	**3**	**7**	**0**	**0**	**2**	**5**
YEAR: 2017										
REAR-END	0	0	1	7	3	11	0	0	1	12
TURNING MOVEMENTS	0	0	2	1	6	9	0	0	5	2
2017 TOTAL	**0**	**0**	**3**	**8**	**9**	**20**	**0**	**0**	**6**	**14**
YEAR: 2016										
HEAD-ON	0	0	0	1	0	1	0	0	0	2
REAR-END	0	0	2	8	2	12	0	0	2	10
TURNING MOVEMENTS	0	0	2	1	3	6	0	0	2	2
2016 TOTAL	**0**	**0**	**4**	**10**	**5**	**19**	**0**	**0**	**4**	**14**
YEAR: 2015										
REAR-END	0	1	1	6	4	12	0	1	1	14
SIDESWIPE - OVERTAKING	0	0	0	0	1	1	0	0	0	0
TURNING MOVEMENTS	0	0	1	1	0	2	0	0	2	3
2015 TOTAL	**0**	**1**	**2**	**7**	**5**	**15**	**0**	**1**	**3**	**17**
FINAL TOTAL	**0**	**1**	**10**	**38**	**25**	**74**	**0**	**1**	**15**	**68**

CITY OF SHERWOOD, WASHINGTON COUNTY

TUALATIN-SHERWOOD and OREGON ST, City of Sherwood, Washington County, 01/01/2015 to 12/31/2019

1 - 4 of 74 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R J S W U G N H R I V L K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / TYPE / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02200	N	N	N	04/25/2015	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07
NO RPT				SA	0	SW TUALATIN-SHERWOOD	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W										000	00
N				3P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		042	000		07
N				45 22 5.83	-122 48 58.75																OR<25					
													02	NONE 0	STOP											
														PRVTE	E -W									011	013	00
														PSNGR CAR		01	DRVR	NONE	23	M	OR-Y		000	000		00
																					OR<25					
													03	NONE 0	STOP											
														PRVTE	E -W									022		00
														PSNGR CAR		01	DRVR	INJB	58	F	OR-Y		000	000		00
																					OR<25					
05457	N	Y	N N N	08/16/2016	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	O-STRGHT	01	NONE 0	STRGHT										013	04
CITY				TU	0	SW TUALATIN-SHERWOOD	E		TRF SIGNAL	N	DRY	HEAD		PRVTE	W -E										000	00
N				8P			06	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	INJC	75	M	OR-Y		020	000		04
N				45 22 5.83	-122 48 58.75																OR<25					
													02	NONE 0	STOP											
														PRVTE	E -W									011	013	00
														PSNGR CAR		01	DRVR	INJC	48	M	OR-Y		000	000		00
																					OR<25					
													03	NONE 0	STOP											
														PRVTE	E -W									022		00
														PSNGR CAR		01	DRVR	NONE	22	F	OR-Y		000	000		00
																					OR<25					
02711	N	N	N N N	04/25/2016	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT											02
CITY				MO	0	SW TUALATIN-SHERWOOD	E		TRF SIGNAL	N	DRY	TURN		N/A	W -E										000	00
N				10A			05	0		N	DAY	PDO		SEMI TOW		01	DRVR	NONE	00	Unk	UNK		000	000		00
N				45 22 5.83	-122 48 58.75																UNK					
													02	NONE 9	TURN-R											
														N/A	S -E									000		00
														PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																					UNK					
08530	N	N	N	12/12/2016	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
NO RPT				MO	0	SW TUALATIN-SHERWOOD	E		TRF SIGNAL	N	DRY	REAR		N/A	E -W										000	00
N				1P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N				45 22 5.83	-122 48 58.75																UNK					
													02	NONE 9	STOP											
														N/A	E -W									011		00
														PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																					UNK					

SER# / INVEST / RD DPT / UNLOC?	SPEAR	DRJNSVLK	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES / LOC	PED ERROR	ACT	EVENT	CAUSE
01714	N N N	N N	03/26/2017	14	SW OREGON ST	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT									013	07
CITY			SU	0	SW TUALATIN-SHERWOOD	E		TRF SIGNAL	N	WET	REAR		PRVTE	E -W								000		00
N			4P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y	043	000		07
N			45 22 5.83	-122 48 58.75																OR<25				
												02	NONE 0	STOP										
													PRVTE	E -W								011	013	00
													PSNGR CAR		01	DRVR	INJC	21	M	OR-Y	000	000		00
																				OR<25				
												03	NONE 0	STOP										
													PRVTE	E -W								022		00
													PSNGR CAR		01	DRVR	NONE	32	M	OR-Y	000	000		00
																				OR<25				
02711	N N N	N N	05/09/2017	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT									053	04
CITY			TU	0	SW TUALATIN-SHERWOOD	E		TRF SIGNAL	N	DRY	TURN		N/A	W -E								000		00
N			1P			05	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
N			45 22 5.83	-122 48 58.75																UNK				
												02	NONE 9	TURN-R										
													N/A	S -E								000		00
													PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
																				UNK				
00016	N N N	N N	01/02/2018	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	S-STRGHT	01	NONE 0	STRGHT										29
CITY			TU	0	SW TUALATIN-SHERWOOD	E		TRF SIGNAL	N	DRY	REAR		UNKN	E -W								000		00
N			4P			06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	026	000		29
N			45 22 5.83	-122 48 58.75																UNK				
												02	NONE 0	STRGHT										
													PRVTE	E -W								000		00
													PSNGR CAR		01	DRVR	INJC	70	F	OR-Y	000	000		00
																				OR>25				
07005	N N N		12/20/2018	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 9	STRGHT										29
NONE			TH	0	SW TUALATIN-SHERWOOD	E		TRF SIGNAL	N	DRY	REAR		N/A	E -W								000		00
N			3P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
N			45 22 5.93	-122 48 58.75																UNK				
												02	NONE 9	STOP										
													N/A	E -W								012		00
													PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
																				UNK				
02946	N N N	N N	06/11/2019	14	SW OREGON ST	INTER	3-LEG	N	Y	CLR	FIX OBJ	01	NONE 0	STRGHT									054	17
CITY			TU	0	SW TUALATIN-SHERWOOD	E		TRF SIGNAL	N	DRY	FIX		PRVTE	W -E								000	054	00
N			6P			05	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	45	F	OTH-Y	081	028		17
N			45 22 5.93	-122 48 58.75																OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G S	J N V	I H L	C O R K	W DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00979	N	Y	N		N	N	02/22/2015	16	SW OREGON ST	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
CITY			SU				0	SW TUALATIN-SHERWOOD	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000		00
N			9A							06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	33	M	SUSP		026	000		29
N			45 22 5.83				-122 48 58.75																	OR<25					
																02	NONE 0	STOP											
																	PRVTE	S -N									011		00
																	PSNGR CAR		01	DRVR	NONE	57	F	OR-Y		000	000		00
																								OR<25					
04231	N	N	N		N	N	07/27/2015	16	SW OREGON ST	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY			MO				0	SW TUALATIN-SHERWOOD	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000		00
N			7A							06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	22	M	OR-Y		043	000		07
N			45 22 5.83				-122 48 58.75																	OR<25					
																02	NONE 0	STOP											
																	PRVTE	S -N									011		00
																	PSNGR CAR		01	DRVR	NONE	23	F	OTH-Y		000	000		00
																								OR<25					
02295	N	N	N		N	N	04/07/2016	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY			TH				0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	WET	REAR		PRVTE	W -E									000		00
N			8A							06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	41	F	OR-Y		043	000		07
N			45 22 5.83				-122 48 58.75																	OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011		00
																	PSNGR CAR		01	DRVR	INJC	59	F	OR-Y		000	000		00
																								OR<25					
08136	N	N	N		N	N	11/28/2016	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY			MO				0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	WET	REAR		PRVTE	W -E									000		00
N			8A							06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	40	M	OR-Y		043	000		07
N			45 22 5.83				-122 48 58.75																	OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	INJC	47	F	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP											
																	PRVTE	W -E									022		00
																	PSNGR CAR		01	DRVR	NONE	50	M	OR-Y		000	000		00
																								OR<25					
01296	N	N	N		N	N	03/07/2017	14	SW OREGON ST	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										093	27,29,32
CITY			TU				0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	WET	REAR		PRVTE	W -E									000		00
N			2P							06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	24	M	OR-Y		016,026,052	000	093	27,29,32
N			45 22 5.83				-122 48 58.75																	OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	I H V	C O R K	W DAY / TIME / LAT	DATE / CLASS / DIST FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0	STOP										
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	INJC	21	F	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STOP										
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		02	PSNG	NO<5	01	M			000	000		00
																03	NONE 0	STOP										
																	PRVTE	W -E									022	013	00
																	PSNGR CAR		01	DRVR	INJC	30	F	OR-Y		000	000		00
																								OR<25					
																04	NONE 0	STOP										
																	PRVTE	W -E									022		00
																	PSNGR CAR		01	DRVR	NONE	47	M	OR-Y		000	000		00
																								OR<25					
03293	N	N	N	N	N		06/04/2017	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	S-STRGHT	01	NONE 0	STRGHT											07
CITY							SU	0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000		00
N							6P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	23	M	OR-Y		043	000		07
N							45 22 5.83	-122 48 58.75																OR<25					
																02	NONE 0	STRGHT										
																	PRVTE	W -E									006		00
																	PSNGR CAR		01	DRVR	NONE	31	M	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STRGHT										
																	PRVTE	W -E									006		00
																	PSNGR CAR		02	PSNG	INJB	35	F			000	000		00
00992	N	N	N				02/21/2017	14	SW OREGON ST	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 9	STRGHT											29
NONE							TU	0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	WET	REAR		N/A	W -E									000		00
N							UNK			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 5.83	-122 48 58.75																UNK					
																02	NONE 9	STOP										
																	N/A	W -E									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
02036	N	N	N	N	N		04/10/2017	14	SW OREGON ST	INTER	3-LEG	N	N	CLD	S-1STOP	01	NONE 9	STRGHT											27,07
CITY							MO	0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	DRY	REAR		N/A	W -E									000		00
N							1P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 5.83	-122 48 58.75																UNK					
																02	NONE 9	STOP										
																	N/A	W -E									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02888	N	N	N		N	N	06/08/2019	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											087	27,29
CITY			SA				DAY	0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000	087	00
N			4P				TIME	FROM		06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	41	M	OR-Y		016,026	038		27,29
N			45 22 5.93				LAT	LONG																OR<25					
								58.75																					
																02	NONE 0	STOP										
																	PRVTE	W -E									011	087	00
																	PSNGR CAR		01	DRVR	NONE	36	M	OR-Y		000	000		00
																								OR<25					
06060	N	N	N		N	N	11/18/2019	14	SW OREGON ST	INTER	3-LEG	N	N	CLD	S-1STOP	01	NONE 0	STRGHT											013	07
CITY			MO				DAY	0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	WET	REAR		PRVTE	W -E									000		00
N			6A				TIME	FROM		06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	57	F	OR-Y		043	000		07
N			45 22 5.93				LAT	LONG																OR<25					
								58.75																					
																02	NONE 0	STOP										
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	INJC	22	M	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP										
																	PRVTE	W -E									022		00
																	PSNGR CAR		01	DRVR	INJC	59	F	OR-Y		000	000		00
																								OR>25					
01523	N	N	N				03/27/2019	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 9	STRGHT												27,29
CITY			WE				DAY	0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	DRY	REAR		N/A	W -E									000		00
N			7A				TIME	FROM		06	0		N	DAWN	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 5.93				LAT	LONG																UNK					
								58.75																					
																02	NONE 9	STOP										
																	N/A	W -E									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
04853	N	N	N		N	N	09/20/2019	14	SW OREGON ST	INTER	3-LEG	N	N	CLD	S-1STOP	01	NONE 9	STRGHT										003	27,07
CITY			FR				DAY	0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	DRY	REAR		N/A	W -E									000		00
N			4P				TIME	FROM		06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 5.93				LAT	LONG																UNK					
								58.75																					
																02	NONE 9	STOP										
																	N/A	W -E									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
03704	N	N	N		N	N	07/03/2015	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT												02
CITY			FR				DAY	0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	W -E									000		00
N			9P				TIME	FROM		03	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJB	70	F	OR-Y		000	000		00
N			45 22 5.83				LAT	LONG																OR<25					
								58.75																					

SER# / INVEST / RD DPT / UNLOC?	SPE LGN HVL	DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
											01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E										000		00 00
											02	NONE 0 PRVTE PSNGR CAR	TURN-L E -S	01	DRVR	INJC	31	M	OR-Y OR<25		004,028	000		00 02
											02	NONE 0 PRVTE PSNGR CAR	TURN-L E -S	02	PSNG	INJC	30	F			000	000		00 00
03372 CITY N N	N N N TH 7A 45 22 5.83	N N 06/18/2015 0 -122 48 58.75	14 SW TUALATIN-SHERWOOD	SW OREGON ST CN	INTER 03	3-LEG 0	N TRF SIGNAL	N N	CLR DRY DAY	O-1 L-TURN TURN INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	INJC	26	M	OR-Y OR<25		000	000		02 00 00
											02	NONE 0 PRVTE PSNGR CAR	TURN-L E -S	01	DRVR	NONE	45	M	OR-Y OR<25		004,028	000		00 02
03900 CITY N N	N N N TU 1P 45 22 5.83	N N 06/14/2016 0 -122 48 58.75	14 SW TUALATIN-SHERWOOD	SW OREGON ST CN	INTER 03	3-LEG 0	N TRF SIGNAL	N N	CLR DRY DAY	O-1 L-TURN TURN INJ	01	NONE 0 PRVTE PSNGR CAR	TURN-L E -S	01	DRVR	INJB	48	M	OR-Y OR<25		004,020	000	013,087	04 00 04
											02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	INJC	39	F	OR-Y OR<25		000	000	013,087	00 00
											03	NONE 0 PRVTE PSNGR CAR	STOP S -N	01	DRVR	NONE	42	M	OTH-Y N-RES		000	022 000	087	00 00
08007 NONE N N	N N N TU 7P 45 22 5.83	11/22/2016 0 -122 48 58.75	14 SW TUALATIN-SHERWOOD	SW OREGON ST CN	INTER 03	3-LEG 0	N TRF SIGNAL	N N	RAIN WET DLIT	O-1 L-TURN TURN INJ	01	NONE 0 PRVTE PSNGR CAR	TURN-L E -S	01	DRVR	NONE	60	F	OR-Y OR<25		004,028	000		02 00 02
											02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	INJB	47	M	OR-Y OR<25		000	000		00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R J U G S V	I N H L	C S O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR / OWNER	QTY	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00767	N	N	N	N	N		02/03/2016	14	SW OREGON ST	INTER	3-LEG	N	N	CLD	O-1 L-TURN	01	NONE	0	STRGHT											02
CITY			WE					0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	WET	TURN		PRVTE		W -E									000		00
N			8A							03	0		N	DAY	INJ		PSNGR CAR			01	DRVR	INJC	57	M	OR-Y		000	000		00
N			45 22 5.83					-122 48 58.75																	OR<25					
																02	NONE	0	TURN-L											
																	PRVTE		E -S									000		00
																	PSNGR CAR			01	DRVR	NONE	38	M	OR-Y		004,028	000		02
																									OR<25					
03478	N	N	N	N	N		05/27/2016	14	SW OREGON ST	INTER	3-LEG	N	N	CLD	ANGL-OTH	01	NONE	9	TURN-R											02
CITY			FR					0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	WET	TURN		N/A		S -E									000		00
N			11A							04	0		N	DAY	PDO		PSNGR CAR			01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 5.83					-122 48 58.75																	UNK					
																02	NONE	9	STRGHT											
																	N/A		W -E									000		00
																	PSNGR CAR			01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK					
07730	N	N	N				11/10/2016	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	O-1 L-TURN	01	NONE	9	TURN-L											02
NO RPT			TH					0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	DRY	TURN		N/A		E -S									000		00
N			4P							03	0		N	DAY	PDO		PSNGR CAR			01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 5.83					-122 48 58.75																	UNK					
																02	NONE	9	STRGHT											
																	N/A		W -E									000		00
																	SEMI TOW			01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK					
04558	N	N	N	N	N		07/26/2017	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	O-1 L-TURN	01	NONE	1	STRGHT										055	02
CITY			WE					0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	DRY	TURN		PRVTE		W -E									000		00
N			4P							03	0		N	DAY	INJ		PSNGR CAR			01	DRVR	NONE	41	M	OR-Y		000	000		00
N			45 22 5.83					-122 48 58.75																	OR>25					
																01	NONE	1	STRGHT											
																	PRVTE		W -E									000		00
																	PSNGR CAR			02	PSNG	INJC	38	M			000	000		00
																02	NONE	0	TURN-L											
																	PRVTE		E -S									000		00
																	PSNGR CAR			01	DRVR	INJB	55	M	OR-Y		028	000		02
																									OR<25					
08403	N	N	N	N	N		12/30/2017	14	SW OREGON ST	INTER	3-LEG	N	N	CLD	O-1 L-TURN	01	NONE	0	STRGHT										087	04
CITY			SA					0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	DRY	TURN		PRVTE		W -E									000	087	00
N			5P							03	0		N	DLIT	INJ		PSNGR CAR			01	DRVR	INJC	40	F	OR-Y		000	000		00
N			45 22 5.83					-122 48 58.75																	OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0	TURN-L										
																	PRVTE	E -S									000	087	00
																	PSNGR CAR		01	DRVR	NONE	47	M	OR-Y		020	000		04
																								OR<25					
05608	N	N	N	N	N		09/12/2017	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	O-1 L-TURN	01	NONE 0	TURN-L											04
CITY			TU					0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	E -S									000		00
N			7P							03	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	INJB	24	M	OTH-Y		020	000		04
N			45 22 5.83					-122 48 58.75																OR<25					
																02	NONE 0	STRGHT										
																	PRVTE	W -E									000		00
																	PSNGR CAR		01	DRVR	INJB	33	F	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STRGHT										
																	PRVTE	W -E									000		00
																	PSNGR CAR		02	PSNG	INJB	12	F			000	000		00
																02	NONE 0	STRGHT										
																	PRVTE	W -E									000		00
																	PSNGR CAR		03	PSNG	INJB	11	F			000	000		00
00714	N	N	N				02/07/2017	14	SW OREGON ST	INTER	3-LEG	N	N	RAIN	ANGL-OTH	01	NONE 9	STRGHT											02
NO RPT			TU					0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	WET	TURN		N/A	W -E									000		00
N			3P							04	0		N	DAY	PDO		SEMI TOW		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 5.83					-122 48 58.75																UNK					
																02	NONE 9	TURN-R										
																	N/A	S -E									000		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
01044	N	N	N				02/23/2017	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	S-OTHER	01	NONE 9	TURN-R											08
NONE			TH					0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	DRY	TURN		N/A	S -E									000		00
N			10A							04	0		N	DAY	PDO		SEMI TOW		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 5.83					-122 48 58.75																UNK					
																02	NONE 9	TURN-R										
																	N/A	S -E									000		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
06584	N	N	N				10/20/2017	14	SW OREGON ST	INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE 9	TURN-R											02
NONE			FR					0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	DRY	TURN		N/A	S -E									000		00
N			2P							04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 5.83					-122 48 58.75																UNK					

SER# / INVEST / RD DPT / UNLOC?	S P E D	D A L C	M R J S	U G N V	S I H L	W C O K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 9 N/A SEMI TOW	STRGHT W -E						UNK			000 000		00 00
06915	N	N	N				11/01/2017 WE 5P 45 22 5.83	14 0 -122 48 58.75	SW OREGON ST SW TUALATIN-SHERWOOD	INTER CN 04	3-LEG 0	N TRF SIGNAL	N N	CLR DRY DUSK	ANGL-OTH TURN PDO	01	NONE 9 N/A PSNGR CAR	TURN-R S -E	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		02 00 00
																02	NONE 9 N/A SEMI TOW	STRGHT W -E						UNK			000 000		00 00
06132	Y	N	N	N	N		10/03/2017 TU 5P 45 22 5.83	14 0 -122 48 58.75	SW OREGON ST SW TUALATIN-SHERWOOD	INTER CN 03	3-LEG 0	N TRF SIGNAL	N N	CLR DRY DAY	O-1 L-TURN TURN PDO	01	NONE 9 N/A PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		02,01 00 00
																02	NONE 9 N/A PSNGR CAR	TURN-L E -S	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		00 00
00976	N	N	N	N	N		02/23/2019 SA 3P 45 22 5.93	14 0 -122 48 58.75	SW OREGON ST SW TUALATIN-SHERWOOD	INTER CN 04	3-LEG 0	N TRF SIGNAL	N N	CLD WET DAY	ANGL-OTH TURN INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	39	M	OR-Y OR<25		000	000		04 00 00
																02	NONE 0 PRVTE PSNGR CAR	TURN-R S -E	01	DRVR	INJC	56	F	OR-Y OR<25		020	000		00 04
05116	N	N	N	N	N		08/03/2016 CITY WE 11A 45 22 5.9	14 20 -122 48 58.02	SW TUALATIN-SHERWOOD SW OREGON ST	STRGHT E 05	(NONE) (02)	N UNKNOWN	Y N	CLR DRY DAY	PRKD MV REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	INJB	18	M	OR-Y OR<25		026,080,052	069 000 025		29,16,32 00 29,16,32
																02	NONE 0 PRVTE TRUCK	PRKD-P W -E	01	PRKD	NONE	38	M			000	008 000	069	00 00
03938	N	N	N				07/30/2018 NONE MO 7A 45 22 6.03	14 45 -122 48 57.8	SW TUALATIN-SHERWOOD SW OREGON ST	STRGHT E 05	(NONE) (02)	N UNKNOWN	N N	CLR DRY DAY	S-STRGHT REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		29 00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 9	STRGHT										
																	N/A	W -E								000		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
00887	N	N	N	N	N		02/09/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	29
CITY			TU					76	SW OREGON ST	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W								000		00
N			3P							08			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	25	F	OR-Y		026	000		29
N			45 22 5.99					-122 48 57.19			(02)													OR<25					
																02	NONE 0	STOP										
																	PRVTE	E -W									011	013	00
																	PSNGR CAR		01	DRVR	INJC	25	M	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP										
																	PRVTE	E -W									022		00
																	PSNGR CAR		01	DRVR	NONE	33	M	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP										
																	PRVTE	E -W									022		00
																	PSNGR CAR		02	PSNG	NO<5	04	M			000	000		00
08224	Y	N	N	N	N		12/01/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE 9	STRGHT											07,01
CITY			TH					100	SW OREGON ST	E	(NONE)	UNKNOWN	N	DRY	REAR		N/A	W -E								000		00
N			8P							07			N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 6.01					-122 48 56.99			(02)													UNK					
																02	NONE 9	STRGHT										
																	N/A	W -E								000		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
07424	N	N	N	N	N		11/21/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 9	STRGHT											29
CITY			TU					100	SW OREGON ST	E	(NONE)	NONE	N	WET	REAR		N/A	E -W								000		00
N			7A							08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 6.01					-122 48 57.01			(02)													UNK					
																02	NONE 9	STOP										
																	N/A	E -W									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
00576	N	N	N				02/03/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE 0	STRGHT											29,32
NO RPT			SU					100	SW OREGON ST	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E								000		00
N			2P							07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	59	M	OR-Y		042,052	000		29,32
N			45 22 6.11					-122 48 57			(02)													OR<25					
																02	NONE 0	STRGHT										
																	PRVTE	W -E									000		00
																	PSNGR CAR		01	DRVR	INJC	34	F	OR-Y		000	000		00
																								OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
06916	N	N	N		N	N	11/17/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											07
CITY							TU	120	SW OREGON ST	E	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	W -E									000	00
N							8A			07			N	DAWN	INJ		PSNGR CAR		01	DRVR	INJC	82	F	OR-Y		043	000	07
N							45 22 6.04	-122 48 56.71			(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	W -E									011	00
																	PSNGR CAR		01	DRVR	INJC	43	F	OR-Y		000	000	00
																								OR<25				
																03	NONE 0	STRGHT										
																	PRVTE	W -E									022	00
																	PSNGR CAR		01	DRVR	INJC	49	M	OR-Y		043	000	07
																								OR<25				
02639	N	N	N		N	N	04/21/2016	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-STRGHT	01	NONE 0	STRGHT											07
CITY							TH	220	SW OREGON ST	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W									000	00
N							5A			08			N	DAWN	INJ		PSNGR CAR		01	DRVR	INJB	72	M	OR-Y		043	000	07
N							45 22 6.19	-122 48 55.22			(02)													OR<25				
																02	NONE 0	STRGHT										
																	PRVTE	E -W									006	00
																	PSNGR CAR		01	DRVR	NONE	27	M	OR-Y		000	000	00
																								OR<25				
02928	N	N	N		N	N	05/19/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	29
CITY							FR	260	SW OREGON ST	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000	00
N							7A			07			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	32	M	OR-Y		026	000	29
N							45 22 6.23	-122 48 54.77			(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	W -E									011 013	00
																	PSNGR CAR		01	DRVR	NONE	73	M	OR-Y		000	000	00
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	W -E									011 013	00
																	PSNGR CAR		02	PSNG	INJC	71	F			000	000	00
																03	NONE 0	STOP										
																	PRVTE	W -E									022 013	00
																	PSNGR CAR		01	DRVR	INJC	37	M	OR-Y		000	000	00
																								OR<25				
																04	NONE 0	STOP										
																	PRVTE	W -E									022	00
																	PSNGR CAR		01	DRVR	INJC	51	F	OR-Y		000	000	00
																								OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
01012	N	N	N		N	N	01/31/2019	16	SW OREGON ST	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT											07
CITY							TH	100	SW TUALATIN-SHERWOOD	S	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	S -N									000		00
N							7A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	34	M	OR-Y		043	000		07
N							45 22 4.62	-122 48 58.57			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	S -N									011		00
																	PSNGR CAR		01	DRVR	NONE	42	F	OTH-Y		000	000		00
																								OR<25					
																02	NONE 0	STOP											
																	PRVTE	S -N									011		00
																	PSNGR CAR		02	PSNG	INJC	18	M			000	000		00
																02	NONE 0	STOP											
																	PRVTE	S -N									011		00
																	PSNGR CAR		03	PSNG	INJC	16	F			000	000		00
02010	N	N	N		N	N	04/22/2019	16	SW OREGON ST	STRGHT		N	N	CLD	S-STRGHT	01	NONE 9	STRGHT											13
CITY							MO	100	SW TUALATIN-SHERWOOD	S	(NONE)	UNKNOWN	N	DRY	SS-O		N/A	S -N									000		00
N							3P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 4.6	-122 48 58.57			(03)													UNK					
																02	NONE 9	STRGHT											
																	N/A	S -N									000		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
02970	N	N	N		N	N	06/12/2019	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-1STOP	01	NONE 0	STRGHT										013		29
CITY							WE	50	SW OREGON ST	W	(RSDMD)	UNKNOWN	N	DRY	REAR		UNKN	W -E									000		00
N							6A			06			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		026	000		29
N							45 22 5.82	-122 48 59.91			(02)													UNK					
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	INJC	47	F	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP											
																	PRVTE	W -E									022		00
																	PSNGR CAR		01	DRVR	INJC	61	M	OR-Y		000	000		00
																								OR<25					
05739	N	N	N				11/02/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE							SA	55	SW OREGON ST	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000		00
N							11A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	43	F	OR-Y		026	000		29
N							45 22 5.81	-122 48 59.98			(02)													OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	I H V	C R L	S W O H K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	SPCL USE / TRLR QTY / OWNER / V# / TYPE / TO	MOVE / FROM / P# / TYPE	PRTC / INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																	02 NONE 0	STOP									
																	PRVTE	W -E							011		00
																	PSNGR CAR		01 DRVR	INJC	76	M	OR-Y		000	000		00
																							OR<25					
																	02 NONE 0	STOP									
																	PRVTE	W -E							011		00
																	PSNGR CAR		02 PSNG	INJC	00	M			000	000		00
																	02 NONE 0	STOP									
																	PRVTE	W -E							011		00
																	PSNGR CAR		03 PSNG	INJC	74	F			000	000		00
																	02 NONE 0	STOP									
																	PRVTE	W -E							011		00
																	PSNGR CAR		04 PSNG	INJC	00	F			000	000		00
01230	N	N	N	N	N			03/07/2015	16	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01 NONE 0	STRGHT									32,22
CITY			SA						70	SW OREGON ST	W	(NONE)	UNKNOWN	N	DRY	REAR	PRVTE	W -E							000		00,22
N			5P								08			N	DAY	INJ	PSNGR CAR		01 DRVR	INJC	16	M	OR-Y		052	000		32
N			45 22 5.68						-122 49 .29			(02)											OR<25					
																	02 NONE 0	STOP									
																	PRVTE	W -E							011		00
																	PSNGR CAR		01 DRVR	INJA	50	F	OR-Y		000	000		00
																							OR<25					
07218	N	N	N	N	N			12/30/2018	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-1STOP	01 NONE	STRGHT									29
CITY			SU						75	SW OREGON ST	W	(RSDMD)	UNKNOWN	N	DRY	REAR	PRVTE	W -E							000		00
N			12P								08			N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	22	M	SUSP		026	000		29
N			45 22 5.78						-122 49 .26			(02)											OR<25					
																	02 NONE	STOP									
																	PRVTE	W -E							011		00
																	PSNGR CAR		01 DRVR	INJC	36	M	OTH-Y		000	000		00
																							N-RES					
																	02 NONE	STOP									
																	PRVTE	W -E							011		00
																	PSNGR CAR		02 PSNG	INJC	37	F			000	000		00
																	02 NONE	STOP									
																	PRVTE	W -E							011		00
																	PSNGR CAR		03 PSNG	INJC	04	M			000	000		00
04305	N	N	N	N	N			07/30/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01 NONE 0	STRGHT									07
CITY			TH						100	SW OREGON ST	W	(NONE)	UNKNOWN	N	DRY	REAR	PRVTE	W -E							000		00
N			6A								08			N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	19	M	OR-Y		043	000		07
N			45 22 5.65						-122 49 .59			(03)											OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	M R J S	U G N V	I H L	S W C O K R	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	INJC	45	F	OR-Y OR<25		000	006 000		00 00
00736	N	N	N				02/09/2015 MO 6A 45 22 5.65	14 100 -122 49 .57	SW TUALATIN-SHERWOOD SW OREGON ST	STRGHT W 08	(NONE) (04)	N UNKNOWN	N N	RAIN WET DAWN	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	47	F	OR-Y OR<25		026	000 000		29 00
																02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	25	F	OR-Y OR<25		000	011 000		00 00
01605	N	N	N				02/11/2015 WE 7A 45 22 5.65	14 100 -122 49 .61	SW TUALATIN-SHERWOOD SW OREGON ST	STRGHT W 08	(NONE) (03)	N UNKNOWN	N N	CLR DRY DAY	S-STRGHT SS-O PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	F	UNK UNK		045	000 000		13 00
																02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	38	M	OR-Y OR<25		000	000 000		00 00
02963	N	N	N				05/06/2016 FR 11A 45 22 5.65	14 100 -122 49 .6	SW TUALATIN-SHERWOOD SW OREGON ST	STRGHT W 08	(RSDMD) (02)	Y UNKNOWN	N N	CLR DRY DAY	S-STRGHT REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	25	F	OR-Y OR>25		042	000 000		29 29
																02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	INJC	21	M	OR-Y OR<25		000	006 000		00 00
04592	N	N	N	N	N		09/09/2019 CITY MO 12P 45 22 5.74	14 100 -122 49 .63	SW TUALATIN-SHERWOOD SW OREGON ST	STRGHT W 08	(RSDMD) (02)	N UNKNOWN	N N	CLD DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	50	F	OR-Y OR<25		043	000 000	013	07 07
																02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	NONE	42	M	OR-Y OR<25		000	011 000	013	00 00
																03	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	25	F	OR-Y OR<25		000	022 000	013	00 00
																04	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	NONE	82	M	OR-Y OR<25		000	022 000		00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
01678	N	N	N				03/31/2015	16	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE 0	STRGHT											07
NONE							TU	125	SW OREGON ST	W	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	W -E									000		00
N							4P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	74	M	OR-Y		042	000		07
N							45 22 5.62	-122 49 .84			(02)														OR<25					
																02	NONE 0	STRGHT											
																	PRVTE	W -E									006		00
																	PSNGR CAR		01	DRVR	INJC	21	F	OR-Y		000	000		00
																								OR<25					
07041	N	N	N		N	N	11/20/2015	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLD	S-1STOP	01	NONE 0	STRGHT											07
CITY							FR	143	SW OREGON ST	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000		00
N							5P			08			N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	26	M	OR-Y		043,026	000		07
N							45 22 5.58	-122 49 1.28			(02)														OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011		00
																	PSNGR CAR		01	DRVR	NONE	60	M	OR-Y		000	022		00
																								OR<25					
01242	N	N	N				02/25/2016	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-STRGHT	01	NONE 0	STRGHT											07
CITY							TH	200	SW OREGON ST	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000		00
N							6A			08			N	DAWN	INJ		PSNGR CAR		01	DRVR	NONE	27	M	OR-Y		043	000		07
N							45 22 5.51	-122 49 2.04			(02)														OR>25					
																02	NONE 0	STRGHT											
																	PRVTE	W -E									006		00
																	PSNGR CAR		01	DRVR	INJC	31	F	OR-Y		000	000		00
																								OR<25					
01331	N	N	N		N	N	02/29/2016	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	RAIN	S-STRGHT	01	NONE 0	STRGHT										013	29
CITY							MO	200	SW OREGON ST	W	(RSDMD)	UNKNOWN	N	WET	REAR		PRVTE	W -E									006		00
N							6A			08			N	DAWN	INJ		PSNGR CAR		01	DRVR	NONE	55	F	OR-Y		042	000		29
N							45 22 5.51	-122 49 2.03			(02)														OR<25					
																02	NONE 0	STRGHT											
																	UNKN	W -E									006	013	00
																	PSNGR CAR		01	DRVR	NONE	00	M	UNK		000	000		00
																								UNK					
																03	NONE 0	STRGHT											
																	PRVTE	W -E									022	013	00
																	PSNGR CAR		01	DRVR	NONE	35	F	OR-Y		000	000		00
																								OR>25					
																04	NONE 0	STRGHT											
																	PRVTE	W -E									022		00
																	PSNGR CAR		01	DRVR	INJC	20	M	OR-Y		000	000		00
																								OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	M R J U G S	I N V	S H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT EVENT	CAUSE
04572	N	N	N				07/26/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT										29
NONE							WE	200	SW OREGON ST	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W									000	00
N							5A			07			Y	DAWN	INJ		PSNGR CAR		01	DRVR	NONE	23	M	OR-Y		042	000	29
N							45 22 5.52	-122 49 1.93			(02)													OR<25				
																02	NONE 0	STRGHT										
																	PRVTE	E -W									006	00
																	SEMI TOW		01	DRVR	INJC	48	M	OR-Y		000	000	00
																								OR<25				
																02	NONE 0	STRGHT										
																	PRVTE	E -W									006	00
																	SEMI TOW		02	PSNG	INJC	00	M			000	000	00
01813	N	N	N				04/13/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										29
NONE							FR	200	SW OREGON ST	W	(RSDMD)	UNKNOWN	N	WET	REAR		PRVTE	W -E									000	00
N							8A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	33	M	OR-Y		026	000	29
N							45 22 5.51	-122 49 1.96			(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	W -E									011	00
																	PSNGR CAR		01	DRVR	INJC	39	F	OR-Y		000	000	00
																								OR<25				
81615	N	N	N				05/11/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT										29
NONE							FR	250	SW OREGON ST	W	(NONE)	NONE	N	DRY	REAR		N/A	W -E									000	00
N							5P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N							45 22 5.59	-122 49 2.23			(02)													UNK				
																02	NONE 9	STOP										
																	N/A	W -E									011	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
01498	N	N	N	N	N		03/20/2015	16	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT										07
CITY							FR	270	SW OREGON ST	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000	00
N							12P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	20	F	OR-Y		043,042	000	07
N							45 22 5.43	-122 49 2.85			(02)													OR>25				
																02	NONE 0	STRGHT										
																	PRVTE	W -E									006	00
																	PSNGR CAR		01	DRVR	INJC	57	F	OR-Y		000	000	00
																								OR<25				
06750	N	N	N	N	N		10/06/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT									013	07
CITY							TH	300	SW OREGON ST	W	(RSDMD)	NONE	N	DRY	REAR		PRVTE	W -E									000	00
N							8A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	30	F	OR-Y		043	000	07
N							45 22 5.38	-122 49 3.3			(02)													OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	S H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	SCHL BUS		01	DRVR	INJC	64	F	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	SCHL BUS		02	PSNG	INJC	44	F			000	000		00
																03	NONE 0	STOP											
																	PRVTE	W -E									022		00
																	PSNGR CAR		01	DRVR	NONE	56	M	OR-Y		000	000		00
																								OR>25					
02696	N	N	N	N	N		05/09/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07
CITY							TU	300	SW OREGON ST	W	(NONE)	NONE	N	DRY	REAR		PRVTE	E -W									000		00
N							5P			07			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	21	F	OR-Y		043	000		07
N							45 22 5.38	-122 49 3.32			(03)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	E -W									011	013	00
																	PSNGR CAR		01	DRVR	NONE	27	M	SUSP		000	000		00
																								OR<25					
																03	NONE 0	STOP											
																	PRVTE	E -W									022		00
																	PSNGR CAR		01	DRVR	NONE	45	F	OR-Y		000	000		00
																								OR<25					
00016	N	N	N				01/02/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT											29
NONE							WE	300	SW OREGON ST	W	(RSDMD)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000		00
N							5P			08			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	70	M	OR-Y		042	000		29
N							45 22 5.48	-122 49 3.37			(02)													OR<25					
																02	NONE 0	STRGHT											
																	PRVTE	W -E									000		00
																	PSNGR CAR		01	DRVR	NONE	44	M	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STRGHT											
																	PRVTE	W -E									000		00
																	PSNGR CAR		02	PSNG	INJC	51	F			000	000		00
05872	N	N	N	N	N		10/07/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT										013	32,07
CITY							WE	500	SW OREGON ST	W	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	W -E									000		00
N							1P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	30	M	OR-Y		052,043	000		32,07
N							45 22 5.11	-122 49 6.12			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	NONE	66	M	OR-Y		000	000		00
																								OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																03	NONE 1	STOP										
																	PRVTE	W -E									022		00
																	SEMI TOW		01	DRVR	NONE	55	M	OR-Y		000	000		00
																								OR<25					
01703	N	N	N	N	N		04/06/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT										093	27,29,32
CITY							FR	500	SW OREGON ST	W	(NONE)	TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000		00
N							3P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	29	M	OR-Y		016,026,052	038	093	27,29,32
N							45 22 5.11	-122 49 6.09			(02)													OR<25					
																02	NONE 0	STOP										
																	PRVTE	W -E									011		00
																	PSNGR CAR		01	DRVR	INJB	69	F	OR-Y		000	000		00
																								OR>25					
																02	NONE 0	STOP										
																	PRVTE	W -E									011		00
																	PSNGR CAR		02	PSNG	INJB	15	M			000	000		00
04842	N	N	N	N	N		08/08/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	27,07
CITY							TU	600	SW OREGON ST	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000		00
N							7A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	17	F	OR-Y		016,043	038		27,07
N							45 22 4.97	-122 49 7.49			(02)													OR<25					
																02	NONE 0	STOP										
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	INJC	46	F	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP										
																	PRVTE	W -E									022		00
																	PSNGR CAR		01	DRVR	NONE	54	F	OR-Y		000	000		00
																								OR<25					
06138	N	N	N	N	N		10/03/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT											07
CITY							TU	600	SW OREGON ST	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000		00
N							9A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	27	F	OR-Y		043	000		07
N							45 22 4.97	-122 49 7.52			(02)													OR<25					
																01	NONE 0	STRGHT										
																	PRVTE	W -E									000		00
																	PSNGR CAR		02	PSNG	NO<5	02	F			000	000		00
																02	NONE 0	STRGHT										
																	PRVTE	W -E									006		00
																	PSNGR CAR		01	DRVR	INJC	66	M	OR-Y		000	000		00
																								OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
03205	N	N	N		N	N	06/11/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	32
CITY							TH	1000	SW OREGON ST	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000		00
N							12P			08			N	DAY	INJ		SEMI TOW		01	DRVR	NONE	46	M	OR-Y		052	000		32
N							45 22 4.58	-122 49 13.06			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	INJC	39	M	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		02	PSNG	INJC	37	F			000	000		00
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		03	PSNG	INJC	04	F			000	000		00
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		04	PSNG	INJC	12	M			000	000		00
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		05	PSNG	INJC	09	F			000	000		00
																03	NONE 0	STOP											
																	PRVTE	W -E									022		00
																	PSNGR CAR		01	DRVR	INJC	28	M	OR-Y		000	000		00
																								OR<25					
03799	N	N	N				06/10/2016	14	SW TUALATIN-SHERWOOD	GRADE		Y	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	29
NONE							FR	100	SW OREGON ST	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W									000		00
N							11A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	36	M	OR-Y		026	000		29
N							45 22 6.02	-122 48 56.86			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	E -W									011		00
																	PSNGR CAR		01	DRVR	INJC	33	M	OR-Y		000	000		00
																								OR<25					

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and CIPOLE RD, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2019														
REAR-END	0	3	1	4	0	3	0	4	0	2	2	1	0	0
YEAR 2019 TOTAL	**0**	**3**	**1**	**4**	**0**	**3**	**0**	**4**	**0**	**2**	**2**	**1**	**0**	**0**
YEAR: 2018														
REAR-END	0	1	3	4	0	1	0	3	1	2	2	0	1	0
YEAR 2018 TOTAL	**0**	**1**	**3**	**4**	**0**	**1**	**0**	**3**	**1**	**2**	**2**	**0**	**1**	**0**
YEAR: 2017														
REAR-END	0	2	0	2	0	2	0	1	1	1	1	0	0	0
YEAR 2017 TOTAL	**0**	**2**	**0**	**2**	**0**	**2**	**0**	**1**	**1**	**1**	**1**	**0**	**0**	**0**
YEAR: 2016														
REAR-END	0	7	1	8	0	11	0	6	2	7	1	0	3	0
YEAR 2016 TOTAL	**0**	**7**	**1**	**8**	**0**	**11**	**0**	**6**	**2**	**7**	**1**	**0**	**3**	**0**
YEAR: 2015														
FIXED / OTHER OBJECT	0	1	0	1	0	2	0	0	1	0	1	0	0	1
REAR-END	0	4	1	5	0	6	0	4	1	5	0	0	0	0
YEAR 2015 TOTAL	**0**	**5**	**1**	**6**	**0**	**8**	**0**	**4**	**2**	**5**	**1**	**0**	**0**	**1**
FINAL TOTAL	**0**	**18**	**6**	**24**	**0**	**25**	**0**	**18**	**6**	**17**	**7**	**1**	**4**	**1**

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and CIPOLE RD, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	MAJOR INJURY CRASHES	MODERATE INJURY CRASHES	MINOR INJURY CRASHES	PROP DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	MAJOR INJURIES	MODERATE INJURIES	MINOR INJURIES
YEAR: 2019										
REAR-END	0	0	0	3	1	4	0	0	0	3
2019 TOTAL	**0**	**0**	**0**	**3**	**1**	**4**	**0**	**0**	**0**	**3**
YEAR: 2018										
REAR-END	0	0	0	1	3	4	0	0	0	1
2018 TOTAL	**0**	**0**	**0**	**1**	**3**	**4**	**0**	**0**	**0**	**1**
YEAR: 2017										
REAR-END	0	0	0	2	0	2	0	0	0	2
2017 TOTAL	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**2**
YEAR: 2016										
REAR-END	0	0	2	5	1	8	0	0	2	9
2016 TOTAL	**0**	**0**	**2**	**5**	**1**	**8**	**0**	**0**	**2**	**9**
YEAR: 2015										
FIXED / OTHER OBJECT	0	1	0	0	0	1	0	2	0	0
REAR-END	0	0	0	4	1	5	0	0	0	6
2015 TOTAL	**0**	**1**	**0**	**4**	**1**	**6**	**0**	**2**	**0**	**6**
FINAL TOTAL	**0**	**1**	**2**	**15**	**6**	**24**	**0**	**2**	**2**	**21**

CITY OF TUALATIN, WASHINGTON COUNTY

TUALATIN-SHERWOOD and CIPOLE RD, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

1 - 5 of 24 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	I H L	C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / TYPE / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
00228	N	N	N					01/13/2019	14	SW CIPOLE RD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 9	STRGHT										27,29
NONE								SU	0	SW TUALATIN-SHERWOOD	E		TRF SIGNAL	N	DRY	REAR		N/A	E -W									000	00
N								4P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N								45 22 8.5	-122 48 32.72																UNK				
																	02	NONE 9	STOP										
																		N/A	E -W									011	00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																									UNK				
06106	N	N	N		N	N		10/17/2015	14	SW CIPOLE RD	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT										07
CITY								SA	20	SW TUALATIN-SHERWOOD	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000	00
N								1P			05			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		043	000	07
N								45 22 8.57	-122 48 32.02			(02)													OR<25				
																	02	NONE 0	STOP										
																		PRVTE	W -E									011	00
																		PSNGR CAR		01	DRVR	INJC	31	F	OR-Y		000	000	00
																									OR<25				
01094	N	N	N		N	N		03/04/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT										27,07
CITY								MO	40	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000	00
N								6P			05			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	25	M	OR-Y		016,043	038	27,07
N								45 22 8.59	-122 48 31.74			(02)													OR<25				
																	02	NONE 0	STRGHT										
																		PRVTE	W -E									000	00
																		PSNGR CAR		01	DRVR	INJC	48	F	OR-Y		000	000	00
																									OR<25				
07578	N	N	N					12/11/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										29
NONE								FR	100	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	E -W									000	00
N								12P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	37	M	OR-Y		026	000	29
N								45 22 8.68	-122 48 30.85			(02)													OR<25				
																	02	NONE 0	STOP										
																		PRVTE	E -W									011	00
																		PSNGR CAR		01	DRVR	NONE	46	F	OR-Y		000	000	00
																									OR<25				
04026	N	N	N					06/19/2016	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE								SU	100	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W									000	00
N								2P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	18	M	OR-Y		026	000	29
N								45 22 8.69	-122 48 30.79			(02)													OR<25				
																	02	NONE 0	STOP										
																		PRVTE	E -W									011	00
																		PSNGR CAR		01	DRVR	INJC	23	F	OR-Y		000	000	00
																									OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
04920	N	N	N		N	N	07/26/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY							TU	100	SW CIPOLE RD	E	(NONE)	NONE	N	DRY	REAR		PRVTE	W -E									000		00
N							12P			07			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	21	M	OR-Y		043	000		07
N							45 22 8.68	-122 48 30.85			(02)													OR<25					
																01	NONE 0	STRGHT											
																	PRVTE	W -E									000		00
																	PSNGR CAR		02	PSNG	INJC	19	M			000	000		00
																02	NONE 0	STOP											
																	PRVTE	W -E									011		00
																	PSNGR CAR		01	DRVR	INJC	53	M	OR-Y		000	000		00
																								OR<25					
03523	N	N	N		N	N	06/14/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT											29,32
CITY							WE	100	SW CIPOLE RD	E	(NONE)	NONE	N	DRY	REAR		PRVTE	W -E									000		00
N							10A			07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	41	F	OR-Y		026,052	000		29,32
N							45 22 8.68	-122 48 30.89			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	INJC	69	M	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011		00
																	PSNGR CAR		02	PSNG	NO<5	04	M			000	000		00
																03	NONE 0	STOP											
																	PRVTE	W -E									022		00
																	PSNGR CAR		01	DRVR	NONE	67	M	OR-Y		000	000		00
																								OR<25					
03610	N	N	N		N	N	07/13/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	22,29
CITY							FR	100	SW CIPOLE RD	E	(NONE)	NONE	N	DRY	REAR		PRVTE	W -E									000		22
N							11A			07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	32	M	OR-Y		026	000		29
N							45 22 8.68	-122 48 30.92			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	INJC	53	F	OR-Y		000	000		00
																								OR>25					
																03	NONE 0	STOP											
																	PRVTE	W -E									022		00
																	PSNGR CAR		01	DRVR	NONE	26	M	OR-Y		000	000		00
																								OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
04565	N	N	N		N	N	08/31/2018	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
CITY							FR	110	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	DRY	REAR		N/A	E -W									000		00
N							5P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 8.69	-122 48 30.78			(02)													UNK					
																02	NONE 9	STOP											
																	N/A	E -W									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
02191	N	N	N				04/04/2016	14	SW CIPOLE RD	STRGHT		Y	N	CLR	S-STRGHT	01	NONE 0	STRGHT											29
NONE							MO	150	SW TUALATIN-SHERWOOD	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W									000		00
N							1P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	19	M	OTH-Y		026	000		29
N							45 22 8.76	-122 48 30.1			(02)													N-RES					
																02	NONE 0	STRGHT											
																	PRVTE	E -W									000		00
																	PSNGR CAR		01	DRVR	INJB	58	M	OR-Y		000	000		00
																								OR<25					
04294	N	N	N		N	N	06/30/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	27,29,32
CITY							TH	150	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000		00
N							3P			07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	18	F	OR-Y	016,026,052	038			27,29,32
N							45 22 8.75	-122 48 30.13			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	INJB	45	F	OR-Y	000	000			00
																								OR<25					
																03	NONE 0	STOP											
																	PRVTE	W -E									022	013	00
																	PSNGR CAR		01	DRVR	INJC	55	M	OR-Y	000	000			00
																								OR<25					
																04	NONE 0	STOP											
																	PRVTE	W -E									022	013	00
																	PSNGR CAR		01	DRVR	NONE	28	F	OR-Y	000	000			00
																								OR<25					
																04	NONE 0	STOP											
																	PRVTE	W -E									022	013	00
																	PSNGR CAR		02	PSNG	INJC	55	F		000	000			00
																05	NONE 0	STOP											
																	UNKN	W -E									022		00
																	PSNGR CAR		01	DRVR	NONE	35	F	OR-Y	000	000			00
																								OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
06795	N	N	N		N	N	10/07/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											093	27,29
CITY			FR					150	SW CIPOLE RD	E	(NONE)	NONE	N	WET	REAR		PRVTE	W -E										000		00
N			12P							07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	65	F	OR-Y		016,026	038	093	27,29
N			45 22 8.75					-122 48 30.22			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E								011		00
																	PSNGR CAR		01	DRVR	INJC	52	M	OR-Y		000	000		00
																								OR>25					
08043	N	N	N		N	N	12/15/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT												07
CITY			FR					150	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	W -E										000		00
N			7P							07			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	16	F	OR-Y		043	000		07
N			45 22 8.75					-122 48 30.21			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E								011		00
																	PSNGR CAR		01	DRVR	INJC	33	F	OR-Y		000	000		00
																								OR<25					
06640	N	N	N		N	N	10/01/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE 0	STRGHT												07
CITY			SA					200	SW CIPOLE RD	E	(NONE)	NONE	N	WET	REAR		PRVTE	W -E										000		00
N			11A							07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	37	M	OR-Y		043	000		07
N			45 22 8.82					-122 48 29.52			(02)													OR<25					
																01	NONE 0	STRGHT											
																	PRVTE	W -E								000		00
																	PSNGR CAR		02	PSNG	NO<5	03	F			000	000		00
																02	NONE 0	STRGHT											
																	PRVTE	W -E								006	013		00
																	PSNGR CAR		01	DRVR	INJC	34	F	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP											
																	PRVTE	W -E								022	013		00
																	PSNGR CAR		01	DRVR	NONE	34	M	OR-Y		000	000		00
																								OR<25					
																04	NONE 0	STOP											
																	PRVTE	W -E								022			00
																	PSNGR CAR		01	DRVR	NONE	54	M	OR-Y		000	000		00
																								OR<25					
08017	N	N	N				11/02/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT												29
NONE			WE					200	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	DRY	REAR		N/A	W -E										000		00
N			5P							07			N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 8.82					-122 48 29.51			(02)													UNK					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 9	STOP										
																	N/A	W -E									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
05771	N	N	N	N	N		11/04/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	27,07
CITY							MO	200	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W									000		00
N							5P			08			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	31	M	OR-Y		016,043	038		27,07
N							45 22 8.81	-122 48 29.54			(02)													OR<25					
																02	NONE 0	STOP										
																	PRVTE	E -W									011	013	00
																	PSNGR CAR		01	DRVR	INJC	38	M	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP										
																	PRVTE	E -W									022		00
																	PSNGR CAR		01	DRVR	NONE	31	M	OR-Y		000	000		00
																								OR<25					
00248	N	N	N	N	N		01/15/2015	16	SW TUALATIN-SHERWOOD	STRGHT		N	Y	RAIN	FIX OBJ	01	NONE 0	STRGHT										040,062	17,05
CITY							TH	218	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	WET	FIX		PRVTE	W -E									000	040,062	00
Y							6P			08			N	DLIT	INJ		PSNGR CAR		01	DRVR	INJA	19	M	NONE		081	028		17,05
N							45 22 8.84	-122 48 29.24			(02)													OR<25					
																01	NONE 0	STRGHT										
																	PRVTE	W -E									000	040,062	00
																	PSNGR CAR		02	PSNG	INJA	02	F			000	000		00
00669	N	N	N	N	N		02/07/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	FOG	S-1STOP	01	NONE 9	STRGHT											29
STATE							WE	245	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	DRY	REAR		N/A	W -E									000		00
N							6A			07			N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 8.88	-122 48 28.92			(02)													UNK					
																02	NONE 9	STOP										
																	N/A	W -E									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
05213	N	N	N	N	N		10/11/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	27,07
CITY							FR	285	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000		00
N							7A			07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	39	M	OR-Y		016,043	038		27,07
N							45 22 8.94	-122 48 28.34			(02)													OR<25					
																02	NONE 0	STOP										
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	INJC	35	F	OR-Y		000	000		00
																								OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
																03	NONE 0	STOP										
																	PRVTE	W -E									022	00
																	PSNGR CAR		01	DRVR	NONE	67	M	OR-Y		000	000	00
																								OR<25				
04862	N	N	N	N	N		07/24/2016	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-STRGHT	01	NONE 0	STRGHT										07
CITY			SU					289	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W									000	00
N			11A							08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		043	000	07
N			45 22 8.95					-122 48 28.2			(02)													OR<25				
																01	NONE 0	STRGHT										
																	PRVTE	E -W									000	00
																	PSNGR CAR		02	PSNG	INJC	15	F			000	000	00
																02	NONE 0	STRGHT										
																	PRVTE	E -W									006	00
																	PSNGR CAR		01	DRVR	NONE	41	M	OR-Y		000	000	00
																								OR<25				
02425	N	N	N	N	N		05/05/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
CITY			TU					300	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000	00
N			9A							07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	26	F	OR-Y		043	000	07
N			45 22 8.96					-122 48 28.14			(02)													OR<25				
																01	NONE 0	STRGHT										
																	PRVTE	W -E									000	00
																	PSNGR CAR		02	PSNG	NO<5	01	F			000	000	00
																01	NONE 0	STRGHT										
																	PRVTE	W -E									000	00
																	PSNGR CAR		03	PSNG	NO<5	02	M			000	000	00
																02	NONE 0	STOP										
																	PRVTE	W -E									011	00
																	PSNGR CAR		01	DRVR	INJC	56	M	OR-Y		000	000	00
																								OR<25				
04829	Y	N	N	N	N		08/24/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT										01
CITY			MO					325	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000	00
N			5P							08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	22	F	OR-Y		047,026	000	01
N			45 22 8.98					-122 48 27.9			(02)													OR<25				
																02	NONE 0	STRGHT										
																	PRVTE	W -E									006	00
																	PSNGR CAR		01	DRVR	INJC	18	M	OR-Y		000	000	00
																								OR<25				
																02	NONE 0	STRGHT										
																	PRVTE	W -E									006	00
																	PSNGR CAR		02	PSNG	INJC	42	F			000	000	00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G	J N V	I H L	S C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR / OWNER	QTY	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00576	N	N	N					02/01/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE	9	STRGHT											29
CITY								TH	325	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	WET	REAR		N/A		W -E									000		00
N								6P			07			N	DLIT	PDO		PSNGR CAR			01	DRVR	NONE	00	Unk	UNK		000	000		00
N								45 22 8.99	-122 48 27.84			(02)														UNK					
																	02	NONE	9	STOP											
																		N/A		W -E									011		00
																		PSNGR CAR			01	DRVR	NONE	00	Unk	UNK		000	000		00
																										UNK					
05224	N	N	N		N	N		09/10/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE	0	STRGHT											07
COUNTY								TH	400	SW CIPOLE RD	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE		W -E									000		00
N								6A			07			N	DAY	INJ		PSNGR CAR			01	DRVR	INJC	33	M	OR-Y		043	000		07
N								45 22 9.09	-122 48 26.73			(02)														OR<25					
																	02	NONE	0	STOP											
																		PRVTE		W -E									011		00
																		PSNGR CAR			01	DRVR	INJC	46	F	OR-Y		000	000		00
																										OR<25					

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and 124TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2019														
MISCELLANEOUS	0	0	1	1	0	0	0	1	0	0	1	1	0	0
REAR-END	0	14	16	30	0	19	1	23	7	23	7	11	1	0
TURNING MOVEMENTS	0	3	0	3	0	4	0	3	0	3	0	3	0	0
YEAR 2019 TOTAL	**0**	**17**	**17**	**34**	**0**	**23**	**1**	**27**	**7**	**26**	**8**	**15**	**1**	**0**
YEAR: 2018														
REAR-END	0	8	3	11	0	15	1	8	3	7	4	1	1	0
YEAR 2018 TOTAL	**0**	**8**	**3**	**11**	**0**	**15**	**1**	**8**	**3**	**7**	**4**	**1**	**1**	**0**
YEAR: 2017														
REAR-END	0	7	5	12	0	11	1	8	4	7	5	8	0	0
TURNING MOVEMENTS	0	2	0	2	0	2	0	1	1	2	0	2	0	0
YEAR 2017 TOTAL	**0**	**9**	**5**	**14**	**0**	**13**	**1**	**9**	**5**	**9**	**5**	**10**	**0**	**0**
YEAR: 2016														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	1	0	1	0	1	0	1
REAR-END	0	7	9	16	0	9	2	16	0	16	0	6	4	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	1	0	1	0	0
YEAR 2016 TOTAL	**0**	**8**	**10**	**18**	**0**	**10**	**2**	**18**	**0**	**18**	**0**	**8**	**4**	**1**
YEAR: 2015														
REAR-END	0	8	4	12	0	15	0	10	2	12	0	4	1	0

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and 124TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
SIDESWIPE - OVERTAKING	0	0	1	1	0	0	0	0	1	1	0	0	0	0
YEAR 2015 TOTAL	**0**	**8**	**5**	**13**	**0**	**15**	**0**	**10**	**3**	**13**	**0**	**4**	**1**	**0**
FINAL TOTAL	**0**	**50**	**40**	**90**	**0**	**76**	**5**	**72**	**18**	**73**	**17**	**38**	**7**	**1**

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and 124TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	MAJOR INJURY CRASHES	MODERATE INJURY CRASHES	MINOR INJURY CRASHES	PROP DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	MAJOR INJURIES	MODERATE INJURIES	MINOR INJURIES
YEAR: 2019										
MISCELLANEOUS	0	0	0	0	1	1	0	0	0	0
REAR-END	0	0	0	14	16	30	0	0	0	19
TURNING MOVEMENTS	0	0	0	3	0	3	0	0	0	4
2019 TOTAL	**0**	**0**	**0**	**17**	**17**	**34**	**0**	**0**	**0**	**23**
YEAR: 2018										
REAR-END	0	0	1	7	3	11	0	0	1	14
2018 TOTAL	**0**	**0**	**1**	**7**	**3**	**11**	**0**	**0**	**1**	**14**
YEAR: 2017										
REAR-END	0	0	1	6	5	12	0	0	1	10
TURNING MOVEMENTS	0	0	2	0	0	2	0	0	2	0
2017 TOTAL	**0**	**0**	**3**	**6**	**5**	**14**	**0**	**0**	**3**	**10**
YEAR: 2016										
FIXED / OTHER OBJECT	0	0	0	0	1	1	0	0	0	0
REAR-END	0	0	1	6	9	16	0	0	1	8
TURNING MOVEMENTS	0	0	0	1	0	1	0	0	0	1
2016 TOTAL	**0**	**0**	**1**	**7**	**10**	**18**	**0**	**0**	**1**	**9**
YEAR: 2015										
REAR-END	0	0	2	6	4	12	0	0	3	12
SIDESWIPE - OVERTAKING	0	0	0	0	1	1	0	0	0	0
2015 TOTAL	**0**	**0**	**2**	**6**	**5**	**13**	**0**	**0**	**3**	**12**
FINAL TOTAL	**0**	**0**	**7**	**43**	**40**	**90**	**0**	**0**	**8**	**68**

CITY OF TUALATIN, WASHINGTON COUNTY

TUALATIN-SHERWOOD and 124TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

1 - 4 of 90 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R J S W U I C O G N H R K	DATE / DAY / TIME / LAT	CLASS / DIST FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02547	N	N	N	05/21/2018	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 1	STRGHT											27,29
CITY				MO	0	SW 124TH AVE	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000		00
N				8A			06	0		N	DAY	INJ		SEMI TOW		01	DRVR	NONE	49	M	OTH-Y		016,026	038		27,29
N				45 22 9.72	-122 48 20.29																N-RES					
													02	NONE 0	STOP											
														PRVTE	N -S									012		00
														PSNGR CAR		01	DRVR	INJC	65	F	OR-Y		000	000		00
																					OR<25					
00625	N	N	N N N	02/06/2019	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 1	TURN-L											27,29
CITY				WE	0	SW 124TH AVE	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -E									000		00
N				11A			06	0		N	DAY	INJ		SEMI TOW		01	DRVR	NONE	31	M	OTH-Y		016,026	038		27,29
N				45 22 9.72	-122 48 20.29																N-RES					
													02	NONE 0	STOP											
														PRVTE	N -S									011		00
														PSNGR CAR		01	DRVR	INJC	17	M	OR-Y		000	000		00
																					OR<25					
02778	N	N	N N N	05/22/2015	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										013	07
CITY				FR	0	SW 124TH AVE	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W									000		00
N				1P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	20	M	OTH-Y		043	000		07
N				45 22 9.72	-122 48 20.3																OR<25					
													02	NONE 0	STOP											
														PRVTE	E -W									011	013	00
														PSNGR CAR		01	DRVR	INJC	59	M	OR-Y		000	000		00
																					OR<25					
													03	NONE 0	STOP											
														PRVTE	E -W									022		00
														PSNGR CAR		01	DRVR	INJC	38	F	OR-Y		000	000		00
																					OR<25					
02310	N	N	N	04/29/2015	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE				WE	0	SW 124TH AVE	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W									000		00
N				10A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		026	000		29
N				45 22 9.72	-122 48 20.29																OR<25					
													02	NONE 0	STOP											
														PRVTE	E -W									011		00
														PSNGR CAR		01	DRVR	NONE	75	M	OR-Y		000	000		00
																					OR<25					
04850	N	N	N	08/25/2015	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-STRGHT	01	NONE 0	STRGHT											29
NONE				TU	0	SW 124TH AVE	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W									000		00
N				2P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	OR-Y		042	000		29
N				45 22 9.72	-122 48 20.29																OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	M R J U G S	S N I V	W O H L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
															02	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	15	F	OR-Y OR<25		000	006 000		00 00
02692	N	N	N			04/23/2016 SA 12P 45 22 9.72	14 0 -122 48 20.29	SW TUALATIN-SHERWOOD SW 124TH AVE	INTER E	3-LEG	N TRF SIGNAL	N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		29 00 00
NONE N N									06	0		N																
															02	NONE 9 N/A PSNGR CAR	STOP E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
03949	N	N	N	N	N	06/16/2016 TH 6P 45 22 9.72	14 0 -122 48 20.29	SW TUALATIN-SHERWOOD SW 124TH AVE	INTER E	3-LEG	N TRF SIGNAL	Y N	CLD DRY DAY	FIX OBJ FIX PDO	01	NONE 9 N/A PSNGR CAR	TURN-L N -E	01	DRVR	NONE	00	Unk	UNK UNK		000	040 000 000		08 00 00
CITY N N									06	0		N																
															02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	37	F	OR-Y OR<25		000	011 000		00 00
07573	N	N	N	N	N	11/28/2017 TU 5P 45 22 9.72	14 0 -122 48 20.29	SW TUALATIN-SHERWOOD SW 124TH AVE	INTER E	3-LEG	N TRF SIGNAL	N	RAIN WET DLIT	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	INJC	48	F	OR-Y OR<25		016,043	038 000		27,07 00
CITY N N									06	0		N																
															02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	NONE	29	M	OR-Y OR<25		000	011 000		00 00
03012	N	N	N	N	N	05/23/2017 TU 6P 45 22 9.72	14 0 -122 48 20.29	SW TUALATIN-SHERWOOD SW 124TH AVE	INTER E	3-LEG	N TRF SIGNAL	N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		07 00 00
CITY N N									06	0		N																
															02	NONE 9 N/A PSNGR CAR	STOP E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00173	N	N	N		N	N	01/10/2019	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT											013	07
CITY							TH	0	SW 124TH AVE	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W									000		00
N							6P			06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	48	F	OR-Y		043	000		07
N							45 22 9.72	-122 48 20.29																	OR>25					
																02	NONE 0	STOP											
																	PRVTE	E -W									011	013	00
																	PSNGR CAR		01	DRVR	INJC	67	F	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP											
																	PRVTE	E -W									022		00
																	PSNGR CAR		01	DRVR	INJC	51	F	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP											
																	PRVTE	E -W									022		00
																	PSNGR CAR		02	PSNG	INJC	08	M			000	000		00
																04	NONE 0	STOP											
																	PRVTE	E -W									022		00
																	PSNGR CAR		01	DRVR	NONE	17	M	OR-Y		000	000		00
																								OR<25					
02816	N	N	N		N	N	06/05/2019	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT												27,29
CITY							WE	0	SW 124TH AVE	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W									000		00
N							2A			06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	23	M	OTH-Y		016,026	038		27,29
N							45 22 9.72	-122 48 20.29																	OR<25					
																02	NONE 0	STOP											
																	PRVTE	E -W									011		00
																	PSNGR CAR		01	DRVR	INJC	56	M	OR-Y		000	000		00
																								OR<25					
00333	N	N	N				01/18/2019	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	RAIN	S-STRGHT	01	NONE 9	STRGHT												29
NONE							FR	0	SW 124TH AVE	E		TRF SIGNAL	N	WET	REAR		N/A	E -W									000		00
N							6P			06	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 9.72	-122 48 20.29																	UNK					
																02	NONE 9	STRGHT											
																	N/A	E -W									006		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
00653	N	Y	N		N	N	02/09/2019	16	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 9	STRGHT												29
CITY							SA	0	SW 124TH AVE	E		TRF SIGNAL	N	DRY	REAR		N/A	E -W									000		00
N							1P			09	2		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 42.84	-122 48 17.93																	UNK					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	S I H V	W C O R L K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES /	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 9 N/A MTRCYCLE	STOP E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
01258	N	N	N	N	N		03/12/2019	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 9	STRGHT											27,29
CITY			TU				0	SW 124TH AVE	E		TRF SIGNAL	N	DRY	REAR		N/A	E -W									000		00
N N			4P 45 22 9.72				-122 48 20.29			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000		00
																02	NONE 9 N/A PSNGR CAR	STOP E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
04362	N	N	N	N	N		06/19/2019	16	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 9	STRGHT											07
CITY			WE				0	SW 124TH AVE	S		TRF SIGNAL	N	DRY	REAR		N/A	S -N									000		00
N N			6P 45 22 42.84				-122 48 17.93			06	2		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000		00
																02	NONE 9 N/A PSNGR CAR	STOP S -N	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
05163	N	N	N	N	N		09/08/2015	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											32,07
CITY			TU				0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000		00
N N			2P 45 22 9.72				-122 48 20.3			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	35	M	NONE OR<25		052,043	000		32,07
																02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	INJC	27	F	OTH-Y N-RES		000	000 000		00 00
																02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	02	PSNG	NO<5	01	M			000	000 000		00 00
03535	N	N	N	N	N		05/31/2016	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY			TU				0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000		00
N N			2P 45 22 9.72				-122 48 20.29			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	41	M	OR-Y OR<25		043	000		07
																02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	NONE	32	F	OR-Y OR<25		000	011 000		00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	I H L	C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT EVENT	CAUSE
04658	N	N	N	N	N			07/15/2016	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
CITY								FR	0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E								000	00
N								3P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	50	F	OTH-Y		043	000	07
N								45 22 9.72	-122 48 20.29																OR<25				
																	02	NONE 0	STOP										
																		PRVTE	W -E									011	00
																		PSNGR CAR		01	DRVR	NONE	40	F	OR-Y		000	000	00
																									OR<25				
01864	N	N	N	N	N			03/20/2016	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLD	S-1STOP	01	NONE 9	STRGHT										27,29
CITY								SU	0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	REAR		N/A	W -E								000	00
N								4P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N								45 22 9.72	-122 48 20.29																UNK				
																	02	NONE 9	STOP										
																		N/A	W -E									011	00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																									UNK				
05361	N	N	N					08/11/2016	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 9	STRGHT										29
NONE								TH	0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	REAR		N/A	W -E								000	00
N								6P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N								45 22 9.72	-122 48 20.29																UNK				
																	02	NONE 9	STOP										
																		N/A	W -E									011	00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																									UNK				
07665	N	N	N					11/08/2016	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 9	STRGHT										27,29
NO RPT								TU	0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	REAR		N/A	E -W								000	00
N								3P			05	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N								45 22 9.72	-122 48 20.29																UNK				
																	02	NONE 9	STOP										
																		N/A	E -W									011	00
																		SEMI TOW		01	DRVR	NONE	00	Unk	UNK		000	000	00
																									UNK				
00025	N	N	N	N	N			01/02/2017	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
CITY								MO	0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E								000	00
N								5P			06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	79	M	OR-Y		026	000	29
N								45 22 9.72	-122 48 20.29																OR<25				
																	02	NONE 0	STOP										
																		PRVTE	W -E									011	00
																		PSNGR CAR		01	DRVR	INJC	30	F	OR-Y		000	000	00
																									OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	S I H V	W C O L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0 PRVTE PSNGR CAR	STOP W -E	02	PSNG	INJC	05	F			000	011 000		00 00
02204	N	N	N	N	N		04/18/2017	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY			TU					0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000		00
N N			6P 45 22 9.72					-122 48 20.29		06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	18	F	OTH-Y OR<25		043	000		07
																02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	18	F	OR-Y OR<25		000	011 000		00 00
05685	N	N	N				09/15/2017	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 1	STRGHT											29
NONE			FR					0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000		00
N N			5P 45 22 9.72					-122 48 20.29		06	0		N	DAY	INJ		SEMI TOW		01	DRVR	NONE	38	M	OR-Y OR<25		026	000		29
																02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	56	F	OR-Y OR<25		000	012 000		00 00
06563	N	N	N	N	N		10/19/2017	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											07
CITY			TH					0	SW 124TH AVE	W		TRF SIGNAL	N	WET	REAR		PRVTE	W -E									000		00
N N			6P 45 22 9.72					-122 48 20.29		06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	17	M	OR-Y OR<25		043	000		07
																02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	50	M	OR-Y OR<25		000	011 000		00 00
																02	NONE 0 PRVTE PSNGR CAR	STOP W -E	02	PSNG	INJC	50	F			000	011 000		00 00
07889	N	N	N				12/09/2017	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
NONE			SA					0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	REAR		N/A	W -E									000		00
N N			1P 45 22 9.72					-122 48 20.29		06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000		00
																02	NONE 9 N/A PSNGR CAR	STOP W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
03819	N	N	N		N	N	07/29/2019	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											013	27,29
CITY			MO				0	SW 124TH AVE	W		UNKNOWN	N	DRY	REAR		PRVTE	E -W									000		00
N			9A						05	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	81	M	OR-Y		016,026	038		27,29
N			45 22 9.72	-122 48 20.29																				OR<25					
																02	NONE 0	STOP											
																	PRVTE	E -W								011	013	00
																	PSNGR CAR		01	DRVR	INJC	64	M	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP											
																	PRVTE	E -W								022		00
																	PSNGR CAR		01	DRVR	NONE	37	F	OR-Y		000	000		00
																								OR<25					
04114	N	N	N				08/13/2019	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT												29
NONE			TU				0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000		00
N			2A						06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	35	M	OR-Y		026	000		29
N			45 22 9.72	-122 48 20.29																				OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E								011		00
																	PSNGR CAR		01	DRVR	INJC	59	M	OR-Y		000	000		00
																								OR<25					
82093	N	N	N				06/23/2019	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT												29
NONE			SU				0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000		00
N			11A						06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	62	F	OR-Y		026	000		29
N			45 22 9.71	-122 48 20.29																				OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E								011		00
																	PSNGR CAR		01	DRVR	INJC	70	F	OR-Y		000	000		00
																								OR<25					
00771	N	N	N				02/12/2019	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 9	STRGHT												29
NONE			TU				0	SW 124TH AVE	W		TRF SIGNAL	N	WET	REAR		N/A	W -E									000		00
N			8A						06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 9.72	-122 48 20.29																				UNK					
																02	NONE 9	STOP											
																	N/A	W -E								011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
83688	N	N	N				10/21/2019	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	ANIMAL	01	NONE 9	STRGHT											035	12
NONE			MO				0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	OTH		N/A	E -W									000		00
N			5A						05	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 9.72	-122 48 20.27																				UNK					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G S	J N V	I H L	C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
06385	N	N	N		N	N		09/21/2016	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLD	O-1 L-TURN	01	NONE 0	STRGHT										04
CITY								WE	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	E -W								000	00
N								8A			02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	57	F	OR-Y		000	000	00
N								45 22 9.72	-122 48 20.29																OR<25				
																	02	NONE 0	TURN-L										
																		PRVTE	W -N									000	00
																		PSNGR CAR		01	DRVR	NONE	23	F	OR-Y		020,004	000	04
																									OR<25				
00335	N	N	N					01/18/2017	16	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	RAIN	O-1 L-TURN	01	NONE 0	STRGHT										04
NO RPT								WE	0	SW 124TH AVE	CN		TRF SIGNAL	N	WET	TURN		PRVTE	S -N								000	00
N								1P			04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	23	M	OR-Y		000	000	00
N								45 23 16.36	-122 48 15.23																OR<25				
																	02	NONE 0	TURN-L										
																		PRVTE	N -E									000	00
																		PSNGR CAR		01	DRVR	NONE	20	M	OR-Y		020	000	04
																									OR<25				
04434	N	N	N		N	N		07/21/2017	16	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT										04
CITY								FR	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	N -S								000	00
N								3P			01	2		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	35	M	OR-Y		020	000	04
N								45 22 42.84	-122 48 17.93																OR<25				
																	02	NONE 0	TURN-L										
																		PRVTE	S -W									000	00
																		PSNGR CAR		01	DRVR	NONE	55	M	OR-Y		000	000	00
																									OR<25				
01124	N	N	N		N	N		03/05/2019	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT									080	02
CITY								TU	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	S -N								000	00
N								7A			04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	49	M	OR-Y		000	000	00
N								45 22 9.72	-122 48 20.29																OR<25				
																	02	NONE 0	TURN-L										
																		PRVTE	N -E									000	00
																		PSNGR CAR		01	DRVR	NONE	30	M	OR-Y		028,004	000	02
																									OR<25				
																	03	NONE 0	STOP										
																		PRVTE	E -W									022	00
																		PSNGR CAR		01	DRVR	NONE	40	M	OR-Y		000	000	00
																									OR<25				
02524	N	N	N		N	N		05/18/2019	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLD	O-1 L-TURN	01	NONE 0	TURN-L										04
CITY								SA	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	W -N								000	00
N								3P			02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	77	F	OR-Y		020	000	04
N								45 22 9.72	-122 48 20.29																OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	M R U G S	J N S	S I H V	W C O R L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	INJC	23	M	OR-Y OR<25		000	000		00 00
06869	N	N	N	N	N		12/23/2019 MO 1P 45 22 9.72	14 0 -122 48 20.29	SW TUALATIN-SHERWOOD SW 124TH AVE	INTER CN 02	CROSS 0	N TRF SIGNAL N	N N N	CLD DRY DAY	O-1 L-TURN TURN INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	INJC	22	F	OR-Y OR<25		000	000 000		04 00 00
																02	NONE 0 PRVTE PSNGR CAR	TURN-L W -N	01	DRVR	NONE	61	M	OR-Y OR<25		020	000		00 04
05093	N	N	N	N	N		08/01/2016 MO 9A 45 22 10.65	16 50 -122 48 20.29	SW 124TH AVE SW TUALATIN-SHERWOOD	STRGHT N 06	(NONE) (03)	Y UNKNOWN	N N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT N -S	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		07 00 00
																02	NONE 9 N/A SEMI TOW	STOP N -S	01	DRVR	NONE	00	Unk	UNK UNK		000	012 000		00 00
04205	N	N	N	N	N		08/14/2018 TU 1P 45 22 9.88	14 50 -122 48 18.7	SW TUALATIN-SHERWOOD SW 124TH AVE 05	STRGHT E (02)	(NONE)	N NONE N	N N N	SMOK DRY DAY	S-STRGHT REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	18	F	OR-Y OR<25		043	087 000		07 00 07
																02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	INJC	32	M	OR-Y OR<25		000	006 000	087	00 00
																02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	02	PSNG	INJC	31	F			000	006 000	087	00 00
																02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	03	PSNG	INJB	01	F			000	006 000	087	00 00
02275	N	N	N	N	N		05/07/2019 TU 1P 45 22 9.93	14 80 -122 48 18.3	SW TUALATIN-SHERWOOD SW 124TH AVE 08	STRGHT E (02)	(NONE)	N UNKNOWN N	N N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 UNKN PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	M	UNK UNK		026	000		29 00 29

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	S I H V	W C O R L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	35	F	OR-Y OR<25		000	011 000		00 00
02767	N	N	N				06/01/2019 NONE N N	14 SA 2P 45 22 9.95	SW TUALATIN-SHERWOOD SW 124TH AVE -122 48 18.02	STRGHT E 08	(NONE) (02)	N UNKNOWN	N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		29 00 00
																02	NONE 9 N/A PSNGR CAR	STOP E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
03667	N	N	N				07/19/2019 NONE N N	14 FR 7P 45 22 9.95	SW TUALATIN-SHERWOOD SW 124TH AVE -122 48 18.04	STRGHT E 07	(NONE) (02)	N UNKNOWN	N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		29 00 00
																02	NONE 9 N/A PSNGR CAR	STOP W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
06003	N	N	N	N	N		11/15/2019 CITY N N	14 FR 6P 45 22 9.94	SW TUALATIN-SHERWOOD SW 124TH AVE -122 48 18	STRGHT E 08	(NONE) (02)	N TRF SIGNAL	N N	CLR DRY DUSK	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		07 00 00
																02	NONE 9 N/A PSNGR CAR	STOP E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
06147	N	N	N				11/13/2018 NO RPT N N	14 TU 5P 45 22 10.04	SW TUALATIN-SHERWOOD SW 124TH AVE -122 48 17.22	STRGHT E 08	(NONE) (02)	Y UNKNOWN	N N	RAIN WET DUSK	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	46	M	OR-Y OR<25		016,026	038	013	27,29 00 27,29
																02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	37	M	OR-Y OR<25		000	011 022	013	00 00
																03	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	45	M	OR-Y OR<25		000	011 000		00 00
																03	NONE 0 PRVTE PSNGR CAR	STOP E -W	02	PSNG	INJC	45	F			000	011 000		00 00

SER# / INVEST / RD DPT / UNLOC?	SPD	ELE	ADC	URG	JSV	IVL	CHK	WOR	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																		03	NONE 0 PRVTE PSNGR CAR	STOP E -W	03	PSNG	INJC	18	F			000	011 000		00 00
00035	N	N	N	N	N				01/03/2015 CITY N N	16 SA 11A 45 22 8.74	SW TUALATIN-SHERWOOD SW 124TH AVE -122 48 30.32	STRGHT E 08	(NONE) (04)	N UNKNOWN	N N	RAIN WET DAY	S-STRGHT REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	26	F	OR-Y OR<25		043	013,115 000 038	115	07 00 07
																		02	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	INJC	28	M	OR-Y OR>25		000	006 000	013	00 00
																		03	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	022 000		00 00
06091	N	N	N		Y				11/10/2018 CITY N N	14 SA 1P 45 22 10.1	SW TUALATIN-SHERWOOD SW 124TH AVE -122 48 16.64	STRGHT E 07	(NONE) (02)	N UNKNOWN N	N N N	CLR DRY DAY	S-STRGHT REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	22	F	OR-Y OR>25		043	013 000 000		07 00 07
																		02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	INJC	61	F	OR-Y OR<25		000	000 000	013	00 00
																		02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	02	PSNG	INJC	66	F			000	000 000	013	00 00
																		03	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	71	M	OR-Y OR<25		000	022 000		00 00
00223	N	N	N	N	N				01/13/2019 CITY N N	14 SU 5P 45 22 10.1	SW TUALATIN-SHERWOOD SW 124TH AVE -122 48 16.62	STRGHT E 08	(NONE) (02)	N NONE N	N N N	CLR DRY DUSK	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	62	M	OR-Y OR<25		043	000 000		07 00 07
																		02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	66	M	OR-Y OR<25		000	011 000		00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G S	U N V	J H L	S C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
03702	N	N	N		N	N		07/22/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT										27,07
CITY								MO	250	SW 124TH AVE	E	(NONE)	UNKNOWN	N	DRY	REAR		N/A	W -E								000	00
N								9A			07			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N								45 22 10.16	-122 48 15.97			(02)													UNK				
																	02	NONE 9	STOP										
																		N/A	W -E									011	00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																									UNK				
84730	N	N	N					11/10/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	UNK	S-1STOP	01	NONE 9	STRGHT										29
NO RPT								FR	500	SW 124TH AVE	E	(NONE)	UNKNOWN	N	WET	REAR		N/A	E -W								000	00
N								6P			08			N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N								45 22 10.52	-122 48 12.48			(02)													UNK				
																	02	NONE 9	STOP										
																		N/A	E -W									011	00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																									UNK				
02064	N	N	N		N	N		04/25/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										27,07
CITY								TH	500	SW 124TH AVE	E	(NONE)	NONE	N	DRY	REAR		PRVTE	E -W								000	00
N								5P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	17	F	OR-Y		016,043	038	27,07
N								45 22 10.52	-122 48 12.51			(02)													OR<25				
																	02	NONE 0	STOP										
																		PRVTE	E -W									011	00
																		PSNGR CAR		01	DRVR	INJC	54	F	OR-Y		000	000	00
																									OR<25				
00134	N	N	N		N	N		01/08/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 9	STRGHT										07
CITY								TU	500	SW 124TH AVE	E	(NONE)	NONE	N	WET	REAR		N/A	E -W								000	00
N								11A			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N								45 22 10.52	-122 48 12.49			(02)													UNK				
																	02	NONE 9	STOP										
																		N/A	E -W									011	00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																									UNK				
06592	Y	N	N		N	N		12/01/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE 9	STRGHT										01
CITY								SA	600	SW 124TH AVE	E	(NONE)	NONE	N	WET	REAR		N/A	E -W								000	00
N								11A			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N								45 22 10.66	-122 48 11.14			(02)													UNK				
																	02	NONE 9	STRGHT										
																		N/A	E -W									000	00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																									UNK				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G S	U N V	I H L	C O R K	W DAY / TIME / LAT / LONG	CLASS / DIST / FROM / LRS	CITY STREET / FIRST STREET / SECOND STREET / LOCTN	RD CHAR / DIRECT	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / TYPE / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES / LICNS LOC	PED ERROR	ACT	EVENT	CAUSE
02027	N	N	N				04/23/2019	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-1STOP	01	NONE 9	STRGHT										29
NONE							TU	30	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		N/A	W -E									000		00
N							1P			06			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
N							45 22 9.61	-122 48 21.36			(02)													UNK				
																02	NONE 9	STOP										
																	N/A	W -E								011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
																								UNK				
06475	N	N	N				11/26/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-STRGHT	01	NONE 9	STRGHT										29
NONE							TU	30	SW 124TH AVE	W	(NONE)	UNKNOWN	N	WET	REAR		N/A	E -W								000		00
N							1P			05			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
N							45 22 9.61	-122 48 21.35			(02)													UNK				
																02	NONE 9	STRGHT										
																	N/A	E -W								000		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
																								UNK				
01307	N	N	N		N	N	03/11/2015	16	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT									013		27,29
CITY							WE	50	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W								000		00
N							3P			07			N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	20	F	OR-Y	016,026	038		27,29
N							45 22 9.56	-122 48 21.92			(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	E -W								011	013	00
																	PSNGR CAR		01	DRVR	NONE	39	M	OR-Y	000	000		00
																								OR<25				
																03	NONE 0	STOP										
																	PRVTE	E -W								022		00
																	PSNGR CAR		01	DRVR	NONE	19	M	OR-Y	000	000		00
																								OR<25				
04701	N	N	N		N	N	08/18/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT									013		29
CITY							TU	50	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W								000		00
N							6P			07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	57	M	OR-Y	026	000		29
N							45 22 9.59	-122 48 21.61			(02)													OR<25				
																01	NONE 0	STRGHT										
																	PRVTE	E -W								000		00
																	PSNGR CAR		02	PSNG	INJC	51	F		000	000		00
																02	NONE 0	STOP										
																	PRVTE	E -W								011	013	00
																	PSNGR CAR		01	DRVR	NONE	17	M	OR-Y	000	000		00
																								OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	I H V	C O R K	W DAY TIME LAT	DATE / CLASS / DIST FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																03	NONE 0	STOP										
																	PRVTE	E -W									011	013	00
																	PSNGR CAR		01	DRVR	NONE	47	M	OR-Y		000	000		00
																								OR<25					
																04	NONE 0	STOP										
																	PRVTE	E -W									022		00
																	PSNGR CAR		01	DRVR	NONE	48	M	OR-Y		000	000		00
																								OR<25					
04760	N	N	N	Y			08/20/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07
CITY					TH			50	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W									000		00
N					3P					07			N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	47	F	OR-Y		043	000		07
N					45 22 9.59			-122 48 21.6			(03)													OR<25					
																01	NONE 0	STRGHT										
																	PRVTE	E -W									000		00
																	PSNGR CAR		02	PSNG	INJB	07	F			000	000		00
																02	NONE 0	STOP										
																	PRVTE	E -W									011	013	00
																	PSNGR CAR		01	DRVR	INJC	38	F	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STOP										
																	PRVTE	E -W									011	013	00
																	PSNGR CAR		02	PSNG	INJC	06	M			000	000		00
																03	NONE 0	STOP										
																	PRVTE	E -W									022		00
																	PSNGR CAR		01	DRVR	NONE	59	F	OR-Y		000	000		00
																								OR<25					
06771	N	N	N	N	N		10/07/2016	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY					FR			50	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000		00
N					3P					06			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	44	F	OR-Y		043	000		07
N					45 22 9.59			-122 48 21.64			(02)													OR<25					
																02	NONE 0	STOP										
																	PRVTE	W -E									011		00
																	PSNGR CAR		01	DRVR	INJC	51	F	OTH-Y		000	000		00
																								N-RES					
																02	NONE 0	STOP										
																	PRVTE	W -E									011		00
																	PSNGR CAR		02	PSNG	INJC	25	F			000	000		00
05356	N	N	N				08/11/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT											06,29
NONE					TH			50	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		N/A	W -E									000		00
N					6A					06			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N					45 22 9.59			-122 48 21.64			(03)													UNK					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	S I H V	W C O L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC / INJ / SVRTY	A G E	S E X	LICNS / RES /	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 9 N/A PSNGR CAR	STOP W -E	01	DRVR NONE DRVR NONE	00 00	Unk	UNK UNK		000	011 000		00 00
06572	N N N		N N				09/29/2016 TH 5P 45 22 9.59	14 50 -122 48 21.64	SW TUALATIN-SHERWOOD SW 124TH AVE	STRGHT W 05	(NONE)	N NONE	N N	CLR DRY DAY	S-STRGHT REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR NONE DRVR NONE	00	Unk	UNK UNK UNK		000 000	000 000		07 00 00
																02	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR NONE DRVR NONE	00	Unk	UNK UNK		000	006 000		00 00
01112	N N N		N N				02/27/2017 MO 3P 45 22 9.59	14 50 -122 48 21.65	SW TUALATIN-SHERWOOD SW 124TH AVE	STRGHT W 05	(NONE)	N NONE	N N	CLD WET DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR NONE DRVR NONE	34	F	OR-Y OR<25		043	000	013	07 00 07
																02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR INJC DRVR INJB	16 43	M M	OR-Y OR<25		000	011 013 000 022 000		00 00 00 00
																03	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR NONE DRVR INJB	00 43	Unk M	UNK OR-Y OR<25		000 000	000 022 000		00 00 00
05186	N N N		N N				10/09/2019 WE 2P 45 22 9.58	14 50 -122 48 21.65	SW TUALATIN-SHERWOOD SW 124TH AVE	STRGHT W 05	(NONE)	N NONE	N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR NONE DRVR NONE	00	Unk	UNK UNK UNK		000 000	000 000		27,29 00 00
																02	NONE 9 N/A PSNGR CAR	STOP E -W	01	DRVR NONE DRVR NONE	00	Unk	UNK UNK UNK		000	011 000		00 00
03771	N N N		N N				06/09/2016 TH 5P 45 22 9.55	14 75 -122 48 22	SW TUALATIN-SHERWOOD SW 124TH AVE	STRGHT W 08	(NONE)	Y TRF SIGNAL	N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT W -E	01	DRVR NONE DRVR NONE	00	Unk	UNK UNK UNK		000 000	000 000		27,07 00 00
																02	NONE 9 N/A UNKNOWN	STOP W -E	01	DRVR NONE DRVR NONE	00	Unk	UNK UNK UNK		000	011 000		00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02578	N	N	N		N	N	05/12/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											07
CITY							TU	100	SW 124TH AVE	W	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	E -W									000	00
N							12P			07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	57	M	OR-Y		043	000		07
N							45 22 9.5	-122 48 22.46			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	E -W									011		00
																	PSNGR CAR		01	DRVR	INJC	47	F	OR-Y		000	000		00
																								OR<25					
06673	N	N	N		N	N	11/07/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT											29
CITY							SA	100	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E									000	00
N							3P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	21	M	SUSP		026	000		29
N							45 22 9.52	-122 48 22.26			(03)													OR<25					
																01	NONE 0	STRGHT											
																	PRVTE	W -E									000		00
																	PSNGR CAR		02	PSNG	NO<5	01	M			000	000		00
																02	NONE 0	STOP											
																	PRVTE	W -E									011		00
																	PSNGR CAR		01	DRVR	INJC	31	F	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011		00
																	PSNGR CAR		02	PSNG	INJC	31	M			000	000		00
																02	NONE 0	STOP											
																	PRVTE	W -E									011		00
																	PSNGR CAR		03	PSNG	INJC	06	M			000	000		00
																02	NONE 0	STOP											
																	PRVTE	W -E									011		00
																	PSNGR CAR		04	PSNG	INJC	11	F			000	000		00
04225	Y	N	N		N	N	06/27/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013		01,29
CITY							MO	100	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W									000		00
N							11A			07			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	37	M	OTH-Y		047,026	000		01,29
N							45 22 9.51	-122 48 22.42			(02)													N-RES					
																02	NONE 0	STOP											
																	PRVTE	E -W									011	013	00
																	PSNGR CAR		01	DRVR	NONE	65	F	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP											
																	PRVTE	E -W									022		00
																	PSNGR CAR		01	DRVR	NONE	65	M	OR-Y		000	000		00
																								OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
02841	N	N	N		N	N	05/01/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT											29
CITY							SU	100	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W									000	00
N							3P			07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	75	M	OR-Y		042	000	29
N							45 22 9.52	-122 48 22.31			(02)													OR<25				
																01	NONE 0	STRGHT										
																	PRVTE	E -W									000	00
																	PSNGR CAR		02	PSNG	INJC	75	F			000	000	00
																02	NONE 0	STRGHT										
																	PRVTE	E -W									000	00
																	PSNGR CAR		01	DRVR	NONE	53	M	OR-Y		000	000	00
																								OR<25				
																03	NONE 0	STRGHT										
																	PRVTE	E -W									022	00
																	PSNGR CAR		01	DRVR	NONE	37	M	OTH-Y		000	000	00
																								N-RES				
03700	N	N	N				07/17/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT											29
CITY							TU	100	SW 124TH AVE	W	(NONE)	NONE	N	DRY	REAR		PRVTE	W -E									000	00
N							7A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	19	F	OR-Y		042	000	29
N							45 22 9.52	-122 48 22.31			(02)													OR<25				
																02	NONE 0	STRGHT										
																	PRVTE	W -E									006	00
																	PSNGR CAR		01	DRVR	INJC	41	F	OR-Y		000	000	00
																								OR<25				
04450	N	N	N				08/25/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE							SA	100	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W									000	00
N							10A			07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	73	F	OR-Y		026	000	29
N							45 22 9.52	-122 48 22.34			(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	E -W									011	00
																	PSNGR CAR		01	DRVR	INJC	59	F	OR-Y		000	000	00
																								OR<25				
04024	N	N	N				08/08/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											07
NO RPT							TH	100	SW 124TH AVE	W	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	W -E									000	00
N							12P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	18	M	OR-Y		043	000	07
N							45 22 9.48	-122 48 22.29			(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	W -E									011	00
																	PSNGR CAR		01	DRVR	INJC	56	M	OR-Y		000	000	00
																								OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R J S W U I C O G N H R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02746	N	N	N N N	05/31/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											27,07
CITY			FR	100	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR			PRVTE	W -E									000		00
N			3P			08			N	DAY	INJ			PSNGR CAR		01	DRVR	NONE	28	F	SUSP		016,043	038		27,07
N			45 22 9.51	-122 48 22.33			(02)														OR<25					
													02	NONE 0	STOP											
														PRVTE	W -E									011		00
														PSNGR CAR		01	DRVR	INJC	30	M	NONE		000	000		00
																					OR<25					
03686	N	N	N	07/21/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE			SU	100	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR			PRVTE	W -E									000		00
N			2P			08			N	DAY	INJ			PSNGR CAR		01	DRVR	NONE	32	F	OR-Y		026	000		29
N			45 22 9.52	-122 48 22.34			(02)														OR<25					
													02	NONE 0	STOP											
														PRVTE	W -E									011		00
														PSNGR CAR		01	DRVR	INJC	62	F	OR-Y		000	000		00
																					OR<25					
07776	N	N	N N N	11/12/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 9	STRGHT											07
CITY			SA	150	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR			N/A	W -E									000		00
N			1P			08			N	DAY	PDO			PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 9.45	-122 48 23.01			(02)														UNK					
													02	NONE 9	STRGHT											
														N/A	W -E									006		00
														PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																					UNK					
00766	N	N	N	02/13/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 9	STRGHT											27,29
NONE			WE	150	SW 124TH AVE	W	(NONE)	UNKNOWN	N	WET	REAR			N/A	W -E									000		00
N			8A			08			N	DAY	PDO			PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 9.44	-122 48 23.05			(02)														UNK					
													02	NONE 9	STOP											
														N/A	W -E									011		00
														PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																					UNK					
03213	N	N	N	06/22/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
NO RPT			SA	150	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR			N/A	W -E									000		00
N			10A			08			N	DAY	PDO			PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 9.45	-122 48 23.03			(02)														UNK					
													02	NONE 9	STOP											
														N/A	W -E									011		00
														PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																					UNK					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
05653	N	N	N		N	N	08/23/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											013	29
CITY							TU	200	SW 124TH AVE	W	(NONE)	NONE	N	DRY	REAR		PRVTE	E -W										000		00
N							6P			07			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	19	F	OR-Y		026	000		29
N							45 22 9.38	-122 48 23.72			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	E -W									011	013	00
																	PSNGR CAR		01	DRVR	INJC	23	F	OR-Y		000	000		00
																								OR>25					
																03	NONE 0	STOP											
																	PRVTE	E -W									022		00
																	PSNGR CAR		01	DRVR	NONE	42	M	OR-Y		000	000		00
																								OR<25					
07214	N	N	N		N	N	10/22/2016	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-1STOP	01	NONE 0	STRGHT											013	29
CITY							SA	200	SW 124TH AVE	W	(NONE)	NONE	N	DRY	REAR		PRVTE	W -E										000		00
N							11A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	19	F	OR-Y		026	000		29
N							45 22 9.38	-122 48 23.69			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	INJC	21	F	OTH-Y		000	000		00
																								N-RES					
																03	NONE 0	STOP											
																	UNKN	W -E									022		00
																	PSNGR CAR		01	DRVR	NONE	48	F	OR-Y		000	000		00
																								OR<25					
04986	N	N	N				08/15/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT												29
NONE							TU	200	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		N/A	E -W										000		00
N							3P			07			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 9.38	-122 48 23.72			(02)													UNK					
																02	NONE 9	STOP											
																	N/A	E -W									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
03319	N	N	N				06/28/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											013	29
NONE							TH	200	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W										000		00
N							12P			07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	44	M	OTH-Y		026	000		29
N							45 22 9.38	-122 48 23.73			(02)													N-RES					
																02	NONE 0	STOP											
																	PRVTE	E -W									011	013	00
																	PSNGR CAR		01	DRVR	INJC	66	M	OR-Y		000	000		00
																								OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																03	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	18	M	OR-Y OR<25		000	022 000		00 00
07019 NONE N N	N	N	N				12/05/2018 WE 5P 45 22 9.41	14 200 -122 48 23.54	SW TUALATIN-SHERWOOD SW 124TH AVE	STRGHT W 07	(NONE) (02)	N UNKNOWN	N N	CLR DRY DLIT	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	54	M	OR-Y OR<25		026	000 000	013	29 00 29
																02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	59	F	OR-Y OR<25		000	011 000	013	00 00
																03	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	NONE	17	M	OR-Y OR<25		000	011 000		00 00
00566 CITY N N	N	N	N	N	N		02/03/2019 SU 7P 45 22 9.38	14 200 -122 48 23.73	SW TUALATIN-SHERWOOD SW 124TH AVE 08	STRGHT W (02)	(NONE)	N UNKNOWN	N N	RAIN WET DLIT	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	INJC	31	F	OR-Y OR<25		016,043	038 000	013	27,07 00 27,07
																02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	32	F	OTH-Y OR<25		000	011 000	013	00 00
																03	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	34	F	OR-Y OR<25		000	022 000		00 00
02178 NONE N N	N	N	N				04/24/2015 FR 1P 45 22 9.31	14 250 -122 48 24.41	SW TUALATIN-SHERWOOD SW 124TH AVE 08	STRGHT W (02)	(NONE)	N UNKNOWN	N N	RAIN WET DAY	S-STRGHT SS-O PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	M	OR-Y OR<25		042	000 000		29 00 29
																02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	64	M	OR-Y OR<25		000	006 000		00 00
06054 NONE N N	N	N	N				10/13/2015 TU 8A 45 22 9.31	14 250 -122 48 24.46	SW TUALATIN-SHERWOOD SW 124TH AVE 08	STRGHT W (02)	(NONE)	Y UNKNOWN	N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	F	UNK OR<25		026	000 000		29 00 29

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	M R J U G S	S N H V	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
															02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	NONE	59	F	OR-Y OR<25		000	011 000		00 00
04450	N	N	N			07/21/2017 FR 9P 45 22 9.25	14 300 -122 48 25.11	SW TUALATIN-SHERWOOD SW 124TH AVE	STRGHT W 08	(NONE)	N UNKNOWN	N N	CLR DRY DLIT	S-STRGHT REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	000		29 00 00
															02	NONE 9 N/A PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	006 000		00 00
06980	N	N	N			12/17/2018 MO 6P 45 22 9.25	14 300 -122 48 25.08	SW TUALATIN-SHERWOOD SW 124TH AVE	STRGHT W 07	(NONE)	N UNKNOWN	N N	CLR WET DLIT	S-STRGHT REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	000		29 00 00
															02	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	000		00 00
05082	N	N	N	N	N	10/04/2019 CITY 12P 45 22 9.25	14 FR 300 -122 48 25.1	SW TUALATIN-SHERWOOD SW 124TH AVE	STRGHT W 07	(NONE)	N NONE N	N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	22	M	OR-Y OR<25		043	000	013	07 00 07
															02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	NONE	46	M	OR-Y OR<25		000	011 000	013	00 00
															03	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	NONE	78	M	OR-Y OR<25		000	022 000		00 00
															03	NONE 0 PRVTE PSNGR CAR	STOP E -W	02	PSNG	INJC	75	F			000	022 000		00 00
03669	N	N	N	N	N	07/19/2019 CITY 6P 45 22 8.97	14 FR 505 -122 48 27.95	SW TUALATIN-SHERWOOD SW 124TH AVE	STRGHT W 08	(NONE)	N UNKNOWN N	N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	000		07 00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	S I H V	W C O L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC / INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT EVENT	CAUSE
																02	NONE 9 N/A PSNGR CAR	STOP W -E	01	DRVR NONE 	00	Unk	UNK UNK		000	011 000	00 00
04945	N	N	N	N	N		08/29/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE 0	STRGHT									07
CITY			SA					550	SW 124TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W								000	00
N N			6P 45 22 8.91					-122 48 28.56		07	(02)		N	DAY	PDO		PSNGR CAR		01	DRVR NONE	19	M	OR-Y OR<25		043	000	07
																02	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR NONE	49	M	OR-Y OR<25		000	006 000	00 00
06669	N	N	N	N	N		12/05/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 9	STRGHT									27,29
CITY			WE					580	SW 124TH AVE	W	(NONE)	NONE	N	DRY	REAR		N/A	W -E								000	00
N N			6A 45 22 8.87					-122 48 29.02		08	(02)		N	DAWN	PDO		PSNGR CAR		01	DRVR NONE	00	Unk	UNK UNK		000	000	00
																02	NONE 9 N/A PSNGR CAR	STOP W -E	01	DRVR NONE 	00	Unk	UNK UNK		000	011 000	00 00

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and 120TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2019														
REAR-END	0	2	1	3	0	2	0	1	2	3	0	0	0	0
YEAR 2019 TOTAL	**0**	**2**	**1**	**3**	**0**	**2**	**0**	**1**	**2**	**3**	**0**	**0**	**0**	**0**
YEAR: 2018														
MISCELLANEOUS	0	0	1	1	0	0	0	1	0	0	1	0	0	0
REAR-END	0	0	1	1	0	0	0	1	0	1	0	0	0	0
YEAR 2018 TOTAL	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**2**	**0**	**1**	**1**	**0**	**0**	**0**
YEAR: 2017														
BACKING	0	1	0	1	0	3	1	0	1	1	0	1	0	0
REAR-END	0	4	3	7	0	4	0	7	0	7	0	1	0	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	1	0	1	0	0
YEAR 2017 TOTAL	**0**	**6**	**3**	**9**	**0**	**8**	**1**	**8**	**1**	**9**	**0**	**3**	**0**	**0**
YEAR: 2016														
REAR-END	0	1	3	4	0	1	0	3	1	3	1	0	0	0
YEAR 2016 TOTAL	**0**	**1**	**3**	**4**	**0**	**1**	**0**	**3**	**1**	**3**	**1**	**0**	**0**	**0**
YEAR: 2015														
REAR-END	0	1	1	2	0	2	0	1	1	1	1	0	0	0
YEAR 2015 TOTAL	**0**	**1**	**1**	**2**	**0**	**2**	**0**	**1**	**1**	**1**	**1**	**0**	**0**	**0**
FINAL TOTAL	**0**	**10**	**10**	**20**	**0**	**13**	**1**	**15**	**5**	**17**	**3**	**3**	**0**	**0**

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports 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 quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and 120TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	MAJOR INJURY CRASHES	MODERATE INJURY CRASHES	MINOR INJURY CRASHES	PROP DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	MAJOR INJURIES	MODERATE INJURIES	MINOR INJURIES
YEAR: 2019										
REAR-END	0	0	0	2	1	3	0	0	0	2
2019 TOTAL	**0**	**0**	**0**	**2**	**1**	**3**	**0**	**0**	**0**	**2**
YEAR: 2018										
MISCELLANEOUS	0	0	0	0	1	1	0	0	0	0
REAR-END	0	0	0	0	1	1	0	0	0	0
2018 TOTAL	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**0**
YEAR: 2017										
BACKING	0	0	0	1	0	1	0	0	0	3
REAR-END	0	0	0	4	3	7	0	0	0	4
TURNING MOVEMENTS	0	0	1	0	0	1	0	0	1	0
2017 TOTAL	**0**	**0**	**1**	**5**	**3**	**9**	**0**	**0**	**1**	**7**
YEAR: 2016										
REAR-END	0	0	0	1	3	4	0	0	0	1
2016 TOTAL	**0**	**0**	**0**	**1**	**3**	**4**	**0**	**0**	**0**	**1**
YEAR: 2015										
REAR-END	0	0	0	1	1	2	0	0	0	2
2015 TOTAL	**0**	**0**	**0**	**1**	**1**	**2**	**0**	**0**	**0**	**2**
FINAL TOTAL	**0**	**0**	**1**	**9**	**10**	**20**	**0**	**0**	**1**	**12**

CITY OF TUALATIN, WASHINGTON COUNTY

TUALATIN-SHERWOOD and 120TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

1 - 3 of 20 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
01473	N	N	N		N	N	03/16/2017	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07
CITY			TH		0		SW 120TH AVE	E		NONE	N	DRY	REAR		PRVTE	E -W										000		00
N			2P					06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	45	M	OR-Y		043	000		07
N			45 22 11.63		-122 48 1.79																			OR<25				
																02	NONE 0	STOP										
																	PRVTE	E -W									011	013	00
																	PSNGR CAR		01	DRVR	INJC	24	F	OTH-Y		000	000		00
																								OR<25				
																03	NONE 0	STOP										
																	PRVTE	E -W									022		00
																	PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		000	000		00
																								OR<25				
06922	N	N	N		N	N	11/02/2017	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	RAIN	O-1STOP	01	NONE 0	BACK											10
CITY			TH		0		SW 120TH AVE	S		STOP SIGN	N	WET	BACK		PRVTE	N -S										000		00
N			11A					06	0		N	DAY	INJ		TRUCK		01	DRVR	NONE	24	M	OR-Y		011	000		10
N			45 22 11.63		-122 48 1.79																			OR<25				
																02	NONE 0	STOP										
																	PRVTE	S -N									011		00
																	PSNGR CAR		01	DRVR	INJC	31	F	OR-Y		000	000		00
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	S -N									011		00
																	PSNGR CAR		02	PSNG	INJC	36	M			000	000		00
																02	NONE 0	STOP										
																	PRVTE	S -N									011		00
																	PSNGR CAR		03	PSNG	INJC	02	F			000	000		00
00049	N	N	N		N	N	01/04/2017	14	SW TUALATIN-SHERWOOD	INTER	3-LEG	N	N	CLD	ANGL-OTH	01	NONE 0	STRGHT											02
CITY			WE		0		SW 120TH AVE	CN		STOP SIGN	N	DRY	TURN		PRVTE	W -E										000		00
N			12P					04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	26	F	OR-Y		000	000		00
N			45 22 11.63		-122 48 1.79																			OR<25				
																02	NONE 0	TURN-L										
																	PRVTE	S -W									000		00
																	PSNGR CAR		01	DRVR	NONE	26	M	OR-Y		028	000		02
																								OR<25				
04316	N	N	N		N	N	08/26/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY			MO		70		SW 120TH AVE	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W -E										000		00
N			3P					07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	30	M	OR-Y		043	000		07
N			45 22 11.68		-122 48 .75				(02)															OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	M R J U G S	S N H V	W O R L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
															02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	66	M	OR-Y OR<25		000	011 000		00 00
01615	N	N	N	N	N	03/22/2017 CITY WE 5P 45 22 11.95	14 200 -122 47 58.86	SW TUALATIN-SHERWOOD SW 120TH AVE	STRGHT E 08	(NONE) (02)	N NONE	N N	CLD DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	37	F	OR-Y OR<25		043	000 000		07 00 07
															02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	49	M	OR-Y OR<25		000	011 000		00 00
03665	N	N	N	Y	N	06/20/2017 NONE TU 7A 45 22 11.93	14 200 -122 47 58.99	SW TUALATIN-SHERWOOD SW 120TH AVE	STRGHT E 08	(NONE) (02)	N UNKNOWN N	N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	54	M	OR-Y OR<25		026	000 000		29 00 29
															02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	32	M	OR-Y OR<25		000	011 000		00 00
02333	N	N	N		N	05/08/2018 NONE TU 8P 45 22 12.23	14 325 -122 47 57.2	SW TUALATIN-SHERWOOD SW 120TH AVE	STRGHT E 08	(NONE) (02)	N UNKNOWN N	N N	CLR DRY DARK	ANIMAL OTH PDO	01	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	035 000 000		12 00 00
02411	N	N	N	Y	N	04/13/2016 NONE WE 8A 45 22 12.71	14 500 -122 47 54.76	SW TUALATIN-SHERWOOD SW 120TH AVE	STRGHT E 07	(NONE) (02)	N UNKNOWN N	N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	67	F	OTH-Y N-RES		026	000 000		29 00 29
															02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	42	F	OR-Y OR<25		000	011 000		00 00
02659	N	N	N	N	N	05/16/2015 CITY SA 12P 45 22 11.49	14 50 -122 48 3.1	SW TUALATIN-SHERWOOD SW 120TH AVE	STRGHT W 07	(NONE) (02)	N UNKNOWN N	N N	CLD DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	33	M	OTH-Y N-RES		043	000 000		07 00 07
															02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	27	F	OR-Y OR<25		000	011 000		00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	S I H V	W C O R L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0 PRVTE PSNGR CAR	STOP E -W	02	PSNG	INJC	23	M			000	011 000		00 00
05451	N	N	N				08/15/2016 MO 1P 45 22 11.46	14 50 -122 48 3.34	SW TUALATIN-SHERWOOD SW 120TH AVE	STRGHT W 06	(NONE)	N UNKNOWN	N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	000		29 00 00
																02	NONE 9 N/A PSNGR CAR	STOP W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
02145	N	N	N				04/15/2017 SA 10A 45 22 11.43	14 80 -122 48 3.63	SW TUALATIN-SHERWOOD SW 120TH AVE	STRGHT W 07	(NONE)	N UNKNOWN	N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	000		29 00 00
																02	NONE 9 N/A PSNGR CAR	STOP E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
04457	N	N	N	N	N		07/22/2017 SA 3P 45 22 11.39	14 100 -122 48 4.02	SW TUALATIN-SHERWOOD SW 120TH AVE	STRGHT W 07	(NONE)	N NONE	N N	CLR DRY DAY	S-STRGHT REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	16	F	OTH-Y OR<25		042,052	000	013	29,32
																02	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	INJC	53	F	OTH-Y N-RES		000	006 000	013	00 00
																03	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	41	F	OTH-Y OR>25		000	022 000	013	00 00
																04	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	46	M	OR-Y OR<25		000	022 000		00 00
00380	N	N	N	N	N		01/22/2019 TU 2P 45 22 11.4	14 100 -122 48 3.88	SW TUALATIN-SHERWOOD SW 120TH AVE	STRGHT W 07	(NONE)	N NONE	N N	RAIN WET DAY	S-STRGHT REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	37	F	OR-Y OR<25		016,043	038		27,07 00 27,07

SER# / INVEST / RD DPT / UNLOC?	SPD / ALC / GRD / SCL / VEH / LGT / WTH / CRS / LAT	DAY / TIME / LONG	CLASS / DIST / FROM / SECOND STREET / LRS	CITY STREET / FIRST STREET / RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
										02	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	INJC	69	F	OR-Y OR<25		000	000 000	00 00
07915	N N N	12/21/2015 14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										29
NONE		MO 172	SW 120TH AVE	W	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	E -W									000	00
N N		5P 45 22 11.28 -122 48 5.09		07	(02)		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	F	UNK UNK		026	000	29
										02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	NONE	65	M	OR-Y OR<25		000	011 000	00 00
05141	N N N	08/02/2016 14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 9	STRGHT										27,29
NO RPT		TU 190	SW 120TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		N/A	E -W									000	00
N N		2P 45 22 11.27 -122 48 5.23		07	(02)		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000	00
										02	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000	00 00
07349	N N N	10/27/2016 14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT										29
NONE		TH 200	SW 120TH AVE	W	(NONE)	UNKNOWN	N	WET	REAR		N/A	W -E									000	00
N N		6A 45 22 11.26 -122 48 5.29		08	(02)		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000	00
										02	NONE 9 N/A PSNGR CAR	STOP W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000	00 00
00350	N N N N N	01/19/2019 14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 9	STRGHT										27,07
CITY		SA 300	SW 120TH AVE	W	(NONE)	NONE	N	WET	REAR		N/A	W -E									000	00
N N		1P 45 22 11.14 -122 48 6.47		08	(02)		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000	00
										02	NONE 9 N/A PSNGR CAR	STOP W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000	00 00
03507	N N N N N	06/13/2017 14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE 9	STRGHT										27,07
CITY		TU 470	SW 120TH AVE	W	(NONE)	NONE	N	DRY	REAR		N/A	E -W									000	00
N N		6P 45 22 10.87 -122 48 9.14		07	(02)		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000	00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	S I H V	W C O L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	006 000		00 00
02445	N	N	N				04/27/2017 TH 4P 45 22 10.83	14 500 -122 48 9.51	SW TUALATIN-SHERWOOD SW 120TH AVE	STRGHT W 07	(NONE) (02)	N UNKNOWN	N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		29 00 00
																02	NONE 9 N/A PSNGR CAR	STOP E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
06061	N	N	N	N	N		11/08/2018 CITY 8A 45 22 10.82	14 500 -122 48 9.44	SW TUALATIN-SHERWOOD SW 120TH AVE	STRGHT W 08	(NONE) (02)	N NONE	N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		07 00 00
																02	NONE 9 N/A PSNGR CAR	STOP W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and 115TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2019														
REAR-END	0	2	1	3	0	3	0	3	0	2	1	1	0	0
YEAR 2019 TOTAL	**0**	**2**	**1**	**3**	**0**	**3**	**0**	**3**	**0**	**2**	**1**	**1**	**0**	**0**
YEAR: 2018														
REAR-END	0	3	2	5	0	5	0	2	3	3	2	0	2	0
YEAR 2018 TOTAL	**0**	**3**	**2**	**5**	**0**	**5**	**0**	**2**	**3**	**3**	**2**	**0**	**2**	**0**
YEAR: 2017														
REAR-END	0	4	2	6	0	6	0	4	2	6	0	2	0	0
YEAR 2017 TOTAL	**0**	**4**	**2**	**6**	**0**	**6**	**0**	**4**	**2**	**6**	**0**	**2**	**0**	**0**
YEAR: 2016														
REAR-END	0	4	3	7	0	4	1	6	1	4	3	1	1	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2016 TOTAL	**0**	**4**	**4**	**8**	**0**	**4**	**1**	**7**	**1**	**5**	**3**	**2**	**1**	**0**
YEAR: 2015														
REAR-END	0	7	0	7	0	11	2	6	1	6	1	2	0	0
YEAR 2015 TOTAL	**0**	**7**	**0**	**7**	**0**	**11**	**2**	**6**	**1**	**6**	**1**	**2**	**0**	**0**
FINAL TOTAL	**0**	**20**	**9**	**29**	**0**	**29**	**3**	**22**	**7**	**22**	**7**	**7**	**3**	**0**

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and 115TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	MAJOR INJURY CRASHES	MODERATE INJURY CRASHES	MINOR INJURY CRASHES	PROP DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	MAJOR INJURIES	MODERATE INJURIES	MINOR INJURIES
YEAR: 2019										
REAR-END	0	0	0	2	1	3	0	0	0	3
2019 TOTAL	**0**	**0**	**0**	**2**	**1**	**3**	**0**	**0**	**0**	**3**
YEAR: 2018										
REAR-END	0	0	0	3	2	5	0	0	0	5
2018 TOTAL	**0**	**0**	**0**	**3**	**2**	**5**	**0**	**0**	**0**	**5**
YEAR: 2017										
REAR-END	0	0	1	3	2	6	0	0	1	5
2017 TOTAL	**0**	**0**	**1**	**3**	**2**	**6**	**0**	**0**	**1**	**5**
YEAR: 2016										
REAR-END	0	0	0	4	3	7	0	0	0	4
TURNING MOVEMENTS	0	0	0	0	1	1	0	0	0	0
2016 TOTAL	**0**	**0**	**0**	**4**	**4**	**8**	**0**	**0**	**0**	**4**
YEAR: 2015										
REAR-END	0	0	0	7	0	7	0	0	0	11
2015 TOTAL	**0**	**0**	**0**	**7**	**0**	**7**	**0**	**0**	**0**	**11**
FINAL TOTAL	**0**	**0**	**1**	**19**	**9**	**29**	**0**	**0**	**1**	**28**

CITY OF TUALATIN, WASHINGTON COUNTY

TUALATIN-SHERWOOD and 115TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

1 - 4 of 29 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G S	J N V	I H L	C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
04759	N	N	N		N	N		08/20/2015	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY								TH	0	SW 115TH AVE	NE		TRF SIGNAL	N	DRY	REAR		PRVTE	NE-SW									000		00
N								6P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	39	M	OR-Y		043	000		07
N								45 22 15.86	-122 47 44.11																OR<25					
																	02	NONE 0	STOP											
																		PRVTE	NE-SW									011		00
																		PSNGR CAR		01	DRVR	INJC	39	F	OR-Y		000	000		00
																									OR<25					
00848	N	N	N		N	N		02/14/2017	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT											013	07
CITY								TU	0	SW 115TH AVE	NE		TRF SIGNAL	N	DRY	REAR		PRVTE	NE-SW									000		00
N								2P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	23	M	OR-Y		043	000		07
N								45 22 15.86	-122 47 44.11																OR<25					
																	02	NONE 0	STOP											
																		PRVTE	NE-SW									011	013	00
																		PSNGR CAR		01	DRVR	INJC	79	M	OR-Y		000	000		00
																									OR<25					
																	03	NONE 0	STOP											
																		PRVTE	NE-SW									022		00
																		PSNGR CAR		01	DRVR	INJC	51	F	OR-Y		000	000		00
																									OR<25					
																	03	NONE 0	STOP											
																		PRVTE	NE-SW									022		00
																		PSNGR CAR		02	PSNG	NO<5	01	F			000	000		00
01938	N	N	N					04/07/2017	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT												29
NONE								FR	0	SW 115TH AVE	NE		TRF SIGNAL	N	WET	REAR		UNKN	NE-SW									000		00
N								5P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	19	F	OR-Y		026	000		29
N								45 22 15.86	-122 47 44.11																UNK					
																	02	NONE 0	STOP											
																		PRVTE	NE-SW									011		00
																		PSNGR CAR		01	DRVR	INJC	28	F	OR-Y		000	000		00
																									OR<25					
05227	N	N	N					10/12/2019	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT												27,29
NONE								SA	0	SW 115TH AVE	NE		TRF SIGNAL	N	DRY	REAR		PRVTE	NE-SW									000		00
N								3P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	48	F	OR-Y		016,026	038		27,29
N								45 22 15.86	-122 47 44.11																OR<25					
																	02	NONE 0	STOP											
																		PRVTE	NE-SW									011		00
																		PSNGR CAR		01	DRVR	INJC	56	F	OR-Y		000	000		00
																									OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R J S W U I C O G N H R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
01321	N	N	N	03/12/2015	16	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE				TH	0	SW 115TH AVE	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000	00
N				3P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	44	M	OR-Y		026	000	07
N				45 22 15.86	-122 47 44.11																OR<25				
													02	NONE 0	STOP										
														PRVTE	S -N									011	00
														TRUCK		01	DRVR	INJC	46	M	OR-Y		000	000	00
																					OR<25				
04869	N	N	N	07/24/2016	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										27,29
NONE				SU	0	SW 115TH AVE	SW		TRF SIGNAL	N	DRY	REAR		PRVTE	SW-NE									000	00
N				10P			06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	35	F	OR-Y		016,026	038	27,29
N				45 22 15.86	-122 47 44.11																OR<25				
													02	NONE 0	STOP										
														PRVTE	SW-NE									011	00
														PSNGR CAR		01	DRVR	INJC	66	M	OR-Y		000	000	00
																					OR<25				
03552	N	N	N N	06/01/2016	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 9	STRGHT										04
CITY				WE	0	SW 115TH AVE	CN		TRF SIGNAL	N	DRY	TURN		N/A	W -E									000	00
N				2P			03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N				45 22 15.86	-122 47 44.11																UNK				
													02	NONE 9	TURN-L										
														N/A	E -S									000	00
														PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																					UNK				
05520	N	N	N N	N 09/23/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
CITY				WE	10	SW 115TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000	00
N				11A			06			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	29	F	OR-Y		043	000	07
N				45 22 16.21	-122 47 43.27			(02)													OR<25				
													01	NONE 0	STRGHT										
														PRVTE	NE-SW									000	00
														PSNGR CAR		02	PSNG	NO<5	01	M			000	000	00
													01	NONE 0	STRGHT										
														PRVTE	NE-SW									000	00
														PSNGR CAR		03	PSNG	NO<5	04	F			000	000	00
													02	NONE 0	STRGHT										
														PRVTE	NE-SW									006	00
														PSNGR CAR		01	DRVR	INJC	42	M	OR-Y		000	000	00
																					OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	I H V	C O R L	W DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0 PRVTE PSNGR CAR	STRGHT NE-SW	02	PSNG	INJC	37	F			000	006 000		00 00
																02	NONE 0 PRVTE PSNGR CAR	STRGHT NE-SW	03	PSNG	NO<5	01	M			000	006 000		00 00
01426	N	N	N	N	N		03/04/2016	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLD	S-STRGHT	01	NONE 0	STRGHT										013	07
CITY			FR	50					SW 115TH AVE	NE	(NONE)	NONE	N	DRY	REAR		PRVTE	NE-SW								000		00
N N			9A 45 22 16.4	-122 47 42.83						06	(02)		N	DAY	INJ		TRUCK		01	DRVR	NONE	29	M	OR-Y OR>25		043	000		07
																02	NONE 0 PRVTE PSNGR CAR	STRGHT NE-SW	01	DRVR	INJC	74	F	EXP OR<25		000	000 000	013	00 00
																03	NONE 0 PRVTE PSNGR CAR	STOP NE-SW	01	DRVR	NONE	63	M	OR-Y		000	022 000		00 00
06443	N	N	N				09/23/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 9	STRGHT											29
NONE			FR	55					SW 115TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		N/A	NE-SW								000		00
N N			4P 45 22 16.4	-122 47 42.83						08	(02)		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000		00
																02	NONE 9 N/A PSNGR CAR	STRGHT NE-SW	01	DRVR	NONE	00	Unk	UNK UNK		000	006 000		00 00
02079	N	N	N	N	N		04/20/2015	16	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY			MO	100					SW 115TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW								000		00
N N			8A 45 22 16.59	-122 47 42.36						08	(04)		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	50	M	OR-Y OR<25		043	000		07
																02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW	01	DRVR	INJC	34	M	OR-Y OR<25		000	011 000		00 00
																02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW	02	PSNG	INJC	32	F			000	011 000		00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
06442	N	N	N		N	N	10/15/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07
CITY							SU	100	SW 115TH AVE	NE	(NONE)	NONE	N	DRY	REAR		PRVTE	NE-SW									000	087	00
N							1P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	19	M	OR-Y		043	000		07
N							45 22 16.62	-122 47 42.3			(02)							OR<25										
																01	NONE 0	STRGHT										
																	PRVTE	NE-SW									000	087	00
																	PSNGR CAR		02	PSNG	INJB	18	F			000	000		00
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	013	00
																	PSNGR CAR		01	DRVR	INJC	35	F	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	013	00
																	PSNGR CAR		02	PSNG	NO<5	03	F			000	000		00
																03	NONE 0	STOP										
																	PRVTE	NE-SW									022		00
																	PSNGR CAR		01	DRVR	NONE	43	M	OR-Y		000	000		00
																								OR<25					
00450	N	N	N		N	N	01/27/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT											07
CITY							SA	150	SW 115TH AVE	NE	(NONE)	NONE	N	DRY	REAR		RENTL	NE-SW									000		00
N							2P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	43	F	OR-Y		043	000		07
N							45 22 16.87	-122 47 41.7			(02)							OR<25										
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011		00
																	PSNGR CAR		01	DRVR	INJC	30	F	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011		00
																	PSNGR CAR		02	PSNG	NONE	01	F			000	000		00
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011		00
																	PSNGR CAR		03	PSNG	NONE	04	M			000	000		00
00460	N	N	N				01/27/2015	16	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT											07
NONE							TU	160	SW 115TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000		00
N							6P			08			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	19	M	OR-Y		026	000		07
N							45 22 16.71	-122 47 42.07			(02)							OR<25										
																02	NONE 0	STRGHT										
																	PRVTE	NE-SW									006		00
																	PSNGR CAR		01	DRVR	INJC	34	M	OR-Y		000	000		00
																								OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
04212	N	N	N		N	N	07/12/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT											07
CITY							WE	200	SW 115TH AVE	NE	(NONE)	NONE	N	DRY	REAR		N/A	NE-SW									000	00
N							6P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N							45 22 17.14	-122 47 41.08			(02)													UNK				
																02	NONE 9	STOP										
																	N/A	NE-SW									011	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
05727	N	N	N				09/16/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 9	STRGHT										29
NONE							SA	370	SW 115TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		N/A	NE-SW									000	00
N							12P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N							45 22 18.07	-122 47 39.09			(02)													UNK				
																02	NONE 9	STRGHT										
																	N/A	NE-SW									000	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
04108	N	N	N				06/22/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT										29
NONE							WE	470	SW 115TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		N/A	NE-SW									000	00
N							1P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N							45 22 18.63	-122 47 37.97			(02)													UNK				
																02	NONE 9	STOP										
																	N/A	NE-SW									011	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
07827	N	N	N				11/14/2016	19	SW 115TH AVE	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										29
NONE							MO	620	SW TUALATIN-SHERWOOD	S	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	N -S									000	00
N							4A			07			N	DARK	INJ		PSNGR CAR		01	DRVR	NONE	55	M	OR-Y		026	000	29
N							45 22 9.47	-122 47 43.49			(04)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	N -S									011	00
																	PSNGR CAR		01	DRVR	INJC	39	F	OR-Y		000	000	00
																								OR<25				
00997	N	N	N				01/10/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										29
NONE							WE	50	SW 115TH AVE	SW	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	NE-SW									000	00
N							5P			05			N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	68	F	OR-Y		026	000	29
N							45 22 15.38	-122 47 45.44			(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	NONE	64	M	OR-Y		000	000	00
																								OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R J U G S V	I N H L	S C O R K	W DAY / TIME / LAT / LONG / LRS	CLASS / DIST / FROM / SECOND STREET / DIRECT / LOCTN	CITY STREET / FIRST STREET / RD CHAR / INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
07036	N	N	N			12/19/2018	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	RAIN	S-1STOP	01	NONE 9	STRGHT										29
NONE						WE	50	SW 115TH AVE	SW	(NONE)	UNKNOWN	N	WET	REAR		N/A	SW-NE								000		00
N						6A			06			N	DAWN	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N						45 22 15.37	-122 47 45.42			(02)													UNK				
															02	NONE 9	STOP									
																N/A	SW-NE								011	00
																PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																							UNK				
03448	N	N	N			06/29/2018	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-1STOP	01	NONE 9	STRGHT										29
NONE						FR	55	SW 115TH AVE	SW	(NONE)	UNKNOWN	N	DRY	REAR		N/A	SW-NE								000		00
N						3P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N						45 22 15.36	-122 47 45.5			(02)													UNK				
															02	NONE 9	STOP									
																N/A	SW-NE								011	00
																PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																							UNK				
02888	N	N	N			05/17/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT										29
NONE						WE	100	SW 115TH AVE	SW	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	SW-NE								000		00
N						7A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	27	M	OTH-Y	042	000		29
N						45 22 15.16	-122 47 46.08			(02)													N-RES				
															02	NONE 0	STRGHT									
																PRVTE	SW-NE								006		00
																PSNGR CAR		01	DRVR	NONE	00	F	UNK	000	000		00
																							UNK				
00936	N	N	N	N	N	02/22/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE 0	STRGHT									013	07
CITY						TH	100	SW 115TH AVE	SW	(NONE)	NONE	N	WET	REAR		PRVTE	NE-SW								000		00
N						9A			07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	28	M	OR-Y	043	000		07
N						45 22 15.16	-122 47 46.07			(02)													OR<25				
															02	NONE 0	STRGHT									
																PRVTE	NE-SW								006	013	00
																PSNGR CAR		01	DRVR	INJC	33	F	OR-Y	000	000		00
																							OR<25				
															02	NONE 0	STRGHT									
																PRVTE	NE-SW								006	013	00
																PSNGR CAR		02	PSNG	INJC	04	M		000	000		00
															03	NONE 0	STOP									
																PRVTE	NE-SW								022		00
																PSNGR CAR		01	DRVR	INJC	29	F	OR-Y	000	000		00
																							OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00595	N	N	N		N	N	02/02/2015	16	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-STRGHT	01	NONE 0	STRGHT											013	07
CITY							MO	150	SW 115TH AVE	SW	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	SW-NE									000		00
N							7A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	25	M	OR-Y		043	000		07
N							45 22 14.92	-122 47 46.77			(02)													OR<25					
																02	NONE 0	STRGHT											
																	PRVTE	SW-NE									006	013	00
																	PSNGR CAR		01	DRVR	NONE	42	F	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STRGHT											
																	PRVTE	SW-NE									022		00
																	PSNGR CAR		01	DRVR	INJC	38	M	OR-Y		000	000		00
																								OR<25					
06191	N	N	N		N	N	10/21/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE 1	STRGHT												29
CITY							WE	150	SW 115TH AVE	SW	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	SW-NE									000		00
N							1P			08			N	DAY	INJ		SEMI TOW		01	DRVR	NONE	23	M	OR-Y		026	000		29
N							45 22 14.95	-122 47 46.69			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	SW-NE									011		00
																	PSNGR CAR		01	DRVR	INJC	49	M	OR-Y		000	000		00
																								OR>25					
00392	N	N	N		N	N	01/23/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE 0	STRGHT												07
CITY							WE	150	SW 115TH AVE	SW	(NONE)	NONE	N	DRY	REAR		PRVTE	SW-NE									000		00
N							5P			08			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	20	M	OR-Y		043	000		07
N							45 22 14.94	-122 47 46.71			(02)													OR<25					
																02	NONE 0	STRGHT											
																	PRVTE	SW-NE									000		00
																	PSNGR CAR		01	DRVR	INJC	58	M	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STRGHT											
																	PRVTE	SW-NE									000		00
																	PSNGR CAR		02	PSNG	INJC	56	M			000	000		00
06420	N	N	N				12/05/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 9	STRGHT												29
NONE							TH	150	SW 115TH AVE	SW	(NONE)	UNKNOWN	N	DRY	REAR		N/A	SW-NE									000		00
N							1P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 14.94	-122 47 46.72			(02)													UNK					
																02	NONE 9	STRGHT											
																	N/A	SW-NE									006		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G S	J N V	S H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
06343	N	N	N				09/19/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE							MO	200	SW 115TH AVE	SW	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	SW-NE									000		00
N							10A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	27	F	OR-Y		026	000		29
N							45 22 17.15	-122 47 41.07			(02)													OR>25					
																02	NONE 0	STOP											
																	PRVTE	SW-NE									011		00
																	PSNGR CAR		01	DRVR	INJC	47	M	OR-Y		000	000		00
																								OR<25					
08409	N	N	N		Y		12/07/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE 9	STRGHT											07
CITY							WE	200	SW 115TH AVE	SW	(NONE)	NONE	N	DRY	REAR		N/A	SW-NE									000		00
N							6P			08			N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 14.73	-122 47 47.33			(02)													UNK					
																02	NONE 9	STOP											
																	N/A	SW-NE									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and 112TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2019														
REAR-END	0	6	0	6	0	6	1	4	2	4	2	1	1	0
YEAR 2019 TOTAL	**0**	**6**	**0**	**6**	**0**	**6**	**1**	**4**	**2**	**4**	**2**	**1**	**1**	**0**
YEAR: 2018														
REAR-END	0	2	1	3	0	3	1	3	0	2	1	1	0	0
YEAR 2018 TOTAL	**0**	**2**	**1**	**3**	**0**	**3**	**1**	**3**	**0**	**2**	**1**	**1**	**0**	**0**
YEAR: 2017														
REAR-END	0	6	3	9	0	12	0	6	3	8	1	2	0	0
YEAR 2017 TOTAL	**0**	**6**	**3**	**9**	**0**	**12**	**0**	**6**	**3**	**8**	**1**	**2**	**0**	**0**
YEAR: 2016														
REAR-END	0	4	6	10	0	12	1	6	4	9	1	1	2	0
YEAR 2016 TOTAL	**0**	**4**	**6**	**10**	**0**	**12**	**1**	**6**	**4**	**9**	**1**	**1**	**2**	**0**
YEAR: 2015														
REAR-END	0	2	4	6	0	4	0	5	0	6	0	1	1	0
YEAR 2015 TOTAL	**0**	**2**	**4**	**6**	**0**	**4**	**0**	**5**	**0**	**6**	**0**	**1**	**1**	**0**
FINAL TOTAL	**0**	**20**	**14**	**34**	**0**	**37**	**3**	**24**	**9**	**29**	**5**	**6**	**4**	**0**

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and AVERY ST, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2019														
REAR-END	0	3	2	5	0	4	0	5	0	5	0	1	1	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	0	1	0	1	1	0	0
YEAR 2019 TOTAL	**0**	**4**	**2**	**6**	**0**	**5**	**0**	**5**	**1**	**5**	**1**	**2**	**1**	**0**
YEAR: 2018														
ANGLE	0	0	1	1	0	0	0	1	0	1	0	1	0	0
REAR-END	0	4	2	6	0	5	0	5	1	4	2	1	3	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	0	0	0
YEAR 2018 TOTAL	**0**	**4**	**4**	**8**	**0**	**5**	**0**	**7**	**1**	**6**	**2**	**2**	**3**	**0**
YEAR: 2017														
REAR-END	0	3	2	5	0	4	3	2	3	3	2	1	0	0
SIDESWIPE - OVERTAKING	0	0	1	1	0	0	0	0	1	1	0	0	1	0
TURNING MOVEMENTS	0	1	5	6	0	1	0	2	4	5	1	6	0	0
YEAR 2017 TOTAL	**0**	**4**	**8**	**12**	**0**	**5**	**3**	**4**	**8**	**9**	**3**	**7**	**1**	**0**
YEAR: 2016														
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	1	0	1	0	0	0	1
REAR-END	0	4	4	8	0	6	0	6	2	6	2	4	1	0
SIDESWIPE - MEETING	0	0	1	1	0	0	1	1	0	1	0	0	1	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	0	1	0	1	1	0	0
YEAR 2016 TOTAL	**0**	**5**	**6**	**11**	**0**	**7**	**1**	**8**	**3**	**8**	**3**	**5**	**2**	**1**

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and AVERY ST, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2015														
REAR-END	0	8	3	11	0	14	0	7	3	9	2	1	0	0
YEAR 2015 TOTAL	**0**	**8**	**3**	**11**	**0**	**14**	**0**	**7**	**3**	**9**	**2**	**1**	**0**	**0**
FINAL TOTAL	**0**	**25**	**23**	**48**	**0**	**36**	**4**	**31**	**16**	**37**	**11**	**17**	**7**	**1**

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and 112TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	MAJOR INJURY CRASHES	MODERATE INJURY CRASHES	MINOR INJURY CRASHES	PROP DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	MAJOR INJURIES	MODERATE INJURIES	MINOR INJURIES
YEAR: 2019										
REAR-END	0	0	0	6	0	6	0	0	0	6
2019 TOTAL	**0**	**0**	**0**	**6**	**0**	**6**	**0**	**0**	**0**	**6**
YEAR: 2018										
REAR-END	0	0	0	2	1	3	0	0	0	3
2018 TOTAL	**0**	**0**	**0**	**2**	**1**	**3**	**0**	**0**	**0**	**3**
YEAR: 2017										
REAR-END	0	1	1	4	3	9	0	1	2	9
2017 TOTAL	**0**	**1**	**1**	**4**	**3**	**9**	**0**	**1**	**2**	**9**
YEAR: 2016										
REAR-END	0	0	3	1	6	10	0	0	4	8
2016 TOTAL	**0**	**0**	**3**	**1**	**6**	**10**	**0**	**0**	**4**	**8**
YEAR: 2015										
REAR-END	0	0	1	1	4	6	0	0	1	3
2015 TOTAL	**0**	**0**	**1**	**1**	**4**	**6**	**0**	**0**	**1**	**3**
FINAL TOTAL	**0**	**1**	**5**	**14**	**14**	**34**	**0**	**1**	**7**	**29**

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

TUALATIN-SHERWOOD and AVERY ST, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	MAJOR INJURY CRASHES	MODERATE INJURY CRASHES	MINOR INJURY CRASHES	PROP DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	MAJOR INJURIES	MODERATE INJURIES	MINOR INJURIES
YEAR: 2019										
REAR-END	0	0	0	3	2	5	0	0	0	4
TURNING MOVEMENTS	0	0	0	1	0	1	0	0	0	1
2019 TOTAL	**0**	**0**	**0**	**4**	**2**	**6**	**0**	**0**	**0**	**5**
YEAR: 2018										
ANGLE	0	0	0	0	1	1	0	0	0	0
REAR-END	0	0	1	3	2	6	0	0	1	4
TURNING MOVEMENTS	0	0	0	0	1	1	0	0	0	0
2018 TOTAL	**0**	**0**	**1**	**3**	**4**	**8**	**0**	**0**	**1**	**4**
YEAR: 2017										
REAR-END	0	0	0	3	2	5	0	0	0	4
SIDESWIPE - OVERTAKING	0	0	0	0	1	1	0	0	0	0
TURNING MOVEMENTS	0	0	1	0	5	6	0	0	1	0
2017 TOTAL	**0**	**0**	**1**	**3**	**8**	**12**	**0**	**0**	**1**	**4**
YEAR: 2016										
FIXED / OTHER OBJECT	0	0	0	1	0	1	0	0	0	1
REAR-END	0	0	0	4	4	8	0	0	0	6
SIDESWIPE - MEETING	0	0	0	0	1	1	0	0	0	0
TURNING MOVEMENTS	0	0	0	0	1	1	0	0	0	0
2016 TOTAL	**0**	**0**	**0**	**5**	**6**	**11**	**0**	**0**	**0**	**7**
YEAR: 2015										
REAR-END	0	0	1	7	3	11	0	0	2	12
2015 TOTAL	**0**	**0**	**1**	**7**	**3**	**11**	**0**	**0**	**2**	**12**
FINAL TOTAL	**0**	**0**	**3**	**22**	**23**	**48**	**0**	**0**	**4**	**32**

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

TUALATIN-SHERWOOD and 112TH AVE, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

1 - 4 of 34 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00692	N	N	N		N	N	01/30/2016	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 9	STRGHT												07
CITY			SA				DAY	DIST	FIRST STREET	NE		TRF SIGNAL	N	WET	REAR		N/A	NE-SW									000		00
N			4P				TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	LIGHT	COLL		TRLR QTY	MOVE											
N			45 22 21.91				LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	SURF	SVRTY	V#	OWNER TYPE	TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
			-122 47 31.86																									
																01	DRVR	NONE	00	Unk	UNK		000	000		00
																	PSNGR CAR							UNK				
																02	NONE 9	STOP										
																	N/A	NE-SW									011	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
02477	N	N	N		N	N	04/29/2017	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 9	STRGHT												27,29
CITY			SA				DAY	DIST	FIRST STREET	NE		TRF SIGNAL	N	DRY	REAR		N/A	NE-SW									000		00
N			5P				TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	LIGHT	COLL		TRLR QTY	MOVE											
N			45 22 21.91				LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	SURF	SVRTY	V#	OWNER TYPE	TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
			-122 47 31.86																									
																01	DRVR	NONE	00	Unk	UNK		000	000		00
																	PSNGR CAR							UNK				
																02	NONE 9	STOP										
																	N/A	NE-SW									011	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
04052	N	N	N		N	N	08/06/2018	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT												29
CITY			MO				DAY	DIST	FIRST STREET	NE		TRF SIGNAL	N	DRY	REAR		PRVTE	NE-SW									000		00
N			9A				TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	LIGHT	COLL		TRLR QTY	MOVE											
N			45 22 21.91				LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	SURF	SVRTY	V#	OWNER TYPE	TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
			-122 47 31.86																									
																01	DRVR	NONE	00	Unk	UNK		026	000		29	
																	PSNGR CAR							UNK				
																02	NONE 1	STOP										
																	PRVTE	NE-SW									011	013	00
																	SEMI TOW		01	DRVR	INJC	66	M	OR-Y		000	000		00
																								OR<25				
																03	NONE 0	STOP										
																	PRVTE	NE-SW									022		00
																	PSNGR CAR		01	DRVR	NONE	33	M	OR-Y		000	000		00
																								OR<25				
05829	N	N	N				11/07/2019	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013		29
NONE			TH				DAY	DIST	FIRST STREET	NE		TRF SIGNAL	N	DRY	REAR		PRVTE	NE-SW									000		00
N			5P				TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	LIGHT	COLL		TRLR QTY	MOVE											
N			45 22 21.91				LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	SURF	SVRTY	V#	OWNER TYPE	TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
			-122 47 31.86																									
																01	DRVR	NONE	00	M	UNK		026	000		29	
																	PSNGR CAR							UNK				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	013	00
																	PSNGR CAR		01	DRVR	INJC	71	M	OR-Y		000	000		00
																								OR<25				
																03	NONE 0	STOP										
																	PRVTE	NE-SW									022		00
																	PSNGR CAR		01	DRVR	NONE	46	M	OR-Y		000	000		00
																								OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	I H L	S C K	W O R	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
06395	N	N	N		N	N		10/13/2017	14	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT											013	07
CITY								FR	0	SW 112TH AVE	SW		TRF SIGNAL	N	DRY	REAR		PRVTE	NE-SW									000		00
N								11A			05	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	51	M	OTH-Y		043	000		07
N								45 22 21.91	-122 47 31.86																N-RES					
																	02	NONE 0	STOP											
																		PRVTE	NE-SW									011	013	00
																		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		000	000		00
																									OR<25					
																	02	NONE 0	STOP											
																		PRVTE	NE-SW									011	013	00
																		PSNGR CAR		02	PSNG	INJB	21	M			000	000		00
																	03	NONE 0	STOP											
																		PRVTE	NE-SW									022	013	00
																		PSNGR CAR		01	DRVR	INJC	31	M	OR-Y		000	000		00
																									OR<25					
																	04	NONE 0	STOP											
																		PRVTE	NE-SW									022	013	00
																		PSNGR CAR		01	DRVR	NONE	54	M	OR-Y		000	000		00
																									OR<25					
																	05	NONE 0	STOP											
																		PRVTE	NE-SW									022		00
																		PSNGR CAR		01	DRVR	NONE	59	F	OTH-Y		000	000		00
																									N-RES					
01101	N	N	N					02/28/2015	17	SW TUALATIN-SHERWOOD	INTER	CROSS	N	N	CLR	S-STRGHT	01	NONE 0	STRGHT												07
CITY								SA	0	SW 112TH AVE	CN		TRF SIGNAL	N	DRY	REAR		PRVTE	NE-SW									000		00
N								1P			03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	62	M	OR-Y		043	000		07
N								45 22 21.91	-122 47 31.86																OR<25					
																	02	NONE 0	STRGHT											
																		PRVTE	NE-SW									006		00
																		PSNGR CAR		01	DRVR	INJC	46	F	OR-Y		000	000		00
																									OR<25					
06991	N	N	N					10/13/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-STRGHT	01	NONE 9	STRGHT												29
NONE								TH	50	SW 112TH AVE	NE	(NONE)	UNKNOWN	N	WET	REAR		N/A	NE-SW									000		00
N								3P			06			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N								45 22 22.34	-122 47 31.06			(02)													UNK					
																	02	NONE 9	STRGHT											
																		N/A	NE-SW									000		00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	I H L	C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
06186	N	N	N		N	N		11/25/2019	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLD	S-1STOP	01	NONE 0	STRGHT											07
CITY								MO	55	SW 112TH AVE	NE	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	NE-SW									000		00
N								4P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	18	M	SUSP		043	000		07
N								45 22 22.37	-122 47 31.01			(02)													OR<25					
																	02	NONE 0	STOP											
																		PRVTE	NE-SW									011		00
																		PSNGR CAR		01	DRVR	INJC	36	M	OR-Y		000	000		00
																									OR<25					
01607	N	N	N					03/30/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE								SA	70	SW 112TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000		00
N								8A			08			N	DAY	INJ		TRUCK		01	DRVR	NONE	00	Unk	UNK		026	000		29
N								45 22 22.46	-122 47 30.85			(02)													UNK					
																	02	NONE 0	STOP											
																		PRVTE	NE-SW									011		00
																		PSNGR CAR		01	DRVR	INJC	70	M	OR-Y		000	000		00
																									OR<25					
00018	N	N	N		N	N		01/02/2016	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-STRGHT	01	NONE 0	STRGHT										013	07,32
CITY								SA	77	SW 112TH AVE	NE	(NONE)	TRF SIGNAL	N	DRY	REAR		PRVTE	NE-SW									000		00
N								2P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	19	M	OR-Y		043,052	000		07,32
N								45 22 22.54	-122 47 30.71			(02)													OR<25					
																	02	NONE 0	STRGHT											
																		PRVTE	NE-SW									006 013		00
																		PSNGR CAR		01	DRVR	INJB	45	F	OR-Y		000	000		00
																									OR<25					
																	03	NONE 0	STRGHT											
																		PRVTE	NE-SW									022 013		00
																		PSNGR CAR		01	DRVR	NONE	25	M	OR-Y		000	000		00
																									OR<25					
																	04	NONE 0	STRGHT											
																		PRVTE	NE-SW									022		00
																		PSNGR CAR		01	DRVR	INJC	41	M	OR-Y		000	000		00
																									OR<25					
07949	N	N	N					12/22/2015	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NO RPT								TU	100	SW 112TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000		00
N								11A			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	58	F	OR-Y		043,026	000		07
N								45 22 22.67	-122 47 30.46			(02)													OR<25					
																	02	NONE 0	STOP											
																		PRVTE	NE-SW									011		00
																		PSNGR CAR		01	DRVR	NONE	44	F	OR-Y		000	000		00
																									OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
04634	N	N	N		N	N	07/14/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 9	STRGHT											27,07
CITY			TH					100	SW 112TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		N/A	NE-SW									000		00
N			3P							08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 22.65					-122 47 30.5			(02)													UNK					
																02	NONE 9	STRGHT											
																	N/A	NE-SW									006		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
03668	N	N	N		N	N	06/20/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	29
CITY			TU					100	SW 112TH AVE	NE	(NONE)	NONE	N	DRY	REAR		PRVTE	NE-SW									000		00
N			3P							08			N	DAY	INJ		PSNGR CAR		01	DRVR	INJA	31	F	OR-Y		026	000		29
N			45 22 22.69					-122 47 30.42			(02)													OR<25					
																01	NONE 0	STRGHT											
																	PRVTE	NE-SW									000		00
																	PSNGR CAR		02	PSNG	INJB	60	M			000	000		00
																01	NONE 0	STRGHT											
																	PRVTE	NE-SW									000		00
																	PSNGR CAR		03	PSNG	INJC	14	M			000	000		00
																02	NONE 0	STOP											
																	PRVTE	NE-SW									011	013	00
																	PSNGR CAR		01	DRVR	NONE	56	M	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP											
																	PRVTE	NE-SW									022		00
																	PSNGR CAR		01	DRVR	INJC	25	F	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP											
																	PRVTE	NE-SW									022		00
																	PSNGR CAR		02	PSNG	NO<5	01	F			000	000		00
06625	N	N	N		N	N	10/21/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											07
CITY			SA					100	SW 112TH AVE	NE	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	NE-SW									000		00
N			6P							08			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	32	M	OR-Y		043	000		07
N			45 22 22.64					-122 47 30.52			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	NE-SW									011		00
																	PSNGR CAR		01	DRVR	INJC	48	M	OR-Y		000	000		00
																								OR<25					

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03858	N	N	N				07/31/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT									29
NONE							WE	100	SW 112TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW								000	00
N							9A			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	21	M	OR-Y		026	000	29
N							45 22 22.65	-122 47 30.5			(02)													OR<25				
																02	NONE 0	STOP									
																	PRVTE	NE-SW								011	00
																	PSNGR CAR		01	DRVR	INJC	55	M	OR-Y		000	000	00
																								OR<25				
00572	N	N	N		N	N	02/03/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT									07
CITY							SU	150	SW 112TH AVE	NE	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	NE-SW								000	00
N							7P			08			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	25	F	OR-Y		043	000	07
N							45 22 22.96	-122 47 29.95			(02)													OR<25				
																02	NONE 0	STOP									
																	PRVTE	NE-SW								011	00
																	PSNGR CAR		01	DRVR	INJC	50	F	OR-Y		000	000	00
																								OR<25				
04548	N	N	N		N	N	07/11/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT									27,07
CITY							MO	200	SW 112TH AVE	NE	(NONE)	NONE	N	DRY	REAR		PRVTE	NE-SW								000	00
N							5P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	32	F	OR-Y		016,043	038	27,07
N							45 22 23.29	-122 47 29.34			(02)													OR<25				
																01	NONE 0	STRGHT									
																	PRVTE	NE-SW								000	00
																	PSNGR CAR		02	PSNG	INJB	07	F			000	000	00
																01	NONE 0	STRGHT									
																	PRVTE	NE-SW								000	00
																	PSNGR CAR		03	PSNG	INJB	04	M			000	000	00
																02	NONE 0	STRGHT									
																	PRVTE	NE-SW								000	00
																	PSNGR CAR		01	DRVR	NONE	46	M	OR-Y		000	000	00
																								OR<25				
05412	N	N	N				08/17/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT									29
NONE							TH	200	SW 112TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		N/A	NE-SW								000	00
N							11A			07			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N							45 22 20.57	-122 47 34.54			(04)													UNK				
																02	NONE 9	STOP									
																	N/A	NE-SW								011	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				

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01513	N	N	N		N	N	03/18/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-STRGHT	01	NONE 9	STRGHT											07
CITY							SA	250	SW 112TH AVE	NE	(NONE)	UNKNOWN	N	WET	REAR		N/A	NE-SW								000		00
N							10A			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
N							45 22 23.56	-122 47 28.84			(02)													UNK				
																02	NONE 9	STRGHT										
																	N/A	NE-SW								000		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
																								UNK				
08138	Y	N	N		N	N	11/28/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE 9	STRGHT											29,01
CITY							MO	300	SW 112TH AVE	NE	(NONE)	TRF SIGNAL	N	WET	REAR		N/A	NE-SW								000		00
N							3P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
N							45 22 23.86	-122 47 28.3			(02)													UNK				
																02	NONE 9	STRGHT										
																	N/A	NE-SW								006		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
																								UNK				
00725	N	N	N		N	N	02/12/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	27,29
CITY							MO	400	SW 112TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW								000		00
N							3P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	50	M	OR-Y	016,026	038		27,29
N							45 22 24.46	-122 47 27.2			(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW								011	013	00
																	PSNGR CAR		01	DRVR	INJC	57	M	OR-Y	000	000		00
																								OR<25				
																03	NONE 0	STOP										
																	PRVTE	SW-NE								022	013	00
																	PSNGR CAR		01	DRVR	INJC	30	M	OR-Y	000	000		00
																								OR<25				
																04	NONE 0	STOP										
																	PRVTE	SW-NE								022		00
																	PSNGR CAR		01	DRVR	NONE	39	F	OR-Y	000	000		00
																								OR<25				
01876	N	N	N		N	N	04/10/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT											07
CITY							FR	500	SW 112TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW								000		00
N							12P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	69	F	OR-Y	043	000		07
N							45 22 25.1	-122 47 26.04			(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW								011		00
																	PSNGR CAR		01	DRVR	NONE	30	F	OR-Y	000	000		00
																								OR<25				

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00838	N	N	N		N	N	02/14/2015	16	SW TUALATIN-SHERWOOD	STRGHT		N	N	FOG	S-STRGHT	01	NONE 0	STRGHT											07
CITY			SA		634			SW 112TH AVE	NE	(NONE)	CHANNEL	N	DRY	REAR		PRVTE	NE-SW									000	00
N			9A						08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	30	F	OR-Y		043	000	07
N			45 22 25.77		-122 47 24.82					(02)													OR<25				
																01	NONE 0	STRGHT									
																	PRVTE	NE-SW								000	00
																	PSNGR CAR		02	PSNG	NO<5	03	M		000	000	00
																02	NONE 0	STRGHT									
																	PRVTE	NE-SW								006	00
																	PSNGR CAR		01	DRVR	INJC	49	F	OR-Y	000	000	00
																								OR<25			
																02	NONE 0	STRGHT									
																	PRVTE	NE-SW								006	00
																	PSNGR CAR		02	PSNG	INJC	07	M		000	000	00
03592	N	N	N		N	N	07/15/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE 0	STRGHT											16,29
CITY			MO		650			SW 112TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000	00
N			3P						08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	30	F	OR-Y		042	025	16,29
N			45 22 25.98		-122 47 24.43					(02)													OR<25				
																02	NONE 0	STRGHT									
																	PRVTE	NE-SW								000	00
																	PSNGR CAR		01	DRVR	NONE	61	M	OR-Y	000	000	00
																								OR<25			
																02	NONE 0	STRGHT									
																	PRVTE	NE-SW								000	00
																	PSNGR CAR		02	PSNG	INJC	60	F		000	000	00
03836	N	N	N				06/11/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-STRGHT	01	NONE 9	STRGHT											27,07
NO RPT			SA		1000			SW 112TH AVE	NE	(NONE)	UNKNOWN	N	DRY	REAR		N/A	NE-SW									000	00
N			9A						08			N	DAY	PDO		TRUCK		01	DRVR	NONE	00	Unk	UNK	000	000	00
N			45 22 28.12		-122 47 20.54					(02)													UNK				
																02	NONE 9	STRGHT									
																	N/A	NE-SW								006	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000	00
																								UNK			
02995	N	N	N				06/02/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	UNK	S-1STOP	01	NONE 0	STRGHT											29
NONE			TU		300			SW 112TH AVE	E	(NONE)	UNKNOWN	N	UNK	REAR		PRVTE	NE-SW									000	00
N			3P						08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	45	M	OR-Y		026	000	29
N			45 22 23.85		-122 47 28.32					(02)													OR<25				

SER# / INVEST / RD DPT / UNLOC?	SPE DCS	ALGVH	URNLK	SWO	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
														02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW									011		00
																	01	DRVR	NONE	60	M	OR-Y OR<25		000	000		00
01580	N N N		N	N	03/21/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT										013		07
CITY					TU	50	SW 112TH AVE	SW	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000		00
N N					6P 45 22 21.43	-122 47 32.82		06	(02)		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	35	F	OR-Y OR<25		043	000		07
														02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW									011	013	00
																	01	DRVR	INJC	26	M	OR-Y OR<25		000	000		00
														02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW									011	013	00
																	02	PSNG	INJC	29	F			000	000		00
														03	NONE 0 PRVTE PSNGR CAR	STOP NE-SW									022		00
																	01	DRVR	NONE	17	F	OR-Y OR<25		000	000		00
08173	N N N		N	N	12/20/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT												07,32
CITY					WE	60	SW 112TH AVE	SW	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000		00
N N					11A 45 22 21.36	-122 47 32.95		07	(02)		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	53	F	OR-Y OR<25		043,052	000		07,32
														02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW									011		00
																	01	DRVR	INJC	44	F	OR-Y OR<25		000	000		00
														02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW									011		00
																	02	PSNG	INJC	10	F			000	000		00
01460	N N N				03/15/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										013		29
NONE					WE	150	SW 112TH AVE	SW	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	NE-SW									000		00
N N					3P 45 22 20.85	-122 47 33.97		07	(02)		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	M	UNK OR<25		026	000		29
														02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW									011	013	00
																	01	DRVR	INJC	42	F	OR-Y OR<25		000	000		00
														03	NONE 0 PRVTE PSNGR CAR	STOP NE-SW									022		00
																	01	DRVR	NONE	00	Unk	UNK UNK		000	000		00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G S	U N V	J I H L	S C O K	W R	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
06123	N	N	N	N	N		N	11/12/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT										093	27,07
CITY								MO	150	SW 112TH AVE	SW	(NONE)	UNKNOWN	N	DRY	REAR		N/A	NE-SW									000	00
N								5P			07			N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N								45 22 20.87	-122 47 33.9			(02)							UNK										
																	02	NONE 9	STOP										
																		N/A	NE-SW									011	00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																			UNK										
04180	N	N	N					07/24/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE								FR	200	SW 112TH AVE	SW	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000	00
N								4P			07			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	73	F	OR-Y		026	000		29
N								45 22 20.58	-122 47 34.51			(02)							OR<25										
																	02	NONE 0	STOP										
																		PRVTE	NE-SW									011	00
																		PSNGR CAR		01	DRVR	NONE	59	F	OR-Y		000	000	00
																			OR<25										
06334	N	N	N					09/18/2016	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-STRGHT	01	NONE 0	STRGHT										013	29
NO RPT								SU	200	SW 112TH AVE	SW	(NONE)	UNKNOWN	N	DRY	REAR		UNKN	SW-NE									000	00
N								2P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		026	000		29
N								45 22 20.57	-122 47 34.54			(02)							UNK										
																	02	NONE 0	STOP										
																		PRVTE	SW-NE									011	013 00
																		PSNGR CAR		01	DRVR	INJC	38	M	OR-Y		000	000	00
																			OR<25										
																	03	NONE 0	STOP										
																		PRVTE	SW-NE									022	00
																		PSNGR CAR		01	DRVR	NONE	57	F	OR-Y		000	000	00
																			OR<25										
03201	N	N	N	N	N		N	05/17/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT											07
CITY								TU	200	SW 112TH AVE	SW	(NONE)	NONE	N	DRY	REAR		N/A	NE-SW									000	00
N								3P			07			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N								45 22 20.58	-122 47 34.52			(02)							UNK										
																	02	NONE 9	STOP										
																		N/A	NE-SW									011	00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																			UNK										
07985	N	N	N	N	N		N	11/19/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-STRGHT	01	NONE 0	STRGHT										013	07
CITY								SA	250	SW 112TH AVE	SW	(NONE)	NONE	N	WET	REAR		PRVTE	NE-SW									000	00
N								5P			07			N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	50	M	OTH-Y		043	000		07
N								45 22 20.28	-122 47 35.11			(02)							N-RES										

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0	STRGHT										
																	PRVTE	NE-SW									000	013	00
																	PSNGR CAR		01	DRVR	INJC	50	F	OR-Y		000	000		00
																								OR>25					
																02	NONE 0	STRGHT										
																	PRVTE	NE-SW									000	013	00
																	PSNGR CAR		02	PSNG	INJB	60	M			000	000		00
																03	NONE 0	STRGHT										
																	PRVTE	NE-SW									022		00
																	PSNGR CAR		01	DRVR	INJC	55	F	OTH-Y		000	000		00
																								N-RES					
																03	NONE 0	STRGHT										
																	PRVTE	NE-SW									022		00
																	PSNGR CAR		02	PSNG	INJC	56	F			000	000		00
																03	NONE 0	STRGHT										
																	PRVTE	NE-SW									022		00
																	PSNGR CAR		03	PSNG	INJC	53	M			000	000		00

CITY OF TUALATIN, WASHINGTON COUNTY

TUALATIN-SHERWOOD and AVERY ST, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

1 - 4 of 48 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G J N I S H V C O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
03873	N	N	N	06/14/2016	14	SW AVERY ST	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE				TU	0	SW TUALATIN-SHERWOOD	NE		STOP SIGN	N	DRY	REAR		PRVTE	NE-SW									000		00
N				1P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	55	M	OR-Y		026	000		29
N				45 22 21.91	-122 47 31.86																OR<25					
													02	NONE 0	STOP											
														PRVTE	NE-SW									011		00
														PSNGR CAR		01	DRVR	INJC	28	M	OR-Y		000	000		00
																					OR<25					
05431	N	N	N	N N 08/15/2016	14	SW AVERY ST	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07
CITY				MO	0	SW TUALATIN-SHERWOOD	NE		TRF SIGNAL	N	DRY	REAR		PRVTE	NE-SW									000		00
N				6P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	26	M	SUSP		043	000		07
N				45 22 21.91	-122 47 31.86																OR<25					
													02	NONE 0	STOP											
														PRVTE	NE-SW									011	013	00
														PSNGR CAR		01	DRVR	INJC	30	F	OR-Y		000	000		00
																					OR<25					
													03	NONE 0	STOP											
														PRVTE	NE-SW									022		00
														PSNGR CAR		01	DRVR	NONE	48	F	OR-Y		000	000		00
																					OR<25					
04932	N	N	N	09/25/2019	14	SW AVERY ST	INTER	CROSS	N	N	CLR	BIKE	01	NONE 0	STRGHT										29
NONE				WE	0	SW TUALATIN-SHERWOOD	NE		TRF SIGNAL	N	DRY	REAR		PRVTE	NE-SW									000		00
N				4P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	59	M	OR-Y		000	000		00
N				45 22 21.91	-122 47 31.86																OR<25					
															-											
															STRGHT	01	BIKE	INJC	00	Unk		I INRD	042	000		29
															NE SW											
08649	N	N	N	12/14/2016	14	SW AVERY ST	INTER	CROSS	N	N	SNOW	ANGL-STP	01	NONE 9	TURN-L										124	08
NONE				WE	0	SW TUALATIN-SHERWOOD	SE		TRF SIGNAL	N	ICE	TURN		N/A	NE-SE									000		00
N				6P			06	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N				45 22 21.91	-122 47 31.86																UNK					
													02	NONE 9	STOP											
														N/A	SE-NW									012		00
														PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																					UNK					
00236	N	N	N	01/12/2017	14	SW AVERY ST	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE				TH	0	SW TUALATIN-SHERWOOD	SE		TRF SIGNAL	N	ICE	REAR		PRVTE	SE-NW									000		00
N				5P			06	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	20	M	OR-Y		026	000		29
N				45 22 21.91	-122 47 31.86																OR<25					

SER# / INVEST / RD DPT / UNLOC?	SPE ALG USC VLK	DRJ UIN CHR OLK	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
												02	NONE 0 PRVTE PSNGR CAR	STOP SE-NW										011 000		00 00
00249	Y N N N N		01/12/2017 TH 2P 45 22 21.91 -122 47 31.86	14 0	SW AVERY ST SW TUALATIN-SHERWOOD	INTER SE 06	CROSS 0	N TRF SIGNAL	N N N	CLR ICE DAY	ANGL-STP TURN PDO	01	NONE 9 N/A PSNGR CAR	TURN-R SW-SE	01	DRVR	NONE	00	Unk	UNK UNK		000	000		01 00 00
												02	NONE 9 N/A PSNGR CAR	STOP SE-NW	01	DRVR	NONE	00	Unk	UNK UNK		000	012 000		00 00
00261	N N N		01/13/2017 FR 8A 45 22 21.91 -122 47 31.86	14 0	SW AVERY ST SW TUALATIN-SHERWOOD	INTER SE 06	CROSS 0	N TRF SIGNAL	N N N	CLR ICE DAY	ANGL-STP TURN PDO	01	NONE 9 N/A PSNGR CAR	TURN-R SW-SE	01	DRVR	NONE	00	Unk	UNK UNK		000	000		08 00 00
												02	NONE 9 N/A PSNGR CAR	STOP SE-NW	01	DRVR	NONE	00	Unk	UNK UNK		000	012 000		00 00
00277	N N N N N		01/14/2017 SA 2P 45 22 21.91 -122 47 31.86	14 0	SW AVERY ST SW TUALATIN-SHERWOOD	INTER SE 06	CROSS 0	N TRF SIGNAL	N N N	CLR ICE DAY	ANGL-STP TURN PDO	01	NONE 9 N/A PSNGR CAR	TURN-R SW-SE	01	DRVR	NONE	00	Unk	UNK UNK		000	000	124	08 00 00
												02	NONE 9 N/A PSNGR CAR	STOP SE-NW	01	DRVR	NONE	00	Unk	UNK UNK		000	012 000		00 00
00300	N N N N N		01/14/2017 SA 4P 45 22 21.91 -122 47 31.86	14 0	SW AVERY ST SW TUALATIN-SHERWOOD	INTER SE 06	CROSS 0	N TRF SIGNAL	N N N	CLR ICE DAY	ANGL-STP TURN PDO	01	NONE 9 N/A PSNGR CAR	TURN-R SW-SE	01	DRVR	NONE	00	Unk	UNK UNK		000	000		08 00 00
												02	NONE 9 N/A PSNGR CAR	STOP SE-NW	01	DRVR	NONE	00	Unk	UNK UNK		000	012 000		00 00
00986	N N N		02/27/2019 WE 4A 45 22 21.91 -122 47 31.86	14 0	SW AVERY ST SW TUALATIN-SHERWOOD	INTER SE 06	CROSS 0	N TRF SIGNAL	N N N	SNOW ICE DLIT	ANGL-STP TURN INJ	01	NONE 0 PRVTE PSNGR CAR	TURN-R SW-SE	01	DRVR	NONE	31	M	OR-Y OR<25		001	000	124	08 00 08

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	I H V	C R L	O W K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																	02	NONE 0 PRVTE PSNGR CAR	STOP SE-NW	01	DRVR	INJC	46	M	OR-Y OR<25		000	012 000		00 00
08199	N	N	N					12/31/2015 TH 11A 45 22 21.91	14 0 -122 47 31.86	SW AVERY ST SW TUALATIN-SHERWOOD	INTER SW 06	CROSS 0	N TRF SIGNAL	N N	UNK UNK DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT SW-NE	01	DRVR	NONE	00	F	UNK UNK		026	013 000 000		29 00 29
																	02	NONE 0 PRVTE PSNGR CAR	STOP SW-NE	01	DRVR	NONE	68	M	OR-Y OR<25		000	011 022	013	00 00
																	03	UNKN 0 UNKN UNKNOWN	STOP SW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
02297	N	N	N	N	N			04/08/2016 FR 7P 45 22 21.91	14 0 -122 47 31.86	SW AVERY ST SW TUALATIN-SHERWOOD	INTER SW 06	CROSS 0	N TRF SIGNAL	N N	CLR DRY DUSK	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT SW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	087 000 000		07 00 00
																	02	NONE 9 N/A PSNGR CAR	STOP SW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
07608	N	N	N					11/05/2016 NONE SA UNK 45 22 21.91	14 0 -122 47 31.86	SW AVERY ST SW TUALATIN-SHERWOOD	INTER SW 06	CROSS 0	N TRF SIGNAL	N N	RAIN WET DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT SW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		29 00 00
																	02	NONE 9 N/A PSNGR CAR	STOP SW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
00687	N	N	N					02/08/2018 NONE TH 3P 45 22 21.91	14 0 -122 47 31.86	SW AVERY ST SW TUALATIN-SHERWOOD	INTER SW 06	CROSS 0	N TRF SIGNAL	N N	CLD DRY DAY	S-1STOP REAR PDO	01	NONE 9 N/A PSNGR CAR	STRGHT SW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		29 00 00
																	02	NONE 9 N/A PSNGR CAR	STOP SW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G S	J U N V	I C H L	S O R K	W DAY / TIME / LAT	CLASS / DIST FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
04744	N	N	N		N	N	08/03/2017	14	SW AVERY ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 1	STRGHT											04
CITY							TH	0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	NE-SW									000		00
N							9A			01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	29	F	OR-Y		020	000		04
N							45 22 21.91	-122 47 31.86																OR<25					
																02	NONE 0	TURN-L											
																	PRVTE	SE-SW									000		00
																	PSNGR CAR		01	DRVR	INJB	53	F	OR-Y		000	000		00
																								OR<25					
07939	N	N	N		N	N	12/12/2017	14	SW AVERY ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT											04
CITY							TU	0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	DRY	TURN		N/A	SW-NE									000		00
N							7P			02	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 21.91	-122 47 31.86																UNK					
																02	NONE 9	TURN-L											
																	N/A	SE-SW									000		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
01300	N	N	N		N	N	03/14/2018	14	SW AVERY ST	INTER	CROSS	N	N	CLD	ANGL-OTH	01	NONE 9	STRGHT											04
CITY							WE	0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	DRY	ANGL		N/A	NW-SE									000		00
N							10A			04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 21.91	-122 47 31.86																UNK					
																02	NONE 9	STRGHT											
																	N/A	SW-NE									000		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
01283	N	N	N				03/10/2015	16	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE							TU	50	SW AVERY ST	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000		00
N							3P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		026	000		29
N							45 22 22.39	-122 47 30.99			(02)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	NE-SW									011		00
																	PSNGR CAR		01	DRVR	INJC	79	F	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STOP											
																	PRVTE	NE-SW									011		00
																	PSNGR CAR		02	PSNG	INJC	00	Unk			000	000		00
06883	N	N	N		N	N	11/16/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										013	07
CITY							MO	100	SW AVERY ST	NE	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	NE-SW									000		00
N							3P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	17	M	OR-Y		043	000		07
N							45 22 22.62	-122 47 30.56			(02)													OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	S H V	W R L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC / INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0	STOP									
																	PRVTE	NE-SW								011	013	00
																	PSNGR CAR		01	DRVR INJC	55	F	OR-Y		000	000		00
																							OR<25					
																03	NONE 0	STOP									
																	PRVTE	NE-SW								022		00
																	PSNGR CAR		01	DRVR INJC	34	M	OR-Y		000	000		00
																							OR<25					
07931	N	N	N				12/22/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT									013	29
NONE							TU	100	SW AVERY ST	NE	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	NE-SW								000		00
N							5P			08			N	DLIT	INJ		PSNGR CAR		01	DRVR NONE	35	F	OR-Y		026	000		29
N							45 22 22.64	-122 47 30.53			(04)												OR<25					
																02	NONE 0	STOP									
																	PRVTE	NE-SW								011	013	00
																	PSNGR CAR		01	DRVR INJC	48	F	OR-Y		000	000		00
																							OR<25					
																03	NONE 0	STOP									
																	PRVTE	NE-SW								022		00
																	PSNGR CAR		01	DRVR NONE	60	F	OR-Y		000	000		00
																							OR<25					
00801	N	N	N				01/30/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-1STOP	01	NONE 9	STRGHT										29
NONE							SA	200	SW AVERY ST	NE	(NONE)	UNKNOWN	N	WET	REAR		N/A	NE-SW								000		00
N							6P			08			N	DLIT	PDO		PSNGR CAR		01	DRVR NONE	00	Unk	UNK		000	000		00
N							45 22 23.27	-122 47 29.38			(02)												UNK					
																02	NONE 9	STOP									
																	N/A	NE-SW								011		00
																	PSNGR CAR		01	DRVR NONE	00	Unk	UNK		000	000		00
																							UNK					
00590	N	N	N	N	N		02/03/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT									087,013	27,07
CITY							SA	200	SW AVERY ST	NE	(NONE)	NONE	N	DRY	REAR		PRVTE	NE-SW								000		00
N							12P			08			N	DAY	INJ		PSNGR CAR		01	DRVR NONE	58	F	OR-Y		016,043	038		27,07
N							45 22 23.25	-122 47 29.41			(02)												OR<25					
																02	NONE 0	STOP									
																	PRVTE	NE-SW								011	013	00
																	PSNGR CAR		01	DRVR NONE	73	F	OR-Y		000	000		00
																							OR<25					
																03	NONE 0	STOP									
																	PRVTE	NE-SW								022		00
																	PSNGR CAR		01	DRVR NONE	27	M	OR-Y		000	000		00
																							OR<25					
																03	NONE 0	STOP									
																	PRVTE	NE-SW								022		00
																	PSNGR CAR		02	PSNG INJC	14	F			000	000		00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
06768	N	N	N		N	N	11/11/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
CITY			WE					250	SW AVERY ST	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000	00
N			1P							08			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	25	F	OR-Y		043	000	07
N			45 22 23.53					-122 47 28.89			(03)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	NONE	22	F	OR-Y		000	000	00
																								OR<25				
																03	NONE 0	STRGHT										
																	PRVTE	NE-SW									022	00
																	PSNGR CAR		01	DRVR	INJB	33	F	OR-Y		000	000	00
																								OR<25				
																03	NONE 0	STRGHT										
																	PRVTE	NE-SW									022	00
																	PSNGR CAR		02	PSNG	INJB	10	M			000	000	00
03260	N	N	N		N	N	06/13/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
CITY			SA					264	SW AVERY ST	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000	00
N			1P							08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	23	F	OR-Y		026	038	29
N			45 22 23.53					-122 47 28.9			(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	INJC	35	M	OR-Y		000	000	00
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		02	PSNG	INJC	33	F			000	000	00
07841	N	N	N				12/18/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
CITY			FR					300	SW AVERY ST	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000	00
N			6P							08			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	29	M	OR-Y		043	000	07
N			45 22 23.85					-122 47 28.31			(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	INJC	58	M	OR-Y		000	000	00
																								OR<25				
00845	N	N	N				02/14/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	FOG	S-1STOP	01	NONE 0	STRGHT										07
CITY			SA					300	SW AVERY ST	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000	00
N			9A							08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	24	M	OR-Y		043	000	07
N			45 22 23.84					-122 47 28.34			(02)													OR<25				

SER# / INVEST / RD DPT / UNLOC?	SPE DLS	DRJ GNC	MSW HRO	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
													02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW	01	DRVR	NONE	20	F	OR-Y OR<25		000	011 000		00 00
01240	N N N	N N		03/06/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE 0	STRGHT											07
CITY				MO	300	SW AVERY ST	NE	(NONE)	NONE	N	WET	REAR		PRVTE	NE-SW									000		00
N N				3P 45 22 23.86	-122 47 28.3		08	(02)		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	21	M	OR-Y OR<25		043	000		07
													01	NONE 0 PRVTE PSNGR CAR	STRGHT NE-SW	02	PSNG	INJC	36	F			000	000 000		00 00
													02	NONE 0 PRVTE PSNGR CAR	STRGHT NE-SW	01	DRVR	NONE	43	M	SUSP OR<25		000	000 000		00 00
06521	N N N	N N		11/28/2018	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	RAIN	S-1STOP	01	NONE 0	STRGHT											27,29
CITY				WE	346	SW AVERY ST	NE	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	NE-SW									000		00
N N				6A 45 22 24.15	-122 47 27.77		08	(02)		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	26	F	OR-Y OR<25		016,026	038		27,29
													01	NONE 0 PRVTE PSNGR CAR	STRGHT NE-SW	02	PSNG	INJB	39	M			000	000 000		00 00
													02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW	01	DRVR	NONE	53	M	OR-Y OR<25		000	011 000		00 00
													02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW	02	PSNG	INJC	36	M			000	011 000		00 00
02887	N N N	N N		05/29/2015	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013		07
CITY				FR	400	SW AVERY ST	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW									000		00
N N				1P 45 22 24.45	-122 47 27.22		08	(02)		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	51	F	OR-Y OR<25		043	000		07
													02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW	01	DRVR	INJC	55	F	OR-Y OR<25		000	011 000	013	00 00
													03	NONE 0 PRVTE PSNGR CAR	STOP NE-SW	01	DRVR	INJC	44	M	OR-Y OR<25		000	022 000		00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G S	J N V	I H L	C O R K	W DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL TRLR OWNER	USE QTY / TYPE	MOVE / FROM / TO	P#	PRTC	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02619	N	N	N		N	N	05/05/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-STRGHT	01	NONE	9	STRGHT												07
CITY			FR					500	SW AVERY ST	NE	(NONE)	UNKNOWN	N	WET	REAR		N/A		NE-SW									000		00
N			6A							08			N	DAWN	PDO		SEMI TOW			01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 22 25.07					-122 47 26.09			(02)														UNK					
																02	NONE	9	STRGHT											
																	N/A		NE-SW									000		00
																	SEMI TOW			01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK					
02127	N	N	N		N	N	04/14/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE	1	STRGHT											013	07
CITY			FR					815	SW AVERY ST	NE	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE		NE-SW									000		00
N			8A							08			N	DAY	INJ		SEMI TOW			01	DRVR	NONE	38	M	OR-Y		043	000		07
N			45 22 26.96					-122 47 22.65			(02)														OR>25					
																02	NONE	0	STOP											
																	PRVTE		NE-SW									011	013	00
																	PSNGR CAR			01	DRVR	INJC	63	M	OR-Y		000	000		00
																									OR<25					
																03	NONE	0	STRGHT											
																	PRVTE		NE-SW									022		00
																	PSNGR CAR			01	DRVR	NONE	33	M	OR-Y		000	000		00
																									OR<25					
06371	N	N	N		N	N	12/03/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE	0	STRGHT											013	27,07
CITY			TU					1000	SW AVERY ST	NE	(NONE)	NONE	N	DRY	REAR		PRVTE		NE-SW									000		00
N			12P							08			N	DAY	INJ		PSNGR CAR			01	DRVR	NONE	38	F	OR-Y		016,043	038		27,07
N			45 22 28					-122 47 20.75			(02)														OR<25					
																02	NONE	0	STOP											
																	PRVTE		NE-SW									011	013	00
																	PSNGR CAR			01	DRVR	INJC	83	M	OR-Y		000	000		00
																									OR<25					
																02	NONE	0	STOP											
																	PRVTE		NE-SW									011	013	00
																	PSNGR CAR			02	PSNG	INJC	80	F			000	000		00
																03	NONE	0	STOP											
																	PRVTE		NE-SW									022		00
																	PSNGR CAR			01	DRVR	NONE	68	M	OR-Y		000	000		00
																									OR<25					
03248	N	N	N		N	N	06/24/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE	0	STRGHT												07
CITY			MO					1300	SW AVERY ST	NE	(NONE)	NONE	N	DRY	REAR		PRVTE		NE-SW									000		00
N			5P							08			N	DAY	INJ		PSNGR CAR			01	DRVR	NONE	16	M	OR-Y		043	000		07
N			45 22 29.92					-122 47 17.25			(02)														OR<25					

SER# / INVEST / RD DPT / UNLOC?	SPD / ELE / DCS	ALG / USH / SVL	MJU / NHK	ICR	SWO	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
															02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW	01	DRVR	INJC	22	F	OR-Y OR<25		000	011 000		00 00
04853 NONE N N	N	N	N			09/14/2018 FR 5P 45 22 31.14	14 1500 -122 47 15.03	SW TUALATIN-SHERWOOD SW AVERY ST	STRGHT NE 07	(NONE) (02)	N UNKNOWN	N N	CLR DRY DAY	S-1TURN TURN PDO	01	NONE 9 N/A PSNGR CAR	U-TURN SW-SW	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		08 00 00
															02	NONE 9 N/A PSNGR CAR	STRGHT SW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		00 00
04270 CITY Y N	N	N	N	N	N	06/29/2016 WE 7P 45 22 20.49	17 150 -122 47 30.35	SW AVERY ST SW TUALATIN-SHERWOOD	STRGHT SE 05	(NONE) (02)	N UNKNOWN	Y N	CLR DRY DAY	FIX OBJ FIX INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT NW-SE	01	DRVR	INJC	28	F	OR-Y OR<25		081	100 000	100	22 22 00
05848 NONE N N	N	N	N			09/20/2017 WE 3P 45 22 21.49	14 40 -122 47 32.7	SW TUALATIN-SHERWOOD SW AVERY ST	STRGHT SW 06	(NONE) (03)	Y UNKNOWN	N N	RAIN WET DAY	S-STRGHT SS-O PDO	01	NONE 9 N/A PSNGR CAR	STRGHT SW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		13 00 00
															02	NONE 9 N/A PSNGR CAR	STRGHT SW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		00 00
00849 NONE N N	N	N	N			02/14/2015 SA 10A 45 22 21.43	14 50 -122 47 32.82	SW TUALATIN-SHERWOOD SW AVERY ST	STRGHT SW 07	(NONE) (02)	N UNKNOWN	N N	CLR DRY DAY	S-STRGHT REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT NE-SW	01	DRVR	NONE	46	M	OR-Y OR>25		042	000 000		29 00 29
															02	NONE 0 PRVTE PSNGR CAR	STRGHT NE-SW	01	DRVR	NONE	34	F	OR-Y OR<25		000	006 000		00 00
															02	NONE 0 PRVTE PSNGR CAR	STRGHT NE-SW	02	PSNG	NO<5	04	F			000	006 000		00 00
02745 CITY N N	N	N	N	N	N	04/26/2016 TU 3P 45 22 21.43	14 50 -122 47 32.82	SW TUALATIN-SHERWOOD SW AVERY ST	STRGHT SW 06	(NONE) (02)	Y NONE	N N	CLD DRY DAY	O-STRGHT SS-M PDO	01	NONE 9 N/A PSNGR CAR	STRGHT NE-SW	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		07 00 00

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	S I H L	W C O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 9 N/A TRUCK	STRGHT SW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	000		00 00
05672	N	N	N				10/23/2018	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
NONE							TU	50	SW AVERY ST	SW	(NONE)	UNKNOWN	N	DRY	REAR		N/A	SW-NE								000		00
N N							5P 45 22 21.42	-122 47 32.83		06	(02)		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000		00
																02	NONE 9 N/A PSNGR CAR	STOP SW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
03398	N	N	N		N	N	07/02/2019	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT											07
CITY							TU	50	SW AVERY ST	SW	(NONE)	NONE	N	DRY	REAR		N/A	NE-SW								000		00
N N							4P 45 22 21.42	-122 47 32.83		05	(02)		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000		00
																02	NONE 9 N/A PSNGR CAR	STOP NE-SW	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
05942	N	N	N		N	N	09/04/2016	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLD	S-1STOP	01	NONE 0	STRGHT										013	07
CITY							SU	75	SW AVERY ST	SW	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	SW-NE								000		00
N N							10A 45 22 21.3	-122 47 33.08		08	(02)		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	62	M	OR-Y OR<25		043	000		07
																02	NONE 0 PRVTE PSNGR CAR	STOP SW-NE	01	DRVR	INJC	54	M	OR-Y OR<25		000	011 000	013	00 00
																02	NONE 0 PRVTE PSNGR CAR	STOP SW-NE	02	PSNG	INJC	54	F			000	011 000	013	00 00
																03	NONE 0 PRVTE PSNGR CAR	STOP SW-NE	01	DRVR	INJC	57	F	OR-Y OR>25		000	022 000		00 00
06743	N	N	N		N	N	12/05/2018	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	29
CITY							WE	75	SW AVERY ST	SW	(NONE)	NONE	N	DRY	REAR		PRVTE	SW-NE								000		00
N N							4P 45 22 21.29	-122 47 33.09		08	(02)		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	85	F	OR-Y OR<25		026	000		29

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	S H V	W R L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0	STOP										
																	PRVTE	SW-NE									011	013	00
																	PSNGR CAR		01	DRVR	NONE	47	M	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP										
																	PRVTE	SW-NE									022		00
																	PSNGR CAR		01	DRVR	NONE	34	M	OTH-Y		000	000		00
																								N-RES					
02710	N	N	N				04/25/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
NONE							MO	100	SW AVERY ST	SW	(NONE)	UNKNOWN	N	DRY	REAR		N/A	NE-SW									000		00
N							5P			07			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 21.15	-122 47 33.38			(02)													UNK					
																02	NONE 9	STOP										
																	N/A	NE-SW									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
08424	N	N	N				12/31/2017	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
NONE							SU	100	SW AVERY ST	SW	(NONE)	UNKNOWN	N	DRY	REAR		N/A	SW-NE									000		00
N							2P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 21.14	-122 47 33.39			(02)													UNK					
																02	NONE 9	STOP										
																	N/A	SW-NE									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
03426	N	N	N	N	N		05/25/2016	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT											17,29
CITY							WE	200	SW AVERY ST	SW	(NONE)	NONE	N	DRY	REAR		PRVTE	NE-SW									000		00
N							5P			07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	26	M	OR-Y		026	028		17,29
N							45 22 20.53	-122 47 34.61			(02)													OR<25					
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011		00
																	PSNGR CAR		01	DRVR	INJC	44	M	OR-Y		000	000		00
																								OR<25					
03569	N	N	N				07/12/2019	14	SW TUALATIN-SHERWOOD	STRGHT		Y	N	CLR	S-STRGHT	01	NONE 9	STRGHT											29
NONE							FR	200	SW AVERY ST	SW	(NONE)	UNKNOWN	N	DRY	REAR		N/A	SW-NE									000		00
N							7A			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 22 20.56	-122 47 34.55			(02)													UNK					
																02	NONE 9	STRGHT										
																	N/A	SW-NE									006		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G U N	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
01379	Y	N	N	N	N		03/14/2015	16	SW TUALATIN-SHERWOOD	STRGHT		N	N	RAIN	S-STRGHT	01	NONE 0	STRGHT											07,30
CITY			SA	450	SW AVERY ST	SW	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	SW-NE											000		00
N			1P			08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	17	F	OR-Y		043,050	038		07,30
N			45 22 19.08	-122 47 37.12			(02)													OR<25						
																02	NONE 0	STRGHT										
																	PRVTE	SW-NE								006		00
																	PSNGR CAR		01	DRVR	INJC	55	F	OR-Y		000	000		00
																								OR<25				
07145	N	N	N	N	N		12/24/2018	14	SW TUALATIN-SHERWOOD	STRGHT		N	N	CLR	S-1STOP	01	NONE	STRGHT									013	29,27
CITY			MO	500	SW AVERY ST	SW	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	NE-SW											000		00
N			4P			07			N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	72	F	OR-Y		016,026	038		29,27
N			45 22 18.76	-122 47 37.72			(02)													OR<25						
																02	NONE	STOP										
																	PRVTE	NE-SW								011	013	00
																	PSNGR CAR		01	DRVR	INJC	41	M	OR-Y		000	000		00
																								OR<25				
																03	NONE	STOP										
																	PRVTE	NE-SW								011		00
																	PSNGR CAR		01	DRVR	NONE	31	M	OR-Y		000	000		00
																								OR>25				

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

CIPOLE RD and HERMAN RD, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
FINAL TOTAL														

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

CIPOLE RD and HERMAN RD, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	MAJOR INJURY CRASHES	MODERATE INJURY CRASHES	MINOR INJURY CRASHES	PROP DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	MAJOR INJURIES	MODERATE INJURIES	MINOR INJURIES
FINAL TOTAL										

CITY OF TUALATIN, WASHINGTON COUNTY

CIPOLE RD and HERMAN RD, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D R U G S	M J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

124TH AVE and CIMINO ST, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2017														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2017 TOTAL	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**
FINAL TOTAL	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

124TH AVE and CIMINO ST, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	MAJOR INJURY CRASHES	MODERATE INJURY CRASHES	MINOR INJURY CRASHES	PROP DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	MAJOR INJURIES	MODERATE INJURIES	MINOR INJURIES
YEAR: 2017										
REAR-END	0	0	0	0	1	1	0	0	0	0
2017 TOTAL	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**
FINAL TOTAL	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

124TH AVE and CIMINO ST, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

1 - 1 of 1 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D R J U G S	M J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
05345	N	N	N		N	N	08/31/2017	16	SW CIMINO ST	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 9	STRGHT										27
CITY							TH	0	SW 124TH AVE	N		STOP SIGN	N	DRY	REAR		N/A	N -S									000	00
N							3P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N							45 22 17.75	-122 48 20.26																UNK				
																02	NONE 9	STOP										
																	N/A	N -S									011	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

124TH AVE at MYSLONY ST, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2016														
SIDESWIPE - MEETING	0	1	0	1	0	2	0	1	0	0	1	1	0	0
YEAR 2016 TOTAL	**0**	**1**	**0**	**1**	**0**	**2**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**
YEAR: 2015														
TURNING MOVEMENTS	0	1	1	2	0	1	2	1	1	1	1	2	0	0
YEAR 2015 TOTAL	**0**	**1**	**1**	**2**	**0**	**1**	**2**	**1**	**1**	**1**	**1**	**2**	**0**	**0**
FINAL TOTAL	**0**	**2**	**1**	**3**	**0**	**3**	**2**	**2**	**1**	**1**	**2**	**3**	**0**	**0**

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

124TH AVE at MYSLONY ST, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	MAJOR INJURY CRASHES	MODERATE INJURY CRASHES	MINOR INJURY CRASHES	PROP DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	MAJOR INJURIES	MODERATE INJURIES	MINOR INJURIES
YEAR: 2016										
SIDESWIPE - MEETING	0	0	1	0	0	1	0	0	1	1
2016 TOTAL	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**1**	**1**
YEAR: 2015										
TURNING MOVEMENTS	0	0	0	1	1	2	0	0	0	1
2015 TOTAL	**0**	**0**	**0**	**1**	**1**	**2**	**0**	**0**	**0**	**1**
FINAL TOTAL	**0**	**0**	**1**	**1**	**1**	**3**	**0**	**0**	**1**	**2**

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	I H L	S C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
00601	N	N	N					02/02/2015	16	SW MYSLONY ST	INTER	3-LEG	N	N	RAIN	ANGL-OTH	01	NONE 0	TURN-R										02
NONE								MO	0	SW 124TH AVE	CN		TRF SIGNAL	N	WET	TURN		PRVTE	E -N								015	00
N								5A			02	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	47	M	OR-Y		028	000	02
N								45 22 35.33	-122 48 17.98																OR<25				
																	02	NONE 0	STRGHT										
																		PRVTE	S -N									000	00
																		TRUCK		01	DRVR	INJC	47	M	OR-Y		000	000	00
																									OR<25				
03338	N	N	N		N	N		06/16/2015	16	SW MYSLONY ST	INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										02
CITY								TU	0	SW 124TH AVE	CN		STOP SIGN	N	DRY	TURN		PRVTE	S -N								000	00
N								10A			02	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	34	F	OR-Y		000	000	00
N								45 22 35.33	-122 48 17.98																OR<25				
																	01	NONE 0	STRGHT										
																		PRVTE	S -N									000	00
																		PSNGR CAR		01	PSNG	NO<5	01	M			000	000	00
																	01	NONE 0	STRGHT										
																		PRVTE	S -N									000	00
																		PSNGR CAR		02	PSNG	NO<5	04	M			000	000	00
																	02	NONE 0	TURN-L										
																		PRVTE	E -S									015	00
																		TRUCK		01	DRVR	NONE	53	F	OR-Y		028	000	02
																									OR<25				
01826	N	N	N		N	N		03/18/2016	16	SW MYSLONY ST	INTER	3-LEG	N	N	CLR	O-1STOP	01	NONE 0	STRGHT										05
CITY								FR	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	SS-M		PRVTE	N -S								000	00
N								4A			04	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	47	M	NONE		044	000	05
N								45 22 35.33	-122 48 17.98																OR<25				
																	02	NONE 0	STOP										
																		PRVTE	S -N									012	00
																		MTRCYCLE		01	DRVR	INJB	36	M	OR-Y		000	000	00
																									OR>25				

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

124TH AVE and HERMAN RD, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2019														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	0	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	0	1	1	1	1	2	0	0
YEAR 2019 TOTAL	**0**	**1**	**2**	**3**	**0**	**1**	**0**	**2**	**1**	**2**	**1**	**2**	**0**	**0**
YEAR: 2018														
BACKING	0	0	1	1	0	0	0	1	0	1	0	1	0	0
REAR-END	0	0	1	1	0	0	0	1	0	1	0	0	1	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2018 TOTAL	**0**	**0**	**3**	**3**	**0**	**0**	**0**	**3**	**0**	**3**	**0**	**2**	**1**	**0**
YEAR: 2017														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	0	1	1	0	1	0	0
YEAR 2017 TOTAL	**0**	**1**	**1**	**2**	**0**	**1**	**0**	**1**	**1**	**2**	**0**	**2**	**0**	**0**
YEAR: 2016														
ANGLE	0	1	0	1	0	3	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2016 TOTAL	**0**	**1**	**1**	**2**	**0**	**3**	**0**	**2**	**0**	**2**	**0**	**2**	**0**	**0**
YEAR: 2015														
ANGLE	0	0	1	1	0	0	0	1	0	1	0	1	0	0

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

124TH AVE and HERMAN RD, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2015 TOTAL	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**2**	**0**	**0**
FINAL TOTAL	**0**	**3**	**9**	**12**	**0**	**5**	**0**	**10**	**2**	**11**	**1**	**10**	**1**	**0**

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

124TH AVE and HERMAN RD, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

COLLISION TYPE	FATAL CRASHES	MAJOR INJURY CRASHES	MODERATE INJURY CRASHES	MINOR INJURY CRASHES	PROP DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	MAJOR INJURIES	MODERATE INJURIES	MINOR INJURIES
YEAR: 2019										
REAR-END	0	0	0	0	1	1	0	0	0	0
TURNING MOVEMENTS	0	0	0	1	1	2	0	0	0	1
2019 TOTAL	**0**	**0**	**0**	**1**	**2**	**3**	**0**	**0**	**0**	**1**
YEAR: 2018										
BACKING	0	0	0	0	1	1	0	0	0	0
REAR-END	0	0	0	0	1	1	0	0	0	0
TURNING MOVEMENTS	0	0	0	0	1	1	0	0	0	0
2018 TOTAL	**0**	**0**	**0**	**0**	**3**	**3**	**0**	**0**	**0**	**0**
YEAR: 2017										
REAR-END	0	0	0	0	1	1	0	0	0	0
TURNING MOVEMENTS	0	0	0	1	0	1	0	0	0	1
2017 TOTAL	**0**	**0**	**0**	**1**	**1**	**2**	**0**	**0**	**0**	**1**
YEAR: 2016										
ANGLE	0	1	0	0	0	1	0	1	2	0
TURNING MOVEMENTS	0	0	0	0	1	1	0	0	0	0
2016 TOTAL	**0**	**1**	**0**	**0**	**1**	**2**	**0**	**1**	**2**	**0**
YEAR: 2015										
ANGLE	0	0	0	0	1	1	0	0	0	0
REAR-END	0	0	0	0	1	1	0	0	0	0
2015 TOTAL	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**0**
FINAL TOTAL	**0**	**1**	**0**	**2**	**9**	**12**	**0**	**1**	**2**	**2**

CITY OF TUALATIN, WASHINGTON COUNTY

124TH AVE and HERMAN RD, City of Tualatin, Washington County, 01/01/2015 to 12/31/2019

1 - 5 of 12 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT EVENT	CAUSE
01033	N	N	N		N	N	02/28/2019	16	SW HERMAN RD	INTER	CROSS	N	N	CLD	ANGL-OTH	01	NONE 9	TURN-R										27,02
CITY			TH				0	SW 124TH AVE	N		TRF SIGNAL	N	WET	TURN		N/A	E -N									000	00
N			1P							00	2		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N			45 22 42.84				-122 48 17.93																	UNK				
																02	NONE 9	STRGHT										
																	N/A	S -N									000	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
03529	N	N	N				06/14/2017	16	SW HERMAN RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 9	TURN-R										29
NONE			WE				0	SW 124TH AVE	NE		TRF SIGNAL	N	DRY	REAR		N/A	E -N									000	00
N			5P							09	2		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N			45 22 42.84				-122 48 17.93																	UNK				
																02	NONE 9	STOP										
																	N/A	E -N									011	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
03577	N	N	N		N	N	06/26/2015	17	SW HERMAN RD	INTER	CROSS	N	N	CLR	S-STRGHT	01	NONE 0	STRGHT										29
CITY			FR				0	SW 124TH AVE	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W									000	00
N			12P							06	2		N	DAY	PDO		PSNGR CAR										000	29
N			45 22 42.84				-122 48 17.93																	OR-Y OR<25	026			
																02	NONE 0	STOP										
																	PRVTE	E -W									011	00
																	PSNGR CAR		01	DRVR	NONE	54	M	OR-Y OR<25	000	000	000	00
01769	N	N	N				04/10/2018	16	SW HERMAN RD	INTER	CROSS	N	N	CLR	O-1STOP	01	NONE 9	BACK										10
NONE			TU				0	SW 124TH AVE	W		TRF SIGNAL	N	DRY	BACK		N/A	E -W									000	00
N			3P							09	2		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N			45 22 42.84				-122 48 17.93																	UNK				
																02	NONE 9	STOP										
																	N/A	W -E									011	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
02985	N	N	N		N	N	06/02/2015	16	SW HERMAN RD	INTER	CROSS	N	N	CLD	ANGL-OTH	01	NONE 0	STRGHT										04
CITY			TU				0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	E -W									000	00
N			9A							01	1		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	68	M	OR-Y OR<25	020	000	04	
N			45 22 42.84				-122 48 17.93																					
																02	NONE 0	STRGHT										
																	PUBLC	N -S									000	00
																	SCHL BUS		01	DRVR	NONE	57	M	OR-Y OR<25	000	000	00	

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
05366	N	N	N		N	N	08/12/2016	16	SW HERMAN RD	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											04
CITY							FR	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	E -W									000	00
N							9A			02	2		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	30	F	OR-Y		000	000	00
N							45 22 42.84	-122 48 17.93																OR<25				
																01	NONE 0	STRGHT										
																	PRVTE	E -W									000	00
																	PSNGR CAR		02	PSNG	INJB	08	F			000	000	00
																02	NONE 0	STRGHT										
																	PRVTE	S -N									000	00
																	PSNGR CAR		01	DRVR	INJA	56	F	OR-Y		020	000	04
																								OR<25				
02422	N	N	N		N	N	04/13/2016	16	SW HERMAN RD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 9	STRGHT											02
CITY							WE	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	TURN		N/A	S -N									000	00
N							3P			04	2		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N							45 22 42.84	-122 48 17.93																UNK				
																02	NONE 9	TURN-L										
																	N/A	N -E									000	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
01933	N	N	N		N	N	04/07/2017	16	SW HERMAN RD	INTER	CROSS	N	N	CLD	O-1 L-TURN	01	NONE 0	STRGHT											02
CITY							FR	0	SW 124TH AVE	CN		TRF SIGNAL	N	WET	TURN		PRVTE	S -N									000	00
N							1P			04	2		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	29	M	OR-Y		000	000	00
N							45 22 42.84	-122 48 17.93																OR<25				
																02	NONE 0	TURN-L										
																	PRVTE	N -E									000	00
																	PSNGR CAR		01	DRVR	NONE	45	M	OR-Y		004,028	000	02
																								OR<25				
05408	N	N	N		N	N	10/11/2018	16	SW HERMAN RD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 9	TURN-L											04
CITY							TH	0	SW 124TH AVE	CN		TRF SIGNAL	N	DRY	TURN		N/A	N -E									000	00
N							1P			04	2		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N							45 22 42.84	-122 48 17.93																UNK				
																02	NONE 9	STRGHT										
																	N/A	S -N									000	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
06891	N	N	N				12/24/2019	16	SW HERMAN RD	INTER	CROSS	N	N	CLD	O-1 L-TURN	01	NONE 0	STRGHT											02
CITY							TU	0	SW 124TH AVE	CN		L-GRN-SIG	N	DRY	TURN		PRVTE	S -N									000	00
N							5P			04	2		N	DUSK	INJ		PSNGR CAR		01	DRVR	INJC	30	M	OR-Y		000	000	00
N							45 22 42.84	-122 48 17.93																OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	S H V	W O R L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0 PRVTE PSNGR CAR	TURN-L N -E						OR-Y OR<25		028,004	000 000		00 02
02786	N	N	N	N	N		06/01/2018	17	SW HERMAN RD	STRGHT		Y	N	CLR	S-1STOP	01	NONE 9	STRGHT											07
CITY			FR					100	SW 124TH AVE	E	(NONE)	UNKNOWN	N	DRY	REAR		N/A	E -W									000		00
N N			5P 45 22 43.42					-122 48 15.94		08	(02)		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000		00
																02	NONE 9 N/A PSNGR CAR	STOP E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00
03519	N	N	N	N	N		07/10/2019	17	SW HERMAN RD	STRGHT		N	N	CLD	S-1STOP	01	NONE 9	STRGHT											27,29
CITY			WE					200	SW 124TH AVE	E	(NONE)	UNKNOWN	N	DRY	REAR		N/A	E -W									000		00
N N			4P 45 22 43.8					-122 48 14.66		08	(02)		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000		00
																02	NONE 9 N/A PSNGR CAR	STOP E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	011 000		00 00

Left-Turn Lane Warrant Analysis

Project: 21086 - TLP
Intersection: Site Access at Cipole Road - Scenario 1
Date: 12/15/2021
Scenario: Buildout - AM Peak Hour

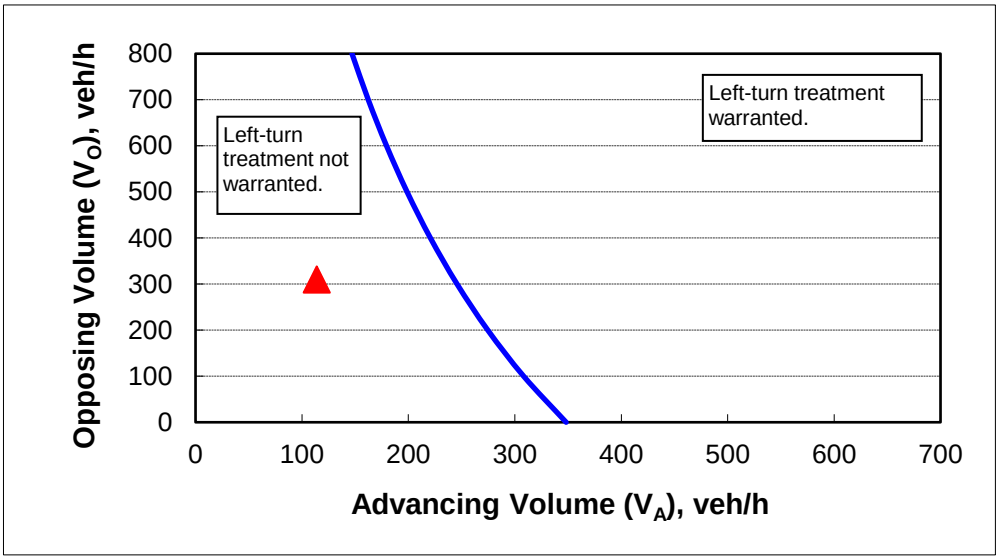
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	50
Percent of left-turns in advancing volume (V_A), %:	25%
Advancing volume (V_A), veh/h:	114
Opposing volume (V_O), veh/h:	310

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	243
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 21086 - TLP
Intersection: Site Access at Cipole Road - Scenario 1
Date: 12/15/2021
Scenario: Buildout - PM Peak Hour

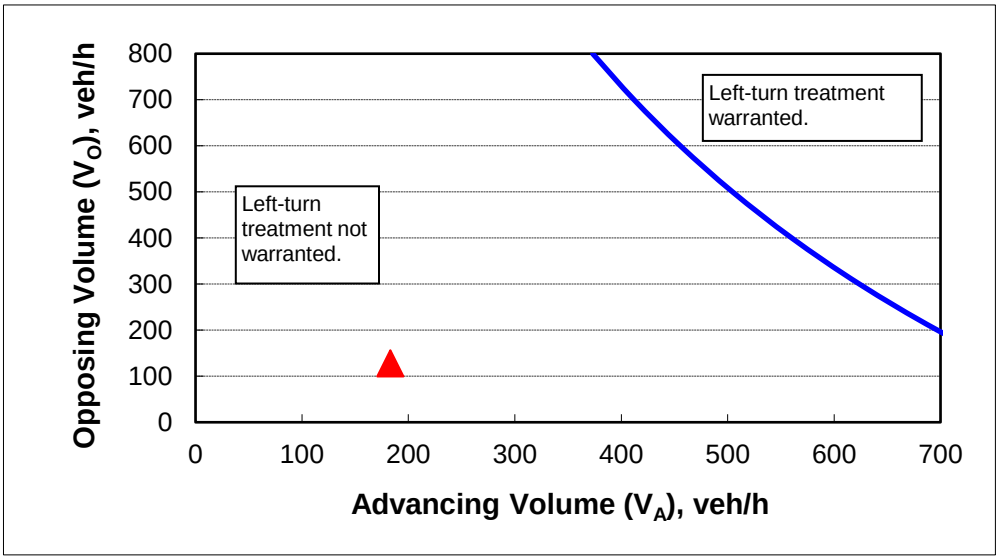
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	50
Percent of left-turns in advancing volume (V_A), %:	3%
Advancing volume (V_A), veh/h:	183
Opposing volume (V_O), veh/h:	128

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	757
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 21086 - TLP
Intersection: Site Access at Cipole Road - Scenario 2
Date: 12/15/2021
Scenario: Buildout - AM Peak Hour

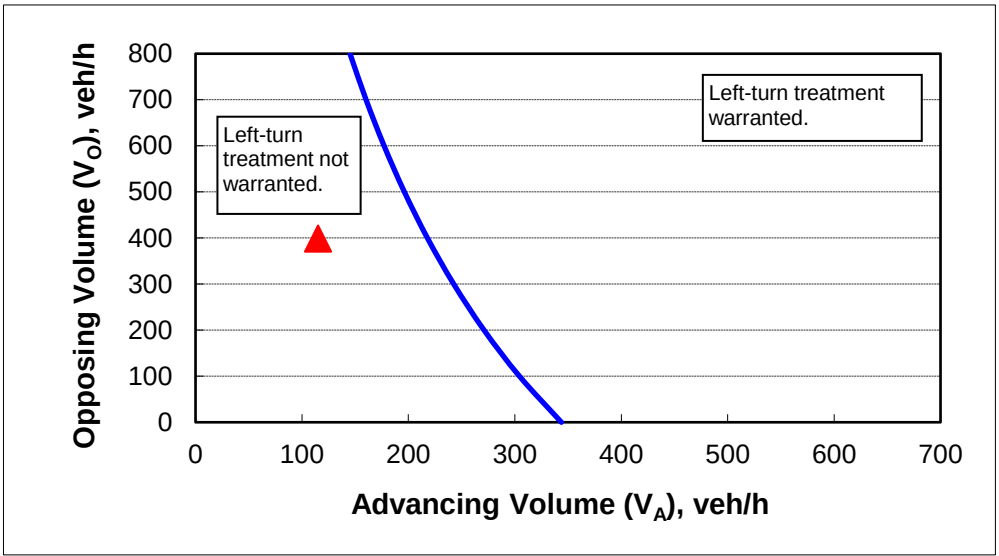
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	50
Percent of left-turns in advancing volume (V_A), %:	26%
Advancing volume (V_A), veh/h:	115
Opposing volume (V_O), veh/h:	399

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	218
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 21086 - TLP
Intersection: Site Access at Cipole Road - Scenario 2
Date: 12/15/2021
Scenario: Buildout - PM Peak Hour

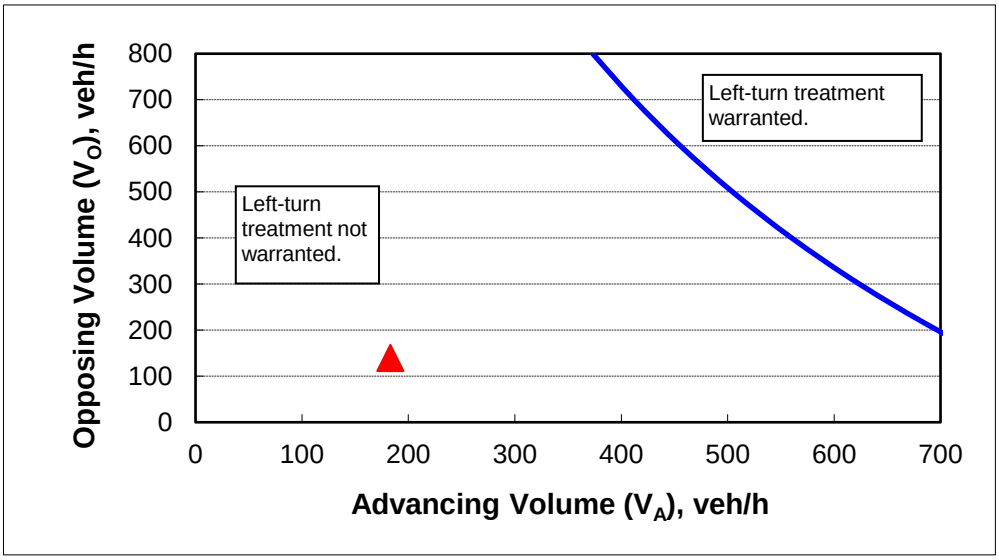
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	50
Percent of left-turns in advancing volume (V_A), %:	3%
Advancing volume (V_A), veh/h:	183
Opposing volume (V_O), veh/h:	140

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	747
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 21086 - TLP
Intersection: Site Access at Cipole Road - Scenario 3
Date: 12/15/2021
Scenario: Buildout - AM Peak Hour

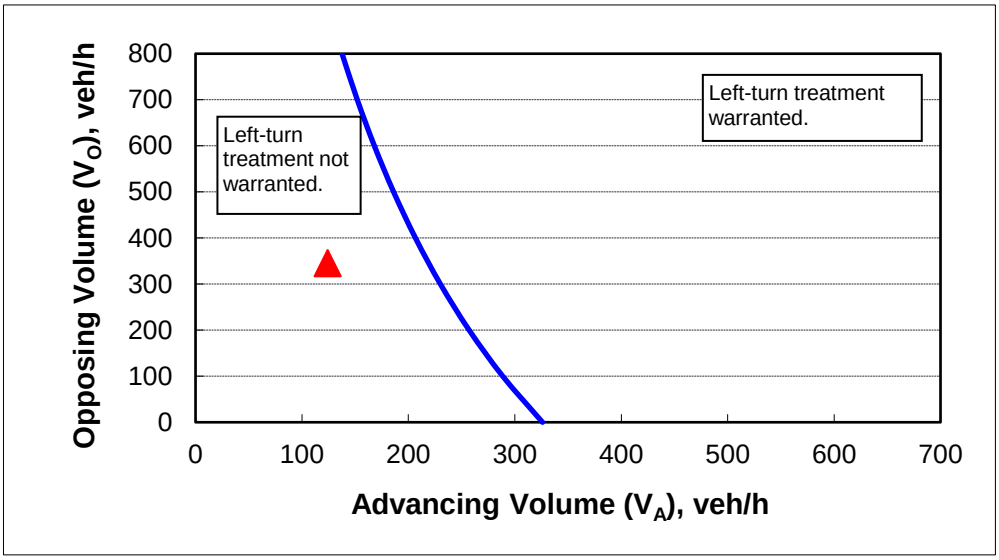
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	50
Percent of left-turns in advancing volume (V_A), %:	31%
Advancing volume (V_A), veh/h:	124
Opposing volume (V_O), veh/h:	345

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	219
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 21086 - TLP
Intersection: Site Access at Cipole Road - Scenario 3
Date: 12/15/2021
Scenario: Buildout - PM Peak Hour

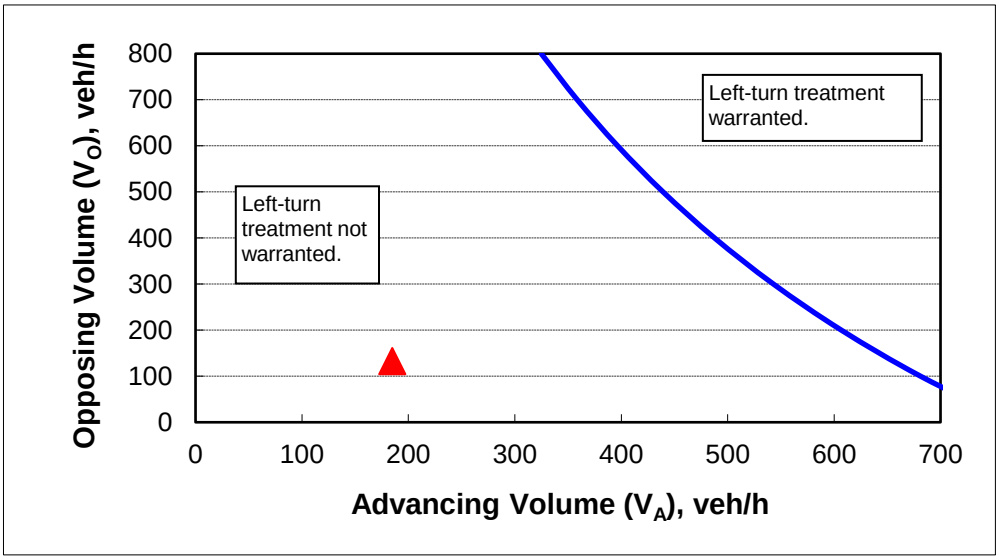
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	50
Percent of left-turns in advancing volume (V_A), %:	4%
Advancing volume (V_A), veh/h:	185
Opposing volume (V_O), veh/h:	133

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	655
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 21086 - TLP
Intersection: Site Access at Cipole Road - Scenario 4
Date: 12/15/2021
Scenario: Buildout - AM Peak Hour

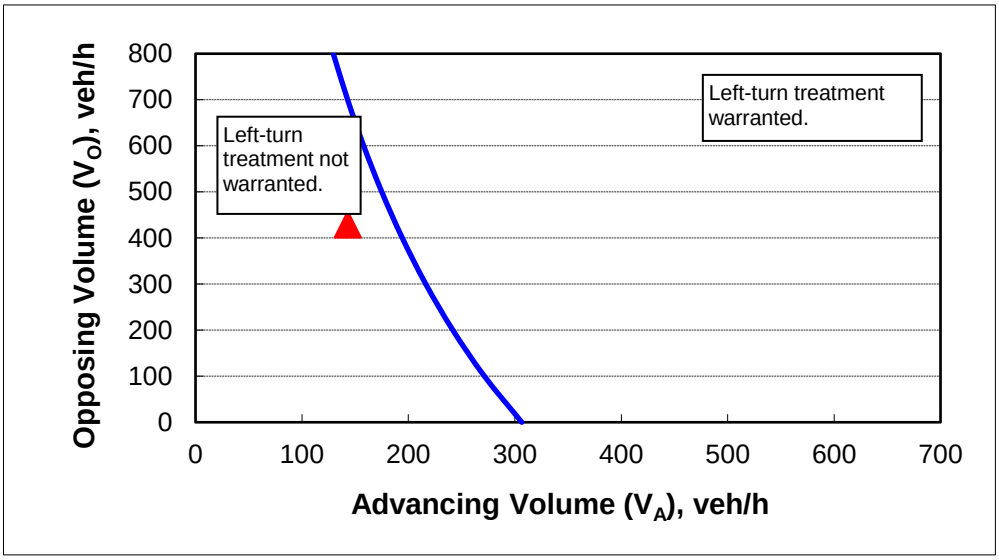
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	50
Percent of left-turns in advancing volume (V_A), %:	41%
Advancing volume (V_A), veh/h:	143
Opposing volume (V_O), veh/h:	429

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	188
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: 21086 - TLP
Intersection: Site Access at Cipole Road - Scenario 4
Date: 12/15/2021
Scenario: Buildout - PM Peak Hour

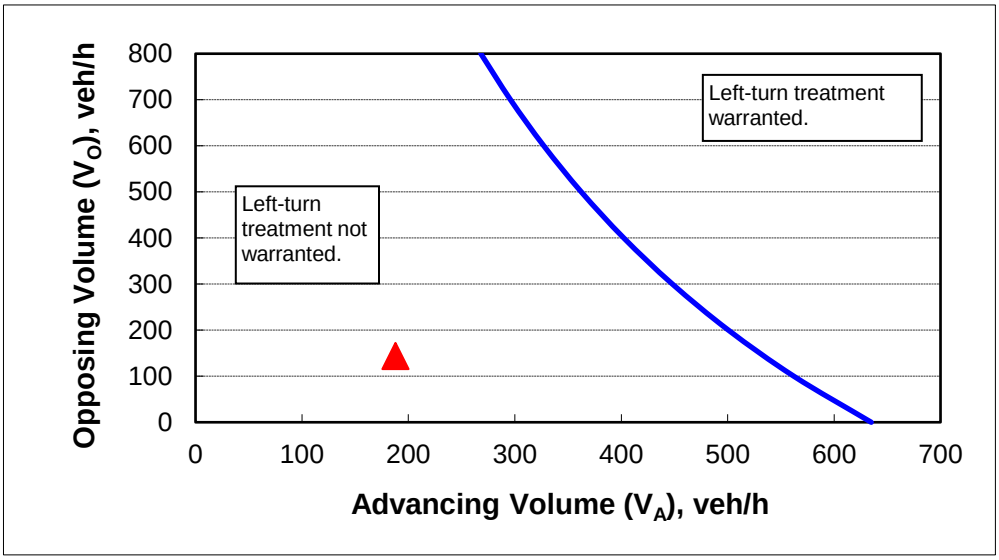
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	50
Percent of left-turns in advancing volume (V_A), %:	6%
Advancing volume (V_A), veh/h:	188
Opposing volume (V_O), veh/h:	144

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	534
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Preliminary Traffic Signal Warrant Analysis

Project: 21086 - Tualatin Logistics Park
Date: 12/15/2021
Scenario: Year 2025 Buildout Conditions - Scenario 1

Major Street:	SW Cipole Rd		Minor Street:	SW Access	
Number of Lanes:	2		Number of Lanes:	1	
PM Peak Hour Volumes:	311		PM Peak Hour Volumes:	148	Total
				29	Rights
				50%	RT Discount

Warrant Used:

X — 100 percent of standard warrants used

_____ — 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	3,110	10,600	
Minor Street*	1,340	2,650	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	3,110	15,900	
Minor Street*	1,340	1,350	**No**
Combination Warrant			
Major Street	3,110	12,720	
Minor Street*	1,340	2,120	**No**

* Minor street right-turning traffic volumes reduced by 50%.

Preliminary Traffic Signal Warrant Analysis

Project: 21086 - Tualatin Logistics Park
Date: 12/15/2021
Scenario: Year 2025 Buildout Conditions - Scenario 2

Major Street:	SW Cipole Rd		Minor Street:	SW Access	
Number of Lanes:	2		Number of Lanes:	1	
PM Peak Hour Volumes:	323		PM Peak Hour Volumes:	199	Total
				54	Rights
				50%	RT Discount

Warrant Used:

X — 100 percent of standard warrants used

_____ — 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	3,230	10,600	
Minor Street*	1,720	2,650	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	3,230	15,900	
Minor Street*	1,720	1,350	**No**
Combination Warrant			
Major Street	3,230	12,720	
Minor Street*	1,720	2,120	**No**

* Minor street right-turning traffic volumes reduced by 50%.

Preliminary Traffic Signal Warrant Analysis

Project: 21086 - Tualatin Logistics Park
Date: 12/15/2021
Scenario: Year 2025 Buildout Conditions - Scenario 3

Major Street:	SW Cipole Rd		Minor Street:	SW Access	
Number of Lanes:	2		Number of Lanes:	1	
PM Peak Hour Volumes:	318		PM Peak Hour Volumes:	186	Total
				36	Rights
				50%	RT Discount

Warrant Used:

X — 100 percent of standard warrants used

_____ — 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	3,180	10,600	
Minor Street*	1,680	2,650	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	3,180	15,900	
Minor Street*	1,680	1,350	**No**
Combination Warrant			
Major Street	3,180	12,720	
Minor Street*	1,680	2,120	**No**

* Minor street right-turning traffic volumes reduced by 50%.

Preliminary Traffic Signal Warrant Analysis

Project: 21086 - Tualatin Logistics Park
Date: 12/15/2021
Scenario: Year 2025 Buildout Conditions - Scenario 4

Major Street:	SW Cipole Rd		Minor Street:	SW Access	
Number of Lanes:	2		Number of Lanes:	1	
PM Peak Hour Volumes:	311		PM Peak Hour Volumes:	111	Total
				30	Rights
				50%	RT Discount

Warrant Used:

X — 100 percent of standard warrants used

_____ — 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	3,110	10,600	
Minor Street*	960	2,650	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	3,110	15,900	
Minor Street*	960	1,350	**No**
Combination Warrant			
Major Street	3,110	12,720	
Minor Street*	960	2,120	**No**

* Minor street right-turning traffic volumes reduced by 50%.

Preliminary Traffic Signal Warrant Analysis

Project: 21086 - Tualatin Logistics Park
Date: 12/15/2021
Scenario: Year 2025 Buildout Conditions - Scenario 1

Major Street:	SW Cipole Rd		Minor Street:	SE Access	
Number of Lanes:	2		Number of Lanes:	1	
PM Peak Hour Volumes:	1123		PM Peak Hour Volumes:	127	Total
				101	Rights
				50%	RT Discount

Warrant Used:

X — 100 percent of standard warrants used

_____ — 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	11,230	10,600	
Minor Street*	770	2,650	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	11,230	15,900	
Minor Street*	770	1,350	**No**
Combination Warrant			
Major Street	11,230	12,720	
Minor Street*	770	2,120	**No**

* Minor street right-turning traffic volumes reduced by 50%.

Preliminary Traffic Signal Warrant Analysis

Project: 21086 - Tualatin Logistics Park
Date: 12/15/2021
Scenario: Year 2025 Buildout Conditions - Scenario 4

Major Street:	SW Cipole Rd		Minor Street:	SE Access	
Number of Lanes:	2		Number of Lanes:	1	
PM Peak Hour Volumes:	1193		PM Peak Hour Volumes:	88	Total
				64	Rights
				50%	RT Discount

Warrant Used:

X — 100 percent of standard warrants used

_____ — 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	11,930	10,600	
Minor Street*	560	2,650	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	11,930	15,900	
Minor Street*	560	1,350	**No**
Combination Warrant			
Major Street	11,930	12,720	
Minor Street*	560	2,120	**No**

* Minor street right-turning traffic volumes reduced by 50%.

Preliminary Traffic Signal Warrant Analysis

Project: 21086 - Tualatin Logistics Park
Date: 12/15/2021
Scenario: Year 2025 Buildout Conditions - Scenario 2

Major Street:	SW Cipole Rd		Minor Street:	NE Access	
Number of Lanes:	2		Number of Lanes:	1	
PM Peak Hour Volumes:	1130		PM Peak Hour Volumes:	76	Total
				76	Rights
				100%	RT Discount

Warrant Used:

X — 100 percent of standard warrants used

_____ — 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	11,300	10,600	
Minor Street*	0	2,650	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	11,300	15,900	
Minor Street*	0	1,350	**No**
Combination Warrant			
Major Street	11,300	12,720	
Minor Street*	0	2,120	**No**

* Minor street right-turning traffic volumes reduced by 100%.

Preliminary Traffic Signal Warrant Analysis

Project: 21086 - Tualatin Logistics Park
Date: 12/15/2021
Scenario: Year 2025 Buildout Conditions - Scenario 3

Major Street:	SW Cipole Rd		Minor Street:	NE Access	
Number of Lanes:	2		Number of Lanes:	1	
PM Peak Hour Volumes:	1130		PM Peak Hour Volumes:	89	Total
				71	Rights
				50%	RT Discount

Warrant Used:

X — 100 percent of standard warrants used

_____ — 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	11,300	10,600	
Minor Street*	540	2,650	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	11,300	15,900	
Minor Street*	540	1,350	**No**
Combination Warrant			
Major Street	11,300	12,720	
Minor Street*	540	2,120	**No**

* Minor street right-turning traffic volumes reduced by 50%.

Preliminary Traffic Signal Warrant Analysis

Project: 21086 - Tualatin Logistics Park
Date: 12/15/2021
Scenario: Year 2025 Buildout Conditions - Scenario 4

Major Street:	SW Cipole Rd		Minor Street:	NE Access	
Number of Lanes:	2		Number of Lanes:	1	
PM Peak Hour Volumes:	1130		PM Peak Hour Volumes:	76	Total
				76	Rights
				100%	RT Discount

Warrant Used:

X — 100 percent of standard warrants used

_____ — 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

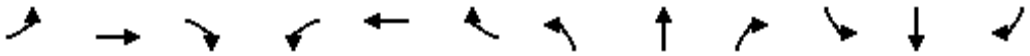
	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	11,300	10,600	
Minor Street*	0	2,650	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	11,300	15,900	
Minor Street*	0	1,350	**No**
Combination Warrant			
Major Street	11,300	12,720	
Minor Street*	0	2,120	**No**

* Minor street right-turning traffic volumes reduced by 100%.

Appendix D – Operations Analysis

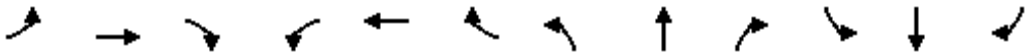
Synchro Reports

SimTraffic Queuing Reports



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	810	121	114	618	6	87	3	342	4	0	0
Future Volume (vph)	8	810	121	114	618	6	87	3	342	4	0	0
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		4.0	
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	0.98	1.00	1.00			1.00	0.99		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	
Satd. Flow (prot)	1655	1743	1449	1570	1650			1675	1475		1444	
Flt Permitted	0.40	1.00	1.00	0.18	1.00			0.73	1.00		0.66	
Satd. Flow (perm)	701	1743	1449	300	1650			1283	1475		1003	
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)	8	853	127	120	651	6	92	3	360	4	0	0
RTOR Reduction (vph)	0	0	23	0	0	0	0	0	91	0	0	0
Lane Group Flow (vph)	8	853	104	120	657	0	0	95	269	0	4	0
Confl. Peds. (#/hr)	1					1	1					1
Confl. Bikes (#/hr)			4						2			
Heavy Vehicles (%)	9%	9%	9%	15%	15%	15%	8%	8%	8%	25%	25%	25%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	61.3	60.6	60.6	74.0	69.3			12.7	22.1		12.7	
Effective Green, g (s)	61.3	62.1	62.1	74.0	70.8			12.7	22.1		12.7	
Actuated g/C Ratio	0.64	0.65	0.65	0.77	0.74			0.13	0.23		0.13	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			4.0	4.0		4.0	
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5			1.5	1.5		1.5	
Lane Grp Cap (vph)	453	1125	935	354	1214			169	400		132	
v/s Ratio Prot	0.00	c0.49		0.03	0.40				c0.07			
v/s Ratio Perm	0.01		0.07	0.23				0.07	0.12		0.00	
v/c Ratio	0.02	0.76	0.11	0.34	0.54			0.56	0.67		0.03	
Uniform Delay, d1	6.4	11.8	6.5	9.0	5.6			39.1	33.8		36.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	3.1	0.1	0.2	0.6			2.5	3.5		0.0	
Delay (s)	6.4	14.9	6.6	9.2	6.1			41.7	37.2		36.4	
Level of Service	A	B	A	A	A			D	D		D	
Approach Delay (s)		13.8			6.6			38.2			36.4	
Approach LOS		B			A			D			D	

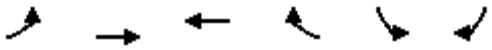
Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	96.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	810	121	114	618	6	87	3	342	4	0	0
Future Volume (veh/h)	8	810	121	114	618	6	87	3	342	4	0	0
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		1.00	1.00		0.97	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	1767	1767	1767	1678	1678	1678	1781	1781	1781	1530	1530	1530
Adj Flow Rate, veh/h	8	853	101	120	651	6	92	3	265	4	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
Percent Heavy Veh, %	9	9	9	15	15	15	8	8	8	25	25	25
Cap, veh/h	416	1114	923	297	1113	10	346	10	362	208	0	0
Arrive On Green	0.01	0.63	0.63	0.05	0.67	0.67	0.19	0.19	0.19	0.19	0.00	0.00
Sat Flow, veh/h	1682	1767	1463	1598	1660	15	1395	52	1470	685	0	0
Grp Volume(v), veh/h	8	853	101	120	0	657	95	0	265	4	0	0
Grp Sat Flow(s),veh/h/ln	1682	1767	1463	1598	0	1675	1447	0	1470	685	0	0
Q Serve(g_s), s	0.2	33.2	2.6	2.5	0.0	20.5	0.0	0.0	16.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.2	33.2	2.6	2.5	0.0	20.5	4.6	0.0	16.0	5.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.97		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	416	1114	923	297	0	1123	356	0	362	208	0	0
V/C Ratio(X)	0.02	0.77	0.11	0.40	0.00	0.58	0.27	0.00	0.73	0.02	0.00	0.00
Avail Cap(c_a), veh/h	591	1392	1153	814	0	1494	457	0	471	276	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	1.00	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	8.3	12.7	7.1	13.5	0.0	8.6	33.1	0.0	33.6	35.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.2	0.1	0.3	0.0	0.6	0.1	0.0	2.6	0.0	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	11.1	0.7	1.0	0.0	5.9	1.9	0.0	5.9	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	14.9	7.1	13.8	0.0	9.2	33.2	0.0	36.1	35.2	0.0	0.0
LnGrp LOS	A	B	A	B	A	A	C	A	D	D	A	A
Approach Vol, veh/h		962			777			360			4	
Approach Delay, s/veh		14.0			9.9			35.4			35.2	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	64.8		22.8	5.0	68.7		22.8				
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0				
Max Green Setting (Gmax), s	36.0	74.5		26.0	11.0	84.5		26.0				
Max Q Clear Time (g_c+I1), s	4.5	35.2		7.0	2.2	22.5		18.0				
Green Ext Time (p_c), s	0.2	24.1		0.0	0.0	19.8		0.6				

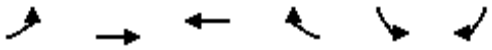
Intersection Summary												
HCM 6th Ctrl Delay			16.2									
HCM 6th LOS			B									



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	110	1055	705	75	47	30
Future Volume (vph)	110	1055	705	75	47	30
Ideal Flow (vphpl)	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	1.00	1.00	1.00
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	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1671	1759	1667	1388	1399	1252
Flt Permitted	0.31	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	542	1759	1667	1388	1399	1252
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	115	1099	734	78	49	31
RTOR Reduction (vph)	0	0	0	13	0	28
Lane Group Flow (vph)	115	1099	734	65	49	3
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	8%	8%	14%	14%	29%	29%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	100.0	100.0	90.6	90.6	9.5	9.5
Effective Green, g (s)	100.0	101.5	92.1	92.1	10.5	10.5
Actuated g/C Ratio	0.83	0.85	0.77	0.77	0.09	0.09
Clearance Time (s)	4.0	5.5	5.5	5.5	5.0	5.0
Vehicle Extension (s)	1.5	3.5	3.5	3.5	2.0	2.0
Lane Grp Cap (vph)	502	1487	1279	1065	122	109
v/s Ratio Prot	0.01	c0.62	0.44		c0.04	
v/s Ratio Perm	0.18			0.05		0.00
v/c Ratio	0.23	0.74	0.57	0.06	0.40	0.02
Uniform Delay, d1	3.6	3.8	5.8	3.4	51.8	50.1
Progression Factor	1.00	1.00	0.66	0.36	1.00	1.00
Incremental Delay, d2	0.1	3.3	1.5	0.1	0.8	0.0
Delay (s)	3.7	7.1	5.3	1.3	52.6	50.1
Level of Service	A	A	A	A	D	D
Approach Delay (s)		6.8	4.9		51.6	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		

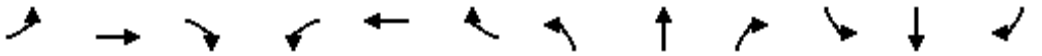
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	110	1055	705	75	47	30
Future Volume (veh/h)	110	1055	705	75	47	30
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	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	1781	1781	1693	1693	1470	1470
Adj Flow Rate, veh/h	115	1099	734	62	49	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	14	14	29	29
Cap, veh/h	642	1561	1358	1127	80	71
Arrive On Green	0.04	0.88	1.00	1.00	0.06	0.06
Sat Flow, veh/h	1697	1781	1693	1405	1400	1246
Grp Volume(v), veh/h	115	1099	734	62	49	31
Grp Sat Flow(s),veh/h/ln	1697	1781	1693	1405	1400	1246
Q Serve(g_s), s	1.3	23.9	0.0	0.0	4.1	2.9
Cycle Q Clear(g_c), s	1.3	23.9	0.0	0.0	4.1	2.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	642	1561	1358	1127	80	71
V/C Ratio(X)	0.18	0.70	0.54	0.06	0.61	0.44
Avail Cap(c_a), veh/h	655	1561	1358	1127	268	239
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.51	0.51	0.74	0.74	1.00	1.00
Uniform Delay (d), s/veh	1.5	2.4	0.0	0.0	55.3	54.7
Incr Delay (d2), s/veh	0.0	1.4	1.1	0.1	2.8	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.2	0.4	0.0	1.5	2.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.5	3.8	1.1	0.1	58.1	56.3
LnGrp LOS	A	A	A	A	E	E
Approach Vol, veh/h		1214	796		80	
Approach Delay, s/veh		3.6	1.1		57.4	
Approach LOS		A	A		E	

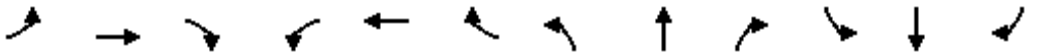
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		109.2		10.8	8.9	100.3
Change Period (Y+Rc), s		5.5		5.0	4.0	5.5
Max Green Setting (Gmax), s		87.5		22.0	5.8	77.7
Max Q Clear Time (g_c+I1), s		25.9		6.1	3.3	2.0
Green Ext Time (p_c), s		54.1		0.2	0.0	38.9

Intersection Summary	
HCM 6th Ctrl Delay	4.7
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	942	92	24	558	189	170	208	70	167	185	52
Future Volume (vph)	68	942	92	24	558	189	170	208	70	167	185	52
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	4.0	5.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	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	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1612	1696	1408	1583	1667	1401	1625	1712	1455	1583	1667	1391
Flt Permitted	0.29	1.00	1.00	0.06	1.00	1.00	0.38	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	499	1696	1408	98	1667	1401	642	1712	1455	522	1667	1391
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	73	1013	99	26	600	203	183	224	75	180	199	56
RTOR Reduction (vph)	0	0	35	0	0	74	0	0	62	0	0	44
Lane Group Flow (vph)	73	1013	64	26	600	129	183	224	13	180	199	12
Confl. Peds. (#/hr)			2	2			1					1
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	12%	12%	12%	14%	14%	14%	11%	11%	11%	14%	14%	14%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	74.4	69.6	77.6	71.2	68.0	76.0	28.2	20.2	20.2	28.2	20.2	25.0
Effective Green, g (s)	74.4	71.1	77.6	71.2	69.5	76.0	28.2	21.7	20.2	28.2	21.7	25.0
Actuated g/C Ratio	0.62	0.59	0.65	0.59	0.58	0.63	0.23	0.18	0.17	0.23	0.18	0.21
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5	5.5	4.0	5.5	4.0
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0	2.0	1.5	2.0	1.5
Lane Grp Cap (vph)	353	1004	910	97	965	887	216	309	244	193	301	289
v/s Ratio Prot	c0.01	c0.60	0.00	0.01	0.36	0.01	0.06	0.13		c0.06	0.12	0.00
v/s Ratio Perm	0.12		0.04	0.15		0.08	0.14		0.01	c0.16		0.01
v/c Ratio	0.21	1.01	0.07	0.27	0.62	0.14	0.85	0.72	0.05	0.93	0.66	0.04
Uniform Delay, d1	11.5	24.5	7.8	24.4	16.6	8.9	42.5	46.3	41.9	43.4	45.7	37.9
Progression Factor	1.03	0.97	1.36	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	26.4	0.0	0.5	3.0	0.0	24.3	7.0	0.0	45.3	4.2	0.0
Delay (s)	11.9	50.1	10.7	24.9	19.6	8.9	66.8	53.3	41.9	88.6	49.9	37.9
Level of Service	B	D	B	C	B	A	E	D	D	F	D	D
Approach Delay (s)		44.4			17.2			56.7			64.4	
Approach LOS		D			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	942	92	24	558	189	170	208	70	167	185	52
Future Volume (veh/h)	68	942	92	24	558	189	170	208	70	167	185	52
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		0.99	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	1722	1722	1722	1693	1693	1693	1737	1737	1737	1693	1693	1693
Adj Flow Rate, veh/h	73	1013	83	26	600	128	183	224	53	180	199	34
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	14	14	14	11	11	11	14	14	14
Cap, veh/h	360	1043	942	113	1002	916	220	295	231	202	288	280
Arrive On Green	0.04	0.61	0.59	0.02	0.59	0.58	0.07	0.17	0.16	0.07	0.17	0.16
Sat Flow, veh/h	1640	1722	1423	1612	1693	1415	1654	1737	1467	1612	1693	1430
Grp Volume(v), veh/h	73	1013	83	26	600	128	183	224	53	180	199	34
Grp Sat Flow(s),veh/h/ln	1640	1722	1423	1612	1693	1415	1654	1737	1467	1612	1693	1430
Q Serve(g_s), s	2.1	67.6	2.5	0.8	26.9	4.2	8.0	14.7	3.8	8.0	13.3	2.4
Cycle Q Clear(g_c), s	2.1	67.6	2.5	0.8	26.9	4.2	8.0	14.7	3.8	8.0	13.3	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	360	1043	942	113	1002	916	220	295	231	202	288	280
V/C Ratio(X)	0.20	0.97	0.09	0.23	0.60	0.14	0.83	0.76	0.23	0.89	0.69	0.12
Avail Cap(c_a), veh/h	380	1043	942	155	1002	916	220	420	336	202	409	382
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)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	22.6	7.4	28.7	15.5	8.3	45.4	47.5	44.2	45.9	46.8	39.8
Incr Delay (d2), s/veh	0.1	16.4	0.1	0.4	2.6	0.3	21.6	2.7	0.2	34.3	1.1	0.1
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	0.7	28.3	0.7	0.4	10.1	1.2	3.1	6.4	1.4	3.7	5.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	39.0	7.5	29.1	18.1	8.6	67.0	50.1	44.4	80.3	48.0	39.8
LnGrp LOS	B	D	A	C	B	A	E	D	D	F	D	D
Approach Vol, veh/h		1169			754			460			413	
Approach Delay, s/veh		35.1			16.9			56.2			61.4	
Approach LOS		D			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	76.7	12.0	24.4	8.6	75.0	12.0	24.4
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	6.0	59.5	8.0	27.5	6.0	59.5	8.0	27.5
Max Q Clear Time (g_c+I1), s	2.8	69.6	10.0	15.3	4.1	28.9	10.0	16.7
Green Ext Time (p_c), s	0.0	0.0	0.0	1.7	0.1	17.2	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

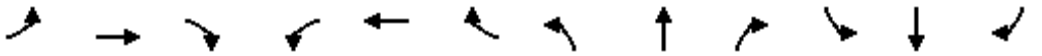
Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1139	39	11	771	17	15
Future Vol, veh/h	1139	39	11	771	17	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	440	-	0	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	10	10	13	13	93	93
Mvmt Flow	1199	41	12	812	18	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1240	0	2035	1199
Stage 1	-	-	-	-	1199	-
Stage 2	-	-	-	-	836	-
Critical Hdwy	-	-	4.23	-	7.33	7.13
Critical Hdwy Stg 1	-	-	-	-	6.33	-
Critical Hdwy Stg 2	-	-	-	-	6.33	-
Follow-up Hdwy	-	-	2.317	-	4.337	4.137
Pot Cap-1 Maneuver	-	-	525	-	35	149
Stage 1	-	-	-	-	191	-
Stage 2	-	-	-	-	303	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	525	-	34	149
Mov Cap-2 Maneuver	-	-	-	-	121	-
Stage 1	-	-	-	-	191	-
Stage 2	-	-	-	-	296	-

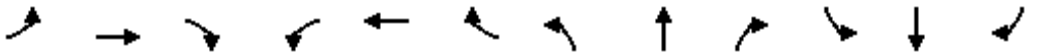
Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	41
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	133	-	-	525	-
HCM Lane V/C Ratio	0.253	-	-	0.022	-
HCM Control Delay (s)	41	-	-	12	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1020	129	197	740	10	40	0	84	3	1	2
Future Volume (vph)	5	1020	129	197	740	10	40	0	84	3	1	2
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	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00			1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.99	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	0.99	1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1640	1727	1449	3127	1692			1337	1182	1534	1462	
Flt Permitted	0.35	1.00	1.00	0.95	1.00			0.76	1.00	0.73	1.00	
Satd. Flow (perm)	605	1727	1449	3127	1692			1064	1182	1177	1462	
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)	5	1085	137	210	787	11	43	0	89	3	1	2
RTOR Reduction (vph)	0	0	23	0	0	0	0	0	31	0	2	0
Lane Group Flow (vph)	5	1085	114	210	798	0	0	43	58	3	1	0
Confl. Peds. (#/hr)	2					2			2	2		
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	10%	10%	10%	12%	12%	12%	35%	35%	35%	17%	17%	17%
Turn Type	pm+pt	NA	Perm	Prot	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2				8		8	4		
Actuated Green, G (s)	101.0	100.0	100.0	13.7	112.7			11.8	25.5	11.8	11.8	
Effective Green, g (s)	102.0	101.5	101.5	14.2	114.2			12.3	26.5	12.3	12.3	
Actuated g/C Ratio	0.73	0.72	0.72	0.10	0.82			0.09	0.19	0.09	0.09	
Clearance Time (s)	4.5	5.5	5.5	4.5	5.5			4.5	4.5	4.5	4.5	
Vehicle Extension (s)	2.0	3.5	3.5	2.0	3.5			2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	451	1252	1050	317	1380			93	257	103	128	
v/s Ratio Prot	0.00	c0.63		c0.07	0.47				0.02		0.00	
v/s Ratio Perm	0.01		0.08					c0.04	0.03	0.00		
v/c Ratio	0.01	0.87	0.11	0.66	0.58			0.46	0.23	0.03	0.01	
Uniform Delay, d1	5.2	14.2	5.7	60.6	4.5			60.7	48.1	58.4	58.3	
Progression Factor	1.00	1.00	1.00	1.05	0.59			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	8.2	0.2	2.3	1.0			1.3	0.2	0.0	0.0	
Delay (s)	5.2	22.5	6.0	65.8	3.7			62.0	48.2	58.4	58.3	
Level of Service	A	C	A	E	A			E	D	E	E	
Approach Delay (s)		20.5			16.6			52.7			58.4	
Approach LOS		C			B			D			E	

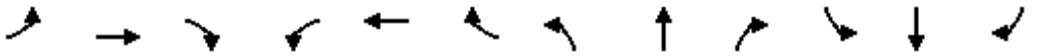
Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1020	129	197	740	10	40	0	84	3	1	2
Future Volume (veh/h)	5	1020	129	197	740	10	40	0	84	3	1	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.99	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	1752	1752	1752	1722	1722	1722	1381	1381	1381	1648	1648	1648
Adj Flow Rate, veh/h	5	1085	110	210	787	11	43	0	57	3	1	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	10	10	12	12	12	35	35	35	17	17	17
Cap, veh/h	500	1323	1106	272	1407	20	125	0	185	88	36	71
Arrive On Green	0.01	0.76	0.76	0.09	0.83	0.82	0.07	0.00	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1668	1752	1464	3182	1694	24	1001	0	1155	1176	486	971
Grp Volume(v), veh/h	5	1085	110	210	0	798	43	0	57	3	0	3
Grp Sat Flow(s),veh/h/ln	1668	1752	1464	1591	0	1717	1001	0	1155	1176	0	1457
Q Serve(g_s), s	0.1	55.7	2.8	9.0	0.0	20.5	5.7	0.0	6.1	0.3	0.0	0.3
Cycle Q Clear(g_c), s	0.1	55.7	2.8	9.0	0.0	20.5	6.0	0.0	6.1	6.3	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	500	1323	1106	272	0	1427	121	0	185	88	0	107
V/C Ratio(X)	0.01	0.82	0.10	0.77	0.00	0.56	0.35	0.00	0.31	0.03	0.00	0.03
Avail Cap(c_a), veh/h	555	1323	1106	477	0	1427	384	0	479	304	0	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.47	0.00	0.47	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.5	11.0	4.5	62.7	0.0	3.7	63.2	0.0	52.1	65.9	0.0	60.4
Incr Delay (d2), s/veh	0.0	5.8	0.2	0.8	0.0	0.7	0.7	0.0	0.3	0.1	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	0.0	19.1	0.8	3.6	0.0	4.8	1.5	0.0	1.8	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.5	16.8	4.7	63.5	0.0	4.5	63.9	0.0	52.4	66.0	0.0	60.4
LnGrp LOS	A	B	A	E	A	A	E	A	D	E	A	E
Approach Vol, veh/h		1200			1008			100			6	
Approach Delay, s/veh		15.6			16.8			57.4			63.2	
Approach LOS		B			B			E			E	

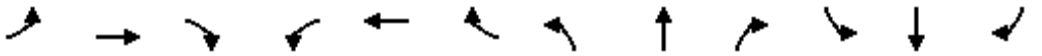
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.0	109.8		14.3	5.4	120.3		14.3				
Change Period (Y+Rc), s	4.5	5.5		4.5	4.5	5.5		4.5				
Max Green Setting (Gmax), s	20.5	59.5		35.5	5.5	59.5		45.5				
Max Q Clear Time (g_c+I1), s	11.0	57.7		8.3	2.1	22.5		8.1				
Green Ext Time (p_c), s	0.4	1.7		0.0	0.0	20.7		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		18.1	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	770	274	19	676	101	253	49	16	25	9	15
Future Volume (vph)	72	770	274	19	676	101	253	49	16	25	9	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.4	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	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	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		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1626	1712	1422	1570	1652	1370	1703	1718		1347	1287	
Flt Permitted	0.19	1.00	1.00	0.14	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	317	1712	1422	235	1652	1370	1703	1718		1347	1287	
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)	78	837	298	21	735	110	275	53	17	27	10	16
RTOR Reduction (vph)	0	0	43	0	0	49	0	9	0	0	15	0
Lane Group Flow (vph)	78	837	255	21	735	61	275	61	0	27	11	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	11%	11%	11%	15%	15%	15%	6%	6%	6%	34%	34%	34%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6						
Actuated Green, G (s)	92.9	83.8	83.8	76.9	73.3	73.3	26.3	29.9		4.7	8.3	
Effective Green, g (s)	92.9	85.3	83.9	76.9	74.8	74.8	26.3	30.4		4.7	8.8	
Actuated g/C Ratio	0.66	0.61	0.60	0.55	0.53	0.53	0.19	0.22		0.03	0.06	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	342	1043	852	163	882	731	319	373		45	80	
v/s Ratio Prot	c0.02	c0.49		0.00	c0.44		c0.16	c0.04		0.02	0.01	
v/s Ratio Perm	0.13		0.18	0.07		0.04						
v/c Ratio	0.23	0.80	0.30	0.13	0.83	0.08	0.86	0.16		0.60	0.14	
Uniform Delay, d1	31.4	20.9	13.7	42.1	27.4	15.9	55.1	44.5		66.7	62.0	
Progression Factor	0.61	0.69	0.85	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	4.0	0.5	0.4	9.1	0.2	20.6	0.2		19.7	0.8	
Delay (s)	19.3	18.3	12.2	42.5	36.5	16.1	75.7	44.7		86.4	62.8	
Level of Service	B	B	B	D	D	B	E	D		F	E	
Approach Delay (s)		16.9			34.0			69.4			74.8	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	770	274	19	676	101	253	49	16	25	9	15
Future Volume (veh/h)	72	770	274	19	676	101	253	49	16	25	9	15
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		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	1737	1737	1737	1678	1678	1678	1811	1811	1811	1396	1396	1396
Adj Flow Rate, veh/h	78	837	249	21	735	61	275	53	12	27	10	11
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, %	11	11	11	15	15	15	6	6	6	34	34	34
Cap, veh/h	433	831	673	379	792	656	271	256	58	31	27	30
Arrive On Green	0.42	0.96	0.94	0.21	0.47	0.47	0.16	0.18	0.18	0.02	0.04	0.04
Sat Flow, veh/h	1654	1737	1436	1598	1678	1390	1725	1428	323	1330	603	664
Grp Volume(v), veh/h	78	837	249	21	735	61	275	0	65	27	0	21
Grp Sat Flow(s),veh/h/ln	1654	1737	1436	1598	1678	1390	1725	0	1752	1330	0	1267
Q Serve(g_s), s	0.0	67.0	1.3	0.0	57.6	2.7	22.0	0.0	4.4	2.8	0.0	2.3
Cycle Q Clear(g_c), s	0.0	67.0	1.3	0.0	57.6	2.7	22.0	0.0	4.4	2.8	0.0	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.52
Lane Grp Cap(c), veh/h	433	831	673	379	792	656	271	0	313	31	0	57
V/C Ratio(X)	0.18	1.01	0.37	0.06	0.93	0.09	1.01	0.00	0.21	0.87	0.00	0.37
Avail Cap(c_a), veh/h	433	831	673	379	815	675	271	0	526	66	0	253
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.47	0.47	0.47	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.4	3.0	0.8	44.2	34.7	13.3	59.0	0.0	49.1	68.2	0.0	65.0
Incr Delay (d2), s/veh	0.1	23.1	0.7	0.1	18.6	0.3	58.4	0.0	0.3	47.7	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	6.5	0.7	0.6	26.3	1.1	13.9	0.0	2.0	1.4	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	26.1	1.5	44.3	53.3	13.6	117.4	0.0	49.4	115.8	0.0	69.0
LnGrp LOS	C	F	A	D	D	B	F	A	D	F	A	E
Approach Vol, veh/h		1164			817			340			48	
Approach Delay, s/veh		21.1			50.1			104.4			95.3	
Approach LOS		C			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.7	71.0	26.0	10.3	33.6	70.1	7.3	29.0
Change Period (Y+Rc), s	4.0	5.5	4.0	4.5	4.0	5.5	4.0	4.5
Max Green Setting (Gmax), s	7.0	65.5	22.0	27.5	6.0	66.5	7.0	41.5
Max Q Clear Time (g_c+I1), s	2.0	69.0	24.0	4.3	2.0	59.6	4.8	6.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	5.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	44.6
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	1	179	6	2	72
Future Vol, veh/h	5	1	179	6	2	72
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	74	74	74	74	74	74
Heavy Vehicles, %	5	5	10	10	17	17
Mvmt Flow	7	1	242	8	3	97

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	349	246	0	0	250	0
Stage 1	246	-	-	-	-	-
Stage 2	103	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.27	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.353	-
Pot Cap-1 Maneuver	642	785	-	-	1233	-
Stage 1	788	-	-	-	-	-
Stage 2	914	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	640	785	-	-	1233	-
Mov Cap-2 Maneuver	640	-	-	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	911	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	660	1233	-
HCM Lane V/C Ratio	-	-	0.012	0.002	-
HCM Control Delay (s)	-	-	10.5	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	165	39	38	113	1	84	1	95	2	0	0
Future Vol, veh/h	2	165	39	38	113	1	84	1	95	2	0	0
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, %	20	20	20	9	9	9	14	14	14	0	0	0
Mvmt Flow	3	223	53	51	153	1	114	1	128	3	0	0
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	11.3	10.3	10.9	8.8
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	47%	1%	25%	100%
Vol Thru, %	1%	80%	74%	0%
Vol Right, %	53%	19%	1%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	206	152	2
LT Vol	84	2	38	2
Through Vol	1	165	113	0
RT Vol	95	39	1	0
Lane Flow Rate	243	278	205	3
Geometry Grp	1	1	1	1
Degree of Util (X)	0.344	0.389	0.29	0.004
Departure Headway (Hd)	5.098	5.027	5.089	5.782
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	701	710	700	623
Service Time	3.173	3.097	3.166	3.782
HCM Lane V/C Ratio	0.347	0.392	0.293	0.005
HCM Control Delay	10.9	11.3	10.3	8.8
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.5	1.8	1.2	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	5	0	2	0	431	34	14	399	0
Future Vol, veh/h	0	0	0	5	0	2	0	431	34	14	399	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	110	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	43	43	43	17	17	17	20	20	20
Mvmt Flow	0	0	0	6	0	2	0	479	38	16	443	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	715	992	222	752	973	259	443	0	0	517	0	0
Stage 1	475	475	-	498	498	-	-	-	-	-	-	-
Stage 2	240	517	-	254	475	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	8.36	7.36	7.76	4.44	-	-	4.5	-	-
Critical Hdwy Stg 1	6.6	5.6	-	7.36	6.36	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	7.36	6.36	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.93	4.43	3.73	2.37	-	-	2.4	-	-
Pot Cap-1 Maneuver	312	239	772	234	191	630	1014	-	-	929	-	-
Stage 1	532	548	-	429	451	-	-	-	-	-	-	-
Stage 2	733	525	-	624	464	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	307	235	772	231	188	630	1014	-	-	929	-	-
Mov Cap-2 Maneuver	307	235	-	231	188	-	-	-	-	-	-	-
Stage 1	532	539	-	429	451	-	-	-	-	-	-	-
Stage 2	730	525	-	613	456	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	18.1	0	0.3
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1014	-	-	-	282	929	-	-
HCM Lane V/C Ratio	-	-	-	-	0.028	0.017	-	-
HCM Control Delay (s)	0	-	-	0	18.1	8.9	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	433	413	0
Future Vol, veh/h	0	0	0	433	413	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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	17	17	20	20
Mvmt Flow	0	0	0	481	459	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	700	230	459	0	-	0
Stage 1	459	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Critical Hdwy	6.9	7	4.44	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.37	-	-	-
Pot Cap-1 Maneuver	367	763	999	-	-	-
Stage 1	594	-	-	-	-	-
Stage 2	768	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	367	763	999	-	-	-
Mov Cap-2 Maneuver	367	-	-	-	-	-
Stage 1	594	-	-	-	-	-
Stage 2	768	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	999	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

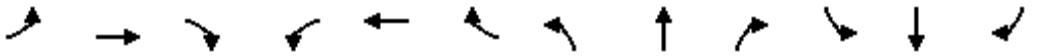
Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	3	28	1	18	17	378	38	42	382	24
Future Vol, veh/h	4	1	3	28	1	18	17	378	38	42	382	24
Conflicting Peds, #/hr	3	0	1	1	0	3	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	13	13	13	41	41	41	18	18	18	17	17	17
Mvmt Flow	5	1	4	33	1	21	20	450	45	50	455	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	840	1106	244	842	1098	251	485	0	0	495	0	0
Stage 1	571	571	-	513	513	-	-	-	-	-	-	-
Stage 2	269	535	-	329	585	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	8.32	7.32	7.72	4.46	-	-	4.44	-	-
Critical Hdwy Stg 1	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.91	4.41	3.71	2.38	-	-	2.37	-	-
Pot Cap-1 Maneuver	240	193	724	201	159	643	969	-	-	967	-	-
Stage 1	446	477	-	423	447	-	-	-	-	-	-	-
Stage 2	683	496	-	561	409	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	217	179	723	188	147	641	968	-	-	967	-	-
Mov Cap-2 Maneuver	217	179	-	188	147	-	-	-	-	-	-	-
Stage 1	436	452	-	414	438	-	-	-	-	-	-	-
Stage 2	643	486	-	527	387	-	-	-	-	-	-	-

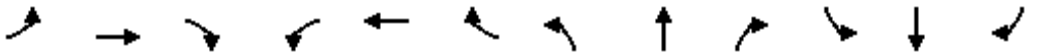
Approach	EB	WB	NB	SB
HCM Control Delay, s	18.1	23	0.3	0.8
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	968	-	-	284	256	967	-	-
HCM Lane V/C Ratio	0.021	-	-	0.034	0.219	0.052	-	-
HCM Control Delay (s)	8.8	-	-	18.1	23	8.9	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.8	0.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	219	55	52	152	38	37	301	62	173	341	63
Future Volume (vph)	30	219	55	52	152	38	37	301	62	173	341	63
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	4.0	
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	0.97		1.00	0.97		1.00	0.97		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)	1597	1631		1597	1627		1504	2919		1702	3315	
Flt Permitted	0.60	1.00		0.38	1.00		0.49	1.00		0.37	1.00	
Satd. Flow (perm)	1006	1631		632	1627		776	2919		659	3315	
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)	34	246	62	58	171	43	42	338	70	194	383	71
RTOR Reduction (vph)	0	11	0	0	10	0	0	20	0	0	16	0
Lane Group Flow (vph)	34	297	0	58	204	0	42	388	0	194	438	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	20%	20%	20%	6%	6%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.5	18.5		23.3	19.9		20.8	17.5		28.2	21.2	
Effective Green, g (s)	22.5	20.0		25.3	21.4		22.8	19.0		30.2	22.7	
Actuated g/C Ratio	0.33	0.30		0.38	0.32		0.34	0.28		0.45	0.34	
Clearance Time (s)	5.0	5.5		5.0	5.5		5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	362	483		300	516		308	822		419	1116	
v/s Ratio Prot	0.00	c0.18		c0.01	0.13		0.01	0.13		c0.05	0.13	
v/s Ratio Perm	0.03			0.06			0.04			c0.15		
v/c Ratio	0.09	0.62		0.19	0.39		0.14	0.47		0.46	0.39	
Uniform Delay, d1	15.3	20.4		14.1	17.9		15.2	20.0		12.0	17.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	2.3		0.1	0.5		0.1	0.4		0.3	0.2	
Delay (s)	15.3	22.7		14.2	18.4		15.3	20.5		12.3	17.3	
Level of Service	B	C		B	B		B	C		B	B	
Approach Delay (s)		22.0			17.5			20.0			15.8	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	67.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	219	55	52	152	38	37	301	62	173	341	63
Future Volume (veh/h)	30	219	55	52	152	38	37	301	62	173	341	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1604	1604	1604	1811	1811	1811
Adj Flow Rate, veh/h	34	246	0	58	171	0	42	338	64	194	383	60
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, %	13	13	13	13	13	13	20	20	20	6	6	6
Cap, veh/h	418	404		370	434		394	596	112	471	894	139
Arrive On Green	0.06	0.24	0.00	0.08	0.25	0.00	0.06	0.23	0.20	0.13	0.30	0.27
Sat Flow, veh/h	1626	1707	0	1626	1707	0	1527	2550	477	1725	2974	462
Grp Volume(v), veh/h	34	246	0	58	171	0	42	200	202	194	220	223
Grp Sat Flow(s),veh/h/ln	1626	1707	0	1626	1707	0	1527	1523	1504	1725	1721	1715
Q Serve(g_s), s	0.8	6.4	0.0	1.3	4.1	0.0	1.0	5.7	5.9	3.9	5.1	5.2
Cycle Q Clear(g_c), s	0.8	6.4	0.0	1.3	4.1	0.0	1.0	5.7	5.9	3.9	5.1	5.2
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.32	1.00		0.27
Lane Grp Cap(c), veh/h	418	404		370	434		394	356	352	471	517	516
V/C Ratio(X)	0.08	0.61		0.16	0.39		0.11	0.56	0.57	0.41	0.43	0.43
Avail Cap(c_a), veh/h	635	1016		558	1016		542	860	849	523	971	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	16.9	0.0	13.0	15.3	0.0	13.0	16.8	17.0	11.4	13.9	14.1
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.1	0.6	0.0	0.0	1.4	1.5	0.2	0.6	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	0.2	2.4	0.0	0.4	1.5	0.0	0.3	1.7	1.8	1.1	1.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.1	18.4	0.0	13.0	15.9	0.0	13.0	18.1	18.5	11.6	14.5	14.7
LnGrp LOS	B	B		B	B		B	B	B	B	B	B
Approach Vol, veh/h		280	A		229	A		444			637	
Approach Delay, s/veh		17.7			15.2			17.8			13.7	
Approach LOS		B			B			B			B	

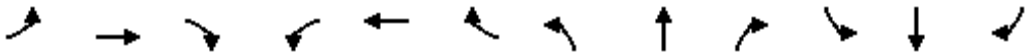
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	15.6	7.8	15.7	7.2	18.9	6.9	16.6
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	7.0	26.5	8.5	28.0	7.0	26.5	8.5	28.0
Max Q Clear Time (g_c+I1), s	5.9	7.9	3.3	8.4	3.0	7.2	2.8	6.1
Green Ext Time (p_c), s	0.0	2.0	0.0	1.3	0.0	2.2	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

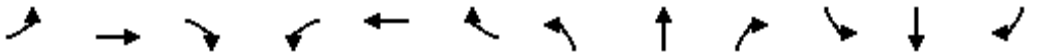
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	786	118	356	945	8	126	1	172	11	10	8
Future Volume (vph)	7	786	118	356	945	8	126	1	172	11	10	8
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		4.0	
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	0.97	1.00	1.00			1.00	0.99		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1736	1827	1512	1752	1842			1741	1539		1793	
Flt Permitted	0.25	1.00	1.00	0.10	1.00			0.78	1.00		0.89	
Satd. Flow (perm)	462	1827	1512	188	1842			1430	1539		1620	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	8	845	127	383	1016	9	135	1	185	12	11	9
RTOR Reduction (vph)	0	0	29	0	0	0	0	0	77	0	8	0
Lane Group Flow (vph)	8	845	98	383	1025	0	0	136	108	0	24	0
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	66.1	65.3	65.3	96.0	91.2			16.7	43.4		16.7	
Effective Green, g (s)	66.1	66.8	66.8	96.0	92.7			16.7	43.4		16.7	
Actuated g/C Ratio	0.54	0.55	0.55	0.79	0.76			0.14	0.36		0.14	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			4.0	4.0		4.0	
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5			1.5	1.5		1.5	
Lane Grp Cap (vph)	258	998	826	489	1397			195	596		221	
v/s Ratio Prot	0.00	c0.46		c0.17	0.56				0.04			
v/s Ratio Perm	0.02		0.06	0.44				c0.10	0.03		0.01	
v/c Ratio	0.03	0.85	0.12	0.78	0.73			0.70	0.18		0.11	
Uniform Delay, d1	17.7	23.4	13.4	31.5	8.0			50.3	27.2		46.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	6.9	0.1	7.4	2.1			8.5	0.1		0.1	
Delay (s)	17.7	30.3	13.5	38.9	10.1			58.8	27.2		46.3	
Level of Service	B	C	B	D	B			E	C		D	
Approach Delay (s)		28.0			18.0			40.6			46.3	
Approach LOS		C			B			D			D	

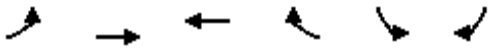
Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	122.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	786	118	356	945	8	126	1	172	11	10	8
Future Volume (veh/h)	7	786	118	356	945	8	126	1	172	11	10	8
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	1841	1841	1841	1856	1856	1856	1841	1841	1841	1900	1900	1900
Adj Flow Rate, veh/h	8	845	95	383	1016	9	135	1	110	12	11	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	0	0	0
Cap, veh/h	235	1025	849	412	1266	11	216	1	535	52	46	22
Arrive On Green	0.01	0.56	0.56	0.14	0.69	0.69	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1753	1841	1525	1767	1836	16	779	6	1556	55	229	111
Grp Volume(v), veh/h	8	845	95	383	0	1025	136	0	110	32	0	0
Grp Sat Flow(s),veh/h/ln	1753	1841	1525	1767	0	1852	784	0	1556	396	0	0
Q Serve(g_s), s	0.2	45.3	3.5	14.6	0.0	46.3	0.0	0.0	6.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.2	45.3	3.5	14.6	0.0	46.3	21.9	0.0	6.0	22.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.99		1.00	0.37		0.28
Lane Grp Cap(c), veh/h	235	1025	849	412	0	1278	217	0	535	121	0	0
V/C Ratio(X)	0.03	0.82	0.11	0.93	0.00	0.80	0.63	0.00	0.21	0.27	0.00	0.00
Avail Cap(c_a), veh/h	379	1162	962	688	0	1323	238	0	559	144	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	1.00	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	15.9	21.9	12.6	29.9	0.0	13.0	47.2	0.0	27.9	40.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.7	0.1	8.3	0.0	3.7	2.9	0.0	0.1	0.4	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	18.9	1.2	11.7	0.0	16.9	4.2	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.9	26.5	12.7	38.1	0.0	16.6	50.1	0.0	28.0	41.0	0.0	0.0
LnGrp LOS	B	C	B	D	A	B	D	A	C	D	A	A
Approach Vol, veh/h		948			1408			246			32	
Approach Delay, s/veh		25.1			22.5			40.2			41.0	
Approach LOS		C			C			D			D	

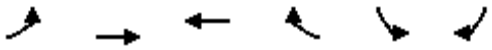
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.3	71.1		28.3	5.2	87.2		28.3				
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0				
Max Green Setting (Gmax), s	36.0	74.5		26.0	11.0	84.5		26.0				
Max Q Clear Time (g_c+I1), s	16.6	47.3		24.3	2.2	48.3		23.9				
Green Ext Time (p_c), s	0.7	18.4		0.0	0.0	27.4		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		25.3	
HCM 6th LOS		C	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	37	959	1183	14	63	124
Future Volume (vph)	37	959	1183	14	63	124
Ideal Flow (vphpl)	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	1.00	1.00	1.00
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	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1736	1827	1845	1530	1736	1553
Flt Permitted	0.06	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	107	1827	1845	1530	1736	1553
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	1042	1286	15	68	135
RTOR Reduction (vph)	0	0	0	1	0	122
Lane Group Flow (vph)	40	1042	1286	14	68	14
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)				4		
Heavy Vehicles (%)	4%	4%	3%	3%	4%	4%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	98.5	98.5	90.4	90.4	11.0	11.0
Effective Green, g (s)	98.5	100.0	91.9	91.9	12.0	12.0
Actuated g/C Ratio	0.82	0.83	0.77	0.77	0.10	0.10
Clearance Time (s)	4.0	5.5	5.5	5.5	5.0	5.0
Vehicle Extension (s)	1.5	3.5	3.5	3.5	2.0	2.0
Lane Grp Cap (vph)	143	1522	1412	1171	173	155
v/s Ratio Prot	0.01	c0.57	c0.70		c0.04	
v/s Ratio Perm	0.22			0.01		0.01
v/c Ratio	0.28	0.68	0.91	0.01	0.39	0.09
Uniform Delay, d1	24.7	3.9	10.9	3.3	50.6	49.0
Progression Factor	1.00	1.00	0.67	0.46	1.00	1.00
Incremental Delay, d2	0.4	2.5	7.3	0.0	0.5	0.1
Delay (s)	25.1	6.4	14.6	1.5	51.1	49.1
Level of Service	C	A	B	A	D	D
Approach Delay (s)		7.1	14.5		49.8	
Approach LOS		A	B		D	

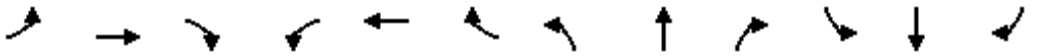
Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	959	1183	14	63	124
Future Volume (veh/h)	37	959	1183	14	63	124
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	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	1841	1841	1856	1856	1841	1841
Adj Flow Rate, veh/h	40	1042	1286	15	68	81
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	3	3	4	4
Cap, veh/h	438	1575	1469	1217	137	122
Arrive On Green	0.03	0.86	1.00	1.00	0.08	0.08
Sat Flow, veh/h	1753	1841	1856	1537	1753	1560
Grp Volume(v), veh/h	40	1042	1286	15	68	81
Grp Sat Flow(s),veh/h/ln	1753	1841	1856	1537	1753	1560
Q Serve(g_s), s	0.5	22.6	0.0	0.0	4.5	6.1
Cycle Q Clear(g_c), s	0.5	22.6	0.0	0.0	4.5	6.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	438	1575	1469	1217	137	122
V/C Ratio(X)	0.09	0.66	0.88	0.01	0.50	0.67
Avail Cap(c_a), veh/h	472	1575	1469	1217	336	299
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.54	0.54	1.00	1.00
Uniform Delay (d), s/veh	1.9	2.9	0.0	0.0	53.1	53.8
Incr Delay (d2), s/veh	0.0	1.2	4.3	0.0	1.0	2.3
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	3.6	1.8	0.0	2.0	5.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.9	4.1	4.3	0.0	54.1	56.1
LnGrp LOS	A	A	A	A	D	E
Approach Vol, veh/h		1082	1301		149	
Approach Delay, s/veh		4.0	4.3		55.2	
Approach LOS		A	A		E	

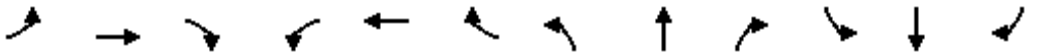
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		106.7		13.3	7.7	99.0
Change Period (Y+Rc), s		5.5		5.0	4.0	5.5
Max Green Setting (Gmax), s		87.5		22.0	6.0	77.5
Max Q Clear Time (g_c+I1), s		24.6		8.1	2.5	2.0
Green Ext Time (p_c), s		52.6		0.3	0.0	71.9

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	824	151	58	885	118	112	174	31	195	277	200
Future Volume (vph)	47	824	151	58	885	118	112	174	31	195	277	200
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	4.0	5.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	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	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1736	1827	1518	1770	1863	1564	1719	1810	1501	1769	1863	1551
Flt Permitted	0.09	1.00	1.00	0.14	1.00	1.00	0.22	1.00	1.00	0.42	1.00	1.00
Satd. Flow (perm)	158	1827	1518	256	1863	1564	401	1810	1501	775	1863	1551
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	48	849	156	60	912	122	115	179	32	201	286	206
RTOR Reduction (vph)	0	0	59	0	0	46	0	0	26	0	0	95
Lane Group Flow (vph)	48	849	97	60	912	76	115	179	6	201	286	111
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			1			2			1			2
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	73.2	67.8	74.3	71.4	66.9	74.5	27.6	21.1	21.1	29.8	22.2	27.6
Effective Green, g (s)	73.2	69.3	74.3	71.4	68.4	74.5	27.6	22.6	21.1	29.8	23.7	27.6
Actuated g/C Ratio	0.61	0.58	0.62	0.60	0.57	0.62	0.23	0.19	0.18	0.25	0.20	0.23
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5	5.5	4.0	5.5	4.0
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0	2.0	1.5	2.0	1.5
Lane Grp Cap (vph)	167	1055	939	209	1061	970	163	340	263	255	367	356
v/s Ratio Prot	0.01	0.46	0.01	0.01	c0.49	0.00	0.04	0.10		c0.05	c0.15	c0.01
v/s Ratio Perm	0.16		0.06	0.16		0.04	0.12		0.00	0.15		0.06
v/c Ratio	0.29	0.80	0.10	0.29	0.86	0.08	0.71	0.53	0.02	0.79	0.78	0.31
Uniform Delay, d1	20.7	20.0	9.3	17.7	21.8	9.1	39.1	43.9	40.9	41.3	45.7	38.3
Progression Factor	1.09	0.91	1.15	0.41	0.80	1.36	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	5.0	0.0	0.2	6.6	0.0	10.8	0.7	0.0	13.8	9.2	0.2
Delay (s)	22.8	23.1	10.7	7.5	24.0	12.3	49.9	44.6	40.9	55.1	54.9	38.5
Level of Service	C	C	B	A	C	B	D	D	D	E	D	D
Approach Delay (s)		21.3			21.8			46.1			50.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	824	151	58	885	118	112	174	31	195	277	200
Future Volume (veh/h)	47	824	151	58	885	118	112	174	31	195	277	200
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		0.99	1.00		0.98	1.00		0.97
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	1841	1841	1841	1870	1870	1870	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	48	849	94	60	912	81	115	179	11	201	286	113
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	5	5	5	2	2	2
Cap, veh/h	272	1079	953	465	1102	980	182	355	275	261	364	333
Arrive On Green	0.07	1.00	1.00	0.05	0.78	0.77	0.05	0.19	0.18	0.05	0.19	0.18
Sat Flow, veh/h	1753	1841	1525	1781	1870	1563	1739	1826	1509	1781	1870	1543
Grp Volume(v), veh/h	48	849	94	60	912	81	115	179	11	201	286	113
Grp Sat Flow(s),veh/h/ln	1753	1841	1525	1781	1870	1563	1739	1826	1509	1781	1870	1543
Q Serve(g_s), s	1.3	0.0	0.0	1.6	36.1	1.4	6.0	10.5	0.7	6.0	17.5	7.4
Cycle Q Clear(g_c), s	1.3	0.0	0.0	1.6	36.1	1.4	6.0	10.5	0.7	6.0	17.5	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	272	1079	953	465	1102	980	182	355	275	261	364	333
V/C Ratio(X)	0.18	0.79	0.10	0.13	0.83	0.08	0.63	0.50	0.04	0.77	0.79	0.34
Avail Cap(c_a), veh/h	302	1079	953	490	1102	980	182	441	346	261	452	406
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	0.0	9.3	9.2	4.8	40.6	43.2	40.5	45.8	46.0	39.9
Incr Delay (d2), s/veh	0.1	4.1	0.1	0.0	7.2	0.2	5.3	0.4	0.0	11.8	5.6	0.2
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	0.5	1.2	0.0	0.6	8.8	0.5	3.0	4.7	0.3	3.7	8.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.9	4.1	0.1	9.4	16.4	4.9	45.9	43.6	40.5	57.6	51.6	40.1
LnGrp LOS	B	A	A	A	B	A	D	D	D	E	D	D
Approach Vol, veh/h		991			1053			305			600	
Approach Delay, s/veh		4.2			15.2			44.3			51.4	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	74.3	10.0	27.3	8.0	74.7	10.0	27.3
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	6.0	61.5	6.0	27.5	6.0	61.5	6.0	27.5
Max Q Clear Time (g_c+I1), s	3.6	2.0	8.0	19.5	3.3	38.1	8.0	12.5
Green Ext Time (p_c), s	0.1	37.9	0.0	2.2	0.1	19.5	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

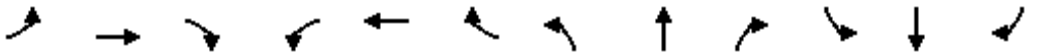
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1030	22	3	1014	27	17
Future Vol, veh/h	1030	22	3	1014	27	17
Conflicting Peds, #/hr	0	2	2	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	440	-	0	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	2	2	0	0
Mvmt Flow	1096	23	3	1079	29	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1121	0	2183	1098
Stage 1	-	-	-	-	1098	-
Stage 2	-	-	-	-	1085	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	623	-	51	261
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	327	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	622	-	51	261
Mov Cap-2 Maneuver	-	-	-	-	171	-
Stage 1	-	-	-	-	321	-
Stage 2	-	-	-	-	325	-

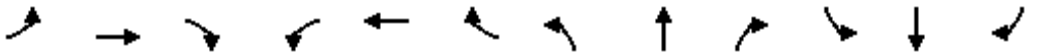
Approach	EB	WB	NB
HCM Control Delay, s	0	0	28.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	197	-	-	622	-
HCM Lane V/C Ratio	0.238	-	-	0.005	-
HCM Control Delay (s)	28.9	-	-	10.8	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.9	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	975	60	52	891	16	111	0	229	16	1	15
Future Volume (vph)	12	975	60	52	891	16	111	0	229	16	1	15
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	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00			1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00			1.00	0.98	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	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1736	1827	1530	3400	1839			1716	1510	1766	1567	
Flt Permitted	0.15	1.00	1.00	0.95	1.00			0.75	1.00	0.62	1.00	
Satd. Flow (perm)	268	1827	1530	3400	1839			1348	1510	1161	1567	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	12	1016	62	54	928	17	116	0	239	17	1	16
RTOR Reduction (vph)	0	0	21	0	0	0	0	0	84	0	12	0
Lane Group Flow (vph)	13	1016	42	54	945	0	0	116	155	17	5	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	5%	5%	5%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	Prot	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2				8		8	4		
Actuated Green, G (s)	75.0	72.9	72.9	5.4	76.2			27.2	32.6	27.2	27.2	
Effective Green, g (s)	76.0	74.4	74.4	5.9	77.7			27.7	33.6	27.7	27.7	
Actuated g/C Ratio	0.63	0.62	0.62	0.05	0.65			0.23	0.28	0.23	0.23	
Clearance Time (s)	4.5	5.5	5.5	4.5	5.5			4.5	4.5	4.5	4.5	
Vehicle Extension (s)	2.0	3.5	3.5	2.0	3.5			2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	201	1132	948	167	1190			311	473	267	361	
v/s Ratio Prot	0.00	c0.56		0.02	c0.51				c0.02		0.00	
v/s Ratio Perm	0.04		0.03					c0.09	0.09	0.01		
v/c Ratio	0.06	0.90	0.04	0.32	0.79			0.37	0.33	0.06	0.01	
Uniform Delay, d1	14.8	19.5	8.9	55.1	15.3			38.8	34.2	36.0	35.6	
Progression Factor	0.50	0.94	0.27	1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	6.8	0.0	0.4	3.8			3.4	0.1	0.5	0.1	
Delay (s)	7.4	25.1	2.4	55.5	19.2			42.2	34.4	36.5	35.7	
Level of Service	A	C	A	E	B			D	C	D	D	
Approach Delay (s)		23.6			21.1			37.0			36.1	
Approach LOS		C			C			D			D	

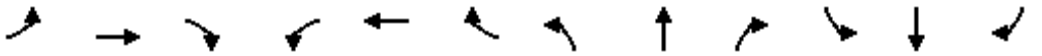
Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	975	60	52	891	16	111	0	229	16	1	15
Future Volume (veh/h)	12	975	60	52	891	16	111	0	229	16	1	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		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	1841	1841	1841	1856	1856	1856	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	12	1016	41	54	928	17	116	0	150	17	1	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	2	2	2
Cap, veh/h	203	1081	904	134	1105	20	426	0	483	307	37	402
Arrive On Green	0.02	0.78	0.78	0.04	0.61	0.60	0.27	0.00	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1753	1841	1538	3428	1816	33	1339	0	1545	1236	134	1469
Grp Volume(v), veh/h	12	1016	41	54	0	945	116	0	150	17	0	12
Grp Sat Flow(s),veh/h/ln	1753	1841	1538	1714	0	1849	1339	0	1545	1236	0	1603
Q Serve(g_s), s	0.3	54.5	0.7	1.8	0.0	49.1	8.2	0.0	8.9	1.3	0.0	0.7
Cycle Q Clear(g_c), s	0.3	54.5	0.7	1.8	0.0	49.1	8.9	0.0	8.9	10.2	0.0	0.7
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.92
Lane Grp Cap(c), veh/h	203	1081	904	134	0	1125	421	0	483	307	0	439
V/C Ratio(X)	0.06	0.94	0.05	0.40	0.00	0.84	0.28	0.00	0.31	0.06	0.00	0.03
Avail Cap(c_a), veh/h	259	1112	929	171	0	1125	421	0	483	307	0	439
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.00	0.65	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.9	11.4	5.5	56.3	0.0	18.8	35.3	0.0	31.4	38.9	0.0	32.1
Incr Delay (d2), s/veh	0.0	14.7	0.0	0.5	0.0	3.9	1.6	0.0	1.7	0.3	0.0	0.1
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	14.2	0.2	0.8	0.0	19.6	3.0	0.0	3.5	0.4	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	26.1	5.5	56.8	0.0	22.8	36.9	0.0	33.1	39.3	0.0	32.2
LnGrp LOS	B	C	A	E	A	C	D	A	C	D	A	C
Approach Vol, veh/h		1069			999			266			29	
Approach Delay, s/veh		25.2			24.6			34.8			36.3	
Approach LOS		C			C			C			D	

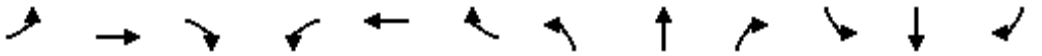
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	74.5		36.8	6.1	77.0		36.8				
Change Period (Y+Rc), s	4.5	5.5		4.5	4.5	5.5		4.5				
Max Green Setting (Gmax), s	5.5	71.0		29.0	5.5	71.0		29.0				
Max Q Clear Time (g_c+I1), s	3.8	56.5		12.2	2.3	51.1		10.9				
Green Ext Time (p_c), s	0.0	12.5		0.0	0.0	15.5		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			26.2									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	832	351	5	700	37	193	19	14	100	42	63
Future Volume (vph)	29	832	351	5	700	37	193	19	14	100	42	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.4	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	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	1827	1520	1719	1810	1504	1770	1726		1736	1640	
Flt Permitted	0.20	1.00	1.00	0.11	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	362	1827	1520	205	1810	1504	1770	1726		1736	1640	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	876	369	5	737	39	203	20	15	105	44	66
RTOR Reduction (vph)	0	0	61	0	0	18	0	13	0	0	49	0
Lane Group Flow (vph)	31	876	308	5	737	21	203	22	0	105	61	0
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)			2			3						
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6						
Actuated Green, G (s)	78.1	72.3	72.3	68.7	67.6	67.6	20.0	15.0		19.1	14.1	
Effective Green, g (s)	78.1	73.8	72.4	68.7	69.1	69.1	20.0	15.5		19.1	14.6	
Actuated g/C Ratio	0.62	0.59	0.58	0.55	0.55	0.55	0.16	0.12		0.15	0.12	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	288	1074	876	125	996	828	282	213		264	190	
v/s Ratio Prot	c0.00	c0.48		0.00	0.41		c0.11	0.01		0.06	c0.04	
v/s Ratio Perm	0.06		0.20	0.02		0.01						
v/c Ratio	0.11	0.82	0.35	0.04	0.74	0.03	0.72	0.10		0.40	0.32	
Uniform Delay, d1	28.4	20.5	14.1	41.6	21.4	12.9	50.1	48.8		48.0	50.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	6.8	1.1	0.1	4.9	0.1	8.5	0.2		1.0	1.0	
Delay (s)	28.5	27.3	15.2	41.8	26.3	12.9	58.6	49.0		49.0	51.9	
Level of Service	C	C	B	D	C	B	E	D		D	D	
Approach Delay (s)		23.8			25.8			57.2			50.5	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	125.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	832	351	5	700	37	193	19	14	100	42	63
Future Volume (veh/h)	29	832	351	5	700	37	193	19	14	100	42	63
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		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	1841	1841	1841	1826	1826	1826	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	31	876	306	5	737	18	203	20	10	105	44	61
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, %	4	4	4	5	5	5	2	2	2	4	4	4
Cap, veh/h	476	891	722	372	831	688	212	193	97	77	62	86
Arrive On Green	0.21	0.48	0.47	0.18	0.46	0.46	0.12	0.16	0.16	0.04	0.09	0.09
Sat Flow, veh/h	1753	1841	1526	1739	1826	1513	1781	1175	587	1753	696	965
Grp Volume(v), veh/h	31	876	306	5	737	18	203	0	30	105	0	105
Grp Sat Flow(s),veh/h/ln	1753	1841	1526	1739	1826	1513	1781	0	1762	1753	0	1660
Q Serve(g_s), s	0.0	59.0	10.5	0.0	46.5	0.6	14.3	0.0	1.8	5.5	0.0	7.8
Cycle Q Clear(g_c), s	0.0	59.0	10.5	0.0	46.5	0.6	14.3	0.0	1.8	5.5	0.0	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.58
Lane Grp Cap(c), veh/h	476	891	722	372	831	688	212	0	290	77	0	148
V/C Ratio(X)	0.07	0.98	0.42	0.01	0.89	0.03	0.96	0.00	0.10	1.37	0.00	0.71
Avail Cap(c_a), veh/h	476	891	722	372	884	732	212	0	518	77	0	362
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)	0.45	0.45	0.45	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	32.0	8.7	42.3	31.4	10.9	55.2	0.0	44.8	60.3	0.0	56.0
Incr Delay (d2), s/veh	0.0	16.6	0.8	0.0	13.4	0.1	49.6	0.0	0.2	230.5	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	0.7	28.3	3.4	0.1	22.3	0.3	9.3	0.0	0.8	7.3	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	48.6	9.5	42.3	44.8	11.0	104.8	0.0	45.0	290.7	0.0	62.1
LnGrp LOS	C	D	A	D	D	B	F	A	D	F	A	E
Approach Vol, veh/h		1213			760			233			210	
Approach Delay, s/veh		38.3			44.0			97.1			176.4	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.8	65.0	19.0	15.2	30.4	61.3	9.5	24.7
Change Period (Y+Rc), s	4.0	5.5	4.0	4.5	4.0	5.5	4.0	4.5
Max Green Setting (Gmax), s	6.0	59.5	15.0	27.0	6.0	59.5	5.5	36.5
Max Q Clear Time (g_c+I1), s	2.0	61.0	16.3	9.8	2.0	48.5	7.5	3.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	7.4	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	57.8
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	5	86	17	4	165
Future Vol, veh/h	22	5	86	17	4	165
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	82	82	82	82	82	82
Heavy Vehicles, %	5	5	11	11	5	5
Mvmt Flow	27	6	105	21	5	201

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	327	116	0	0	126	0
Stage 1	116	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	661	928	-	-	1442	-
Stage 1	902	-	-	-	-	-
Stage 2	817	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	658	928	-	-	1442	-
Mov Cap-2 Maneuver	658	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	814	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	695	1442	-
HCM Lane V/C Ratio	-	-	0.047	0.003	-
HCM Control Delay (s)	-	-	10.4	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	117	72	115	240	1	45	0	61	1	0	0
Future Vol, veh/h	0	117	72	115	240	1	45	0	61	1	0	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	7	7	7	7	7	7	5	5	5	0	0	0
Mvmt Flow	0	139	86	137	286	1	54	0	73	1	0	0
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	9.5	13.3	9.4	8.9
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	42%	0%	32%	100%
Vol Thru, %	0%	62%	67%	0%
Vol Right, %	58%	38%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	106	189	356	1
LT Vol	45	0	115	1
Through Vol	0	117	240	0
RT Vol	61	72	1	0
Lane Flow Rate	126	225	424	1
Geometry Grp	1	1	1	1
Degree of Util (X)	0.182	0.288	0.549	0.002
Departure Headway (Hd)	5.192	4.601	4.663	5.792
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	686	779	771	612
Service Time	3.256	2.651	2.706	3.88
HCM Lane V/C Ratio	0.184	0.289	0.55	0.002
HCM Control Delay	9.4	9.5	13.3	8.9
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.7	1.2	3.4	0

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	36	0	20	0	332	7	3	636	0
Future Vol, veh/h	0	0	0	36	0	20	0	332	7	3	636	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	110	-	-
Veh in Median Storage, #	-	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, %	5	5	5	2	2	2	4	4	4	4	4	4
Mvmt Flow	0	0	0	41	0	23	0	377	8	3	723	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	918	1115	362	750	1111	194	723	0	0	386	0	0
Stage 1	729	729	-	382	382	-	-	-	-	-	-	-
Stage 2	189	386	-	368	729	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	7.54	6.54	6.94	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.6	5.6	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.52	4.02	3.32	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	222	202	626	300	208	815	862	-	-	1155	-	-
Stage 1	374	419	-	612	611	-	-	-	-	-	-	-
Stage 2	786	601	-	624	426	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	215	201	626	299	207	814	862	-	-	1154	-	-
Mov Cap-2 Maneuver	215	201	-	299	207	-	-	-	-	-	-	-
Stage 1	374	418	-	611	610	-	-	-	-	-	-	-
Stage 2	764	600	-	622	425	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	16.2	0	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	862	-	-	-	386	1154	-	-
HCM Lane V/C Ratio	-	-	-	-	0.165	0.003	-	-
HCM Control Delay (s)	0	-	-	0	16.2	8.1	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.6	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	352	639	0
Future Vol, veh/h	0	0	0	352	639	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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	5	5	4	4	4	4
Mvmt Flow	0	0	0	400	726	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	926	363	726	0	-	0
Stage 1	726	-	-	-	-	-
Stage 2	200	-	-	-	-	-
Critical Hdwy	6.9	7	4.18	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.24	-	-	-
Pot Cap-1 Maneuver	262	625	860	-	-	-
Stage 1	432	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	262	625	860	-	-	-
Mov Cap-2 Maneuver	262	-	-	-	-	-
Stage 1	432	-	-	-	-	-
Stage 2	805	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	860	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

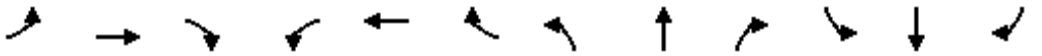
Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	1	19	63	0	30	0	341	11	8	557	1
Future Vol, veh/h	17	1	19	63	0	30	0	341	11	8	557	1
Conflicting Peds, #/hr	3	0	1	1	0	3	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	13	13	13	41	41	41	18	18	18	17	17	17
Mvmt Flow	20	1	23	75	0	36	0	406	13	10	663	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	891	1104	334	766	1098	213	665	0	0	419	0	0
Stage 1	685	685	-	413	413	-	-	-	-	-	-	-
Stage 2	206	419	-	353	685	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	8.32	7.32	7.72	4.46	-	-	4.44	-	-
Critical Hdwy Stg 1	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.91	4.41	3.71	2.38	-	-	2.37	-	-
Pot Cap-1 Maneuver	220	193	631	231	159	684	820	-	-	1037	-	-
Stage 1	379	421	-	493	504	-	-	-	-	-	-	-
Stage 2	746	562	-	541	362	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	206	191	630	220	157	682	819	-	-	1037	-	-
Mov Cap-2 Maneuver	206	191	-	220	157	-	-	-	-	-	-	-
Stage 1	379	416	-	493	504	-	-	-	-	-	-	-
Stage 2	705	562	-	515	358	-	-	-	-	-	-	-

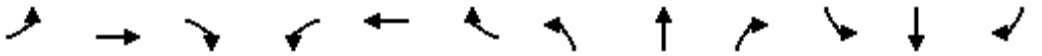
Approach	EB	WB	NB	SB
HCM Control Delay, s	18.3	25.8	0	0.1
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	819	-	-	314	282	1037	-	-
HCM Lane V/C Ratio	-	-	-	0.14	0.393	0.009	-	-
HCM Control Delay (s)	0	-	-	18.3	25.8	8.5	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	1.8	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	178	31	146	322	173	15	309	64	93	389	28
Future Volume (vph)	82	178	31	146	322	173	15	309	64	93	389	28
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	4.0	
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	0.98		1.00	0.95		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)	1597	1644		1597	1586		1504	2920		1702	3366	
Flt Permitted	0.20	1.00		0.47	1.00		0.48	1.00		0.33	1.00	
Satd. Flow (perm)	338	1644		795	1586		765	2920		583	3366	
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)	92	200	35	164	362	194	17	347	72	104	437	31
RTOR Reduction (vph)	0	5	0	0	15	0	0	18	0	0	5	0
Lane Group Flow (vph)	92	230	0	164	541	0	17	401	0	104	463	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)												4
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	20%	20%	20%	6%	6%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	33.1	27.1		39.1	30.1		20.1	19.1		30.3	24.3	
Effective Green, g (s)	35.1	28.6		41.1	31.6		22.1	20.6		31.3	25.8	
Actuated g/C Ratio	0.43	0.35		0.50	0.38		0.27	0.25		0.38	0.31	
Clearance Time (s)	5.0	5.5		5.0	5.5		5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	250	570		493	608		223	730		319	1053	
v/s Ratio Prot	0.03	0.14		c0.04	c0.34		0.00	c0.14		c0.03	0.14	
v/s Ratio Perm	0.12			0.13			0.02			0.10		
v/c Ratio	0.37	0.40		0.33	0.89		0.08	0.55		0.33	0.44	
Uniform Delay, d1	16.1	20.4		11.9	23.8		22.3	26.9		17.4	22.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.5		0.1	15.1		0.1	0.8		0.2	0.3	
Delay (s)	16.4	20.9		12.0	38.9		22.4	27.7		17.6	22.8	
Level of Service	B	C		B	D		C	C		B	C	
Approach Delay (s)		19.6			32.8			27.5			21.9	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	82.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	178	31	146	322	173	15	309	64	93	389	28
Future Volume (veh/h)	82	178	31	146	322	173	15	309	64	93	389	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
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	1707	1707	1707	1707	1707	1707	1604	1604	1604	1811	1811	1811
Adj Flow Rate, veh/h	92	200	0	164	362	0	17	347	55	104	437	25
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, %	13	13	13	13	13	13	20	20	20	6	6	6
Cap, veh/h	367	450		497	504		321	598	94	387	923	53
Arrive On Green	0.09	0.26	0.00	0.12	0.30	0.00	0.04	0.23	0.20	0.09	0.28	0.25
Sat Flow, veh/h	1626	1707	0	1626	1707	0	1527	2637	414	1725	3303	188
Grp Volume(v), veh/h	92	200	0	164	362	0	17	199	203	104	227	235
Grp Sat Flow(s),veh/h/ln	1626	1707	0	1626	1707	0	1527	1523	1528	1725	1721	1771
Q Serve(g_s), s	2.1	5.2	0.0	3.8	10.2	0.0	0.4	6.2	6.4	2.3	5.9	5.9
Cycle Q Clear(g_c), s	2.1	5.2	0.0	3.8	10.2	0.0	0.4	6.2	6.4	2.3	5.9	5.9
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.27	1.00		0.11
Lane Grp Cap(c), veh/h	367	450		497	504		321	346	347	387	481	495
V/C Ratio(X)	0.25	0.44		0.33	0.72		0.05	0.58	0.59	0.27	0.47	0.48
Avail Cap(c_a), veh/h	723	938		803	938		603	1022	1024	613	1154	1187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	16.5	0.0	12.0	16.9	0.0	15.1	18.5	18.7	13.6	16.1	16.1
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.1	1.9	0.0	0.0	1.5	1.6	0.1	0.7	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	0.7	1.9	0.0	1.2	3.8	0.0	0.1	2.0	2.0	0.7	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	17.2	0.0	12.2	18.9	0.0	15.1	20.0	20.3	13.7	16.8	16.9
LnGrp LOS	B	B		B	B		B	B	C	B	B	B
Approach Vol, veh/h		292	A		526	A		419			566	
Approach Delay, s/veh		15.9			16.8			19.9			16.2	
Approach LOS		B			B			B			B	

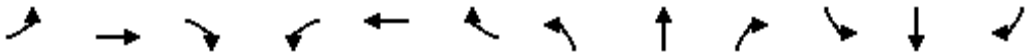
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	16.2	10.4	18.2	6.1	19.0	8.7	19.8
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	11.0	34.5	15.5	28.0	11.0	34.5	15.5	28.0
Max Q Clear Time (g_c+I1), s	4.3	8.4	5.8	7.2	2.4	7.9	4.1	12.2
Green Ext Time (p_c), s	0.1	2.2	0.2	1.1	0.0	2.5	0.1	2.0

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

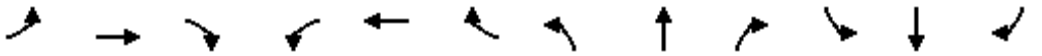
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	936	128	123	673	6	92	3	378	4	0	0
Future Volume (vph)	8	936	128	123	673	6	92	3	378	4	0	0
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		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00	0.99		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	
Satd. Flow (prot)	1655	3312	1449	1570	3135			1676	1486		1444	
Flt Permitted	0.38	1.00	1.00	0.22	1.00			0.73	1.00		0.58	
Satd. Flow (perm)	662	3312	1449	372	3135			1283	1486		888	
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)	8	985	135	129	708	6	97	3	398	4	0	0
RTOR Reduction (vph)	0	0	46	0	0	0	0	0	40	0	0	0
Lane Group Flow (vph)	8	985	89	129	714	0	0	100	358	0	4	0
Confl. Peds. (#/hr)	1					1	1					1
Confl. Bikes (#/hr)			4						2			
Heavy Vehicles (%)	9%	9%	9%	15%	15%	15%	8%	8%	8%	25%	25%	25%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	75.5	74.5	74.5	96.3	91.3			14.2	32.0		14.2	
Effective Green, g (s)	75.5	76.0	76.0	96.3	92.8			14.2	32.0		14.2	
Actuated g/C Ratio	0.63	0.63	0.63	0.80	0.77			0.12	0.27		0.12	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			4.0	4.0		4.0	
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5			1.5	1.5		1.5	
Lane Grp Cap (vph)	424	2097	917	476	2424			151	445		105	
v/s Ratio Prot	0.00	c0.30		0.04	0.23				c0.12			
v/s Ratio Perm	0.01		0.06	0.18				0.08	0.12		0.00	
v/c Ratio	0.02	0.47	0.10	0.27	0.29			0.66	0.80		0.04	
Uniform Delay, d1	8.3	11.5	8.6	4.4	4.0			50.6	41.1		46.9	
Progression Factor	1.00	1.00	1.00	3.24	1.29			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.8	0.2	0.1	0.3			8.2	9.6		0.1	
Delay (s)	8.3	12.2	8.8	14.2	5.4			58.8	50.6		46.9	
Level of Service	A	B	A	B	A			E	D		D	
Approach Delay (s)		11.8			6.8			52.3			46.9	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	936	128	123	673	6	92	3	378	4	0	0
Future Volume (veh/h)	8	936	128	123	673	6	92	3	378	4	0	0
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		1.00	1.00		0.98	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	1767	1767	1767	1678	1678	1678	1781	1781	1781	1530	1530	1530
Adj Flow Rate, veh/h	8	985	109	129	708	6	97	3	303	4	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
Percent Heavy Veh, %	9	9	9	15	15	15	8	8	8	25	25	25
Cap, veh/h	517	2170	945	358	2210	19	350	10	378	199	0	0
Arrive On Green	0.01	0.65	0.65	0.09	1.00	1.00	0.21	0.21	0.21	0.21	0.00	0.00
Sat Flow, veh/h	1682	3357	1463	1598	3239	27	1398	48	1486	668	0	0
Grp Volume(v), veh/h	8	985	109	129	348	366	100	0	303	4	0	0
Grp Sat Flow(s),veh/h/ln	1682	1678	1463	1598	1594	1673	1446	0	1486	668	0	0
Q Serve(g_s), s	0.2	17.6	3.4	3.3	0.0	0.0	0.0	0.0	22.9	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.2	17.6	3.4	3.3	0.0	0.0	5.9	0.0	22.9	6.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.97		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	517	2170	945	358	1088	1141	360	0	378	199	0	0
V/C Ratio(X)	0.02	0.45	0.12	0.36	0.32	0.32	0.28	0.00	0.80	0.02	0.00	0.00
Avail Cap(c_a), veh/h	585	2170	945	685	1088	1141	360	0	379	199	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.7	10.6	8.1	7.8	0.0	0.0	40.0	0.0	42.0	42.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.2	0.2	0.7	0.7	0.2	0.0	10.9	0.0	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	5.9	1.0	0.9	0.2	0.2	2.5	0.0	9.5	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	11.3	8.4	8.0	0.7	0.7	40.2	0.0	52.8	42.7	0.0	0.0
LnGrp LOS	A	B	A	A	A	A	D	A	D	D	A	A
Approach Vol, veh/h		1102			843			403			4	
Approach Delay, s/veh		11.0			1.8			49.7			42.7	
Approach LOS		B			A			D			D	

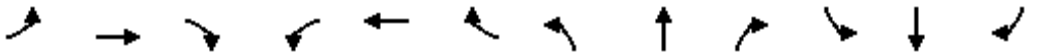
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	81.6		28.9	5.2	85.9		28.9				
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0				
Max Green Setting (Gmax), s	30.0	51.5		25.0	6.0	75.5		25.0				
Max Q Clear Time (g_c+I1), s	5.3	19.6		8.4	2.2	2.0		24.9				
Green Ext Time (p_c), s	0.2	21.4		0.0	0.0	19.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		14.4	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	117	1142	68	62	752	80	15	2	11	50	9	32
Future Volume (vph)	117	1142	68	62	752	80	15	2	11	50	9	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.5	4.0		4.5	4.5		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	0.99		1.00	0.99		1.00	0.87		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3310		1583	3115		1805	1659		1399	1299	
Flt Permitted	0.29	1.00		0.17	1.00		0.73	1.00		0.49	1.00	
Satd. Flow (perm)	502	3310		282	3115		1386	1659		716	1299	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	122	1190	71	65	783	83	16	2	11	52	9	33
RTOR Reduction (vph)	0	2	0	0	4	0	0	10	0	0	29	0
Lane Group Flow (vph)	122	1259	0	65	862	0	16	3	0	52	13	0
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	8%	8%	8%	14%	14%	14%	0%	0%	0%	29%	29%	29%
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)	85.2	79.1		83.5	78.5		8.9	6.9		20.9	14.4	
Effective Green, g (s)	85.2	80.6		83.5	80.0		8.9	6.9		21.9	14.4	
Actuated g/C Ratio	0.71	0.67		0.70	0.67		0.07	0.06		0.18	0.12	
Clearance Time (s)	4.0	5.5		4.5	5.5		4.5	4.5		5.0	5.0	
Vehicle Extension (s)	1.5	3.5		3.0	3.5		3.0	3.0		2.0	2.0	
Lane Grp Cap (vph)	415	2223		250	2076		109	95		190	155	
v/s Ratio Prot	c0.01	c0.38		0.01	0.28		0.00	0.00		c0.02	0.01	
v/s Ratio Perm	0.19			0.17			0.01			c0.03		
v/c Ratio	0.29	0.57		0.26	0.42		0.15	0.03		0.27	0.08	
Uniform Delay, d1	6.0	10.4		7.5	9.2		51.9	53.4		41.7	46.9	
Progression Factor	1.17	0.89		0.88	0.55		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.9		0.5	0.6		0.6	0.1		0.3	0.1	
Delay (s)	7.1	10.2		7.1	5.7		52.5	53.5		42.0	47.0	
Level of Service	A	B		A	A		D	D		D	D	
Approach Delay (s)		10.0			5.8			53.0			44.2	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



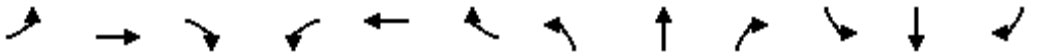
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	1142	68	62	752	80	15	2	11	50	9	32
Future Volume (veh/h)	117	1142	68	62	752	80	15	2	11	50	9	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1781	1781	1781	1693	1693	1693	1900	1900	1900	1470	1470	1470
Adj Flow Rate, veh/h	122	1190	71	65	783	67	16	2	11	52	9	33
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	14	14	14	0	0	0	29	29	29
Cap, veh/h	567	2337	139	402	2158	185	144	10	53	184	21	76
Arrive On Green	0.08	1.00	1.00	0.07	1.00	1.00	0.02	0.04	0.04	0.06	0.07	0.08
Sat Flow, veh/h	1697	3241	193	1612	2992	256	1810	254	1395	1400	276	1012
Grp Volume(v), veh/h	122	621	640	65	421	429	16	0	13	52	0	42
Grp Sat Flow(s),veh/h/ln	1697	1692	1741	1612	1608	1640	1810	0	1649	1400	0	1288
Q Serve(g_s), s	2.4	0.0	0.0	1.3	0.0	0.0	1.0	0.0	0.9	4.1	0.0	3.7
Cycle Q Clear(g_c), s	2.4	0.0	0.0	1.3	0.0	0.0	1.0	0.0	0.9	4.1	0.0	3.7
Prop In Lane	1.00		0.11	1.00		0.16	1.00		0.85	1.00		0.79
Lane Grp Cap(c), veh/h	567	1221	1256	402	1160	1183	144	0	62	184	0	96
V/C Ratio(X)	0.22	0.51	0.51	0.16	0.36	0.36	0.11	0.00	0.21	0.28	0.00	0.44
Avail Cap(c_a), veh/h	615	1221	1256	413	1160	1183	189	0	385	371	0	482
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.90	0.90	0.90	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.9	0.0	0.0	3.9	0.0	0.0	54.1	0.0	56.0	48.2	0.0	52.7
Incr Delay (d2), s/veh	0.1	1.2	1.1	0.2	0.8	0.8	0.3	0.0	1.6	0.3	0.0	1.2
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	0.6	0.4	0.4	0.3	0.3	0.3	0.5	0.0	0.4	1.4	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.9	1.2	1.1	4.1	0.8	0.8	54.4	0.0	57.6	48.5	0.0	53.9
LnGrp LOS	A	A	A	A	A	A	D	A	E	D	A	D
Approach Vol, veh/h		1383			915			29			94	
Approach Delay, s/veh		1.4			1.0			55.9			50.9	
Approach LOS		A			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	90.5	6.6	14.0	8.9	90.6	11.0	9.5
Change Period (Y+Rc), s	4.5	5.5	4.5	5.0	4.0	5.5	5.0	* 5
Max Green Setting (Gmax), s	5.3	45.2	5.1	44.9	8.3	42.7	22.0	* 28
Max Q Clear Time (g_c+I1), s	3.3	2.0	3.0	5.7	4.4	2.0	6.1	2.9
Green Ext Time (p_c), s	0.0	38.0	0.0	0.1	0.1	27.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.8
HCM 6th LOS	A

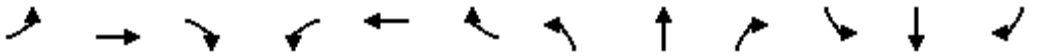
Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1007	122	127	635	200	185	229	101	177	228	73
Future Volume (vph)	75	1007	122	127	635	200	185	229	101	177	228	73
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	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3127	3223	1422	3072	3167	1402	3155	3102		3072	1667	1402
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3127	3223	1422	3072	3167	1402	3155	3102		3072	1667	1402
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	81	1083	131	137	683	215	199	246	109	190	245	78
RTOR Reduction (vph)	0	0	54	0	0	85	0	45	0	0	0	60
Lane Group Flow (vph)	81	1083	77	137	683	130	199	310	0	190	245	18
Confl. Peds. (#/hr)			2	2			1					1
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	12%	12%	12%	14%	14%	14%	11%	11%	11%	14%	14%	14%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	6.6	59.4	70.7	8.8	61.6	72.7	11.3	21.7		11.1	21.5	28.1
Effective Green, g (s)	6.6	60.9	70.7	8.8	63.1	72.7	11.3	23.2		11.1	23.0	28.1
Actuated g/C Ratio	0.05	0.51	0.59	0.07	0.53	0.61	0.09	0.19		0.09	0.19	0.23
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	4.0
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	1.5
Lane Grp Cap (vph)	171	1635	837	225	1665	849	297	599		284	319	328
v/s Ratio Prot	0.03	c0.34	0.01	c0.04	0.22	0.01	c0.06	0.10		0.06	c0.15	0.00
v/s Ratio Perm			0.05			0.08						0.01
v/c Ratio	0.47	0.66	0.09	0.61	0.41	0.15	0.67	0.52		0.67	0.77	0.06
Uniform Delay, d1	55.0	21.9	10.7	53.9	17.2	10.3	52.5	43.4		52.7	46.0	35.7
Progression Factor	1.16	0.49	0.78	1.05	0.93	2.75	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	1.9	0.0	3.0	0.7	0.0	4.6	0.3		4.6	9.6	0.0
Delay (s)	64.7	12.7	8.3	59.7	16.7	28.3	57.2	43.7		57.2	55.6	35.7
Level of Service	E	B	A	E	B	C	E	D		E	E	D
Approach Delay (s)		15.5			24.8			48.5			53.2	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1007	122	127	635	200	185	229	101	177	228	73
Future Volume (veh/h)	75	1007	122	127	635	200	185	229	101	177	228	73
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		0.99	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	1722	1722	1722	1693	1693	1693	1737	1737	1737	1693	1693	1693
Adj Flow Rate, veh/h	81	1083	115	137	683	140	199	246	87	190	245	56
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	14	14	14	11	11	11	14	14	14
Cap, veh/h	125	1759	875	194	1802	891	265	449	155	252	312	302
Arrive On Green	0.08	1.00	1.00	0.02	0.18	0.18	0.08	0.19	0.17	0.08	0.18	0.17
Sat Flow, veh/h	3182	3272	1437	3127	3216	1415	3209	2407	829	3127	1693	1432
Grp Volume(v), veh/h	81	1083	115	137	683	140	199	167	166	190	245	56
Grp Sat Flow(s),veh/h/ln	1591	1636	1437	1564	1608	1415	1605	1650	1586	1564	1693	1432
Q Serve(g_s), s	3.0	0.0	0.0	5.2	22.3	8.3	7.3	11.0	11.5	7.1	16.6	3.9
Cycle Q Clear(g_c), s	3.0	0.0	0.0	5.2	22.3	8.3	7.3	11.0	11.5	7.1	16.6	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	125	1759	875	194	1802	891	265	308	296	252	312	302
V/C Ratio(X)	0.65	0.62	0.13	0.71	0.38	0.16	0.75	0.54	0.56	0.75	0.79	0.19
Avail Cap(c_a), veh/h	186	1759	875	266	1802	891	369	408	393	341	409	385
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	57.7	30.6	17.8	53.8	44.2	44.7	54.0	46.7	38.9
Incr Delay (d2), s/veh	1.8	1.4	0.3	2.4	0.6	0.4	3.0	0.6	0.6	3.9	5.3	0.1
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	1.2	0.3	0.1	2.1	9.7	2.8	3.0	4.4	4.5	2.9	7.2	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	1.4	0.3	60.1	31.2	18.2	56.8	44.7	45.4	57.9	51.9	39.0
LnGrp LOS	E	A	A	E	C	B	E	D	D	E	D	D
Approach Vol, veh/h		1279			960			532			491	
Approach Delay, s/veh		4.7			33.4			49.5			52.8	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	68.5	13.9	26.1	8.7	71.2	13.7	26.4
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	10.2	49.5	13.8	27.5	7.0	52.7	13.1	28.2
Max Q Clear Time (g_c+I1), s	7.2	2.0	9.3	18.6	5.0	24.3	9.1	13.5
Green Ext Time (p_c), s	0.3	36.2	0.7	1.8	0.1	17.4	0.6	3.2

Intersection Summary	
HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

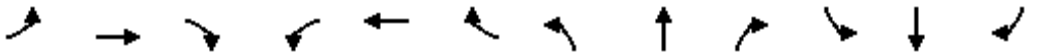
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1242	41	0	981	0	16
Future Vol, veh/h	1242	41	0	981	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	10	10	13	13	93	93
Mvmt Flow	1307	43	0	1033	0	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	654
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	8.76
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.23
Pot Cap-1 Maneuver	-	-	0	-	0	248
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	248
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

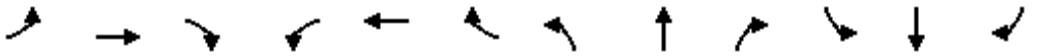
Approach	EB	WB	NB
HCM Control Delay, s	0	0	20.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	248	-	-	-
HCM Lane V/C Ratio	0.068	-	-	-
HCM Control Delay (s)	20.6	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1116	137	220	919	11	60	0	89	3	1	2
Future Volume (vph)	5	1116	137	220	919	11	60	0	89	3	1	2
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		4.5		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.99	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	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1449	3127	3216		1337		1187	1538	1462	
Flt Permitted	0.29	1.00	1.00	0.95	1.00		0.76		1.00	0.76	1.00	
Satd. Flow (perm)	500	3282	1449	3127	3216		1064		1187	1226	1462	
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)	5	1187	146	234	978	12	64	0	95	3	1	2
RTOR Reduction (vph)	0	0	43	0	0	0	0	0	40	0	2	0
Lane Group Flow (vph)	5	1187	103	234	990	0	64	0	55	3	1	0
Confl. Peds. (#/hr)	2					2			2	2		
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	10%	10%	10%	12%	12%	12%	35%	35%	35%	17%	17%	17%
Turn Type	pm+pt	NA	Perm	Prot	NA		Perm		pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2				8		8	4		
Actuated Green, G (s)	80.8	79.8	79.8	12.9	91.7		12.8		25.7	12.8	12.8	
Effective Green, g (s)	81.8	81.3	81.3	13.4	93.2		12.8		26.7	13.3	13.3	
Actuated g/C Ratio	0.68	0.68	0.68	0.11	0.78		0.11		0.22	0.11	0.11	
Clearance Time (s)	4.5	5.5	5.5	4.5	5.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)	2.0	3.5	3.5	2.0	3.5		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	355	2223	981	349	2497		113		303	135	162	
v/s Ratio Prot	0.00	c0.36		c0.07	0.31				0.02		0.00	
v/s Ratio Perm	0.01		0.07				c0.06		0.03	0.00		
v/c Ratio	0.01	0.53	0.11	0.67	0.40		0.57		0.18	0.02	0.01	
Uniform Delay, d1	6.1	9.8	6.7	51.2	4.3		51.0		37.8	47.6	47.5	
Progression Factor	0.45	0.48	0.24	0.96	0.98		1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.7	0.2	3.0	0.4		3.8		0.1	0.0	0.0	
Delay (s)	2.7	5.4	1.8	51.9	4.6		54.8		37.9	47.6	47.5	
Level of Service	A	A	A	D	A		D		D	D	D	
Approach Delay (s)		5.0			13.7			44.7			47.5	
Approach LOS		A			B			D			D	

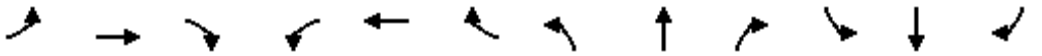
Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1116	137	220	919	11	60	0	89	3	1	2
Future Volume (veh/h)	5	1116	137	220	919	11	60	0	89	3	1	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.99	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	1752	1752	1752	1722	1722	1722	1381	1381	1381	1648	1648	1648
Adj Flow Rate, veh/h	5	1187	119	234	978	12	64	0	63	3	1	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	10	10	12	12	12	35	35	35	17	17	17
Cap, veh/h	452	2371	1043	303	2637	32	150	128	219	168	45	90
Arrive On Green	0.01	0.71	0.71	0.10	0.80	0.78	0.09	0.00	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1668	3328	1464	3182	3309	41	1037	1381	1163	1173	488	976
Grp Volume(v), veh/h	5	1187	119	234	484	506	64	0	63	3	0	3
Grp Sat Flow(s),veh/h/ln	1668	1664	1464	1591	1636	1714	1037	1381	1163	1173	0	1464
Q Serve(g_s), s	0.1	19.1	3.1	8.6	10.2	10.2	7.2	0.0	5.6	0.3	0.0	0.2
Cycle Q Clear(g_c), s	0.1	19.1	3.1	8.6	10.2	10.2	7.4	0.0	5.6	0.3	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	452	2371	1043	303	1304	1366	150	128	219	168	0	135
V/C Ratio(X)	0.01	0.50	0.11	0.77	0.37	0.37	0.43	0.00	0.29	0.02	0.00	0.02
Avail Cap(c_a), veh/h	511	2371	1043	424	1304	1366	309	340	397	348	0	360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.70	0.70	0.70	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.9	7.7	5.4	53.0	3.5	3.5	53.4	0.0	41.9	49.5	0.0	49.7
Incr Delay (d2), s/veh	0.0	0.8	0.2	2.4	0.6	0.5	0.7	0.0	0.3	0.0	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	0.0	5.8	0.8	3.5	2.4	2.5	1.9	0.0	1.6	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.9	8.5	5.6	55.4	4.1	4.1	54.1	0.0	42.1	49.6	0.0	49.7
LnGrp LOS	A	A	A	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		1311			1224			127			6	
Approach Delay, s/veh		8.2			13.9			48.2			49.6	
Approach LOS		A			B			D			D	

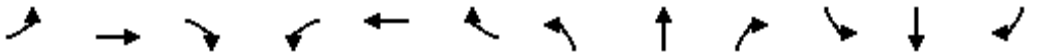
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.4	89.5		15.1	5.3	99.6		15.1				
Change Period (Y+Rc), s	4.5	5.5		4.5	4.5	5.5		4.5				
Max Green Setting (Gmax), s	15.5	61.0		29.0	5.0	71.5		29.0				
Max Q Clear Time (g_c+I1), s	10.6	21.1		2.3	2.1	12.2		9.4				
Green Ext Time (p_c), s	0.3	30.0		0.0	0.0	29.5		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			12.8									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	847	294	20	845	107	286	52	17	27	10	16
Future Volume (vph)	76	847	294	20	845	107	286	52	17	27	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.4	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	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	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.96		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1626	3252	1422	1570	3078		1703	1722		1347	1289	
Flt Permitted	0.19	1.00	1.00	0.23	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	323	3252	1422	379	3078		1703	1722		1347	1289	
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)	83	921	320	22	918	116	311	57	18	29	11	17
RTOR Reduction (vph)	0	0	150	0	6	0	0	11	0	0	16	0
Lane Group Flow (vph)	83	921	170	22	1028	0	311	64	0	29	12	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	11%	11%	11%	15%	15%	15%	6%	6%	6%	34%	34%	34%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	69.8	63.6	63.6	67.8	62.6		24.9	27.9		5.3	8.3	
Effective Green, g (s)	69.8	65.1	63.7	67.8	64.1		24.9	28.4		5.3	8.8	
Actuated g/C Ratio	0.58	0.54	0.53	0.56	0.53		0.21	0.24		0.04	0.07	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	255	1764	754	265	1644		353	407		59	94	
v/s Ratio Prot	c0.02	0.28		0.00	c0.33		c0.18	c0.04		0.02	0.01	
v/s Ratio Perm	0.17		0.12	0.04								
v/c Ratio	0.33	0.52	0.23	0.08	0.63		0.88	0.16		0.49	0.13	
Uniform Delay, d1	25.0	17.5	15.0	20.4	19.5		46.1	36.3		56.0	52.0	
Progression Factor	0.40	0.39	0.35	1.00	1.00		1.00	1.00		0.90	1.09	
Incremental Delay, d2	0.7	1.0	0.6	0.1	1.8		21.7	0.2		6.3	0.6	
Delay (s)	10.8	7.9	5.9	20.5	21.4		67.8	36.5		56.7	57.2	
Level of Service	B	A	A	C	C		E	D		E	E	
Approach Delay (s)		7.6			21.3			61.7			57.0	
Approach LOS		A			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	847	294	20	845	107	286	52	17	27	10	16
Future Volume (veh/h)	76	847	294	20	845	107	286	52	17	27	10	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1737	1737	1678	1678	1678	1811	1811	1811	1396	1396	1396
Adj Flow Rate, veh/h	83	921	271	22	918	67	311	57	13	29	11	12
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, %	11	11	11	15	15	15	6	6	6	34	34	34
Cap, veh/h	523	1183	498	511	1081	79	339	317	72	34	31	34
Arrive On Green	0.17	0.24	0.23	0.26	0.36	0.36	0.20	0.22	0.22	0.03	0.05	0.05
Sat Flow, veh/h	1654	3300	1434	1598	3006	219	1725	1427	325	1330	608	663
Grp Volume(v), veh/h	83	921	271	22	487	498	311	0	70	29	0	23
Grp Sat Flow(s),veh/h/ln	1654	1650	1434	1598	1594	1632	1725	0	1752	1330	0	1272
Q Serve(g_s), s	0.0	31.3	11.5	0.0	33.8	33.8	21.2	0.0	3.9	2.6	0.0	2.1
Cycle Q Clear(g_c), s	0.0	31.3	11.5	0.0	33.8	33.8	21.2	0.0	3.9	2.6	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.19	1.00		0.52
Lane Grp Cap(c), veh/h	523	1183	498	511	573	587	339	0	389	34	0	65
V/C Ratio(X)	0.16	0.78	0.54	0.04	0.85	0.85	0.92	0.00	0.18	0.84	0.00	0.35
Avail Cap(c_a), veh/h	523	1238	521	511	594	608	374	0	647	102	0	291
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.1	41.1	12.5	27.1	35.4	35.4	47.2	0.0	37.8	58.2	0.0	55.1
Incr Delay (d2), s/veh	0.1	4.3	3.6	0.0	14.6	14.3	25.5	0.0	0.2	39.4	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	13.7	4.4	0.4	14.8	15.1	11.4	0.0	1.7	1.2	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	45.5	16.1	27.2	50.0	49.7	72.7	0.0	38.1	97.6	0.0	58.3
LnGrp LOS	D	D	B	C	D	D	E	A	D	F	A	E
Approach Vol, veh/h		1275			1007			381			52	
Approach Delay, s/veh		38.6			49.3			66.3			80.2	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.2	47.0	27.6	10.2	35.1	47.2	7.1	30.7
Change Period (Y+Rc), s	4.0	5.5	4.0	4.5	4.0	5.5	4.0	4.5
Max Green Setting (Gmax), s	5.5	43.5	26.0	27.0	5.8	43.2	9.2	43.8
Max Q Clear Time (g_c+I1), s	2.0	33.3	23.2	4.1	2.0	35.8	4.6	5.9
Green Ext Time (p_c), s	0.0	8.2	0.4	0.1	0.1	5.9	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	47.3
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	1	192	6	2	85
Future Vol, veh/h	5	1	192	6	2	85
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	74	74	74	74	74	74
Heavy Vehicles, %	5	5	10	10	17	17
Mvmt Flow	7	1	259	8	3	115

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	384	263	0	0	267	0
Stage 1	263	-	-	-	-	-
Stage 2	121	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.27	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.353	-
Pot Cap-1 Maneuver	613	768	-	-	1215	-
Stage 1	774	-	-	-	-	-
Stage 2	897	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	611	768	-	-	1215	-
Mov Cap-2 Maneuver	611	-	-	-	-	-
Stage 1	774	-	-	-	-	-
Stage 2	894	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	633	1215	-
HCM Lane V/C Ratio	-	-	0.013	0.002	-
HCM Control Delay (s)	-	-	10.8	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	175	50	40	120	1	91	1	101	2	0	0
Future Vol, veh/h	2	175	50	40	120	1	91	1	101	2	0	0
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, %	20	20	20	9	9	9	14	14	14	0	0	0
Mvmt Flow	3	236	68	54	162	1	123	1	136	3	0	0
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	12.1	10.7	11.5	9
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	47%	1%	25%	100%
Vol Thru, %	1%	77%	75%	0%
Vol Right, %	52%	22%	1%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	193	227	161	2
LT Vol	91	2	40	2
Through Vol	1	175	120	0
RT Vol	101	50	1	0
Lane Flow Rate	261	307	218	3
Geometry Grp	1	1	1	1
Degree of Util (X)	0.377	0.434	0.314	0.004
Departure Headway (Hd)	5.206	5.088	5.19	5.962
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	683	699	685	604
Service Time	3.296	3.172	3.281	3.962
HCM Lane V/C Ratio	0.382	0.439	0.318	0.005
HCM Control Delay	11.5	12.1	10.7	9
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.8	2.2	1.3	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	5	0	2	0	469	36	15	473	0
Future Vol, veh/h	0	0	0	5	0	2	0	469	36	15	473	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	110	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	43	43	43	17	17	17	20	20	20
Mvmt Flow	0	0	0	6	0	2	0	521	40	17	526	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	821	1121	263	838	1101	281	526	0	0	561	0	0
Stage 1	560	560	-	541	541	-	-	-	-	-	-	-
Stage 2	261	561	-	297	560	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	8.36	7.36	7.76	4.44	-	-	4.5	-	-
Critical Hdwy Stg 1	6.6	5.6	-	7.36	6.36	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	7.36	6.36	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.93	4.43	3.73	2.37	-	-	2.4	-	-
Pot Cap-1 Maneuver	261	200	726	200	156	607	939	-	-	892	-	-
Stage 1	473	501	-	401	428	-	-	-	-	-	-	-
Stage 2	713	501	-	584	418	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	256	196	726	197	153	607	939	-	-	892	-	-
Mov Cap-2 Maneuver	256	196	-	197	153	-	-	-	-	-	-	-
Stage 1	473	491	-	401	428	-	-	-	-	-	-	-
Stage 2	710	501	-	573	410	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	20.2	0	0.3
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	939	-	-	-	244	892	-	-
HCM Lane V/C Ratio	-	-	-	-	0.032	0.019	-	-
HCM Control Delay (s)	0	-	-	0	20.2	9.1	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	471	488	0
Future Vol, veh/h	0	0	0	471	488	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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	17	17	20	20
Mvmt Flow	0	0	0	523	542	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	804	271	542	0	-	0
Stage 1	542	-	-	-	-	-
Stage 2	262	-	-	-	-	-
Critical Hdwy	6.9	7	4.44	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.37	-	-	-
Pot Cap-1 Maneuver	315	718	926	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	315	718	926	-	-	-
Mov Cap-2 Maneuver	315	-	-	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	749	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	926	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

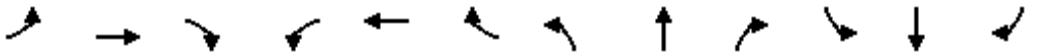
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	3	30	1	19	18	413	40	45	455	25
Future Vol, veh/h	4	1	3	30	1	19	18	413	40	45	455	25
Conflicting Peds, #/hr	3	0	1	1	0	3	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	13	13	13	41	41	41	18	18	18	17	17	17
Mvmt Flow	5	1	4	36	1	23	21	492	48	54	542	30

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	958	1248	288	939	1239	273	573	0	0	540	0	0
Stage 1	666	666	-	558	558	-	-	-	-	-	-	-
Stage 2	292	582	-	381	681	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	8.32	7.32	7.72	4.46	-	-	4.44	-	-
Critical Hdwy Stg 1	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.91	4.41	3.71	2.38	-	-	2.37	-	-
Pot Cap-1 Maneuver	196	157	677	168	128	620	893	-	-	927	-	-
Stage 1	390	430	-	395	423	-	-	-	-	-	-	-
Stage 2	662	471	-	518	364	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	175	144	676	156	118	618	892	-	-	927	-	-
Mov Cap-2 Maneuver	175	144	-	156	118	-	-	-	-	-	-	-
Stage 1	381	405	-	386	413	-	-	-	-	-	-	-
Stage 2	619	460	-	483	343	-	-	-	-	-	-	-

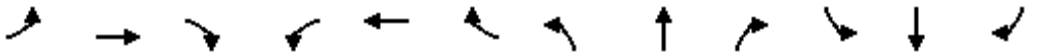
Approach	EB	WB	NB	SB
HCM Control Delay, s	21	27.9	0.3	0.8
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	892	-	-	234	216	927	-	-
HCM Lane V/C Ratio	0.024	-	-	0.041	0.276	0.058	-	-
HCM Control Delay (s)	9.1	-	-	21	27.9	9.1	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.1	0.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	232	58	55	161	40	39	331	66	183	411	67
Future Volume (vph)	32	232	58	55	161	40	39	331	66	183	411	67
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	4.0	
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	0.97		1.00	0.97		1.00	0.98		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)	1597	1631		1597	1627		1504	2922		1702	3325	
Flt Permitted	0.58	1.00		0.33	1.00		0.45	1.00		0.33	1.00	
Satd. Flow (perm)	967	1631		560	1627		716	2922		585	3325	
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)	36	261	65	62	181	45	44	372	74	206	462	75
RTOR Reduction (vph)	0	8	0	0	8	0	0	14	0	0	11	0
Lane Group Flow (vph)	36	318	0	62	218	0	44	432	0	206	526	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	20%	20%	20%	6%	6%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.0	22.4		29.2	24.5		23.9	20.5		36.5	28.1	
Effective Green, g (s)	27.0	23.9		31.2	26.0		25.9	22.0		37.5	29.6	
Actuated g/C Ratio	0.34	0.30		0.39	0.33		0.33	0.28		0.47	0.37	
Clearance Time (s)	5.0	5.5		5.0	5.5		5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	356	489		293	531		276	807		443	1236	
v/s Ratio Prot	0.00	c0.20		c0.02	0.13		0.01	c0.15		c0.07	0.16	
v/s Ratio Perm	0.03			0.07			0.04			0.15		
v/c Ratio	0.10	0.65		0.21	0.41		0.16	0.54		0.47	0.43	
Uniform Delay, d1	17.8	24.2		16.0	20.8		18.7	24.5		13.3	18.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	3.1		0.1	0.5		0.1	0.7		0.3	0.2	
Delay (s)	17.8	27.3		16.2	21.4		18.8	25.1		13.6	18.9	
Level of Service	B	C		B	C		B	C		B	B	
Approach Delay (s)		26.4			20.2			24.6			17.4	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	79.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	232	58	55	161	40	39	331	66	183	411	67
Future Volume (veh/h)	32	232	58	55	161	40	39	331	66	183	411	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1604	1604	1604	1811	1811	1811
Adj Flow Rate, veh/h	36	261	0	62	181	0	44	372	74	206	462	75
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, %	13	13	13	13	13	13	20	20	20	6	6	6
Cap, veh/h	406	408		354	439		368	621	122	465	939	151
Arrive On Green	0.06	0.24	0.00	0.08	0.26	0.00	0.06	0.25	0.22	0.14	0.32	0.29
Sat Flow, veh/h	1626	1707	0	1626	1707	0	1527	2526	497	1725	2956	477
Grp Volume(v), veh/h	36	261	0	62	181	0	44	223	223	206	268	269
Grp Sat Flow(s),veh/h/ln	1626	1707	0	1626	1707	0	1527	1523	1500	1725	1721	1712
Q Serve(g_s), s	0.9	7.2	0.0	1.5	4.6	0.0	1.1	6.8	7.0	4.2	6.6	6.8
Cycle Q Clear(g_c), s	0.9	7.2	0.0	1.5	4.6	0.0	1.1	6.8	7.0	4.2	6.6	6.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.33	1.00		0.28
Lane Grp Cap(c), veh/h	406	408		354	439		368	375	369	465	546	544
V/C Ratio(X)	0.09	0.64		0.18	0.41		0.12	0.59	0.61	0.44	0.49	0.50
Avail Cap(c_a), veh/h	497	1361		478	1425		502	925	911	951	1502	1494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.8	18.0	0.0	13.7	16.3	0.0	13.4	17.6	17.8	11.5	14.5	14.7
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.1	0.6	0.0	0.1	1.5	1.6	0.2	0.7	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	0.3	2.7	0.0	0.5	1.7	0.0	0.3	2.1	2.1	1.2	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	19.7	0.0	13.8	16.9	0.0	13.4	19.1	19.5	11.8	15.2	15.4
LnGrp LOS	B	B		B	B		B	B	B	B	B	B
Approach Vol, veh/h		297	A		243	A		490			743	
Approach Delay, s/veh		19.0			16.1			18.7			14.3	
Approach LOS		B			B			B			B	

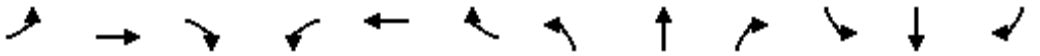
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	17.0	8.0	16.6	7.4	20.7	7.0	17.5
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	21.0	30.5	7.0	40.5	7.0	44.5	5.0	42.5
Max Q Clear Time (g_c+I1), s	6.2	9.0	3.5	9.2	3.1	8.8	2.9	6.6
Green Ext Time (p_c), s	0.2	2.4	0.0	1.6	0.0	3.1	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Notes

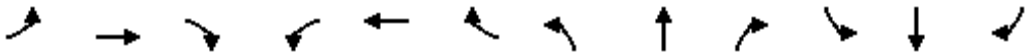
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	852	125	386	1080	8	134	1	186	12	11	8
Future Volume (vph)	7	852	125	386	1080	8	134	1	186	12	11	8
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		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00			1.00	0.99		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1736	3471	1512	1752	3500			1740	1545		1797	
Flt Permitted	0.24	1.00	1.00	0.22	1.00			0.78	1.00		0.88	
Satd. Flow (perm)	442	3471	1512	411	3500			1420	1545		1612	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	8	916	134	415	1161	9	144	1	200	13	12	9
RTOR Reduction (vph)	0	0	55	0	0	0	0	0	30	0	8	0
Lane Group Flow (vph)	8	916	79	415	1170	0	0	145	170	0	26	0
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	65.9	64.9	64.9	93.9	88.9			16.6	41.6		16.6	
Effective Green, g (s)	65.9	66.4	66.4	93.9	90.4			16.6	41.6		16.6	
Actuated g/C Ratio	0.55	0.55	0.55	0.78	0.75			0.14	0.35		0.14	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			4.0	4.0		4.0	
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5			1.5	1.5		1.5	
Lane Grp Cap (vph)	253	1920	836	600	2636			196	587		222	
v/s Ratio Prot	0.00	0.26		c0.14	0.33				0.06			
v/s Ratio Perm	0.02		0.05	c0.40				c0.10	0.05		0.02	
v/c Ratio	0.03	0.48	0.09	0.69	0.44			0.74	0.29		0.12	
Uniform Delay, d1	12.4	16.3	12.6	9.7	5.5			49.6	28.5		45.3	
Progression Factor	1.00	1.00	1.00	0.71	0.84			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	2.3	0.5			11.9	0.1		0.1	
Delay (s)	12.4	17.1	12.9	9.2	5.1			61.5	28.6		45.4	
Level of Service	B	B	B	A	A			E	C		D	
Approach Delay (s)		16.5			6.1			42.4			45.4	
Approach LOS		B			A			D			D	

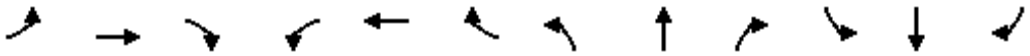
Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	852	125	386	1080	8	134	1	186	12	11	8
Future Volume (veh/h)	7	852	125	386	1080	8	134	1	186	12	11	8
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	1841	1841	1841	1856	1856	1856	1841	1841	1841	1900	1900	1900
Adj Flow Rate, veh/h	8	916	102	415	1161	9	144	1	125	13	12	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	0	0	0
Cap, veh/h	284	2007	875	485	2428	19	226	1	508	54	47	21
Arrive On Green	0.01	0.57	0.57	0.08	0.45	0.45	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1753	3497	1525	1767	3585	28	782	5	1558	57	220	100
Grp Volume(v), veh/h	8	916	102	415	571	599	145	0	125	34	0	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1525	1767	1763	1850	787	0	1558	377	0	0
Q Serve(g_s), s	0.2	18.1	3.7	10.8	27.1	27.1	0.0	0.0	7.1	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.1	3.7	10.8	27.1	27.1	23.1	0.0	7.1	23.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.99		1.00	0.38		0.26
Lane Grp Cap(c), veh/h	284	2007	875	485	1194	1253	227	0	508	122	0	0
V/C Ratio(X)	0.03	0.46	0.12	0.86	0.48	0.48	0.64	0.00	0.25	0.28	0.00	0.00
Avail Cap(c_a), veh/h	349	2007	875	801	1194	1253	233	0	514	127	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.77	0.77	0.77	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.0	14.8	11.7	15.2	18.0	18.0	46.3	0.0	29.6	39.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.3	1.9	1.1	1.0	4.2	0.0	0.1	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	6.8	1.2	4.4	11.9	12.5	4.5	0.0	2.7	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	15.5	11.9	17.1	19.0	19.0	50.4	0.0	29.7	40.0	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	D	A	C	D	A	A
Approach Vol, veh/h		1026			1585			270			34	
Approach Delay, s/veh		15.1			18.5			40.8			40.0	
Approach LOS		B			B			D			D	

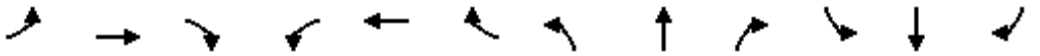
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.6	72.9		29.6	5.2	85.3		29.6				
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0				
Max Green Setting (Gmax), s	35.0	45.5		26.0	5.6	74.9		26.0				
Max Q Clear Time (g_c+I1), s	12.8	20.1		25.5	2.2	29.1		25.1				
Green Ext Time (p_c), s	0.8	17.0		0.0	0.0	31.0		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			19.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	1022	18	17	1281	15	60	9	45	67	2	131
Future Volume (vph)	39	1022	18	17	1281	15	60	9	45	67	2	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.5	4.0		4.5	4.5		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	1.00		1.00	1.00		1.00	0.88		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3460		1752	3498		1805	1663		1736	1557	
Flt Permitted	0.12	1.00		0.20	1.00		0.67	1.00		0.53	1.00	
Satd. Flow (perm)	227	3460		375	3498		1264	1663		970	1557	
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)	42	1111	20	18	1392	16	65	10	49	73	2	142
RTOR Reduction (vph)	0	1	0	0	0	0	0	45	0	0	123	0
Lane Group Flow (vph)	42	1130	0	18	1408	0	65	14	0	73	21	0
Confl. Peds. (#/hr)	1		2	2		1						
Confl. Bikes (#/hr)			6			4						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	0%	0%	0%	4%	4%	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)	82.0	77.8		78.5	76.3		15.0	10.8		25.0	16.3	
Effective Green, g (s)	82.0	79.3		78.5	77.8		15.0	10.8		26.0	16.3	
Actuated g/C Ratio	0.68	0.66		0.65	0.65		0.12	0.09		0.22	0.14	
Clearance Time (s)	4.0	5.5		4.5	5.5		4.5	4.5		5.0	5.0	
Vehicle Extension (s)	1.5	3.5		3.0	3.5		3.0	3.0		2.0	2.0	
Lane Grp Cap (vph)	207	2286		270	2267		176	149		278	211	
v/s Ratio Prot	c0.01	0.33		0.00	c0.40		0.01	0.01		c0.02	0.01	
v/s Ratio Perm	0.13			0.04			c0.03			0.03		
v/c Ratio	0.20	0.49		0.07	0.62		0.37	0.10		0.26	0.10	
Uniform Delay, d1	9.6	10.3		8.2	12.4		47.7	50.1		38.5	45.4	
Progression Factor	0.49	0.96		0.71	0.62		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.7		0.1	1.1		1.3	0.3		0.2	0.1	
Delay (s)	4.9	10.5		5.9	8.8		49.0	50.4		38.7	45.5	
Level of Service	A	B		A	A		D	D		D	D	
Approach Delay (s)		10.3			8.8			49.7			43.2	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



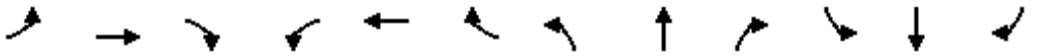
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	1022	18	17	1281	15	60	9	45	67	2	131
Future Volume (veh/h)	39	1022	18	17	1281	15	60	9	45	67	2	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1841	1841	1841	1856	1856	1856	1900	1900	1900	1841	1841	1841
Adj Flow Rate, veh/h	42	1111	20	18	1392	16	65	10	49	73	2	88
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, %	4	4	4	3	3	3	0	0	0	4	4	4
Cap, veh/h	375	2498	45	305	2508	29	166	17	83	217	3	116
Arrive On Green	0.01	0.23	0.23	0.04	1.00	1.00	0.04	0.06	0.06	0.06	0.08	0.08
Sat Flow, veh/h	1753	3513	63	1767	3569	41	1810	280	1373	1753	35	1530
Grp Volume(v), veh/h	42	553	578	18	687	721	65	0	59	73	0	90
Grp Sat Flow(s),veh/h/ln	1753	1749	1827	1767	1763	1847	1810	0	1653	1753	0	1565
Q Serve(g_s), s	0.8	32.4	32.4	0.4	0.0	0.0	4.0	0.0	4.2	4.5	0.0	6.8
Cycle Q Clear(g_c), s	0.8	32.4	32.4	0.4	0.0	0.0	4.0	0.0	4.2	4.5	0.0	6.8
Prop In Lane	1.00		0.03	1.00		0.02	1.00		0.83	1.00		0.98
Lane Grp Cap(c), veh/h	375	1244	1300	305	1239	1298	166	0	100	217	0	119
V/C Ratio(X)	0.11	0.44	0.44	0.06	0.55	0.56	0.39	0.00	0.59	0.34	0.00	0.76
Avail Cap(c_a), veh/h	401	1244	1300	347	1239	1298	166	0	387	441	0	584
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.83	0.83	0.83	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.9	25.7	25.7	9.2	0.0	0.0	50.0	0.0	54.9	47.2	0.0	53.9
Incr Delay (d2), s/veh	0.0	1.0	1.0	0.1	1.5	1.4	1.5	0.0	5.5	0.3	0.0	3.7
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	0.3	15.4	16.1	0.1	0.5	0.5	1.9	0.0	1.9	2.0	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.9	26.7	26.7	9.3	1.5	1.4	51.5	0.0	60.4	47.5	0.0	57.6
LnGrp LOS	A	C	C	A	A	A	D	A	E	D	A	E
Approach Vol, veh/h		1173			1426			124			163	
Approach Delay, s/veh		25.9			1.6			55.7			53.1	
Approach LOS		C			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	89.3	9.8	14.1	7.8	88.3	11.7	12.3
Change Period (Y+Rc), s	4.5	5.5	4.5	5.0	4.0	5.5	5.0	* 5
Max Green Setting (Gmax), s	5.1	45.3	5.3	44.8	5.6	45.3	22.0	* 28
Max Q Clear Time (g_c+I1), s	2.4	34.4	6.0	8.8	2.8	2.0	6.5	6.2
Green Ext Time (p_c), s	0.0	10.1	0.0	0.4	0.0	40.1	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

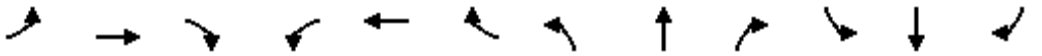
Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	905	165	81	950	125	146	225	160	207	301	217
Future Volume (vph)	63	905	165	81	950	125	146	225	160	207	301	217
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	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	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	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3367	3471	1533	3433	3539	1565	3335	3204		3433	1863	1565
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3367	3471	1533	3433	3539	1565	3335	3204		3433	1863	1565
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	65	933	170	84	979	129	151	232	165	213	310	224
RTOR Reduction (vph)	0	0	69	0	0	51	0	115	0	0	0	45
Lane Group Flow (vph)	65	933	101	84	979	78	151	282	0	213	310	179
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			1			2			1			2
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	6.6	62.3	71.4	5.5	61.2	72.3	9.1	22.1		11.1	24.1	30.7
Effective Green, g (s)	6.6	63.8	71.4	5.5	62.7	72.3	9.1	23.6		11.1	25.6	30.7
Actuated g/C Ratio	0.05	0.53	0.60	0.05	0.52	0.60	0.08	0.20		0.09	0.21	0.26
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	4.0
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	1.5
Lane Grp Cap (vph)	185	1845	912	157	1849	942	252	630		317	397	400
v/s Ratio Prot	0.02	0.27	0.01	0.02	c0.28	0.01	0.05	0.09		c0.06	c0.17	c0.02
v/s Ratio Perm			0.06			0.04						0.09
v/c Ratio	0.35	0.51	0.11	0.54	0.53	0.08	0.60	0.45		0.67	0.78	0.45
Uniform Delay, d1	54.6	18.0	10.5	56.0	18.9	10.0	53.7	42.5		52.7	44.6	37.5
Progression Factor	1.37	0.50	0.15	1.16	0.57	1.49	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.9	0.0	1.6	1.0	0.0	2.5	0.2		4.4	8.9	0.3
Delay (s)	75.4	9.9	1.6	66.6	11.7	14.9	56.2	42.6		57.0	53.4	37.8
Level of Service	E	A	A	E	B	B	E	D		E	D	D
Approach Delay (s)		12.3			15.9			46.4			49.8	
Approach LOS		B			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	64.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	905	165	81	950	125	146	225	160	207	301	217
Future Volume (veh/h)	63	905	165	81	950	125	146	225	160	207	301	217
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	65	933	108	84	979	88	151	232	144	213	310	131
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	5	5	5	2	2	2
Cap, veh/h	125	1938	932	135	1977	980	214	398	237	283	393	367
Arrive On Green	0.07	1.00	1.00	0.05	0.74	0.72	0.06	0.19	0.18	0.08	0.21	0.20
Sat Flow, veh/h	3401	3497	1539	3456	3554	1563	3374	2079	1236	3456	1870	1560
Grp Volume(v), veh/h	65	933	108	84	979	88	151	192	184	213	310	131
Grp Sat Flow(s),veh/h/ln	1700	1749	1539	1728	1777	1563	1687	1735	1581	1728	1870	1560
Q Serve(g_s), s	2.2	0.0	0.0	2.9	13.6	1.7	5.3	12.1	12.9	7.2	18.8	8.4
Cycle Q Clear(g_c), s	2.2	0.0	0.0	2.9	13.6	1.7	5.3	12.1	12.9	7.2	18.8	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		1.00
Lane Grp Cap(c), veh/h	125	1938	932	135	1977	980	214	332	303	283	393	367
V/C Ratio(X)	0.52	0.48	0.12	0.62	0.50	0.09	0.71	0.58	0.61	0.75	0.79	0.36
Avail Cap(c_a), veh/h	317	1938	932	202	1977	980	309	434	395	374	499	455
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	56.0	8.7	5.3	55.1	44.1	45.0	53.9	44.9	38.4
Incr Delay (d2), s/veh	1.1	0.8	0.2	1.7	0.9	0.2	1.6	0.6	0.7	3.8	4.9	0.2
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	0.9	0.2	0.1	1.2	4.1	0.5	2.2	5.1	5.0	3.2	9.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	0.8	0.2	57.7	9.6	5.5	56.7	44.7	45.7	57.7	49.8	38.6
LnGrp LOS	E	A	A	E	A	A	E	D	D	E	D	D
Approach Vol, veh/h		1106			1151			527			654	
Approach Delay, s/veh		3.9			12.8			48.5			50.1	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	70.5	11.6	29.2	8.4	70.8	13.8	27.0
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	7.0	52.5	11.0	30.5	11.2	48.3	13.0	28.5
Max Q Clear Time (g_c+I1), s	4.9	2.0	7.3	20.8	4.2	15.6	9.2	14.9
Green Ext Time (p_c), s	0.1	33.1	0.4	2.8	0.2	24.8	0.6	3.5

Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

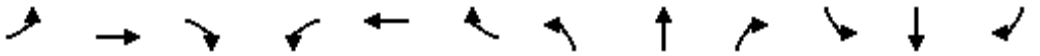
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1251	23	0	1135	0	18
Future Vol, veh/h	1251	23	0	1135	0	18
Conflicting Peds, #/hr	0	2	2	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	2	2	0	0
Mvmt Flow	1331	24	0	1207	0	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	668
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	405
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	404
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

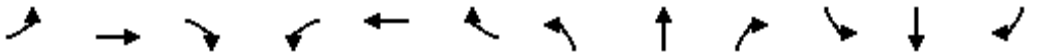
Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	404	-	-	-
HCM Lane V/C Ratio	0.047	-	-	-
HCM Control Delay (s)	14.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	1193	64	58	973	17	146	0	243	17	1	16
Future Volume (vph)	13	1193	64	58	973	17	146	0	243	17	1	16
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		4.5		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)	1735	3471	1530	3400	3494		1717		1520	1767	1579	
Flt Permitted	0.20	1.00	1.00	0.95	1.00		0.75		1.00	0.76	1.00	
Satd. Flow (perm)	367	3471	1530	3400	3494		1348		1520	1408	1579	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	14	1243	67	60	1014	18	152	0	253	18	1	17
RTOR Reduction (vph)	0	0	34	0	1	0	0	0	23	0	11	0
Lane Group Flow (vph)	14	1243	33	60	1031	0	152	0	230	18	7	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	5%	5%	5%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	Prot	NA		Perm		pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2				8		8	4		
Actuated Green, G (s)	59.7	57.6	57.6	6.5	62.0		41.4		47.9	41.4	41.4	
Effective Green, g (s)	60.7	59.1	59.1	7.0	63.5		41.4		48.9	41.9	41.9	
Actuated g/C Ratio	0.51	0.49	0.49	0.06	0.53		0.34		0.41	0.35	0.35	
Clearance Time (s)	4.5	5.5	5.5	4.5	5.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)	2.0	3.5	3.5	2.0	3.5		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	215	1709	753	198	1848		465		670	491	551	
v/s Ratio Prot	0.00	c0.36		0.02	c0.30				c0.02		0.00	
v/s Ratio Perm	0.03		0.02				0.11		0.13	0.01		
v/c Ratio	0.07	0.73	0.04	0.30	0.56		0.33		0.34	0.04	0.01	
Uniform Delay, d1	15.9	24.1	15.8	54.2	18.9		29.0		24.5	25.7	25.5	
Progression Factor	0.51	0.89	1.98	1.08	0.72		1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.0	1.5	0.0	0.3	0.4		1.9		0.1	0.1	0.0	
Delay (s)	8.1	23.0	31.4	58.9	14.0		30.9		24.6	25.9	25.6	
Level of Service	A	C	C	E	B		C		C	C	C	
Approach Delay (s)		23.3			16.5			27.0			25.7	
Approach LOS		C			B			C			C	

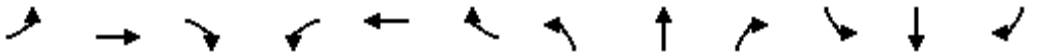
Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1193	64	58	973	17	146	0	243	17	1	16
Future Volume (veh/h)	13	1193	64	58	973	17	146	0	243	17	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		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	1841	1841	1841	1856	1856	1856	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	14	1243	46	60	1014	18	152	0	164	18	1	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	2	2	2
Cap, veh/h	250	1672	735	138	1767	31	569	697	652	526	47	565
Arrive On Green	0.01	0.32	0.32	0.04	0.50	0.49	0.38	0.00	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1753	3497	1538	3428	3544	63	1367	1826	1546	1221	123	1479
Grp Volume(v), veh/h	14	1243	46	60	504	528	152	0	164	18	0	13
Grp Sat Flow(s),veh/h/ln	1753	1749	1538	1714	1763	1844	1367	1826	1546	1221	0	1603
Q Serve(g_s), s	0.5	38.0	2.5	2.1	24.1	24.1	9.4	0.0	8.2	1.1	0.0	0.6
Cycle Q Clear(g_c), s	0.5	38.0	2.5	2.1	24.1	24.1	10.0	0.0	8.2	1.1	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		0.92
Lane Grp Cap(c), veh/h	250	1672	735	138	879	919	569	697	652	526	0	612
V/C Ratio(X)	0.06	0.74	0.06	0.44	0.57	0.57	0.27	0.00	0.25	0.03	0.00	0.02
Avail Cap(c_a), veh/h	310	1749	769	431	1008	1054	569	697	652	526	0	612
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	34.2	22.1	56.3	21.1	21.2	26.6	0.0	22.4	23.3	0.0	23.3
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.7	0.6	0.6	1.1	0.0	0.9	0.1	0.0	0.1
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	0.2	16.9	0.9	0.9	9.4	9.9	3.3	0.0	3.2	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	36.0	22.2	56.9	21.7	21.7	27.7	0.0	23.4	23.4	0.0	23.3
LnGrp LOS	B	D	C	E	C	C	C	A	C	C	A	C
Approach Vol, veh/h		1303			1092			316			31	
Approach Delay, s/veh		35.3			23.7			25.5			23.4	
Approach LOS		D			C			C			C	

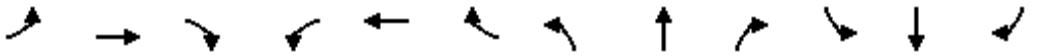
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	61.4		49.8	6.4	63.8		49.8				
Change Period (Y+Rc), s	4.5	5.5		4.5	4.5	5.5		4.5				
Max Green Setting (Gmax), s	14.6	58.5		32.4	6.0	67.1		32.4				
Max Q Clear Time (g_c+I1), s	4.1	40.0		3.1	2.5	26.1		12.0				
Green Ext Time (p_c), s	0.1	15.8		0.1	0.0	25.1		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		29.4	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	1024	389	5	769	39	210	20	15	106	45	67
Future Volume (vph)	31	1024	389	5	769	39	210	20	15	106	45	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.4	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.94		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3471	1520	1719	3410		1770	1732		1736	1649	
Flt Permitted	0.26	1.00	1.00	0.18	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	474	3471	1520	328	3410		1770	1732		1736	1649	
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)	33	1078	409	5	809	41	221	21	16	112	47	71
RTOR Reduction (vph)	0	0	179	0	2	0	0	14	0	0	52	0
Lane Group Flow (vph)	33	1078	230	5	848	0	221	23	0	112	66	0
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)			2			3						
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	74.0	67.4	67.4	62.9	61.8		19.3	14.3		19.2	14.2	
Effective Green, g (s)	74.0	68.9	67.5	62.9	63.3		19.3	14.8		19.2	14.7	
Actuated g/C Ratio	0.62	0.57	0.56	0.52	0.53		0.16	0.12		0.16	0.12	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	362	1992	855	184	1798		284	213		277	202	
v/s Ratio Prot	c0.01	c0.31		0.00	0.25		c0.12	0.01		0.06	c0.04	
v/s Ratio Perm	0.05		0.15	0.01								
v/c Ratio	0.09	0.54	0.27	0.03	0.47		0.78	0.11		0.40	0.33	
Uniform Delay, d1	16.3	15.8	13.5	24.7	17.8		48.3	46.7		45.3	48.1	
Progression Factor	0.48	0.56	0.18	1.00	1.00		1.00	1.00		1.00	1.01	
Incremental Delay, d2	0.1	0.8	0.6	0.1	0.9		12.6	0.2		1.0	1.0	
Delay (s)	7.9	9.7	3.1	24.8	18.7		60.9	47.0		46.2	49.7	
Level of Service	A	A	A	C	B		E	D		D	D	
Approach Delay (s)		7.9			18.8			58.9			48.0	
Approach LOS		A			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1024	389	5	769	39	210	20	15	106	45	67
Future Volume (veh/h)	31	1024	389	5	769	39	210	20	15	106	45	67
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	1841	1841	1841	1826	1826	1826	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	33	1078	346	5	809	20	221	21	11	112	47	66
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, %	4	4	4	5	5	5	2	2	2	4	4	4
Cap, veh/h	651	1294	547	551	1142	28	253	183	96	139	66	92
Arrive On Green	0.60	0.74	0.72	0.26	0.33	0.33	0.14	0.16	0.15	0.08	0.09	0.09
Sat Flow, veh/h	1753	3497	1526	1739	3457	85	1781	1155	605	1753	691	971
Grp Volume(v), veh/h	33	1078	346	5	406	423	221	0	32	112	0	113
Grp Sat Flow(s),veh/h/ln	1753	1749	1526	1739	1735	1808	1781	0	1760	1753	0	1662
Q Serve(g_s), s	0.0	25.1	9.2	0.0	24.5	24.6	14.6	0.0	1.9	7.5	0.0	7.9
Cycle Q Clear(g_c), s	0.0	25.1	9.2	0.0	24.5	24.6	14.6	0.0	1.9	7.5	0.0	7.9
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.34	1.00		0.58
Lane Grp Cap(c), veh/h	651	1294	547	551	573	597	253	0	278	139	0	158
V/C Ratio(X)	0.05	0.83	0.63	0.01	0.71	0.71	0.87	0.00	0.11	0.81	0.00	0.72
Avail Cap(c_a), veh/h	651	1399	592	551	694	723	341	0	515	225	0	381
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	13.1	5.5	24.3	35.1	35.1	50.4	0.0	43.4	54.4	0.0	52.9
Incr Delay (d2), s/veh	0.0	4.4	3.7	0.0	7.2	7.0	16.7	0.0	0.2	10.5	0.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	5.2	3.5	0.1	11.1	11.5	7.6	0.0	0.8	3.7	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.7	17.5	9.2	24.3	42.4	42.1	67.1	0.0	43.6	64.9	0.0	58.8
LnGrp LOS	B	B	A	C	D	D	E	A	D	E	A	E
Approach Vol, veh/h		1457			834			253			225	
Approach Delay, s/veh		15.4			42.1			64.1			61.8	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.1	48.4	21.1	15.4	39.9	43.6	13.5	23.0
Change Period (Y+Rc), s	4.0	5.5	4.0	4.5	4.0	5.5	4.0	4.5
Max Green Setting (Gmax), s	5.5	46.5	23.0	27.0	5.5	46.5	15.4	34.6
Max Q Clear Time (g_c+I1), s	2.0	27.1	16.6	9.9	2.0	26.6	9.5	3.9
Green Ext Time (p_c), s	0.0	15.9	0.5	0.4	0.0	11.6	0.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	31.7
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	5	100	18	4	177
Future Vol, veh/h	23	5	100	18	4	177
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	82	82	82	82	82	82
Heavy Vehicles, %	5	5	11	11	5	5
Mvmt Flow	28	6	122	22	5	216

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	359	133	0	0	144	0
Stage 1	133	-	-	-	-	-
Stage 2	226	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	634	908	-	-	1420	-
Stage 1	886	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	631	908	-	-	1420	-
Mov Cap-2 Maneuver	631	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	802	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	667	1420	-
HCM Lane V/C Ratio	-	-	0.051	0.003	-
HCM Control Delay (s)	-	-	10.7	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	124	78	122	254	1	57	0	65	1	0	0
Future Vol, veh/h	0	124	78	122	254	1	57	0	65	1	0	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	7	7	7	7	7	7	5	5	5	0	0	0
Mvmt Flow	0	148	93	145	302	1	68	0	77	1	0	0
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	9.9	14.5	9.9	9.1
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	47%	0%	32%	100%
Vol Thru, %	0%	61%	67%	0%
Vol Right, %	53%	39%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	122	202	377	1
LT Vol	57	0	122	1
Through Vol	0	124	254	0
RT Vol	65	78	1	0
Lane Flow Rate	145	240	449	1
Geometry Grp	1	1	1	1
Degree of Util (X)	0.215	0.314	0.592	0.002
Departure Headway (Hd)	5.328	4.698	4.746	6.053
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	668	760	758	595
Service Time	3.407	2.76	2.8	4.053
HCM Lane V/C Ratio	0.217	0.316	0.592	0.002
HCM Control Delay	9.9	9.9	14.5	9.1
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.8	1.3	3.9	0

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	38	0	21	0	406	7	3	686	0
Future Vol, veh/h	0	0	0	38	0	21	0	406	7	3	686	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	110	-	-
Veh in Median Storage, #	-	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, %	5	5	5	2	2	2	4	4	4	4	4	4
Mvmt Flow	0	0	0	43	0	24	0	461	8	3	780	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1017	1256	390	862	1252	236	780	0	0	470	0	0
Stage 1	786	786	-	466	466	-	-	-	-	-	-	-
Stage 2	231	470	-	396	786	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	7.54	6.54	6.94	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.6	5.6	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.52	4.02	3.32	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	188	166	600	249	171	766	820	-	-	1074	-	-
Stage 1	345	394	-	546	561	-	-	-	-	-	-	-
Stage 2	742	551	-	601	401	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	182	165	600	248	170	765	820	-	-	1073	-	-
Mov Cap-2 Maneuver	182	165	-	248	170	-	-	-	-	-	-	-
Stage 1	345	393	-	545	560	-	-	-	-	-	-	-
Stage 2	719	550	-	599	400	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	18.8	0	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	820	-	-	-	327	1073	-	-
HCM Lane V/C Ratio	-	-	-	-	0.205	0.003	-	-
HCM Control Delay (s)	0	-	-	0	18.8	8.4	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.8	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	427	689	0
Future Vol, veh/h	0	0	0	427	689	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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	5	5	4	4	4	4
Mvmt Flow	0	0	0	485	783	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1026	392	783	0	-	0
Stage 1	783	-	-	-	-	-
Stage 2	243	-	-	-	-	-
Critical Hdwy	6.9	7	4.18	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.24	-	-	-
Pot Cap-1 Maneuver	226	598	818	-	-	-
Stage 1	403	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	226	598	818	-	-	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	403	-	-	-	-	-
Stage 2	766	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	818	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

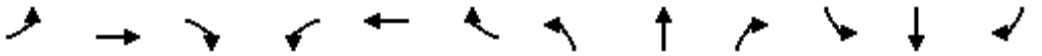
Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1	20	67	0	32	0	415	12	8	602	1
Future Vol, veh/h	18	1	20	67	0	32	0	415	12	8	602	1
Conflicting Peds, #/hr	3	0	1	1	0	3	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	13	13	13	41	41	41	18	18	18	17	17	17
Mvmt Flow	21	1	24	80	0	38	0	494	14	10	717	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	989	1247	361	881	1240	257	719	0	0	508	0	0
Stage 1	739	739	-	501	501	-	-	-	-	-	-	-
Stage 2	250	508	-	380	739	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	8.32	7.32	7.72	4.46	-	-	4.44	-	-
Critical Hdwy Stg 1	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.91	4.41	3.71	2.38	-	-	2.37	-	-
Pot Cap-1 Maneuver	186	158	605	187	128	637	780	-	-	955	-	-
Stage 1	351	396	-	431	453	-	-	-	-	-	-	-
Stage 2	702	510	-	519	339	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	173	156	604	177	127	635	779	-	-	955	-	-
Mov Cap-2 Maneuver	173	156	-	177	127	-	-	-	-	-	-	-
Stage 1	351	392	-	431	453	-	-	-	-	-	-	-
Stage 2	658	510	-	491	335	-	-	-	-	-	-	-

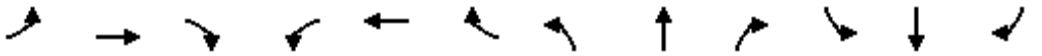
Approach	EB	WB	NB	SB
HCM Control Delay, s	20.9	35.8	0	0.1
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	779	-	-	272	231	955	-	-
HCM Lane V/C Ratio	-	-	-	0.171	0.51	0.01	-	-
HCM Control Delay (s)	0	-	-	20.9	35.8	8.8	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	2.6	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	189	33	155	341	183	16	382	68	99	424	30
Future Volume (vph)	87	189	33	155	341	183	16	382	68	99	424	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	4.0	
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	0.98		1.00	0.95		1.00	0.98		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)	1597	1644		1597	1586		1504	2930		1702	3366	
Flt Permitted	0.22	1.00		0.46	1.00		0.42	1.00		0.28	1.00	
Satd. Flow (perm)	364	1644		767	1586		664	2930		510	3366	
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)	98	212	37	174	383	206	18	429	76	111	476	34
RTOR Reduction (vph)	0	6	0	0	18	0	0	12	0	0	4	0
Lane Group Flow (vph)	98	243	0	174	571	0	18	493	0	111	506	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)												4
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	20%	20%	20%	6%	6%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	37.6	33.9		47.2	38.7		26.9	25.3		36.1	29.9	
Effective Green, g (s)	39.6	35.4		48.4	40.2		28.9	26.8		37.5	31.4	
Actuated g/C Ratio	0.42	0.37		0.51	0.42		0.30	0.28		0.40	0.33	
Clearance Time (s)	5.0	5.5		5.0	5.5		5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	212	613		474	671		225	827		291	1113	
v/s Ratio Prot	0.02	0.15		c0.04	c0.36		0.00	c0.17		c0.03	0.15	
v/s Ratio Perm	0.17			0.15			0.02			0.12		
v/c Ratio	0.46	0.40		0.37	0.85		0.08	0.60		0.38	0.45	
Uniform Delay, d1	19.1	21.9		13.4	24.7		23.3	29.4		19.4	25.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.4		0.2	10.1		0.1	1.2		0.3	0.3	
Delay (s)	19.7	22.3		13.5	34.8		23.3	30.5		19.7	25.3	
Level of Service	B	C		B	C		C	C		B	C	
Approach Delay (s)		21.6			29.9			30.3			24.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	94.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	189	33	155	341	183	16	382	68	99	424	30
Future Volume (veh/h)	87	189	33	155	341	183	16	382	68	99	424	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
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	1707	1707	1707	1707	1707	1707	1604	1604	1604	1811	1811	1811
Adj Flow Rate, veh/h	98	212	0	174	383	0	18	429	59	111	476	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, %	13	13	13	13	13	13	20	20	20	6	6	6
Cap, veh/h	350	466		488	525		311	669	91	358	982	58
Arrive On Green	0.08	0.27	0.00	0.12	0.31	0.00	0.04	0.25	0.22	0.09	0.30	0.27
Sat Flow, veh/h	1626	1707	0	1626	1707	0	1527	2692	368	1725	3297	193
Grp Volume(v), veh/h	98	212	0	174	383	0	18	242	246	111	248	256
Grp Sat Flow(s),veh/h/ln	1626	1707	0	1626	1707	0	1527	1523	1536	1725	1721	1770
Q Serve(g_s), s	2.5	6.1	0.0	4.3	11.8	0.0	0.5	8.4	8.5	2.7	7.0	7.0
Cycle Q Clear(g_c), s	2.5	6.1	0.0	4.3	11.8	0.0	0.5	8.4	8.5	2.7	7.0	7.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.24	1.00		0.11
Lane Grp Cap(c), veh/h	350	466		488	525		311	378	382	358	512	527
V/C Ratio(X)	0.28	0.45		0.36	0.73		0.06	0.64	0.65	0.31	0.48	0.49
Avail Cap(c_a), veh/h	378	1563		570	1679		408	852	859	411	992	1020
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	17.8	0.0	12.9	18.2	0.0	15.7	19.8	20.0	14.4	17.0	17.1
Incr Delay (d2), s/veh	0.2	0.7	0.0	0.2	2.0	0.0	0.0	1.8	1.8	0.2	0.7	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	0.8	2.3	0.0	1.4	4.5	0.0	0.2	2.7	2.8	0.9	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.4	18.5	0.0	13.0	20.2	0.0	15.7	21.6	21.8	14.6	17.7	17.8
LnGrp LOS	B	B		B	C		B	C	C	B	B	B
Approach Vol, veh/h		310	A		557	A		506			615	
Approach Delay, s/veh		17.2			18.0			21.5			17.2	
Approach LOS		B			B			C			B	

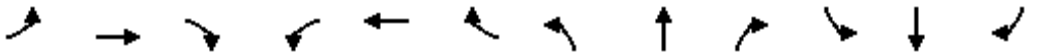
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	18.7	11.0	20.1	6.3	21.6	9.0	22.1
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	6.0	31.5	9.0	52.5	5.0	32.5	5.0	56.5
Max Q Clear Time (g_c+I1), s	4.7	10.5	6.3	8.1	2.5	9.0	4.5	13.8
Green Ext Time (p_c), s	0.0	2.6	0.1	1.3	0.0	2.7	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

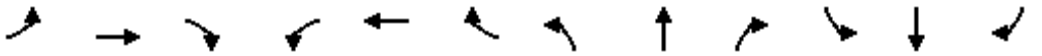
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	974	128	125	677	6	92	3	398	4	0	0
Future Volume (vph)	8	974	128	125	677	6	92	3	398	4	0	0
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		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00	0.99		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	
Satd. Flow (prot)	1655	3312	1448	1570	3135			1676	1487		1444	
Flt Permitted	0.38	1.00	1.00	0.21	1.00			0.73	1.00		0.58	
Satd. Flow (perm)	659	3312	1448	341	3135			1283	1487		888	
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)	8	1025	135	132	713	6	97	3	419	4	0	0
RTOR Reduction (vph)	0	0	47	0	0	0	0	0	34	0	0	0
Lane Group Flow (vph)	8	1025	88	132	719	0	0	100	385	0	4	0
Confl. Peds. (#/hr)	1					1	1					1
Confl. Bikes (#/hr)			4						2			
Heavy Vehicles (%)	9%	9%	9%	15%	15%	15%	8%	8%	8%	25%	25%	25%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	72.9	71.9	71.9	96.3	91.3			14.2	34.6		14.2	
Effective Green, g (s)	72.9	73.4	73.4	96.3	92.8			14.2	34.6		14.2	
Actuated g/C Ratio	0.61	0.61	0.61	0.80	0.77			0.12	0.29		0.12	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			4.0	4.0		4.0	
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5			1.5	1.5		1.5	
Lane Grp Cap (vph)	408	2025	885	482	2424			151	478		105	
v/s Ratio Prot	0.00	c0.31		0.05	0.23				c0.14			
v/s Ratio Perm	0.01		0.06	0.17				0.08	0.12		0.00	
v/c Ratio	0.02	0.51	0.10	0.27	0.30			0.66	0.81		0.04	
Uniform Delay, d1	9.3	13.1	9.6	4.9	4.0			50.6	39.6		46.9	
Progression Factor	1.00	1.00	1.00	3.43	1.34			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	0.1	0.3			8.2	9.0		0.1	
Delay (s)	9.3	14.0	9.9	16.8	5.6			58.8	48.6		46.9	
Level of Service	A	B	A	B	A			E	D		D	
Approach Delay (s)		13.5			7.4			50.6			46.9	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	974	128	125	677	6	92	3	398	4	0	0
Future Volume (veh/h)	8	974	128	125	677	6	92	3	398	4	0	0
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		1.00	1.00		0.98	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	1767	1767	1767	1678	1678	1678	1781	1781	1781	1530	1530	1530
Adj Flow Rate, veh/h	8	1025	109	132	713	6	97	3	324	4	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
Percent Heavy Veh, %	9	9	9	15	15	15	8	8	8	25	25	25
Cap, veh/h	514	2165	944	347	2209	19	350	10	380	197	0	0
Arrive On Green	0.01	0.65	0.65	0.09	1.00	1.00	0.21	0.21	0.21	0.21	0.00	0.00
Sat Flow, veh/h	1682	3357	1463	1598	3239	27	1398	48	1486	656	0	0
Grp Volume(v), veh/h	8	1025	109	132	351	368	100	0	324	4	0	0
Grp Sat Flow(s),veh/h/ln	1682	1678	1463	1598	1594	1673	1445	0	1486	656	0	0
Q Serve(g_s), s	0.2	18.7	3.4	3.4	0.0	0.0	0.0	0.0	24.9	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.7	3.4	3.4	0.0	0.0	5.9	0.0	24.9	6.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.97		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	514	2165	944	347	1087	1141	360	0	380	197	0	0
V/C Ratio(X)	0.02	0.47	0.12	0.38	0.32	0.32	0.28	0.00	0.85	0.02	0.00	0.00
Avail Cap(c_a), veh/h	582	2165	944	672	1087	1141	360	0	380	197	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.7	10.9	8.2	8.1	0.0	0.0	40.0	0.0	42.6	42.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.2	0.2	0.7	0.7	0.2	0.0	16.1	0.0	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	6.3	1.0	0.9	0.2	0.2	2.5	0.0	10.8	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	11.6	8.4	8.4	0.7	0.7	40.1	0.0	58.7	42.7	0.0	0.0
LnGrp LOS	A	B	A	A	A	A	D	A	E	D	A	A
Approach Vol, veh/h		1142			851			424			4	
Approach Delay, s/veh		11.3			1.9			54.3			42.7	
Approach LOS		B			A			D			D	

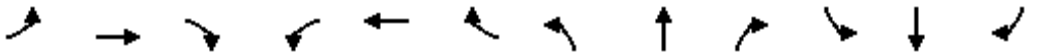
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	81.4		29.0	5.2	85.8		29.0				
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0				
Max Green Setting (Gmax), s	30.0	51.5		25.0	6.0	75.5		25.0				
Max Q Clear Time (g_c+I1), s	5.4	20.7		8.4	2.2	2.0		26.9				
Green Ext Time (p_c), s	0.2	21.6		0.0	0.0	19.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		15.6	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	1172	68	62	756	164	15	2	11	59	9	34
Future Volume (vph)	145	1172	68	62	756	164	15	2	11	59	9	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.5	4.0		4.5	4.5		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	0.99		1.00	0.97		1.00	0.87		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3311		1583	3071		1805	1659		1399	1297	
Flt Permitted	0.25	1.00		0.16	1.00		0.73	1.00		0.49	1.00	
Satd. Flow (perm)	434	3311		270	3071		1384	1659		716	1297	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	151	1221	71	65	788	171	16	2	11	61	9	35
RTOR Reduction (vph)	0	2	0	0	8	0	0	10	0	0	31	0
Lane Group Flow (vph)	151	1290	0	65	951	0	16	3	0	61	13	0
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	8%	8%	8%	14%	14%	14%	0%	0%	0%	29%	29%	29%
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)	85.6	78.6		82.1	77.1		8.9	6.9		21.4	14.9	
Effective Green, g (s)	85.6	80.1		82.1	78.6		8.9	6.9		22.4	14.9	
Actuated g/C Ratio	0.71	0.67		0.68	0.65		0.07	0.06		0.19	0.12	
Clearance Time (s)	4.0	5.5		4.5	5.5		4.5	4.5		5.0	5.0	
Vehicle Extension (s)	1.5	3.5		3.0	3.5		3.0	3.0		2.0	2.0	
Lane Grp Cap (vph)	381	2210		239	2011		109	95		196	161	
v/s Ratio Prot	c0.02	c0.39		0.01	0.31		0.00	0.00		c0.03	0.01	
v/s Ratio Perm	0.26			0.17			0.01			c0.03		
v/c Ratio	0.40	0.58		0.27	0.47		0.15	0.03		0.31	0.08	
Uniform Delay, d1	6.5	10.9		8.0	10.3		51.9	53.4		41.6	46.5	
Progression Factor	1.30	0.96		0.89	0.62		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.9		0.5	0.7		0.6	0.1		0.3	0.1	
Delay (s)	8.7	11.4		7.7	7.1		52.5	53.5		41.9	46.6	
Level of Service	A	B		A	A		D	D		D	D	
Approach Delay (s)		11.1			7.2			53.0			43.9	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



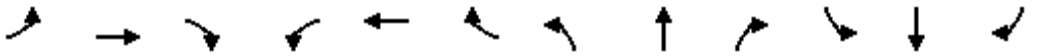
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	1172	68	62	756	164	15	2	11	59	9	34
Future Volume (veh/h)	145	1172	68	62	756	164	15	2	11	59	9	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1781	1781	1781	1693	1693	1693	1900	1900	1900	1470	1470	1470
Adj Flow Rate, veh/h	151	1221	71	65	788	155	16	2	11	61	9	35
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	14	14	14	0	0	0	29	29	29
Cap, veh/h	530	2320	135	390	1900	374	144	10	53	193	21	83
Arrive On Green	0.09	1.00	1.00	0.07	1.00	1.00	0.02	0.04	0.04	0.06	0.08	0.09
Sat Flow, veh/h	1697	3246	189	1612	2668	525	1810	254	1395	1400	263	1023
Grp Volume(v), veh/h	151	636	656	65	475	468	16	0	13	61	0	44
Grp Sat Flow(s),veh/h/ln	1697	1692	1742	1612	1608	1585	1810	0	1649	1400	0	1286
Q Serve(g_s), s	3.2	0.0	0.0	1.3	0.0	0.0	1.0	0.0	0.9	4.8	0.0	3.9
Cycle Q Clear(g_c), s	3.2	0.0	0.0	1.3	0.0	0.0	1.0	0.0	0.9	4.8	0.0	3.9
Prop In Lane	1.00		0.11	1.00		0.33	1.00		0.85	1.00		0.80
Lane Grp Cap(c), veh/h	530	1209	1245	390	1145	1129	144	0	63	193	0	104
V/C Ratio(X)	0.28	0.53	0.53	0.17	0.41	0.41	0.11	0.00	0.21	0.32	0.00	0.42
Avail Cap(c_a), veh/h	573	1209	1245	402	1145	1129	190	0	385	371	0	481
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	0.86	0.86	0.86	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.2	0.0	0.0	4.2	0.0	0.0	54.0	0.0	56.0	47.8	0.0	52.1
Incr Delay (d2), s/veh	0.1	1.2	1.2	0.2	1.0	1.0	0.3	0.0	1.6	0.3	0.0	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/ln	0.8	0.4	0.4	0.4	0.3	0.3	0.5	0.0	0.4	1.7	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	1.2	1.2	4.3	1.0	1.0	54.4	0.0	57.6	48.1	0.0	53.1
LnGrp LOS	A	A	A	A	A	A	D	A	E	D	A	D
Approach Vol, veh/h		1443			1008			29			105	
Approach Delay, s/veh		1.5			1.2			55.8			50.2	
Approach LOS		A			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	89.8	6.6	14.7	9.2	89.5	11.8	9.6
Change Period (Y+Rc), s	4.5	5.5	4.5	5.0	4.0	5.5	5.0	* 5
Max Green Setting (Gmax), s	5.3	45.2	5.1	44.9	8.3	42.7	22.0	* 28
Max Q Clear Time (g_c+I1), s	3.3	2.0	3.0	5.9	5.2	2.0	6.8	2.9
Green Ext Time (p_c), s	0.0	38.5	0.0	0.2	0.1	29.7	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	4.0
HCM 6th LOS	A

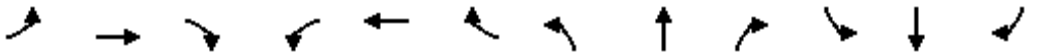
Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	1011	127	127	676	244	228	273	101	183	234	77
Future Volume (vph)	105	1011	127	127	676	244	228	273	101	183	234	77
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	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3127	3223	1423	3072	3167	1402	3155	3120		3072	1667	1403
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3127	3223	1423	3072	3167	1402	3155	3120		3072	1667	1403
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	113	1087	137	137	727	262	245	294	109	197	252	83
RTOR Reduction (vph)	0	0	57	0	0	82	0	33	0	0	0	63
Lane Group Flow (vph)	113	1087	80	137	727	180	245	370	0	197	252	20
Confl. Peds. (#/hr)			2	2			1					1
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	12%	12%	12%	14%	14%	14%	11%	11%	11%	14%	14%	14%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	7.3	58.0	70.3	8.8	59.5	70.8	12.3	22.9		11.3	21.9	29.2
Effective Green, g (s)	7.3	59.5	70.3	8.8	61.0	70.8	12.3	24.4		11.3	23.4	29.2
Actuated g/C Ratio	0.06	0.50	0.59	0.07	0.51	0.59	0.10	0.20		0.09	0.19	0.24
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	4.0
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	1.5
Lane Grp Cap (vph)	190	1598	833	225	1609	827	323	634		289	325	341
v/s Ratio Prot	0.04	c0.34	0.01	c0.04	0.23	0.02	c0.08	0.12		0.06	c0.15	0.00
v/s Ratio Perm			0.05			0.11						0.01
v/c Ratio	0.59	0.68	0.10	0.61	0.45	0.22	0.76	0.58		0.68	0.78	0.06
Uniform Delay, d1	54.9	23.0	10.9	53.9	18.8	11.6	52.4	43.2		52.6	45.8	34.9
Progression Factor	1.14	0.50	0.76	1.09	0.88	1.65	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.9	2.1	0.0	3.0	0.9	0.0	8.7	0.9		5.2	10.1	0.0
Delay (s)	65.7	13.6	8.3	61.8	17.5	19.1	61.2	44.1		57.8	55.9	34.9
Level of Service	E	B	A	E	B	B	E	D		E	E	C
Approach Delay (s)		17.5			23.3			50.5			53.3	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1011	127	127	676	244	228	273	101	183	234	77
Future Volume (veh/h)	105	1011	127	127	676	244	228	273	101	183	234	77
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		0.99	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	1722	1722	1722	1693	1693	1693	1737	1737	1737	1693	1693	1693
Adj Flow Rate, veh/h	113	1087	121	137	727	187	245	294	87	197	252	61
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	14	14	14	11	11	11	14	14	14
Cap, veh/h	160	1703	870	194	1711	854	308	508	148	259	318	324
Arrive On Green	0.10	1.00	1.00	0.02	0.18	0.17	0.10	0.20	0.19	0.08	0.19	0.18
Sat Flow, veh/h	3182	3272	1437	3127	3216	1415	3209	2522	732	3127	1693	1432
Grp Volume(v), veh/h	113	1087	121	137	727	187	245	190	191	197	252	61
Grp Sat Flow(s),veh/h/ln	1591	1636	1437	1564	1608	1415	1605	1650	1604	1564	1693	1432
Q Serve(g_s), s	4.1	0.0	0.0	5.2	24.2	11.4	9.0	12.5	13.0	7.4	17.0	4.1
Cycle Q Clear(g_c), s	4.1	0.0	0.0	5.2	24.2	11.4	9.0	12.5	13.0	7.4	17.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	160	1703	870	194	1711	854	308	332	323	259	318	324
V/C Ratio(X)	0.70	0.64	0.14	0.71	0.42	0.22	0.79	0.57	0.59	0.76	0.79	0.19
Avail Cap(c_a), veh/h	186	1703	870	266	1711	854	369	408	397	341	409	400
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	0.0	0.0	57.7	33.1	20.3	53.1	43.3	43.7	53.9	46.5	37.5
Incr Delay (d2), s/veh	5.9	1.5	0.3	2.4	0.8	0.6	7.9	0.6	0.6	4.7	5.9	0.1
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	1.7	0.4	0.1	2.1	10.5	4.2	3.9	5.0	5.1	3.0	7.5	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.0	1.5	0.3	60.1	33.9	20.9	61.0	43.8	44.4	58.6	52.4	37.6
LnGrp LOS	E	A	A	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		1321			1051			626			510	
Approach Delay, s/veh		6.3			35.0			50.7			53.0	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	66.4	15.5	26.6	10.1	67.8	13.9	28.2
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	10.2	49.5	13.8	27.5	7.0	52.7	13.1	28.2
Max Q Clear Time (g_c+I1), s	7.2	2.0	11.0	19.0	6.1	26.2	9.4	15.0
Green Ext Time (p_c), s	0.3	36.4	0.6	1.8	0.1	17.9	0.5	3.4

Intersection Summary	
HCM 6th Ctrl Delay	29.6
HCM 6th LOS	C

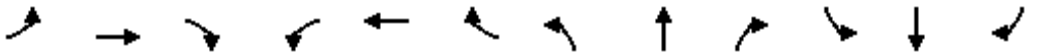
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1252	41	0	1066	0	16
Future Vol, veh/h	1252	41	0	1066	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	10	10	13	13	93	93
Mvmt Flow	1318	43	0	1122	0	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	659
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	8.76
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.23
Pot Cap-1 Maneuver	-	-	0	-	0	246
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	246
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

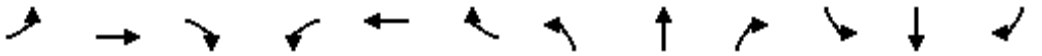
Approach	EB	WB	NB
HCM Control Delay, s	0	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	246	-	-	-
HCM Lane V/C Ratio	0.068	-	-	-
HCM Control Delay (s)	20.7	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1126	137	220	1004	11	60	0	89	3	1	2
Future Volume (vph)	5	1126	137	220	1004	11	60	0	89	3	1	2
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		4.5		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.99	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	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1449	3127	3217		1337		1187	1538	1462	
Flt Permitted	0.26	1.00	1.00	0.95	1.00		0.76		1.00	0.76	1.00	
Satd. Flow (perm)	457	3282	1449	3127	3217		1064		1187	1226	1462	
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)	5	1198	146	234	1068	12	64	0	95	3	1	2
RTOR Reduction (vph)	0	0	42	0	0	0	0	0	39	0	2	0
Lane Group Flow (vph)	5	1198	104	234	1080	0	64	0	56	3	1	0
Confl. Peds. (#/hr)	2					2			2	2		
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	10%	10%	10%	12%	12%	12%	35%	35%	35%	17%	17%	17%
Turn Type	pm+pt	NA	Perm	Prot	NA		Perm		pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2				8		8	4		
Actuated Green, G (s)	80.8	79.8	79.8	12.9	91.7		12.8		25.7	12.8	12.8	
Effective Green, g (s)	81.8	81.3	81.3	13.4	93.2		12.8		26.7	13.3	13.3	
Actuated g/C Ratio	0.68	0.68	0.68	0.11	0.78		0.11		0.22	0.11	0.11	
Clearance Time (s)	4.5	5.5	5.5	4.5	5.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)	2.0	3.5	3.5	2.0	3.5		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	326	2223	981	349	2498		113		303	135	162	
v/s Ratio Prot	0.00	c0.37		c0.07	0.34				0.02		0.00	
v/s Ratio Perm	0.01		0.07				c0.06		0.03	0.00		
v/c Ratio	0.02	0.54	0.11	0.67	0.43		0.57		0.19	0.02	0.01	
Uniform Delay, d1	6.1	9.8	6.7	51.2	4.5		51.0		37.8	47.6	47.5	
Progression Factor	0.44	0.47	0.21	0.93	0.95		1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.7	0.2	2.7	0.4		3.8		0.1	0.0	0.0	
Delay (s)	2.7	5.3	1.6	50.2	4.6		54.8		37.9	47.6	47.5	
Level of Service	A	A	A	D	A		D		D	D	D	
Approach Delay (s)		4.9			12.8			44.7			47.5	
Approach LOS		A			B			D			D	

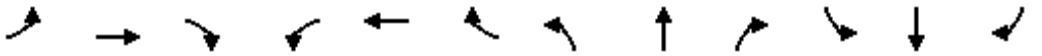
Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1126	137	220	1004	11	60	0	89	3	1	2
Future Volume (veh/h)	5	1126	137	220	1004	11	60	0	89	3	1	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.99	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	1752	1752	1752	1722	1722	1722	1381	1381	1381	1648	1648	1648
Adj Flow Rate, veh/h	5	1198	119	234	1068	12	64	0	63	3	1	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	10	10	12	12	12	35	35	35	17	17	17
Cap, veh/h	416	2371	1043	303	2641	30	150	128	219	168	45	90
Arrive On Green	0.01	0.71	0.71	0.10	0.80	0.78	0.09	0.00	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1668	3328	1464	3182	3313	37	1037	1381	1163	1173	488	976
Grp Volume(v), veh/h	5	1198	119	234	527	553	64	0	63	3	0	3
Grp Sat Flow(s),veh/h/ln	1668	1664	1464	1591	1636	1714	1037	1381	1163	1173	0	1464
Q Serve(g_s), s	0.1	19.4	3.1	8.6	11.6	11.6	7.2	0.0	5.6	0.3	0.0	0.2
Cycle Q Clear(g_c), s	0.1	19.4	3.1	8.6	11.6	11.6	7.4	0.0	5.6	0.3	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	416	2371	1043	303	1304	1366	150	128	219	168	0	135
V/C Ratio(X)	0.01	0.51	0.11	0.77	0.40	0.40	0.43	0.00	0.29	0.02	0.00	0.02
Avail Cap(c_a), veh/h	475	2371	1043	424	1304	1366	309	340	397	348	0	360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.62	0.62	0.62	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.9	7.8	5.4	53.0	3.6	3.7	53.4	0.0	41.9	49.5	0.0	49.7
Incr Delay (d2), s/veh	0.0	0.8	0.2	2.1	0.6	0.6	0.7	0.0	0.3	0.0	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	0.0	5.9	0.8	3.4	2.7	2.8	1.9	0.0	1.6	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.9	8.5	5.6	55.2	4.2	4.2	54.1	0.0	42.1	49.6	0.0	49.7
LnGrp LOS	A	A	A	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		1322			1314			127			6	
Approach Delay, s/veh		8.3			13.3			48.2			49.6	
Approach LOS		A			B			D			D	

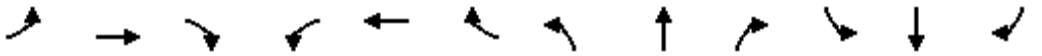
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.4	89.5		15.1	5.3	99.6		15.1				
Change Period (Y+Rc), s	4.5	5.5		4.5	4.5	5.5		4.5				
Max Green Setting (Gmax), s	15.5	61.0		29.0	5.0	71.5		29.0				
Max Q Clear Time (g_c+I1), s	10.6	21.4		2.3	2.1	13.6		9.4				
Green Ext Time (p_c), s	0.3	30.0		0.0	0.0	32.8		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		12.6	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	853	298	20	896	107	320	52	17	27	10	16
Future Volume (vph)	76	853	298	20	896	107	320	52	17	27	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.4	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	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	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.96		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1626	3252	1422	1570	3081		1703	1722		1347	1289	
Flt Permitted	0.16	1.00	1.00	0.22	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	275	3252	1422	361	3081		1703	1722		1347	1289	
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)	83	927	324	22	974	116	348	57	18	29	11	17
RTOR Reduction (vph)	0	0	158	0	6	0	0	11	0	0	16	0
Lane Group Flow (vph)	83	927	166	22	1084	0	348	64	0	29	12	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	11%	11%	11%	15%	15%	15%	6%	6%	6%	34%	34%	34%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	69.2	61.4	61.4	64.8	59.2		26.7	29.7		5.3	8.3	
Effective Green, g (s)	69.2	62.9	61.5	64.8	60.7		26.7	30.2		5.3	8.8	
Actuated g/C Ratio	0.58	0.52	0.51	0.54	0.51		0.22	0.25		0.04	0.07	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	246	1704	728	251	1558		378	433		59	94	
v/s Ratio Prot	c0.02	0.29		0.00	c0.35		c0.20	c0.04		0.02	0.01	
v/s Ratio Perm	0.17		0.12	0.04								
v/c Ratio	0.34	0.54	0.23	0.09	0.70		0.92	0.15		0.49	0.13	
Uniform Delay, d1	28.4	19.0	16.1	22.8	22.6		45.6	34.9		56.0	52.0	
Progression Factor	0.45	0.46	0.41	1.00	1.00		1.00	1.00		0.90	1.06	
Incremental Delay, d2	0.7	1.1	0.6	0.2	2.6		27.3	0.2		6.3	0.6	
Delay (s)	13.6	9.8	7.3	23.0	25.2		72.9	35.1		56.7	55.7	
Level of Service	B	A	A	C	C		E	D		E	E	
Approach Delay (s)		9.4			25.2			66.2			56.2	
Approach LOS		A			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	853	298	20	896	107	320	52	17	27	10	16
Future Volume (veh/h)	76	853	298	20	896	107	320	52	17	27	10	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1737	1737	1678	1678	1678	1811	1811	1811	1396	1396	1396
Adj Flow Rate, veh/h	83	927	275	22	974	67	348	57	13	29	11	12
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, %	11	11	11	15	15	15	6	6	6	34	34	34
Cap, veh/h	470	1186	499	480	1105	76	371	344	78	34	31	34
Arrive On Green	0.16	0.24	0.23	0.24	0.37	0.37	0.22	0.24	0.24	0.03	0.05	0.05
Sat Flow, veh/h	1654	3300	1434	1598	3020	208	1725	1427	325	1330	608	663
Grp Volume(v), veh/h	83	927	275	22	514	527	348	0	70	29	0	23
Grp Sat Flow(s),veh/h/ln	1654	1650	1434	1598	1594	1634	1725	0	1752	1330	0	1272
Q Serve(g_s), s	0.0	31.5	11.1	0.0	36.2	36.2	23.8	0.0	3.8	2.6	0.0	2.1
Cycle Q Clear(g_c), s	0.0	31.5	11.1	0.0	36.2	36.2	23.8	0.0	3.8	2.6	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.19	1.00		0.52
Lane Grp Cap(c), veh/h	470	1186	499	480	583	598	371	0	422	34	0	65
V/C Ratio(X)	0.18	0.78	0.55	0.05	0.88	0.88	0.94	0.00	0.17	0.84	0.00	0.35
Avail Cap(c_a), veh/h	470	1238	521	480	594	609	374	0	647	102	0	291
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.0	41.2	11.3	28.9	35.6	35.6	46.3	0.0	36.1	58.2	0.0	55.1
Incr Delay (d2), s/veh	0.2	4.4	3.7	0.0	17.3	17.0	30.8	0.0	0.2	39.4	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	13.8	4.2	0.4	16.1	16.5	13.2	0.0	1.6	1.2	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	45.6	15.0	28.9	52.9	52.6	77.1	0.0	36.2	97.6	0.0	58.3
LnGrp LOS	D	D	B	C	D	D	E	A	D	F	A	E
Approach Vol, veh/h		1285			1063			418			52	
Approach Delay, s/veh		38.6			52.3			70.3			80.2	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.9	47.1	29.8	10.2	32.1	47.9	7.1	32.9
Change Period (Y+Rc), s	4.0	5.5	4.0	4.5	4.0	5.5	4.0	4.5
Max Green Setting (Gmax), s	5.5	43.5	26.0	27.0	5.8	43.2	9.2	43.8
Max Q Clear Time (g_c+I1), s	2.0	33.5	25.8	4.1	2.0	38.2	4.6	5.8
Green Ext Time (p_c), s	0.0	8.1	0.0	0.1	0.1	4.2	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	49.2
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	4	192	118	29	85
Future Vol, veh/h	16	4	192	118	29	85
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	74	74	74	74	74	74
Heavy Vehicles, %	5	5	10	10	17	17
Mvmt Flow	22	5	259	159	39	115

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	532	339	0	0	418	0
Stage 1	339	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.27	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.353	-
Pot Cap-1 Maneuver	503	696	-	-	1065	-
Stage 1	715	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	483	696	-	-	1065	-
Mov Cap-2 Maneuver	483	-	-	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	801	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	2.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	514	1065	-
HCM Lane V/C Ratio	-	-	0.053	0.037	-
HCM Control Delay (s)	-	-	12.4	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	175	63	54	120	1	92	1	103	2	0	0
Future Vol, veh/h	2	175	63	54	120	1	92	1	103	2	0	0
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, %	20	20	20	9	9	9	14	14	14	0	0	0
Mvmt Flow	3	236	85	73	162	1	124	1	139	3	0	0
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	12.8	11.3	11.9	9.2
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	47%	1%	31%	100%
Vol Thru, %	1%	73%	69%	0%
Vol Right, %	53%	26%	1%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	196	240	175	2
LT Vol	92	2	54	2
Through Vol	1	175	120	0
RT Vol	103	63	1	0
Lane Flow Rate	265	324	236	3
Geometry Grp	1	1	1	1
Degree of Util (X)	0.397	0.469	0.351	0.005
Departure Headway (Hd)	5.402	5.21	5.346	6.092
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	667	694	674	587
Service Time	3.417	3.227	3.374	4.133
HCM Lane V/C Ratio	0.397	0.467	0.35	0.005
HCM Control Delay	11.9	12.8	11.3	9.2
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.9	2.5	1.6	0

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	16	5	0	2	118	469	36	15	473	30
Future Vol, veh/h	4	0	16	5	0	2	118	469	36	15	473	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	110	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	43	43	43	17	17	17	20	20	20
Mvmt Flow	4	0	18	6	0	2	131	521	40	17	526	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1100	1400	280	1100	1396	281	559	0	0	561	0	0
Stage 1	577	577	-	803	803	-	-	-	-	-	-	-
Stage 2	523	823	-	297	593	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	8.36	7.36	7.76	4.44	-	-	4.5	-	-
Critical Hdwy Stg 1	6.6	5.6	-	7.36	6.36	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	7.36	6.36	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.93	4.43	3.73	2.37	-	-	2.4	-	-
Pot Cap-1 Maneuver	163	136	708	122	98	607	911	-	-	892	-	-
Stage 1	462	492	-	266	310	-	-	-	-	-	-	-
Stage 2	498	379	-	584	402	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	142	114	708	104	82	607	911	-	-	892	-	-
Mov Cap-2 Maneuver	142	114	-	104	82	-	-	-	-	-	-	-
Stage 1	395	483	-	228	265	-	-	-	-	-	-	-
Stage 2	425	324	-	558	394	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.7	33.1	1.8	0.3
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	911	-	-	394	136	892	-	-
HCM Lane V/C Ratio	0.144	-	-	0.056	0.057	0.019	-	-
HCM Control Delay (s)	9.6	-	-	14.7	33.1	9.1	-	-
HCM Lane LOS	A	-	-	B	D	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	0.2	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	475	518	0
Future Vol, veh/h	0	0	0	475	518	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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	17	17	20	20
Mvmt Flow	0	0	0	528	576	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	840	288	576	0	-	0
Stage 1	576	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.9	7	4.44	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.37	-	-	-
Pot Cap-1 Maneuver	298	700	897	-	-	-
Stage 1	517	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	298	700	897	-	-	-
Mov Cap-2 Maneuver	298	-	-	-	-	-
Stage 1	517	-	-	-	-	-
Stage 2	747	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	897	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	3	30	1	19	18	417	40	45	485	25
Future Vol, veh/h	4	1	3	30	1	19	18	417	40	45	485	25
Conflicting Peds, #/hr	3	0	1	1	0	3	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	13	13	13	41	41	41	18	18	18	17	17	17
Mvmt Flow	5	1	4	36	1	23	21	496	48	54	577	30

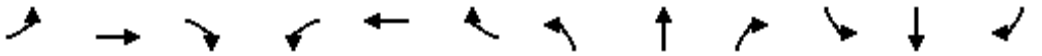
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	995	1287	306	960	1278	275	608	0	0	544	0	0
Stage 1	701	701	-	562	562	-	-	-	-	-	-	-
Stage 2	294	586	-	398	716	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	8.32	7.32	7.72	4.46	-	-	4.44	-	-
Critical Hdwy Stg 1	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.91	4.41	3.71	2.38	-	-	2.37	-	-
Pot Cap-1 Maneuver	184	149	658	161	120	618	865	-	-	924	-	-
Stage 1	371	413	-	392	421	-	-	-	-	-	-	-
Stage 2	660	469	-	505	349	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	164	137	657	149	110	616	864	-	-	924	-	-
Mov Cap-2 Maneuver	164	137	-	149	110	-	-	-	-	-	-	-
Stage 1	362	389	-	383	411	-	-	-	-	-	-	-
Stage 2	617	458	-	471	328	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22	29.3	0.4	0.7
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	864	-	-	221	207	924	-	-
HCM Lane V/C Ratio	0.025	-	-	0.043	0.288	0.058	-	-
HCM Control Delay (s)	9.3	-	-	22	29.3	9.1	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.1	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	232	58	55	161	40	39	335	66	183	441	81
Future Volume (vph)	34	232	58	55	161	40	39	335	66	183	441	81
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	4.0	
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	0.97		1.00	0.97		1.00	0.98		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)	1597	1631		1597	1627		1504	2923		1702	3316	
Flt Permitted	0.57	1.00		0.33	1.00		0.43	1.00		0.32	1.00	
Satd. Flow (perm)	966	1631		560	1627		682	2923		582	3316	
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)	38	261	65	62	181	45	44	376	74	206	496	91
RTOR Reduction (vph)	0	8	0	0	8	0	0	14	0	0	13	0
Lane Group Flow (vph)	38	318	0	62	218	0	44	436	0	206	574	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	20%	20%	20%	6%	6%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.1	22.5		29.3	24.6		24.1	20.7		36.7	28.3	
Effective Green, g (s)	27.1	24.0		31.3	26.1		26.1	22.2		37.7	29.8	
Actuated g/C Ratio	0.34	0.30		0.39	0.33		0.33	0.28		0.47	0.37	
Clearance Time (s)	5.0	5.5		5.0	5.5		5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	356	489		293	531		268	812		442	1236	
v/s Ratio Prot	0.00	c0.20		c0.02	0.13		0.01	c0.15		c0.07	0.17	
v/s Ratio Perm	0.03			0.07			0.04			0.15		
v/c Ratio	0.11	0.65		0.21	0.41		0.16	0.54		0.47	0.46	
Uniform Delay, d1	17.9	24.3		16.1	20.9		18.7	24.5		13.3	19.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	3.1		0.1	0.5		0.1	0.7		0.3	0.3	
Delay (s)	17.9	27.4		16.2	21.4		18.8	25.2		13.6	19.3	
Level of Service	B	C		B	C		B	C		B	B	
Approach Delay (s)		26.4			20.3			24.6			17.8	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	79.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	232	58	55	161	40	39	335	66	183	441	81
Future Volume (veh/h)	34	232	58	55	161	40	39	335	66	183	441	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1604	1604	1604	1811	1811	1811
Adj Flow Rate, veh/h	38	261	0	62	181	0	44	376	74	206	496	91
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, %	13	13	13	13	13	13	20	20	20	6	6	6
Cap, veh/h	405	408		353	436		352	626	122	464	922	168
Arrive On Green	0.06	0.24	0.00	0.08	0.26	0.00	0.06	0.25	0.22	0.14	0.32	0.29
Sat Flow, veh/h	1626	1707	0	1626	1707	0	1527	2531	493	1725	2894	528
Grp Volume(v), veh/h	38	261	0	62	181	0	44	225	225	206	294	293
Grp Sat Flow(s),veh/h/ln	1626	1707	0	1626	1707	0	1527	1523	1501	1725	1721	1701
Q Serve(g_s), s	0.9	7.3	0.0	1.5	4.7	0.0	1.1	6.9	7.1	4.2	7.4	7.5
Cycle Q Clear(g_c), s	0.9	7.3	0.0	1.5	4.7	0.0	1.1	6.9	7.1	4.2	7.4	7.5
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.33	1.00		0.31
Lane Grp Cap(c), veh/h	405	408		353	436		352	376	371	464	548	542
V/C Ratio(X)	0.09	0.64		0.18	0.42		0.12	0.60	0.61	0.44	0.54	0.54
Avail Cap(c_a), veh/h	494	1357		477	1422		486	923	909	949	1498	1481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.8	18.1	0.0	13.8	16.4	0.0	13.4	17.6	17.9	11.5	14.8	15.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.1	0.6	0.0	0.1	1.5	1.6	0.2	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.7	0.0	0.5	1.7	0.0	0.3	2.1	2.2	1.2	2.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	19.7	0.0	13.9	17.0	0.0	13.5	19.1	19.5	11.8	15.6	15.9
LnGrp LOS	B	B		B	B		B	B	B	B	B	B
Approach Vol, veh/h		299	A		243	A		494			793	
Approach Delay, s/veh		19.0			16.2			18.8			14.7	
Approach LOS		B			B			B			B	

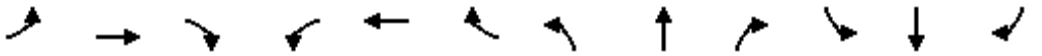
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	17.1	8.0	16.6	7.4	20.8	7.1	17.5
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	21.0	30.5	7.0	40.5	7.0	44.5	5.0	42.5
Max Q Clear Time (g_c+I1), s	6.2	9.1	3.5	9.3	3.1	9.5	2.9	6.7
Green Ext Time (p_c), s	0.2	2.4	0.0	1.6	0.0	3.5	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

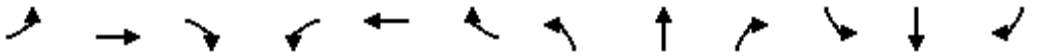
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	856	125	403	1111	8	134	1	188	12	11	8
Future Volume (vph)	7	856	125	403	1111	8	134	1	188	12	11	8
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		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00			1.00	0.99		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1736	3471	1512	1752	3500			1740	1545		1797	
Flt Permitted	0.23	1.00	1.00	0.22	1.00			0.78	1.00		0.88	
Satd. Flow (perm)	427	3471	1512	401	3500			1420	1545		1612	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	8	920	134	433	1195	9	144	1	202	13	12	9
RTOR Reduction (vph)	0	0	55	0	0	0	0	0	28	0	8	0
Lane Group Flow (vph)	8	920	79	433	1204	0	0	145	174	0	26	0
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	64.5	63.5	63.5	93.9	88.9			16.6	43.0		16.6	
Effective Green, g (s)	64.5	65.0	65.0	93.9	90.4			16.6	43.0		16.6	
Actuated g/C Ratio	0.54	0.54	0.54	0.78	0.75			0.14	0.36		0.14	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			4.0	4.0		4.0	
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5			1.5	1.5		1.5	
Lane Grp Cap (vph)	240	1880	819	611	2636			196	605		222	
v/s Ratio Prot	0.00	0.27		c0.16	0.34				0.06			
v/s Ratio Perm	0.02		0.05	c0.40				c0.10	0.05		0.02	
v/c Ratio	0.03	0.49	0.10	0.71	0.46			0.74	0.29		0.12	
Uniform Delay, d1	13.1	17.2	13.3	11.9	5.6			49.6	27.6		45.3	
Progression Factor	1.00	1.00	1.00	0.63	0.77			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	2.5	0.5			11.9	0.1		0.1	
Delay (s)	13.1	18.1	13.5	10.0	4.7			61.5	27.6		45.4	
Level of Service	B	B	B	B	A			E	C		D	
Approach Delay (s)		17.5			6.1			41.8			45.4	
Approach LOS		B			A			D			D	

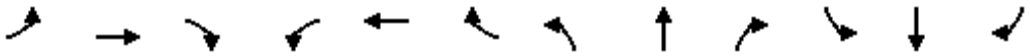
Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	856	125	403	1111	8	134	1	188	12	11	8
Future Volume (veh/h)	7	856	125	403	1111	8	134	1	188	12	11	8
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	1841	1841	1841	1856	1856	1856	1841	1841	1841	1900	1900	1900
Adj Flow Rate, veh/h	8	920	102	433	1195	9	144	1	127	13	12	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	0	0	0
Cap, veh/h	277	2010	877	491	2445	18	219	1	507	50	44	19
Arrive On Green	0.01	0.57	0.57	0.08	0.46	0.46	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1753	3497	1525	1767	3586	27	764	5	1558	41	210	90
Grp Volume(v), veh/h	8	920	102	433	587	617	145	0	127	34	0	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1525	1767	1763	1850	769	0	1558	341	0	0
Q Serve(g_s), s	0.2	18.2	3.7	11.2	28.0	28.0	0.0	0.0	7.2	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.2	3.7	11.2	28.0	28.0	23.3	0.0	7.2	23.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.99		1.00	0.38		0.26
Lane Grp Cap(c), veh/h	277	2010	877	491	1202	1261	220	0	507	112	0	0
V/C Ratio(X)	0.03	0.46	0.12	0.88	0.49	0.49	0.66	0.00	0.25	0.30	0.00	0.00
Avail Cap(c_a), veh/h	341	2010	877	830	1202	1261	220	0	507	112	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.72	0.72	0.72	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.0	14.7	11.6	15.8	18.0	18.0	46.8	0.0	29.7	40.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.3	2.3	1.0	1.0	5.7	0.0	0.1	0.6	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	6.8	1.2	5.7	12.2	12.8	4.6	0.0	2.7	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	15.5	11.9	18.0	19.0	18.9	52.5	0.0	29.8	40.6	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	D	A	C	D	A	A
Approach Vol, veh/h		1030			1637			272			34	
Approach Delay, s/veh		15.1			18.7			41.9			40.6	
Approach LOS		B			B			D			D	

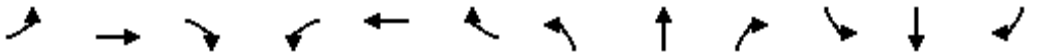
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	73.0		29.0	5.2	85.8		29.0				
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0				
Max Green Setting (Gmax), s	37.0	44.5		25.0	5.6	75.9		25.0				
Max Q Clear Time (g_c+I1), s	13.2	20.2		25.7	2.2	30.0		25.3				
Green Ext Time (p_c), s	0.9	16.5		0.0	0.0	32.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			19.8									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	1026	18	17	1306	23	60	9	45	140	2	154
Future Volume (vph)	41	1026	18	17	1306	23	60	9	45	140	2	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.5	4.0		4.5	4.5		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	1.00		1.00	1.00		1.00	0.88		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3460		1752	3494		1805	1663		1736	1556	
Flt Permitted	0.11	1.00		0.19	1.00		0.65	1.00		0.51	1.00	
Satd. Flow (perm)	195	3460		356	3494		1236	1663		938	1556	
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)	45	1115	20	18	1420	25	65	10	49	152	2	167
RTOR Reduction (vph)	0	1	0	0	1	0	0	45	0	0	139	0
Lane Group Flow (vph)	45	1134	0	18	1444	0	65	14	0	152	30	0
Confl. Peds. (#/hr)	1		2	2		1						
Confl. Bikes (#/hr)			6			4						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	0%	0%	0%	4%	4%	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)	78.2	74.0		74.9	72.6		13.7	9.5		28.7	20.0	
Effective Green, g (s)	78.2	75.5		74.9	74.1		13.7	9.5		29.7	20.0	
Actuated g/C Ratio	0.65	0.63		0.62	0.62		0.11	0.08		0.25	0.17	
Clearance Time (s)	4.0	5.5		4.5	5.5		4.5	4.5		5.0	5.0	
Vehicle Extension (s)	1.5	3.5		3.0	3.5		3.0	3.0		2.0	2.0	
Lane Grp Cap (vph)	181	2176		248	2157		161	131		336	259	
v/s Ratio Prot	c0.01	0.33		0.00	c0.41		0.01	0.01		c0.06	0.02	
v/s Ratio Perm	0.15			0.04			0.03			c0.05		
v/c Ratio	0.25	0.52		0.07	0.67		0.40	0.11		0.45	0.12	
Uniform Delay, d1	12.1	12.3		9.8	15.0		48.8	51.3		37.3	42.5	
Progression Factor	0.55	0.93		0.73	0.63		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.8		0.1	1.5		1.7	0.4		0.4	0.1	
Delay (s)	6.8	12.2		7.2	10.8		50.5	51.7		37.7	42.6	
Level of Service	A	B		A	B		D	D		D	D	
Approach Delay (s)		12.0			10.8			51.1			40.2	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



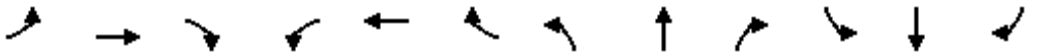
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	1026	18	17	1306	23	60	9	45	140	2	154
Future Volume (veh/h)	41	1026	18	17	1306	23	60	9	45	140	2	154
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1841	1841	1841	1856	1856	1856	1900	1900	1900	1841	1841	1841
Adj Flow Rate, veh/h	45	1115	20	18	1420	25	65	10	49	152	2	113
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, %	4	4	4	3	3	3	0	0	0	4	4	4
Cap, veh/h	354	2378	43	284	2364	42	192	15	74	280	3	169
Arrive On Green	0.01	0.22	0.22	0.04	1.00	1.00	0.04	0.05	0.05	0.10	0.11	0.12
Sat Flow, veh/h	1753	3513	63	1767	3543	62	1810	280	1373	1753	27	1537
Grp Volume(v), veh/h	45	555	580	18	706	739	65	0	59	152	0	115
Grp Sat Flow(s),veh/h/ln	1753	1749	1827	1767	1763	1843	1810	0	1653	1753	0	1564
Q Serve(g_s), s	1.0	33.0	33.0	0.4	0.0	0.0	4.0	0.0	4.2	9.3	0.0	8.4
Cycle Q Clear(g_c), s	1.0	33.0	33.0	0.4	0.0	0.0	4.0	0.0	4.2	9.3	0.0	8.4
Prop In Lane	1.00		0.03	1.00		0.03	1.00		0.83	1.00		0.98
Lane Grp Cap(c), veh/h	354	1183	1237	284	1176	1230	192	0	89	280	0	172
V/C Ratio(X)	0.13	0.47	0.47	0.06	0.60	0.60	0.34	0.00	0.66	0.54	0.00	0.67
Avail Cap(c_a), veh/h	380	1183	1237	326	1176	1230	192	0	387	432	0	584
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.81	0.81	0.81	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.2	27.9	27.9	10.7	0.0	0.0	50.7	0.0	55.7	44.0	0.0	50.8
Incr Delay (d2), s/veh	0.1	1.2	1.1	0.1	1.8	1.8	1.0	0.0	8.2	0.6	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	0.3	15.7	16.4	0.1	0.6	0.6	1.9	0.0	2.0	4.1	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.2	29.1	29.0	10.7	1.8	1.8	51.7	0.0	64.0	44.6	0.0	52.4
LnGrp LOS	A	C	C	B	A	A	D	A	E	D	A	D
Approach Vol, veh/h		1180			1463			124			267	
Approach Delay, s/veh		28.2			1.9			57.5			48.0	
Approach LOS		C			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	85.2	9.8	18.2	7.9	84.1	16.6	11.4
Change Period (Y+Rc), s	4.5	5.5	4.5	5.0	4.0	5.5	5.0	* 5
Max Green Setting (Gmax), s	5.1	45.3	5.3	44.8	5.6	45.3	22.0	* 28
Max Q Clear Time (g_c+I1), s	2.4	35.0	6.0	10.4	3.0	2.0	11.3	6.2
Green Ext Time (p_c), s	0.0	9.5	0.0	0.5	0.0	40.4	0.3	0.2

Intersection Summary	
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

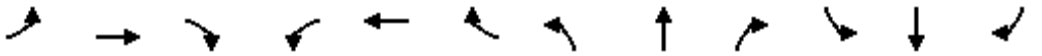
Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	941	202	81	953	131	151	231	160	245	339	242
Future Volume (vph)	67	941	202	81	953	131	151	231	160	245	339	242
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	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	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	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3367	3471	1533	3433	3539	1565	3335	3208		3433	1863	1565
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3367	3471	1533	3433	3539	1565	3335	3208		3433	1863	1565
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	970	208	84	982	135	156	238	165	253	349	249
RTOR Reduction (vph)	0	0	89	0	0	56	0	113	0	0	0	42
Lane Group Flow (vph)	69	970	119	84	982	79	156	290	0	253	349	207
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			1			2			1			2
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	6.9	59.6	68.8	5.5	58.2	70.5	9.2	23.6		12.3	26.7	33.6
Effective Green, g (s)	6.9	61.1	68.8	5.5	59.7	70.5	9.2	25.1		12.3	28.2	33.6
Actuated g/C Ratio	0.06	0.51	0.57	0.05	0.50	0.59	0.08	0.21		0.10	0.23	0.28
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	4.0
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	1.5
Lane Grp Cap (vph)	193	1767	878	157	1760	919	255	671		351	437	438
v/s Ratio Prot	0.02	c0.28	0.01	0.02	0.28	0.01	0.05	0.09		c0.07	c0.19	c0.03
v/s Ratio Perm			0.07			0.04						0.10
v/c Ratio	0.36	0.55	0.14	0.54	0.56	0.09	0.61	0.43		0.72	0.80	0.47
Uniform Delay, d1	54.4	20.1	11.8	56.0	21.0	10.8	53.7	41.3		52.2	43.2	35.8
Progression Factor	1.33	0.57	0.17	1.10	0.65	1.80	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	1.1	0.0	1.6	1.1	0.0	3.0	0.2		6.1	9.2	0.3
Delay (s)	72.6	12.6	2.0	63.1	14.8	19.4	56.7	41.4		58.2	52.4	36.1
Level of Service	E	B	A	E	B	B	E	D		E	D	D
Approach Delay (s)		14.2			18.7			45.7			49.4	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	941	202	81	953	131	151	231	160	245	339	242
Future Volume (veh/h)	67	941	202	81	953	131	151	231	160	245	339	242
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	69	970	146	84	982	94	156	238	144	253	349	156
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	5	5	5	2	2	2
Cap, veh/h	127	1852	897	135	1887	961	219	427	248	327	436	404
Arrive On Green	0.07	1.00	1.00	0.04	0.53	0.52	0.06	0.20	0.19	0.09	0.23	0.22
Sat Flow, veh/h	3401	3497	1539	3456	3554	1563	3374	2100	1220	3456	1870	1561
Grp Volume(v), veh/h	69	970	146	84	982	94	156	195	187	253	349	156
Grp Sat Flow(s),veh/h/ln	1700	1749	1539	1728	1777	1563	1687	1735	1585	1728	1870	1561
Q Serve(g_s), s	2.3	0.0	0.0	2.9	21.5	3.0	5.4	12.1	12.9	8.6	21.1	9.9
Cycle Q Clear(g_c), s	2.3	0.0	0.0	2.9	21.5	3.0	5.4	12.1	12.9	8.6	21.1	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	127	1852	897	135	1887	961	219	353	322	327	436	404
V/C Ratio(X)	0.54	0.52	0.16	0.62	0.52	0.10	0.71	0.55	0.58	0.77	0.80	0.39
Avail Cap(c_a), veh/h	323	1852	897	202	1887	961	309	455	416	418	546	495
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	56.8	18.2	9.5	55.0	42.9	43.7	53.1	43.4	36.7
Incr Delay (d2), s/veh	1.1	0.9	0.3	1.7	1.0	0.2	1.8	0.5	0.6	4.9	5.3	0.2
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	1.0	0.2	0.1	1.3	8.5	1.0	2.3	5.1	5.0	3.9	10.1	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	0.9	0.3	58.5	19.3	9.7	56.8	43.4	44.3	58.0	48.6	36.9
LnGrp LOS	E	A	A	E	B	A	E	D	D	E	D	D
Approach Vol, veh/h		1185			1160			538			758	
Approach Delay, s/veh		4.0			21.3			47.6			49.3	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	67.5	11.8	32.0	8.5	67.7	15.4	28.4
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	7.0	49.5	11.0	33.5	11.4	45.1	14.5	30.0
Max Q Clear Time (g_c+I1), s	4.9	2.0	7.4	23.1	4.3	23.5	10.6	14.9
Green Ext Time (p_c), s	0.1	33.4	0.4	3.4	0.2	17.6	0.8	3.8

Intersection Summary	
HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C

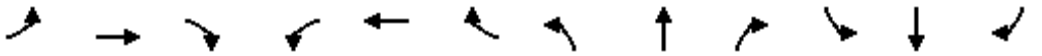
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1325	23	0	1144	0	18
Future Vol, veh/h	1325	23	0	1144	0	18
Conflicting Peds, #/hr	0	2	2	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	2	2	0	0
Mvmt Flow	1410	24	0	1217	0	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	707
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	382
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	381
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

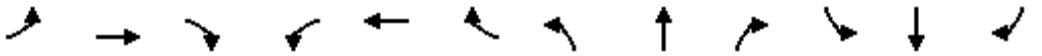
Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	381	-	-	-
HCM Lane V/C Ratio	0.05	-	-	-
HCM Control Delay (s)	14.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	1267	64	58	982	17	146	0	243	17	1	16
Future Volume (vph)	13	1267	64	58	982	17	146	0	243	17	1	16
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		4.5		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)	1735	3471	1530	3400	3494		1717		1520	1767	1579	
Flt Permitted	0.21	1.00	1.00	0.95	1.00		0.75		1.00	0.76	1.00	
Satd. Flow (perm)	376	3471	1530	3400	3494		1348		1520	1408	1579	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	14	1320	67	60	1023	18	152	0	253	18	1	17
RTOR Reduction (vph)	0	0	33	0	1	0	0	0	20	0	11	0
Lane Group Flow (vph)	14	1320	34	60	1040	0	152	0	233	18	7	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	5%	5%	5%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	Prot	NA		Perm		pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2				8		8	4		
Actuated Green, G (s)	61.9	59.9	59.9	6.5	64.4		39.1		45.6	39.1	39.1	
Effective Green, g (s)	62.9	61.4	61.4	7.0	65.9		39.1		46.6	39.6	39.6	
Actuated g/C Ratio	0.52	0.51	0.51	0.06	0.55		0.33		0.39	0.33	0.33	
Clearance Time (s)	4.5	5.5	5.5	4.5	5.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)	2.0	3.5	3.5	2.0	3.5		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	225	1775	782	198	1918		439		640	464	521	
v/s Ratio Prot	0.00	c0.38		0.02	0.30				c0.02		0.00	
v/s Ratio Perm	0.03		0.02				0.11		0.13	0.01		
v/c Ratio	0.06	0.74	0.04	0.30	0.54		0.35		0.36	0.04	0.01	
Uniform Delay, d1	14.7	23.1	14.6	54.2	17.4		30.7		26.2	27.3	27.0	
Progression Factor	0.45	0.86	1.40	1.08	0.69		1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.0	1.6	0.0	0.3	0.3		2.2		0.1	0.2	0.0	
Delay (s)	6.6	21.4	20.4	58.9	12.2		32.9		26.3	27.4	27.1	
Level of Service	A	C	C	E	B		C		C	C	C	
Approach Delay (s)		21.2			14.8			28.8			27.3	
Approach LOS		C			B			C			C	

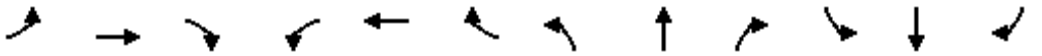
Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1267	64	58	982	17	146	0	243	17	1	16
Future Volume (veh/h)	13	1267	64	58	982	17	146	0	243	17	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		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	1841	1841	1841	1856	1856	1856	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	14	1320	46	60	1023	18	152	0	164	18	1	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	2	2	2
Cap, veh/h	254	1704	749	138	1799	32	557	680	638	515	46	551
Arrive On Green	0.02	0.49	0.49	0.04	0.51	0.50	0.37	0.00	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1753	3497	1538	3428	3545	62	1367	1826	1546	1221	123	1479
Grp Volume(v), veh/h	14	1320	46	60	509	532	152	0	164	18	0	13
Grp Sat Flow(s),veh/h/ln	1753	1749	1538	1714	1763	1844	1367	1826	1546	1221	0	1603
Q Serve(g_s), s	0.5	37.3	1.9	2.1	24.0	24.0	9.6	0.0	8.4	1.1	0.0	0.6
Cycle Q Clear(g_c), s	0.5	37.3	1.9	2.1	24.0	24.0	10.2	0.0	8.4	1.1	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		0.92
Lane Grp Cap(c), veh/h	254	1704	749	138	895	936	557	680	638	515	0	597
V/C Ratio(X)	0.06	0.77	0.06	0.44	0.57	0.57	0.27	0.00	0.26	0.03	0.00	0.02
Avail Cap(c_a), veh/h	300	1778	782	377	1009	1056	557	680	638	515	0	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.84	0.84	0.84	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.2	25.4	16.3	56.3	20.4	20.5	27.4	0.0	23.1	24.0	0.0	24.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.7	0.6	0.6	1.2	0.0	1.0	0.1	0.0	0.1
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	0.2	14.9	0.7	0.9	9.3	9.8	3.3	0.0	3.2	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	27.6	16.3	56.9	21.0	21.0	28.6	0.0	24.1	24.1	0.0	24.0
LnGrp LOS	B	C	B	E	C	C	C	A	C	C	A	C
Approach Vol, veh/h		1380			1101			316			31	
Approach Delay, s/veh		27.1			23.0			26.3			24.1	
Approach LOS		C			C			C			C	

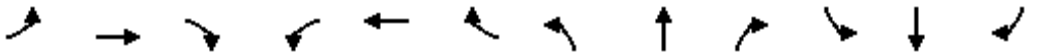
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	62.5		48.7	6.4	64.9		48.7				
Change Period (Y+Rc), s	4.5	5.5		4.5	4.5	5.5		4.5				
Max Green Setting (Gmax), s	12.7	59.5		33.3	5.0	67.2		33.3				
Max Q Clear Time (g_c+I1), s	4.1	39.3		3.1	2.5	26.0		12.2				
Green Ext Time (p_c), s	0.1	17.6		0.1	0.0	25.4		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			25.4									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	1069	418	5	774	39	214	20	15	106	45	67
Future Volume (vph)	31	1069	418	5	774	39	214	20	15	106	45	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.4	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.94		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3471	1520	1719	3410		1770	1732		1736	1649	
Flt Permitted	0.25	1.00	1.00	0.17	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	465	3471	1520	299	3410		1770	1732		1736	1649	
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)	33	1125	440	5	815	41	225	21	16	112	47	71
RTOR Reduction (vph)	0	0	193	0	2	0	0	14	0	0	52	0
Lane Group Flow (vph)	33	1125	247	5	854	0	225	23	0	112	66	0
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)			2			3						
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	73.8	67.2	67.2	62.0	60.9		19.5	14.4		19.3	14.2	
Effective Green, g (s)	73.8	68.7	67.3	62.0	62.4		19.5	14.9		19.3	14.7	
Actuated g/C Ratio	0.61	0.57	0.56	0.52	0.52		0.16	0.12		0.16	0.12	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	364	1987	852	167	1773		287	215		279	202	
v/s Ratio Prot	c0.01	c0.32		0.00	0.25		c0.13	0.01		0.06	c0.04	
v/s Ratio Perm	0.05		0.16	0.02								
v/c Ratio	0.09	0.57	0.29	0.03	0.48		0.78	0.11		0.40	0.33	
Uniform Delay, d1	16.6	16.2	13.8	26.4	18.4		48.2	46.6		45.2	48.1	
Progression Factor	0.49	0.54	0.17	1.00	1.00		1.00	1.00		1.00	1.01	
Incremental Delay, d2	0.1	0.9	0.6	0.1	0.9		13.1	0.2		0.9	1.0	
Delay (s)	8.2	9.6	3.0	26.5	19.4		61.3	46.9		46.1	49.7	
Level of Service	A	A	A	C	B		E	D		D	D	
Approach Delay (s)		7.8			19.4			59.3			48.0	
Approach LOS		A			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1069	418	5	774	39	214	20	15	106	45	67
Future Volume (veh/h)	31	1069	418	5	774	39	214	20	15	106	45	67
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	1841	1841	1841	1826	1826	1826	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	33	1125	377	5	815	20	225	21	11	112	47	66
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, %	4	4	4	5	5	5	2	2	2	4	4	4
Cap, veh/h	641	1319	558	528	1148	28	257	185	97	139	66	92
Arrive On Green	0.59	0.75	0.73	0.25	0.33	0.33	0.14	0.16	0.16	0.08	0.09	0.09
Sat Flow, veh/h	1753	3497	1526	1739	3458	85	1781	1155	605	1753	691	971
Grp Volume(v), veh/h	33	1125	377	5	409	426	225	0	32	112	0	113
Grp Sat Flow(s),veh/h/ln	1753	1749	1526	1739	1735	1808	1781	0	1760	1753	0	1662
Q Serve(g_s), s	0.0	26.6	10.2	0.0	24.7	24.7	14.8	0.0	1.9	7.5	0.0	7.9
Cycle Q Clear(g_c), s	0.0	26.6	10.2	0.0	24.7	24.7	14.8	0.0	1.9	7.5	0.0	7.9
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.34	1.00		0.58
Lane Grp Cap(c), veh/h	641	1319	558	528	576	600	257	0	282	139	0	158
V/C Ratio(X)	0.05	0.85	0.68	0.01	0.71	0.71	0.87	0.00	0.11	0.81	0.00	0.72
Avail Cap(c_a), veh/h	641	1399	592	528	694	723	341	0	515	225	0	381
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	12.5	5.2	25.9	35.0	35.0	50.3	0.0	43.2	54.4	0.0	52.9
Incr Delay (d2), s/veh	0.0	4.7	4.2	0.0	7.3	7.0	17.3	0.0	0.2	10.5	0.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	5.2	3.7	0.1	11.2	11.6	7.8	0.0	0.8	3.7	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	17.2	9.4	25.9	42.3	42.0	67.6	0.0	43.3	64.9	0.0	58.8
LnGrp LOS	B	B	A	C	D	D	E	A	D	E	A	E
Approach Vol, veh/h		1535			840			257			225	
Approach Delay, s/veh		15.2			42.1			64.6			61.8	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.0	49.3	21.3	15.4	39.4	43.8	13.5	23.2
Change Period (Y+Rc), s	4.0	5.5	4.0	4.5	4.0	5.5	4.0	4.5
Max Green Setting (Gmax), s	5.5	46.5	23.0	27.0	5.5	46.5	15.4	34.6
Max Q Clear Time (g_c+I1), s	2.0	28.6	16.8	9.9	2.0	26.7	9.5	3.9
Green Ext Time (p_c), s	0.0	15.2	0.5	0.4	0.0	11.6	0.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	31.2
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	119	29	100	28	6	177
Future Vol, veh/h	119	29	100	28	6	177
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	82	82	82	82	82	82
Heavy Vehicles, %	5	5	11	11	5	5
Mvmt Flow	145	35	122	34	7	216

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	369	139	0	0	156	0
Stage 1	139	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	625	901	-	-	1406	-
Stage 1	880	-	-	-	-	-
Stage 2	801	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	621	901	-	-	1406	-
Mov Cap-2 Maneuver	621	-	-	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	796	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	661	1406	-
HCM Lane V/C Ratio	-	-	0.273	0.005	-
HCM Control Delay (s)	-	-	12.5	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0	-

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	124	78	124	254	1	69	0	77	1	0	0
Future Vol, veh/h	0	124	78	124	254	1	69	0	77	1	0	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	7	7	7	7	7	7	5	5	5	0	0	0
Mvmt Flow	0	148	93	148	302	1	82	0	92	1	0	0
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	10.1	15.1	10.3	9.2
HCM LOS	B	C	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	47%	0%	33%	100%
Vol Thru, %	0%	61%	67%	0%
Vol Right, %	53%	39%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	146	202	379	1
LT Vol	69	0	124	1
Through Vol	0	124	254	0
RT Vol	77	78	1	0
Lane Flow Rate	174	240	451	1
Geometry Grp	1	1	1	1
Degree of Util (X)	0.258	0.32	0.605	0.002
Departure Headway (Hd)	5.353	4.792	4.831	6.15
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	664	743	740	585
Service Time	3.443	2.868	2.896	4.15
HCM Lane V/C Ratio	0.262	0.323	0.609	0.002
HCM Control Delay	10.3	10.1	15.1	9.2
HCM Lane LOS	B	B	C	A
HCM 95th-tile Q	1	1.4	4.1	0

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	0	101	38	0	21	16	406	7	3	686	5
Future Vol, veh/h	26	0	101	38	0	21	16	406	7	3	686	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	110	-	-
Veh in Median Storage, #	-	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, %	5	5	5	2	2	2	4	4	4	4	4	4
Mvmt Flow	30	0	115	43	0	24	18	461	8	3	780	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1056	1295	393	898	1294	236	786	0	0	470	0	0
Stage 1	789	789	-	502	502	-	-	-	-	-	-	-
Stage 2	267	506	-	396	792	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	7.54	6.54	6.94	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.6	5.6	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.52	4.02	3.32	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	176	157	598	234	161	766	816	-	-	1074	-	-
Stage 1	343	393	-	520	540	-	-	-	-	-	-	-
Stage 2	707	531	-	601	399	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	167	153	598	185	157	765	816	-	-	1073	-	-
Mov Cap-2 Maneuver	167	153	-	185	157	-	-	-	-	-	-	-
Stage 1	335	392	-	508	528	-	-	-	-	-	-	-
Stage 2	670	519	-	484	398	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.5	24.3	0.4	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	816	-	-	391	253	1073	-	-
HCM Lane V/C Ratio	0.022	-	-	0.369	0.265	0.003	-	-
HCM Control Delay (s)	9.5	-	-	19.5	24.3	8.4	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.7	1	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	453	694	0
Future Vol, veh/h	0	0	0	453	694	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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	5	5	4	4	4	4
Mvmt Flow	0	0	0	515	789	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1047	395	789	0	-	0
Stage 1	789	-	-	-	-	-
Stage 2	258	-	-	-	-	-
Critical Hdwy	6.9	7	4.18	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.24	-	-	-
Pot Cap-1 Maneuver	219	596	814	-	-	-
Stage 1	400	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	219	596	814	-	-	-
Mov Cap-2 Maneuver	219	-	-	-	-	-
Stage 1	400	-	-	-	-	-
Stage 2	753	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	814	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

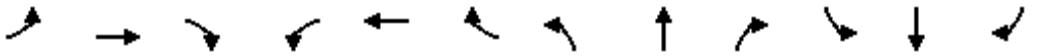
Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1	20	67	0	32	0	441	12	8	607	1
Future Vol, veh/h	18	1	20	67	0	32	0	441	12	8	607	1
Conflicting Peds, #/hr	3	0	1	1	0	3	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	13	13	13	41	41	41	18	18	18	17	17	17
Mvmt Flow	21	1	24	80	0	38	0	525	14	10	723	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1011	1284	364	915	1277	273	725	0	0	539	0	0
Stage 1	745	745	-	532	532	-	-	-	-	-	-	-
Stage 2	266	539	-	383	745	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	8.32	7.32	7.72	4.46	-	-	4.44	-	-
Critical Hdwy Stg 1	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.91	4.41	3.71	2.38	-	-	2.37	-	-
Pot Cap-1 Maneuver	179	149	602	175	120	620	775	-	-	928	-	-
Stage 1	348	394	-	411	437	-	-	-	-	-	-	-
Stage 2	686	493	-	517	337	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	166	147	601	166	119	618	774	-	-	928	-	-
Mov Cap-2 Maneuver	166	147	-	166	119	-	-	-	-	-	-	-
Stage 1	348	389	-	411	437	-	-	-	-	-	-	-
Stage 2	642	493	-	489	333	-	-	-	-	-	-	-

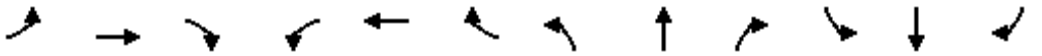
Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	39.7	0	0.1
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	774	-	-	263	217	928	-	-
HCM Lane V/C Ratio	-	-	-	0.177	0.543	0.01	-	-
HCM Control Delay (s)	0	-	-	21.6	39.7	8.9	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	2.9	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	189	33	155	341	183	16	408	68	99	429	32
Future Volume (vph)	99	189	33	155	341	183	16	408	68	99	429	32
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	4.0	
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	0.98		1.00	0.95		1.00	0.98		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)	1597	1644		1597	1586		1504	2935		1703	3364	
Flt Permitted	0.19	1.00		0.49	1.00		0.40	1.00		0.26	1.00	
Satd. Flow (perm)	315	1644		818	1586		635	2935		468	3364	
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)	111	212	37	174	383	206	18	458	76	111	482	36
RTOR Reduction (vph)	0	6	0	0	18	0	0	11	0	0	4	0
Lane Group Flow (vph)	111	243	0	174	571	0	18	523	0	111	514	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)												4
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	20%	20%	20%	6%	6%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.2	37.0		47.6	39.2		27.7	26.0		36.5	30.4	
Effective Green, g (s)	45.2	38.5		49.6	40.7		29.7	27.5		38.1	31.9	
Actuated g/C Ratio	0.46	0.39		0.50	0.41		0.30	0.28		0.39	0.32	
Clearance Time (s)	5.0	5.5		5.0	5.5		5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	238	642		486	655		215	819		270	1089	
v/s Ratio Prot	c0.03	0.15		c0.03	c0.36		0.00	c0.18		c0.03	0.15	
v/s Ratio Perm	0.18			0.15			0.02			0.13		
v/c Ratio	0.47	0.38		0.36	0.87		0.08	0.64		0.41	0.47	
Uniform Delay, d1	18.4	21.4		14.0	26.5		24.4	31.1		20.8	26.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.4		0.2	12.2		0.1	1.6		0.4	0.3	
Delay (s)	18.9	21.8		14.2	38.7		24.4	32.8		21.2	26.9	
Level of Service	B	C		B	D		C	C		C	C	
Approach Delay (s)		20.9			33.1			32.5			25.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	98.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	189	33	155	341	183	16	408	68	99	429	32
Future Volume (veh/h)	99	189	33	155	341	183	16	408	68	99	429	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
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	1707	1707	1707	1707	1707	1707	1604	1604	1604	1811	1811	1811
Adj Flow Rate, veh/h	111	212	0	174	383	0	18	458	59	111	482	30
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, %	13	13	13	13	13	13	20	20	20	6	6	6
Cap, veh/h	348	467		485	522		312	697	89	351	1001	62
Arrive On Green	0.09	0.27	0.00	0.12	0.31	0.00	0.04	0.26	0.23	0.09	0.30	0.28
Sat Flow, veh/h	1626	1707	0	1626	1707	0	1527	2715	348	1725	3284	204
Grp Volume(v), veh/h	111	212	0	174	383	0	18	256	261	111	252	260
Grp Sat Flow(s),veh/h/ln	1626	1707	0	1626	1707	0	1527	1523	1540	1725	1721	1768
Q Serve(g_s), s	2.9	6.2	0.0	4.5	12.1	0.0	0.5	9.1	9.2	2.7	7.2	7.3
Cycle Q Clear(g_c), s	2.9	6.2	0.0	4.5	12.1	0.0	0.5	9.1	9.2	2.7	7.2	7.3
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.23	1.00		0.12
Lane Grp Cap(c), veh/h	348	467		485	522		312	391	395	351	525	539
V/C Ratio(X)	0.32	0.45		0.36	0.73		0.06	0.66	0.66	0.32	0.48	0.48
Avail Cap(c_a), veh/h	396	1526		561	1611		405	832	841	401	969	995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.6	18.2	0.0	13.2	18.8	0.0	15.7	20.1	20.3	14.6	17.1	17.2
Incr Delay (d2), s/veh	0.2	0.7	0.0	0.2	2.0	0.0	0.0	1.9	1.9	0.2	0.7	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	1.0	2.3	0.0	1.5	4.6	0.0	0.2	3.0	3.0	0.9	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.8	18.9	0.0	13.4	20.8	0.0	15.8	21.9	22.2	14.8	17.8	17.9
LnGrp LOS	B	B		B	C		B	C	C	B	B	B
Approach Vol, veh/h		323	A		557	A		535			623	
Approach Delay, s/veh		17.5			18.5			21.8			17.3	
Approach LOS		B			B			C			B	

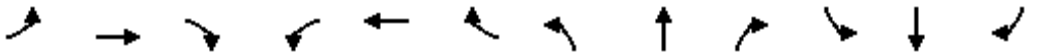
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	19.5	11.2	20.5	6.3	22.4	9.2	22.5
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	6.0	31.5	9.0	52.5	5.0	32.5	6.0	55.5
Max Q Clear Time (g_c+I1), s	4.7	11.2	6.5	8.2	2.5	9.3	4.9	14.1
Green Ext Time (p_c), s	0.0	2.7	0.1	1.3	0.0	2.7	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Notes

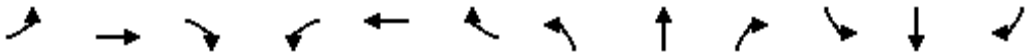
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	973	128	125	677	6	92	3	398	4	0	0
Future Volume (vph)	8	973	128	125	677	6	92	3	398	4	0	0
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		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00	0.99		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	
Satd. Flow (prot)	1655	3312	1448	1570	3135			1676	1487		1444	
Flt Permitted	0.38	1.00	1.00	0.21	1.00			0.73	1.00		0.58	
Satd. Flow (perm)	659	3312	1448	341	3135			1283	1487		888	
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)	8	1024	135	132	713	6	97	3	419	4	0	0
RTOR Reduction (vph)	0	0	47	0	0	0	0	0	34	0	0	0
Lane Group Flow (vph)	8	1024	88	132	719	0	0	100	385	0	4	0
Confl. Peds. (#/hr)	1					1	1					1
Confl. Bikes (#/hr)			4						2			
Heavy Vehicles (%)	9%	9%	9%	15%	15%	15%	8%	8%	8%	25%	25%	25%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	73.0	72.0	72.0	96.3	91.3			14.2	34.5		14.2	
Effective Green, g (s)	73.0	73.5	73.5	96.3	92.8			14.2	34.5		14.2	
Actuated g/C Ratio	0.61	0.61	0.61	0.80	0.77			0.12	0.29		0.12	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			4.0	4.0		4.0	
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5			1.5	1.5		1.5	
Lane Grp Cap (vph)	409	2028	886	481	2424			151	477		105	
v/s Ratio Prot	0.00	c0.31		0.05	0.23				c0.14			
v/s Ratio Perm	0.01		0.06	0.17				0.08	0.12		0.00	
v/c Ratio	0.02	0.50	0.10	0.27	0.30			0.66	0.81		0.04	
Uniform Delay, d1	9.2	13.0	9.6	4.9	4.0			50.6	39.7		46.9	
Progression Factor	1.00	1.00	1.00	3.23	1.27			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	0.1	0.3			8.2	9.1		0.1	
Delay (s)	9.3	13.9	9.8	15.8	5.4			58.8	48.8		46.9	
Level of Service	A	B	A	B	A			E	D		D	
Approach Delay (s)		13.4			7.0			50.7			46.9	
Approach LOS		B			A			D			D	

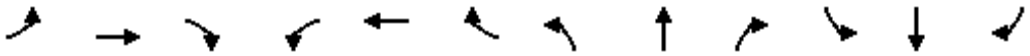
Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	973	128	125	677	6	92	3	398	4	0	0
Future Volume (veh/h)	8	973	128	125	677	6	92	3	398	4	0	0
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		1.00	1.00		0.98	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	1767	1767	1767	1678	1678	1678	1781	1781	1781	1530	1530	1530
Adj Flow Rate, veh/h	8	1024	109	132	713	6	97	3	324	4	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
Percent Heavy Veh, %	9	9	9	15	15	15	8	8	8	25	25	25
Cap, veh/h	514	2165	944	347	2209	19	350	10	380	197	0	0
Arrive On Green	0.01	0.65	0.65	0.09	1.00	1.00	0.21	0.21	0.21	0.21	0.00	0.00
Sat Flow, veh/h	1682	3357	1463	1598	3239	27	1398	48	1486	656	0	0
Grp Volume(v), veh/h	8	1024	109	132	351	368	100	0	324	4	0	0
Grp Sat Flow(s),veh/h/ln	1682	1678	1463	1598	1594	1673	1445	0	1486	656	0	0
Q Serve(g_s), s	0.2	18.7	3.4	3.4	0.0	0.0	0.0	0.0	24.9	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.7	3.4	3.4	0.0	0.0	5.9	0.0	24.9	6.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.97		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	514	2165	944	347	1087	1141	360	0	380	197	0	0
V/C Ratio(X)	0.02	0.47	0.12	0.38	0.32	0.32	0.28	0.00	0.85	0.02	0.00	0.00
Avail Cap(c_a), veh/h	582	2165	944	672	1087	1141	360	0	380	197	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.7	10.9	8.2	8.1	0.0	0.0	40.0	0.0	42.6	42.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.2	0.2	0.7	0.6	0.2	0.0	16.1	0.0	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	6.3	1.0	0.9	0.2	0.2	2.5	0.0	10.8	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	11.6	8.4	8.4	0.7	0.6	40.1	0.0	58.7	42.7	0.0	0.0
LnGrp LOS	A	B	A	A	A	A	D	A	E	D	A	A
Approach Vol, veh/h		1141			851			424			4	
Approach Delay, s/veh		11.3			1.8			54.3			42.7	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	81.4		29.0	5.2	85.8		29.0				
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0				
Max Green Setting (Gmax), s	30.0	51.5		25.0	6.0	75.5		25.0				
Max Q Clear Time (g_c+I1), s	5.4	20.7		8.4	2.2	2.0		26.9				
Green Ext Time (p_c), s	0.2	21.6		0.0	0.0	19.9		0.0				

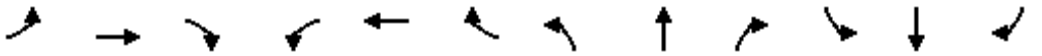
Intersection Summary			
HCM 6th Ctrl Delay		15.6	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	1142	68	62	755	224	15	2	11	62	9	35
Future Volume (vph)	174	1142	68	62	755	224	15	2	11	62	9	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.5	4.0		4.5	4.5		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	0.99		1.00	0.97		1.00	0.87		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3310		1583	3044		1805	1659		1399	1296	
Flt Permitted	0.21	1.00		0.18	1.00		0.73	1.00		0.49	1.00	
Satd. Flow (perm)	368	3310		299	3044		1383	1659		716	1296	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	181	1190	71	65	786	233	16	2	11	65	9	36
RTOR Reduction (vph)	0	2	0	0	14	0	0	10	0	0	31	0
Lane Group Flow (vph)	181	1259	0	65	1005	0	16	3	0	65	14	0
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	8%	8%	8%	14%	14%	14%	0%	0%	0%	29%	29%	29%
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)	87.9	78.4		77.5	72.5		8.9	6.9		21.6	15.1	
Effective Green, g (s)	87.9	79.9		77.5	74.0		8.9	6.9		22.6	15.1	
Actuated g/C Ratio	0.73	0.67		0.65	0.62		0.07	0.06		0.19	0.13	
Clearance Time (s)	4.0	5.5		4.5	5.5		4.5	4.5		5.0	5.0	
Vehicle Extension (s)	1.5	3.5		3.0	3.5		3.0	3.0		2.0	2.0	
Lane Grp Cap (vph)	393	2203		246	1877		109	95		198	163	
v/s Ratio Prot	c0.04	c0.38		0.01	0.33		0.00	0.00		c0.03	0.01	
v/s Ratio Perm	0.29			0.16			0.01			c0.03		
v/c Ratio	0.46	0.57		0.26	0.54		0.15	0.03		0.33	0.08	
Uniform Delay, d1	7.3	10.8		8.8	13.2		51.9	53.4		41.5	46.3	
Progression Factor	1.53	0.96		0.77	0.69		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.9		0.5	0.9		0.6	0.1		0.4	0.1	
Delay (s)	11.5	11.3		7.2	10.0		52.5	53.5		41.9	46.4	
Level of Service	B	B		A	A		D	D		D	D	
Approach Delay (s)		11.3			9.8			53.0			43.7	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



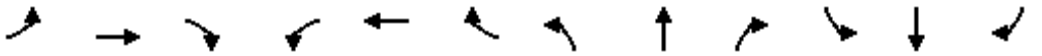
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	1142	68	62	755	224	15	2	11	62	9	35
Future Volume (veh/h)	174	1142	68	62	755	224	15	2	11	62	9	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1781	1781	1781	1693	1693	1693	1900	1900	1900	1470	1470	1470
Adj Flow Rate, veh/h	181	1190	71	65	786	217	16	2	11	65	9	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	14	14	14	0	0	0	29	29	29
Cap, veh/h	515	2307	137	394	1739	480	144	10	53	197	22	86
Arrive On Green	0.10	1.00	1.00	0.07	1.00	1.00	0.02	0.04	0.04	0.07	0.08	0.09
Sat Flow, veh/h	1697	3241	193	1612	2477	684	1810	254	1395	1400	257	1028
Grp Volume(v), veh/h	181	621	640	65	510	493	16	0	13	65	0	45
Grp Sat Flow(s),veh/h/ln	1697	1692	1741	1612	1608	1553	1810	0	1649	1400	0	1285
Q Serve(g_s), s	4.0	0.0	0.0	1.4	0.0	0.0	1.0	0.0	0.9	5.1	0.0	4.0
Cycle Q Clear(g_c), s	4.0	0.0	0.0	1.4	0.0	0.0	1.0	0.0	0.9	5.1	0.0	4.0
Prop In Lane	1.00		0.11	1.00		0.44	1.00		0.85	1.00		0.80
Lane Grp Cap(c), veh/h	515	1205	1239	394	1129	1090	144	0	63	197	0	108
V/C Ratio(X)	0.35	0.52	0.52	0.16	0.45	0.45	0.11	0.00	0.21	0.33	0.00	0.42
Avail Cap(c_a), veh/h	546	1205	1239	406	1129	1090	190	0	385	371	0	481
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	0.82	0.82	0.82	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.3	0.0	0.0	4.5	0.0	0.0	54.0	0.0	56.0	47.6	0.0	51.8
Incr Delay (d2), s/veh	0.1	1.2	1.2	0.2	1.1	1.1	0.3	0.0	1.6	0.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.4	0.4	0.4	0.3	0.3	0.5	0.0	0.4	1.8	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.4	1.2	1.2	4.7	1.1	1.1	54.4	0.0	57.6	48.0	0.0	52.7
LnGrp LOS	A	A	A	A	A	A	D	A	E	D	A	D
Approach Vol, veh/h		1442			1068			29			110	
Approach Delay, s/veh		1.6			1.3			55.8			49.9	
Approach LOS		A			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	89.4	6.6	15.1	10.1	88.3	12.1	9.6
Change Period (Y+Rc), s	4.5	5.5	4.5	5.0	4.0	5.5	5.0	* 5
Max Green Setting (Gmax), s	5.3	45.2	5.1	44.9	8.3	42.7	22.0	* 28
Max Q Clear Time (g_c+I1), s	3.4	2.0	3.0	6.0	6.0	2.0	7.1	2.9
Green Ext Time (p_c), s	0.0	38.0	0.0	0.2	0.1	31.3	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	4.1
HCM 6th LOS	A

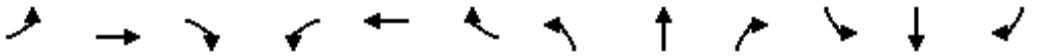
Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1013	128	127	691	200	273	229	101	181	233	76
Future Volume (vph)	75	1013	128	127	691	200	273	229	101	181	233	76
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	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3127	3223	1423	3072	3167	1402	3155	3102		3072	1667	1402
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3127	3223	1423	3072	3167	1402	3155	3102		3072	1667	1402
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	81	1089	138	137	743	215	294	246	109	195	251	82
RTOR Reduction (vph)	0	0	57	0	0	89	0	44	0	0	0	63
Lane Group Flow (vph)	81	1089	81	137	743	126	294	311	0	195	251	19
Confl. Peds. (#/hr)			2	2			1					1
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	12%	12%	12%	14%	14%	14%	11%	11%	11%	14%	14%	14%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	6.6	57.2	70.4	8.8	59.4	70.6	13.2	23.8		11.2	21.8	28.4
Effective Green, g (s)	6.6	58.7	70.4	8.8	60.9	70.6	13.2	25.3		11.2	23.3	28.4
Actuated g/C Ratio	0.05	0.49	0.59	0.07	0.51	0.59	0.11	0.21		0.09	0.19	0.24
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	4.0
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	1.5
Lane Grp Cap (vph)	171	1576	834	225	1607	824	347	654		286	323	331
v/s Ratio Prot	0.03	c0.34	0.01	c0.04	0.23	0.01	c0.09	0.10		0.06	c0.15	0.00
v/s Ratio Perm			0.05			0.08						0.01
v/c Ratio	0.47	0.69	0.10	0.61	0.46	0.15	0.85	0.48		0.68	0.78	0.06
Uniform Delay, d1	55.0	23.7	10.9	53.9	19.0	11.2	52.4	41.5		52.7	45.9	35.5
Progression Factor	1.16	0.52	0.79	1.06	0.91	2.69	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	2.2	0.0	3.0	0.9	0.0	16.5	0.2		5.3	10.2	0.0
Delay (s)	64.5	14.4	8.6	60.0	18.3	30.1	68.9	41.7		57.9	56.1	35.5
Level of Service	E	B	A	E	B	C	E	D		E	E	D
Approach Delay (s)		16.9			25.8			54.0			53.6	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1013	128	127	691	200	273	229	101	181	233	76
Future Volume (veh/h)	75	1013	128	127	691	200	273	229	101	181	233	76
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		0.99	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	1722	1722	1722	1693	1693	1693	1737	1737	1737	1693	1693	1693
Adj Flow Rate, veh/h	81	1089	122	137	743	140	294	246	87	195	251	60
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	14	14	14	11	11	11	14	14	14
Cap, veh/h	125	1663	871	194	1707	851	349	516	178	257	318	307
Arrive On Green	0.08	1.00	0.99	0.02	0.18	0.17	0.11	0.21	0.20	0.08	0.19	0.18
Sat Flow, veh/h	3182	3272	1437	3127	3216	1415	3209	2407	829	3127	1693	1432
Grp Volume(v), veh/h	81	1089	122	137	743	140	294	167	166	195	251	60
Grp Sat Flow(s),veh/h/ln	1591	1636	1437	1564	1608	1415	1605	1650	1586	1564	1693	1432
Q Serve(g_s), s	3.0	0.0	0.1	5.2	24.8	8.4	10.8	10.6	11.1	7.3	17.0	4.1
Cycle Q Clear(g_c), s	3.0	0.0	0.1	5.2	24.8	8.4	10.8	10.6	11.1	7.3	17.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	125	1663	871	194	1707	851	349	354	340	257	318	307
V/C Ratio(X)	0.65	0.65	0.14	0.71	0.44	0.16	0.84	0.47	0.49	0.76	0.79	0.20
Avail Cap(c_a), veh/h	186	1663	871	266	1707	851	369	408	393	341	409	385
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.2	57.7	33.4	19.4	52.5	41.2	41.8	53.9	46.5	38.6
Incr Delay (d2), s/veh	1.8	1.7	0.3	2.4	0.8	0.4	14.3	0.4	0.4	4.5	5.8	0.1
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	1.2	0.4	0.1	2.1	10.8	2.9	4.9	4.2	4.3	3.0	7.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	1.7	0.4	60.1	34.2	19.8	66.8	41.6	42.2	58.4	52.3	38.8
LnGrp LOS	E	A	A	E	C	B	E	D	D	E	D	D
Approach Vol, veh/h		1292			1020			627			506	
Approach Delay, s/veh		5.0			35.7			53.5			53.0	
Approach LOS		A			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	65.0	17.1	26.5	8.7	67.7	13.9	29.7
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	10.2	49.5	13.8	27.5	7.0	52.7	13.1	28.2
Max Q Clear Time (g_c+I1), s	7.2	2.1	12.8	19.0	5.0	26.8	9.3	13.1
Green Ext Time (p_c), s	0.3	36.4	0.3	1.8	0.1	17.4	0.6	3.2

Intersection Summary	
HCM 6th Ctrl Delay	30.0
HCM 6th LOS	C

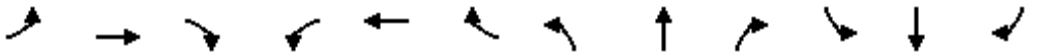
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1252	41	0	1037	0	16
Future Vol, veh/h	1252	41	0	1037	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	10	10	13	13	93	93
Mvmt Flow	1318	43	0	1092	0	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	659
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	8.76
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.23
Pot Cap-1 Maneuver	-	-	0	-	0	246
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	246
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

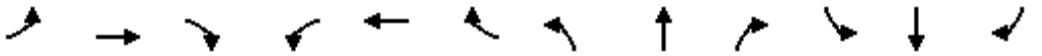
Approach	EB	WB	NB
HCM Control Delay, s	0	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	246	-	-	-
HCM Lane V/C Ratio	0.068	-	-	-
HCM Control Delay (s)	20.7	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1126	137	220	975	11	60	0	89	3	1	2
Future Volume (vph)	5	1126	137	220	975	11	60	0	89	3	1	2
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		4.5		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.99	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	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1449	3127	3217		1337		1187	1538	1462	
Flt Permitted	0.27	1.00	1.00	0.95	1.00		0.76		1.00	0.76	1.00	
Satd. Flow (perm)	471	3282	1449	3127	3217		1064		1187	1226	1462	
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)	5	1198	146	234	1037	12	64	0	95	3	1	2
RTOR Reduction (vph)	0	0	42	0	0	0	0	0	39	0	2	0
Lane Group Flow (vph)	5	1198	104	234	1049	0	64	0	56	3	1	0
Confl. Peds. (#/hr)	2					2			2	2		
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	10%	10%	10%	12%	12%	12%	35%	35%	35%	17%	17%	17%
Turn Type	pm+pt	NA	Perm	Prot	NA		Perm		pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2				8		8	4		
Actuated Green, G (s)	80.8	79.8	79.8	12.9	91.7		12.8		25.7	12.8	12.8	
Effective Green, g (s)	81.8	81.3	81.3	13.4	93.2		12.8		26.7	13.3	13.3	
Actuated g/C Ratio	0.68	0.68	0.68	0.11	0.78		0.11		0.22	0.11	0.11	
Clearance Time (s)	4.5	5.5	5.5	4.5	5.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)	2.0	3.5	3.5	2.0	3.5		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	335	2223	981	349	2498		113		303	135	162	
v/s Ratio Prot	0.00	c0.37		c0.07	0.33				0.02		0.00	
v/s Ratio Perm	0.01		0.07				c0.06		0.03	0.00		
v/c Ratio	0.01	0.54	0.11	0.67	0.42		0.57		0.19	0.02	0.01	
Uniform Delay, d1	6.1	9.8	6.7	51.2	4.4		51.0		37.8	47.6	47.5	
Progression Factor	0.43	0.47	0.21	0.93	0.96		1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.7	0.2	2.8	0.4		3.8		0.1	0.0	0.0	
Delay (s)	2.6	5.3	1.6	50.6	4.6		54.8		37.9	47.6	47.5	
Level of Service	A	A	A	D	A		D		D	D	D	
Approach Delay (s)		4.9			13.0			44.7			47.5	
Approach LOS		A			B			D			D	

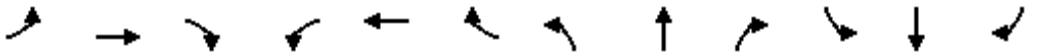
Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1126	137	220	975	11	60	0	89	3	1	2
Future Volume (veh/h)	5	1126	137	220	975	11	60	0	89	3	1	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.99	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	1752	1752	1752	1722	1722	1722	1381	1381	1381	1648	1648	1648
Adj Flow Rate, veh/h	5	1198	119	234	1037	12	64	0	63	3	1	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	10	10	12	12	12	35	35	35	17	17	17
Cap, veh/h	428	2371	1043	303	2640	31	150	128	219	168	45	90
Arrive On Green	0.01	0.71	0.71	0.10	0.80	0.78	0.09	0.00	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1668	3328	1464	3182	3312	38	1037	1381	1163	1173	488	976
Grp Volume(v), veh/h	5	1198	119	234	512	537	64	0	63	3	0	3
Grp Sat Flow(s),veh/h/ln	1668	1664	1464	1591	1636	1714	1037	1381	1163	1173	0	1464
Q Serve(g_s), s	0.1	19.4	3.1	8.6	11.1	11.1	7.2	0.0	5.6	0.3	0.0	0.2
Cycle Q Clear(g_c), s	0.1	19.4	3.1	8.6	11.1	11.1	7.4	0.0	5.6	0.3	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	428	2371	1043	303	1304	1366	150	128	219	168	0	135
V/C Ratio(X)	0.01	0.51	0.11	0.77	0.39	0.39	0.43	0.00	0.29	0.02	0.00	0.02
Avail Cap(c_a), veh/h	487	2371	1043	424	1304	1366	309	340	397	348	0	360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.63	0.63	0.63	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.9	7.8	5.4	53.0	3.6	3.6	53.4	0.0	41.9	49.5	0.0	49.7
Incr Delay (d2), s/veh	0.0	0.8	0.2	2.2	0.6	0.5	0.7	0.0	0.3	0.0	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	0.0	5.9	0.8	3.4	2.6	2.7	1.9	0.0	1.6	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.9	8.5	5.6	55.2	4.2	4.1	54.1	0.0	42.1	49.6	0.0	49.7
LnGrp LOS	A	A	A	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		1322			1283			127			6	
Approach Delay, s/veh		8.3			13.5			48.2			49.6	
Approach LOS		A			B			D			D	

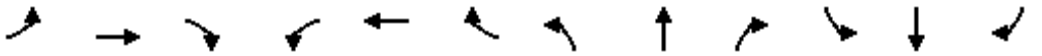
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.4	89.5		15.1	5.3	99.6		15.1				
Change Period (Y+Rc), s	4.5	5.5		4.5	4.5	5.5		4.5				
Max Green Setting (Gmax), s	15.5	61.0		29.0	5.0	71.5		29.0				
Max Q Clear Time (g_c+I1), s	10.6	21.4		2.3	2.1	13.1		9.4				
Green Ext Time (p_c), s	0.3	30.0		0.0	0.0	31.7		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			12.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	853	298	20	878	125	309	64	17	27	10	16
Future Volume (vph)	76	853	298	20	878	125	309	64	17	27	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.4	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	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	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1626	3252	1422	1570	3071		1703	1733		1347	1289	
Flt Permitted	0.16	1.00	1.00	0.22	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	281	3252	1422	366	3071		1703	1733		1347	1289	
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)	83	927	324	22	954	136	336	70	18	29	11	17
RTOR Reduction (vph)	0	0	156	0	7	0	0	9	0	0	16	0
Lane Group Flow (vph)	83	927	168	22	1083	0	336	79	0	29	12	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	11%	11%	11%	15%	15%	15%	6%	6%	6%	34%	34%	34%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	70.0	62.3	62.3	65.8	60.2		25.8	28.8		5.3	8.3	
Effective Green, g (s)	70.0	63.8	62.4	65.8	61.7		25.8	29.3		5.3	8.8	
Actuated g/C Ratio	0.58	0.53	0.52	0.55	0.51		0.22	0.24		0.04	0.07	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	250	1728	739	256	1579		366	423		59	94	
v/s Ratio Prot	c0.02	0.29		0.00	c0.35		c0.20	c0.05		0.02	0.01	
v/s Ratio Perm	0.17		0.12	0.04								
v/c Ratio	0.33	0.54	0.23	0.09	0.69		0.92	0.19		0.49	0.13	
Uniform Delay, d1	27.5	18.4	15.7	22.0	21.9		46.1	35.9		56.0	52.0	
Progression Factor	0.45	0.45	0.40	1.00	1.00		1.00	1.00		0.90	1.08	
Incremental Delay, d2	0.7	1.1	0.6	0.1	2.4		27.2	0.2		6.3	0.6	
Delay (s)	13.0	9.4	6.9	22.2	24.3		73.2	36.1		56.6	57.0	
Level of Service	B	A	A	C	C		E	D		E	E	
Approach Delay (s)		9.0			24.3			65.5			56.8	
Approach LOS		A			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	853	298	20	878	125	309	64	17	27	10	16
Future Volume (veh/h)	76	853	298	20	878	125	309	64	17	27	10	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1737	1737	1678	1678	1678	1811	1811	1811	1396	1396	1396
Adj Flow Rate, veh/h	83	927	275	22	954	87	336	70	13	29	11	12
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, %	11	11	11	15	15	15	6	6	6	34	34	34
Cap, veh/h	478	1186	499	489	1079	98	361	349	65	34	31	34
Arrive On Green	0.16	0.24	0.23	0.25	0.37	0.37	0.21	0.24	0.23	0.03	0.05	0.05
Sat Flow, veh/h	1654	3300	1434	1598	2947	269	1725	1485	276	1330	608	663
Grp Volume(v), veh/h	83	927	275	22	516	525	336	0	83	29	0	23
Grp Sat Flow(s),veh/h/ln	1654	1650	1434	1598	1594	1622	1725	0	1761	1330	0	1272
Q Serve(g_s), s	0.0	31.5	11.3	0.0	36.4	36.4	22.9	0.0	4.5	2.6	0.0	2.1
Cycle Q Clear(g_c), s	0.0	31.5	11.3	0.0	36.4	36.4	22.9	0.0	4.5	2.6	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.16	1.00		0.52
Lane Grp Cap(c), veh/h	478	1186	499	489	584	594	361	0	414	34	0	66
V/C Ratio(X)	0.17	0.78	0.55	0.05	0.88	0.88	0.93	0.00	0.20	0.84	0.00	0.35
Avail Cap(c_a), veh/h	478	1238	521	489	594	604	374	0	650	102	0	291
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.6	41.2	11.7	28.4	35.6	35.6	46.6	0.0	36.9	58.2	0.0	55.1
Incr Delay (d2), s/veh	0.1	4.4	3.7	0.0	17.6	17.4	29.0	0.0	0.2	39.4	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	13.8	4.3	0.4	16.3	16.5	12.6	0.0	2.0	1.2	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	45.6	15.4	28.4	53.2	53.0	75.6	0.0	37.1	97.6	0.0	58.3
LnGrp LOS	D	D	B	C	D	D	E	A	D	F	A	E
Approach Vol, veh/h		1285			1063			419			52	
Approach Delay, s/veh		38.6			52.6			67.9			80.2	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.6	47.1	29.1	10.2	32.7	47.9	7.1	32.2
Change Period (Y+Rc), s	4.0	5.5	4.0	4.5	4.0	5.5	4.0	4.5
Max Green Setting (Gmax), s	5.5	43.5	26.0	27.0	5.8	43.2	9.2	43.8
Max Q Clear Time (g_c+I1), s	2.0	33.5	24.9	4.1	2.0	38.4	4.6	6.5
Green Ext Time (p_c), s	0.0	8.1	0.2	0.1	0.1	4.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	49.0
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	8	237	162	30	85
Future Vol, veh/h	20	8	237	162	30	85
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	74	74	74	74	74	74
Heavy Vehicles, %	5	5	10	10	17	17
Mvmt Flow	27	11	320	219	41	115

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	627	430	0	0	539	0
Stage 1	430	-	-	-	-	-
Stage 2	197	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.27	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.353	-
Pot Cap-1 Maneuver	443	619	-	-	958	-
Stage 1	650	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	423	619	-	-	958	-
Mov Cap-2 Maneuver	423	-	-	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	791	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	2.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	465	958	-
HCM Lane V/C Ratio	-	-	0.081	0.042	-
HCM Control Delay (s)	-	-	13.4	8.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	175	63	55	120	1	92	1	152	2	0	0
Future Vol, veh/h	2	175	63	55	120	1	92	1	152	2	0	0
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, %	20	20	20	9	9	9	14	14	14	0	0	0
Mvmt Flow	3	236	85	74	162	1	124	1	205	3	0	0
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	13.5	11.8	13.6	9.4
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	1%	31%	100%
Vol Thru, %	0%	73%	68%	0%
Vol Right, %	62%	26%	1%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	245	240	176	2
LT Vol	92	2	55	2
Through Vol	1	175	120	0
RT Vol	152	63	1	0
Lane Flow Rate	331	324	238	3
Geometry Grp	1	1	1	1
Degree of Util (X)	0.494	0.488	0.368	0.005
Departure Headway (Hd)	5.367	5.418	5.57	6.282
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	672	665	647	568
Service Time	3.401	3.45	3.605	4.339
HCM Lane V/C Ratio	0.493	0.487	0.368	0.005
HCM Control Delay	13.6	13.5	11.8	9.4
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	2.7	2.7	1.7	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	5	0	2	0	469	36	15	485	0
Future Vol, veh/h	0	0	0	5	0	2	0	469	36	15	485	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	110	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	43	43	43	17	17	17	20	20	20
Mvmt Flow	0	0	0	6	0	2	0	521	40	17	539	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	834	1134	270	845	1114	281	539	0	0	561	0	0
Stage 1	573	573	-	541	541	-	-	-	-	-	-	-
Stage 2	261	561	-	304	573	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	8.36	7.36	7.76	4.44	-	-	4.5	-	-
Critical Hdwy Stg 1	6.6	5.6	-	7.36	6.36	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	7.36	6.36	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.93	4.43	3.73	2.37	-	-	2.4	-	-
Pot Cap-1 Maneuver	256	197	719	197	153	607	928	-	-	892	-	-
Stage 1	464	495	-	401	428	-	-	-	-	-	-	-
Stage 2	713	501	-	578	412	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	251	193	719	194	150	607	928	-	-	892	-	-
Mov Cap-2 Maneuver	251	193	-	194	150	-	-	-	-	-	-	-
Stage 1	464	486	-	401	428	-	-	-	-	-	-	-
Stage 2	710	501	-	567	404	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	20.4	0	0.3
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	928	-	-	-	241	892	-	-
HCM Lane V/C Ratio	-	-	-	-	0.032	0.019	-	-
HCM Control Delay (s)	0	-	-	0	20.4	9.1	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	0	471	488	103
Future Vol, veh/h	0	12	0	471	488	103
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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	17	17	20	20
Mvmt Flow	0	13	0	523	542	114

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	861	328	656	0	-	0
Stage 1	599	-	-	-	-	-
Stage 2	262	-	-	-	-	-
Critical Hdwy	6.9	7	4.44	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.37	-	-	-
Pot Cap-1 Maneuver	289	659	833	-	-	-
Stage 1	503	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	289	659	833	-	-	-
Mov Cap-2 Maneuver	289	-	-	-	-	-
Stage 1	503	-	-	-	-	-
Stage 2	749	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	833	-	659	-	-
HCM Lane V/C Ratio	-	-	0.02	-	-
HCM Control Delay (s)	0	-	10.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

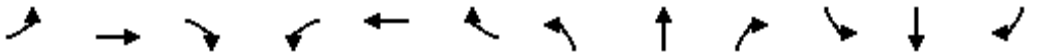
Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	3	60	1	19	18	413	40	45	528	25
Future Vol, veh/h	4	1	3	60	1	19	18	413	40	45	528	25
Conflicting Peds, #/hr	3	0	1	1	0	3	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	13	13	13	41	41	41	18	18	18	17	17	17
Mvmt Flow	5	1	4	71	1	23	21	492	48	54	629	30

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1045	1335	332	982	1326	273	660	0	0	540	0	0
Stage 1	753	753	-	558	558	-	-	-	-	-	-	-
Stage 2	292	582	-	424	768	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	8.32	7.32	7.72	4.46	-	-	4.44	-	-
Critical Hdwy Stg 1	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.91	4.41	3.71	2.38	-	-	2.37	-	-
Pot Cap-1 Maneuver	169	139	633	155	111	620	824	-	-	927	-	-
Stage 1	344	390	-	395	423	-	-	-	-	-	-	-
Stage 2	662	471	-	485	327	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	151	127	632	143	102	618	823	-	-	927	-	-
Mov Cap-2 Maneuver	151	127	-	143	102	-	-	-	-	-	-	-
Stage 1	335	367	-	385	412	-	-	-	-	-	-	-
Stage 2	618	459	-	452	308	-	-	-	-	-	-	-

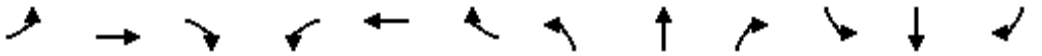
Approach	EB	WB	NB	SB
HCM Control Delay, s	23.4	48.2	0.4	0.7
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	823	-	-	205	174	927	-	-
HCM Lane V/C Ratio	0.026	-	-	0.046	0.547	0.058	-	-
HCM Control Delay (s)	9.5	-	-	23.4	48.2	9.1	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	2.8	0.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	232	103	55	161	40	39	331	66	183	439	82
Future Volume (vph)	38	232	103	55	161	40	39	331	66	183	439	82
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	4.0	
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	0.95		1.00	0.97		1.00	0.98		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)	1597	1604		1597	1627		1504	2922		1702	3314	
Flt Permitted	0.58	1.00		0.29	1.00		0.43	1.00		0.32	1.00	
Satd. Flow (perm)	968	1604		490	1627		683	2922		573	3314	
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)	43	261	116	62	181	45	44	372	74	206	493	92
RTOR Reduction (vph)	0	14	0	0	8	0	0	14	0	0	13	0
Lane Group Flow (vph)	43	363	0	62	218	0	44	432	0	206	572	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	20%	20%	20%	6%	6%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.3	25.7		32.5	27.8		24.6	21.2		37.8	29.4	
Effective Green, g (s)	30.3	27.2		34.5	29.3		26.6	22.7		38.8	30.9	
Actuated g/C Ratio	0.36	0.32		0.41	0.35		0.32	0.27		0.46	0.37	
Clearance Time (s)	5.0	5.5		5.0	5.5		5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	375	518		275	566		258	787		432	1216	
v/s Ratio Prot	0.00	c0.23		c0.02	0.13		0.01	c0.15		c0.07	0.17	
v/s Ratio Perm	0.04			0.08			0.04			0.15		
v/c Ratio	0.11	0.70		0.23	0.39		0.17	0.55		0.48	0.47	
Uniform Delay, d1	17.7	24.9		16.4	20.7		20.3	26.4		14.6	20.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	4.3		0.2	0.4		0.1	0.8		0.3	0.3	
Delay (s)	17.8	29.2		16.5	21.1		20.4	27.2		14.9	20.7	
Level of Service	B	C		B	C		C	C		B	C	
Approach Delay (s)		28.0			20.1			26.5			19.2	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	84.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	232	103	55	161	40	39	331	66	183	439	82
Future Volume (veh/h)	38	232	103	55	161	40	39	331	66	183	439	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1604	1604	1604	1811	1811	1811
Adj Flow Rate, veh/h	43	261	0	62	181	0	44	372	74	206	493	92
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, %	13	13	13	13	13	13	20	20	20	6	6	6
Cap, veh/h	408	408		354	429		352	621	122	465	916	170
Arrive On Green	0.06	0.24	0.00	0.08	0.25	0.00	0.06	0.25	0.22	0.14	0.32	0.29
Sat Flow, veh/h	1626	1707	0	1626	1707	0	1527	2526	497	1725	2885	535
Grp Volume(v), veh/h	43	261	0	62	181	0	44	223	223	206	293	292
Grp Sat Flow(s),veh/h/ln	1626	1707	0	1626	1707	0	1527	1523	1500	1725	1721	1700
Q Serve(g_s), s	1.0	7.2	0.0	1.5	4.7	0.0	1.1	6.8	7.0	4.2	7.4	7.5
Cycle Q Clear(g_c), s	1.0	7.2	0.0	1.5	4.7	0.0	1.1	6.8	7.0	4.2	7.4	7.5
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.33	1.00		0.31
Lane Grp Cap(c), veh/h	408	408		354	429		352	375	369	465	546	540
V/C Ratio(X)	0.11	0.64		0.18	0.42		0.12	0.59	0.61	0.44	0.54	0.54
Avail Cap(c_a), veh/h	490	1361		478	1425		486	925	911	951	1502	1484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	18.0	0.0	13.7	16.5	0.0	13.4	17.6	17.8	11.5	14.8	15.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.1	0.7	0.0	0.1	1.5	1.6	0.2	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.7	0.0	0.5	1.7	0.0	0.3	2.1	2.1	1.2	2.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	19.7	0.0	13.8	17.2	0.0	13.5	19.1	19.5	11.8	15.6	15.9
LnGrp LOS	B	B		B	B		B	B	B	B	B	B
Approach Vol, veh/h		304	A		243	A		490			791	
Approach Delay, s/veh		18.8			16.3			18.7			14.7	
Approach LOS		B			B			B			B	

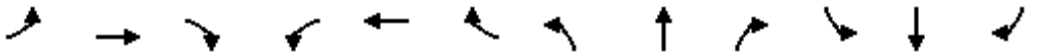
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	17.0	8.0	16.6	7.4	20.7	7.3	17.3
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	21.0	30.5	7.0	40.5	7.0	44.5	5.0	42.5
Max Q Clear Time (g_c+I1), s	6.2	9.0	3.5	9.2	3.1	9.5	3.0	6.7
Green Ext Time (p_c), s	0.2	2.4	0.0	1.6	0.0	3.5	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

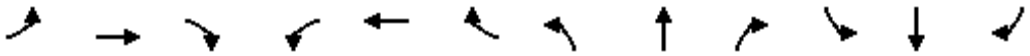
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	856	125	403	1112	8	134	1	188	12	11	8
Future Volume (vph)	7	856	125	403	1112	8	134	1	188	12	11	8
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		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00			1.00	0.99		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1736	3471	1512	1752	3500			1740	1545		1797	
Flt Permitted	0.23	1.00	1.00	0.22	1.00			0.78	1.00		0.88	
Satd. Flow (perm)	427	3471	1512	401	3500			1420	1545		1612	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	8	920	134	433	1196	9	144	1	202	13	12	9
RTOR Reduction (vph)	0	0	55	0	0	0	0	0	28	0	8	0
Lane Group Flow (vph)	8	920	79	433	1205	0	0	145	174	0	26	0
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	64.5	63.5	63.5	93.9	88.9			16.6	43.0		16.6	
Effective Green, g (s)	64.5	65.0	65.0	93.9	90.4			16.6	43.0		16.6	
Actuated g/C Ratio	0.54	0.54	0.54	0.78	0.75			0.14	0.36		0.14	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			4.0	4.0		4.0	
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5			1.5	1.5		1.5	
Lane Grp Cap (vph)	240	1880	819	611	2636			196	605		222	
v/s Ratio Prot	0.00	0.27		c0.16	0.34				0.06			
v/s Ratio Perm	0.02		0.05	c0.40				c0.10	0.05		0.02	
v/c Ratio	0.03	0.49	0.10	0.71	0.46			0.74	0.29		0.12	
Uniform Delay, d1	13.1	17.2	13.3	11.9	5.6			49.6	27.6		45.3	
Progression Factor	1.00	1.00	1.00	0.62	0.73			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	2.5	0.5			11.9	0.1		0.1	
Delay (s)	13.1	18.1	13.5	9.9	4.5			61.5	27.6		45.4	
Level of Service	B	B	B	A	A			E	C		D	
Approach Delay (s)		17.5			5.9			41.8			45.4	
Approach LOS		B			A			D			D	

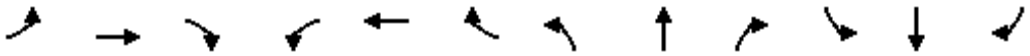
Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	856	125	403	1112	8	134	1	188	12	11	8
Future Volume (veh/h)	7	856	125	403	1112	8	134	1	188	12	11	8
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	1841	1841	1841	1856	1856	1856	1841	1841	1841	1900	1900	1900
Adj Flow Rate, veh/h	8	920	102	433	1196	9	144	1	127	13	12	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	0	0	0
Cap, veh/h	276	2010	877	491	2445	18	219	1	507	50	44	19
Arrive On Green	0.01	0.57	0.57	0.08	0.46	0.46	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1753	3497	1525	1767	3586	27	764	5	1558	41	210	90
Grp Volume(v), veh/h	8	920	102	433	588	617	145	0	127	34	0	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1525	1767	1763	1850	769	0	1558	341	0	0
Q Serve(g_s), s	0.2	18.2	3.7	11.2	28.0	28.0	0.0	0.0	7.2	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.2	3.7	11.2	28.0	28.0	23.3	0.0	7.2	23.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.99		1.00	0.38		0.26
Lane Grp Cap(c), veh/h	276	2010	877	491	1202	1261	220	0	507	112	0	0
V/C Ratio(X)	0.03	0.46	0.12	0.88	0.49	0.49	0.66	0.00	0.25	0.30	0.00	0.00
Avail Cap(c_a), veh/h	341	2010	877	830	1202	1261	220	0	507	112	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.71	0.71	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.0	14.7	11.6	15.8	18.0	18.0	46.8	0.0	29.7	40.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.3	2.2	1.0	1.0	5.7	0.0	0.1	0.6	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	6.8	1.2	5.7	12.2	12.8	4.6	0.0	2.7	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	15.5	11.9	18.0	19.0	18.9	52.5	0.0	29.8	40.6	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	D	A	C	D	A	A
Approach Vol, veh/h		1030			1638			272			34	
Approach Delay, s/veh		15.1			18.7			41.9			40.6	
Approach LOS		B			B			D			D	

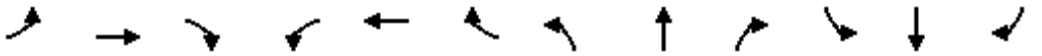
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	73.0		29.0	5.2	85.8		29.0				
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0				
Max Green Setting (Gmax), s	37.0	44.5		25.0	5.6	75.9		25.0				
Max Q Clear Time (g_c+I1), s	13.2	20.2		25.7	2.2	30.0		25.3				
Green Ext Time (p_c), s	0.9	16.5		0.0	0.0	32.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			19.8									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	1022	18	17	1299	31	60	9	45	158	2	162
Future Volume (vph)	45	1022	18	17	1299	31	60	9	45	158	2	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.5	4.0		4.5	4.5		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	1.00		1.00	1.00		1.00	0.88		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3460		1752	3490		1805	1663		1736	1556	
Flt Permitted	0.10	1.00		0.19	1.00		0.64	1.00		0.51	1.00	
Satd. Flow (perm)	188	3460		353	3490		1225	1663		938	1556	
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)	49	1111	20	18	1412	34	65	10	49	172	2	176
RTOR Reduction (vph)	0	1	0	0	1	0	0	45	0	0	144	0
Lane Group Flow (vph)	49	1130	0	18	1445	0	65	14	0	172	34	0
Confl. Peds. (#/hr)	1		2	2		1						
Confl. Bikes (#/hr)			6			4						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	0%	0%	0%	4%	4%	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)	77.2	72.9		73.7	71.4		13.7	9.5		29.8	21.1	
Effective Green, g (s)	77.2	74.4		73.7	72.9		13.7	9.5		30.8	21.1	
Actuated g/C Ratio	0.64	0.62		0.61	0.61		0.11	0.08		0.26	0.18	
Clearance Time (s)	4.0	5.5		4.5	5.5		4.5	4.5		5.0	5.0	
Vehicle Extension (s)	1.5	3.5		3.0	3.5		3.0	3.0		2.0	2.0	
Lane Grp Cap (vph)	176	2145		243	2120		160	131		352	273	
v/s Ratio Prot	c0.01	0.33		0.00	c0.41		0.01	0.01		c0.07	0.02	
v/s Ratio Perm	0.17			0.04			0.03			c0.06		
v/c Ratio	0.28	0.53		0.07	0.68		0.41	0.11		0.49	0.12	
Uniform Delay, d1	12.9	12.9		10.3	15.8		48.8	51.3		36.9	41.7	
Progression Factor	0.59	0.94		0.71	0.63		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.9		0.1	1.6		1.7	0.4		0.4	0.1	
Delay (s)	7.8	13.0		7.4	11.5		50.5	51.7		37.3	41.7	
Level of Service	A	B		A	B		D	D		D	D	
Approach Delay (s)		12.8			11.5			51.1			39.5	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



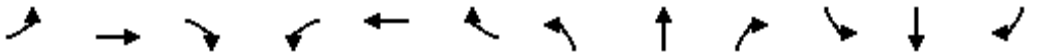
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1022	18	17	1299	31	60	9	45	158	2	162
Future Volume (veh/h)	45	1022	18	17	1299	31	60	9	45	158	2	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1841	1841	1841	1856	1856	1856	1900	1900	1900	1841	1841	1841
Adj Flow Rate, veh/h	49	1111	20	18	1412	34	65	10	49	172	2	122
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, %	4	4	4	3	3	3	0	0	0	4	4	4
Cap, veh/h	352	2341	42	280	2306	55	198	15	74	298	3	186
Arrive On Green	0.01	0.22	0.22	0.04	1.00	1.00	0.04	0.05	0.05	0.12	0.12	0.13
Sat Flow, veh/h	1753	3513	63	1767	3516	85	1810	280	1373	1753	25	1539
Grp Volume(v), veh/h	49	553	578	18	707	739	65	0	59	172	0	124
Grp Sat Flow(s),veh/h/ln	1753	1749	1827	1767	1763	1838	1810	0	1653	1753	0	1564
Q Serve(g_s), s	1.1	33.1	33.1	0.4	0.0	0.0	4.0	0.0	4.2	10.5	0.0	9.1
Cycle Q Clear(g_c), s	1.1	33.1	33.1	0.4	0.0	0.0	4.0	0.0	4.2	10.5	0.0	9.1
Prop In Lane	1.00		0.03	1.00		0.05	1.00		0.83	1.00		0.98
Lane Grp Cap(c), veh/h	352	1165	1218	280	1156	1205	198	0	89	298	0	189
V/C Ratio(X)	0.14	0.47	0.47	0.06	0.61	0.61	0.33	0.00	0.66	0.58	0.00	0.66
Avail Cap(c_a), veh/h	375	1165	1218	322	1156	1205	198	0	387	432	0	584
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.82	0.82	0.82	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.6	28.5	28.5	11.1	0.0	0.0	50.7	0.0	55.7	43.4	0.0	49.9
Incr Delay (d2), s/veh	0.1	1.2	1.2	0.1	2.0	1.9	1.0	0.0	8.2	0.7	0.0	1.5
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	0.4	15.7	16.4	0.1	0.6	0.6	1.9	0.0	2.0	4.6	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.7	29.7	29.7	11.2	2.0	1.9	51.6	0.0	64.0	44.1	0.0	51.4
LnGrp LOS	A	C	C	B	A	A	D	A	E	D	A	D
Approach Vol, veh/h		1180			1464			124			296	
Approach Delay, s/veh		28.8			2.1			57.5			47.1	
Approach LOS		C			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	84.0	9.8	19.5	8.0	82.7	17.8	11.4
Change Period (Y+Rc), s	4.5	5.5	4.5	5.0	4.0	5.5	5.0	* 5
Max Green Setting (Gmax), s	5.1	45.3	5.3	44.8	5.6	45.3	22.0	* 28
Max Q Clear Time (g_c+I1), s	2.4	35.1	6.0	11.1	3.1	2.0	12.5	6.2
Green Ext Time (p_c), s	0.0	9.5	0.0	0.5	0.0	40.5	0.3	0.2

Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B

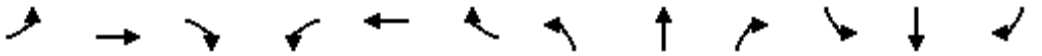
Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	951	210	81	955	125	157	225	160	235	331	235
Future Volume (vph)	63	951	210	81	955	125	157	225	160	235	331	235
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	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	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	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3367	3471	1533	3433	3539	1565	3335	3204		3433	1863	1564
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3367	3471	1533	3433	3539	1565	3335	3204		3433	1863	1564
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	65	980	216	84	985	129	162	232	165	242	341	242
RTOR Reduction (vph)	0	0	85	0	0	52	0	114	0	0	0	43
Lane Group Flow (vph)	65	980	131	84	985	77	162	283	0	242	341	199
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			1			2			1			2
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	6.6	60.2	69.7	5.5	59.1	71.2	9.5	23.2		12.1	25.8	32.4
Effective Green, g (s)	6.6	61.7	69.7	5.5	60.6	71.2	9.5	24.7		12.1	27.3	32.4
Actuated g/C Ratio	0.05	0.51	0.58	0.05	0.51	0.59	0.08	0.21		0.10	0.23	0.27
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	4.0
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	1.5
Lane Grp Cap (vph)	185	1784	890	157	1787	928	264	659		346	423	422
v/s Ratio Prot	0.02	c0.28	0.01	0.02	0.28	0.01	0.05	0.09		c0.07	c0.18	c0.03
v/s Ratio Perm			0.07			0.04						0.10
v/c Ratio	0.35	0.55	0.15	0.54	0.55	0.08	0.61	0.43		0.70	0.81	0.47
Uniform Delay, d1	54.6	19.7	11.5	56.0	20.4	10.4	53.5	41.5		52.2	43.8	36.6
Progression Factor	1.30	0.54	0.18	1.10	0.64	1.86	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	1.1	0.0	1.6	1.1	0.0	3.0	0.2		4.9	10.1	0.3
Delay (s)	71.6	11.8	2.1	62.9	14.2	19.4	56.4	41.7		57.1	54.0	36.9
Level of Service	E	B	A	E	B	B	E	D		E	D	D
Approach Delay (s)		13.2			18.1			46.0			49.9	
Approach LOS		B			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	66.7%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	951	210	81	955	125	157	225	160	235	331	235
Future Volume (veh/h)	63	951	210	81	955	125	157	225	160	235	331	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	65	980	154	84	985	88	162	232	144	242	341	149
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	5	5	5	2	2	2
Cap, veh/h	125	1870	907	135	1908	964	225	419	249	315	423	392
Arrive On Green	0.07	1.00	1.00	0.04	0.54	0.52	0.07	0.20	0.19	0.09	0.23	0.21
Sat Flow, veh/h	3401	3497	1539	3456	3554	1563	3374	2080	1237	3456	1870	1561
Grp Volume(v), veh/h	65	980	154	84	985	88	162	192	184	242	341	149
Grp Sat Flow(s),veh/h/ln	1700	1749	1539	1728	1777	1563	1687	1735	1582	1728	1870	1561
Q Serve(g_s), s	2.2	0.0	0.0	2.9	21.3	2.8	5.6	11.9	12.7	8.2	20.7	9.5
Cycle Q Clear(g_c), s	2.2	0.0	0.0	2.9	21.3	2.8	5.6	11.9	12.7	8.2	20.7	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		1.00
Lane Grp Cap(c), veh/h	125	1870	907	135	1908	964	225	350	319	315	423	392
V/C Ratio(X)	0.52	0.52	0.17	0.62	0.52	0.09	0.72	0.55	0.58	0.77	0.81	0.38
Avail Cap(c_a), veh/h	315	1870	907	202	1908	964	309	432	394	406	514	468
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	56.8	17.8	9.4	54.9	43.0	43.8	53.3	43.9	37.2
Incr Delay (d2), s/veh	1.1	0.9	0.3	1.7	1.0	0.2	2.5	0.5	0.6	4.6	6.3	0.2
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	0.9	0.2	0.1	1.3	8.4	0.9	2.4	5.0	4.9	3.7	10.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	0.9	0.3	58.5	18.8	9.6	57.4	43.5	44.5	57.9	50.2	37.5
LnGrp LOS	E	A	A	E	B	A	E	D	D	E	D	D
Approach Vol, veh/h		1199			1157			538			732	
Approach Delay, s/veh		3.8			21.0			48.0			50.2	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	68.2	12.0	31.2	8.4	68.4	14.9	28.2
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	7.0	51.5	11.0	31.5	11.1	47.4	14.1	28.4
Max Q Clear Time (g_c+I1), s	4.9	2.0	7.6	22.7	4.2	23.3	10.2	14.7
Green Ext Time (p_c), s	0.1	34.9	0.4	2.9	0.2	19.3	0.7	3.5

Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

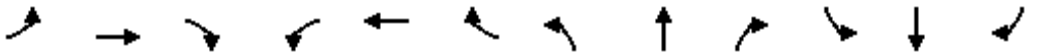
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1325	23	0	1140	0	18
Future Vol, veh/h	1325	23	0	1140	0	18
Conflicting Peds, #/hr	0	2	2	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	2	2	0	0
Mvmt Flow	1410	24	0	1213	0	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	707
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	382
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	381
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

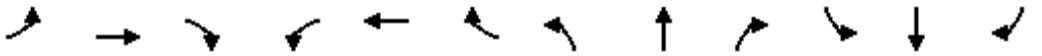
Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	381	-	-	-
HCM Lane V/C Ratio	0.05	-	-	-
HCM Control Delay (s)	14.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	1267	64	58	978	17	146	0	243	17	1	16
Future Volume (vph)	13	1267	64	58	978	17	146	0	243	17	1	16
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		4.5		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)	1735	3471	1530	3400	3494		1717		1520	1767	1579	
Flt Permitted	0.21	1.00	1.00	0.95	1.00		0.75		1.00	0.76	1.00	
Satd. Flow (perm)	379	3471	1530	3400	3494		1348		1520	1408	1579	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	14	1320	67	60	1019	18	152	0	253	18	1	17
RTOR Reduction (vph)	0	0	33	0	1	0	0	0	20	0	11	0
Lane Group Flow (vph)	14	1320	34	60	1036	0	152	0	233	18	7	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	5%	5%	5%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	Prot	NA		Perm		pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2				8		8	4		
Actuated Green, G (s)	61.9	59.9	59.9	6.5	64.4		39.1		45.6	39.1	39.1	
Effective Green, g (s)	62.9	61.4	61.4	7.0	65.9		39.1		46.6	39.6	39.6	
Actuated g/C Ratio	0.52	0.51	0.51	0.06	0.55		0.33		0.39	0.33	0.33	
Clearance Time (s)	4.5	5.5	5.5	4.5	5.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)	2.0	3.5	3.5	2.0	3.5		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	226	1775	782	198	1918		439		640	464	521	
v/s Ratio Prot	0.00	c0.38		0.02	0.30				c0.02		0.00	
v/s Ratio Perm	0.03		0.02				0.11		0.13	0.01		
v/c Ratio	0.06	0.74	0.04	0.30	0.54		0.35		0.36	0.04	0.01	
Uniform Delay, d1	14.7	23.1	14.6	54.2	17.3		30.7		26.2	27.3	27.0	
Progression Factor	0.47	0.86	1.34	1.09	0.68		1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.0	1.6	0.0	0.3	0.3		2.2		0.1	0.2	0.0	
Delay (s)	7.0	21.5	19.6	59.3	12.2		32.9		26.3	27.4	27.1	
Level of Service	A	C	B	E	B		C		C	C	C	
Approach Delay (s)		21.3			14.8			28.8			27.3	
Approach LOS		C			B			C			C	

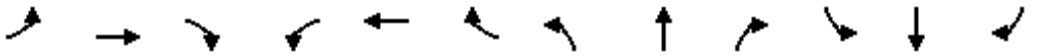
Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1267	64	58	978	17	146	0	243	17	1	16
Future Volume (veh/h)	13	1267	64	58	978	17	146	0	243	17	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		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	1841	1841	1841	1856	1856	1856	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	14	1320	46	60	1019	18	152	0	164	18	1	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	2	2	2
Cap, veh/h	255	1704	749	138	1799	32	557	680	638	515	46	551
Arrive On Green	0.02	0.49	0.49	0.04	0.51	0.50	0.37	0.00	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1753	3497	1538	3428	3544	63	1367	1826	1546	1221	123	1479
Grp Volume(v), veh/h	14	1320	46	60	507	530	152	0	164	18	0	13
Grp Sat Flow(s),veh/h/ln	1753	1749	1538	1714	1763	1844	1367	1826	1546	1221	0	1603
Q Serve(g_s), s	0.5	37.3	1.9	2.1	23.8	23.9	9.6	0.0	8.4	1.1	0.0	0.6
Cycle Q Clear(g_c), s	0.5	37.3	1.9	2.1	23.8	23.9	10.2	0.0	8.4	1.1	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		0.92
Lane Grp Cap(c), veh/h	255	1704	749	138	895	936	557	680	638	515	0	597
V/C Ratio(X)	0.05	0.77	0.06	0.44	0.57	0.57	0.27	0.00	0.26	0.03	0.00	0.02
Avail Cap(c_a), veh/h	301	1778	782	377	1009	1056	557	680	638	515	0	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.2	25.4	16.3	56.3	20.4	20.4	27.4	0.0	23.1	24.0	0.0	24.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.7	0.6	0.6	1.2	0.0	1.0	0.1	0.0	0.1
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	0.2	14.9	0.7	0.9	9.3	9.7	3.3	0.0	3.2	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	27.6	16.3	56.9	21.0	21.0	28.6	0.0	24.1	24.1	0.0	24.0
LnGrp LOS	B	C	B	E	C	C	C	A	C	C	A	C
Approach Vol, veh/h		1380			1097			316			31	
Approach Delay, s/veh		27.1			23.0			26.3			24.1	
Approach LOS		C			C			C			C	

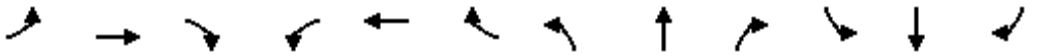
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	62.5		48.7	6.4	64.9		48.7				
Change Period (Y+Rc), s	4.5	5.5		4.5	4.5	5.5		4.5				
Max Green Setting (Gmax), s	12.7	59.5		33.3	5.0	67.2		33.3				
Max Q Clear Time (g_c+I1), s	4.1	39.3		3.1	2.5	25.9		12.2				
Green Ext Time (p_c), s	0.1	17.6		0.1	0.0	25.4		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		25.4	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	1069	418	5	772	41	212	22	15	106	45	67
Future Volume (vph)	31	1069	418	5	772	41	212	22	15	106	45	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.4	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.94		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3471	1520	1719	3408		1770	1739		1736	1649	
Flt Permitted	0.25	1.00	1.00	0.17	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	465	3471	1520	300	3408		1770	1739		1736	1649	
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)	33	1125	440	5	813	43	223	23	16	112	47	71
RTOR Reduction (vph)	0	0	193	0	2	0	0	14	0	0	52	0
Lane Group Flow (vph)	33	1125	248	5	854	0	223	25	0	112	66	0
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)			2			3						
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	74.0	67.4	67.4	62.0	60.9		19.3	14.2		19.3	14.2	
Effective Green, g (s)	74.0	68.9	67.5	62.0	62.4		19.3	14.7		19.3	14.7	
Actuated g/C Ratio	0.62	0.57	0.56	0.52	0.52		0.16	0.12		0.16	0.12	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	367	1992	855	168	1772		284	213		279	202	
v/s Ratio Prot	c0.01	c0.32		0.00	0.25		c0.13	0.01		0.06	c0.04	
v/s Ratio Perm	0.05		0.16	0.02								
v/c Ratio	0.09	0.56	0.29	0.03	0.48		0.79	0.12		0.40	0.33	
Uniform Delay, d1	16.5	16.1	13.7	26.3	18.4		48.4	46.9		45.2	48.1	
Progression Factor	0.47	0.55	0.17	1.00	1.00		1.00	1.00		1.00	1.01	
Incremental Delay, d2	0.1	0.9	0.6	0.1	0.9		13.3	0.2		0.9	1.0	
Delay (s)	7.9	9.7	3.0	26.4	19.4		61.6	47.1		46.1	49.7	
Level of Service	A	A	A	C	B		E	D		D	D	
Approach Delay (s)		7.8			19.4			59.5			47.9	
Approach LOS		A			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1069	418	5	772	41	212	22	15	106	45	67
Future Volume (veh/h)	31	1069	418	5	772	41	212	22	15	106	45	67
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	1841	1841	1841	1826	1826	1826	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	33	1125	377	5	813	22	223	23	11	112	47	66
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, %	4	4	4	5	5	5	2	2	2	4	4	4
Cap, veh/h	640	1334	564	527	1154	31	255	190	91	139	66	92
Arrive On Green	0.59	0.76	0.74	0.25	0.33	0.33	0.14	0.16	0.15	0.08	0.09	0.09
Sat Flow, veh/h	1753	3497	1526	1739	3448	93	1781	1195	571	1753	691	971
Grp Volume(v), veh/h	33	1125	377	5	409	426	223	0	34	112	0	113
Grp Sat Flow(s),veh/h/ln	1753	1749	1526	1739	1735	1806	1781	0	1766	1753	0	1662
Q Serve(g_s), s	0.0	25.7	9.9	0.0	24.6	24.6	14.7	0.0	2.0	7.5	0.0	7.9
Cycle Q Clear(g_c), s	0.0	25.7	9.9	0.0	24.6	24.6	14.7	0.0	2.0	7.5	0.0	7.9
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.32	1.00		0.58
Lane Grp Cap(c), veh/h	640	1334	564	527	581	605	255	0	280	139	0	158
V/C Ratio(X)	0.05	0.84	0.67	0.01	0.70	0.70	0.88	0.00	0.12	0.81	0.00	0.72
Avail Cap(c_a), veh/h	640	1428	605	527	708	738	327	0	502	225	0	381
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	11.9	5.0	25.3	34.7	34.7	50.4	0.0	43.4	54.4	0.0	52.9
Incr Delay (d2), s/veh	0.0	4.4	4.0	0.0	7.0	6.7	18.8	0.0	0.2	10.5	0.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	5.0	3.6	0.1	11.1	11.5	7.8	0.0	0.9	3.7	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	16.2	9.0	25.3	41.8	41.5	69.1	0.0	43.6	64.9	0.0	58.8
LnGrp LOS	B	B	A	C	D	D	E	A	D	E	A	E
Approach Vol, veh/h		1535			840			257			225	
Approach Delay, s/veh		14.4			41.5			65.8			61.8	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.7	49.8	21.2	15.4	39.3	44.2	13.5	23.1
Change Period (Y+Rc), s	4.0	5.5	4.0	4.5	4.0	5.5	4.0	4.5
Max Green Setting (Gmax), s	5.5	47.5	22.0	27.0	5.5	47.5	15.4	33.6
Max Q Clear Time (g_c+I1), s	2.0	27.7	16.7	9.9	2.0	26.6	9.5	4.0
Green Ext Time (p_c), s	0.0	16.6	0.4	0.4	0.0	12.0	0.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	5.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	145	54	105	35	6	177
Future Vol, veh/h	145	54	105	35	6	177
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	82	82	82	82	82	82
Heavy Vehicles, %	5	5	11	11	5	5
Mvmt Flow	177	66	128	43	7	216

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	380	150	0	0	171	0
Stage 1	150	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	616	889	-	-	1388	-
Stage 1	870	-	-	-	-	-
Stage 2	801	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	612	889	-	-	1388	-
Mov Cap-2 Maneuver	612	-	-	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	796	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	669	1388	-
HCM Lane V/C Ratio	-	-	0.363	0.005	-
HCM Control Delay (s)	-	-	13.4	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.7	0	-

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	124	78	124	254	1	69	0	107	1	0	0
Future Vol, veh/h	0	124	78	124	254	1	69	0	107	1	0	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	7	7	7	7	7	7	5	5	5	0	0	0
Mvmt Flow	0	148	93	148	302	1	82	0	127	1	0	0
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	10.5	15.8	10.9	9.3
HCM LOS	B	C	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	39%	0%	33%	100%
Vol Thru, %	0%	61%	67%	0%
Vol Right, %	61%	39%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	176	202	379	1
LT Vol	69	0	124	1
Through Vol	0	124	254	0
RT Vol	107	78	1	0
Lane Flow Rate	210	240	451	1
Geometry Grp	1	1	1	1
Degree of Util (X)	0.315	0.334	0.618	0.002
Departure Headway (Hd)	5.411	5.007	5.03	6.261
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	666	721	722	573
Service Time	3.422	3.007	3.03	4.283
HCM Lane V/C Ratio	0.315	0.333	0.625	0.002
HCM Control Delay	10.9	10.5	15.8	9.3
HCM Lane LOS	B	B	C	A
HCM 95th-tile Q	1.3	1.5	4.3	0

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	38	0	21	0	406	7	3	762	0
Future Vol, veh/h	0	0	0	38	0	21	0	406	7	3	762	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	110	-	-
Veh in Median Storage, #	-	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, %	5	5	5	2	2	2	4	4	4	4	4	4
Mvmt Flow	0	0	0	43	0	24	0	461	8	3	866	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1103	1342	433	905	1338	236	866	0	0	470	0	0
Stage 1	872	872	-	466	466	-	-	-	-	-	-	-
Stage 2	231	470	-	439	872	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	7.54	6.54	6.94	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.6	5.6	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.52	4.02	3.32	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	162	147	563	232	152	766	761	-	-	1074	-	-
Stage 1	306	359	-	546	561	-	-	-	-	-	-	-
Stage 2	742	551	-	567	366	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	157	146	563	231	151	765	761	-	-	1073	-	-
Mov Cap-2 Maneuver	157	146	-	231	151	-	-	-	-	-	-	-
Stage 1	306	358	-	545	560	-	-	-	-	-	-	-
Stage 2	719	550	-	565	365	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	20	0	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	761	-	-	-	307	1073	-	-
HCM Lane V/C Ratio	-	-	-	-	0.218	0.003	-	-
HCM Control Delay (s)	0	-	-	0	20	8.4	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.8	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	76	0	427	689	14
Future Vol, veh/h	0	76	0	427	689	14
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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	5	5	4	4	4	4
Mvmt Flow	0	86	0	485	783	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1034	400	799	0	-	0
Stage 1	791	-	-	-	-	-
Stage 2	243	-	-	-	-	-
Critical Hdwy	6.9	7	4.18	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.24	-	-	-
Pot Cap-1 Maneuver	223	591	807	-	-	-
Stage 1	399	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	223	591	807	-	-	-
Mov Cap-2 Maneuver	223	-	-	-	-	-
Stage 1	399	-	-	-	-	-
Stage 2	766	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	807	-	591	-	-
HCM Lane V/C Ratio	-	-	0.146	-	-
HCM Control Delay (s)	0	-	12.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

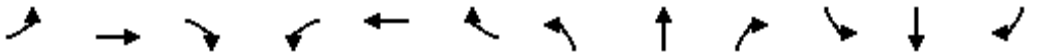
Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1	20	71	0	32	0	415	12	8	612	1
Future Vol, veh/h	18	1	20	71	0	32	0	415	12	8	612	1
Conflicting Peds, #/hr	3	0	1	1	0	3	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	13	13	13	41	41	41	18	18	18	17	17	17
Mvmt Flow	21	1	24	85	0	38	0	494	14	10	729	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1001	1259	367	887	1252	257	731	0	0	508	0	0
Stage 1	751	751	-	501	501	-	-	-	-	-	-	-
Stage 2	250	508	-	386	751	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	8.32	7.32	7.72	4.46	-	-	4.44	-	-
Critical Hdwy Stg 1	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.91	4.41	3.71	2.38	-	-	2.37	-	-
Pot Cap-1 Maneuver	182	155	599	185	125	637	771	-	-	955	-	-
Stage 1	345	391	-	431	453	-	-	-	-	-	-	-
Stage 2	702	510	-	514	334	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	169	153	598	175	124	635	770	-	-	955	-	-
Mov Cap-2 Maneuver	169	153	-	175	124	-	-	-	-	-	-	-
Stage 1	345	387	-	431	453	-	-	-	-	-	-	-
Stage 2	658	510	-	486	330	-	-	-	-	-	-	-

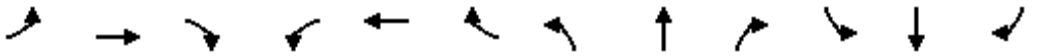
Approach	EB	WB	NB	SB
HCM Control Delay, s	21.4	38.3	0	0.1
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	770	-	-	266	226	955	-	-
HCM Lane V/C Ratio	-	-	-	0.175	0.543	0.01	-	-
HCM Control Delay (s)	0	-	-	21.4	38.3	8.8	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	2.9	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	189	38	155	341	183	16	382	68	99	429	32
Future Volume (vph)	124	189	38	155	341	183	16	382	68	99	429	32
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	4.0	
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	0.97		1.00	0.95		1.00	0.98		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)	1597	1639		1597	1586		1504	2930		1702	3364	
Flt Permitted	0.18	1.00		0.51	1.00		0.39	1.00		0.27	1.00	
Satd. Flow (perm)	297	1639		858	1586		622	2930		485	3364	
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)	139	212	43	174	383	206	18	429	76	111	482	36
RTOR Reduction (vph)	0	7	0	0	18	0	0	12	0	0	4	0
Lane Group Flow (vph)	139	248	0	174	571	0	18	493	0	111	514	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)												4
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	20%	20%	20%	6%	6%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	39.1		47.8	39.5		26.8	25.1		35.6	29.5	
Effective Green, g (s)	49.0	40.6		49.8	41.0		28.8	26.6		37.2	31.0	
Actuated g/C Ratio	0.49	0.41		0.50	0.41		0.29	0.27		0.37	0.31	
Clearance Time (s)	5.0	5.5		5.0	5.5		5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	262	668		498	652		203	782		267	1047	
v/s Ratio Prot	c0.05	0.15		0.03	c0.36		0.00	c0.17		c0.03	0.15	
v/s Ratio Perm	0.21			0.14			0.02			0.13		
v/c Ratio	0.53	0.37		0.35	0.88		0.09	0.63		0.42	0.49	
Uniform Delay, d1	17.7	20.6		14.2	27.0		25.5	32.2		21.8	27.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.4		0.2	12.6		0.1	1.7		0.4	0.4	
Delay (s)	18.7	20.9		14.4	39.5		25.6	33.8		22.2	28.2	
Level of Service	B	C		B	D		C	C		C	C	
Approach Delay (s)		20.2			33.8			33.6			27.2	
Approach LOS		C			C			C			C	

Intersection Summary					
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.72				
Actuated Cycle Length (s)	99.6	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	67.6%	ICU Level of Service		C	
Analysis Period (min)	15				
c Critical Lane Group					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	189	38	155	341	183	16	382	68	99	429	32
Future Volume (veh/h)	124	189	38	155	341	183	16	382	68	99	429	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
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	1707	1707	1707	1707	1707	1707	1604	1604	1604	1811	1811	1811
Adj Flow Rate, veh/h	139	212	0	174	383	0	18	429	59	111	482	30
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, %	13	13	13	13	13	13	20	20	20	6	6	6
Cap, veh/h	368	491		500	521		301	659	90	348	963	60
Arrive On Green	0.10	0.29	0.00	0.12	0.31	0.00	0.04	0.24	0.22	0.09	0.29	0.27
Sat Flow, veh/h	1626	1707	0	1626	1707	0	1527	2692	368	1725	3284	204
Grp Volume(v), veh/h	139	212	0	174	383	0	18	242	246	111	252	260
Grp Sat Flow(s),veh/h/ln	1626	1707	0	1626	1707	0	1527	1523	1536	1725	1721	1768
Q Serve(g_s), s	3.5	6.1	0.0	4.4	12.2	0.0	0.5	8.6	8.8	2.8	7.3	7.4
Cycle Q Clear(g_c), s	3.5	6.1	0.0	4.4	12.2	0.0	0.5	8.6	8.8	2.8	7.3	7.4
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.24	1.00		0.12
Lane Grp Cap(c), veh/h	368	491		500	521		301	373	376	348	504	518
V/C Ratio(X)	0.38	0.43		0.35	0.73		0.06	0.65	0.65	0.32	0.50	0.50
Avail Cap(c_a), veh/h	448	1578		577	1606		394	779	786	399	909	933
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	17.6	0.0	12.7	18.8	0.0	16.3	20.5	20.7	15.1	17.7	17.8
Incr Delay (d2), s/veh	0.2	0.6	0.0	0.2	2.0	0.0	0.0	1.9	1.9	0.2	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.3	0.0	1.4	4.6	0.0	0.2	2.8	2.9	0.9	2.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	18.2	0.0	12.9	20.9	0.0	16.3	22.4	22.7	15.3	18.5	18.6
LnGrp LOS	B	B		B	C		B	C	C	B	B	B
Approach Vol, veh/h		351	A		557	A		506			623	
Approach Delay, s/veh		16.6			18.4			22.3			18.0	
Approach LOS		B			B			C			B	

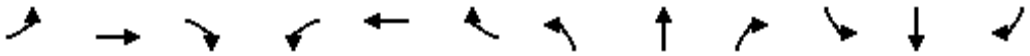
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	18.8	11.1	21.4	6.3	21.8	10.0	22.5
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	6.0	29.5	9.0	54.5	5.0	30.5	8.0	55.5
Max Q Clear Time (g_c+I1), s	4.8	10.8	6.4	8.1	2.5	9.4	5.5	14.2
Green Ext Time (p_c), s	0.0	2.5	0.1	1.4	0.0	2.7	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B

Notes

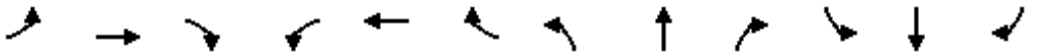
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	973	128	125	677	6	92	3	398	4	0	0
Future Volume (vph)	8	973	128	125	677	6	92	3	398	4	0	0
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		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00	0.99		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	
Satd. Flow (prot)	1655	3312	1448	1570	3135			1676	1487		1444	
Flt Permitted	0.38	1.00	1.00	0.21	1.00			0.73	1.00		0.58	
Satd. Flow (perm)	659	3312	1448	341	3135			1283	1487		888	
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)	8	1024	135	132	713	6	97	3	419	4	0	0
RTOR Reduction (vph)	0	0	47	0	0	0	0	0	34	0	0	0
Lane Group Flow (vph)	8	1024	88	132	719	0	0	100	385	0	4	0
Confl. Peds. (#/hr)	1					1	1					1
Confl. Bikes (#/hr)			4						2			
Heavy Vehicles (%)	9%	9%	9%	15%	15%	15%	8%	8%	8%	25%	25%	25%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	73.0	72.0	72.0	96.3	91.3			14.2	34.5		14.2	
Effective Green, g (s)	73.0	73.5	73.5	96.3	92.8			14.2	34.5		14.2	
Actuated g/C Ratio	0.61	0.61	0.61	0.80	0.77			0.12	0.29		0.12	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			4.0	4.0		4.0	
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5			1.5	1.5		1.5	
Lane Grp Cap (vph)	409	2028	886	481	2424			151	477		105	
v/s Ratio Prot	0.00	c0.31		0.05	0.23				c0.14			
v/s Ratio Perm	0.01		0.06	0.17				0.08	0.12		0.00	
v/c Ratio	0.02	0.50	0.10	0.27	0.30			0.66	0.81		0.04	
Uniform Delay, d1	9.2	13.0	9.6	4.9	4.0			50.6	39.7		46.9	
Progression Factor	1.00	1.00	1.00	3.34	1.33			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	0.1	0.3			8.2	9.1		0.1	
Delay (s)	9.3	13.9	9.8	16.4	5.6			58.8	48.8		46.9	
Level of Service	A	B	A	B	A			E	D		D	
Approach Delay (s)		13.4			7.3			50.7			46.9	
Approach LOS		B			A			D			D	

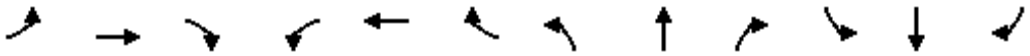
Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	973	128	125	677	6	92	3	398	4	0	0
Future Volume (veh/h)	8	973	128	125	677	6	92	3	398	4	0	0
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		1.00	1.00		0.98	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	1767	1767	1767	1678	1678	1678	1781	1781	1781	1530	1530	1530
Adj Flow Rate, veh/h	8	1024	109	132	713	6	97	3	324	4	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
Percent Heavy Veh, %	9	9	9	15	15	15	8	8	8	25	25	25
Cap, veh/h	514	2165	944	347	2209	19	350	10	380	197	0	0
Arrive On Green	0.01	0.65	0.65	0.09	1.00	1.00	0.21	0.21	0.21	0.21	0.00	0.00
Sat Flow, veh/h	1682	3357	1463	1598	3239	27	1398	48	1486	656	0	0
Grp Volume(v), veh/h	8	1024	109	132	351	368	100	0	324	4	0	0
Grp Sat Flow(s),veh/h/ln	1682	1678	1463	1598	1594	1673	1445	0	1486	656	0	0
Q Serve(g_s), s	0.2	18.7	3.4	3.4	0.0	0.0	0.0	0.0	24.9	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.7	3.4	3.4	0.0	0.0	5.9	0.0	24.9	6.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.97		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	514	2165	944	347	1087	1141	360	0	380	197	0	0
V/C Ratio(X)	0.02	0.47	0.12	0.38	0.32	0.32	0.28	0.00	0.85	0.02	0.00	0.00
Avail Cap(c_a), veh/h	582	2165	944	672	1087	1141	360	0	380	197	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.7	10.9	8.2	8.1	0.0	0.0	40.0	0.0	42.6	42.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.2	0.2	0.7	0.7	0.2	0.0	16.1	0.0	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	6.3	1.0	0.9	0.2	0.2	2.5	0.0	10.8	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	11.6	8.4	8.4	0.7	0.7	40.1	0.0	58.7	42.7	0.0	0.0
LnGrp LOS	A	B	A	A	A	A	D	A	E	D	A	A
Approach Vol, veh/h		1141			851			424			4	
Approach Delay, s/veh		11.3			1.9			54.3			42.7	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	81.4		29.0	5.2	85.8		29.0				
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0				
Max Green Setting (Gmax), s	30.0	51.5		25.0	6.0	75.5		25.0				
Max Q Clear Time (g_c+I1), s	5.4	20.7		8.4	2.2	2.0		26.9				
Green Ext Time (p_c), s	0.2	21.6		0.0	0.0	19.9		0.0				

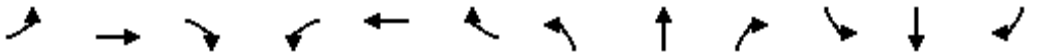
Intersection Summary			
HCM 6th Ctrl Delay		15.6	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	1163	68	62	755	191	15	2	11	63	9	35
Future Volume (vph)	153	1163	68	62	755	191	15	2	11	63	9	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.5	4.0		4.5	4.5		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	0.99		1.00	0.97		1.00	0.87		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3311		1583	3058		1805	1659		1399	1296	
Flt Permitted	0.23	1.00		0.17	1.00		0.73	1.00		0.49	1.00	
Satd. Flow (perm)	411	3311		276	3058		1383	1659		716	1296	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	159	1211	71	65	786	199	16	2	11	66	9	36
RTOR Reduction (vph)	0	2	0	0	11	0	0	10	0	0	31	0
Lane Group Flow (vph)	159	1280	0	65	974	0	16	3	0	66	14	0
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	8%	8%	8%	14%	14%	14%	0%	0%	0%	29%	29%	29%
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)	86.2	78.4		81.1	76.1		8.9	6.9		21.6	15.1	
Effective Green, g (s)	86.2	79.9		81.1	77.6		8.9	6.9		22.6	15.1	
Actuated g/C Ratio	0.72	0.67		0.68	0.65		0.07	0.06		0.19	0.13	
Clearance Time (s)	4.0	5.5		4.5	5.5		4.5	4.5		5.0	5.0	
Vehicle Extension (s)	1.5	3.5		3.0	3.5		3.0	3.0		2.0	2.0	
Lane Grp Cap (vph)	377	2204		240	1977		109	95		198	163	
v/s Ratio Prot	c0.03	c0.39		0.01	0.32		0.00	0.00		c0.03	0.01	
v/s Ratio Perm	0.28			0.17			0.01			c0.03		
v/c Ratio	0.42	0.58		0.27	0.49		0.15	0.03		0.33	0.08	
Uniform Delay, d1	6.7	10.9		8.2	11.0		51.9	53.4		41.6	46.3	
Progression Factor	1.36	0.96		0.82	0.65		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.9		0.5	0.8		0.6	0.1		0.4	0.1	
Delay (s)	9.3	11.4		7.3	7.9		52.5	53.5		41.9	46.4	
Level of Service	A	B		A	A		D	D		D	D	
Approach Delay (s)		11.2			7.9			53.0			43.7	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



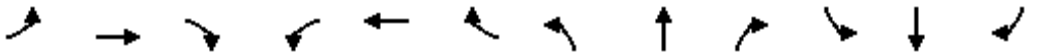
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	1163	68	62	755	191	15	2	11	63	9	35
Future Volume (veh/h)	153	1163	68	62	755	191	15	2	11	63	9	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1781	1781	1781	1693	1693	1693	1900	1900	1900	1470	1470	1470
Adj Flow Rate, veh/h	159	1211	71	65	786	183	16	2	11	66	9	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	14	14	14	0	0	0	29	29	29
Cap, veh/h	521	2307	135	390	1821	424	144	10	53	198	22	87
Arrive On Green	0.09	1.00	1.00	0.07	1.00	1.00	0.02	0.04	0.04	0.07	0.08	0.09
Sat Flow, veh/h	1697	3244	190	1612	2577	600	1810	254	1395	1400	257	1028
Grp Volume(v), veh/h	159	631	651	65	490	479	16	0	13	66	0	45
Grp Sat Flow(s),veh/h/ln	1697	1692	1742	1612	1608	1570	1810	0	1649	1400	0	1285
Q Serve(g_s), s	3.4	0.0	0.0	1.4	0.0	0.0	1.0	0.0	0.9	5.2	0.0	4.0
Cycle Q Clear(g_c), s	3.4	0.0	0.0	1.4	0.0	0.0	1.0	0.0	0.9	5.2	0.0	4.0
Prop In Lane	1.00		0.11	1.00		0.38	1.00		0.85	1.00		0.80
Lane Grp Cap(c), veh/h	521	1203	1239	390	1136	1109	144	0	63	198	0	109
V/C Ratio(X)	0.31	0.52	0.53	0.17	0.43	0.43	0.11	0.00	0.21	0.33	0.00	0.41
Avail Cap(c_a), veh/h	561	1203	1239	402	1136	1109	190	0	385	371	0	481
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	0.84	0.84	0.84	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.3	0.0	0.0	4.4	0.0	0.0	54.0	0.0	56.0	47.6	0.0	51.7
Incr Delay (d2), s/veh	0.1	1.2	1.2	0.2	1.0	1.0	0.3	0.0	1.6	0.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.4	0.4	0.4	0.3	0.3	0.5	0.0	0.4	1.8	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.4	1.2	1.2	4.5	1.0	1.0	54.4	0.0	57.6	47.9	0.0	52.6
LnGrp LOS	A	A	A	A	A	A	D	A	E	D	A	D
Approach Vol, veh/h		1441			1034			29			111	
Approach Delay, s/veh		1.6			1.2			55.8			49.8	
Approach LOS		A			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	89.3	6.6	15.2	9.5	88.8	12.2	9.6
Change Period (Y+Rc), s	4.5	5.5	4.5	5.0	4.0	5.5	5.0	* 5
Max Green Setting (Gmax), s	5.3	45.2	5.1	44.9	8.3	42.7	22.0	* 28
Max Q Clear Time (g_c+I1), s	3.4	2.0	3.0	6.0	5.4	2.0	7.2	2.9
Green Ext Time (p_c), s	0.0	38.4	0.0	0.2	0.1	30.4	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	4.1
HCM 6th LOS	A

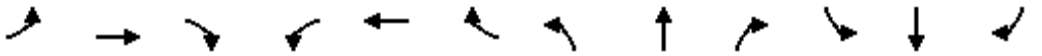
Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	1013	129	127	691	229	240	261	101	181	232	76
Future Volume (vph)	96	1013	129	127	691	229	240	261	101	181	232	76
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	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3127	3223	1423	3072	3167	1402	3155	3116		3072	1667	1403
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3127	3223	1423	3072	3167	1402	3155	3116		3072	1667	1403
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	103	1089	139	137	743	246	258	281	109	195	249	82
RTOR Reduction (vph)	0	0	57	0	0	90	0	36	0	0	0	62
Lane Group Flow (vph)	103	1089	82	137	743	156	258	354	0	195	249	20
Confl. Peds. (#/hr)			2	2			1					1
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	12%	12%	12%	14%	14%	14%	11%	11%	11%	14%	14%	14%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	7.2	57.9	70.5	8.8	59.5	70.7	12.6	23.1		11.2	21.7	28.9
Effective Green, g (s)	7.2	59.4	70.5	8.8	61.0	70.7	12.6	24.6		11.2	23.2	28.9
Actuated g/C Ratio	0.06	0.49	0.59	0.07	0.51	0.59	0.10	0.21		0.09	0.19	0.24
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	4.0
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	1.5
Lane Grp Cap (vph)	187	1595	836	225	1609	826	331	638		286	322	337
v/s Ratio Prot	0.03	c0.34	0.01	c0.04	0.23	0.02	c0.08	0.11		0.06	c0.15	0.00
v/s Ratio Perm			0.05			0.09						0.01
v/c Ratio	0.55	0.68	0.10	0.61	0.46	0.19	0.78	0.56		0.68	0.77	0.06
Uniform Delay, d1	54.8	23.1	10.8	53.9	19.0	11.4	52.3	42.8		52.7	45.9	35.1
Progression Factor	1.15	0.51	0.76	1.09	0.89	2.05	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.7	2.1	0.0	3.0	0.9	0.0	10.1	0.6		5.3	10.1	0.0
Delay (s)	64.9	13.8	8.2	61.6	17.8	23.4	62.5	43.4		57.9	56.0	35.1
Level of Service	E	B	A	E	B	C	E	D		E	E	D
Approach Delay (s)		17.2			24.3			51.0			53.4	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	1013	129	127	691	229	240	261	101	181	232	76
Future Volume (veh/h)	96	1013	129	127	691	229	240	261	101	181	232	76
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		0.99	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	1722	1722	1722	1693	1693	1693	1737	1737	1737	1693	1693	1693
Adj Flow Rate, veh/h	103	1089	123	137	743	171	258	281	87	195	249	60
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	14	14	14	11	11	11	14	14	14
Cap, veh/h	150	1696	872	194	1715	855	320	509	154	257	316	317
Arrive On Green	0.09	1.00	1.00	0.02	0.18	0.17	0.10	0.20	0.19	0.08	0.19	0.17
Sat Flow, veh/h	3182	3272	1437	3127	3216	1415	3209	2493	756	3127	1693	1432
Grp Volume(v), veh/h	103	1089	123	137	743	171	258	184	184	195	249	60
Grp Sat Flow(s),veh/h/ln	1591	1636	1437	1564	1608	1415	1605	1650	1599	1564	1693	1432
Q Serve(g_s), s	3.8	0.0	0.0	5.2	24.7	10.4	9.4	12.0	12.5	7.3	16.8	4.1
Cycle Q Clear(g_c), s	3.8	0.0	0.0	5.2	24.7	10.4	9.4	12.0	12.5	7.3	16.8	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	150	1696	872	194	1715	855	320	337	326	257	316	317
V/C Ratio(X)	0.69	0.64	0.14	0.71	0.43	0.20	0.81	0.55	0.56	0.76	0.79	0.19
Avail Cap(c_a), veh/h	186	1696	872	266	1715	855	369	408	396	341	409	396
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	0.0	0.0	57.7	33.3	19.9	52.9	42.8	43.3	53.9	46.5	38.0
Incr Delay (d2), s/veh	3.8	1.6	0.3	2.4	0.8	0.5	9.5	0.5	0.6	4.5	5.6	0.1
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	1.5	0.4	0.1	2.1	10.8	3.7	4.1	4.8	4.9	3.0	7.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.3	1.6	0.3	60.1	34.1	20.4	62.4	43.3	43.9	58.4	52.2	38.1
LnGrp LOS	E	A	A	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		1315			1051			626			504	
Approach Delay, s/veh		5.8			35.2			51.3			52.9	
Approach LOS		A			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	66.2	16.0	26.4	9.7	68.0	13.9	28.5
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	10.2	49.5	13.8	27.5	7.0	52.7	13.1	28.2
Max Q Clear Time (g_c+I1), s	7.2	2.0	11.4	18.8	5.8	26.7	9.3	14.5
Green Ext Time (p_c), s	0.3	36.5	0.5	1.8	0.1	17.7	0.6	3.4

Intersection Summary	
HCM 6th Ctrl Delay	29.6
HCM 6th LOS	C

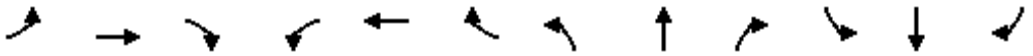
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	1252	41	0	1066	0	16
Future Vol, veh/h	1252	41	0	1066	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	10	10	13	13	93	93
Mvmt Flow	1318	43	0	1122	0	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	659
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	8.76
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.23
Pot Cap-1 Maneuver	-	-	0	-	0	246
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	246
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

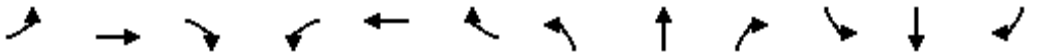
Approach	EB	WB	NB
HCM Control Delay, s	0	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	246	-	-	-
HCM Lane V/C Ratio	0.068	-	-	-
HCM Control Delay (s)	20.7	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1126	137	220	1004	11	60	0	89	3	1	2
Future Volume (vph)	5	1126	137	220	1004	11	60	0	89	3	1	2
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		4.5		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.99	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	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1449	3127	3217		1337		1187	1538	1462	
Flt Permitted	0.26	1.00	1.00	0.95	1.00		0.76		1.00	0.76	1.00	
Satd. Flow (perm)	457	3282	1449	3127	3217		1064		1187	1226	1462	
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)	5	1198	146	234	1068	12	64	0	95	3	1	2
RTOR Reduction (vph)	0	0	42	0	0	0	0	0	39	0	2	0
Lane Group Flow (vph)	5	1198	104	234	1080	0	64	0	56	3	1	0
Confl. Peds. (#/hr)	2					2			2	2		
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	10%	10%	10%	12%	12%	12%	35%	35%	35%	17%	17%	17%
Turn Type	pm+pt	NA	Perm	Prot	NA		Perm		pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2				8		8	4		
Actuated Green, G (s)	80.8	79.8	79.8	12.9	91.7		12.8		25.7	12.8	12.8	
Effective Green, g (s)	81.8	81.3	81.3	13.4	93.2		12.8		26.7	13.3	13.3	
Actuated g/C Ratio	0.68	0.68	0.68	0.11	0.78		0.11		0.22	0.11	0.11	
Clearance Time (s)	4.5	5.5	5.5	4.5	5.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)	2.0	3.5	3.5	2.0	3.5		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	326	2223	981	349	2498		113		303	135	162	
v/s Ratio Prot	0.00	c0.37		c0.07	0.34				0.02		0.00	
v/s Ratio Perm	0.01		0.07				c0.06		0.03	0.00		
v/c Ratio	0.02	0.54	0.11	0.67	0.43		0.57		0.19	0.02	0.01	
Uniform Delay, d1	6.1	9.8	6.7	51.2	4.5		51.0		37.8	47.6	47.5	
Progression Factor	0.45	0.47	0.20	0.93	0.95		1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.7	0.2	2.7	0.4		3.8		0.1	0.0	0.0	
Delay (s)	2.7	5.3	1.5	50.2	4.6		54.8		37.9	47.6	47.5	
Level of Service	A	A	A	D	A		D		D	D	D	
Approach Delay (s)		4.9			12.8			44.7			47.5	
Approach LOS		A			B			D			D	

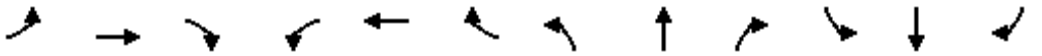
Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1126	137	220	1004	11	60	0	89	3	1	2
Future Volume (veh/h)	5	1126	137	220	1004	11	60	0	89	3	1	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.99	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	1752	1752	1752	1722	1722	1722	1381	1381	1381	1648	1648	1648
Adj Flow Rate, veh/h	5	1198	119	234	1068	12	64	0	63	3	1	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	10	10	12	12	12	35	35	35	17	17	17
Cap, veh/h	416	2371	1043	303	2641	30	150	128	219	168	45	90
Arrive On Green	0.01	0.71	0.71	0.10	0.80	0.78	0.09	0.00	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1668	3328	1464	3182	3313	37	1037	1381	1163	1173	488	976
Grp Volume(v), veh/h	5	1198	119	234	527	553	64	0	63	3	0	3
Grp Sat Flow(s),veh/h/ln	1668	1664	1464	1591	1636	1714	1037	1381	1163	1173	0	1464
Q Serve(g_s), s	0.1	19.4	3.1	8.6	11.6	11.6	7.2	0.0	5.6	0.3	0.0	0.2
Cycle Q Clear(g_c), s	0.1	19.4	3.1	8.6	11.6	11.6	7.4	0.0	5.6	0.3	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	416	2371	1043	303	1304	1366	150	128	219	168	0	135
V/C Ratio(X)	0.01	0.51	0.11	0.77	0.40	0.40	0.43	0.00	0.29	0.02	0.00	0.02
Avail Cap(c_a), veh/h	475	2371	1043	424	1304	1366	309	340	397	348	0	360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.62	0.62	0.62	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.9	7.8	5.4	53.0	3.6	3.7	53.4	0.0	41.9	49.5	0.0	49.7
Incr Delay (d2), s/veh	0.0	0.8	0.2	2.1	0.6	0.6	0.7	0.0	0.3	0.0	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	0.0	5.9	0.8	3.4	2.7	2.8	1.9	0.0	1.6	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.9	8.5	5.6	55.2	4.2	4.2	54.1	0.0	42.1	49.6	0.0	49.7
LnGrp LOS	A	A	A	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		1322			1314			127			6	
Approach Delay, s/veh		8.3			13.3			48.2			49.6	
Approach LOS		A			B			D			D	

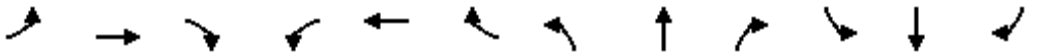
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.4	89.5		15.1	5.3	99.6		15.1				
Change Period (Y+Rc), s	4.5	5.5		4.5	4.5	5.5		4.5				
Max Green Setting (Gmax), s	15.5	61.0		29.0	5.0	71.5		29.0				
Max Q Clear Time (g_c+I1), s	10.6	21.4		2.3	2.1	13.6		9.4				
Green Ext Time (p_c), s	0.3	30.0		0.0	0.0	32.8		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		12.6	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	853	298	20	896	107	320	52	17	27	10	16
Future Volume (vph)	76	853	298	20	896	107	320	52	17	27	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.4	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	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	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.96		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1626	3252	1422	1570	3081		1703	1722		1347	1289	
Flt Permitted	0.16	1.00	1.00	0.22	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	275	3252	1422	361	3081		1703	1722		1347	1289	
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)	83	927	324	22	974	116	348	57	18	29	11	17
RTOR Reduction (vph)	0	0	158	0	6	0	0	11	0	0	16	0
Lane Group Flow (vph)	83	927	166	22	1084	0	348	64	0	29	12	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	11%	11%	11%	15%	15%	15%	6%	6%	6%	34%	34%	34%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	69.2	61.4	61.4	64.8	59.2		26.7	29.7		5.3	8.3	
Effective Green, g (s)	69.2	62.9	61.5	64.8	60.7		26.7	30.2		5.3	8.8	
Actuated g/C Ratio	0.58	0.52	0.51	0.54	0.51		0.22	0.25		0.04	0.07	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	246	1704	728	251	1558		378	433		59	94	
v/s Ratio Prot	c0.02	0.29		0.00	c0.35		c0.20	c0.04		0.02	0.01	
v/s Ratio Perm	0.17		0.12	0.04								
v/c Ratio	0.34	0.54	0.23	0.09	0.70		0.92	0.15		0.49	0.13	
Uniform Delay, d1	28.4	19.0	16.1	22.8	22.6		45.6	34.9		56.0	52.0	
Progression Factor	0.45	0.45	0.40	1.00	1.00		1.00	1.00		0.89	1.08	
Incremental Delay, d2	0.7	1.1	0.6	0.2	2.6		27.3	0.2		6.3	0.6	
Delay (s)	13.6	9.7	7.2	23.0	25.2		72.9	35.1		56.4	56.7	
Level of Service	B	A	A	C	C		E	D		E	E	
Approach Delay (s)		9.3			25.2			66.2			56.5	
Approach LOS		A			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	853	298	20	896	107	320	52	17	27	10	16
Future Volume (veh/h)	76	853	298	20	896	107	320	52	17	27	10	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1737	1737	1678	1678	1678	1811	1811	1811	1396	1396	1396
Adj Flow Rate, veh/h	83	927	275	22	974	67	348	57	13	29	11	12
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, %	11	11	11	15	15	15	6	6	6	34	34	34
Cap, veh/h	470	1186	499	480	1105	76	371	344	78	34	31	34
Arrive On Green	0.16	0.24	0.23	0.24	0.37	0.37	0.22	0.24	0.24	0.03	0.05	0.05
Sat Flow, veh/h	1654	3300	1434	1598	3020	208	1725	1427	325	1330	608	663
Grp Volume(v), veh/h	83	927	275	22	514	527	348	0	70	29	0	23
Grp Sat Flow(s),veh/h/ln	1654	1650	1434	1598	1594	1634	1725	0	1752	1330	0	1272
Q Serve(g_s), s	0.0	31.5	11.1	0.0	36.2	36.2	23.8	0.0	3.8	2.6	0.0	2.1
Cycle Q Clear(g_c), s	0.0	31.5	11.1	0.0	36.2	36.2	23.8	0.0	3.8	2.6	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.19	1.00		0.52
Lane Grp Cap(c), veh/h	470	1186	499	480	583	598	371	0	422	34	0	65
V/C Ratio(X)	0.18	0.78	0.55	0.05	0.88	0.88	0.94	0.00	0.17	0.84	0.00	0.35
Avail Cap(c_a), veh/h	470	1238	521	480	594	609	374	0	647	102	0	291
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.0	41.2	11.3	28.9	35.6	35.6	46.3	0.0	36.1	58.2	0.0	55.1
Incr Delay (d2), s/veh	0.2	4.4	3.7	0.0	17.3	17.0	30.8	0.0	0.2	39.4	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	13.8	4.2	0.4	16.1	16.5	13.2	0.0	1.6	1.2	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	45.6	15.0	28.9	52.9	52.6	77.1	0.0	36.2	97.6	0.0	58.3
LnGrp LOS	D	D	B	C	D	D	E	A	D	F	A	E
Approach Vol, veh/h		1285			1063			418			52	
Approach Delay, s/veh		38.6			52.3			70.3			80.2	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.9	47.1	29.8	10.2	32.1	47.9	7.1	32.9
Change Period (Y+Rc), s	4.0	5.5	4.0	4.5	4.0	5.5	4.0	4.5
Max Green Setting (Gmax), s	5.5	43.5	26.0	27.0	5.8	43.2	9.2	43.8
Max Q Clear Time (g_c+I1), s	2.0	33.5	25.8	4.1	2.0	38.2	4.6	5.8
Green Ext Time (p_c), s	0.0	8.1	0.0	0.1	0.1	4.2	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	49.2
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	5	192	153	39	85
Future Vol, veh/h	21	5	192	153	39	85
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	74	74	74	74	74	74
Heavy Vehicles, %	5	5	10	10	17	17
Mvmt Flow	28	7	259	207	53	115

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	584	363	0	0	466	0
Stage 1	363	-	-	-	-	-
Stage 2	221	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.27	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.353	-
Pot Cap-1 Maneuver	469	675	-	-	1021	-
Stage 1	697	-	-	-	-	-
Stage 2	809	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	443	675	-	-	1021	-
Mov Cap-2 Maneuver	443	-	-	-	-	-
Stage 1	697	-	-	-	-	-
Stage 2	765	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	2.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	474	1021	-
HCM Lane V/C Ratio	-	-	0.074	0.052	-
HCM Control Delay (s)	-	-	13.2	8.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	175	63	64	120	1	92	1	104	2	0	0
Future Vol, veh/h	2	175	63	64	120	1	92	1	104	2	0	0
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, %	20	20	20	9	9	9	14	14	14	0	0	0
Mvmt Flow	3	236	85	86	162	1	124	1	141	3	0	0
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	12.9	11.6	12.1	9.2
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	47%	1%	35%	100%
Vol Thru, %	1%	73%	65%	0%
Vol Right, %	53%	26%	1%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	197	240	185	2
LT Vol	92	2	64	2
Through Vol	1	175	120	0
RT Vol	104	63	1	0
Lane Flow Rate	266	324	250	3
Geometry Grp	1	1	1	1
Degree of Util (X)	0.401	0.474	0.373	0.005
Departure Headway (Hd)	5.425	5.258	5.366	6.142
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	663	691	670	581
Service Time	3.46	3.258	3.396	4.192
HCM Lane V/C Ratio	0.401	0.469	0.373	0.005
HCM Control Delay	12.1	12.9	11.6	9.2
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.9	2.6	1.7	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	5	0	2	0	551	36	15	484	0
Future Vol, veh/h	0	0	0	5	0	2	0	551	36	15	484	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	110	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	43	43	43	17	17	17	20	20	20
Mvmt Flow	0	0	0	6	0	2	0	612	40	17	538	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	878	1224	269	935	1204	326	538	0	0	652	0	0
Stage 1	572	572	-	632	632	-	-	-	-	-	-	-
Stage 2	306	652	-	303	572	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	8.36	7.36	7.76	4.44	-	-	4.5	-	-
Critical Hdwy Stg 1	6.6	5.6	-	7.36	6.36	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	7.36	6.36	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.93	4.43	3.73	2.37	-	-	2.4	-	-
Pot Cap-1 Maneuver	237	174	720	167	133	563	929	-	-	819	-	-
Stage 1	465	495	-	348	383	-	-	-	-	-	-	-
Stage 2	670	455	-	579	412	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	232	170	720	164	130	563	929	-	-	819	-	-
Mov Cap-2 Maneuver	232	170	-	164	130	-	-	-	-	-	-	-
Stage 1	465	485	-	348	383	-	-	-	-	-	-	-
Stage 2	667	455	-	567	403	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	23.2	0	0.3
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	929	-	-	-	206	819	-	-
HCM Lane V/C Ratio	-	-	-	-	0.038	0.02	-	-
HCM Control Delay (s)	0	-	-	0	23.2	9.5	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	11	82	471	488	21
Future Vol, veh/h	3	11	82	471	488	21
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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	17	17	20	20
Mvmt Flow	3	12	91	523	542	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	998	283	565	0	-	0
Stage 1	554	-	-	-	-	-
Stage 2	444	-	-	-	-	-
Critical Hdwy	6.9	7	4.44	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.37	-	-	-
Pot Cap-1 Maneuver	235	705	906	-	-	-
Stage 1	531	-	-	-	-	-
Stage 2	605	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	212	705	906	-	-	-
Mov Cap-2 Maneuver	212	-	-	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	605	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	906	-	471	-	-
HCM Lane V/C Ratio	0.101	-	0.033	-	-
HCM Control Delay (s)	9.4	-	12.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.1	-	-

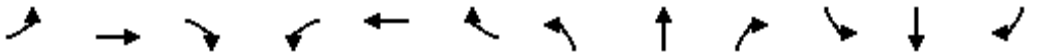
Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	3	30	1	19	18	416	40	45	476	25
Future Vol, veh/h	4	1	3	30	1	19	18	416	40	45	476	25
Conflicting Peds, #/hr	3	0	1	1	0	3	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	13	13	13	41	41	41	18	18	18	17	17	17
Mvmt Flow	5	1	4	36	1	23	21	495	48	54	567	30

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	984	1276	301	954	1267	275	598	0	0	543	0	0
Stage 1	691	691	-	561	561	-	-	-	-	-	-	-
Stage 2	293	585	-	393	706	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	8.32	7.32	7.72	4.46	-	-	4.44	-	-
Critical Hdwy Stg 1	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.91	4.41	3.71	2.38	-	-	2.37	-	-
Pot Cap-1 Maneuver	188	151	663	163	122	618	873	-	-	925	-	-
Stage 1	376	418	-	393	422	-	-	-	-	-	-	-
Stage 2	661	469	-	509	353	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	168	139	662	151	112	616	872	-	-	925	-	-
Mov Cap-2 Maneuver	168	139	-	151	112	-	-	-	-	-	-	-
Stage 1	367	393	-	384	412	-	-	-	-	-	-	-
Stage 2	618	458	-	475	332	-	-	-	-	-	-	-

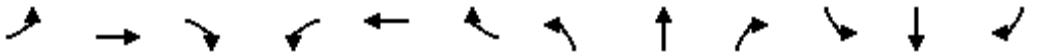
Approach	EB	WB	NB	SB
HCM Control Delay, s	21.7	28.8	0.4	0.8
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	872	-	-	225	210	925	-	-
HCM Lane V/C Ratio	0.025	-	-	0.042	0.283	0.058	-	-
HCM Control Delay (s)	9.2	-	-	21.7	28.8	9.1	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.1	0.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	232	58	55	161	40	39	334	66	183	432	91
Future Volume (vph)	35	232	58	55	161	40	39	334	66	183	432	91
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	4.0	
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	0.97		1.00	0.97		1.00	0.98		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)	1597	1631		1597	1627		1504	2923		1702	3305	
Flt Permitted	0.58	1.00		0.33	1.00		0.43	1.00		0.32	1.00	
Satd. Flow (perm)	967	1631		561	1627		682	2923		582	3305	
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)	39	261	65	62	181	45	44	375	74	206	485	102
RTOR Reduction (vph)	0	8	0	0	8	0	0	14	0	0	15	0
Lane Group Flow (vph)	39	318	0	62	218	0	44	435	0	206	572	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	20%	20%	20%	6%	6%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.1	22.5		29.3	24.6		24.0	20.6		36.6	28.2	
Effective Green, g (s)	27.1	24.0		31.3	26.1		26.0	22.1		37.6	29.7	
Actuated g/C Ratio	0.34	0.30		0.39	0.33		0.33	0.28		0.47	0.37	
Clearance Time (s)	5.0	5.5		5.0	5.5		5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	356	490		294	532		267	809		442	1230	
v/s Ratio Prot	0.00	c0.20		c0.02	0.13		0.01	c0.15		c0.07	0.17	
v/s Ratio Perm	0.03			0.07			0.04			0.15		
v/c Ratio	0.11	0.65		0.21	0.41		0.16	0.54		0.47	0.46	
Uniform Delay, d1	17.9	24.2		16.1	20.9		18.7	24.5		13.3	19.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	3.0		0.1	0.5		0.1	0.7		0.3	0.3	
Delay (s)	17.9	27.2		16.2	21.4		18.8	25.2		13.6	19.3	
Level of Service	B	C		B	C		B	C		B	B	
Approach Delay (s)		26.2			20.3			24.6			17.8	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	79.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	232	58	55	161	40	39	334	66	183	432	91
Future Volume (veh/h)	35	232	58	55	161	40	39	334	66	183	432	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1604	1604	1604	1811	1811	1811
Adj Flow Rate, veh/h	39	261	0	62	181	0	44	375	74	206	485	102
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, %	13	13	13	13	13	13	20	20	20	6	6	6
Cap, veh/h	406	408		353	434		351	624	122	465	898	188
Arrive On Green	0.06	0.24	0.00	0.08	0.25	0.00	0.06	0.25	0.22	0.14	0.32	0.29
Sat Flow, veh/h	1626	1707	0	1626	1707	0	1527	2530	494	1725	2820	589
Grp Volume(v), veh/h	39	261	0	62	181	0	44	224	225	206	295	292
Grp Sat Flow(s),veh/h/ln	1626	1707	0	1626	1707	0	1527	1523	1500	1725	1721	1689
Q Serve(g_s), s	0.9	7.2	0.0	1.5	4.7	0.0	1.1	6.9	7.1	4.2	7.4	7.6
Cycle Q Clear(g_c), s	0.9	7.2	0.0	1.5	4.7	0.0	1.1	6.9	7.1	4.2	7.4	7.6
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.33	1.00		0.35
Lane Grp Cap(c), veh/h	406	408		353	434		351	376	370	465	548	538
V/C Ratio(X)	0.10	0.64		0.18	0.42		0.13	0.60	0.61	0.44	0.54	0.54
Avail Cap(c_a), veh/h	493	1358		477	1423		485	923	909	950	1499	1471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.8	18.0	0.0	13.8	16.4	0.0	13.4	17.6	17.9	11.5	14.8	15.1
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.1	0.6	0.0	0.1	1.5	1.6	0.2	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.7	0.0	0.5	1.7	0.0	0.3	2.1	2.2	1.2	2.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	19.7	0.0	13.9	17.1	0.0	13.5	19.1	19.5	11.8	15.6	15.9
LnGrp LOS	B	B		B	B		B	B	B	B	B	B
Approach Vol, veh/h		300	A		243	A		493			793	
Approach Delay, s/veh		18.9			16.2			18.8			14.7	
Approach LOS		B			B			B			B	

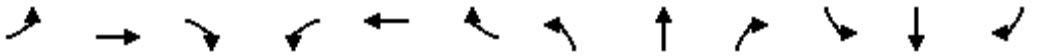
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	17.0	8.0	16.6	7.4	20.8	7.2	17.4
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	21.0	30.5	7.0	40.5	7.0	44.5	5.0	42.5
Max Q Clear Time (g_c+I1), s	6.2	9.1	3.5	9.2	3.1	9.6	2.9	6.7
Green Ext Time (p_c), s	0.2	2.4	0.0	1.6	0.0	3.5	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

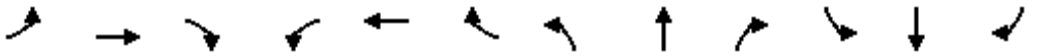
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	856	125	403	1112	8	134	1	188	12	11	8
Future Volume (vph)	7	856	125	403	1112	8	134	1	188	12	11	8
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		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00			1.00	0.99		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1736	3471	1512	1752	3500			1740	1545		1797	
Flt Permitted	0.23	1.00	1.00	0.22	1.00			0.78	1.00		0.88	
Satd. Flow (perm)	427	3471	1512	401	3500			1420	1545		1612	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	8	920	134	433	1196	9	144	1	202	13	12	9
RTOR Reduction (vph)	0	0	55	0	0	0	0	0	28	0	8	0
Lane Group Flow (vph)	8	920	79	433	1205	0	0	145	174	0	26	0
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	64.5	63.5	63.5	93.9	88.9			16.6	43.0		16.6	
Effective Green, g (s)	64.5	65.0	65.0	93.9	90.4			16.6	43.0		16.6	
Actuated g/C Ratio	0.54	0.54	0.54	0.78	0.75			0.14	0.36		0.14	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			4.0	4.0		4.0	
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5			1.5	1.5		1.5	
Lane Grp Cap (vph)	240	1880	819	611	2636			196	605		222	
v/s Ratio Prot	0.00	0.27		c0.16	0.34				0.06			
v/s Ratio Perm	0.02		0.05	c0.40				c0.10	0.05		0.02	
v/c Ratio	0.03	0.49	0.10	0.71	0.46			0.74	0.29		0.12	
Uniform Delay, d1	13.1	17.2	13.3	11.9	5.6			49.6	27.6		45.3	
Progression Factor	1.00	1.00	1.00	0.57	0.72			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	2.5	0.5			11.9	0.1		0.1	
Delay (s)	13.1	18.1	13.5	9.3	4.5			61.5	27.6		45.4	
Level of Service	B	B	B	A	A			E	C		D	
Approach Delay (s)		17.5			5.8			41.8			45.4	
Approach LOS		B			A			D			D	

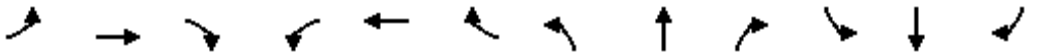
Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	856	125	403	1112	8	134	1	188	12	11	8
Future Volume (veh/h)	7	856	125	403	1112	8	134	1	188	12	11	8
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	1841	1841	1841	1856	1856	1856	1841	1841	1841	1900	1900	1900
Adj Flow Rate, veh/h	8	920	102	433	1196	9	144	1	127	13	12	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	0	0	0
Cap, veh/h	276	2010	877	491	2445	18	219	1	507	50	44	19
Arrive On Green	0.01	0.57	0.57	0.08	0.46	0.46	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1753	3497	1525	1767	3586	27	764	5	1558	41	210	90
Grp Volume(v), veh/h	8	920	102	433	588	617	145	0	127	34	0	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1525	1767	1763	1850	769	0	1558	341	0	0
Q Serve(g_s), s	0.2	18.2	3.7	11.2	28.0	28.0	0.0	0.0	7.2	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.2	3.7	11.2	28.0	28.0	23.3	0.0	7.2	23.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.99		1.00	0.38		0.26
Lane Grp Cap(c), veh/h	276	2010	877	491	1202	1261	220	0	507	112	0	0
V/C Ratio(X)	0.03	0.46	0.12	0.88	0.49	0.49	0.66	0.00	0.25	0.30	0.00	0.00
Avail Cap(c_a), veh/h	341	2010	877	830	1202	1261	220	0	507	112	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.71	0.71	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.0	14.7	11.6	15.8	18.0	18.0	46.8	0.0	29.7	40.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.3	2.2	1.0	1.0	5.7	0.0	0.1	0.6	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	6.8	1.2	5.7	12.2	12.8	4.6	0.0	2.7	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	15.5	11.9	18.0	19.0	18.9	52.5	0.0	29.8	40.6	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	D	A	C	D	A	A
Approach Vol, veh/h		1030			1638			272			34	
Approach Delay, s/veh		15.1			18.7			41.9			40.6	
Approach LOS		B			B			D			D	

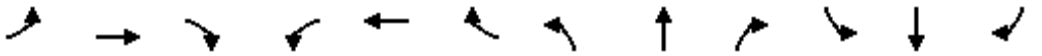
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	73.0		29.0	5.2	85.8		29.0				
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0				
Max Green Setting (Gmax), s	37.0	44.5		25.0	5.6	75.9		25.0				
Max Q Clear Time (g_c+I1), s	13.2	20.2		25.7	2.2	30.0		25.3				
Green Ext Time (p_c), s	0.9	16.5		0.0	0.0	32.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			19.8									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	1025	18	17	1299	27	60	9	45	163	2	162
Future Volume (vph)	42	1025	18	17	1299	27	60	9	45	163	2	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.5	4.0		4.5	4.5		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	1.00		1.00	1.00		1.00	0.88		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3460		1752	3493		1805	1663		1736	1556	
Flt Permitted	0.10	1.00		0.19	1.00		0.64	1.00		0.51	1.00	
Satd. Flow (perm)	189	3460		350	3493		1225	1663		938	1556	
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)	46	1114	20	18	1412	29	65	10	49	177	2	176
RTOR Reduction (vph)	0	1	0	0	1	0	0	45	0	0	144	0
Lane Group Flow (vph)	46	1133	0	18	1440	0	65	14	0	177	34	0
Confl. Peds. (#/hr)	1		2	2		1						
Confl. Bikes (#/hr)			6			4						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	0%	0%	0%	4%	4%	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)	76.9	72.7		73.6	71.3		13.7	9.5		30.0	21.3	
Effective Green, g (s)	76.9	74.2		73.6	72.8		13.7	9.5		31.0	21.3	
Actuated g/C Ratio	0.64	0.62		0.61	0.61		0.11	0.08		0.26	0.18	
Clearance Time (s)	4.0	5.5		4.5	5.5		4.5	4.5		5.0	5.0	
Vehicle Extension (s)	1.5	3.5		3.0	3.5		3.0	3.0		2.0	2.0	
Lane Grp Cap (vph)	175	2139		241	2119		160	131		355	276	
v/s Ratio Prot	c0.01	0.33		0.00	c0.41		0.01	0.01		c0.07	0.02	
v/s Ratio Perm	0.16			0.04			0.03			c0.06		
v/c Ratio	0.26	0.53		0.07	0.68		0.41	0.11		0.50	0.12	
Uniform Delay, d1	12.8	13.0		10.4	15.8		48.8	51.3		36.8	41.5	
Progression Factor	0.57	0.95		0.70	0.62		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.9		0.1	1.6		1.7	0.4		0.4	0.1	
Delay (s)	7.6	13.2		7.3	11.3		50.5	51.7		37.2	41.6	
Level of Service	A	B		A	B		D	D		D	D	
Approach Delay (s)		13.0			11.3			51.1			39.4	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



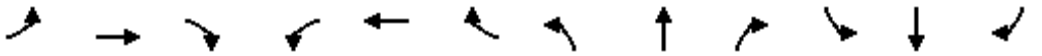
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	1025	18	17	1299	27	60	9	45	163	2	162
Future Volume (veh/h)	42	1025	18	17	1299	27	60	9	45	163	2	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1841	1841	1841	1856	1856	1856	1900	1900	1900	1841	1841	1841
Adj Flow Rate, veh/h	46	1114	20	18	1412	29	65	10	49	177	2	122
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, %	4	4	4	3	3	3	0	0	0	4	4	4
Cap, veh/h	351	2332	42	278	2309	47	202	15	74	302	3	190
Arrive On Green	0.01	0.22	0.21	0.04	1.00	1.00	0.04	0.05	0.05	0.12	0.12	0.13
Sat Flow, veh/h	1753	3513	63	1767	3531	72	1810	280	1373	1753	25	1539
Grp Volume(v), veh/h	46	554	580	18	704	737	65	0	59	177	0	124
Grp Sat Flow(s),veh/h/ln	1753	1749	1827	1767	1763	1840	1810	0	1653	1753	0	1564
Q Serve(g_s), s	1.1	33.2	33.2	0.4	0.0	0.0	4.0	0.0	4.2	10.8	0.0	9.0
Cycle Q Clear(g_c), s	1.1	33.2	33.2	0.4	0.0	0.0	4.0	0.0	4.2	10.8	0.0	9.0
Prop In Lane	1.00		0.03	1.00		0.04	1.00		0.83	1.00		0.98
Lane Grp Cap(c), veh/h	351	1161	1213	278	1153	1204	202	0	89	302	0	193
V/C Ratio(X)	0.13	0.48	0.48	0.06	0.61	0.61	0.32	0.00	0.66	0.59	0.00	0.64
Avail Cap(c_a), veh/h	376	1161	1213	320	1153	1204	202	0	387	432	0	584
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.82	0.82	0.82	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.7	28.7	28.7	11.2	0.0	0.0	50.7	0.0	55.7	43.3	0.0	49.6
Incr Delay (d2), s/veh	0.1	1.2	1.2	0.1	2.0	1.9	0.9	0.0	8.2	0.7	0.0	1.3
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	0.4	15.8	16.5	0.1	0.6	0.6	1.9	0.0	2.0	4.8	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.7	30.0	29.9	11.3	2.0	1.9	51.6	0.0	64.0	43.9	0.0	50.9
LnGrp LOS	A	C	C	B	A	A	D	A	E	D	A	D
Approach Vol, veh/h		1180			1459			124			301	
Approach Delay, s/veh		29.0			2.1			57.5			46.8	
Approach LOS		C			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	83.6	9.8	19.8	7.9	82.5	18.2	11.4
Change Period (Y+Rc), s	4.5	5.5	4.5	5.0	4.0	5.5	5.0	* 5
Max Green Setting (Gmax), s	5.1	45.3	5.3	44.8	5.6	45.3	22.0	* 28
Max Q Clear Time (g_c+I1), s	2.4	35.2	6.0	11.0	3.1	2.0	12.8	6.2
Green Ext Time (p_c), s	0.0	9.4	0.0	0.5	0.0	40.4	0.3	0.2

Intersection Summary	
HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

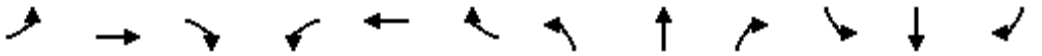
Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	954	212	81	955	129	153	230	160	232	329	235
Future Volume (vph)	66	954	212	81	955	129	153	230	160	232	329	235
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	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	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	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3367	3471	1533	3433	3539	1565	3335	3207		3433	1863	1565
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3367	3471	1533	3433	3539	1565	3335	3207		3433	1863	1565
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	68	984	219	84	985	133	158	237	165	239	339	242
RTOR Reduction (vph)	0	0	90	0	0	55	0	113	0	0	0	43
Lane Group Flow (vph)	68	984	129	84	985	78	158	289	0	239	339	199
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			1			2			1			2
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	6.9	60.2	69.5	5.5	58.8	70.7	9.3	23.4		11.9	26.0	32.9
Effective Green, g (s)	6.9	61.7	69.5	5.5	60.3	70.7	9.3	24.9		11.9	27.5	32.9
Actuated g/C Ratio	0.06	0.51	0.58	0.05	0.50	0.59	0.08	0.21		0.10	0.23	0.27
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	4.0
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	1.5
Lane Grp Cap (vph)	193	1784	887	157	1778	922	258	665		340	426	429
v/s Ratio Prot	0.02	c0.28	0.01	0.02	0.28	0.01	0.05	0.09		c0.07	c0.18	c0.03
v/s Ratio Perm			0.07			0.04						0.10
v/c Ratio	0.35	0.55	0.15	0.54	0.55	0.08	0.61	0.44		0.70	0.80	0.46
Uniform Delay, d1	54.4	19.8	11.6	56.0	20.6	10.7	53.6	41.4		52.3	43.6	36.2
Progression Factor	1.29	0.56	0.17	1.10	0.65	1.83	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	1.1	0.0	1.6	1.1	0.0	3.0	0.2		5.3	9.3	0.3
Delay (s)	70.6	12.1	2.0	63.3	14.4	19.6	56.6	41.6		57.6	52.9	36.5
Level of Service	E	B	A	E	B	B	E	D		E	D	D
Approach Delay (s)		13.5			18.4			45.8			49.4	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	954	212	81	955	129	153	230	160	232	329	235
Future Volume (veh/h)	66	954	212	81	955	129	153	230	160	232	329	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	68	984	157	84	985	92	158	237	144	239	339	149
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	5	5	5	2	2	2
Cap, veh/h	127	1872	906	135	1908	963	221	424	247	312	424	394
Arrive On Green	0.07	1.00	1.00	0.04	0.54	0.52	0.07	0.20	0.19	0.09	0.23	0.21
Sat Flow, veh/h	3401	3497	1539	3456	3554	1563	3374	2097	1222	3456	1870	1561
Grp Volume(v), veh/h	68	984	157	84	985	92	158	194	187	239	339	149
Grp Sat Flow(s),veh/h/ln	1700	1749	1539	1728	1777	1563	1687	1735	1584	1728	1870	1561
Q Serve(g_s), s	2.3	0.0	0.0	2.9	21.3	2.9	5.5	12.1	12.9	8.1	20.5	9.5
Cycle Q Clear(g_c), s	2.3	0.0	0.0	2.9	21.3	2.9	5.5	12.1	12.9	8.1	20.5	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	127	1872	906	135	1908	963	221	351	320	312	424	394
V/C Ratio(X)	0.54	0.53	0.17	0.62	0.52	0.10	0.72	0.55	0.58	0.77	0.80	0.38
Avail Cap(c_a), veh/h	315	1872	906	202	1908	963	309	448	409	403	530	482
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	56.8	17.8	9.5	55.0	43.0	43.9	53.3	43.8	37.1
Incr Delay (d2), s/veh	1.1	0.9	0.4	1.7	1.0	0.2	2.0	0.5	0.6	4.5	5.4	0.2
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	1.0	0.2	0.1	1.3	8.4	1.0	2.3	5.1	5.0	3.6	9.8	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	0.9	0.4	58.5	18.8	9.7	57.0	43.5	44.5	57.9	49.2	37.4
LnGrp LOS	E	A	A	E	B	A	E	D	D	E	D	D
Approach Vol, veh/h		1209			1161			539			727	
Approach Delay, s/veh		3.9			20.9			47.8			49.6	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	68.2	11.9	31.2	8.5	68.4	14.8	28.3
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	7.0	50.5	11.0	32.5	11.1	46.4	14.0	29.5
Max Q Clear Time (g_c+I1), s	4.9	2.0	7.5	22.5	4.3	23.3	10.1	14.9
Green Ext Time (p_c), s	0.1	34.5	0.4	3.2	0.2	18.6	0.7	3.7

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

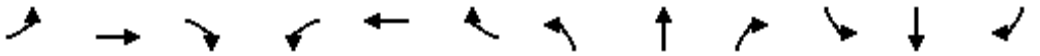
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1325	23	0	1144	0	18
Future Vol, veh/h	1325	23	0	1144	0	18
Conflicting Peds, #/hr	0	2	2	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	2	2	0	0
Mvmt Flow	1410	24	0	1217	0	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	707
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	382
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	381
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

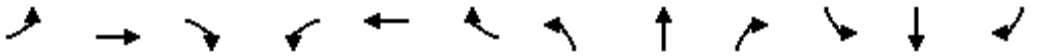
Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	381	-	-	-
HCM Lane V/C Ratio	0.05	-	-	-
HCM Control Delay (s)	14.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	1267	64	58	982	17	146	0	243	17	1	16
Future Volume (vph)	13	1267	64	58	982	17	146	0	243	17	1	16
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		4.5		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)	1735	3471	1530	3400	3494		1717		1520	1767	1579	
Flt Permitted	0.21	1.00	1.00	0.95	1.00		0.75		1.00	0.76	1.00	
Satd. Flow (perm)	376	3471	1530	3400	3494		1348		1520	1408	1579	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	14	1320	67	60	1023	18	152	0	253	18	1	17
RTOR Reduction (vph)	0	0	33	0	1	0	0	0	20	0	11	0
Lane Group Flow (vph)	14	1320	34	60	1040	0	152	0	233	18	7	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	5%	5%	5%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	Prot	NA		Perm		pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2				8		8	4		
Actuated Green, G (s)	61.9	59.9	59.9	6.5	64.4		39.1		45.6	39.1	39.1	
Effective Green, g (s)	62.9	61.4	61.4	7.0	65.9		39.1		46.6	39.6	39.6	
Actuated g/C Ratio	0.52	0.51	0.51	0.06	0.55		0.33		0.39	0.33	0.33	
Clearance Time (s)	4.5	5.5	5.5	4.5	5.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)	2.0	3.5	3.5	2.0	3.5		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	225	1775	782	198	1918		439		640	464	521	
v/s Ratio Prot	0.00	c0.38		0.02	0.30				c0.02		0.00	
v/s Ratio Perm	0.03		0.02				0.11		0.13	0.01		
v/c Ratio	0.06	0.74	0.04	0.30	0.54		0.35		0.36	0.04	0.01	
Uniform Delay, d1	14.7	23.1	14.6	54.2	17.4		30.7		26.2	27.3	27.0	
Progression Factor	0.45	0.86	1.38	1.08	0.69		1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.0	1.6	0.0	0.3	0.3		2.2		0.1	0.2	0.0	
Delay (s)	6.7	21.5	20.2	58.9	12.2		32.9		26.3	27.4	27.1	
Level of Service	A	C	C	E	B		C		C	C	C	
Approach Delay (s)		21.3			14.8			28.8			27.3	
Approach LOS		C			B			C			C	

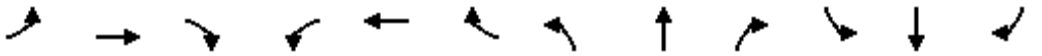
Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1267	64	58	982	17	146	0	243	17	1	16
Future Volume (veh/h)	13	1267	64	58	982	17	146	0	243	17	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		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	1841	1841	1841	1856	1856	1856	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	14	1320	46	60	1023	18	152	0	164	18	1	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	2	2	2
Cap, veh/h	254	1704	749	138	1799	32	557	680	638	515	46	551
Arrive On Green	0.02	0.49	0.49	0.04	0.51	0.50	0.37	0.00	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1753	3497	1538	3428	3545	62	1367	1826	1546	1221	123	1479
Grp Volume(v), veh/h	14	1320	46	60	509	532	152	0	164	18	0	13
Grp Sat Flow(s),veh/h/ln	1753	1749	1538	1714	1763	1844	1367	1826	1546	1221	0	1603
Q Serve(g_s), s	0.5	37.3	1.9	2.1	24.0	24.0	9.6	0.0	8.4	1.1	0.0	0.6
Cycle Q Clear(g_c), s	0.5	37.3	1.9	2.1	24.0	24.0	10.2	0.0	8.4	1.1	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		0.92
Lane Grp Cap(c), veh/h	254	1704	749	138	895	936	557	680	638	515	0	597
V/C Ratio(X)	0.06	0.77	0.06	0.44	0.57	0.57	0.27	0.00	0.26	0.03	0.00	0.02
Avail Cap(c_a), veh/h	300	1778	782	377	1009	1056	557	680	638	515	0	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.84	0.84	0.84	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.2	25.4	16.3	56.3	20.4	20.5	27.4	0.0	23.1	24.0	0.0	24.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.7	0.6	0.6	1.2	0.0	1.0	0.1	0.0	0.1
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	0.2	14.9	0.7	0.9	9.3	9.8	3.3	0.0	3.2	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	27.6	16.3	56.9	21.0	21.0	28.6	0.0	24.1	24.1	0.0	24.0
LnGrp LOS	B	C	B	E	C	C	C	A	C	C	A	C
Approach Vol, veh/h		1380			1101			316			31	
Approach Delay, s/veh		27.1			23.0			26.3			24.1	
Approach LOS		C			C			C			C	

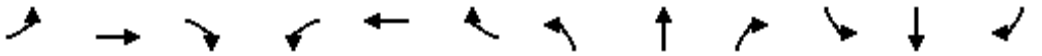
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	62.5		48.7	6.4	64.9		48.7				
Change Period (Y+Rc), s	4.5	5.5		4.5	4.5	5.5		4.5				
Max Green Setting (Gmax), s	12.7	59.5		33.3	5.0	67.2		33.3				
Max Q Clear Time (g_c+I1), s	4.1	39.3		3.1	2.5	26.0		12.2				
Green Ext Time (p_c), s	0.1	17.6		0.1	0.0	25.4		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			25.4									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	1069	418	5	774	39	214	20	15	106	45	67
Future Volume (vph)	31	1069	418	5	774	39	214	20	15	106	45	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.4	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.94		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3471	1520	1719	3410		1770	1732		1736	1649	
Flt Permitted	0.25	1.00	1.00	0.17	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	465	3471	1520	299	3410		1770	1732		1736	1649	
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)	33	1125	440	5	815	41	225	21	16	112	47	71
RTOR Reduction (vph)	0	0	193	0	2	0	0	14	0	0	52	0
Lane Group Flow (vph)	33	1125	247	5	854	0	225	23	0	112	66	0
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)			2			3						
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	73.8	67.2	67.2	62.0	60.9		19.5	14.4		19.3	14.2	
Effective Green, g (s)	73.8	68.7	67.3	62.0	62.4		19.5	14.9		19.3	14.7	
Actuated g/C Ratio	0.61	0.57	0.56	0.52	0.52		0.16	0.12		0.16	0.12	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	364	1987	852	167	1773		287	215		279	202	
v/s Ratio Prot	c0.01	c0.32		0.00	0.25		c0.13	0.01		0.06	c0.04	
v/s Ratio Perm	0.05		0.16	0.02								
v/c Ratio	0.09	0.57	0.29	0.03	0.48		0.78	0.11		0.40	0.33	
Uniform Delay, d1	16.6	16.2	13.8	26.4	18.4		48.2	46.6		45.2	48.1	
Progression Factor	0.49	0.55	0.17	1.00	1.00		1.00	1.00		1.00	1.01	
Incremental Delay, d2	0.1	0.9	0.6	0.1	0.9		13.1	0.2		0.9	1.0	
Delay (s)	8.2	9.9	3.0	26.5	19.4		61.3	46.9		46.1	49.7	
Level of Service	A	A	A	C	B		E	D		D	D	
Approach Delay (s)		7.9			19.4			59.3			47.9	
Approach LOS		A			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1069	418	5	774	39	214	20	15	106	45	67
Future Volume (veh/h)	31	1069	418	5	774	39	214	20	15	106	45	67
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	1841	1841	1841	1826	1826	1826	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	33	1125	377	5	815	20	225	21	11	112	47	66
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, %	4	4	4	5	5	5	2	2	2	4	4	4
Cap, veh/h	641	1319	558	528	1148	28	257	185	97	139	66	92
Arrive On Green	0.59	0.75	0.73	0.25	0.33	0.33	0.14	0.16	0.16	0.08	0.09	0.09
Sat Flow, veh/h	1753	3497	1526	1739	3458	85	1781	1155	605	1753	691	971
Grp Volume(v), veh/h	33	1125	377	5	409	426	225	0	32	112	0	113
Grp Sat Flow(s),veh/h/ln	1753	1749	1526	1739	1735	1808	1781	0	1760	1753	0	1662
Q Serve(g_s), s	0.0	26.6	10.2	0.0	24.7	24.7	14.8	0.0	1.9	7.5	0.0	7.9
Cycle Q Clear(g_c), s	0.0	26.6	10.2	0.0	24.7	24.7	14.8	0.0	1.9	7.5	0.0	7.9
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.34	1.00		0.58
Lane Grp Cap(c), veh/h	641	1319	558	528	576	600	257	0	282	139	0	158
V/C Ratio(X)	0.05	0.85	0.68	0.01	0.71	0.71	0.87	0.00	0.11	0.81	0.00	0.72
Avail Cap(c_a), veh/h	641	1399	592	528	694	723	341	0	515	225	0	381
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	12.5	5.2	25.9	35.0	35.0	50.3	0.0	43.2	54.4	0.0	52.9
Incr Delay (d2), s/veh	0.0	4.7	4.2	0.0	7.3	7.0	17.3	0.0	0.2	10.5	0.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	5.2	3.7	0.1	11.2	11.6	7.8	0.0	0.8	3.7	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	17.2	9.4	25.9	42.3	42.0	67.6	0.0	43.3	64.9	0.0	58.8
LnGrp LOS	B	B	A	C	D	D	E	A	D	E	A	E
Approach Vol, veh/h		1535			840			257			225	
Approach Delay, s/veh		15.2			42.1			64.6			61.8	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.0	49.3	21.3	15.4	39.4	43.8	13.5	23.2
Change Period (Y+Rc), s	4.0	5.5	4.0	4.5	4.0	5.5	4.0	4.5
Max Green Setting (Gmax), s	5.5	46.5	23.0	27.0	5.5	46.5	15.4	34.6
Max Q Clear Time (g_c+I1), s	2.0	28.6	16.8	9.9	2.0	26.7	9.5	3.9
Green Ext Time (p_c), s	0.0	15.2	0.5	0.4	0.0	11.6	0.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	31.2
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	5.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	150	36	100	33	8	177
Future Vol, veh/h	150	36	100	33	8	177
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	82	82	82	82	82	82
Heavy Vehicles, %	5	5	11	11	5	5
Mvmt Flow	183	44	122	40	10	216

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	378	142	0	0	162	0
Stage 1	142	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	618	898	-	-	1399	-
Stage 1	878	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	613	898	-	-	1399	-
Mov Cap-2 Maneuver	613	-	-	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	790	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	653	1399	-
HCM Lane V/C Ratio	-	-	0.347	0.007	-
HCM Control Delay (s)	-	-	13.4	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.6	0	-

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	124	78	126	254	1	69	0	84	1	0	0
Future Vol, veh/h	0	124	78	126	254	1	69	0	84	1	0	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	7	7	7	7	7	7	5	5	5	0	0	0
Mvmt Flow	0	148	93	150	302	1	82	0	100	1	0	0
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	10.2	15.4	10.5	9.2
HCM LOS	B	C	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	45%	0%	33%	100%
Vol Thru, %	0%	61%	67%	0%
Vol Right, %	55%	39%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	202	381	1
LT Vol	69	0	126	1
Through Vol	0	124	254	0
RT Vol	84	78	1	0
Lane Flow Rate	182	240	454	1
Geometry Grp	1	1	1	1
Degree of Util (X)	0.271	0.322	0.612	0.002
Departure Headway (Hd)	5.348	4.821	4.856	6.186
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	665	738	739	582
Service Time	3.441	2.904	2.926	4.186
HCM Lane V/C Ratio	0.274	0.325	0.614	0.002
HCM Control Delay	10.5	10.2	15.4	9.2
HCM Lane LOS	B	B	C	A
HCM 95th-tile Q	1.1	1.4	4.2	0

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	38	0	21	0	418	7	3	757	0
Future Vol, veh/h	0	0	0	38	0	21	0	418	7	3	757	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	110	-	-
Veh in Median Storage, #	-	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, %	5	5	5	2	2	2	4	4	4	4	4	4
Mvmt Flow	0	0	0	43	0	24	0	475	8	3	860	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1104	1350	430	916	1346	243	860	0	0	484	0	0
Stage 1	866	866	-	480	480	-	-	-	-	-	-	-
Stage 2	238	484	-	436	866	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	7.54	6.54	6.94	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.6	5.6	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.52	4.02	3.32	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	162	145	565	227	150	758	765	-	-	1061	-	-
Stage 1	308	362	-	536	553	-	-	-	-	-	-	-
Stage 2	735	543	-	569	369	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	156	144	565	226	149	757	765	-	-	1060	-	-
Mov Cap-2 Maneuver	156	144	-	226	149	-	-	-	-	-	-	-
Stage 1	308	361	-	535	552	-	-	-	-	-	-	-
Stage 2	712	542	-	567	368	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	20.4	0	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	765	-	-	-	301	1060	-	-
HCM Lane V/C Ratio	-	-	-	-	0.223	0.003	-	-
HCM Control Delay (s)	0	-	-	0	20.4	8.4	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.8	0	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	71	12	427	689	2
Future Vol, veh/h	18	71	12	427	689	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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	5	5	4	4	4	4
Mvmt Flow	20	81	14	485	783	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1055	393	785	0	-	0
Stage 1	784	-	-	-	-	-
Stage 2	271	-	-	-	-	-
Critical Hdwy	6.9	7	4.18	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.24	-	-	-
Pot Cap-1 Maneuver	216	598	817	-	-	-
Stage 1	403	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	212	598	817	-	-	-
Mov Cap-2 Maneuver	212	-	-	-	-	-
Stage 1	396	-	-	-	-	-
Stage 2	741	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.7	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	817	-	437	-	-
HCM Lane V/C Ratio	0.017	-	0.231	-	-
HCM Control Delay (s)	9.5	-	15.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

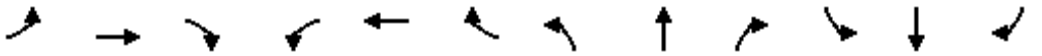
Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1	20	67	0	32	0	433	12	8	604	1
Future Vol, veh/h	18	1	20	67	0	32	0	433	12	8	604	1
Conflicting Peds, #/hr	3	0	1	1	0	3	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	13	13	13	41	41	41	18	18	18	17	17	17
Mvmt Flow	21	1	24	80	0	38	0	515	14	10	719	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1002	1270	362	903	1263	268	721	0	0	529	0	0
Stage 1	741	741	-	522	522	-	-	-	-	-	-	-
Stage 2	261	529	-	381	741	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	8.32	7.32	7.72	4.46	-	-	4.44	-	-
Critical Hdwy Stg 1	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.91	4.41	3.71	2.38	-	-	2.37	-	-
Pot Cap-1 Maneuver	182	153	604	179	123	625	778	-	-	937	-	-
Stage 1	350	395	-	417	442	-	-	-	-	-	-	-
Stage 2	691	499	-	518	338	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	169	151	603	169	122	623	777	-	-	937	-	-
Mov Cap-2 Maneuver	169	151	-	169	122	-	-	-	-	-	-	-
Stage 1	350	390	-	417	442	-	-	-	-	-	-	-
Stage 2	647	499	-	490	334	-	-	-	-	-	-	-

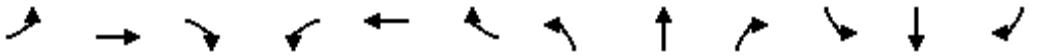
Approach	EB	WB	NB	SB
HCM Control Delay, s	21.3	38.5	0	0.1
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	777	-	-	267	221	937	-	-
HCM Lane V/C Ratio	-	-	-	0.174	0.533	0.01	-	-
HCM Control Delay (s)	0	-	-	21.3	38.5	8.9	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	2.8	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	189	33	155	341	183	16	400	68	99	426	34
Future Volume (vph)	106	189	33	155	341	183	16	400	68	99	426	34
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	4.0	
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	0.98		1.00	0.95		1.00	0.98		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)	1597	1644		1597	1586		1504	2933		1703	3362	
Flt Permitted	0.18	1.00		0.50	1.00		0.41	1.00		0.26	1.00	
Satd. Flow (perm)	300	1644		838	1586		651	2933		468	3362	
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)	119	212	37	174	383	206	18	449	76	111	479	38
RTOR Reduction (vph)	0	6	0	0	18	0	0	12	0	0	5	0
Lane Group Flow (vph)	119	243	0	174	571	0	18	513	0	111	512	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)												4
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	20%	20%	20%	6%	6%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	45.3	38.3		48.1	39.7		27.6	25.9		37.8	31.1	
Effective Green, g (s)	47.3	39.8		50.1	41.2		29.6	27.4		38.8	32.6	
Actuated g/C Ratio	0.47	0.40		0.50	0.41		0.29	0.27		0.39	0.32	
Clearance Time (s)	5.0	5.5		5.0	5.5		5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	244	651		488	650		214	799		277	1090	
v/s Ratio Prot	c0.04	0.15		0.03	c0.36		0.00	c0.18		c0.03	0.15	
v/s Ratio Perm	0.19			0.14			0.02			0.12		
v/c Ratio	0.49	0.37		0.36	0.88		0.08	0.64		0.40	0.47	
Uniform Delay, d1	18.5	21.5		14.5	27.3		25.4	32.2		21.3	27.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.4		0.2	12.9		0.1	1.8		0.3	0.3	
Delay (s)	19.0	21.9		14.7	40.2		25.4	34.0		21.6	27.4	
Level of Service	B	C		B	D		C	C		C	C	
Approach Delay (s)		21.0			34.4			33.7			26.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	189	33	155	341	183	16	400	68	99	426	34
Future Volume (veh/h)	106	189	33	155	341	183	16	400	68	99	426	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
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	1707	1707	1707	1707	1707	1707	1604	1604	1604	1811	1811	1811
Adj Flow Rate, veh/h	119	212	0	174	383	0	18	449	59	111	479	32
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, %	13	13	13	13	13	13	20	20	20	6	6	6
Cap, veh/h	353	472		489	522		309	685	90	351	985	66
Arrive On Green	0.09	0.28	0.00	0.12	0.31	0.00	0.04	0.25	0.23	0.09	0.30	0.28
Sat Flow, veh/h	1626	1707	0	1626	1707	0	1527	2708	354	1725	3268	218
Grp Volume(v), veh/h	119	212	0	174	383	0	18	252	256	111	252	259
Grp Sat Flow(s),veh/h/ln	1626	1707	0	1626	1707	0	1527	1523	1539	1725	1721	1765
Q Serve(g_s), s	3.1	6.2	0.0	4.4	12.1	0.0	0.5	8.9	9.0	2.7	7.2	7.3
Cycle Q Clear(g_c), s	3.1	6.2	0.0	4.4	12.1	0.0	0.5	8.9	9.0	2.7	7.2	7.3
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.23	1.00		0.12
Lane Grp Cap(c), veh/h	353	472		489	522		309	385	389	351	519	532
V/C Ratio(X)	0.34	0.45		0.36	0.73		0.06	0.65	0.66	0.32	0.49	0.49
Avail Cap(c_a), veh/h	423	1529		566	1586		403	809	817	430	970	995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.4	18.0	0.0	13.1	18.7	0.0	15.9	20.2	20.4	14.7	17.2	17.3
Incr Delay (d2), s/veh	0.2	0.7	0.0	0.2	2.0	0.0	0.0	1.9	1.9	0.2	0.7	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	1.0	2.3	0.0	1.5	4.6	0.0	0.2	2.9	3.0	0.9	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	18.7	0.0	13.2	20.8	0.0	15.9	22.0	22.3	14.9	17.9	18.0
LnGrp LOS	B	B		B	C		B	C	C	B	B	B
Approach Vol, veh/h		331	A		557	A		526			622	
Approach Delay, s/veh		17.2			18.4			21.9			17.4	
Approach LOS		B			B			C			B	

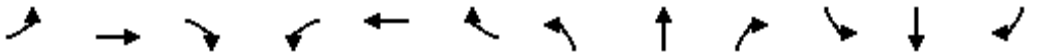
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	19.3	11.1	20.7	6.3	22.2	9.4	22.4
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	7.0	30.5	9.0	52.5	5.0	32.5	7.0	54.5
Max Q Clear Time (g_c+I1), s	4.7	11.0	6.4	8.2	2.5	9.3	5.1	14.1
Green Ext Time (p_c), s	0.0	2.7	0.1	1.3	0.0	2.7	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Notes

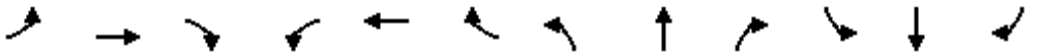
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	974	128	125	677	6	92	3	398	4	0	0
Future Volume (vph)	8	974	128	125	677	6	92	3	398	4	0	0
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		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00			1.00	0.99		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	
Satd. Flow (prot)	1655	3312	1448	1570	3135			1676	1487		1444	
Flt Permitted	0.38	1.00	1.00	0.21	1.00			0.73	1.00		0.58	
Satd. Flow (perm)	659	3312	1448	341	3135			1283	1487		888	
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)	8	1025	135	132	713	6	97	3	419	4	0	0
RTOR Reduction (vph)	0	0	47	0	0	0	0	0	34	0	0	0
Lane Group Flow (vph)	8	1025	88	132	719	0	0	100	385	0	4	0
Confl. Peds. (#/hr)	1					1	1					1
Confl. Bikes (#/hr)			4						2			
Heavy Vehicles (%)	9%	9%	9%	15%	15%	15%	8%	8%	8%	25%	25%	25%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	72.9	71.9	71.9	96.3	91.3			14.2	34.6		14.2	
Effective Green, g (s)	72.9	73.4	73.4	96.3	92.8			14.2	34.6		14.2	
Actuated g/C Ratio	0.61	0.61	0.61	0.80	0.77			0.12	0.29		0.12	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			4.0	4.0		4.0	
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5			1.5	1.5		1.5	
Lane Grp Cap (vph)	408	2025	885	482	2424			151	478		105	
v/s Ratio Prot	0.00	c0.31		0.05	0.23				c0.14			
v/s Ratio Perm	0.01		0.06	0.17				0.08	0.12		0.00	
v/c Ratio	0.02	0.51	0.10	0.27	0.30			0.66	0.81		0.04	
Uniform Delay, d1	9.3	13.1	9.6	4.9	4.0			50.6	39.6		46.9	
Progression Factor	1.00	1.00	1.00	3.43	1.34			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	0.1	0.3			8.2	9.0		0.1	
Delay (s)	9.3	14.0	9.9	16.8	5.6			58.8	48.6		46.9	
Level of Service	A	B	A	B	A			E	D		D	
Approach Delay (s)		13.5			7.4			50.6			46.9	
Approach LOS		B			A			D			D	

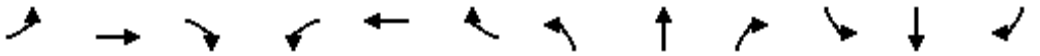
Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	974	128	125	677	6	92	3	398	4	0	0
Future Volume (veh/h)	8	974	128	125	677	6	92	3	398	4	0	0
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		1.00	1.00		0.98	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	1767	1767	1767	1678	1678	1678	1781	1781	1781	1530	1530	1530
Adj Flow Rate, veh/h	8	1025	109	132	713	6	97	3	324	4	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
Percent Heavy Veh, %	9	9	9	15	15	15	8	8	8	25	25	25
Cap, veh/h	514	2165	944	347	2209	19	350	10	380	197	0	0
Arrive On Green	0.01	0.65	0.65	0.09	1.00	1.00	0.21	0.21	0.21	0.21	0.00	0.00
Sat Flow, veh/h	1682	3357	1463	1598	3239	27	1398	48	1486	656	0	0
Grp Volume(v), veh/h	8	1025	109	132	351	368	100	0	324	4	0	0
Grp Sat Flow(s),veh/h/ln	1682	1678	1463	1598	1594	1673	1445	0	1486	656	0	0
Q Serve(g_s), s	0.2	18.7	3.4	3.4	0.0	0.0	0.0	0.0	24.9	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.7	3.4	3.4	0.0	0.0	5.9	0.0	24.9	6.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.97		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	514	2165	944	347	1087	1141	360	0	380	197	0	0
V/C Ratio(X)	0.02	0.47	0.12	0.38	0.32	0.32	0.28	0.00	0.85	0.02	0.00	0.00
Avail Cap(c_a), veh/h	582	2165	944	672	1087	1141	360	0	380	197	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.7	10.9	8.2	8.1	0.0	0.0	40.0	0.0	42.6	42.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.2	0.2	0.7	0.7	0.2	0.0	16.1	0.0	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	6.3	1.0	0.9	0.2	0.2	2.5	0.0	10.8	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	11.6	8.4	8.4	0.7	0.7	40.1	0.0	58.7	42.7	0.0	0.0
LnGrp LOS	A	B	A	A	A	A	D	A	E	D	A	A
Approach Vol, veh/h		1142			851			424			4	
Approach Delay, s/veh		11.3			1.9			54.3			42.7	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	81.4		29.0	5.2	85.8		29.0				
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0				
Max Green Setting (Gmax), s	30.0	51.5		25.0	6.0	75.5		25.0				
Max Q Clear Time (g_c+I1), s	5.4	20.7		8.4	2.2	2.0		26.9				
Green Ext Time (p_c), s	0.2	21.6		0.0	0.0	19.9		0.0				

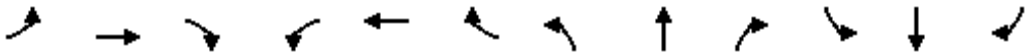
Intersection Summary			
HCM 6th Ctrl Delay		15.6	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	1172	68	62	757	165	15	2	11	54	9	33
Future Volume (vph)	145	1172	68	62	757	165	15	2	11	54	9	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.5	4.0		4.5	4.5		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	0.99		1.00	0.97		1.00	0.87		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3311		1583	3070		1805	1659		1399	1298	
Flt Permitted	0.25	1.00		0.16	1.00		0.73	1.00		0.49	1.00	
Satd. Flow (perm)	440	3311		269	3070		1385	1659		716	1298	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	151	1221	71	65	789	172	16	2	11	56	9	34
RTOR Reduction (vph)	0	2	0	0	8	0	0	10	0	0	30	0
Lane Group Flow (vph)	151	1290	0	65	953	0	16	3	0	56	13	0
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	8%	8%	8%	14%	14%	14%	0%	0%	0%	29%	29%	29%
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)	85.3	78.9		83.0	78.0		8.9	6.9		21.1	14.6	
Effective Green, g (s)	85.3	80.4		83.0	79.5		8.9	6.9		22.1	14.6	
Actuated g/C Ratio	0.71	0.67		0.69	0.66		0.07	0.06		0.18	0.12	
Clearance Time (s)	4.0	5.5		4.5	5.5		4.5	4.5		5.0	5.0	
Vehicle Extension (s)	1.5	3.5		3.0	3.5		3.0	3.0		2.0	2.0	
Lane Grp Cap (vph)	378	2218		240	2033		109	95		192	157	
v/s Ratio Prot	c0.02	c0.39		0.01	0.31		0.00	0.00		c0.03	0.01	
v/s Ratio Perm	0.26			0.18			0.01			c0.03		
v/c Ratio	0.40	0.58		0.27	0.47		0.15	0.03		0.29	0.08	
Uniform Delay, d1	6.5	10.7		7.8	9.9		51.9	53.4		41.7	46.8	
Progression Factor	1.29	0.96		0.88	0.61		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.9		0.5	0.7		0.6	0.1		0.3	0.1	
Delay (s)	8.6	11.2		7.4	6.8		52.5	53.5		42.0	46.8	
Level of Service	A	B		A	A		D	D		D	D	
Approach Delay (s)		11.0			6.8			53.0			44.1	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



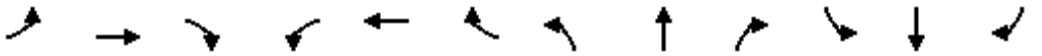
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	1172	68	62	757	165	15	2	11	54	9	33
Future Volume (veh/h)	145	1172	68	62	757	165	15	2	11	54	9	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1781	1781	1781	1693	1693	1693	1900	1900	1900	1470	1470	1470
Adj Flow Rate, veh/h	151	1221	71	65	789	156	16	2	11	56	9	34
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	14	14	14	0	0	0	29	29	29
Cap, veh/h	531	2332	135	391	1909	377	144	10	53	188	21	79
Arrive On Green	0.09	1.00	1.00	0.07	1.00	1.00	0.02	0.04	0.04	0.06	0.08	0.09
Sat Flow, veh/h	1697	3246	189	1612	2666	527	1810	254	1395	1400	269	1018
Grp Volume(v), veh/h	151	636	656	65	476	469	16	0	13	56	0	43
Grp Sat Flow(s),veh/h/ln	1697	1692	1742	1612	1608	1585	1810	0	1649	1400	0	1287
Q Serve(g_s), s	3.1	0.0	0.0	1.3	0.0	0.0	1.0	0.0	0.9	4.4	0.0	3.8
Cycle Q Clear(g_c), s	3.1	0.0	0.0	1.3	0.0	0.0	1.0	0.0	0.9	4.4	0.0	3.8
Prop In Lane	1.00		0.11	1.00		0.33	1.00		0.85	1.00		0.79
Lane Grp Cap(c), veh/h	531	1216	1251	391	1152	1135	144	0	62	188	0	100
V/C Ratio(X)	0.28	0.52	0.52	0.17	0.41	0.41	0.11	0.00	0.21	0.30	0.00	0.43
Avail Cap(c_a), veh/h	575	1216	1251	403	1152	1135	189	0	385	371	0	482
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	0.85	0.85	0.85	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.1	0.0	0.0	4.0	0.0	0.0	54.0	0.0	56.0	48.0	0.0	52.4
Incr Delay (d2), s/veh	0.1	1.2	1.2	0.2	0.9	0.9	0.3	0.0	1.6	0.3	0.0	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	0.8	0.4	0.4	0.3	0.3	0.3	0.5	0.0	0.4	1.5	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.1	1.2	1.2	4.2	0.9	0.9	54.4	0.0	57.6	48.3	0.0	53.5
LnGrp LOS	A	A	A	A	A	A	D	A	E	D	A	D
Approach Vol, veh/h		1443			1010			29			99	
Approach Delay, s/veh		1.5			1.2			55.8			50.6	
Approach LOS		A			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	90.2	6.6	14.3	9.2	89.9	11.3	9.5
Change Period (Y+Rc), s	4.5	5.5	4.5	5.0	4.0	5.5	5.0	* 5
Max Green Setting (Gmax), s	5.3	45.2	5.1	44.9	8.3	42.7	22.0	* 28
Max Q Clear Time (g_c+I1), s	3.3	2.0	3.0	5.8	5.1	2.0	6.4	2.9
Green Ext Time (p_c), s	0.0	38.5	0.0	0.1	0.1	29.8	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.9
HCM 6th LOS	A

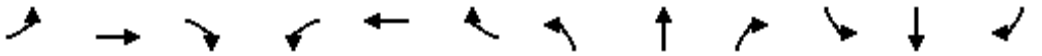
Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	1009	124	127	662	230	243	259	101	185	237	78
Future Volume (vph)	105	1009	124	127	662	230	243	259	101	185	237	78
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	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3127	3223	1423	3072	3167	1402	3155	3115		3072	1667	1403
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3127	3223	1423	3072	3167	1402	3155	3115		3072	1667	1403
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	113	1085	133	137	712	247	261	278	109	199	255	84
RTOR Reduction (vph)	0	0	55	0	0	90	0	36	0	0	0	63
Lane Group Flow (vph)	113	1085	78	137	712	157	261	351	0	199	255	21
Confl. Peds. (#/hr)			2	2			1					1
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	12%	12%	12%	14%	14%	14%	11%	11%	11%	14%	14%	14%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	7.3	57.6	70.2	8.8	59.1	70.4	12.6	23.3		11.3	22.0	29.3
Effective Green, g (s)	7.3	59.1	70.2	8.8	60.6	70.4	12.6	24.8		11.3	23.5	29.3
Actuated g/C Ratio	0.06	0.49	0.59	0.07	0.51	0.59	0.10	0.21		0.09	0.20	0.24
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	4.0
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	1.5
Lane Grp Cap (vph)	190	1587	832	225	1599	822	331	643		289	326	342
v/s Ratio Prot	0.04	c0.34	0.01	c0.04	0.22	0.02	c0.08	0.11		0.06	c0.15	0.00
v/s Ratio Perm			0.04			0.09						0.01
v/c Ratio	0.59	0.68	0.09	0.61	0.45	0.19	0.79	0.55		0.69	0.78	0.06
Uniform Delay, d1	54.9	23.3	10.9	53.9	19.0	11.5	52.4	42.6		52.6	45.8	34.8
Progression Factor	1.14	0.50	0.77	1.05	0.93	2.11	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.9	2.1	0.0	3.0	0.8	0.0	10.9	0.5		5.4	10.7	0.0
Delay (s)	65.7	13.8	8.5	59.5	18.5	24.4	63.3	43.1		58.0	56.5	34.8
Level of Service	E	B	A	E	B	C	E	D		E	E	C
Approach Delay (s)		17.7			25.0			51.2			53.7	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1009	124	127	662	230	243	259	101	185	237	78
Future Volume (veh/h)	105	1009	124	127	662	230	243	259	101	185	237	78
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		0.99	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	1722	1722	1722	1693	1693	1693	1737	1737	1737	1693	1693	1693
Adj Flow Rate, veh/h	113	1085	117	137	712	172	261	278	87	199	255	62
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	14	14	14	11	11	11	14	14	14
Cap, veh/h	160	1683	868	194	1692	846	322	514	158	261	321	326
Arrive On Green	0.10	1.00	1.00	0.02	0.17	0.17	0.10	0.21	0.19	0.08	0.19	0.18
Sat Flow, veh/h	3182	3272	1437	3127	3216	1415	3209	2486	762	3127	1693	1432
Grp Volume(v), veh/h	113	1085	117	137	712	172	261	183	182	199	255	62
Grp Sat Flow(s),veh/h/ln	1591	1636	1437	1564	1608	1415	1605	1650	1598	1564	1693	1432
Q Serve(g_s), s	4.1	0.0	0.0	5.2	23.7	10.5	9.6	11.8	12.3	7.5	17.2	4.2
Cycle Q Clear(g_c), s	4.1	0.0	0.0	5.2	23.7	10.5	9.6	11.8	12.3	7.5	17.2	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	160	1683	868	194	1692	846	322	341	331	261	321	326
V/C Ratio(X)	0.70	0.64	0.13	0.71	0.42	0.20	0.81	0.53	0.55	0.76	0.79	0.19
Avail Cap(c_a), veh/h	186	1683	868	266	1692	846	369	408	396	341	409	400
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	0.0	0.0	57.7	33.3	20.2	52.9	42.4	43.0	53.8	46.4	37.4
Incr Delay (d2), s/veh	5.9	1.6	0.3	2.4	0.8	0.5	9.8	0.5	0.5	4.9	6.2	0.1
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	1.7	0.4	0.1	2.1	10.3	3.8	4.2	4.7	4.8	3.0	7.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.0	1.6	0.3	60.1	34.1	20.8	62.7	42.9	43.5	58.8	52.6	37.5
LnGrp LOS	E	A	A	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		1315			1021			626			516	
Approach Delay, s/veh		6.4			35.3			51.3			53.2	
Approach LOS		A			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	65.7	16.1	26.8	10.1	67.1	14.0	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	10.2	49.5	13.8	27.5	7.0	52.7	13.1	28.2
Max Q Clear Time (g_c+I1), s	7.2	2.0	11.6	19.2	6.1	25.7	9.5	14.3
Green Ext Time (p_c), s	0.3	36.3	0.5	1.8	0.1	17.7	0.5	3.4

Intersection Summary	
HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

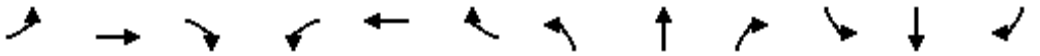
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1252	41	0	1038	0	16
Future Vol, veh/h	1252	41	0	1038	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	10	10	13	13	93	93
Mvmt Flow	1318	43	0	1093	0	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	659
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	8.76
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.23
Pot Cap-1 Maneuver	-	-	0	-	0	246
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	246
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

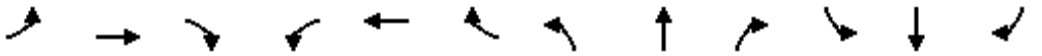
Approach	EB	WB	NB
HCM Control Delay, s	0	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	246	-	-	-
HCM Lane V/C Ratio	0.068	-	-	-
HCM Control Delay (s)	20.7	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1126	137	220	976	11	60	0	89	3	1	2
Future Volume (vph)	5	1126	137	220	976	11	60	0	89	3	1	2
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		4.5		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.99	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	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1449	3127	3217		1337		1187	1538	1462	
Flt Permitted	0.27	1.00	1.00	0.95	1.00		0.76		1.00	0.76	1.00	
Satd. Flow (perm)	471	3282	1449	3127	3217		1064		1187	1226	1462	
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)	5	1198	146	234	1038	12	64	0	95	3	1	2
RTOR Reduction (vph)	0	0	42	0	0	0	0	0	39	0	2	0
Lane Group Flow (vph)	5	1198	104	234	1050	0	64	0	56	3	1	0
Confl. Peds. (#/hr)	2					2			2	2		
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	10%	10%	10%	12%	12%	12%	35%	35%	35%	17%	17%	17%
Turn Type	pm+pt	NA	Perm	Prot	NA		Perm		pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2				8		8	4		
Actuated Green, G (s)	80.8	79.8	79.8	12.9	91.7		12.8		25.7	12.8	12.8	
Effective Green, g (s)	81.8	81.3	81.3	13.4	93.2		12.8		26.7	13.3	13.3	
Actuated g/C Ratio	0.68	0.68	0.68	0.11	0.78		0.11		0.22	0.11	0.11	
Clearance Time (s)	4.5	5.5	5.5	4.5	5.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)	2.0	3.5	3.5	2.0	3.5		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	335	2223	981	349	2498		113		303	135	162	
v/s Ratio Prot	0.00	c0.37		c0.07	0.33				0.02		0.00	
v/s Ratio Perm	0.01		0.07				c0.06		0.03	0.00		
v/c Ratio	0.01	0.54	0.11	0.67	0.42		0.57		0.19	0.02	0.01	
Uniform Delay, d1	6.1	9.8	6.7	51.2	4.4		51.0		37.8	47.6	47.5	
Progression Factor	0.45	0.47	0.21	0.95	0.96		1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.7	0.2	2.8	0.4		3.8		0.1	0.0	0.0	
Delay (s)	2.7	5.3	1.6	51.5	4.6		54.8		37.9	47.6	47.5	
Level of Service	A	A	A	D	A		D		D	D	D	
Approach Delay (s)		4.9			13.2			44.7			47.5	
Approach LOS		A			B			D			D	

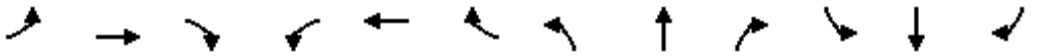
Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1126	137	220	976	11	60	0	89	3	1	2
Future Volume (veh/h)	5	1126	137	220	976	11	60	0	89	3	1	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.99	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	1752	1752	1752	1722	1722	1722	1381	1381	1381	1648	1648	1648
Adj Flow Rate, veh/h	5	1198	119	234	1038	12	64	0	63	3	1	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	10	10	12	12	12	35	35	35	17	17	17
Cap, veh/h	428	2371	1043	303	2640	31	150	128	219	168	45	90
Arrive On Green	0.01	0.71	0.71	0.10	0.80	0.78	0.09	0.00	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1668	3328	1464	3182	3312	38	1037	1381	1163	1173	488	976
Grp Volume(v), veh/h	5	1198	119	234	513	537	64	0	63	3	0	3
Grp Sat Flow(s),veh/h/ln	1668	1664	1464	1591	1636	1714	1037	1381	1163	1173	0	1464
Q Serve(g_s), s	0.1	19.4	3.1	8.6	11.1	11.1	7.2	0.0	5.6	0.3	0.0	0.2
Cycle Q Clear(g_c), s	0.1	19.4	3.1	8.6	11.1	11.1	7.4	0.0	5.6	0.3	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	428	2371	1043	303	1304	1366	150	128	219	168	0	135
V/C Ratio(X)	0.01	0.51	0.11	0.77	0.39	0.39	0.43	0.00	0.29	0.02	0.00	0.02
Avail Cap(c_a), veh/h	487	2371	1043	424	1304	1366	309	340	397	348	0	360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.9	7.8	5.4	53.0	3.6	3.6	53.4	0.0	41.9	49.5	0.0	49.7
Incr Delay (d2), s/veh	0.0	0.8	0.2	2.2	0.6	0.6	0.7	0.0	0.3	0.0	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	0.0	5.9	0.8	3.5	2.6	2.7	1.9	0.0	1.6	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.9	8.5	5.6	55.3	4.2	4.2	54.1	0.0	42.1	49.6	0.0	49.7
LnGrp LOS	A	A	A	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		1322			1284			127			6	
Approach Delay, s/veh		8.3			13.5			48.2			49.6	
Approach LOS		A			B			D			D	

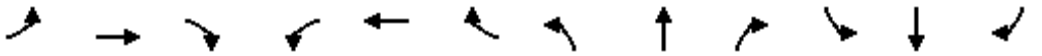
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.4	89.5		15.1	5.3	99.6		15.1				
Change Period (Y+Rc), s	4.5	5.5		4.5	4.5	5.5		4.5				
Max Green Setting (Gmax), s	15.5	61.0		29.0	5.0	71.5		29.0				
Max Q Clear Time (g_c+I1), s	10.6	21.4		2.3	2.1	13.1		9.4				
Green Ext Time (p_c), s	0.3	30.0		0.0	0.0	31.8		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		12.6	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	853	298	20	879	125	309	64	17	27	10	16
Future Volume (vph)	76	853	298	20	879	125	309	64	17	27	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.4	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	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	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1626	3252	1422	1570	3071		1703	1733		1347	1289	
Flt Permitted	0.17	1.00	1.00	0.22	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	288	3252	1422	371	3071		1703	1733		1347	1289	
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)	83	927	324	22	955	136	336	70	18	29	11	17
RTOR Reduction (vph)	0	0	156	0	7	0	0	9	0	0	16	0
Lane Group Flow (vph)	83	927	168	22	1084	0	336	79	0	29	12	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	11%	11%	11%	15%	15%	15%	6%	6%	6%	34%	34%	34%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	67.8	62.3	62.3	68.0	62.4		25.8	28.8		5.3	8.3	
Effective Green, g (s)	67.8	63.8	62.4	68.0	63.9		25.8	29.3		5.3	8.8	
Actuated g/C Ratio	0.56	0.53	0.52	0.57	0.53		0.22	0.24		0.04	0.07	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	224	1728	739	266	1635		366	423		59	94	
v/s Ratio Prot	c0.02	0.29		0.00	c0.35		c0.20	c0.05		0.02	0.01	
v/s Ratio Perm	0.19		0.12	0.04								
v/c Ratio	0.37	0.54	0.23	0.08	0.66		0.92	0.19		0.49	0.13	
Uniform Delay, d1	28.4	18.4	15.7	20.7	20.3		46.1	35.9		56.0	52.0	
Progression Factor	0.45	0.44	0.41	1.00	1.00		1.00	1.00		0.90	1.08	
Incremental Delay, d2	0.9	1.1	0.6	0.1	2.1		27.2	0.2		6.3	0.6	
Delay (s)	13.5	9.1	7.0	20.8	22.4		73.2	36.1		56.5	56.8	
Level of Service	B	A	A	C	C		E	D		E	E	
Approach Delay (s)		8.8			22.4			65.5			56.6	
Approach LOS		A			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	853	298	20	879	125	309	64	17	27	10	16
Future Volume (veh/h)	76	853	298	20	879	125	309	64	17	27	10	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1737	1737	1678	1678	1678	1811	1811	1811	1396	1396	1396
Adj Flow Rate, veh/h	83	927	275	22	955	87	336	70	13	29	11	12
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, %	11	11	11	15	15	15	6	6	6	34	34	34
Cap, veh/h	478	1186	499	489	1079	98	361	349	65	34	31	34
Arrive On Green	0.16	0.24	0.23	0.25	0.37	0.37	0.21	0.24	0.23	0.03	0.05	0.05
Sat Flow, veh/h	1654	3300	1434	1598	2947	268	1725	1485	276	1330	608	663
Grp Volume(v), veh/h	83	927	275	22	516	526	336	0	83	29	0	23
Grp Sat Flow(s),veh/h/ln	1654	1650	1434	1598	1594	1622	1725	0	1761	1330	0	1272
Q Serve(g_s), s	0.0	31.5	11.3	0.0	36.5	36.5	22.9	0.0	4.5	2.6	0.0	2.1
Cycle Q Clear(g_c), s	0.0	31.5	11.3	0.0	36.5	36.5	22.9	0.0	4.5	2.6	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.16	1.00		0.52
Lane Grp Cap(c), veh/h	478	1186	499	489	584	594	361	0	414	34	0	66
V/C Ratio(X)	0.17	0.78	0.55	0.05	0.88	0.88	0.93	0.00	0.20	0.84	0.00	0.35
Avail Cap(c_a), veh/h	478	1238	521	489	594	604	374	0	650	102	0	291
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.6	41.2	11.7	28.4	35.6	35.7	46.6	0.0	36.9	58.2	0.0	55.1
Incr Delay (d2), s/veh	0.1	4.4	3.7	0.0	17.7	17.4	29.0	0.0	0.2	39.4	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	13.8	4.3	0.4	16.3	16.5	12.6	0.0	2.0	1.2	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	45.6	15.4	28.4	53.3	53.1	75.6	0.0	37.1	97.6	0.0	58.3
LnGrp LOS	D	D	B	C	D	D	E	A	D	F	A	E
Approach Vol, veh/h		1285			1064			419			52	
Approach Delay, s/veh		38.6			52.7			67.9			80.2	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.6	47.1	29.1	10.2	32.7	47.9	7.1	32.2
Change Period (Y+Rc), s	4.0	5.5	4.0	4.5	4.0	5.5	4.0	4.5
Max Green Setting (Gmax), s	5.5	43.5	26.0	27.0	5.8	43.2	9.2	43.8
Max Q Clear Time (g_c+I1), s	2.0	33.5	24.9	4.1	2.0	38.5	4.6	6.5
Green Ext Time (p_c), s	0.0	8.1	0.2	0.1	0.1	4.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	49.0
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	4	238	73	30	85
Future Vol, veh/h	10	4	238	73	30	85
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	74	74	74	74	74	74
Heavy Vehicles, %	5	5	10	10	17	17
Mvmt Flow	14	5	322	99	41	115

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	569	372	0	0	421	0
Stage 1	372	-	-	-	-	-
Stage 2	197	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.27	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.353	-
Pot Cap-1 Maneuver	479	667	-	-	1062	-
Stage 1	691	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	459	667	-	-	1062	-
Mov Cap-2 Maneuver	459	-	-	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	795	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	2.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	504	1062	-
HCM Lane V/C Ratio	-	-	0.038	0.038	-
HCM Control Delay (s)	-	-	12.4	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	175	63	55	120	1	92	1	149	2	0	0
Future Vol, veh/h	2	175	63	55	120	1	92	1	149	2	0	0
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, %	20	20	20	9	9	9	14	14	14	0	0	0
Mvmt Flow	3	236	85	74	162	1	124	1	201	3	0	0
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	13.5	11.8	13.4	9.4
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	1%	31%	100%
Vol Thru, %	0%	73%	68%	0%
Vol Right, %	62%	26%	1%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	240	176	2
LT Vol	92	2	55	2
Through Vol	1	175	120	0
RT Vol	149	63	1	0
Lane Flow Rate	327	324	238	3
Geometry Grp	1	1	1	1
Degree of Util (X)	0.488	0.487	0.367	0.005
Departure Headway (Hd)	5.368	5.404	5.556	6.27
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	670	668	647	569
Service Time	3.401	3.437	3.591	4.326
HCM Lane V/C Ratio	0.488	0.485	0.368	0.005
HCM Control Delay	13.4	13.5	11.8	9.4
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	2.7	2.7	1.7	0

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	10	5	0	2	90	469	36	15	485	13
Future Vol, veh/h	4	0	10	5	0	2	90	469	36	15	485	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	110	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	43	43	43	17	17	17	20	20	20
Mvmt Flow	4	0	11	6	0	2	100	521	40	17	539	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1041	1341	277	1045	1328	281	553	0	0	561	0	0
Stage 1	580	580	-	741	741	-	-	-	-	-	-	-
Stage 2	461	761	-	304	587	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	8.36	7.36	7.76	4.44	-	-	4.5	-	-
Critical Hdwy Stg 1	6.6	5.6	-	7.36	6.36	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	7.36	6.36	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.93	4.43	3.73	2.37	-	-	2.4	-	-
Pot Cap-1 Maneuver	180	147	711	136	109	607	916	-	-	892	-	-
Stage 1	460	491	-	294	335	-	-	-	-	-	-	-
Stage 2	542	405	-	578	405	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	162	128	711	121	95	607	916	-	-	892	-	-
Mov Cap-2 Maneuver	162	128	-	121	95	-	-	-	-	-	-	-
Stage 1	410	482	-	262	298	-	-	-	-	-	-	-
Stage 2	481	361	-	558	397	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.4	29.1	1.4	0.3
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	916	-	-	361	157	892	-	-
HCM Lane V/C Ratio	0.109	-	-	0.043	0.05	0.019	-	-
HCM Control Delay (s)	9.4	-	-	15.4	29.1	9.1	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	0	475	501	89
Future Vol, veh/h	0	12	0	475	501	89
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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	17	17	20	20
Mvmt Flow	0	13	0	528	557	99

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	871	328	656	0	-	0
Stage 1	607	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.9	7	4.44	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.37	-	-	-
Pot Cap-1 Maneuver	285	659	833	-	-	-
Stage 1	498	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	285	659	833	-	-	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	498	-	-	-	-	-
Stage 2	747	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	833	-	659	-	-
HCM Lane V/C Ratio	-	-	0.02	-	-
HCM Control Delay (s)	0	-	10.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

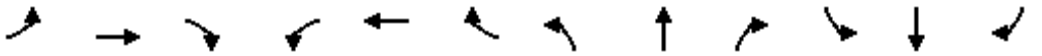
Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	3	60	1	19	18	417	40	45	527	25
Future Vol, veh/h	4	1	3	60	1	19	18	417	40	45	527	25
Conflicting Peds, #/hr	3	0	1	1	0	3	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	13	13	13	41	41	41	18	18	18	17	17	17
Mvmt Flow	5	1	4	71	1	23	21	496	48	54	627	30

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1045	1337	331	985	1328	275	658	0	0	544	0	0
Stage 1	751	751	-	562	562	-	-	-	-	-	-	-
Stage 2	294	586	-	423	766	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	8.32	7.32	7.72	4.46	-	-	4.44	-	-
Critical Hdwy Stg 1	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.91	4.41	3.71	2.38	-	-	2.37	-	-
Pot Cap-1 Maneuver	169	138	634	154	111	618	826	-	-	924	-	-
Stage 1	345	391	-	392	421	-	-	-	-	-	-	-
Stage 2	660	469	-	486	328	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	151	127	633	142	102	616	825	-	-	924	-	-
Mov Cap-2 Maneuver	151	127	-	142	102	-	-	-	-	-	-	-
Stage 1	336	368	-	382	410	-	-	-	-	-	-	-
Stage 2	616	457	-	453	309	-	-	-	-	-	-	-

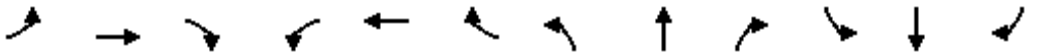
Approach	EB	WB	NB	SB
HCM Control Delay, s	23.4	48.7	0.4	0.7
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	825	-	-	205	173	924	-	-
HCM Lane V/C Ratio	0.026	-	-	0.046	0.551	0.058	-	-
HCM Control Delay (s)	9.5	-	-	23.4	48.7	9.1	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	2.8	0.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	232	104	55	161	40	39	335	66	183	437	82
Future Volume (vph)	34	232	104	55	161	40	39	335	66	183	437	82
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	4.0	
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	0.95		1.00	0.97		1.00	0.98		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)	1597	1603		1597	1627		1504	2923		1702	3314	
Flt Permitted	0.58	1.00		0.29	1.00		0.43	1.00		0.32	1.00	
Satd. Flow (perm)	968	1603		487	1627		684	2923		570	3314	
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)	38	261	117	62	181	45	44	376	74	206	491	92
RTOR Reduction (vph)	0	14	0	0	8	0	0	14	0	0	13	0
Lane Group Flow (vph)	38	364	0	62	218	0	44	436	0	206	570	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	20%	20%	20%	6%	6%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.4	25.8		32.6	27.9		24.8	21.4		38.0	29.6	
Effective Green, g (s)	30.4	27.3		34.6	29.4		26.8	22.9		39.0	31.1	
Actuated g/C Ratio	0.36	0.32		0.41	0.35		0.32	0.27		0.46	0.37	
Clearance Time (s)	5.0	5.5		5.0	5.5		5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	375	517		274	566		259	792		431	1219	
v/s Ratio Prot	0.00	c0.23		c0.02	0.13		0.01	c0.15		c0.07	0.17	
v/s Ratio Perm	0.03			0.08			0.04			0.15		
v/c Ratio	0.10	0.70		0.23	0.39		0.17	0.55		0.48	0.47	
Uniform Delay, d1	17.8	25.1		16.5	20.7		20.3	26.4		14.6	20.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	4.3		0.2	0.4		0.1	0.8		0.3	0.3	
Delay (s)	17.8	29.4		16.6	21.2		20.4	27.2		14.9	20.7	
Level of Service	B	C		B	C		C	C		B	C	
Approach Delay (s)		28.3			20.2			26.6			19.2	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	84.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	232	104	55	161	40	39	335	66	183	437	82
Future Volume (veh/h)	34	232	104	55	161	40	39	335	66	183	437	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1707	1707	1707	1707	1707	1604	1604	1604	1811	1811	1811
Adj Flow Rate, veh/h	38	261	0	62	181	0	44	376	74	206	491	92
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, %	13	13	13	13	13	13	20	20	20	6	6	6
Cap, veh/h	405	408		353	436		353	626	122	464	919	171
Arrive On Green	0.06	0.24	0.00	0.08	0.26	0.00	0.06	0.25	0.22	0.14	0.32	0.29
Sat Flow, veh/h	1626	1707	0	1626	1707	0	1527	2531	493	1725	2883	537
Grp Volume(v), veh/h	38	261	0	62	181	0	44	225	225	206	292	291
Grp Sat Flow(s),veh/h/ln	1626	1707	0	1626	1707	0	1527	1523	1501	1725	1721	1700
Q Serve(g_s), s	0.9	7.3	0.0	1.5	4.7	0.0	1.1	6.9	7.1	4.2	7.4	7.5
Cycle Q Clear(g_c), s	0.9	7.3	0.0	1.5	4.7	0.0	1.1	6.9	7.1	4.2	7.4	7.5
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.33	1.00		0.32
Lane Grp Cap(c), veh/h	405	408		353	436		353	376	371	464	548	542
V/C Ratio(X)	0.09	0.64		0.18	0.42		0.12	0.60	0.61	0.44	0.53	0.54
Avail Cap(c_a), veh/h	494	1357		477	1422		487	923	909	949	1498	1480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.8	18.1	0.0	13.8	16.4	0.0	13.4	17.6	17.9	11.5	14.8	15.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.1	0.6	0.0	0.1	1.5	1.6	0.2	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.7	0.0	0.5	1.7	0.0	0.3	2.1	2.2	1.2	2.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	19.7	0.0	13.9	17.0	0.0	13.5	19.1	19.5	11.8	15.6	15.8
LnGrp LOS	B	B		B	B		B	B	B	B	B	B
Approach Vol, veh/h		299	A		243	A		494			789	
Approach Delay, s/veh		19.0			16.2			18.8			14.7	
Approach LOS		B			B			B			B	

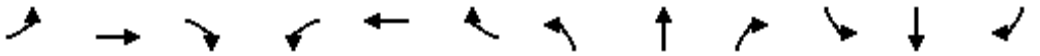
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	17.1	8.0	16.6	7.4	20.8	7.1	17.5
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	21.0	30.5	7.0	40.5	7.0	44.5	5.0	42.5
Max Q Clear Time (g_c+I1), s	6.2	9.1	3.5	9.3	3.1	9.5	2.9	6.7
Green Ext Time (p_c), s	0.2	2.4	0.0	1.6	0.0	3.5	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

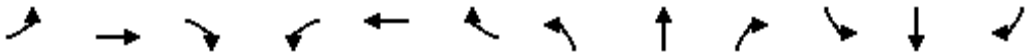
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	856	125	403	1112	8	134	1	188	12	11	8
Future Volume (vph)	7	856	125	403	1112	8	134	1	188	12	11	8
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		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00			1.00	0.99		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1736	3471	1512	1752	3500			1740	1545		1797	
Flt Permitted	0.23	1.00	1.00	0.22	1.00			0.78	1.00		0.88	
Satd. Flow (perm)	427	3471	1512	401	3500			1420	1545		1612	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	8	920	134	433	1196	9	144	1	202	13	12	9
RTOR Reduction (vph)	0	0	55	0	0	0	0	0	28	0	8	0
Lane Group Flow (vph)	8	920	79	433	1205	0	0	145	174	0	26	0
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	64.5	63.5	63.5	93.9	88.9			16.6	43.0		16.6	
Effective Green, g (s)	64.5	65.0	65.0	93.9	90.4			16.6	43.0		16.6	
Actuated g/C Ratio	0.54	0.54	0.54	0.78	0.75			0.14	0.36		0.14	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5			4.0	4.0		4.0	
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5			1.5	1.5		1.5	
Lane Grp Cap (vph)	240	1880	819	611	2636			196	605		222	
v/s Ratio Prot	0.00	0.27		c0.16	0.34				0.06			
v/s Ratio Perm	0.02		0.05	c0.40				c0.10	0.05		0.02	
v/c Ratio	0.03	0.49	0.10	0.71	0.46			0.74	0.29		0.12	
Uniform Delay, d1	13.1	17.2	13.3	11.9	5.6			49.6	27.6		45.3	
Progression Factor	1.00	1.00	1.00	0.72	0.84			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	2.5	0.5			11.9	0.1		0.1	
Delay (s)	13.1	18.1	13.5	11.1	5.2			61.5	27.6		45.4	
Level of Service	B	B	B	B	A			E	C		D	
Approach Delay (s)		17.5			6.7			41.8			45.4	
Approach LOS		B			A			D			D	

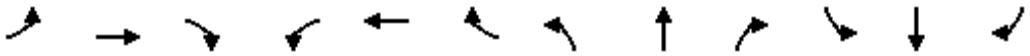
Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	856	125	403	1112	8	134	1	188	12	11	8
Future Volume (veh/h)	7	856	125	403	1112	8	134	1	188	12	11	8
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	1841	1841	1841	1856	1856	1856	1841	1841	1841	1900	1900	1900
Adj Flow Rate, veh/h	8	920	102	433	1196	9	144	1	127	13	12	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	0	0	0
Cap, veh/h	276	2010	877	491	2445	18	219	1	507	50	44	19
Arrive On Green	0.01	0.57	0.57	0.08	0.46	0.46	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1753	3497	1525	1767	3586	27	764	5	1558	41	210	90
Grp Volume(v), veh/h	8	920	102	433	588	617	145	0	127	34	0	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1525	1767	1763	1850	769	0	1558	341	0	0
Q Serve(g_s), s	0.2	18.2	3.7	11.2	28.0	28.0	0.0	0.0	7.2	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.2	3.7	11.2	28.0	28.0	23.3	0.0	7.2	23.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.99		1.00	0.38		0.26
Lane Grp Cap(c), veh/h	276	2010	877	491	1202	1261	220	0	507	112	0	0
V/C Ratio(X)	0.03	0.46	0.12	0.88	0.49	0.49	0.66	0.00	0.25	0.30	0.00	0.00
Avail Cap(c_a), veh/h	341	2010	877	830	1202	1261	220	0	507	112	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.73	0.73	0.73	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.0	14.7	11.6	15.8	18.0	18.0	46.8	0.0	29.7	40.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.3	2.3	1.0	1.0	5.7	0.0	0.1	0.6	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	6.8	1.2	5.7	12.3	12.8	4.6	0.0	2.7	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	15.5	11.9	18.1	19.0	19.0	52.5	0.0	29.8	40.6	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	D	A	C	D	A	A
Approach Vol, veh/h		1030			1638			272			34	
Approach Delay, s/veh		15.1			18.7			41.9			40.6	
Approach LOS		B			B			D			D	

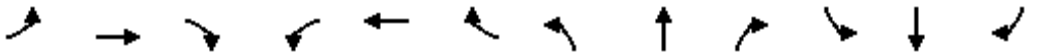
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	73.0		29.0	5.2	85.8		29.0				
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0				
Max Green Setting (Gmax), s	37.0	44.5		25.0	5.6	75.9		25.0				
Max Q Clear Time (g_c+I1), s	13.2	20.2		25.7	2.2	30.0		25.3				
Green Ext Time (p_c), s	0.9	16.5		0.0	0.0	32.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			19.8									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	1026	18	17	1314	23	60	9	45	109	2	147
Future Volume (vph)	41	1026	18	17	1314	23	60	9	45	109	2	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.5	4.0		4.5	4.5		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	1.00		1.00	1.00		1.00	0.88		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3460		1752	3494		1805	1663		1736	1556	
Flt Permitted	0.11	1.00		0.20	1.00		0.65	1.00		0.51	1.00	
Satd. Flow (perm)	200	3460		363	3494		1243	1663		938	1556	
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)	45	1115	20	18	1428	25	65	10	49	118	2	160
RTOR Reduction (vph)	0	1	0	0	1	0	0	45	0	0	136	0
Lane Group Flow (vph)	45	1134	0	18	1452	0	65	14	0	118	26	0
Confl. Peds. (#/hr)	1		2	2		1						
Confl. Bikes (#/hr)			6			4						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	0%	0%	0%	4%	4%	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)	79.9	75.7		76.6	74.3		13.7	9.5		27.0	18.3	
Effective Green, g (s)	79.9	77.2		76.6	75.8		13.7	9.5		28.0	18.3	
Actuated g/C Ratio	0.67	0.64		0.64	0.63		0.11	0.08		0.23	0.15	
Clearance Time (s)	4.0	5.5		4.5	5.5		4.5	4.5		5.0	5.0	
Vehicle Extension (s)	1.5	3.5		3.0	3.5		3.0	3.0		2.0	2.0	
Lane Grp Cap (vph)	186	2225		258	2207		161	131		311	237	
v/s Ratio Prot	c0.01	0.33		0.00	c0.42		0.01	0.01		c0.04	0.02	
v/s Ratio Perm	0.15			0.04			0.03			c0.04		
v/c Ratio	0.24	0.51		0.07	0.66		0.40	0.11		0.38	0.11	
Uniform Delay, d1	11.2	11.4		9.0	13.9		48.8	51.3		37.9	43.8	
Progression Factor	0.52	0.90		0.69	0.63		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.8		0.1	1.4		1.7	0.4		0.3	0.1	
Delay (s)	6.1	11.0		6.4	10.1		50.5	51.7		38.2	43.9	
Level of Service	A	B		A	B		D	D		D	D	
Approach Delay (s)		10.8			10.1			51.1			41.5	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



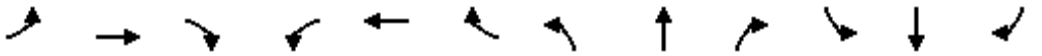
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	1026	18	17	1314	23	60	9	45	109	2	147
Future Volume (veh/h)	41	1026	18	17	1314	23	60	9	45	109	2	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1841	1841	1841	1856	1856	1856	1900	1900	1900	1841	1841	1841
Adj Flow Rate, veh/h	45	1115	20	18	1428	25	65	10	49	118	2	106
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, %	4	4	4	3	3	3	0	0	0	4	4	4
Cap, veh/h	359	2440	44	294	2428	42	173	15	74	248	3	142
Arrive On Green	0.01	0.23	0.23	0.04	1.00	1.00	0.04	0.05	0.05	0.09	0.09	0.10
Sat Flow, veh/h	1753	3513	63	1767	3543	62	1810	280	1373	1753	29	1535
Grp Volume(v), veh/h	45	555	580	18	710	743	65	0	59	118	0	108
Grp Sat Flow(s),veh/h/ln	1753	1749	1827	1767	1763	1843	1810	0	1653	1753	0	1564
Q Serve(g_s), s	0.9	32.8	32.8	0.4	0.0	0.0	4.0	0.0	4.2	7.2	0.0	8.1
Cycle Q Clear(g_c), s	0.9	32.8	32.8	0.4	0.0	0.0	4.0	0.0	4.2	7.2	0.0	8.1
Prop In Lane	1.00		0.03	1.00		0.03	1.00		0.83	1.00		0.98
Lane Grp Cap(c), veh/h	359	1215	1269	294	1208	1263	173	0	89	248	0	145
V/C Ratio(X)	0.13	0.46	0.46	0.06	0.59	0.59	0.38	0.00	0.66	0.48	0.00	0.75
Avail Cap(c_a), veh/h	384	1215	1269	336	1208	1263	173	0	387	432	0	584
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.81	0.81	0.81	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.5	26.8	26.8	9.9	0.0	0.0	50.7	0.0	55.7	44.9	0.0	52.6
Incr Delay (d2), s/veh	0.1	1.1	1.0	0.1	1.7	1.6	1.3	0.0	8.2	0.5	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	15.6	16.3	0.1	0.6	0.6	1.9	0.0	2.0	3.2	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.5	27.9	27.8	10.0	1.7	1.6	52.0	0.0	64.0	45.5	0.0	55.5
LnGrp LOS	A	C	C	A	A	A	D	A	E	D	A	E
Approach Vol, veh/h		1180			1471			124			226	
Approach Delay, s/veh		27.0			1.8			57.7			50.2	
Approach LOS		C			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	87.3	9.8	16.1	7.9	86.2	14.5	11.4
Change Period (Y+Rc), s	4.5	5.5	4.5	5.0	4.0	5.5	5.0	* 5
Max Green Setting (Gmax), s	5.1	45.3	5.3	44.8	5.6	45.3	22.0	* 28
Max Q Clear Time (g_c+I1), s	2.4	34.8	6.0	10.1	2.9	2.0	9.2	6.2
Green Ext Time (p_c), s	0.0	9.7	0.0	0.4	0.0	40.5	0.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

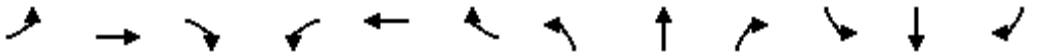
Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	928	184	81	951	129	153	229	160	258	357	250
Future Volume (vph)	67	928	184	81	951	129	153	229	160	258	357	250
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	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	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	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3367	3471	1533	3433	3539	1565	3335	3207		3433	1863	1565
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3367	3471	1533	3433	3539	1565	3335	3207		3433	1863	1565
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	957	190	84	980	133	158	236	165	266	368	258
RTOR Reduction (vph)	0	0	82	0	0	56	0	112	0	0	0	42
Lane Group Flow (vph)	69	957	108	84	980	77	158	289	0	266	368	216
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			1			2			1			2
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	6.9	58.7	68.0	5.5	57.3	69.9	9.3	24.2		12.6	27.5	34.4
Effective Green, g (s)	6.9	60.2	68.0	5.5	58.8	69.9	9.3	25.7		12.6	29.0	34.4
Actuated g/C Ratio	0.06	0.50	0.57	0.05	0.49	0.58	0.08	0.21		0.10	0.24	0.29
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	4.0
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	1.5
Lane Grp Cap (vph)	193	1741	868	157	1734	911	258	686		360	450	448
v/s Ratio Prot	0.02	0.28	0.01	0.02	c0.28	0.01	0.05	0.09		c0.08	c0.20	c0.03
v/s Ratio Perm			0.06			0.04						0.11
v/c Ratio	0.36	0.55	0.12	0.54	0.57	0.09	0.61	0.42		0.74	0.82	0.48
Uniform Delay, d1	54.4	20.6	12.1	56.0	21.6	11.0	53.6	40.7		52.1	43.0	35.4
Progression Factor	1.32	0.59	0.22	1.06	0.66	2.06	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	1.1	0.0	1.6	1.2	0.0	3.0	0.2		6.7	10.5	0.3
Delay (s)	72.4	13.2	2.7	60.8	15.5	22.7	56.6	40.9		58.8	53.5	35.7
Level of Service	E	B	A	E	B	C	E	D		E	D	D
Approach Delay (s)		14.9			19.5			45.3			49.9	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	928	184	81	951	129	153	229	160	258	357	250
Future Volume (veh/h)	67	928	184	81	951	129	153	229	160	258	357	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	69	957	128	84	980	92	158	236	144	266	368	165
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	5	5	5	2	2	2
Cap, veh/h	127	1825	886	135	1860	953	221	436	255	336	449	415
Arrive On Green	0.07	1.00	1.00	0.04	0.52	0.51	0.07	0.21	0.20	0.10	0.24	0.23
Sat Flow, veh/h	3401	3497	1539	3456	3554	1563	3374	2093	1225	3456	1870	1561
Grp Volume(v), veh/h	69	957	128	84	980	92	158	194	186	266	368	165
Grp Sat Flow(s),veh/h/ln	1700	1749	1539	1728	1777	1563	1687	1735	1584	1728	1870	1561
Q Serve(g_s), s	2.3	0.0	0.0	2.9	21.8	2.9	5.5	12.0	12.7	9.0	22.3	10.4
Cycle Q Clear(g_c), s	2.3	0.0	0.0	2.9	21.8	2.9	5.5	12.0	12.7	9.0	22.3	10.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	127	1825	886	135	1860	953	221	361	330	336	449	415
V/C Ratio(X)	0.54	0.52	0.14	0.62	0.53	0.10	0.72	0.54	0.56	0.79	0.82	0.40
Avail Cap(c_a), veh/h	315	1825	886	202	1860	953	309	448	409	403	530	482
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	56.8	18.8	9.8	55.0	42.3	43.2	53.0	43.1	36.2
Incr Delay (d2), s/veh	1.2	0.9	0.3	1.7	1.1	0.2	2.0	0.5	0.6	7.0	7.3	0.2
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	1.0	0.2	0.1	1.3	8.6	1.0	2.3	5.0	4.9	4.2	10.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	0.9	0.3	58.5	19.9	10.0	57.0	42.8	43.7	60.0	50.4	36.4
LnGrp LOS	E	A	A	E	B	A	E	D	D	E	D	D
Approach Vol, veh/h		1154			1156			538			799	
Approach Delay, s/veh		4.1			21.9			47.3			50.7	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	66.6	11.9	32.8	8.5	66.8	15.7	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	7.0	50.5	11.0	32.5	11.1	46.4	14.0	29.5
Max Q Clear Time (g_c+I1), s	4.9	2.0	7.5	24.3	4.3	23.8	11.0	14.7
Green Ext Time (p_c), s	0.1	33.3	0.4	3.0	0.2	18.3	0.7	3.7

Intersection Summary	
HCM 6th Ctrl Delay	26.3
HCM 6th LOS	C

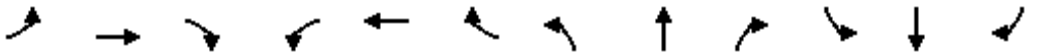
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1325	23	0	1140	0	18
Future Vol, veh/h	1325	23	0	1140	0	18
Conflicting Peds, #/hr	0	2	2	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	2	2	0	0
Mvmt Flow	1410	24	0	1213	0	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	707
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	382
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	381
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

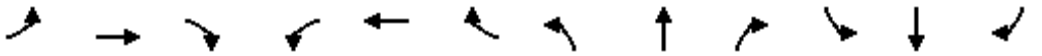
Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	381	-	-	-
HCM Lane V/C Ratio	0.05	-	-	-
HCM Control Delay (s)	14.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	1267	64	58	978	17	146	0	243	17	1	16
Future Volume (vph)	13	1267	64	58	978	17	146	0	243	17	1	16
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		4.5		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)	1735	3471	1530	3400	3494		1717		1520	1767	1579	
Flt Permitted	0.21	1.00	1.00	0.95	1.00		0.75		1.00	0.76	1.00	
Satd. Flow (perm)	379	3471	1530	3400	3494		1348		1520	1408	1579	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	14	1320	67	60	1019	18	152	0	253	18	1	17
RTOR Reduction (vph)	0	0	33	0	1	0	0	0	20	0	11	0
Lane Group Flow (vph)	14	1320	34	60	1036	0	152	0	233	18	7	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	5%	5%	5%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	Prot	NA		Perm		pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases	2		2				8		8	4		
Actuated Green, G (s)	61.9	59.9	59.9	6.5	64.4		39.1		45.6	39.1	39.1	
Effective Green, g (s)	62.9	61.4	61.4	7.0	65.9		39.1		46.6	39.6	39.6	
Actuated g/C Ratio	0.52	0.51	0.51	0.06	0.55		0.33		0.39	0.33	0.33	
Clearance Time (s)	4.5	5.5	5.5	4.5	5.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)	2.0	3.5	3.5	2.0	3.5		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	226	1775	782	198	1918		439		640	464	521	
v/s Ratio Prot	0.00	c0.38		0.02	0.30				c0.02		0.00	
v/s Ratio Perm	0.03		0.02				0.11		0.13	0.01		
v/c Ratio	0.06	0.74	0.04	0.30	0.54		0.35		0.36	0.04	0.01	
Uniform Delay, d1	14.7	23.1	14.6	54.2	17.3		30.7		26.2	27.3	27.0	
Progression Factor	0.45	0.82	1.21	1.09	0.69		1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.0	1.5	0.0	0.3	0.3		2.2		0.1	0.2	0.0	
Delay (s)	6.6	20.6	17.8	59.1	12.2		32.9		26.3	27.4	27.1	
Level of Service	A	C	B	E	B		C		C	C	C	
Approach Delay (s)		20.3			14.8			28.8			27.3	
Approach LOS		C			B			C			C	

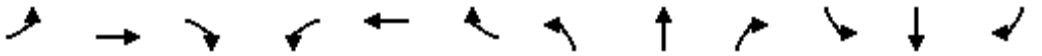
Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1267	64	58	978	17	146	0	243	17	1	16
Future Volume (veh/h)	13	1267	64	58	978	17	146	0	243	17	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		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	1841	1841	1841	1856	1856	1856	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	14	1320	46	60	1019	18	152	0	164	18	1	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	2	2	2
Cap, veh/h	255	1704	749	138	1799	32	557	680	638	515	46	551
Arrive On Green	0.02	0.49	0.49	0.04	0.51	0.50	0.37	0.00	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1753	3497	1538	3428	3544	63	1367	1826	1546	1221	123	1479
Grp Volume(v), veh/h	14	1320	46	60	507	530	152	0	164	18	0	13
Grp Sat Flow(s),veh/h/ln	1753	1749	1538	1714	1763	1844	1367	1826	1546	1221	0	1603
Q Serve(g_s), s	0.5	37.3	1.9	2.1	23.8	23.9	9.6	0.0	8.4	1.1	0.0	0.6
Cycle Q Clear(g_c), s	0.5	37.3	1.9	2.1	23.8	23.9	10.2	0.0	8.4	1.1	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		0.92
Lane Grp Cap(c), veh/h	255	1704	749	138	895	936	557	680	638	515	0	597
V/C Ratio(X)	0.05	0.77	0.06	0.44	0.57	0.57	0.27	0.00	0.26	0.03	0.00	0.02
Avail Cap(c_a), veh/h	301	1778	782	377	1009	1056	557	680	638	515	0	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.2	25.4	16.3	56.3	20.4	20.4	27.4	0.0	23.1	24.0	0.0	24.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.7	0.6	0.6	1.2	0.0	1.0	0.1	0.0	0.1
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	0.2	14.9	0.7	0.9	9.3	9.7	3.3	0.0	3.2	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	27.6	16.3	56.9	21.0	21.0	28.6	0.0	24.1	24.1	0.0	24.0
LnGrp LOS	B	C	B	E	C	C	C	A	C	C	A	C
Approach Vol, veh/h		1380			1097			316			31	
Approach Delay, s/veh		27.1			23.0			26.3			24.1	
Approach LOS		C			C			C			C	

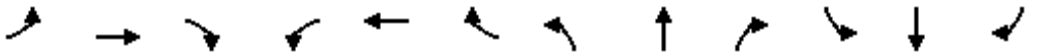
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	62.5		48.7	6.4	64.9		48.7				
Change Period (Y+Rc), s	4.5	5.5		4.5	4.5	5.5		4.5				
Max Green Setting (Gmax), s	12.7	59.5		33.3	5.0	67.2		33.3				
Max Q Clear Time (g_c+I1), s	4.1	39.3		3.1	2.5	25.9		12.2				
Green Ext Time (p_c), s	0.1	17.6		0.1	0.0	25.4		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		25.4	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	1069	418	5	772	41	212	22	15	106	45	67
Future Volume (vph)	31	1069	418	5	772	41	212	22	15	106	45	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.4	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.94		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3471	1520	1719	3408		1770	1739		1736	1649	
Flt Permitted	0.26	1.00	1.00	0.17	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	466	3471	1520	299	3408		1770	1739		1736	1649	
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)	33	1125	440	5	813	43	223	23	16	112	47	71
RTOR Reduction (vph)	0	0	193	0	2	0	0	14	0	0	52	0
Lane Group Flow (vph)	33	1125	247	5	854	0	223	25	0	112	66	0
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)			2			3						
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6								
Actuated Green, G (s)	73.9	67.3	67.3	62.1	61.0		19.4	14.4		19.2	14.2	
Effective Green, g (s)	73.9	68.8	67.4	62.1	62.5		19.4	14.9		19.2	14.7	
Actuated g/C Ratio	0.62	0.57	0.56	0.52	0.52		0.16	0.12		0.16	0.12	
Clearance Time (s)	4.0	5.5	5.5	4.0	5.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	365	1990	853	167	1775		286	215		277	202	
v/s Ratio Prot	c0.01	c0.32		0.00	0.25		c0.13	0.01		0.06	c0.04	
v/s Ratio Perm	0.05		0.16	0.02								
v/c Ratio	0.09	0.57	0.29	0.03	0.48		0.78	0.12		0.40	0.33	
Uniform Delay, d1	16.6	16.2	13.8	26.3	18.4		48.3	46.7		45.3	48.1	
Progression Factor	0.50	0.59	0.21	1.00	1.00		1.00	1.00		1.00	1.01	
Incremental Delay, d2	0.1	0.9	0.6	0.1	0.9		12.6	0.2		1.0	1.0	
Delay (s)	8.4	10.4	3.5	26.4	19.3		60.9	46.9		46.2	49.7	
Level of Service	A	B	A	C	B		E	D		D	D	
Approach Delay (s)		8.5			19.4			58.8			48.0	
Approach LOS		A			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1069	418	5	772	41	212	22	15	106	45	67
Future Volume (veh/h)	31	1069	418	5	772	41	212	22	15	106	45	67
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	1841	1841	1841	1826	1826	1826	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	33	1125	377	5	813	22	223	23	11	112	47	66
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, %	4	4	4	5	5	5	2	2	2	4	4	4
Cap, veh/h	643	1319	558	530	1144	31	255	190	91	139	66	92
Arrive On Green	0.59	0.75	0.73	0.25	0.33	0.33	0.14	0.16	0.16	0.08	0.09	0.09
Sat Flow, veh/h	1753	3497	1526	1739	3448	93	1781	1195	571	1753	691	971
Grp Volume(v), veh/h	33	1125	377	5	409	426	223	0	34	112	0	113
Grp Sat Flow(s),veh/h/ln	1753	1749	1526	1739	1735	1806	1781	0	1766	1753	0	1662
Q Serve(g_s), s	0.0	26.6	10.2	0.0	24.7	24.7	14.7	0.0	2.0	7.5	0.0	7.9
Cycle Q Clear(g_c), s	0.0	26.6	10.2	0.0	24.7	24.7	14.7	0.0	2.0	7.5	0.0	7.9
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.32	1.00		0.58
Lane Grp Cap(c), veh/h	643	1319	558	530	576	600	255	0	281	139	0	158
V/C Ratio(X)	0.05	0.85	0.68	0.01	0.71	0.71	0.87	0.00	0.12	0.81	0.00	0.72
Avail Cap(c_a), veh/h	643	1399	592	530	694	723	341	0	517	225	0	381
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	12.5	5.2	25.8	35.0	35.0	50.3	0.0	43.3	54.4	0.0	52.9
Incr Delay (d2), s/veh	0.0	4.7	4.2	0.0	7.3	7.0	17.0	0.0	0.2	10.5	0.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	5.2	3.7	0.1	11.2	11.6	7.7	0.0	0.9	3.7	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	17.2	9.4	25.8	42.3	42.0	67.4	0.0	43.5	64.9	0.0	58.8
LnGrp LOS	B	B	A	C	D	D	E	A	D	E	A	E
Approach Vol, veh/h		1535			840			257			225	
Approach Delay, s/veh		15.2			42.1			64.2			61.8	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.1	49.3	21.2	15.4	39.6	43.8	13.5	23.1
Change Period (Y+Rc), s	4.0	5.5	4.0	4.5	4.0	5.5	4.0	4.5
Max Green Setting (Gmax), s	5.5	46.5	23.0	27.0	5.5	46.5	15.4	34.6
Max Q Clear Time (g_c+I1), s	2.0	28.6	16.7	9.9	2.0	26.7	9.5	4.0
Green Ext Time (p_c), s	0.0	15.2	0.5	0.4	0.0	11.6	0.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	31.2
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	81	30	106	22	6	177
Future Vol, veh/h	81	30	106	22	6	177
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	82	82	82	82	82	82
Heavy Vehicles, %	5	5	11	11	5	5
Mvmt Flow	99	37	129	27	7	216

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	373	143	0	0	156	0
Stage 1	143	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	622	897	-	-	1406	-
Stage 1	877	-	-	-	-	-
Stage 2	801	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	618	897	-	-	1406	-
Mov Cap-2 Maneuver	618	-	-	-	-	-
Stage 1	877	-	-	-	-	-
Stage 2	796	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	675	1406	-
HCM Lane V/C Ratio	-	-	0.201	0.005	-
HCM Control Delay (s)	-	-	11.7	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	124	78	124	254	1	69	0	84	1	0	0
Future Vol, veh/h	0	124	78	124	254	1	69	0	84	1	0	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	7	7	7	7	7	7	5	5	5	0	0	0
Mvmt Flow	0	148	93	148	302	1	82	0	100	1	0	0
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	10.2	15.3	10.4	9.2
HCM LOS	B	C	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	45%	0%	33%	100%
Vol Thru, %	0%	61%	67%	0%
Vol Right, %	55%	39%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	202	379	1
LT Vol	69	0	124	1
Through Vol	0	124	254	0
RT Vol	84	78	1	0
Lane Flow Rate	182	240	451	1
Geometry Grp	1	1	1	1
Degree of Util (X)	0.27	0.322	0.608	0.002
Departure Headway (Hd)	5.341	4.816	4.853	6.177
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	665	738	740	583
Service Time	3.434	2.898	2.924	4.177
HCM Lane V/C Ratio	0.274	0.325	0.609	0.002
HCM Control Delay	10.4	10.2	15.3	9.2
HCM Lane LOS	B	B	C	A
HCM 95th-tile Q	1.1	1.4	4.2	0

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	0	64	38	0	21	12	406	7	3	762	3
Future Vol, veh/h	24	0	64	38	0	21	12	406	7	3	762	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	110	-	-
Veh in Median Storage, #	-	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, %	5	5	5	2	2	2	4	4	4	4	4	4
Mvmt Flow	27	0	73	43	0	24	14	461	8	3	866	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1133	1372	435	933	1369	236	869	0	0	470	0	0
Stage 1	874	874	-	494	494	-	-	-	-	-	-	-
Stage 2	259	498	-	439	875	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	7.54	6.54	6.94	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.6	5.6	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.52	4.02	3.32	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	154	141	561	221	145	766	759	-	-	1074	-	-
Stage 1	305	359	-	526	545	-	-	-	-	-	-	-
Stage 2	715	535	-	567	365	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	147	138	561	189	142	765	759	-	-	1073	-	-
Mov Cap-2 Maneuver	147	138	-	189	142	-	-	-	-	-	-	-
Stage 1	300	358	-	516	535	-	-	-	-	-	-	-
Stage 2	680	525	-	492	364	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.5	23.8	0.3	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	759	-	-	317	258	1073	-	-
HCM Lane V/C Ratio	0.018	-	-	0.315	0.26	0.003	-	-
HCM Control Delay (s)	9.8	-	-	21.5	23.8	8.4	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.3	1	0	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	76	0	451	692	12
Future Vol, veh/h	0	76	0	451	692	12
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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	5	5	4	4	4	4
Mvmt Flow	0	86	0	513	786	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1050	400	800	0	-	0
Stage 1	793	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Critical Hdwy	6.9	7	4.18	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.24	-	-	-
Pot Cap-1 Maneuver	218	591	806	-	-	-
Stage 1	399	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	218	591	806	-	-	-
Mov Cap-2 Maneuver	218	-	-	-	-	-
Stage 1	399	-	-	-	-	-
Stage 2	753	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	806	-	591	-	-
HCM Lane V/C Ratio	-	-	0.146	-	-
HCM Control Delay (s)	0	-	12.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

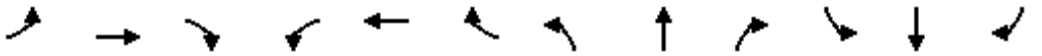
Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1	20	71	0	32	0	439	12	8	613	1
Future Vol, veh/h	18	1	20	71	0	32	0	439	12	8	613	1
Conflicting Peds, #/hr	3	0	1	1	0	3	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	13	13	13	41	41	41	18	18	18	17	17	17
Mvmt Flow	21	1	24	85	0	38	0	523	14	10	730	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1017	1289	368	917	1282	272	732	0	0	537	0	0
Stage 1	752	752	-	530	530	-	-	-	-	-	-	-
Stage 2	265	537	-	387	752	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	8.32	7.32	7.72	4.46	-	-	4.44	-	-
Critical Hdwy Stg 1	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	7.32	6.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.91	4.41	3.71	2.38	-	-	2.37	-	-
Pot Cap-1 Maneuver	177	148	598	175	119	621	770	-	-	930	-	-
Stage 1	345	391	-	412	438	-	-	-	-	-	-	-
Stage 2	687	494	-	513	334	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	164	146	597	165	118	619	769	-	-	930	-	-
Mov Cap-2 Maneuver	164	146	-	165	118	-	-	-	-	-	-	-
Stage 1	345	386	-	412	438	-	-	-	-	-	-	-
Stage 2	643	494	-	485	330	-	-	-	-	-	-	-

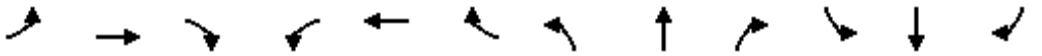
Approach	EB	WB	NB	SB
HCM Control Delay, s	21.8	42.2	0	0.1
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	769	-	-	260	214	930	-	-
HCM Lane V/C Ratio	-	-	-	0.179	0.573	0.01	-	-
HCM Control Delay (s)	0	-	-	21.8	42.2	8.9	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	3.2	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	189	39	155	341	183	16	406	68	99	429	32
Future Volume (vph)	100	189	39	155	341	183	16	406	68	99	429	32
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	4.0	
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	0.97		1.00	0.95		1.00	0.98		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)	1597	1638		1597	1586		1504	2934		1703	3364	
Flt Permitted	0.18	1.00		0.49	1.00		0.41	1.00		0.26	1.00	
Satd. Flow (perm)	302	1638		822	1586		650	2934		461	3364	
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)	112	212	44	174	383	206	18	456	76	111	482	36
RTOR Reduction (vph)	0	7	0	0	18	0	0	11	0	0	4	0
Lane Group Flow (vph)	112	249	0	174	571	0	18	521	0	111	514	0
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)												4
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%	20%	20%	20%	6%	6%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	45.3	38.4		48.3	39.9		27.8	26.1		38.0	31.3	
Effective Green, g (s)	47.3	39.9		50.3	41.4		29.8	27.6		39.0	32.8	
Actuated g/C Ratio	0.47	0.40		0.50	0.41		0.30	0.27		0.39	0.33	
Clearance Time (s)	5.0	5.5		5.0	5.5		5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	243	648		482	651		215	803		275	1094	
v/s Ratio Prot	c0.04	0.15		0.03	c0.36		0.00	c0.18		c0.03	0.15	
v/s Ratio Perm	0.18			0.15			0.02			0.12		
v/c Ratio	0.46	0.38		0.36	0.88		0.08	0.65		0.40	0.47	
Uniform Delay, d1	18.5	21.7		14.5	27.4		25.4	32.3		21.3	27.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.4		0.2	12.8		0.1	1.8		0.4	0.3	
Delay (s)	19.0	22.1		14.7	40.1		25.4	34.1		21.7	27.4	
Level of Service	B	C		B	D		C	C		C	C	
Approach Delay (s)		21.1			34.3			33.9			26.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	189	39	155	341	183	16	406	68	99	429	32
Future Volume (veh/h)	100	189	39	155	341	183	16	406	68	99	429	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
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	1707	1707	1707	1707	1707	1707	1604	1604	1604	1811	1811	1811
Adj Flow Rate, veh/h	112	212	0	174	383	0	18	456	59	111	482	30
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, %	13	13	13	13	13	13	20	20	20	6	6	6
Cap, veh/h	349	467		486	522		311	693	89	351	998	62
Arrive On Green	0.09	0.27	0.00	0.12	0.31	0.00	0.04	0.26	0.23	0.09	0.30	0.28
Sat Flow, veh/h	1626	1707	0	1626	1707	0	1527	2714	349	1725	3284	204
Grp Volume(v), veh/h	112	212	0	174	383	0	18	255	260	111	252	260
Grp Sat Flow(s),veh/h/ln	1626	1707	0	1626	1707	0	1527	1523	1540	1725	1721	1768
Q Serve(g_s), s	2.9	6.2	0.0	4.4	12.1	0.0	0.5	9.0	9.1	2.7	7.2	7.3
Cycle Q Clear(g_c), s	2.9	6.2	0.0	4.4	12.1	0.0	0.5	9.0	9.1	2.7	7.2	7.3
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.23	1.00		0.12
Lane Grp Cap(c), veh/h	349	467		486	522		311	389	393	351	523	537
V/C Ratio(X)	0.32	0.45		0.36	0.73		0.06	0.66	0.66	0.32	0.48	0.48
Avail Cap(c_a), veh/h	423	1529		563	1586		405	809	817	430	970	997
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.6	18.1	0.0	13.2	18.7	0.0	15.7	20.1	20.3	14.6	17.1	17.2
Incr Delay (d2), s/veh	0.2	0.7	0.0	0.2	2.0	0.0	0.0	1.9	1.9	0.2	0.7	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	1.0	2.3	0.0	1.5	4.6	0.0	0.2	2.9	3.0	0.9	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.8	18.8	0.0	13.3	20.7	0.0	15.8	21.9	22.2	14.8	17.8	17.9
LnGrp LOS	B	B		B	C		B	C	C	B	B	B
Approach Vol, veh/h		324	A		557	A		533			623	
Approach Delay, s/veh		17.4			18.4			21.8			17.3	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	19.4	11.2	20.5	6.3	22.3	9.2	22.4
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	7.0	30.5	9.0	52.5	5.0	32.5	7.0	54.5
Max Q Clear Time (g_c+I1), s	4.7	11.1	6.4	8.2	2.5	9.3	4.9	14.1
Green Ext Time (p_c), s	0.0	2.7	0.1	1.3	0.0	2.7	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection: 2: SW Tualatin Sherwood Road & SW Cipole Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	119	276	285	139	225	229	66	47	130	153
Average Queue (ft)	52	87	114	40	69	84	17	10	55	44
95th Queue (ft)	100	206	242	94	173	194	52	35	118	109
Link Distance (ft)		1804	1804		784	784		558		1005
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	360			150			150		175	
Storage Blk Time (%)					2				0	0
Queuing Penalty (veh)					1				0	0

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	87	122	354	365	90	132	137	341	298	121	149	172
Average Queue (ft)	25	47	168	191	29	49	72	128	139	48	57	102
95th Queue (ft)	66	92	286	310	73	104	122	232	246	100	123	163
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			1	0				0				
Queuing Penalty (veh)			1	0				0				

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	R
Maximum Queue (ft)	192	210	140	231	445	73
Average Queue (ft)	90	102	60	92	163	23
95th Queue (ft)	162	189	119	182	315	55
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			2	3	20	
Queuing Penalty (veh)			4	6	36	

Intersection: 7: SW Cipole Road & Project Driveway #3

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	27	10
Average Queue (ft)	3	0
95th Queue (ft)	17	5
Link Distance (ft)	224	1244
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: SW 124th Avenue & SW Cimino Street

Movement	WB	SB
Directions Served	LTR	L
Maximum Queue (ft)	69	38
Average Queue (ft)	12	5
95th Queue (ft)	48	24
Link Distance (ft)	386	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		110
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: SW 124th Avenue & Project Driveway #2

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)

Zone Summary

Zone wide Queuing Penalty: 48

Intersection: 2: SW Tualatin Sherwood Road & SW Cipole Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	63	321	350	51	256	264	114	92	138	125
Average Queue (ft)	21	94	119	10	103	100	53	34	58	60
95th Queue (ft)	51	243	277	37	219	206	99	73	110	107
Link Distance (ft)		1804	1804		784	784		558		1005
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	360			150			150		300	
Storage Blk Time (%)		0			3		0			
Queuing Penalty (veh)		0			1		0			

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	60	76	297	301	77	73	92	285	274	74	141	166
Average Queue (ft)	15	31	121	136	27	24	39	140	139	23	51	85
95th Queue (ft)	44	64	242	262	62	58	75	249	249	56	114	150
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			1	0								
Queuing Penalty (veh)			0	0								

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	R
Maximum Queue (ft)	183	207	131	252	330	141
Average Queue (ft)	91	108	69	95	177	63
95th Queue (ft)	165	191	124	189	285	124
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			1	1	25	
Queuing Penalty (veh)			2	4	52	

Intersection: 7: SW Cipole Road & Project Driveway #3

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	45	10
Average Queue (ft)	20	0
95th Queue (ft)	44	4
Link Distance (ft)	224	1244
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: SW 124th Avenue & SW Cimino Street

Movement	WB	SB
Directions Served	LTR	L
Maximum Queue (ft)	83	10
Average Queue (ft)	33	0
95th Queue (ft)	64	5
Link Distance (ft)	386	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		110
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: SW 124th Avenue & Project Driveway #2

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)

Zone Summary

Zone wide Queuing Penalty: 60

Intersection: 2: SW Tualatin Sherwood Road & SW Cipole Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	132	280	342	157	308	315	64	52	144	137
Average Queue (ft)	63	108	135	50	106	127	17	14	67	49
95th Queue (ft)	118	238	285	114	244	269	48	41	130	107
Link Distance (ft)		1804	1804		784	784		558		1005
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	360			150			150		175	
Storage Blk Time (%)				0	4				0	0
Queuing Penalty (veh)				1	3				0	0

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	106	166	420	427	221	149	174	320	314	159	211	232
Average Queue (ft)	36	58	203	226	32	48	69	157	163	62	92	138
95th Queue (ft)	80	130	351	381	121	111	132	255	263	124	190	215
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			4	2				0				
Queuing Penalty (veh)			4	2				0				

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	R
Maximum Queue (ft)	253	236	179	240	314	78
Average Queue (ft)	106	114	79	99	154	24
95th Queue (ft)	192	205	153	179	262	58
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			3	5	19	
Queuing Penalty (veh)			6	12	35	

Intersection: 7: SW Cipole Road & Project Driveway #3

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	58	9	70
Average Queue (ft)	18	0	10
95th Queue (ft)	46	3	41
Link Distance (ft)	224	1005	1244
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: SW 124th Avenue & SW Cimino Street

Movement	EB	WB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	L	T	TR
Maximum Queue (ft)	50	47	100	34	10	12
Average Queue (ft)	16	7	34	4	1	0
95th Queue (ft)	43	32	73	21	9	7
Link Distance (ft)	175	386			1216	1216
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			105	110		
Storage Blk Time (%)			0			
Queuing Penalty (veh)			0			

Intersection: 10: SW 124th Avenue & Project Driveway #2

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)

Zone Summary

Zone wide Queuing Penalty: 63

Intersection: 2: SW Tualatin Sherwood Road & SW Cipole Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	94	320	349	39	318	307	102	111	187	150
Average Queue (ft)	28	105	132	10	126	117	50	40	101	67
95th Queue (ft)	72	248	287	33	264	252	95	79	173	119
Link Distance (ft)		1804	1804		784	784		558		1005
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	360			150			150		300	
Storage Blk Time (%)		0			5			0		
Queuing Penalty (veh)		0			1			0		

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	81	93	323	325	77	72	88	309	334	77	132	157
Average Queue (ft)	19	39	139	154	31	25	38	160	151	23	43	78
95th Queue (ft)	54	76	264	274	64	60	75	276	273	51	99	137
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			2	0								
Queuing Penalty (veh)			1	0								

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	R
Maximum Queue (ft)	206	239	175	260	394	210
Average Queue (ft)	95	115	85	119	190	77
95th Queue (ft)	173	208	143	228	322	165
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			3	5	24	
Queuing Penalty (veh)			9	18	60	

Intersection: 7: SW Cipole Road & Project Driveway #3

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	86	10
Average Queue (ft)	44	1
95th Queue (ft)	75	7
Link Distance (ft)	224	1244
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: SW 124th Avenue & SW Cimino Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	96	75	41	5
Average Queue (ft)	47	32	6	0
95th Queue (ft)	80	59	26	3
Link Distance (ft)	175	386		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			105	110
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 10: SW 124th Avenue & Project Driveway #2

Movement	SB
Directions Served	T
Maximum Queue (ft)	7
Average Queue (ft)	0
95th Queue (ft)	5
Link Distance (ft)	437
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 89

Intersection: 2: SW Tualatin Sherwood Road & SW Cipole Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	197	404	381	97	435	476	69	47	155	100
Average Queue (ft)	81	115	144	37	134	163	15	13	64	38
95th Queue (ft)	156	280	305	75	304	334	47	38	132	81
Link Distance (ft)		1804	1804		784	784		558		1005
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	360			150			150		175	
Storage Blk Time (%)		1			6				0	
Queuing Penalty (veh)		1			4				0	

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	95	349	410	451	170	110	117	309	333	122	234	275
Average Queue (ft)	28	57	185	210	33	39	59	156	171	50	112	165
95th Queue (ft)	71	150	331	371	105	92	105	262	280	98	217	249
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			3	1				0				
Queuing Penalty (veh)			2	2				0				

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	R
Maximum Queue (ft)	161	215	167	253	339	92
Average Queue (ft)	80	97	72	105	162	25
95th Queue (ft)	150	184	140	203	283	63
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			2	6	21	
Queuing Penalty (veh)			4	14	37	

Intersection: 7: SW Cipole Road & Project Driveway #3

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	50	18	81
Average Queue (ft)	18	1	13
95th Queue (ft)	43	9	48
Link Distance (ft)	224	1005	1244
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: SW 124th Avenue & SW Cimino Street

Movement	WB	NB	SB
Directions Served	LTR	TR	L
Maximum Queue (ft)	65	4	45
Average Queue (ft)	9	0	5
95th Queue (ft)	38	3	26
Link Distance (ft)	386	705	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			110
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: SW 124th Avenue & Project Driveway #2

Movement	EB
Directions Served	LR
Maximum Queue (ft)	44
Average Queue (ft)	10
95th Queue (ft)	34
Link Distance (ft)	149
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 64

Intersection: 2: SW Tualatin Sherwood Road & SW Cipole Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	69	354	346	39	302	290	101	93	262	126
Average Queue (ft)	25	120	141	10	129	127	49	38	119	66
95th Queue (ft)	58	277	314	33	256	246	94	72	205	111
Link Distance (ft)		1804	1804		784	784		558		1005
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	360			150			150		300	
Storage Blk Time (%)		0			5				0	
Queuing Penalty (veh)		0			1				0	

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	60	131	348	365	91	76	85	292	289	65	125	159
Average Queue (ft)	16	39	145	161	35	24	37	151	152	27	41	81
95th Queue (ft)	46	110	274	299	69	58	74	261	263	59	98	142
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			1	0								
Queuing Penalty (veh)			1	1								

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	R
Maximum Queue (ft)	191	229	162	280	439	177
Average Queue (ft)	91	119	79	123	220	70
95th Queue (ft)	164	208	138	255	362	140
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			2	4	31	
Queuing Penalty (veh)			7	14	73	

Intersection: 7: SW Cipole Road & Project Driveway #3

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	108	21
Average Queue (ft)	51	1
95th Queue (ft)	85	10
Link Distance (ft)	224	1244
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: SW 124th Avenue & SW Cimino Street

Movement	WB	SB
Directions Served	LTR	L
Maximum Queue (ft)	70	20
Average Queue (ft)	32	1
95th Queue (ft)	59	10
Link Distance (ft)	386	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		110
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: SW 124th Avenue & Project Driveway #2

Movement	EB	SB
Directions Served	LR	TR
Maximum Queue (ft)	66	10
Average Queue (ft)	33	0
95th Queue (ft)	57	8
Link Distance (ft)	149	437
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 96

Intersection: 2: SW Tualatin Sherwood Road & SW Cipole Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	169	332	361	137	306	319	51	35	168	90
Average Queue (ft)	67	109	137	42	102	123	16	11	71	39
95th Queue (ft)	128	245	281	94	229	256	43	35	149	82
Link Distance (ft)		1804	1804		784	784		558		1005
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	360			150			150		175	
Storage Blk Time (%)		0			3				1	
Queuing Penalty (veh)		0			2				0	

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	114	213	440	452	312	117	148	294	309	155	204	230
Average Queue (ft)	36	54	197	219	36	43	65	156	167	57	93	140
95th Queue (ft)	81	136	353	380	130	93	118	259	268	117	184	212
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			4	1					0			
Queuing Penalty (veh)			4	2					0			

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	R
Maximum Queue (ft)	224	235	174	222	327	82
Average Queue (ft)	104	116	74	92	150	24
95th Queue (ft)	189	199	142	170	261	61
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			2	4	19	
Queuing Penalty (veh)			4	9	34	

Intersection: 7: SW Cipole Road & Project Driveway #3

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	52	17	75
Average Queue (ft)	18	1	17
95th Queue (ft)	47	8	54
Link Distance (ft)	224	1005	1244
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: SW 124th Avenue & SW Cimino Street

Movement	WB	NB	SB
Directions Served	LTR	TR	L
Maximum Queue (ft)	62	11	43
Average Queue (ft)	8	0	5
95th Queue (ft)	37	8	25
Link Distance (ft)	386	705	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			110
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: SW 124th Avenue & Project Driveway #2

Movement	EB	NB	SB
Directions Served	LR	L	T
Maximum Queue (ft)	42	81	15
Average Queue (ft)	12	28	1
95th Queue (ft)	38	69	11
Link Distance (ft)	149		437
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		250	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 55

Intersection: 2: SW Tualatin Sherwood Road & SW Cipole Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	76	320	370	47	330	347	98	88	219	167
Average Queue (ft)	27	120	149	9	134	133	44	36	117	75
95th Queue (ft)	61	286	326	34	261	262	89	69	193	132
Link Distance (ft)		1804	1804		784	784		558		1005
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	360			150			150		300	
Storage Blk Time (%)		0			6					
Queuing Penalty (veh)		0			1					

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	67	84	340	347	77	88	94	296	329	68	151	171
Average Queue (ft)	17	37	131	153	34	24	40	156	153	25	50	81
95th Queue (ft)	45	74	245	269	67	65	78	282	289	56	114	144
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			1	0					0			
Queuing Penalty (veh)			0	0					0			

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	R
Maximum Queue (ft)	195	226	163	279	364	187
Average Queue (ft)	94	115	81	109	192	71
95th Queue (ft)	163	194	134	209	304	142
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			2	4	25	
Queuing Penalty (veh)			5	14	57	

Intersection: 7: SW Cipole Road & Project Driveway #3

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	111	22
Average Queue (ft)	49	1
95th Queue (ft)	81	7
Link Distance (ft)	224	1244
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: SW 124th Avenue & SW Cimino Street

Movement	WB	SB
Directions Served	LTR	L
Maximum Queue (ft)	78	19
Average Queue (ft)	33	1
95th Queue (ft)	59	9
Link Distance (ft)	386	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		110
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: SW 124th Avenue & Project Driveway #2

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	92	29
Average Queue (ft)	37	6
95th Queue (ft)	65	24
Link Distance (ft)	149	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		250
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 79

Intersection: 2: SW Tualatin Sherwood Road & SW Cipole Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	174	291	307	129	337	381	65	47	173	136
Average Queue (ft)	67	103	132	45	114	134	17	11	65	39
95th Queue (ft)	128	231	268	102	255	283	47	36	134	97
Link Distance (ft)		1804	1804		784	784		558		1005
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	360			150			150		175	
Storage Blk Time (%)		0		0	5				0	0
Queuing Penalty (veh)		0		0	3				0	0

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	105	206	383	404	188	98	126	312	344	173	228	268
Average Queue (ft)	42	58	192	208	35	39	57	156	168	57	87	136
95th Queue (ft)	93	136	332	345	112	84	109	267	285	120	187	224
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			3	1					0			
Queuing Penalty (veh)			3	1					0			

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	R
Maximum Queue (ft)	230	225	163	280	366	98
Average Queue (ft)	106	109	83	111	169	25
95th Queue (ft)	187	202	150	208	294	67
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			3	6	22	
Queuing Penalty (veh)			8	14	40	

Intersection: 7: SW Cipole Road & Project Driveway #3

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	46	4	50
Average Queue (ft)	12	0	9
95th Queue (ft)	39	3	33
Link Distance (ft)	224	1005	1244
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: SW 124th Avenue & SW Cimino Street

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	L	L	T
Maximum Queue (ft)	53	62	90	31	15
Average Queue (ft)	13	10	30	6	1
95th Queue (ft)	40	43	71	24	8
Link Distance (ft)	175	386			1216
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			105	110	
Storage Blk Time (%)			0		
Queuing Penalty (veh)			0		

Intersection: 10: SW 124th Avenue & Project Driveway #2

Movement	EB
Directions Served	LR
Maximum Queue (ft)	51
Average Queue (ft)	13
95th Queue (ft)	40
Link Distance (ft)	149
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 71

Intersection: 2: SW Tualatin Sherwood Road & SW Cipole Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	65	291	342	35	320	325	108	119	171	146
Average Queue (ft)	25	97	122	9	122	120	54	35	85	72
95th Queue (ft)	55	244	289	32	247	243	95	80	146	128
Link Distance (ft)		1804	1804		784	784		558		1005
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	360			150			150		300	
Storage Blk Time (%)					6			0		
Queuing Penalty (veh)					1			0		

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	85	159	338	333	122	79	83	301	289	87	143	160
Average Queue (ft)	20	40	142	161	34	22	39	166	165	26	42	78
95th Queue (ft)	59	82	267	292	78	55	74	273	268	62	101	134
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			1	0								
Queuing Penalty (veh)			1	0								

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	R
Maximum Queue (ft)	181	238	172	280	483	192
Average Queue (ft)	91	104	92	132	214	77
95th Queue (ft)	157	196	147	251	365	155
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)					0	
Queuing Penalty (veh)					0	
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			3	6	30	
Queuing Penalty (veh)			11	21	77	

Intersection: 7: SW Cipole Road & Project Driveway #3

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	82	6
Average Queue (ft)	38	0
95th Queue (ft)	63	4
Link Distance (ft)	224	1244
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: SW 124th Avenue & SW Cimino Street

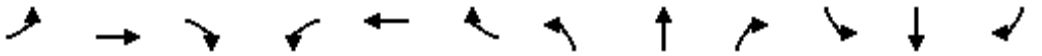
Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	L	L	T
Maximum Queue (ft)	108	74	26	10	5
Average Queue (ft)	45	33	4	0	0
95th Queue (ft)	84	62	20	5	4
Link Distance (ft)	175	386			1216
Upstream Blk Time (%)	0				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)			105	110	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 10: SW 124th Avenue & Project Driveway #2

Movement	EB
Directions Served	LR
Maximum Queue (ft)	91
Average Queue (ft)	34
95th Queue (ft)	63
Link Distance (ft)	149
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

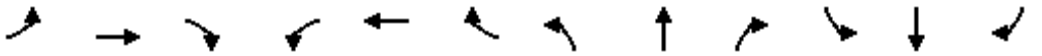
Zone Summary

Zone wide Queuing Penalty: 110



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1007	122	127	635	200	185	229	101	177	228	73
Future Volume (vph)	75	1007	122	127	635	200	185	229	101	177	228	73
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	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	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		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3127	3223	1422	3072	3167	1402	3155	3102		3072	3042	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3127	3223	1422	3072	3167	1402	3155	3102		3072	3042	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	81	1083	131	137	683	215	199	246	109	190	245	78
RTOR Reduction (vph)	0	0	49	0	0	76	0	46	0	0	28	0
Lane Group Flow (vph)	81	1083	82	137	683	139	199	309	0	190	295	0
Confl. Peds. (#/hr)			2	2			1					1
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	12%	12%	12%	14%	14%	14%	11%	11%	11%	14%	14%	14%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	5.7	63.8	74.8	8.6	66.7	77.8	11.0	17.5		11.1	17.6	
Effective Green, g (s)	5.7	65.3	74.8	8.6	68.2	77.8	11.0	19.0		11.1	19.1	
Actuated g/C Ratio	0.05	0.54	0.62	0.07	0.57	0.65	0.09	0.16		0.09	0.16	
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	
Lane Grp Cap (vph)	148	1753	886	220	1799	908	289	491		284	484	
v/s Ratio Prot	0.03	c0.34	0.01	c0.04	c0.22	0.01	c0.06	c0.10		0.06	0.10	
v/s Ratio Perm			0.05			0.09						
v/c Ratio	0.55	0.62	0.09	0.62	0.38	0.15	0.69	0.63		0.67	0.61	
Uniform Delay, d1	55.9	18.8	9.0	54.1	14.3	8.2	52.8	47.2		52.7	47.0	
Progression Factor	1.21	0.42	0.58	1.12	0.91	2.81	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.0	1.5	0.0	3.7	0.6	0.0	5.4	1.8		4.6	1.6	
Delay (s)	69.3	9.4	5.3	64.4	13.6	23.1	58.2	49.0		57.2	48.6	
Level of Service	E	A	A	E	B	C	E	D		E	D	
Approach Delay (s)		12.7			22.3			52.3			51.8	
Approach LOS		B			C			D			D	

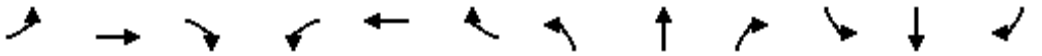
Intersection Summary			
HCM 2000 Control Delay	28.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1007	122	127	635	200	185	229	101	177	228	73
Future Volume (veh/h)	75	1007	122	127	635	200	185	229	101	177	228	73
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		0.99	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	1722	1722	1722	1693	1693	1693	1737	1737	1737	1693	1693	1693
Adj Flow Rate, veh/h	81	1083	115	137	683	140	199	246	87	190	245	56
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	14	14	14	11	11	11	14	14	14
Cap, veh/h	126	1862	920	191	1900	934	263	375	129	252	403	90
Arrive On Green	0.08	1.00	1.00	0.02	0.19	0.19	0.08	0.16	0.14	0.08	0.15	0.14
Sat Flow, veh/h	3182	3272	1437	3127	3216	1415	3209	2407	829	3127	2608	585
Grp Volume(v), veh/h	81	1083	115	137	683	140	199	167	166	190	149	152
Grp Sat Flow(s),veh/h/ln	1591	1636	1437	1564	1608	1415	1605	1650	1586	1564	1608	1586
Q Serve(g_s), s	3.0	0.0	0.0	5.2	22.1	8.0	7.3	11.4	11.9	7.1	10.4	10.8
Cycle Q Clear(g_c), s	3.0	0.0	0.0	5.2	22.1	8.0	7.3	11.4	11.9	7.1	10.4	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		0.37
Lane Grp Cap(c), veh/h	126	1862	920	191	1900	934	263	257	247	252	248	245
V/C Ratio(X)	0.65	0.58	0.13	0.72	0.36	0.15	0.76	0.65	0.67	0.75	0.60	0.62
Avail Cap(c_a), veh/h	194	1862	920	235	1900	934	348	393	378	339	383	378
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	57.8	28.6	16.0	53.9	47.6	48.2	54.0	47.3	47.7
Incr Delay (d2), s/veh	1.7	1.1	0.2	5.4	0.5	0.3	4.4	1.0	1.2	4.1	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.3	0.1	2.2	9.5	2.7	3.0	4.6	4.7	2.9	4.1	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	1.1	0.2	63.1	29.2	16.4	58.3	48.6	49.3	58.1	48.2	48.7
LnGrp LOS	E	A	A	E	C	B	E	D	D	E	D	D
Approach Vol, veh/h		1279			960			532			491	
Approach Delay, s/veh		4.5			32.2			52.5			52.1	
Approach LOS		A			C			D			D	

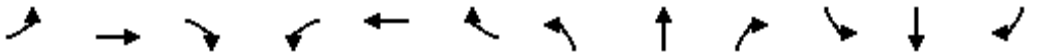
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	72.3	13.8	22.5	8.7	74.9	13.7	22.7
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5
Max Green Setting (Gmax), s	9.0	51.9	13.0	27.1	7.3	53.6	13.0	27.1
Max Q Clear Time (g_c+I1), s	7.2	2.0	9.3	12.8	5.0	24.1	9.1	13.9
Green Ext Time (p_c), s	0.2	37.6	0.6	2.8	0.1	17.9	0.5	3.0

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	905	165	81	950	125	146	225	160	207	301	217
Future Volume (vph)	63	905	165	81	950	125	146	225	160	207	301	217
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	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3367	3471	1533	3433	3539	1565	3335	3204		3433	3295	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3367	3471	1533	3433	3539	1565	3335	3204		3433	3295	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	65	933	170	84	979	129	151	232	165	213	310	224
RTOR Reduction (vph)	0	0	66	0	0	47	0	120	0	0	124	0
Lane Group Flow (vph)	65	933	104	84	979	82	151	277	0	213	410	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			1			2			1			2
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	5.4	64.5	73.6	6.0	65.1	76.6	9.1	19.0		11.5	21.4	
Effective Green, g (s)	5.4	66.0	73.6	6.0	66.6	76.6	9.1	20.5		11.5	22.9	
Actuated g/C Ratio	0.05	0.55	0.61	0.05	0.55	0.64	0.08	0.17		0.10	0.19	
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	
Lane Grp Cap (vph)	151	1909	940	171	1964	998	252	547		328	628	
v/s Ratio Prot	0.02	0.27	0.01	c0.02	c0.28	0.01	0.05	0.09		c0.06	c0.12	
v/s Ratio Perm			0.06			0.04						
v/c Ratio	0.43	0.49	0.11	0.49	0.50	0.08	0.60	0.51		0.65	0.65	
Uniform Delay, d1	55.8	16.6	9.6	55.5	16.4	8.3	53.7	45.2		52.3	44.9	
Progression Factor	1.20	0.69	0.18	1.29	0.52	1.22	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.8	0.0	0.7	0.8	0.0	2.5	0.3		3.3	1.9	
Delay (s)	67.8	12.3	1.7	72.4	9.4	10.2	56.2	45.4		55.6	46.7	
Level of Service	E	B	A	E	A	B	E	D		E	D	
Approach Delay (s)		13.8			13.9			48.4			49.3	
Approach LOS		B			B			D			D	

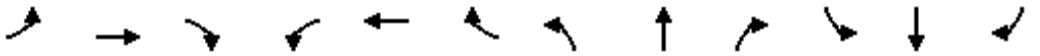
Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	905	165	81	950	125	146	225	160	207	301	217
Future Volume (veh/h)	63	905	165	81	950	125	146	225	160	207	301	217
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	65	933	108	84	979	88	151	232	144	213	310	131
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	5	5	5	2	2	2
Cap, veh/h	125	2002	960	135	2042	1012	214	356	212	291	468	193
Arrive On Green	0.07	1.00	1.00	0.08	1.00	1.00	0.06	0.17	0.16	0.08	0.19	0.18
Sat Flow, veh/h	3401	3497	1539	3456	3554	1563	3374	2079	1236	3456	2440	1007
Grp Volume(v), veh/h	65	933	108	84	979	88	151	192	184	213	224	217
Grp Sat Flow(s),veh/h/ln	1700	1749	1539	1728	1777	1563	1687	1735	1581	1728	1777	1670
Q Serve(g_s), s	2.2	0.0	0.0	2.8	0.0	0.0	5.3	12.4	13.2	7.2	14.0	14.6
Cycle Q Clear(g_c), s	2.2	0.0	0.0	2.8	0.0	0.0	5.3	12.4	13.2	7.2	14.0	14.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.60
Lane Grp Cap(c), veh/h	125	2002	960	135	2042	1012	214	297	270	291	341	320
V/C Ratio(X)	0.52	0.47	0.11	0.62	0.48	0.09	0.71	0.65	0.68	0.73	0.66	0.68
Avail Cap(c_a), veh/h	170	2002	960	230	2042	1012	309	448	408	432	518	487
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	54.4	0.0	0.0	55.1	46.4	47.2	53.6	44.8	45.5
Incr Delay (d2), s/veh	1.1	0.7	0.2	1.7	0.8	0.2	1.6	0.9	1.1	1.3	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.2	0.1	1.2	0.2	0.0	2.2	5.3	5.2	3.1	6.1	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	0.7	0.2	56.2	0.8	0.2	56.7	47.2	48.4	55.0	45.6	46.4
LnGrp LOS	E	A	A	E	A	A	E	D	D	D	D	D
Approach Vol, veh/h		1106			1151			527			654	
Approach Delay, s/veh		3.9			4.8			50.3			48.9	
Approach LOS		A			A			D			D	

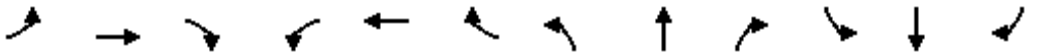
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	72.7	11.6	27.0	8.4	72.9	14.1	24.5
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5
Max Green Setting (Gmax), s	8.0	48.5	11.0	33.5	6.0	50.5	15.0	29.5
Max Q Clear Time (g_c+I1), s	4.8	2.0	7.3	16.6	4.2	2.0	9.2	15.2
Green Ext Time (p_c), s	0.2	31.3	0.4	4.7	0.1	33.3	0.9	3.6

Intersection Summary	
HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	1011	127	127	676	244	228	273	101	183	234	77
Future Volume (vph)	105	1011	127	127	676	244	228	273	101	183	234	77
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	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	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		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3127	3223	1423	3072	3167	1402	3155	3120		3072	3039	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3127	3223	1423	3072	3167	1402	3155	3120		3072	3039	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	113	1087	137	137	727	262	245	294	109	197	252	83
RTOR Reduction (vph)	0	0	53	0	0	83	0	35	0	0	29	0
Lane Group Flow (vph)	113	1087	84	137	727	179	245	368	0	197	306	0
Confl. Peds. (#/hr)			2	2			1					1
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	12%	12%	12%	14%	14%	14%	11%	11%	11%	14%	14%	14%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	7.8	61.6	73.9	8.7	62.5	73.5	12.3	19.7		11.0	18.4	
Effective Green, g (s)	7.8	63.1	73.9	8.7	64.0	73.5	12.3	21.2		11.0	19.9	
Actuated g/C Ratio	0.06	0.53	0.62	0.07	0.53	0.61	0.10	0.18		0.09	0.17	
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	
Lane Grp Cap (vph)	203	1694	876	222	1689	858	323	551		281	503	
v/s Ratio Prot	0.04	c0.34	0.01	c0.04	0.23	0.02	c0.08	c0.12		0.06	0.10	
v/s Ratio Perm			0.05			0.11						
v/c Ratio	0.56	0.64	0.10	0.62	0.43	0.21	0.76	0.67		0.70	0.61	
Uniform Delay, d1	54.4	20.4	9.4	54.0	17.0	10.3	52.4	46.1		52.9	46.4	
Progression Factor	1.19	0.47	0.57	1.16	0.84	1.80	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	1.6	0.0	3.3	0.8	0.0	8.7	2.4		6.3	1.4	
Delay (s)	66.1	11.1	5.4	65.9	15.0	18.6	61.2	48.5		59.2	47.9	
Level of Service	E	B	A	E	B	B	E	D		E	D	
Approach Delay (s)		15.2			22.0			53.3			52.1	
Approach LOS		B			C			D			D	

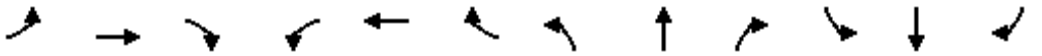
Intersection Summary				
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	61.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1011	127	127	676	244	228	273	101	183	234	77
Future Volume (veh/h)	105	1011	127	127	676	244	228	273	101	183	234	77
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		0.99	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	1722	1722	1722	1693	1693	1693	1737	1737	1737	1693	1693	1693
Adj Flow Rate, veh/h	113	1087	121	137	727	187	245	294	87	197	252	61
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	14	14	14	11	11	11	14	14	14
Cap, veh/h	163	1802	914	192	1804	894	309	435	126	257	407	97
Arrive On Green	0.10	1.00	1.00	0.02	0.19	0.18	0.10	0.17	0.16	0.08	0.16	0.15
Sat Flow, veh/h	3182	3272	1437	3127	3216	1415	3209	2521	732	3127	2577	612
Grp Volume(v), veh/h	113	1087	121	137	727	187	245	190	191	197	155	158
Grp Sat Flow(s),veh/h/ln	1591	1636	1437	1564	1608	1415	1605	1650	1604	1564	1608	1581
Q Serve(g_s), s	4.1	0.0	0.0	5.2	23.9	11.1	9.0	13.0	13.4	7.4	10.8	11.2
Cycle Q Clear(g_c), s	4.1	0.0	0.0	5.2	23.9	11.1	9.0	13.0	13.4	7.4	10.8	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.39
Lane Grp Cap(c), veh/h	163	1802	914	192	1804	894	309	284	276	257	254	250
V/C Ratio(X)	0.69	0.60	0.13	0.71	0.40	0.21	0.79	0.67	0.69	0.77	0.61	0.63
Avail Cap(c_a), veh/h	217	1802	914	242	1804	894	374	419	408	326	389	382
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	0.0	0.0	57.7	31.2	18.6	53.0	46.5	47.0	53.9	47.1	47.5
Incr Delay (d2), s/veh	2.4	1.3	0.2	4.5	0.7	0.5	7.5	1.0	1.2	5.9	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.3	0.1	2.2	10.4	4.0	3.8	5.3	5.3	3.1	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.4	1.3	0.2	62.3	31.9	19.1	60.5	47.5	48.1	59.9	48.0	48.5
LnGrp LOS	E	A	A	E	C	B	E	D	D	E	D	D
Approach Vol, veh/h		1321			1051			626			510	
Approach Delay, s/veh		5.8			33.6			52.8			52.7	
Approach LOS		A			C			D			D	

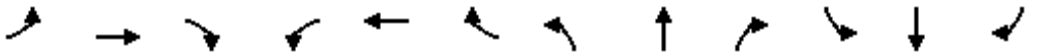
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	70.1	15.6	23.0	10.1	71.3	13.9	24.7
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5
Max Green Setting (Gmax), s	9.3	50.2	14.0	27.5	8.2	51.3	12.5	29.0
Max Q Clear Time (g_c+I1), s	7.2	2.0	11.0	13.2	6.1	25.9	9.4	15.4
Green Ext Time (p_c), s	0.2	36.8	0.6	2.9	0.2	17.3	0.5	3.5

Intersection Summary	
HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	941	202	81	953	131	151	231	160	245	339	242
Future Volume (vph)	67	941	202	81	953	131	151	231	160	245	339	242
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	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3367	3471	1533	3433	3539	1565	3335	3208		3433	3297	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3367	3471	1533	3433	3539	1565	3335	3208		3433	3297	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	970	208	84	982	135	156	238	165	253	349	249
RTOR Reduction (vph)	0	0	84	0	0	51	0	117	0	0	121	0
Lane Group Flow (vph)	69	970	124	84	982	84	156	286	0	253	477	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			1			2			1			2
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	5.5	62.1	71.4	5.9	62.5	74.9	9.3	20.6		12.4	23.7	
Effective Green, g (s)	5.5	63.6	71.4	5.9	64.0	74.9	9.3	22.1		12.4	25.2	
Actuated g/C Ratio	0.05	0.53	0.60	0.05	0.53	0.62	0.08	0.18		0.10	0.21	
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	
Lane Grp Cap (vph)	154	1839	912	168	1887	976	258	590		354	692	
v/s Ratio Prot	0.02	c0.28	0.01	c0.02	0.28	0.01	0.05	0.09		c0.07	c0.14	
v/s Ratio Perm			0.07			0.04						
v/c Ratio	0.45	0.53	0.14	0.50	0.52	0.09	0.60	0.49		0.71	0.69	
Uniform Delay, d1	55.8	18.4	10.7	55.6	18.1	9.0	53.6	43.9		52.1	43.8	
Progression Factor	1.26	0.55	0.13	1.17	0.64	1.54	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	1.0	0.0	0.8	0.9	0.0	2.7	0.2		5.6	2.3	
Delay (s)	71.0	11.0	1.4	65.6	12.5	13.8	56.3	44.1		57.7	46.1	
Level of Service	E	B	A	E	B	B	E	D		E	D	
Approach Delay (s)		12.7			16.4			47.5			49.5	
Approach LOS		B			B			D			D	

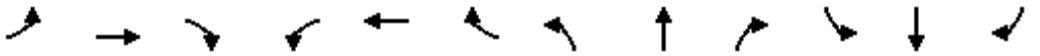
Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	941	202	81	953	131	151	231	160	245	339	242
Future Volume (veh/h)	67	941	202	81	953	131	151	231	160	245	339	242
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	69	970	146	84	982	94	156	238	144	253	349	156
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	5	5	5	2	2	2
Cap, veh/h	127	1931	932	135	1968	996	219	379	220	327	503	221
Arrive On Green	0.07	1.00	1.00	0.04	0.55	0.54	0.06	0.18	0.17	0.09	0.21	0.20
Sat Flow, veh/h	3401	3497	1539	3456	3554	1563	3374	2100	1219	3456	2391	1048
Grp Volume(v), veh/h	69	970	146	84	982	94	156	195	187	253	258	247
Grp Sat Flow(s),veh/h/ln	1700	1749	1539	1728	1777	1563	1687	1735	1584	1728	1777	1662
Q Serve(g_s), s	2.3	0.0	0.0	2.9	20.4	2.8	5.4	12.4	13.2	8.6	16.1	16.6
Cycle Q Clear(g_c), s	2.3	0.0	0.0	2.9	20.4	2.8	5.4	12.4	13.2	8.6	16.1	16.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		0.63
Lane Grp Cap(c), veh/h	127	1931	932	135	1968	996	219	313	286	327	374	350
V/C Ratio(X)	0.54	0.50	0.16	0.62	0.50	0.09	0.71	0.62	0.65	0.77	0.69	0.71
Avail Cap(c_a), veh/h	323	1931	932	202	1968	996	309	455	416	418	518	485
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	56.8	16.5	8.5	55.0	45.4	46.2	53.1	43.8	44.4
Incr Delay (d2), s/veh	1.1	0.8	0.3	1.7	0.9	0.2	1.8	0.8	0.9	4.9	0.9	1.2
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	1.0	0.2	0.1	1.3	7.9	0.9	2.3	5.3	5.2	3.9	7.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	0.8	0.3	58.5	17.4	8.6	56.8	46.1	47.2	58.0	44.6	45.6
LnGrp LOS	E	A	A	E	B	A	E	D	D	E	D	D
Approach Vol, veh/h		1185			1160			538			758	
Approach Delay, s/veh		3.9			19.7			49.6			49.4	
Approach LOS		A			B			D			D	

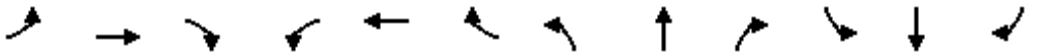
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	70.3	11.8	29.2	8.5	70.5	15.4	25.7
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5
Max Green Setting (Gmax), s	7.0	49.5	11.0	33.5	11.4	45.1	14.5	30.0
Max Q Clear Time (g_c+I1), s	4.9	2.0	7.4	18.6	4.3	22.4	10.6	15.2
Green Ext Time (p_c), s	0.1	33.4	0.4	5.0	0.2	18.3	0.8	3.7

Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1013	128	127	691	200	273	229	101	181	233	76
Future Volume (vph)	75	1013	128	127	691	200	273	229	101	181	233	76
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	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	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		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3127	3223	1423	3072	3167	1402	3155	3102		3072	3040	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3127	3223	1423	3072	3167	1402	3155	3102		3072	3040	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	81	1089	138	137	743	215	294	246	109	195	251	82
RTOR Reduction (vph)	0	0	52	0	0	82	0	47	0	0	29	0
Lane Group Flow (vph)	81	1089	86	137	743	133	294	308	0	195	304	0
Confl. Peds. (#/hr)			2	2			1					1
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	12%	12%	12%	14%	14%	14%	11%	11%	11%	14%	14%	14%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	5.5	60.3	74.8	8.6	63.4	74.3	14.5	21.2		10.9	17.6	
Effective Green, g (s)	5.5	61.8	74.8	8.6	64.9	74.3	14.5	22.7		10.9	19.1	
Actuated g/C Ratio	0.05	0.51	0.62	0.07	0.54	0.62	0.12	0.19		0.09	0.16	
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	
Lane Grp Cap (vph)	143	1659	887	220	1712	868	381	586		279	483	
v/s Ratio Prot	0.03	c0.34	0.01	c0.04	c0.23	0.01	c0.09	c0.10		0.06	c0.10	
v/s Ratio Perm			0.05			0.08						
v/c Ratio	0.57	0.66	0.10	0.62	0.43	0.15	0.77	0.53		0.70	0.63	
Uniform Delay, d1	56.1	21.3	9.1	54.1	16.5	9.6	51.1	43.8		53.0	47.1	
Progression Factor	1.18	0.51	0.64	1.13	0.82	2.33	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	1.8	0.0	3.7	0.8	0.0	8.5	0.4		6.1	1.8	
Delay (s)	68.9	12.7	5.8	64.8	14.3	22.4	59.7	44.2		59.0	49.0	
Level of Service	E	B	A	E	B	C	E	D		E	D	
Approach Delay (s)		15.4			22.2			51.2			52.7	
Approach LOS		B			C			D			D	

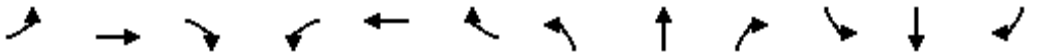
Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1013	128	127	691	200	273	229	101	181	233	76
Future Volume (veh/h)	75	1013	128	127	691	200	273	229	101	181	233	76
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		0.99	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	1722	1722	1722	1693	1693	1693	1737	1737	1737	1693	1693	1693
Adj Flow Rate, veh/h	81	1089	122	137	743	140	294	246	87	195	251	60
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	14	14	14	11	11	11	14	14	14
Cap, veh/h	125	1775	928	192	1816	898	364	437	151	254	386	90
Arrive On Green	0.08	1.00	1.00	0.02	0.19	0.18	0.11	0.18	0.17	0.08	0.15	0.14
Sat Flow, veh/h	3182	3272	1437	3127	3216	1415	3209	2407	829	3127	2584	606
Grp Volume(v), veh/h	81	1089	122	137	743	140	294	167	166	195	154	157
Grp Sat Flow(s),veh/h/ln	1591	1636	1437	1564	1608	1415	1605	1650	1586	1564	1608	1582
Q Serve(g_s), s	3.0	0.0	0.0	5.2	24.4	8.2	10.7	11.0	11.6	7.3	10.8	11.2
Cycle Q Clear(g_c), s	3.0	0.0	0.0	5.2	24.4	8.2	10.7	11.0	11.6	7.3	10.8	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		0.38
Lane Grp Cap(c), veh/h	125	1775	928	192	1816	898	364	300	288	254	240	236
V/C Ratio(X)	0.65	0.61	0.13	0.71	0.41	0.16	0.81	0.56	0.58	0.77	0.64	0.66
Avail Cap(c_a), veh/h	175	1775	928	242	1816	898	439	450	432	318	382	376
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	57.7	31.2	17.5	51.9	44.7	45.3	54.0	48.0	48.5
Incr Delay (d2), s/veh	1.8	1.3	0.2	4.5	0.7	0.4	7.5	0.6	0.7	6.4	1.1	1.2
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	1.2	0.3	0.1	2.2	10.6	2.8	4.6	4.5	4.5	3.0	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	1.3	0.2	62.3	31.9	17.8	59.4	45.3	46.0	60.4	49.1	49.7
LnGrp LOS	E	A	A	E	C	B	E	D	D	E	D	D
Approach Vol, veh/h		1292			1020			627			506	
Approach Delay, s/veh		4.7			34.0			52.1			53.6	
Approach LOS		A			C			D			D	

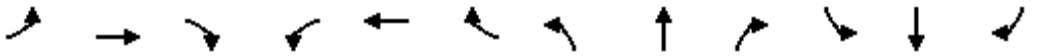
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	69.1	17.6	21.9	8.7	71.8	13.7	25.8
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5
Max Green Setting (Gmax), s	9.3	48.3	16.4	27.0	6.6	51.0	12.2	31.2
Max Q Clear Time (g_c+I1), s	7.2	2.0	12.7	13.2	5.0	26.4	9.3	13.6
Green Ext Time (p_c), s	0.2	35.7	0.9	2.8	0.1	16.7	0.4	3.5

Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	951	210	81	955	125	157	225	160	235	331	235
Future Volume (vph)	63	951	210	81	955	125	157	225	160	235	331	235
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	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3367	3471	1533	3433	3539	1565	3335	3204		3433	3298	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3367	3471	1533	3433	3539	1565	3335	3204		3433	3298	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	65	980	216	84	985	129	162	232	165	242	341	242
RTOR Reduction (vph)	0	0	82	0	0	48	0	117	0	0	117	0
Lane Group Flow (vph)	65	980	134	84	985	81	162	280	0	242	466	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			1			2			1			2
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	5.0	62.5	72.2	5.6	63.1	75.4	9.7	20.6		12.3	23.2	
Effective Green, g (s)	5.0	64.0	72.2	5.6	64.6	75.4	9.7	22.1		12.3	24.7	
Actuated g/C Ratio	0.04	0.53	0.60	0.05	0.54	0.63	0.08	0.18		0.10	0.21	
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	
Lane Grp Cap (vph)	140	1851	922	160	1905	983	269	590		351	678	
v/s Ratio Prot	0.02	c0.28	0.01	c0.02	0.28	0.01	0.05	0.09		c0.07	c0.14	
v/s Ratio Perm			0.08			0.04						
v/c Ratio	0.46	0.53	0.15	0.53	0.52	0.08	0.60	0.48		0.69	0.69	
Uniform Delay, d1	56.2	18.2	10.4	55.9	17.7	8.7	53.3	43.8		52.0	44.1	
Progression Factor	1.26	0.46	0.14	1.12	0.68	2.48	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	1.0	0.0	1.3	0.9	0.0	2.6	0.2		4.5	2.3	
Delay (s)	71.7	9.4	1.5	64.1	12.9	21.7	55.9	44.0		56.5	46.4	
Level of Service	E	A	A	E	B	C	E	D		E	D	
Approach Delay (s)		11.2			17.4			47.4			49.4	
Approach LOS		B			B			D			D	

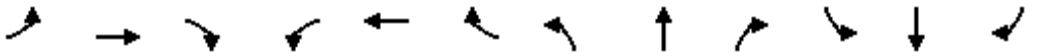
Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	951	210	81	955	125	157	225	160	235	331	235
Future Volume (veh/h)	63	951	210	81	955	125	157	225	160	235	331	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	65	980	154	84	985	88	162	232	144	242	341	149
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	5	5	5	2	2	2
Cap, veh/h	125	1948	943	135	1988	1001	228	370	220	319	489	209
Arrive On Green	0.07	1.00	1.00	0.04	0.56	0.55	0.07	0.18	0.17	0.09	0.20	0.19
Sat Flow, veh/h	3401	3497	1539	3456	3554	1563	3374	2079	1236	3456	2410	1032
Grp Volume(v), veh/h	65	980	154	84	985	88	162	192	184	242	250	240
Grp Sat Flow(s),veh/h/ln	1700	1749	1539	1728	1777	1563	1687	1735	1581	1728	1777	1665
Q Serve(g_s), s	2.2	0.0	0.0	2.9	20.3	2.6	5.6	12.3	13.1	8.2	15.6	16.2
Cycle Q Clear(g_c), s	2.2	0.0	0.0	2.9	20.3	2.6	5.6	12.3	13.1	8.2	15.6	16.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.62
Lane Grp Cap(c), veh/h	125	1948	943	135	1988	1001	228	309	282	319	361	338
V/C Ratio(X)	0.52	0.50	0.16	0.62	0.50	0.09	0.71	0.62	0.65	0.76	0.69	0.71
Avail Cap(c_a), veh/h	170	1948	943	202	1988	1001	337	434	395	432	489	458
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	56.8	16.1	8.3	54.8	45.6	46.4	53.2	44.3	45.0
Incr Delay (d2), s/veh	1.1	0.8	0.3	1.7	0.9	0.2	1.5	0.8	1.0	3.3	1.1	1.6
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	0.9	0.2	0.1	1.3	7.8	0.8	2.4	5.2	5.1	3.6	6.8	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	0.8	0.3	58.5	17.0	8.5	56.4	46.3	47.4	56.4	45.5	46.6
LnGrp LOS	E	A	A	E	B	A	E	D	D	E	D	D
Approach Vol, veh/h		1199			1157			538			732	
Approach Delay, s/veh		3.7			19.4			49.7			49.5	
Approach LOS		A			B			D			D	

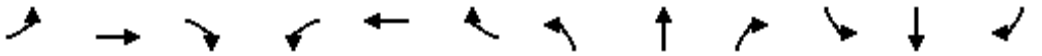
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	70.9	12.1	28.4	8.4	71.1	15.1	25.4
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5
Max Green Setting (Gmax), s	7.0	50.5	12.0	31.5	6.0	51.5	15.0	28.5
Max Q Clear Time (g_c+I1), s	4.9	2.0	7.6	18.2	4.2	22.3	10.2	15.1
Green Ext Time (p_c), s	0.1	34.4	0.5	4.5	0.1	22.7	0.9	3.4

Intersection Summary	
HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	1013	129	127	691	229	240	261	101	181	232	76
Future Volume (vph)	96	1013	129	127	691	229	240	261	101	181	232	76
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	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	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		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3127	3223	1423	3072	3167	1402	3155	3116		3072	3039	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3127	3223	1423	3072	3167	1402	3155	3116		3072	3039	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	103	1089	139	137	743	246	258	281	109	195	249	82
RTOR Reduction (vph)	0	0	52	0	0	92	0	38	0	0	29	0
Lane Group Flow (vph)	103	1089	87	137	743	154	258	352	0	195	302	0
Confl. Peds. (#/hr)			2	2			1					1
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	12%	12%	12%	14%	14%	14%	11%	11%	11%	14%	14%	14%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	7.3	61.5	74.7	8.7	62.9	73.8	13.2	19.9		10.9	17.6	
Effective Green, g (s)	7.3	63.0	74.7	8.7	64.4	73.8	13.2	21.4		10.9	19.1	
Actuated g/C Ratio	0.06	0.52	0.62	0.07	0.54	0.61	0.11	0.18		0.09	0.16	
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	
Lane Grp Cap (vph)	190	1692	885	222	1699	862	347	555		279	483	
v/s Ratio Prot	0.03	c0.34	0.01	c0.04	0.23	0.02	c0.08	c0.11		0.06	0.10	
v/s Ratio Perm			0.05			0.09						
v/c Ratio	0.54	0.64	0.10	0.62	0.44	0.18	0.74	0.63		0.70	0.62	
Uniform Delay, d1	54.7	20.4	9.1	54.0	16.8	10.0	51.8	45.7		53.0	47.1	
Progression Factor	1.19	0.48	0.54	1.16	0.82	2.32	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	1.7	0.0	3.3	0.8	0.0	7.4	1.8		6.1	1.8	
Delay (s)	66.4	11.5	4.9	66.2	14.5	23.2	59.1	47.4		59.0	48.9	
Level of Service	E	B	A	E	B	C	E	D		E	D	
Approach Delay (s)		15.1			22.7			52.1			52.7	
Approach LOS		B			C			D			D	

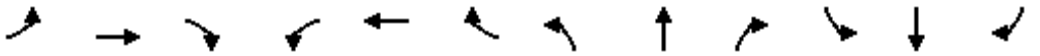
Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	1013	129	127	691	229	240	261	101	181	232	76
Future Volume (veh/h)	96	1013	129	127	691	229	240	261	101	181	232	76
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		0.99	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	1722	1722	1722	1693	1693	1693	1737	1737	1737	1693	1693	1693
Adj Flow Rate, veh/h	103	1089	123	137	743	171	258	281	87	195	249	60
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	14	14	14	11	11	11	14	14	14
Cap, veh/h	151	1814	927	192	1828	903	325	423	128	254	386	91
Arrive On Green	0.09	1.00	1.00	0.02	0.19	0.18	0.10	0.17	0.16	0.08	0.15	0.14
Sat Flow, veh/h	3182	3272	1437	3127	3216	1415	3209	2493	756	3127	2579	610
Grp Volume(v), veh/h	103	1089	123	137	743	171	258	184	184	195	153	156
Grp Sat Flow(s),veh/h/ln	1591	1636	1437	1564	1608	1415	1605	1650	1599	1564	1608	1581
Q Serve(g_s), s	3.8	0.0	0.0	5.2	24.4	10.1	9.4	12.5	13.0	7.3	10.8	11.2
Cycle Q Clear(g_c), s	3.8	0.0	0.0	5.2	24.4	10.1	9.4	12.5	13.0	7.3	10.8	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		0.39
Lane Grp Cap(c), veh/h	151	1814	927	192	1828	903	325	280	271	254	241	237
V/C Ratio(X)	0.68	0.60	0.13	0.71	0.41	0.19	0.79	0.66	0.68	0.77	0.64	0.66
Avail Cap(c_a), veh/h	194	1814	927	242	1828	903	401	436	422	321	389	382
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	0.0	0.0	57.7	30.9	17.9	52.7	46.6	47.1	54.0	48.0	48.4
Incr Delay (d2), s/veh	2.9	1.2	0.2	4.5	0.7	0.5	6.8	1.0	1.1	6.1	1.0	1.2
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	1.5	0.3	0.1	2.2	10.6	3.6	4.0	5.1	5.1	3.0	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.4	1.2	0.2	62.3	31.6	18.3	59.5	47.5	48.2	60.1	49.0	49.6
LnGrp LOS	E	A	A	E	C	B	E	D	D	E	D	D
Approach Vol, veh/h		1315			1051			626			504	
Approach Delay, s/veh		5.5			33.5			52.6			53.5	
Approach LOS		A			C			D			D	

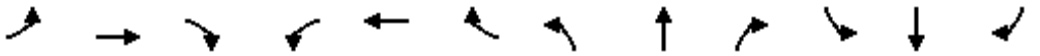
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	70.5	16.2	22.0	9.7	72.2	13.8	24.4
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5
Max Green Setting (Gmax), s	9.3	49.2	15.0	27.5	7.3	51.2	12.3	30.2
Max Q Clear Time (g_c+I1), s	7.2	2.0	11.4	13.2	5.8	26.4	9.3	15.0
Green Ext Time (p_c), s	0.2	36.3	0.7	2.8	0.1	17.1	0.4	3.6

Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	954	212	81	955	129	153	230	160	232	329	235
Future Volume (vph)	66	954	212	81	955	129	153	230	160	232	329	235
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	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3367	3471	1533	3433	3539	1565	3335	3207		3433	3297	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3367	3471	1533	3433	3539	1565	3335	3207		3433	3297	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	68	984	219	84	985	133	158	237	165	239	339	242
RTOR Reduction (vph)	0	0	85	0	0	50	0	116	0	0	120	0
Lane Group Flow (vph)	68	984	134	84	985	83	158	286	0	239	461	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			1			2			1			2
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	5.5	62.9	72.3	5.9	63.3	75.3	9.4	20.2		12.0	22.8	
Effective Green, g (s)	5.5	64.4	72.3	5.9	64.8	75.3	9.4	21.7		12.0	24.3	
Actuated g/C Ratio	0.05	0.54	0.60	0.05	0.54	0.63	0.08	0.18		0.10	0.20	
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	
Lane Grp Cap (vph)	154	1862	923	168	1911	982	261	579		343	667	
v/s Ratio Prot	0.02	c0.28	0.01	c0.02	0.28	0.01	0.05	0.09		c0.07	c0.14	
v/s Ratio Perm			0.08			0.04						
v/c Ratio	0.44	0.53	0.15	0.50	0.52	0.08	0.61	0.49		0.70	0.69	
Uniform Delay, d1	55.8	18.0	10.4	55.6	17.6	8.8	53.5	44.2		52.2	44.4	
Progression Factor	1.22	0.55	0.15	1.18	0.63	1.49	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	1.0	0.0	0.8	0.9	0.0	2.7	0.2		4.9	2.5	
Delay (s)	68.5	10.9	1.6	66.5	12.0	13.1	56.2	44.4		57.2	46.9	
Level of Service	E	B	A	E	B	B	E	D		E	D	
Approach Delay (s)		12.4			15.9			47.8			49.9	
Approach LOS		B			B			D			D	

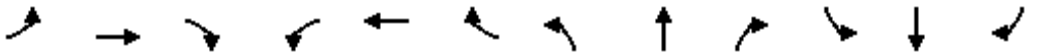
Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	954	212	81	955	129	153	230	160	232	329	235
Future Volume (veh/h)	66	954	212	81	955	129	153	230	160	232	329	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	68	984	157	84	985	92	158	237	144	239	339	149
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	5	5	5	2	2	2
Cap, veh/h	127	1952	942	135	1990	999	221	376	219	312	491	211
Arrive On Green	0.07	1.00	1.00	0.04	0.56	0.55	0.07	0.18	0.17	0.09	0.20	0.19
Sat Flow, veh/h	3401	3497	1539	3456	3554	1563	3374	2096	1222	3456	2405	1036
Grp Volume(v), veh/h	68	984	157	84	985	92	158	194	187	239	249	239
Grp Sat Flow(s),veh/h/ln	1700	1749	1539	1728	1777	1563	1687	1735	1584	1728	1777	1664
Q Serve(g_s), s	2.3	0.0	0.0	2.9	20.3	2.7	5.5	12.4	13.2	8.1	15.5	16.1
Cycle Q Clear(g_c), s	2.3	0.0	0.0	2.9	20.3	2.7	5.5	12.4	13.2	8.1	15.5	16.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		0.62
Lane Grp Cap(c), veh/h	127	1952	942	135	1990	999	221	311	284	312	362	339
V/C Ratio(X)	0.54	0.50	0.17	0.62	0.50	0.09	0.72	0.63	0.66	0.77	0.69	0.71
Avail Cap(c_a), veh/h	315	1952	942	202	1990	999	309	448	409	403	503	472
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	56.8	16.1	8.4	55.0	45.5	46.4	53.3	44.2	44.9
Incr Delay (d2), s/veh	1.1	0.8	0.3	1.7	0.9	0.2	2.0	0.8	1.0	4.5	0.9	1.2
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	1.0	0.2	0.1	1.3	7.8	0.9	2.3	5.3	5.2	3.6	6.7	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	0.8	0.3	58.5	17.0	8.6	57.0	46.3	47.4	57.9	45.1	46.0
LnGrp LOS	E	A	A	E	B	A	E	D	D	E	D	D
Approach Vol, veh/h		1209			1161			539			727	
Approach Delay, s/veh		3.8			19.3			49.8			49.6	
Approach LOS		A			B			D			D	

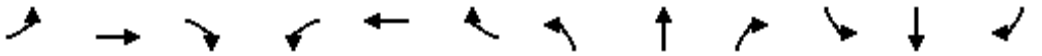
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	71.0	11.9	28.5	8.5	71.2	14.8	25.5
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5
Max Green Setting (Gmax), s	7.0	50.5	11.0	32.5	11.1	46.4	14.0	29.5
Max Q Clear Time (g_c+I1), s	4.9	2.0	7.5	18.1	4.3	22.3	10.1	15.2
Green Ext Time (p_c), s	0.1	34.5	0.4	4.7	0.2	19.4	0.7	3.6

Intersection Summary	
HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	1009	124	127	662	230	243	259	101	185	237	78
Future Volume (vph)	105	1009	124	127	662	230	243	259	101	185	237	78
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	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	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		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3127	3223	1423	3072	3167	1402	3155	3115		3072	3039	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3127	3223	1423	3072	3167	1402	3155	3115		3072	3039	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	113	1085	133	137	712	247	261	278	109	199	255	84
RTOR Reduction (vph)	0	0	51	0	0	88	0	38	0	0	29	0
Lane Group Flow (vph)	113	1085	82	137	712	159	261	349	0	199	310	0
Confl. Peds. (#/hr)			2	2			1					1
Confl. Bikes (#/hr)			5			1						
Heavy Vehicles (%)	12%	12%	12%	14%	14%	14%	11%	11%	11%	14%	14%	14%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	7.8	61.3	74.4	8.6	62.1	73.7	13.1	19.5		11.6	18.0	
Effective Green, g (s)	7.8	62.8	74.4	8.6	63.6	73.7	13.1	21.0		11.6	19.5	
Actuated g/C Ratio	0.06	0.52	0.62	0.07	0.53	0.61	0.11	0.18		0.10	0.16	
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	
Lane Grp Cap (vph)	203	1686	882	220	1678	861	344	545		296	493	
v/s Ratio Prot	0.04	c0.34	0.01	c0.04	0.22	0.02	c0.08	c0.11		0.06	0.10	
v/s Ratio Perm			0.05			0.10						
v/c Ratio	0.56	0.64	0.09	0.62	0.42	0.19	0.76	0.64		0.67	0.63	
Uniform Delay, d1	54.4	20.6	9.2	54.1	17.1	10.1	51.9	46.0		52.4	46.9	
Progression Factor	1.19	0.47	0.60	1.14	0.85	2.23	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	1.7	0.0	3.7	0.7	0.0	8.3	1.9		4.7	1.8	
Delay (s)	66.2	11.2	5.5	65.5	15.3	22.5	60.2	47.9		57.0	48.7	
Level of Service	E	B	A	E	B	C	E	D		E	D	
Approach Delay (s)		15.3			23.2			52.9			51.8	
Approach LOS		B			C			D			D	

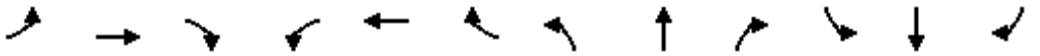
Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1009	124	127	662	230	243	259	101	185	237	78
Future Volume (veh/h)	105	1009	124	127	662	230	243	259	101	185	237	78
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		0.99	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	1722	1722	1722	1693	1693	1693	1737	1737	1737	1693	1693	1693
Adj Flow Rate, veh/h	113	1085	117	137	712	172	261	278	87	199	255	62
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	12	12	14	14	14	11	11	11	14	14	14
Cap, veh/h	164	1806	925	191	1806	897	328	421	129	263	390	93
Arrive On Green	0.10	1.00	1.00	0.02	0.19	0.18	0.10	0.17	0.16	0.08	0.15	0.14
Sat Flow, veh/h	3182	3272	1437	3127	3216	1415	3209	2486	762	3127	2574	614
Grp Volume(v), veh/h	113	1085	117	137	712	172	261	183	182	199	157	160
Grp Sat Flow(s),veh/h/ln	1591	1636	1437	1564	1608	1415	1605	1650	1598	1564	1608	1580
Q Serve(g_s), s	4.1	0.0	0.0	5.2	23.4	10.1	9.5	12.4	12.9	7.5	11.1	11.5
Cycle Q Clear(g_c), s	4.1	0.0	0.0	5.2	23.4	10.1	9.5	12.4	12.9	7.5	11.1	11.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.48	1.00		0.39
Lane Grp Cap(c), veh/h	164	1806	925	191	1806	897	328	280	271	263	243	239
V/C Ratio(X)	0.69	0.60	0.13	0.72	0.39	0.19	0.80	0.65	0.67	0.76	0.65	0.67
Avail Cap(c_a), veh/h	239	1806	925	235	1806	897	401	410	397	360	383	377
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	0.0	0.0	57.8	30.9	18.0	52.6	46.5	47.1	53.8	47.9	48.3
Incr Delay (d2), s/veh	1.6	1.2	0.2	5.4	0.6	0.5	7.1	1.0	1.1	3.7	1.1	1.2
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	1.6	0.3	0.1	2.2	10.2	3.6	4.1	5.0	5.1	3.0	4.4	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.5	1.2	0.2	63.1	31.6	18.5	59.7	47.5	48.2	57.4	49.0	49.5
LnGrp LOS	D	A	A	E	C	B	E	D	D	E	D	D
Approach Vol, veh/h		1315			1021			626			516	
Approach Delay, s/veh		5.7			33.6			52.8			52.4	
Approach LOS		A			C			D			D	

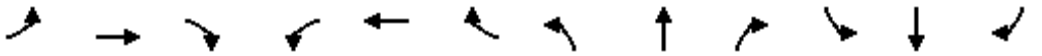
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	70.2	16.3	22.2	10.2	71.4	14.1	24.3
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5
Max Green Setting (Gmax), s	9.0	49.9	15.0	27.1	9.0	49.9	13.8	28.3
Max Q Clear Time (g_c+I1), s	7.2	2.0	11.5	13.5	6.1	25.4	9.5	14.9
Green Ext Time (p_c), s	0.2	36.5	0.7	2.8	0.2	16.5	0.6	3.3

Intersection Summary	
HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	928	184	81	951	129	153	229	160	258	357	250
Future Volume (vph)	67	928	184	81	951	129	153	229	160	258	357	250
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	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95		0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3367	3471	1533	3433	3539	1565	3335	3207		3433	3299	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3367	3471	1533	3433	3539	1565	3335	3207		3433	3299	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	957	190	84	980	133	158	236	165	266	368	258
RTOR Reduction (vph)	0	0	78	0	0	51	0	115	0	0	115	0
Lane Group Flow (vph)	69	957	112	84	980	82	158	286	0	266	511	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Confl. Bikes (#/hr)			1			2			1			2
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	5.5	61.2	70.6	5.5	61.2	73.9	9.4	21.6		12.7	24.9	
Effective Green, g (s)	5.5	62.7	70.6	5.5	62.7	73.9	9.4	23.1		12.7	26.4	
Actuated g/C Ratio	0.05	0.52	0.59	0.05	0.52	0.62	0.08	0.19		0.11	0.22	
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5	4.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	1.5	4.5	1.5	1.5	4.5	1.5	1.5	2.0		1.5	2.0	
Lane Grp Cap (vph)	154	1813	901	157	1849	963	261	617		363	725	
v/s Ratio Prot	0.02	0.28	0.01	c0.02	c0.28	0.01	0.05	0.09		c0.08	c0.15	
v/s Ratio Perm			0.06			0.04						
v/c Ratio	0.45	0.53	0.12	0.54	0.53	0.09	0.61	0.46		0.73	0.70	
Uniform Delay, d1	55.8	18.9	11.0	56.0	18.9	9.3	53.5	43.0		52.0	43.2	
Progression Factor	1.32	0.56	0.11	1.12	0.66	1.71	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	1.0	0.0	1.6	1.0	0.0	2.7	0.2		6.5	2.6	
Delay (s)	74.4	11.5	1.2	64.6	13.5	16.0	56.2	43.2		58.5	45.7	
Level of Service	E	B	A	E	B	B	E	D		E	D	
Approach Delay (s)		13.5			17.4			46.9			49.5	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	928	184	81	951	129	153	229	160	258	357	250
Future Volume (veh/h)	67	928	184	81	951	129	153	229	160	258	357	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	69	957	128	84	980	92	158	236	144	266	368	165
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	5	5	5	2	2	2
Cap, veh/h	127	1908	922	135	1944	990	221	387	226	336	517	228
Arrive On Green	0.07	1.00	1.00	0.04	0.55	0.53	0.07	0.18	0.17	0.10	0.22	0.20
Sat Flow, veh/h	3401	3497	1539	3456	3554	1563	3374	2093	1225	3456	2386	1052
Grp Volume(v), veh/h	69	957	128	84	980	92	158	194	186	266	272	261
Grp Sat Flow(s),veh/h/ln	1700	1749	1539	1728	1777	1563	1687	1735	1583	1728	1777	1661
Q Serve(g_s), s	2.3	0.0	0.0	2.9	20.7	2.8	5.5	12.3	13.1	9.0	17.0	17.5
Cycle Q Clear(g_c), s	2.3	0.0	0.0	2.9	20.7	2.8	5.5	12.3	13.1	9.0	17.0	17.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		0.63
Lane Grp Cap(c), veh/h	127	1908	922	135	1944	990	221	320	292	336	385	360
V/C Ratio(X)	0.54	0.50	0.14	0.62	0.50	0.09	0.72	0.61	0.64	0.79	0.71	0.72
Avail Cap(c_a), veh/h	315	1908	922	202	1944	990	309	448	409	403	503	471
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	56.8	17.0	8.6	55.0	44.9	45.8	53.0	43.5	44.1
Incr Delay (d2), s/veh	1.2	0.8	0.3	1.7	0.9	0.2	2.0	0.7	0.9	7.0	1.7	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	1.0	0.2	0.1	1.3	8.1	0.9	2.3	5.2	5.1	4.2	7.4	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	0.8	0.3	58.5	17.9	8.8	57.0	45.6	46.6	60.0	45.2	46.4
LnGrp LOS	E	A	A	E	B	A	E	D	D	E	D	D
Approach Vol, veh/h		1154			1156			538			799	
Approach Delay, s/veh		4.0			20.2			49.3			50.5	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	69.5	11.9	30.0	8.5	69.7	15.7	26.2
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	7.0	50.5	11.0	32.5	11.1	46.4	14.0	29.5
Max Q Clear Time (g_c+I1), s	4.9	2.0	7.5	19.5	4.3	22.7	11.0	15.1
Green Ext Time (p_c), s	0.1	33.3	0.4	4.9	0.2	19.0	0.7	3.6

Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	78	199	430	462	241	140	132	294	299	133	173	208
Average Queue (ft)	24	48	189	210	45	44	66	144	146	50	64	108
95th Queue (ft)	60	123	355	393	155	100	116	245	249	96	149	180
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			4	2				0				
Queuing Penalty (veh)			3	3				0				

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	TR
Maximum Queue (ft)	196	214	161	174	204	228
Average Queue (ft)	93	110	69	78	87	109
95th Queue (ft)	159	191	134	146	165	187
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			2	4	4	
Queuing Penalty (veh)			2	5	7	

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	66	134	321	339	147	67	92	332	341	53	124	158
Average Queue (ft)	16	38	141	164	32	18	41	170	167	24	48	74
95th Queue (ft)	45	95	276	301	100	47	77	293	301	53	102	132
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			2	1				0	0			
Queuing Penalty (veh)			1	1				0	0			

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	TR
Maximum Queue (ft)	178	230	137	163	236	260
Average Queue (ft)	90	104	69	84	104	143
95th Queue (ft)	157	186	119	140	190	236
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			1	1	6	
Queuing Penalty (veh)			1	2	13	

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	107	255	401	393	298	130	158	294	311	141	206	239
Average Queue (ft)	40	57	192	207	39	46	70	145	161	59	86	130
95th Queue (ft)	83	153	353	367	146	102	124	248	269	116	177	207
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			4	1								
Queuing Penalty (veh)			4	1								

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	TR
Maximum Queue (ft)	269	260	154	181	238	265
Average Queue (ft)	112	114	68	87	85	105
95th Queue (ft)	206	209	133	155	173	192
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			2	5	3	
Queuing Penalty (veh)			3	5	6	

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	76	141	368	374	95	65	83	316	310	68	141	179
Average Queue (ft)	21	38	160	179	37	20	35	177	171	26	45	80
95th Queue (ft)	56	93	301	325	78	49	68	289	287	54	104	145
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			2	0								
Queuing Penalty (veh)			1	1								

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	TR
Maximum Queue (ft)	234	282	158	214	253	322
Average Queue (ft)	94	111	86	103	124	171
95th Queue (ft)	177	210	142	165	216	270
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)	0		2	5	9	
Queuing Penalty (veh)	0		3	8	23	

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	80	209	416	444	229	130	137	319	334	116	228	272
Average Queue (ft)	21	48	196	210	35	37	63	150	163	45	109	153
95th Queue (ft)	55	123	341	362	123	91	117	260	280	91	208	235
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			4	1				0	0			
Queuing Penalty (veh)			3	2				0	0			

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	TR
Maximum Queue (ft)	150	192	162	175	176	195
Average Queue (ft)	75	102	75	91	83	103
95th Queue (ft)	135	175	140	156	160	176
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			2	5	3	
Queuing Penalty (veh)			2	6	6	

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	80	97	333	394	161	78	87	331	314	74	126	153
Average Queue (ft)	19	40	142	166	38	22	39	192	187	29	46	80
95th Queue (ft)	52	78	272	310	105	55	75	319	305	63	105	138
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			1	1				0				
Queuing Penalty (veh)			1	1				0				

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	TR
Maximum Queue (ft)	180	234	167	177	212	282
Average Queue (ft)	85	107	84	98	115	158
95th Queue (ft)	152	194	145	151	184	241
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			1	4	8	
Queuing Penalty (veh)			2	7	18	

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	96	228	434	438	170	112	160	347	351	138	201	238
Average Queue (ft)	35	58	204	215	34	42	65	165	176	56	97	142
95th Queue (ft)	77	145	349	375	106	92	121	289	297	108	188	220
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			4	1				0	0			
Queuing Penalty (veh)			4	1				0	0			

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	TR
Maximum Queue (ft)	204	225	153	163	170	210
Average Queue (ft)	100	112	71	89	77	102
95th Queue (ft)	176	203	134	144	143	179
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			1	3	3	
Queuing Penalty (veh)			1	4	6	

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	79	144	380	392	99	79	103	292	275	77	121	159
Average Queue (ft)	18	40	160	185	39	24	43	169	169	26	44	83
95th Queue (ft)	51	77	301	325	78	63	84	266	262	60	94	144
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			2	0								
Queuing Penalty (veh)			1	1								

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	TR
Maximum Queue (ft)	206	239	173	183	216	294
Average Queue (ft)	89	109	84	94	120	166
95th Queue (ft)	166	203	150	156	193	261
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			3	5	8	
Queuing Penalty (veh)			4	9	20	

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	115	246	375	392	94	128	158	347	338	153	212	256
Average Queue (ft)	43	62	198	221	28	44	69	155	165	62	98	146
95th Queue (ft)	95	147	328	353	69	101	120	272	277	120	202	229
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)		0	3	1				0				
Queuing Penalty (veh)		0	4	1				0				

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	TR
Maximum Queue (ft)	244	226	170	182	194	241
Average Queue (ft)	110	113	73	88	90	113
95th Queue (ft)	200	194	144	150	165	193
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			2	5	4	
Queuing Penalty (veh)			2	5	7	

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	69	132	358	366	176	75	101	311	320	63	128	149
Average Queue (ft)	19	41	159	181	40	23	41	184	178	29	45	79
95th Queue (ft)	52	93	300	329	113	58	80	290	289	58	95	134
Link Distance (ft)			784	784				1237	1237			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250	250			350	385	385			385	465	465
Storage Blk Time (%)			2	0								
Queuing Penalty (veh)			1	0								

Intersection: 3: SW 124th Avenue & SW Tualatin Sherwood Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	TR
Maximum Queue (ft)	188	228	175	240	312	331
Average Queue (ft)	86	112	94	109	129	167
95th Queue (ft)	158	196	150	179	225	269
Link Distance (ft)	662	662			705	705
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			120	120		
Storage Blk Time (%)			3	6	9	
Queuing Penalty (veh)			5	10	24	

TUALATIN LOGISTICS PARK

SW 124th Ave and SW Cimino Street
Tualatin, Oregon 97062

PRELIMINARY STORMWATER REPORT

VLMK Project Number: 20190311

Specht Properties
10260 SW Greenburg Road, Suite 170
Portland, Oregon 97223

Prepared By: Corey Theisen, P.E.
July 28, 2021

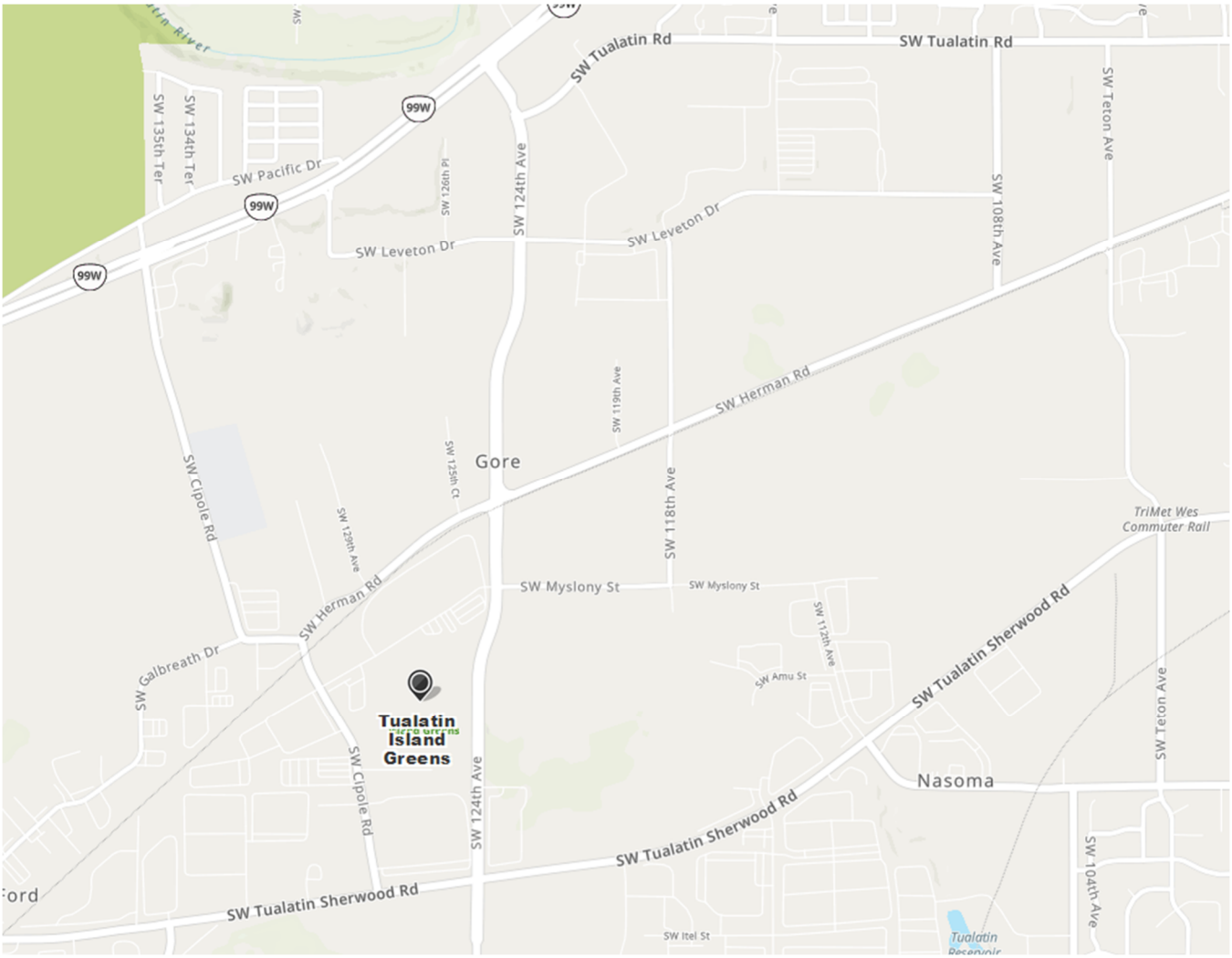
VLMK
ENGINEERING + DESIGN

Project:	Tualatin Logistics Park	*Project Number:*	20190311
Project Address:	SW 124th Ave and SW Cimono Street Tualatin, Oregon 97062		

TABLE OF CONTENTS

I. STORMWATER REPORT

A. Site Vicinity Map



B. **Project Information**

Tualatin Logistics Park is a proposed development in Tualatin, Oregon. This development includes one 455,000 square foot shell building capable of multiple tenants on a 24.16 acre site zoned General Manufacturing (MG). The proposed development includes 2 driveway entrances that access SW 124th Ave, with a 3rd access driveway on SW Cipole Road. Trailer parking, auto parking and drive aisles around the building will be paved with asphalt concrete. This report describes the proposed stormwater management approach for this building.

The existing site contains Tualatin Island Greens, a golf ball driving range with miniature golf. The site has an existing building with associated parking lot and grassy areas for golf activities. Offsite flow drains onto the site from a ditch in Cipole Road, which flows under the sidewalk and into an open ditch on the SW corner of the site. This flow continues to a concrete culvert that passes in front of the building, and discharges to an existing pond on the east side of the site. Runoff from the existing parking area and roof areas also drains to the existing pond. This existing pond is identified on the City's 1995 Natural Resource Inventory and Local Wetland Inventory as a wetland resource. A concrete pipe is the single outlet from this pond, flowing into a 24" culvert under SW 124th. This culvert discharges into an existing wetland on the east side of SW 124th Ave. Stormwater that does not enter the existing pond will drain toward the center of the golf ball driving area and infiltrate through the pervious ground.

Survey information for the site is from a topographic survey provided by: Northwest Surveying Inc. (1815 NW 169th Place, Suite 2090, Beaverton, OR 97006. (503)848-2127).

All stormwater facilities and conveyance systems for this development have been designed per the 2019 Clean Water Services Design & Construction Standards.

Additional design information was obtained from:

- USDA NRCS Web Soil Survey of Clackamas County, Oregon

Software used in design:

- HydroCAD Stormwater Modeling Software
- Microsoft Excel
- AutoCAD Civil 3D 2020

C. **Stormwater Narrative**

Onsite stormwater runoff will be collected at various catch basins, roof drains, and/or curb cuts located throughout the property. All stormwater runoff from pollution-generating surfaces (i.e. asphalt) will be treated on-site using Peak Diversion Stormfilter units manufactured by Contech. These units will be sized per CWS Design and Construction standards. Following treatment, stormwater will be routed to an underground detention chamber facility consisting of approximately (590) MC-4500 chambers manufactured by ADS. Detention will be achieved via a flow control manhole following the chamber system.

Alternatives

Water Quality Treatment

The CWS water quality event used to size these facilities is 0.36" developed over 4 hours. Please see the appendix for a WQ Basin Map and sizing calculations.

Vegetated Low Impact Development treatment approaches were considered on this site. However, during the design phase it was found that there was a lot of variation in the surrounding grades requiring slopes that would not allow the construction of LIDA systems.

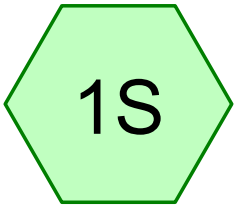
Storm Quantity Control (Complete Infiltration)

Stormtech underground chambers have been proposed as a method for stormwater detention. These chambers work well to create a centralized stormwater detention system for the whole site. A flow control manhole is located at the discharge of the chambers. The flow control system has been designed to detain storm to meet the hydromodification requirements set forth in Table 4-7 of the CWS Design and Construction Standards. A lift station will be designed to accommodate post-detention flows from up to the 100-year storm event.

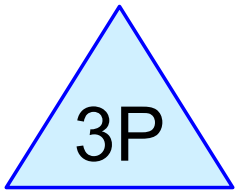
Because infiltration was employed as a stormwater discharge method for the existing site, infiltration was once again investigated during the stormwater design process. Although the Geotechnical Report was not obtained prior to preliminary stormwater design and the writing of this report, preliminary geotechnical information was received from the geotechnical engineer which indicated high groundwater elevation unsuitable for infiltration. Additionally, existing site conditions showed that there were no other alternate stormwater discharge locations, forcing the use of a lift station to utilize the existing culvert under 124th Ave.

II. APPENDIX

A. HydroCAD Calculations



Pre-Dev



Underground Chambers

Subcat Reach Pond Link

Routing Diagram for Tualatin Logistics Park
Prepared by VLMK Engineering, Printed 7/29/2021

Summary for Subcatchment 1S: Pre-Dev

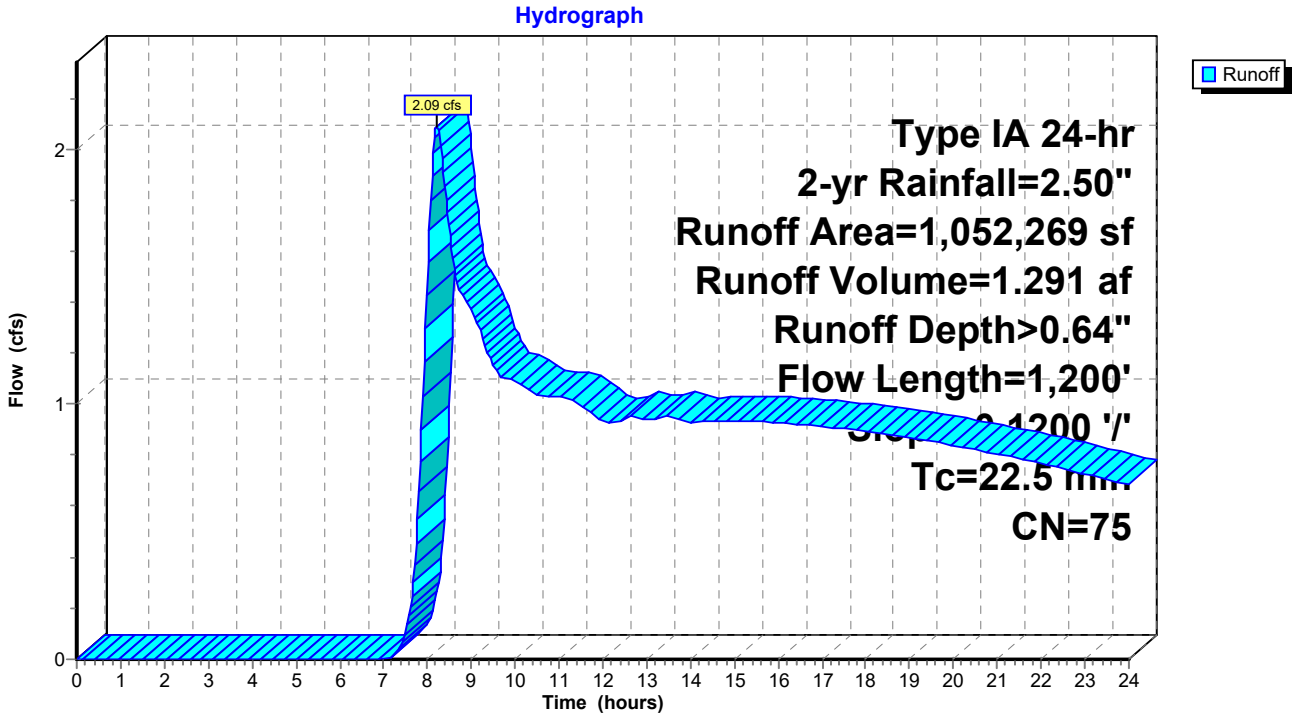
Runoff = 2.09 cfs @ 8.22 hrs, Volume= 1.291 af, Depth> 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Type IA 24-hr 2-yr Rainfall=2.50"

	Area (sf)	CN	Description
*	1,052,269	75	Pre-Developed Area
	1,052,269		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	100	0.1200	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
10.6	1,100	0.1200	1.73		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
22.5	1,200	Total			

Subcatchment 1S: Pre-Dev



Summary for Pond 3P: Underground Chambers

Inflow Area = 24.157 ac, 85.00% Impervious, Inflow Depth > 1.86" for 2-yr event
Inflow = 11.71 cfs @ 7.97 hrs, Volume= 3.750 af
Outflow = 1.03 cfs @ 24.00 hrs, Volume= 1.352 af, Atten= 91%, Lag= 961.5 min
Primary = 1.03 cfs @ 24.00 hrs, Volume= 1.352 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Peak Elev= 144.90' @ 24.00 hrs Surf.Area= 0.516 ac Storage= 2.399 af

Plug-Flow detention time= 502.5 min calculated for 1.350 af (36% of inflow)
Center-of-Mass det. time= 200.8 min (928.4 - 727.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	137.50'	1.072 af	**46.67'W x 482.07'L x 8.00'H Field A** 4.132 af Overall - 1.451 af Embedded = 2.681 af x 40.0% Voids
#2A	139.50'	1.451 af	**ADS_StormTech MC-4500 +Cap** x 590 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 590 Chambers in 5 Rows Cap Storage= +35.7 cf x 2 x 5 rows = 357.0 cf
		2.523 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	137.50'	**2.7" Vert. Orifice/Grate X 2.00** C= 0.600
#2	Primary	145.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=1.03 cfs @ 24.00 hrs HW=144.90' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 1.03 cfs @ 13.00 fps)
└**2=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3P: Underground Chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-4500 +Cap (ADS StormTech® MC-4500 with cap volume)
Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
Cap Storage= +35.7 cf x 2 x 5 rows = 357.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

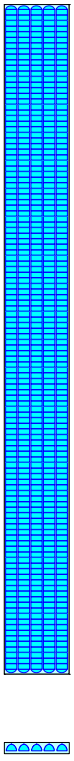
118 Chambers/Row x 4.02' Long +2.56' Cap Length x 2 = 480.07' Row Length +12.0" End Stone x 2 = 482.07' Base Length
5 Rows x 100.0" Wide + 9.0" Spacing x 4 + 12.0" Side Stone x 2 = 46.67' Base Width
24.0" Base + 60.0" Chamber Height + 12.0" Cover = 8.00' Field Height

590 Chambers x 106.5 cf + 35.7 cf Cap Volume x 2 x 5 Rows = 63,186.4 cf Chamber Storage

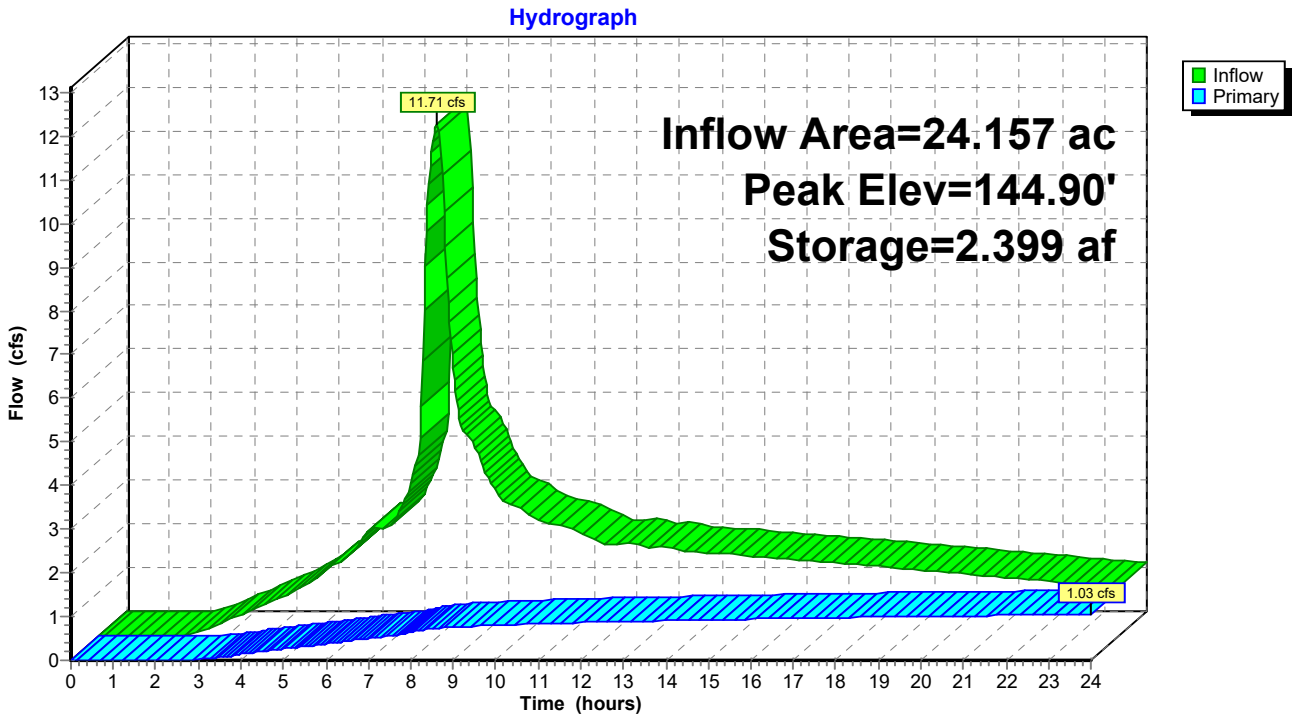
179,971.6 cf Field - 63,186.4 cf Chambers = 116,785.2 cf Stone x 40.0% Voids = 46,714.1 cf Stone Storage

Chamber Storage + Stone Storage = 109,900.4 cf = 2.523 af
Overall Storage Efficiency = 61.1%
Overall System Size = 482.07' x 46.67' x 8.00'

590 Chambers
6,665.6 cy Field
4,325.4 cy Stone



Pond 3P: Underground Chambers



Summary for Subcatchment 1S: Pre-Dev

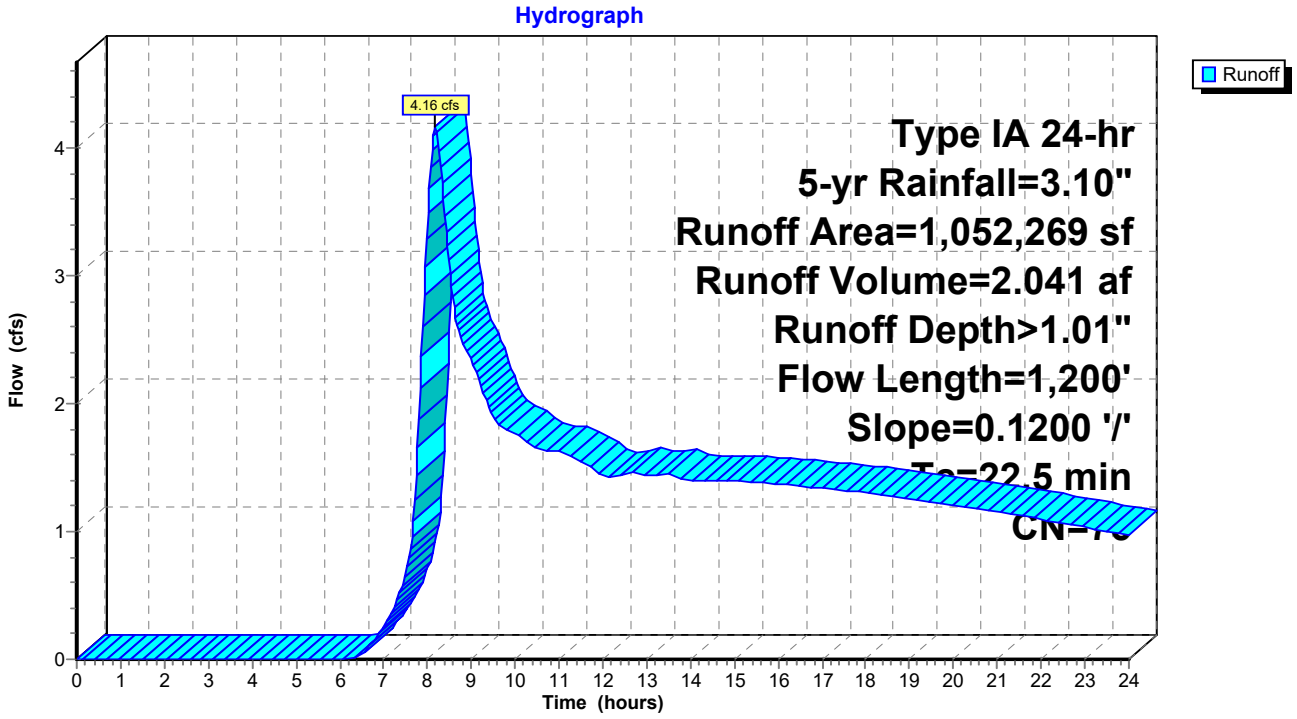
Runoff = 4.16 cfs @ 8.18 hrs, Volume= 2.041 af, Depth> 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Type IA 24-hr 5-yr Rainfall=3.10"

	Area (sf)	CN	Description
*	1,052,269	75	Pre-Developed Area
	1,052,269		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	100	0.1200	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
10.6	1,100	0.1200	1.73		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
22.5	1,200	Total			

Subcatchment 1S: Pre-Dev



Summary for Pond 3P: Underground Chambers

Inflow Area = 24.157 ac, 85.00% Impervious, Inflow Depth > 2.44" for 5-yr event
Inflow = 15.38 cfs @ 7.97 hrs, Volume= 4.910 af
Outflow = 2.58 cfs @ 13.37 hrs, Volume= 2.470 af, Atten= 83%, Lag= 324.2 min
Primary = 2.58 cfs @ 13.37 hrs, Volume= 2.470 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Peak Elev= 145.24' @ 13.37 hrs Surf.Area= 0.516 ac Storage= 2.469 af

Plug-Flow detention time= 496.0 min calculated for 2.470 af (50% of inflow)
Center-of-Mass det. time= 235.5 min (950.2 - 714.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	137.50'	1.072 af	**46.67'W x 482.07'L x 8.00'H Field A** 4.132 af Overall - 1.451 af Embedded = 2.681 af x 40.0% Voids
#2A	139.50'	1.451 af	**ADS_StormTech MC-4500 +Cap** x 590 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 590 Chambers in 5 Rows Cap Storage= +35.7 cf x 2 x 5 rows = 357.0 cf
		2.523 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	137.50'	**2.7" Vert. Orifice/Grate X 2.00** C= 0.600
#2	Primary	145.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=2.56 cfs @ 13.37 hrs HW=145.24' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 1.06 cfs @ 13.30 fps)
└**2=Sharp-Crested Rectangular Weir** (Weir Controls 1.51 cfs @ 1.60 fps)

Pond 3P: Underground Chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-4500 +Cap (ADS StormTech® MC-4500 with cap volume)
Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
Cap Storage= +35.7 cf x 2 x 5 rows = 357.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

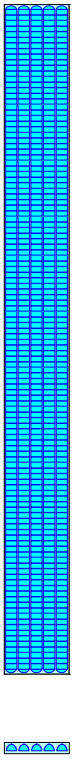
118 Chambers/Row x 4.02' Long +2.56' Cap Length x 2 = 480.07' Row Length +12.0" End Stone x 2 = 482.07' Base Length
5 Rows x 100.0" Wide + 9.0" Spacing x 4 + 12.0" Side Stone x 2 = 46.67' Base Width
24.0" Base + 60.0" Chamber Height + 12.0" Cover = 8.00' Field Height

590 Chambers x 106.5 cf + 35.7 cf Cap Volume x 2 x 5 Rows = 63,186.4 cf Chamber Storage

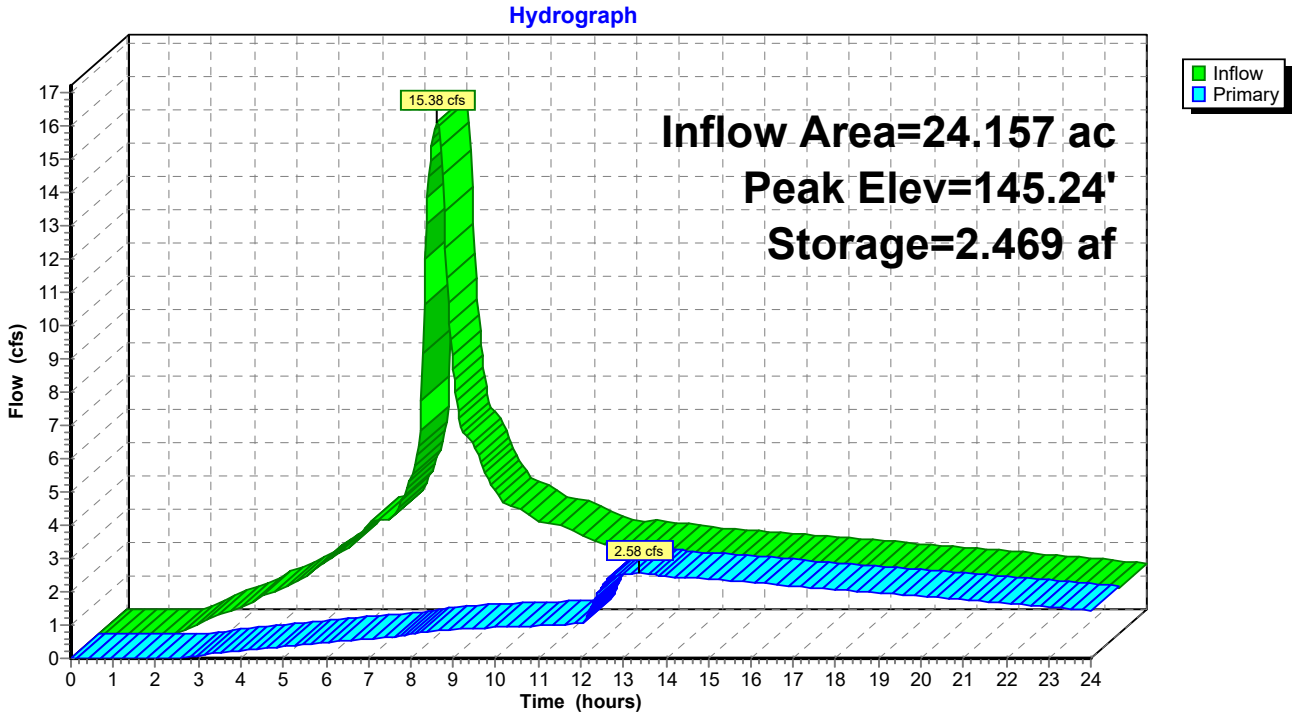
179,971.6 cf Field - 63,186.4 cf Chambers = 116,785.2 cf Stone x 40.0% Voids = 46,714.1 cf Stone Storage

Chamber Storage + Stone Storage = 109,900.4 cf = 2.523 af
Overall Storage Efficiency = 61.1%
Overall System Size = 482.07' x 46.67' x 8.00'

590 Chambers
6,665.6 cy Field
4,325.4 cy Stone



Pond 3P: Underground Chambers



Summary for Subcatchment 1S: Pre-Dev

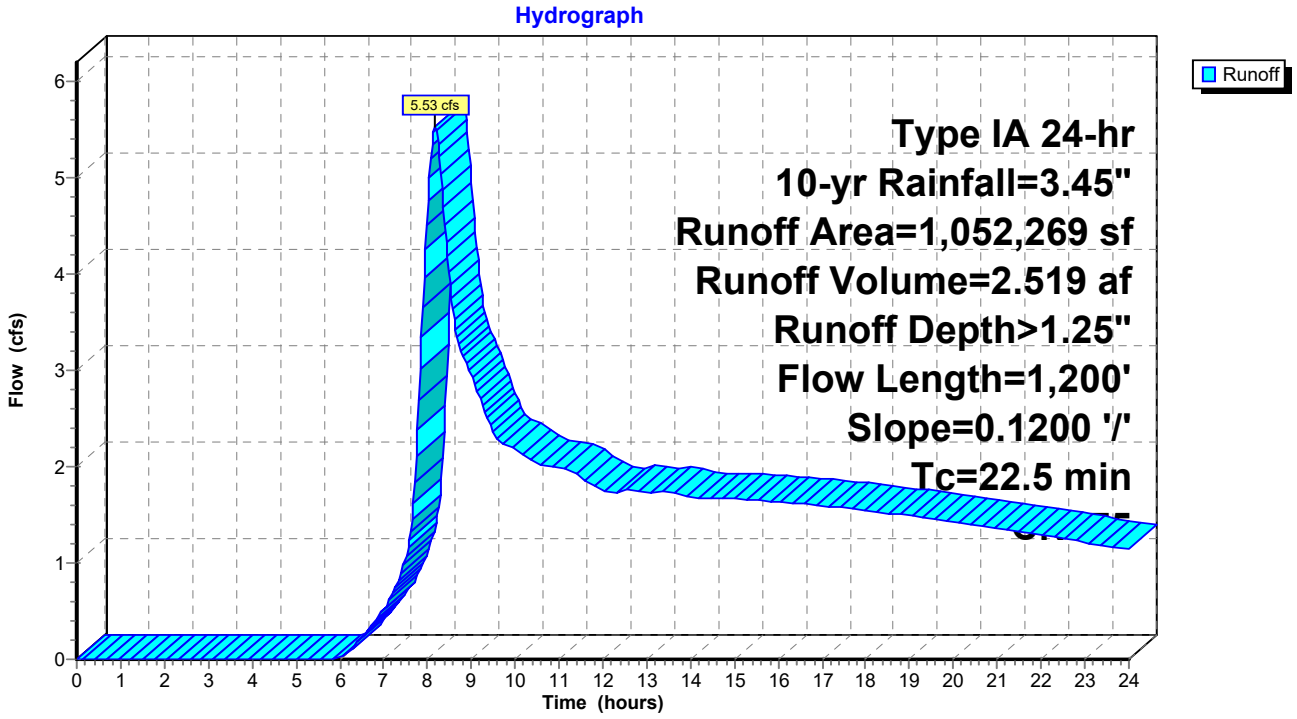
Runoff = 5.53 cfs @ 8.17 hrs, Volume= 2.519 af, Depth> 1.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Type IA 24-hr 10-yr Rainfall=3.45"

	Area (sf)	CN	Description
*	1,052,269	75	Pre-Developed Area
	1,052,269		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	100	0.1200	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
10.6	1,100	0.1200	1.73		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
22.5	1,200	Total			

Subcatchment 1S: Pre-Dev



Summary for Pond 3P: Underground Chambers

Inflow Area = 24.157 ac, 85.00% Impervious, Inflow Depth > 2.78" for 10-yr event
Inflow = 17.51 cfs @ 7.96 hrs, Volume= 5.592 af
Outflow = 3.59 cfs @ 10.99 hrs, Volume= 3.148 af, Atten= 80%, Lag= 181.5 min
Primary = 3.59 cfs @ 10.99 hrs, Volume= 3.148 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Peak Elev= 145.34' @ 10.99 hrs Surf.Area= 0.516 ac Storage= 2.489 af

Plug-Flow detention time= 447.6 min calculated for 3.144 af (56% of inflow)
Center-of-Mass det. time= 208.4 min (917.3 - 708.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	137.50'	1.072 af	**46.67'W x 482.07'L x 8.00'H Field A** 4.132 af Overall - 1.451 af Embedded = 2.681 af x 40.0% Voids
#2A	139.50'	1.451 af	**ADS_StormTech MC-4500 +Cap** x 590 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 590 Chambers in 5 Rows Cap Storage= +35.7 cf x 2 x 5 rows = 357.0 cf
		2.523 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	137.50'	**2.7" Vert. Orifice/Grate X 2.00** C= 0.600
#2	Primary	145.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=3.59 cfs @ 10.99 hrs HW=145.34' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 1.06 cfs @ 13.38 fps)
└**2=Sharp-Crested Rectangular Weir** (Weir Controls 2.52 cfs @ 1.90 fps)

Pond 3P: Underground Chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-4500 +Cap (ADS StormTech® MC-4500 with cap volume)
Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
Cap Storage= +35.7 cf x 2 x 5 rows = 357.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

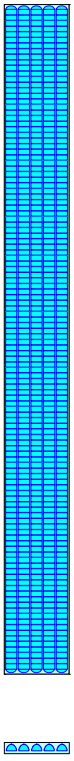
118 Chambers/Row x 4.02' Long +2.56' Cap Length x 2 = 480.07' Row Length +12.0" End Stone x 2 = 482.07' Base Length
5 Rows x 100.0" Wide + 9.0" Spacing x 4 + 12.0" Side Stone x 2 = 46.67' Base Width
24.0" Base + 60.0" Chamber Height + 12.0" Cover = 8.00' Field Height

590 Chambers x 106.5 cf + 35.7 cf Cap Volume x 2 x 5 Rows = 63,186.4 cf Chamber Storage

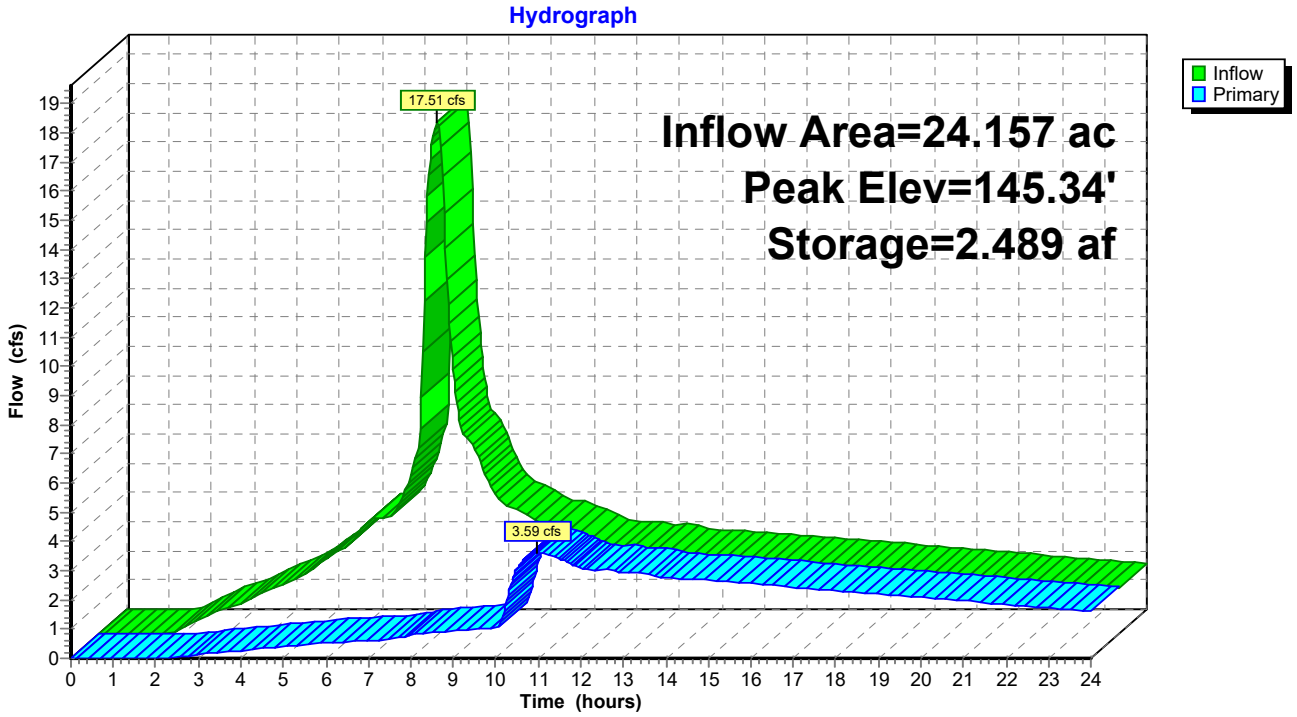
179,971.6 cf Field - 63,186.4 cf Chambers = 116,785.2 cf Stone x 40.0% Voids = 46,714.1 cf Stone Storage

Chamber Storage + Stone Storage = 109,900.4 cf = 2.523 af
Overall Storage Efficiency = 61.1%
Overall System Size = 482.07' x 46.67' x 8.00'

590 Chambers
6,665.6 cy Field
4,325.4 cy Stone



Pond 3P: Underground Chambers



Summary for Subcatchment 1S: Pre-Dev

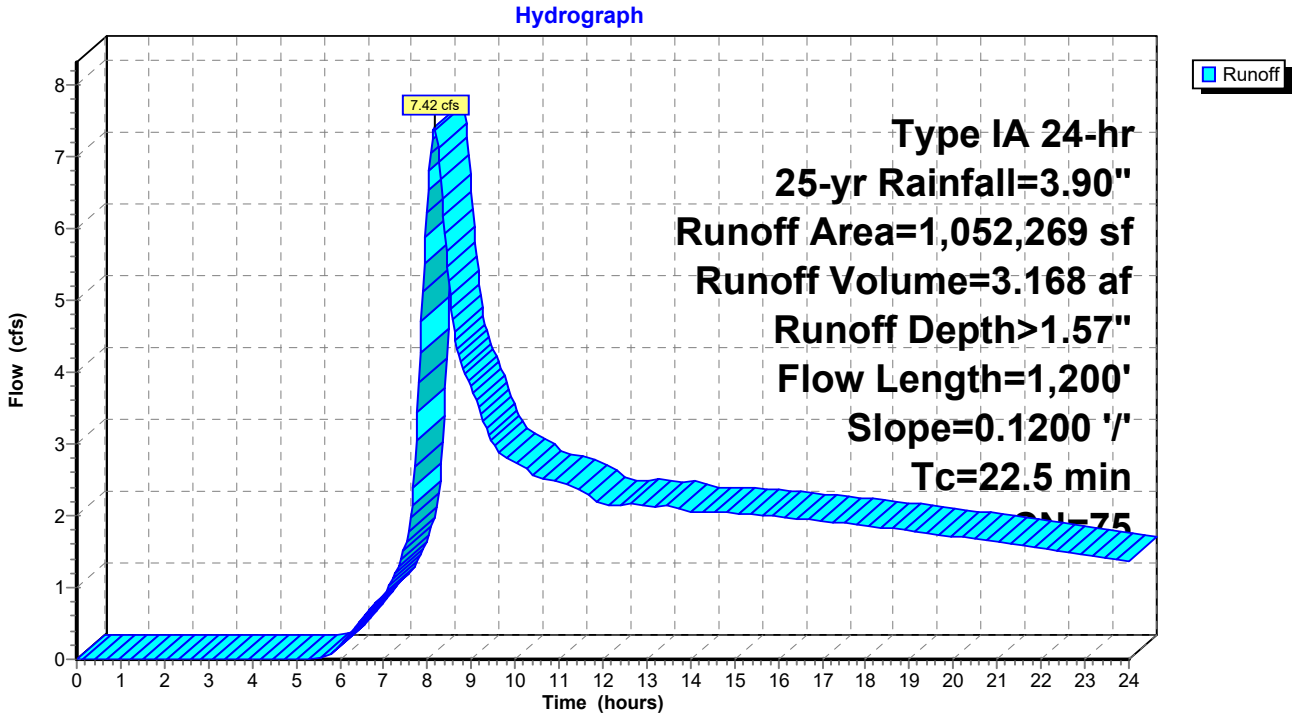
Runoff = 7.42 cfs @ 8.16 hrs, Volume= 3.168 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Type IA 24-hr 25-yr Rainfall=3.90"

	Area (sf)	CN	Description
*	1,052,269	75	Pre-Developed Area
	1,052,269		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	100	0.1200	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
10.6	1,100	0.1200	1.73		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
22.5	1,200	Total			

Subcatchment 1S: Pre-Dev



Summary for Pond 3P: Underground Chambers

Inflow Area = 24.157 ac, 85.00% Impervious, Inflow Depth > 3.22" for 25-yr event
Inflow = 20.25 cfs @ 7.96 hrs, Volume= 6.475 af
Outflow = 5.34 cfs @ 9.40 hrs, Volume= 4.024 af, Atten= 74%, Lag= 86.3 min
Primary = 5.34 cfs @ 9.40 hrs, Volume= 4.024 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Peak Elev= 145.48' @ 9.40 hrs Surf.Area= 0.516 ac Storage= 2.519 af

Plug-Flow detention time= 394.1 min calculated for 4.024 af (62% of inflow)
Center-of-Mass det. time= 177.4 min (880.0 - 702.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	137.50'	1.072 af	**46.67'W x 482.07'L x 8.00'H Field A** 4.132 af Overall - 1.451 af Embedded = 2.681 af x 40.0% Voids
#2A	139.50'	1.451 af	**ADS_StormTech MC-4500 +Cap** x 590 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 590 Chambers in 5 Rows Cap Storage= +35.7 cf x 2 x 5 rows = 357.0 cf
		2.523 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	137.50'	**2.7" Vert. Orifice/Grate X 2.00** C= 0.600
#2	Primary	145.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=5.33 cfs @ 9.40 hrs HW=145.48' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 1.07 cfs @ 13.51 fps)
└**2=Sharp-Crested Rectangular Weir** (Weir Controls 4.26 cfs @ 2.27 fps)

Pond 3P: Underground Chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-4500 +Cap (ADS StormTech® MC-4500 with cap volume)
Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
Cap Storage= +35.7 cf x 2 x 5 rows = 357.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

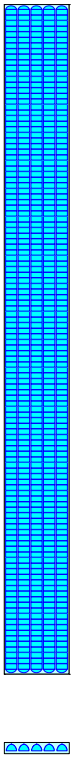
118 Chambers/Row x 4.02' Long +2.56' Cap Length x 2 = 480.07' Row Length +12.0" End Stone x 2 = 482.07' Base Length
5 Rows x 100.0" Wide + 9.0" Spacing x 4 + 12.0" Side Stone x 2 = 46.67' Base Width
24.0" Base + 60.0" Chamber Height + 12.0" Cover = 8.00' Field Height

590 Chambers x 106.5 cf + 35.7 cf Cap Volume x 2 x 5 Rows = 63,186.4 cf Chamber Storage

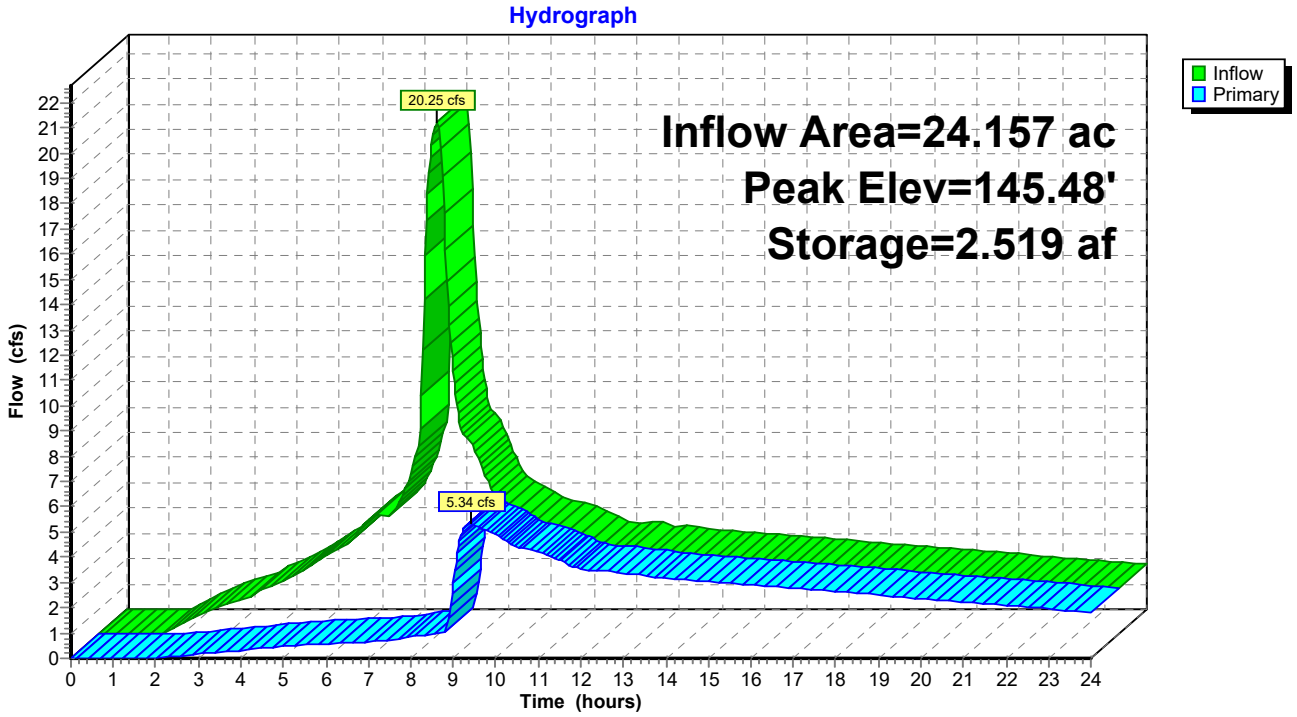
179,971.6 cf Field - 63,186.4 cf Chambers = 116,785.2 cf Stone x 40.0% Voids = 46,714.1 cf Stone Storage

Chamber Storage + Stone Storage = 109,900.4 cf = 2.523 af
Overall Storage Efficiency = 61.1%
Overall System Size = 482.07' x 46.67' x 8.00'

590 Chambers
6,665.6 cy Field
4,325.4 cy Stone



Pond 3P: Underground Chambers



B. **Water Quality Treatment Sizing Calculations**

VLMK ENGINEERING + DESIGN

Project: TLP Job #: 20190311 By: Init's Date: XX-XX-XX Sheet #:

Water Quality Calculations

Based on the CWS December 2019 Design and Construction Standards

Treat Using Contech StormFilter Units:
Each Cartridge Treats 22.5 gpm (0.05 cfs)

SOUTH BASIN 442,124 sf of Impervious Surface Area

Water Quality Volume (V_{wq}):

V_{wq} = Impervious Area • 0.36"

V_{wq} = 442,124 sf • 0.36 in • 1/12 ft/in

V_{wq} = 13,264 cf

Water Quality Flowrate (Q_{wq}):

$Q_{wq} = V_{wq} / Time$ Time = 4 hours

Q_{wq} = 0.921 cfs < 0.950 cfs

Use Nineteen Cartridge Catch Basin Unit(s)

Water Quality Requirements Met

VLMK ENGINEERING + DESIGN

Project: TLP | Job #: 20190311 | By: Init's | Date: XX-XX-XX | Sheet #:

Water Quality Calculations

Based on the CWS December 2019 Design and Construction Standards

Treat Using Contech StormFilter Units:
Each Cartridge Treats 22.5 gpm (0.05 cfs)

NORTH BASIN 486,653 sf of Impervious Surface Area

Water Quality Volume (V_{wq}):

V_{wq} = Impervious Area • 0.36"

V_{wq} = 486,653 sf • 0.36 in • 1/12 ft/in

V_{wq} = 14,600 cf

Water Quality Flowrate (Q_{wq}):

$Q_{wq} = V_{wq} / Time$ Time = 4 hours

Q_{wq} = 1.014 cfs < 1.050 cfs

Use Twenty-one Cartridge Catch Basin Unit(s)

Water Quality Requirements Met

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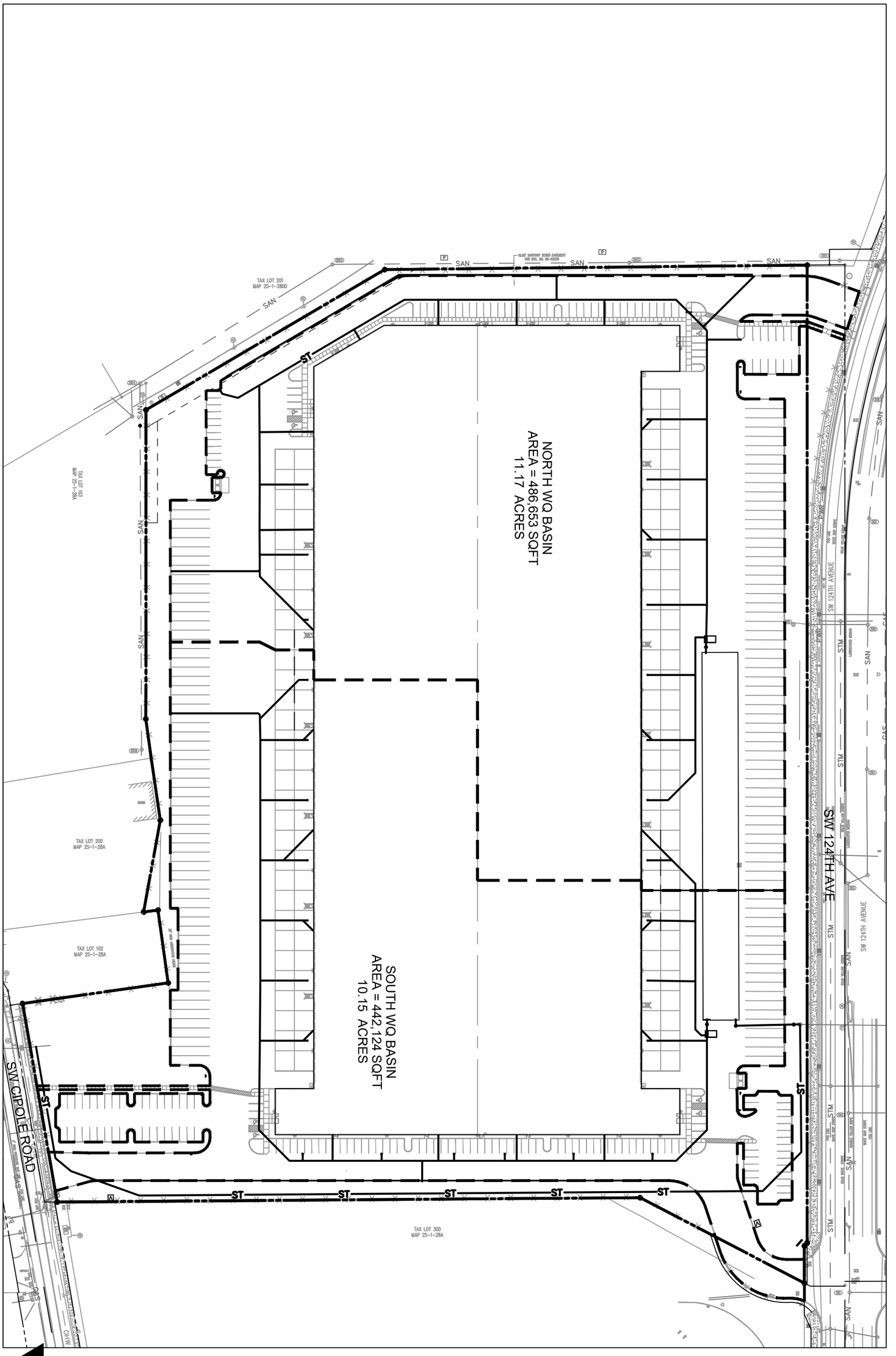


TUALATIN LOGISTICS PARK

SW 124TH AVE, TUALATIN OREGON

SCALE: AS NOTED
DATE:
PROJ. NO.: 20190311
DRAWN:
CHECKED:

VLMK ENGINEERING + DESIGN

3933 S Kelly Avenue
Portland, Oregon 97239
503.222.4453
VLMK.COM

February 4, 2022

ERIN ENGMAN

City of Tualatin, Planning
18880 SW Martinazzi Avenue
Tualatin, OR 97062

Re: 2nd Request to extend the 120-day Review period and request to schedule the AR Hearing
Project: Tualatin Logistics Park: AR21-0011

Erin:

Specht Development, VLMK Engineering + Design and Lancaster-Mobley are continuing to engage with City of Tualatin Staff to resolve outstanding issues related to Site Access, Traffic Impact Assessment and Stormwater disposal. We have made progress on the Site Access issue and feel that we are close to a resolution on this issue. We have yet to receive input from Washington County regarding their review of the revised Traffic Impact Analysis that we provided back in Dec. 2021. We are also looking at other alternatives for stormwater disposal from the site to satisfy Tualatin and CWS requirements.

Thank you for reviewing the possibility of now scheduling the AR Hearing for this project. The entire team feels that we can reach agreement on many of the issues or have Staff write Conditions of Approval that will allow this project to complete the AR process. We are asking that you schedule the AR Hearing for Wednesday, March 9th, 2022.

The initial 120-review period (set by ORS 227.178(5) was previously extended by 21 days to February 12, 2021. We agree to extend the Review Period by another 30-days to March 14, 2022.

As noted in previous correspondence, we are wanting to begin Construction as soon as possible, preferably in July, 2022. We will continue to work with Staff to reach agreement on the outstanding issues as quickly as possible.

We look forward to reaching agreement on the outstanding issues resulting in a TLP Project that City of Tualatin Staff can support in their report to the Architectural Review board. Please give me a call if you have any question at 503-222-4453.

Sincerely,
VLMK Engineering + Design

HAVLIN G. KEMP
Principal

November 10, 2021

ERIN ENGMAN

City of Tualatin, Planning
18880 SW Martinazzi Avenue
Tualatin, OR 97062

Re: Request to cancel scheduled AR Hearing and extend the 120-day Review period
Project: Tualatin Logistics Park: AR21-0011

Erin:

Specht Development, VLMK Engineering + Design and Lancaster-Mobley are all actively engaging with City of Tualatin Staff to resolve outstanding issues related to Site Access, Traffic Impact Assessment and Stormwater disposal. These issues are taking longer than hoped to resolve and therefore, we are requesting that the planned AR Hearing date be cancelled and the 120-Review period be extended.

We are requesting that the 120-review period (set by ORS 227.178(5) be extended by 21 days. This will result in a 141-day review period ending 21 days after Jan. 22, 2022 and will now be ending on February 12, 2021.

We are requesting the current Hearing date of Nov. 17, 2021 be cancelled. As noted, we are working with Tualatin Staff to resolve the outstanding issues as quickly as possible. Time is of the essence and we are wanting to begin Construction as soon as possible, preferably in July, 2022. We will continue to work with Staff to reach agreement on the outstanding issues as quickly as possible. We ask that a new AR Hearing date be scheduled as soon as possible.

We look forward to reaching agreement on the outstanding issues and ending up with a TLP Project that City of Tualatin Staff can support in their report to the Architectural Review board. Please give me a call if you have any question at 503-222-4453.

Sincerely,
VLMK Engineering + Design

HAVLIN G. KEMP
Principal

September 24, 2021

ERIN ENGMAN

City of Tualatin
10699 SW Herman Road
Tualatin, Oregon 97062

Re: Completeness Review Response
Project: Tualatin Logistics Park

Dear Erin:

The following are in response to your August 27, 2021 Incompleteness Letter for the Tualatin Logistics Park:

1. The proposed driveway at the southeast corner of the site has been removed from the project, thus eliminating development on Tax lot 300. No private access easement nor any tree removal are being proposed on the lot to the south of this development. This driveway was going to be very steep due to the grade difference between SW 124th at the intersection of SW Cimino and the new grade of the proposed site. This grade difference did not allow for a common access driveway for this proposed site and the property to the south. Consequently, this driveway has been removed from the proposed project. The Site drawings have been updated for this change and the Traffic Study has also been modified for this change.

2. Service Provider Letter from Clean Water Services: The Service Provider Letter has been issued by CWS and is included with the resubmitted documents with this letter.

We are providing you with the required documents in response to the two Incompleteness Items and ask that you deem this application COMPLETE and move forward with your review of the Architectural Review documents. Our team will continue to work with you, Mike McCarthy and Hayden Ausland during the City of Tualatin review period to get to an approvable project with a minimum of Conditions of Approval.

Thank you for your assistance on this project and we look forward to working with you toward completion of the project. If you have any questions please call me at 503-222-4453 or at havlin@vlmk.com.

Sincerely,
VLMK Engineering + Design

HAVLIN G. KEMP
Principal

Attachments:

1. Revised AR Drawings Set 9-24-21
2. Revised Project Narrative 9-24-21
3. Revised TIS Letter
4. CWS SPL 21-002052

CITY OF
TUALATIN
Planning Division

Land Use Application

Project Information		
Project Title: Tualatin Logistics Park (TLP)		
Brief Description: Proposed development of a multi-tenant distribution warehouse of approximately 455,000sft and associated site work.		
Property Information		
Address: SW 124th Ave and SW Cimino Street		
Assessor's Map Number and Tax Lots: 2S128A 000100		
Applicant/Primary Contact		
Name: Amy Tallent	Company Name: VLMK Engineering + Design	
Address: 3933 S Kelly Ave		
City: Portland	State: OR	ZIP: 97239
Phone: 503-222-4453	Email: amyt@vlmk.com	
Property Owner		
Name: Fore-Sight Balboa, L.L.C. - Charlie Johnson		
Address: ~~22691 sw 55th Avenue~~		
City: Tualatin	State: OR	ZIP: 97062
Phone: ~~503-799-4458~~	Email: cj1@sterling.net	
Property Owner's Signature:		Date: 7-30-21

(Note: Letter of authorization is required if not signed by owner)

AS THE PERSON RESPONSIBLE FOR THIS APPLICATION, I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND STATE THAT THE INFORMATION IN AND INCLUDED WITH THIS APPLICATION IN ITS ENTIRETY IS CORRECT. I AGREE TO COMPLY WITH ALL APPLICABLE CITY AND COUNTY ORDINANCES AND STATE LAWS REGARDING BUILDING CONSTRUCTION AND LAND USE.

Applicant's Signature:	Date: 7/30/21

Land Use Application Type:

- ☐ Annexation (ANN)
- ■ Architectural Review (AR)
- ☐ Architectural Review—Single Family (ARSF)
- ☐ Architectural Review—ADU (ARADU)
- ☐ Conditional Use (CUP)
- ☐ Historic Landmark (HIST)
- ☐ Industrial Master Plan (IMP)
- ☐ Plan Map Amendment (PMA)
- ☐ Plan Text Amendment (PTA)
- ☐ Tree Removal/Review (TCP)
- ☐ Minor Architectural Review (MAR)
- ☐ Minor Variance (MVAR)
- ☐ Sign Variance (SVAR)
- ☐ Variance (VAR)

Office Use		
Case No:	Date Received:	Received by:
Fee:	Receipt No:	

City of Tualatin
www.tualatinoregon.gov

Hydraulic Modeling Fee

Water supply modeling is necessary for larger projects to determine the impact of the project's water demand on the water supply system. Water supply modeling will be performed by a consulting engineer based on the most recent version of the Tualatin Water System Master Plan.

Due to possible impacts to the water supply system, the following projects in Tualatin require hydraulic modeling based on the size and type of the project and projected water use for the finished project. The outcome of modeling could require offsite improvements to the water supply system in order to ensure that adequate water supply is available to serve the project and reduce impacts to the overall system.

Hydraulic modeling of the water supply system is required for the following project type/sizes/demand:

Project Type	Criteria	Permit Fee
Commercial or Industrial Building	Building floor area greater than 48,300 square feet **or** Anticipated daily water demand greater than 870 gallons per acre per day	$ 300 per building
Residential development	More than 49 dwelling units	$ 1,000
Multi-family development	More than 49 dwelling units **or** a combined building floor area greater than 48,300 square feet	$ 300 per building

Please complete this form and submit the form and required fee (if applicable) with your land-use application (architectural review, subdivision, etc.).

☒ Commercial or Industrial Development

- Building floor area 455,800 square feet
- Anticipated water demand (if known) _____ gallons per day
- Described planned building use Multi-tenant distribution warehouse

☐ Residential Development

- Number of dwelling units or single family home lots _____

☐ Multi-Family Residential Development

- Number of dwelling units_____
- Building floor area (sum of all building) _____
- Number of multi-family buildings_____

Permit fee required based on the information provided above $_____

- If no fee is required, enter $0.

NOTE: Water Supply Modeling does not replace the requirement for fire hydrant flow testing. Flow testing of fire hydrants will still be required to verify adequate fire flow of finished system

CERTIFICATION OF SIGN POSTING

The applicant must provide and post a sign pursuant to Tualatin Development Code (TDC 32.150). The block around the word "NOTICE" must remain yellow composed of the RGB color values Red 255, Green 255, and Blue 0. A template is available at:
https://www.tualatinoregon.gov/planning/land-use-application-sign-templates

NOTE: For larger projects, the Community Development Department may require the posting of additional signs in conspicuous locations.

As the applicant for the Tualatin Logistic Park project, I hereby certify that on this day, August 6th 2021 sign(s) was/were posted on the subject property in accordance with the requirements of the Tualatin Development Code and the Community Development Division.

Applicant's Name: Amy Tallent
(Please Print)

Applicant's Signature: Amy Tallent

Date: 8-6-21

Clean Water Services
Our commitment is clear.

CWS File Number
21-002052

Service Provider Letter

This form and the attached conditions will serve as your Service Provider Letter in accordance with Clean Water Services Design and Construction Standards (R&O 19-5, as amended by R&O 19-22).

Jurisdiction:	City of Tualatin	**Review Type:**	Tier 2 Analysis
Site Address / Location:	20400 SW Cipole RD Tualatin, OR 97062	**SPL Issue Date:** **SPL Expiration Date:**	August 31, 2021 August 31, 2023

Applicant Information:		**Owner Information:**	
Name	JACK DALTON	Name	PETER SKEI
Company	ENVIRONMENTAL SCIENCE & ASSESSMENT	Company	SPECHT DEVELOPMENT INC
Address	4831 NE FREMONT ST SUITE 2B PORTLAND OR 97213	Address	10260 SW GREENBURG RD SUITE 170 PORTLAND OR 97223
Phone/Fax	(503) 478-0424	Phone/Fax	(503) 320-9201
E-mail:	jack@esapdx.com	E-mail:	pskei@specht prop.com

Tax lot ID	**Development Activity**
2S128A000100	Tualatin Logistics Park Industrial Development

Pre-Development Site Conditions:		**Post Development Site Conditions:**	
Sensitive Area Present:	[X] On-Site [ ] Off-Site	Sensitive Area Present:	[ ] On-Site [ ] Off-Site
Vegetated Corridor Width:	25	Vegetated Corridor Width:	0
Vegetated Corridor Condition:	Marginal/Degraded		

Enhancement of Remaining Vegetated Corridor Required: [ ]

Square Footage to be enhanced:

Encroachments into Pre-Development Vegetated Corridor:

Type and location of Encroachment:	Square Footage:
Building, Parking (Permanent Encroachment; Mitigation Required)	51,609

Mitigation Requirements:

Type/Location	Sq. Ft./Ratio/Cost
Per R&O 13-12, VC Mitigation Requirement met Through Wetland Mitigation Bank Credit Purchase	51,609

[X] Conditions Attached [X] Development Figures Attached (2) [ ] Planting Plan Attached [ ] Geotech Report Required

This Service Provider Letter does NOT eliminate the need to evaluate and protect water quality sensitive areas if they are subsequently discovered on your property.

In order to comply with Clean Water Services water quality protection requirements the project must comply with the following conditions:

1. **Prior to any activity within the sensitive area, the applicant shall gain authorization for the project from the Oregon Department of State Lands (DSL) and US Army Corps of Engineers (USACE). The applicant shall provide Clean Water Services or its designee (appropriate city) with copies of all DSL and USACE project authorization permits.**
2. An approved Oregon Department of Forestry Notification is required for one or more trees harvested for sale, trade, or barter, on any non-federal lands within the State of Oregon.
3. Prior to any ground disturbing activities, an erosion control permit is required. Appropriate Best Management Practices (BMP's) for Erosion Control, in accordance with Clean Water Services' Erosion Prevention and Sediment Control Planning and Design Manual, shall be used prior to, during, and following earth disturbing activities.
4. Prior to construction, a Stormwater Connection Permit from Clean Water Services or its designee is required pursuant to Ordinance 27, Section 4.B.
5. Removal of native, woody vegetation shall be limited to the greatest extent practicable.
6. **Should final development plans differ significantly from those submitted for review by Clean Water Services, the applicant shall provide updated drawings, and if necessary, obtain a revised Service Provider Letter.**

This Service Provider Letter is not valid unless CWS-approved site plan is attached.

Please call (503) 681-3667 with any questions.

Stacy Benjamin

Stacy Benjamin
Environmental Plan Review

Attachments (2)

CWS FILE NO. 21-002052
Approved
Clean Water Services
FOR ENVIRONMENTAL REVIEW
By SNB Date 8/31/2021
SPL ATTACHMENT 1 OF 2

Figure 3b

Figure 3a

TAX LOT 201
MAP 2S-1-28DD

TAX LOT 104
MAP 2S-1-28A

TAX LOT 103
MAP 2S-1-28A

TAX LOT 200
MAP 2S-1-28A

TAX LOT 102
MAP 2S-1-28A

TAX LOT 100
MAP 2S-1-28A

TAX LOT 300
MAP 2S-1-28A

WETLAND C, 573 SF

VEGETAED CORRIDOR, 12,201 SF

WETLAND B, 3,730 SF

WETLAND A
16,144 SF

VEGETAED CORRIDOR, 20,341 SF

VEGETAED CORRIDOR, 19,067 SF

WETLAND
SWALE
3,247 SF

SW CIPOLE ROAD

SW 124TH AVENUE

SW CIMINO STREET

BARN

PUMP HOUSE

ONE STORY CLUB HOUSE

IRRIGATION PUMP

CISTERN

RETAINING WALL

25' HIGH ARBORVITAE HEDGE

ASPHALT PATH

17" CULVERT

36" CULVERT

12" CULVERT

Study Area Boundary, 24.1 Acres

Vegetated Corridor Area: 51,609 SF
Marginal: 20,341 SF
Degraded: 31,268 SF

Total Wetland Area: 23,694 SF

N

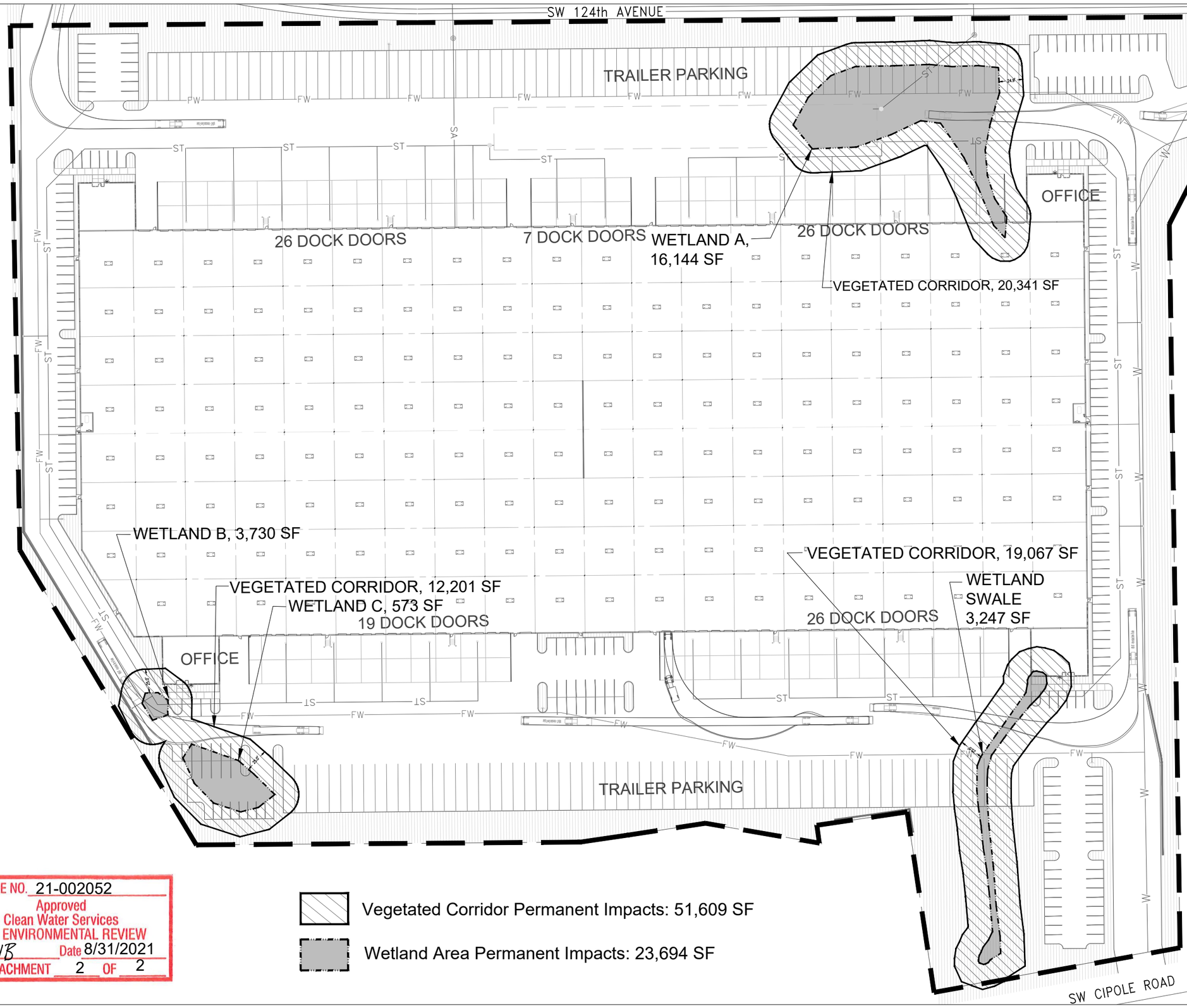
0 60 120

Fig. 3

Existing Conditions Map
Tualatin Logistics Park
Tualatin, Oregon

Base Map Source: Northwest Surveying, Inc.
Mod. By: KR
Date: 5/21
Job: 21016
Rev: 00/00

Environmental Science & Assessment, LLC
4831 NE Fremont St., Suite 2B
Portland, OR 97213
Phone: 503.478.0424
www.esapdx.com



CWS FILE NO. 21-002052
Approved
Clean Water Services
FOR ENVIRONMENTAL REVIEW
By SNB Date 8/31/2021
SPL ATTACHMENT 2 OF 2

Vegetated Corridor Permanent Impacts: 51,609 SF

Wetland Area Permanent Impacts: 23,694 SF

N

1"=120'

0 50 100

4831 NE Fremont St.,
Suite 2B
Portland, OR 97213
Phone: 503.478.0424
www.esapdx.com

Environmental
Science &
Assessment, LLC

Site Plan Map
Tualatin Logistics Park
Tualatin, Oregon

Base Map Source:
VLMK
Engineering &
Design

Mod. By:	KR
Date:	7/21
Job:	21016
Rev:	00/00

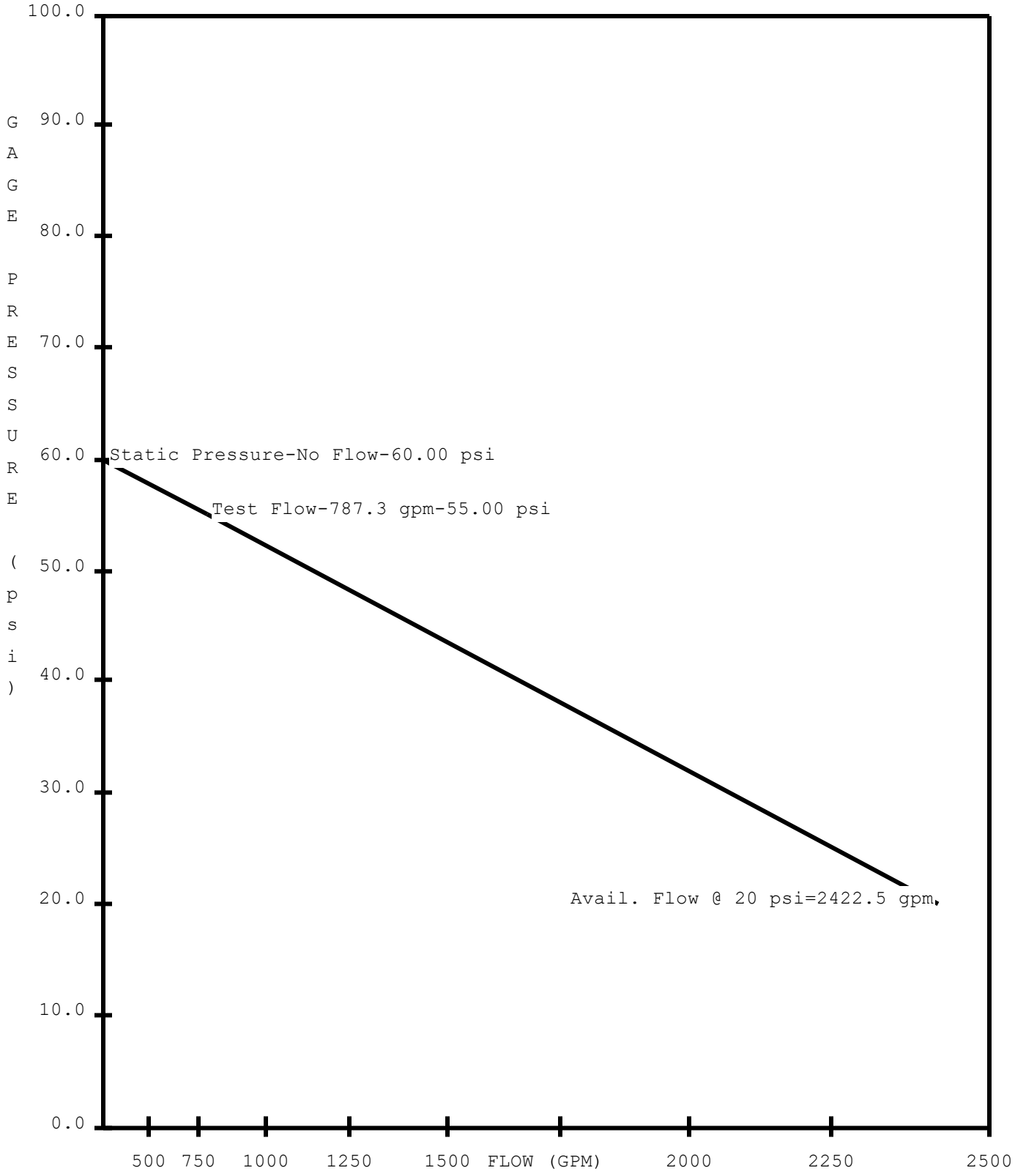
Fig. 4

FLOW TEST SUMMARY REPORT

LOCATION:20400 SW Cipole Rd.
Tualatin, OR 97062

DATE: 8.19.2021
TIME: 6:00 am

Static Hydrant Number:	1	Flowing Hydrant Number:	2
Elevation:	3	Elevation:	3
Dist. Between Hydrants:	250		
Diameter of Main:	8		
Outlet Diameter:	2.50 in	Number flowing: 1 Coeff.:	0.90
Static pressure:	60.00 psi	Residual pressure:	55.00 psi
Pitot Reading:	N/A	Flow:	787.3 gpm
Flow at 20 psi:	2422.5 gpm		


100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
GAGE PRESSURE (psi)
Static Pressure-No Flow-60.00 psi
Test Flow-787.3 gpm-55.00 psi
Avail. Flow @ 20 psi=2422.5 gpm
500
750
1000
1250
1500
FLOW (GPM)
2000
2250
2500

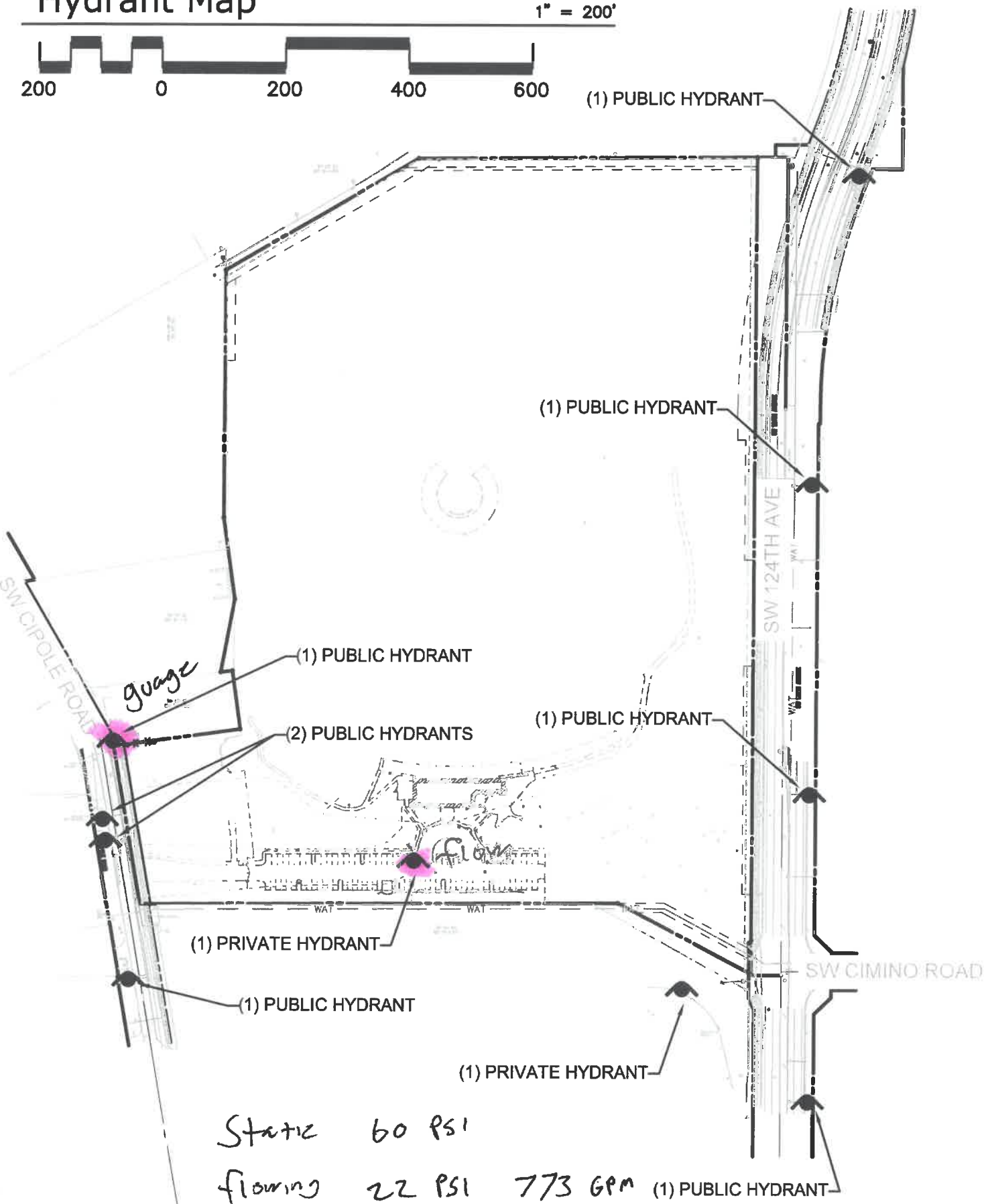
NOTES:

(1) Flowing hydrant is assumed to be on a circulating main or downstream of the pressure test hydrant on a dead-end system.
(2) Flow analysis assumes a gravity flow system with no distribution pumps and having no demand, other than the test flow.
(3) Distance between hydrants, elevations & main diameter are for information only.
(4) Dashed lines on flow curves represent extrapolated values not confirmed by flow test.

Hydrant Map

1" = 200'

200 0 200 400 600



Static 60 PSI

flowing 22 PSI 773 GPM

residual 55 PSI

250 feet apart

REPUBLIC SERVICES

10295 Southwest Ridder Road Wilsonville, OR 97070
o 503.570.0626 f 503.582.9307 republicservices.com

Date August 10, 2021

Amy Tallent

Re: Tualatin Logistics Park
20400 SW Cipole Rd.
Tualatin, OR 97062

Dear Amy,

Thank you, for sending us the preliminary site plans for this proposed development in Tualatin.

My Company: Republic Services of Clackamas and Washington Counties has the franchise agreement to service this area with the City of Tualatin. We will provide complete commercial waste removal and recycling services as needed on a weekly basis for this location

Review of the site access and traffic flow pattern for our vehicles is satisfactory. Dimensions of the trash and recycle enclosures or 20' x 12' will provide room for our equipment. Double gates with NO center post that open 180 degrees and are equipped with wind pins that are operational in the open and closed position is adequate. The truck approach to the enclosures for pull-out service is satisfactory. A straight on truck approach as shown in the traffic pattern design plan appears satisfactory but is contingent on facility traffic and facility equipment storage and parking.

Thanks Amy, for your help and concerns for our services prior to this project being developed.

Sincerely,

Kelly Herrod
Operations Supervisor
Republic Services Inc.

First American Title Insurance Company
National Commercial Services
200 SW Market Street, Suite 250
Portland, Oregon 97201

Escrow Officer: **Connie Haan**
Phone: **(503)790-7852**
Fax: **(866)678-0591**
E-mail **chaan@firstam.com**

Title Officer: **Steve Manome**
Phone: **(503)219-8742**
Fax: **(866)678-0591**
E-mail **smanome@firstam.com**

File No: **NCS-961894-OR1**

File No: **NCS-961894-OR1**

REPORT NO. 2
PRELIMINARY TITLE REPORT

ALTA Owners Standard Coverage	Liability	$	Premium	$
ALTA Owners Extended Coverage	Liability	$	Premium	$
ALTA Lenders Standard Coverage	Liability	$	Premium	$
ALTA Lenders Extended Coverage	Liability	$	Premium	$
ALTA Leasehold Standard Coverage	Liability	$	Premium	$
ALTA Leasehold Extended Coverage	Liability	$	Premium	$
Endorsements	Liability	$	Premium	$
Govt Service Charge			Cost	$
Other				$

We are prepared to issue Title Insurance Policy or Policies in the form and amount shown above, insuring title to the following described land:

The land referred to in this report is described in Exhibit "A" attached hereto.

and as of 04/01/2021 at 8:00 a.m., title to the fee simple estate is vested in:

Fore-Sight Balboa, LLC, an Oregon limited liability company

Subject to the exceptions, exclusions, and stipulations which are ordinarily part of such Policy form and the following:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.

3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.

5. Any lien, or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

The exceptions to coverage 1-5 inclusive as set forth above will remain on any subsequently issued Standard Coverage Title Insurance Policy.

In order to remove these exceptions to coverage in the issuance of an Extended Coverage Policy the following items are required to be furnished to the Company; additional exceptions to coverage may be added upon review of such information:

A. Survey or alternative acceptable to the company
B. Affidavit regarding possession
C. Proof that there is no new construction or remodeling of any improvement located on the premises. In the event of new construction or remodeling the following is required:
   i. Satisfactory evidence that no construction liens will be filed; or
   ii. Adequate security to protect against actual or potential construction liens;
   iii. Payment of additional premiums as required by the Industry Rate Filing approved by the Insurance Division of the State of Oregon

6. City liens, if any, for the city of Tualatin.

   Note: An inquiry has NOT been made concerning the actual status of such liens. A fee of $25.00 will be charged per tax account each time an inquiry request is made.

7. These premises are within the boundaries of the Clean Water District and are subject to the levies and assessments thereof.

8. An easement created by instrument, including the terms and provisions thereof; Recorded : September 10, 1991 as Fee No. 91050054
   Favor of : City of Tualatin, Oregon, an Oregon municipal corporation
   For : A water line
   Affects : As described therein

9. Easement Agreement, including the terms and provisions thereof, Recorded : March 8, 1994 as Fee No. 94022216
   Affects: As described therein

10. An easement reserved in a deed, including the terms and provisions thereof;
Recorded : March 8, 1994 as Fee No. 94022535
For : utilities
Affects : As described therein

11. The terms and provisions contained in the document entitled "Street Improvement Agreement" recorded June 27, 1994 as Fee No. 94061206 of Official Records.

12. Restrictive Covenant, pertaining to Non-Access Reserve Strip, including the terms and provisions thereof
Recorded : August 29, 1994 as Fee No. 94079309

13. Restrictive Covenant to Waive Remonstrance, pertaining to Street Improvement, including the terms and provisions thereof
Recorded : August 29, 1994 as Fee No. 94079310

14. An easement for slopes and incidental purposes, recorded April 6, 1995 as Fee No. 95023329 of Official Records.
In Favor of: City of Tualatin
Affects: as described therein

15. An easement for sanitary sewer and incidental purposes, recorded April 6, 1995 as Fee No. 95023330 of Official Records.
In Favor of: City of Tualatin
Affects: as described therein

16. An easement for storm drain and incidental purposes, recorded April 6, 1995 as Fee No. 95023331 of Official Records.
In Favor of: City of Tualatin
Affects: as described therein

17. An easement for storm drain and incidental purposes, recorded April 6, 1995 as Fee No. 95023332 of Official Records.
In Favor of: City of Tualatin
Affects: as described therein

18. An easement for sanitary sewer line and water line and incidental purposes, recorded July 9, 1996 as Fee No. 96061519 of Official Records.
In Favor of: City of Tualatin
Affects: as described therein

19. An easement for slopes and utilities and incidental purposes, recorded December 29, 2006 as Fee No. 2006-152665 and Fee No. 2006-152666 of Official Records.
In Favor of: City of Tualatin
Affects: as described therein

20. This item has been intentionally deleted.

21. Evidence of the authority of the individual(s) to execute the forthcoming document for Fore-Sight Balboa, LLC, an Oregon limited liability company, copies of the current operating agreement should be submitted prior to closing.

22. Title to vest in an incoming owner whose name is not disclosed. Such name must be furnished to us so that a name search may be made.

23. Unrecorded leaseholds, if any, rights of vendors and security agreement on personal property and rights of tenants, and secured parties to remove trade fixtures at the expiration of the term.

-END OF EXCEPTIONS-

INFORMATIONAL NOTES

NOTE: This report does not include a search for Financing Statements filed in the office of the Secretary of State, or in a county other than the county wherein the premises are situated, and no liability is assumed if a Financing Statement is filed in the office of the County Clerk (Recorder) covering fixtures on the premises wherein the lands are described other than by metes and bounds or under the rectangular survey system or by recorded lot and book.

NOTE: Washington County Ordinance No. 267, filed August 5, 1982 in Washington County, Oregon, imposes a tax of $1.00 per thousand or fraction thereof on the transfer of real property located within Washington County.

NOTE: Taxes for the year 2020-2021, paid in full.

Tax Amount:	$69,373.16
Code No.:	88.15
Map & Tax Lot No.	2S128A-00100
Property ID/Key No.	R547153

THANK YOU FOR CHOOSING FIRST AMERICAN TITLE
WE KNOW YOU HAVE A CHOICE!

First American Title Insurance Company of Oregon

SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
(i) the occupancy, use, or enjoyment of the Land;
(ii) the character, dimensions, or location of any improvement erected on the Land;
(iii) the subdivision of land; or
(iv) environmental protection;
or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
(a) created, suffered, assumed, or agreed to by the Insured Claimant;
(b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
(c) resulting in no loss or damage to the Insured Claimant;
(d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
(e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors? rights laws, that the transaction creating the lien of the Insured Mortgage, is
(a) a fraudulent conveyance or fraudulent transfer, or
(b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

2. American Land Title Association OWNER POLICY - 2006
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
(i) the occupancy, use, or enjoyment of the Land;
(ii) the character, dimensions, or location of any improvement erected on the Land;
(iii) the subdivision of land; or
(iv) environmental protection;
or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
(a) created, suffered, assumed, or agreed to by the Insured Claimant;
(b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
(c) resulting in no loss or damage to the Insured Claimant;
(d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risks 9 and 10); or
(e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors. rights laws, that the transaction vesting the Title as shown in Schedule A, is
(a) a fraudulent conveyance or fraudulent transfer; or
(b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

Exhibit "A"

Real property in the County of Washington , State of Oregon, described as follows:

A parcel of land in the Northeast one-quarter of Section 28, Township 1 South, Range 1 West of the Willamette Meridian, in the City of Tualatin, County of Washington and State of Oregon, more particularly described as follows:

Beginning at the Northeast corner of said Section 28; thence along the East line of Section 28, South 00°43'01" West, 1324.56 feet; thence North 89°45'27" West, 45.01 feet to a 5/8" iron rod with yellow plastic cap inscribed "OTAK, INC."; thence North 61°46'30" West, 248.52 feet to a 5/8" iron rod with yellow plastic cap inscribed "OTAK, INC."; thence North 89°45'27" West, 772.36 feet to a 5/8" iron rod with yellow plastic cap inscribed "OTAK, INC.", said iron rod being 20.00 feet Easterly when measured perpendicular to the centerline of County Road No. 505; thence parallel with the centerline of said County Road and 20.00 feet Easterly therefrom North 09°08'30" West, 259.07 feet to a 5/8" iron rod marking the Southwesterly corner of that certain parcel as described in Document Number 7840849 Washington County Deed Records; thence leaving said parallel line and along the Southerly line of said parcel North 82°26'32" East, 205.84 feet to a 5/8" iron rod marking the Southeasterly corner thereof; thence along the Easterly line of said parcel North 06°47'00" West, 95.35 feet to a 5/8" iron rod marking the Northeasterly corner thereof; thence along the Northerly line of said parcel South 83°27'36" West, 18.78 feet to a 1-1/2" iron pipe marking the Southeasterly corner of that certain parcel as described in Book 161, page 200 Washington County Deed Records; thence along the Easterly line of said parcel North 11°01'08" East, 120.86 feet to a 5/8" iron rod with yellow plastic cap inscribed "Kampe And Assoc., Inc."; thence continuing on said Westerly line North 07°36'03" West, 81.48 feet to a 5/8" iron rod marking the Northeasterly corner thereof; thence North 07°13'19" West, 51.29 feet to a 5/8" iron rod with yellow plastic cap inscribed "OTAK, INC."; thence North 00°43'01" East parallel with the East line of said Section 28, 400.74 feet to a 5/8" iron rod with yellow plastic cap inscribed "OTAK, INC." on the Southeasterly line of that certain 60.00 foot wide access easement as described in Document No. 9012954 Washington County Deed Records; thence along said Southerly line North 60°14'34" East, 359.19 feet to a 5/8" iron rod with yellow plastic cap inscribed "OTAK, INC." in the North line of said Section 28; thence along said North line South 89°52'59" East, 597.08 feet to the point of beginning.

EXCEPTING THEREFROM that portion thereof as described in deeds to the City of Tualatin, recorded July 1, 1994 as Fee No. 94063613 and Fee No. 94063614, also by Deed recorded August 29, 1994 as Fee No. 94079308, also by Deed recorded December 29, 2006, as Fee No. 2006-152665.

NE 1/4 SECTION 28 T S R1W W.M.

WASHINGTON COUNTY OREGON

SCALE 1"=200'

2S 1 28A

SEE MAP 2S 1 21C

SEE MAP 2S 1 21DC

SEE MAP 2S 1 21DD

SEE MAP 2S 1 28B

SEE MAP 2S 1 28BD

SEE MAP 2S 1 28D

SEE MAP 2S 1 27B

1/4 SEC. COR.

44 1/2 RODS (759.00')
41 RODS 13.5 (690.00)
7.35Ch.

S.W. CIPOLE ROAD
(02677B0)

S.W. HERMAN RD.

21 22 28 27

CANCELLED
701,602,500,
301, 101,504,502,
1000,1100,1101,501,
601-C1,300-A1,
1700-A1,505-A1,

900 1.00 Ac.

800 2.31 Ac.

700 2.62Ac.

88-9

1600 2.90 AC.

1500 5.15 AC

600 12.84Ac.

104 4.04 Ac.

100 24.16 AC.

103 3.61Ac.

88-15

(C.S. 25,303)

200 1.34 Ac.

88-9

102 .50 Ac.

603 5.41 Ac.

601 4.77Ac.

88-10

1400 4.98 AC.

1700 6.42 AC

505 2.00 Ac.

300 18.84 Ac.

503 1.74 Ac.

1300 4.90AC.

1800 5.72 AC

1900 4.22AC

400 1.30Ac.

1200 3.84 Ac.

506 1.12 Ac.

EASEMENT 2008-1643

30' PUBLIC EASEMENT COMM. 4 DUR 9PG48

2007-013175

2019-61902 BK 85 PG 233

EASEMENT 95-90645

60' EASEMENT 90-129521

EASEMENT 2001-48360

30' EASEMENT 2003-76013

EASE 2001-48361

EASE 2003-76013

2001-48360

2001-48361

2008-86194

2006-152665

2008-51623

94-63614

91-56458

91-64275

93-74315

94-45181

90-58915

C90-1342CV

RAILROAD

SOUTHERN PACIFIC

EDY ROAD

INDUSTRIAL PLACE

SW WILDROSE

SHERWOOD ROAD

S.W. TUALATIN - SHERWOOD ROAD (C.R.2737)

CIPOLE ROAD

BEGIN C.R. 905

BEGIN 489

VACATED 94-45181

CENTER SEC.

TERM C.R.1070

N.E. OREGON ST.

S.W. DAHLKE LN.

(UNDEVELOPED)

INITIAL PT.

FOR ASSESSMENT PURPOSES ONLY
DO NOT RELY ON FOR ANY OTHER USE

TUALATIN
SHERWOOD
2S 1 28A

TRACED DB
9/11/59

VLMK
ENGINEERING + DESIGN

MEETING NOTES

Neighborhood Meeting Notes
Tualatin Logistics Park
20400 SW Cipole Road

A Neighborhood Meeting was held remotely, via TEAMS, for the proposed Tualatin Logistics Park development at 20400 SW Cipole Road. The meeting started at 6:00pm. The following people were in attendance and their contact information is shown on the attached Sign In Sheet:

1. Havlin G Kemp PE, VLMK Engineering + Design. Meeting Presenter.
2. Amy Tallent, VLMK Engineering + Design
3. Charlie Johnson, Tualatin Island Greens
4. Peter Skei, Specht Development
5. Tyler Reeves, Specht Development
6. John Hagg, Neighbor

Introductions of all attendees were made.

Havlin Kemp noted the Mr. Hagg was attending the meeting by telephone and did not have access to a screen to see the presentation. Mr. Hagg did have a copy of the Proposed Site Plan and was able to follow along with the discussion of the proposed project.

Mr. Kemp noted the new building was to be an approximately 450,000 sft warehouse with driveways to SW 124th at the NE and SE corners of the site. The SE driveway would connect to the intersection of SW 124th and Cimino Street. Another driveway will connect to SW Cipole Road at the SW corner of the site.

The building is being constructed as a multi-tenant building with up to 4 tenants possible.

The Building will have exterior wall heights of 38'-42' in height. However, since the building site is so much lower that the adjacent roads, the top of the wall will only be approx. 14-feet above eye height at the Cimino Street intersection, 27-feet above the NE drive intersection with SW 124th and 22-feet above the SW drive intersection with SW Cipole Road.

Mr. Hagg noted that his property is between SW Cipole Road and this site and noted that he has a large Maple tree and a fence close to the property line. Mr. Kemp noted that the tree and fence should be on the Topographic survey for this project and he will determine is they appear on the project site or if they are, in fact, on Mr. Hagg's property.

Mr. Hagg also noted he has a well approximately 30-feet from the fence. He asked if significant excavation was anticipated near the property line that might affect his well. Mr. Kemp said there may be 4 or 5-feet of excavation near the SE corner of Mr. Hagg's property but not to any depths that might affect the well.

The meeting was then opened for questions:

1. Mr. Hagg if the project had any tenants yet. Mr. Kemp noted that no tenants were known yet but that during the development, permitting and construction of the building shell, it was possible that a tenant or tenants would be identified for the building.

2. Mr. Hagg asked if the building would be in operation 24 hours a day. Mr. Kemp noted that Distribution Centers typically load trucks at night with trucks leaving for deliveries early in the morning and trucks arriving for drop-offs during the day. While trucks may leave early and arrive late in the day, it is not anticipated that there will be truck traffic at night. The truck loading would be contained within the building at night.

Questions Received during the Notice Period:

Only one question was received by VLMK during the notice/posting period:

1. A question was asked by email whether Tualatin Island Greens would exist after this development was completed. Mr. Kemp responded to the email by noting that the entire Tualatin Island Greens site is required for this development and no, Tualatin Island Greens would not exist if this development moves forward to completion.

Mr. Kemp concluded the meeting by noting that the neighbors to this site would receive notices from the City of Tualatin of pending Land Use action on this project when the project has been submitted for Architectural Review.

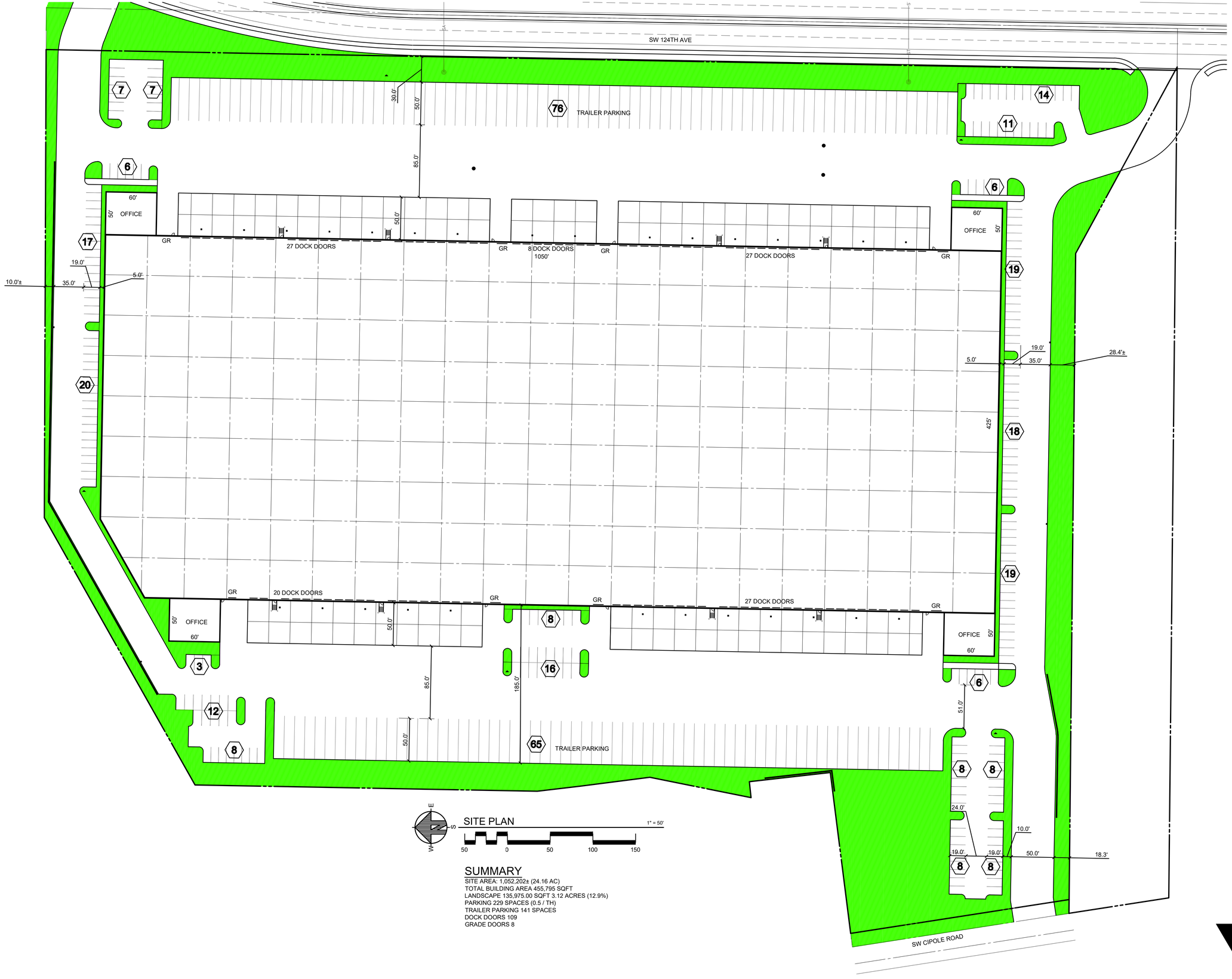
The meeting concluded at 6:43pm.

Submitted by:
VLMK Engineering + Design

Havlin G. Kemp PE
Principal

Enclosures:

1. Proposed Site Plan
2. Sign In Sheet



SITE PLAN 1" = 50'

50 0 50 100 150

SUMMARY

SITE AREA: 1,052,202± (24.16 AC)
TOTAL BUILDING AREA 455,795 SQFT
LANDSCAPE 135,975.00 SQFT 3.12 ACRES (12.9%)
PARKING 229 SPACES (0.5 / TH)
TRAILER PARKING 141 SPACES
DOCK DOORS 109
GRADE DOORS 8

VLMK
ENGINEERING + DESIGN
3933 S Kelly Avenue
Portland, Oregon 97239
503.222.4453
VLMK.COM

SPECHT

PROJECT NAME
TUALATIN
LOGISTICS PARK

SW 124TH AVE AND SW
CIMINO ST
TUALATIN, OREGON 97062

REVISIONS

	DATE	DESCRIPTION

DATE APRIL 2021

SCALE	PROJ. NO.
AS NOTED	20190311
DRAWN	CHECKED
CJM	HGK

SITE PLAN

C1.0

G:\Acad2019\20190311\0-Drawing\00site.dwg4/5/2021 11:05 AM

Neighborhood Meeting Roster for Tualatin Logistics Park

Virtual Meeting June 10, 2021 @ 6:00pm

Name:	Address:	Phone #:	Email address:
Tyler Reeves	10260 SW Greenburg Rd #170 Portland, OR 97223	503-646-2202	treeves@spechtprop.com
Peter Skei Specht Properties	10260 SW Greenburg Rd #170 Portland, OR 97223	503-646-2202	pskei@spechtprop.com
Charlie Johnson	2400 SW Cipole Rd Tualatin, OR 97062	503-691-8400	cj1@sterling.net
Havlin Kemp VLMK Engineers	3933 S Kelly Ave Portland, OR 97239	503-222-4453	havlin@vlmk.com
Amy Tallent VLMK Engineers	3933 S Kelly Ave Portland, OR 97239	503-222-4453	amyt@vlmk.com
John Hagg	20340 SW Cipole Rd Tualatin, OR 97062	503-936-7515	wildgreykitty@gmail.com

AFFIDAVIT OF MAILING NOTICE

STATE OF OREGON)
) SS
COUNTY OF WASHINGTON)

I, Amy Tallent being first duly sworn, depose and say:

That on the 26th day of May, 2021, I served upon the persons shown on Exhibit "A" (Mailing Area List), attached hereto and by this reference incorporated herein, a copy of the Notice of Neighborhood/Developer Meeting marked Exhibit "B," attached hereto and by this reference incorporated herein, by mailing to them a true and correct copy of the original hereof. I further certify that the addresses shown on said Exhibit "A" are their regular addresses as determined from the books and records of the Washington County and/or Clackamas County Departments of Assessment and Taxation Tax Rolls, and that said envelopes were placed in the United States Mail with postage fully prepared thereon.

Amy Tallent
Signature

SUBSCRIBED AND SWORN to before me this 27th day of May, 2021.

Notary Public for Oregon
My commission expires: 6/4/2021

RE: _____

OFFICIAL STAMP
KIMBERLY ELLEN ALLMARAS
NOTARY PUBLIC-OREGON
COMMISSION NO. 963212
MY COMMISSION EXPIRES JUNE 04, 2021

May 24, 2021

TUALATIN LOGISTICS PARK

Re: Virtual Neighborhood Meeting Notice

Dear Property Owner:

You are cordially invited to attend a Virtual meeting on June10th, 2021 at 6:00pm.

This meeting shall be held to discuss a proposed project located at 20400 SW Cipole Rd Tualatin, Oregon 97062, Tax Lot ID 2S128A000100.

The proposal is to develop a large, multi-tenant distribution warehouse on the property west of SW 124th and northwest of the intersection of SW 124th Ave. and SW Cimino Street, Tualatin. The warehouse will be approximately 455,800 sft and will house up to four tenants with office areas located at the corners of the building.

The building will have a clear height of 36-feet resulting in an exterior wall height of approximately 38 to 42-feet. The building will have truck loading bays at the east and west sides with trailer parking areas opposite the loading docks. The building will be sited approximately 20 to 22-feet below SW 124th resulting in the top of the exterior building walls to be just 18-20-feet above SW 124th.

Trucks and employees will enter and exit the site from driveways located southwest of the building onto SW Cipole Road, at the NE corner of the building to SW 124th Ave. and at the SE corner of the building to the signaled intersection at SW 124th Ave. and SW Cimino Street.

The purpose of the meeting is to provide an opportunity for the applicant to meet with the surrounding property owners and discuss the proposal. If you have any questions regarding the proposal, please feel free to call me at 503.222.4453 or email at amyt@vlmk.com

Microsoft Teams meeting

Join on your computer or mobile app

Click here to join the meeting

Or call in (audio only)

+1 971-254-1141,,396410514# United States, Portland

Phone Conference ID: 396 410 514#

Find a local number | Reset PIN

Learn More | Meeting options

Sincerely,
VLMK Engineering + Design

AMY TALLENT

Attachments: Site Plan

JEFFREY G & JAYNIE A WIRKKALA
30905 NE MICHAEL RD
NEWBERG, OR 97132

TUALATIN 124 LLC
9760 SW FREEMAN DR
WILSONVILLE, OR 97070

THOMAS TUALATIN ONE LLC
5122 NE WISTARIA DR
PORTLAND, OR 97213

PORTLAND GENERAL ELECTRIC CO
121 SW SALMON ST
PORTLAND, OR 97204

NSA PROPERTY HOLDINGS LLC
5005 MEADOWS RD STE 420
LAKE OSWEGO, OR 97035

MERIWETHER TUALATIN LLC
1136 NW HOYT ST STE 220
PORTLAND, OR 97209

LARRY W & JUDY K LUDWIG
PO BOX 473
TUALATIN, OR 97062

IPT TUALATIN DC LLC
18818 TELLER AVE #277
IRVINE, CA 92612

ICC 2 LLC
1101 SE TECH CENTER DR STE 160
VANCOUVER, WA 98683

GULSONS
307 LEWERS ST 6TH FLOOR
HONOLULU, HI 96815

WILSHIRE SHERWOOD OWNER LLC
100 WILSHIRE BLVD STE 940
SANTA MONICA, CA 90401

TUALATIN 124 LLC
9760 SW FREEMAN DR
WILSONVILLE, OR 97070

SHERWOOD SCHOOL DIST #88J
23295 SW MAIN ST
SHERWOOD, OR 97140

PETER COTTONTAIL ENTERPRISES LLC
PO BOX 1938
WILSONVILLE, OR 97070

NORTHWEST NATURAL GAS CO
220 NW 2ND AVE
PORTLAND, OR 97209

MERIWETHER TUALATIN LLC
1136 NW HOYT ST STE 220
PORTLAND, OR 97209

JNA PROPERTIES LLC
19975 SW CIPOLE RD
SHERWOOD, OR 97140

ICC 2 LLC
1101 SE TECH CENTER DR STE 160
VANCOUVER, WA 98683

JOHN D & DENISE C HAGG
20340 SW CIPOLE RD
TUALATIN, OR 97062

GUAN'S OREGON LLC
16315 SW BARROWS RD #105A
BEAVERTON, OR 97007

VERUS PROPERTIES LLC
12345 SW MYSLONY ST
TUALATIN, OR 97062

TRUTH-WEST INC
26909 SW LABROUSSE RD
SHERWOOD, OR 97140

RICHARDS PROPERTY LLC
12250 SW MYSLONY RD
TUALATIN, OR 97062

NSA PROPERTY HOLDINGS LLC
5005 MEADOWS RD STE 420
LAKE OSWEGO, OR 97035

NORTHWEST NATURAL GAS CO
220 NW 2ND AVE
PORTLAND, OR 97209

MARK MANAGEMENT ASSOCIATES LLC
PO BOX 532
TUALATIN, OR 97062

ITEL CORPORATE CENTER CONDOMINIUMS
OWNERS OF ALL UNITS
, OR 00000

ICC 2 LLC
1101 SE TECH CENTER DR STE 160
VANCOUVER, WA 98683

JOHN D JR & DENISE C HAGG
20340 SW CIPOLE RD
TUALATIN, OR 97062

GRAY ROBERT A TRUST
7823 SW KINGFISHER WAY
PORTLAND, OR 97224

FOUR-S CORP & STANAWAY DONALD F II

900 FIRST AVE N

BILLINGS, MT 59101

FORE-SIGHT BALBOA LLC

20400 SW CIPOLE RD

TUALATIN, OR 97062

DTI PROPERTIES LLC

15836 SW MADRONA LN

SHERWOOD, OR 97140

DEEP VALLEY LLC

PO BOX 69

TUALATIN, OR 97062

DEEP VALLEY LLC

PO BOX 69

TUALATIN, OR 97062

COLUMBIA CORRUGATED BOX CO INC

12777 SW TUALATIN-SHERWOOD RD

TUALATIN, OR 97062

CIPOLE PROPERTIES LLC

PO BOX 69

TUALATIN, OR 97062

CIPOLE FARMHOUSE LLC

19990 SW CIPOLE RD

TUALATIN, OR 97062

CIPOLE LLC

PO BOX 30428

CHARLOTTE, NC 28230

CIPOLE LLC

PO BOX 30428

CHARLOTTE, NC 28230

CIPOLE LLC

PO BOX 30428

CHARLOTTE, NC 28230

ALAN J & DEANNA CHAVEZ

PO BOX 1363

SHERWOOD, OR 97140

BELMONT PROPERTY LLC & JAMFEE3 LLC

PO BOX 23025

PORTLAND, OR 97281

BEHBAHANY PROPERTIES LLC

12505 SW HERMAN RD

TUALATIN, OR 97062

ALBINA PIPE BENDING CO INC

12080 SW MYSLONY ST

TUALATIN, OR 97062

CERTIFICATION OF SIGN POSTING

NOTICE

NEIGHBORHOOD / DEVELOPER MEETING

__/__/2010 _:__ _.m.

_____ SW _____

503-___-____

In addition to the requirements of TDC 32.150, the 18" x 24" sign must display the meeting date, time, and address as well as a contact phone number. The block around the word "NOTICE" must remain **orange** composed of the **RGB color values Red 254, Green 127, and Blue 0**. A PowerPoint template of this sign is available at: https://www.tualatinoregon.gov/planning/land-use-application-sign-templates.

As the applicant for the Tualatin Logistics Park project, I hereby certify that on this day, May 26, 2021 sign(s) was/were posted on the subject property in accordance with the requirements of the Tualatin Development Code and the Community Development Division.

Applicant's Name: Amy Tallent
(Please Print)

Applicant's Signature: Amy Tallent

Date: 5/26/21

AFFIDAVIT OF MAILING

STATE OF OREGON)
) ss
COUNTY OF WASHINGTON)

I, Lindsey Hagerman being first duly sworn, depose and say:

That on the 9 day of February ,2022 , I served upon the persons shown on Exhibit A, attached hereto and by this reference incorporated herein, a copy of a Notice of Hearing/Application/Decision marked Exhibit B, attached hereto and by this reference incorporated herein, by mailing to them a true and correct copy of the original hereof. I further certify that the addresses reflect information received from the relevant party or agency, and that said envelopes were placed in the United States Mail at Tualatin, Oregon, prepared to receive postage administered by city staff.

Dated this 9 of February, 2022

Lindsey Hagerman
Signature

SUBSCRIBED AND SWORN to before me this 9th of February 2022

Rocio Vargas
Notary Public for Oregon

OFFICIAL STAMP
ROCIO D. VARGAS ALBA
NOTARY PUBLIC - OREGON
COMMISSION NO. 991242
MY COMMISSION EXPIRES SEPTEMBER 15, 2023

My commission expires: Sept. 15, 2023

RE: AR21-0011 NOTICE OF HEARING
PROPERTY: 20400 SW CIPLE ROAD
TAX LOT: 2S128A0001000

Please see Exhibits A-B

Exhibit A

OWNER1	OWNERADDR
WIRKKALA JEFFREY G & WIRKKALA JAYNIE A	30905 NE MICHAEL RD
WILSHIRE SHERWOOD OWNER LLC	100 WILSHIRE BLVD STE 940
VERUS PROPERTIES LLC	12345 SW MYSLONY ST
TUALATIN 124 LLC	9760 SW FREEMAN DR
TUALATIN 124 LLC	9760 SW FREEMAN DR
TRUTH-WEST INC	26909 SW LABROUSSE RD
THOMAS TUALATIN ONE LLC	5122 NE WISTARIA DR
SHERWOOD SCHOOL DIST #88J	23295 SW MAIN ST
RICHARDS PROPERTY LLC	12250 SW MYSLONY RD
PORTLAND GENERAL ELECTRIC CO	121 SW SALMON ST
PETER COTTONTAIL ENTERPRISES LLC	PO BOX 1938
NSA PROPERTY HOLDINGS LLC	5005 MEADOWS RD STE 420
NSA PROPERTY HOLDINGS LLC	5005 MEADOWS RD STE 420
NORTHWEST NATURAL GAS CO	220 NW 2ND AVE
NORTHWEST NATURAL GAS CO	220 NW 2ND AVE
MARK MANAGEMENT ASSOCIATES LLC	PO BOX 532
LUDWIG LARRY W & LUDWIG JUDY K	PO BOX 473
JNA PROPERTIES LLC	19975 SW CIPOLE RD
ITEL CORPORATE CENTER CONDOMINIUMS OWNERS C	
IPT TUALATIN DC LLC	18818 TELLER AVE #277
ICC 2 LLC	1101 SE TECH CENTER DR STE 160
ICC 2 LLC	1101 SE TECH CENTER DR STE 160
ICC 2 LLC	1101 SE TECH CENTER DR STE 160
HAGG JOHN D & HAGG DENISE C	20340 SW CIPOLE RD
HAGG JOHN D JR & HAGG DENISE C	20340 SW CIPOLE RD
GULSONS	307 LEWERS ST 6TH FLOOR
GUAN'S OREGON LLC	16315 SW BARROWS RD #105A
GRAY ROBERT A TRUST	7823 SW KINGFISHER WAY
FOUR-S CORP & STANAWAY DONALD F II	900 FIRST AVE N
FORE-SIGHT BALBOA LLC	20400 SW CIPOLE RD
EXETER 19855 SW 124TH LP	101 W ELM ST STE 600
EXETER 19855 SW 124TH LP	101 W ELM ST STE 600
DTI PROPERTIES LLC	25652 SW CANYON CREEK RD #Q104
DEEP VALLEY LLC	PO BOX 69
DEEP VALLEY LLC	PO BOX 69
COLUMBIA CORRUGATED BOX CO INC	12777 SW TUALATIN-SHERWOOD RD
CIPOLE PROPERTIES LLC	PO BOX 69
CIPOLE FARMHOUSE LLC	19990 SW CIPOLE RD
CIPOLE LLC	PO BOX 30428
CIPOLE LLC	PO BOX 30428
CIPOLE LLC	PO BOX 30428
CHAVEZ ALAN J & CHAVEZ DEANNA	PO BOX 1363
BELMONT PROPERTY LLC & JAMFEE3 LLC	PO BOX 23025
BEHBAHANY PROPERTIES LLC	12505 SW HERMAN RD
ALBINA PIPE BENDING CO INC	12080 SW MYSLONY ST
VLMK ENGINEERING, ATTN: HAVLIN KEMP	3933 S KELLY AVE

OWNERCITY	OWNERSTATE	OWNERZIP
NEWBERG	OR	97132
SANTA MONICA	CA	90401
TUALATIN	OR	97062
WILSONVILLE	OR	97070
WILSONVILLE	OR	97070
SHERWOOD	OR	97140
PORTLAND	OR	97213
SHERWOOD	OR	97140
TUALATIN	OR	97062
PORTLAND	OR	97204
WILSONVILLE	OR	97070
LAKE OSWEGO	OR	97035
LAKE OSWEGO	OR	97035
PORTLAND	OR	97209
PORTLAND	OR	97209
TUALATIN	OR	97062
TUALATIN	OR	97062
SHERWOOD	OR	97140
	OR	00000
IRVINE	CA	92612
VANCOUVER	WA	98683
VANCOUVER	WA	98683
VANCOUVER	WA	98683
TUALATIN	OR	97062
TUALATIN	OR	97062
HONOLULU	HI	96815
BEAVERTON	OR	97007
PORTLAND	OR	97224
BILLINGS	MT	59101
TUALATIN	OR	97062
CONSHOHOCKEN	PA	19428
CONSHOHOCKEN	PA	19428
WILSONVILLE	OR	97070-5661
TUALATIN	OR	97062
TUALATIN	OR	97062
TUALATIN	OR	97062
TUALATIN	OR	97062
TUALATIN	OR	97062
CHARLOTTE	NC	28230
CHARLOTTE	NC	28230
CHARLOTTE	NC	28230
SHERWOOD	OR	97140
PORTLAND	OR	97281
TUALATIN	OR	97062
TUALATIN	OR	97062
PORTLAND	OR	97239

Exhibit B.

NOTICE OF HEARING AND OPPORTUNITY TO COMMENT
CASE FILE: AR 21-0011— TUALATIN LOGISTICS PARK

NOTICE IS HEREBY GIVEN that a public hearing before the Architectural Review Board will be held:

Wednesday, March 9, 2022 at 6:30 pm

Zoom Teleconference: Link with log-in instructions available
www.tualatinoregon.gov/meetings

AR 21-0011
Tualatin Logistics Park

VLMK Engineering, on behalf of Fore-Sight Balboa LLC, is requesting approval to construct an approximately 452,800 square foot multi-tenant distribution warehouse on a 24.16 acre site.

To view the application materials, visit:
www.tualatinoregon.gov/projects

Comments and questions may be submitted to:
eengman@tualatin.gov

Planning Division
Attn: Erin Engman

The property is located at: 20400 SW Cipole Road **Tax Lot:** 2S128A000100

- **Type III Architectural Review Criteria**: Tualatin Municipal Code Titles 3, 4 and Development Code Chapters: 32, 33, 61, 63, 73A-D, 74, 75
- **Staff report** will be available at least seven days before the hearing for inspection at no cost, and copies will be provided at a reasonable cost.
- **Print copies** of the application are available at a reasonable cost.
- **Individuals wishing to comment on the application** must do so in writing to the Planning Division prior to the hearing, or in writing and/or orally at the hearing. Materials must be received by February 23, to be included in the hearing packet.

CITY OF
TUALATIN
Planning Division

- **The public hearing will begin** with a staff presentation, followed by testimony by proponents, testimony by opponents, and rebuttal. The time of individual testimony may be limited. If a participant requests, before the hearing is closed, the record shall remain open for at least 7 days after the hearing.
- **All citizens are invited to attend and be heard:** Failure of an issue to be raised in the hearing, in person, or by letter, or failure to provide sufficient specificity to afford the decision maker an opportunity to respond to the issue precludes appeal to the State Land Use Board of Appeals (LUBA) based on that issue. The failure of the applicant to raise constitutional or other issues relating to the proposed conditions of approval with sufficient specificity to the decision maker to respond to the issue precludes an action for damages in circuit court.
- **Notice of the Decision** will only be provided to those who submit written comments regarding that application or testify at the hearing.

You received this mailing because you own property within 1,000 feet (ft) of the site or within a residential subdivision which is partly within 1,000 ft.

For additional information contact:
Erin Engman, Senior Planner, eengman@tualatin.gov and 503-691-3024

From:	Erin Engman
To:	Erin Engman; "Havlin Kemp"
Cc:	Don Hudson; "Erin Engman"; Heidi Springer; "Jonathan Taylor"; Kim McMillan; Lindsey Hagerman; Martin Loring; Mike McCarthy; "Rich Mueller"; Sherilyn Lombos; "Steve Koper"; "Terrance Leahy"; Tom Scott; Tom Steiger; Tony Doran; Alyssa Kerr; Lindsey Hagerman; Megan George; Betsy Ruef; "Roggy Pflug"; jerry@ccbox.com; "cj1@sterling.net"; "planning@sherwoodoregon.gov"; "naomi_vogel@co.washington.or.us"; "theresa_cherniak@co.washington.or.us"; "deginfo@deq.state.or.us"; "landusenotifications@oregonmetro.gov"; "ODOT_R1_DevRev@odot.state.or.us"; "baldwinb@trimet.org"; "humphreysj@cleanwaterservices.org"; "drew.debois@tvfr.com"; "jolivares@republicservices.com"; "info@theintertwine.org"; "Roy@tualatinchamber.com"; "OR.METRO.ENGINEERING@ZIPLY.COM"; "tod.shattuck@pgn.com"; "brandon.fleming@pgn.com"; "kenneth.spencer@pgn.com"; "richard.girard@nwnatural.com"; "icrawford@wccca.com"; "tualatincio@gmail.com"; "riverparkcio@gmail.com"; "jasuwi7@gmail.com"; "famtunstall1@frontier.com"; "dan@danhardyproperties.com"; "katepinamonti@hotmail.com"; "jraikoglo@aol.com"; "daniel@bachhuber.co"; "cio.east.west@gmail.com"; "doug_ulmer@comcast.net"; "dana476@gmail.com"; "mcrowell248@comcast.net"; "tualatinmidwestcio@gmail.com"; "tmpgarden@comcast.net"; "MartinazziWoodsCIO@gmail.com"; "solson.1827@gmail.com"; "delmoore@frontier.com"; "jamison.l.shields@gmail.com"; "claudia.sterling@comcast.net"; "janet7531@gmail.com"; "roydloop@gmail.com"; "edkcnw@comcast.net"; "jmakarowsky@comcast.net"; "byromcio@gmail.com"; "pdxalex@icloud.com"; "mwestenhaver@hotmail.com"; "humphreysusan10@gmail.com"; "deb.fant@gmail.com"; "tualatincommercialcio@gmail.com"; "tualatincommercialcio@gmail.com"; "scottm@capacitycommercial.com"; "scottm@capacitycommercial.com"; "famtunstall1@frontier.com"; "brian@box2.com"
Subject:	Notice of Hearing: AR 21-0011 Tualatin Logistics Park, 20400 SW Cipole Road
Date:	Tuesday, February 8, 2022 2:24:00 PM
Attachments:	image001.jpg

CITY OF TUALATIN
Planning Division

NOTICE OF HEARING AND OPPORTUNITY TO COMMENT

NOTICE IS HEREBY GIVEN that a public hearing will be held before the City of Architectural Review Board at 6:30 p.m., Wednesday March 9, 2022, held online over Zoom. All are invited to attend the hearing and testify verbally. The Zoom meeting link will be published with the meeting agenda and packet materials at: www.tualatinoregon.gov/meetings.

****** The Architectural Review Board hearing has been rescheduled from the original hearing date of November 17, 2021 at the request of the applicant. ******

VLMK Engineering, on behalf of Fore-Sight Balboa LLC, is requesting approval to construct an approximately 452,800 square foot multi-tenant distribution warehouse. The 24.16 acre site is located in the General Manufacturing (MG) District at 20400 SW Cipole Road, Tax Lot: 2S128A000100.

You may view the application materials on our Projects web page: https://www.tualatinoregon.gov/planning/ar-21-0011-tualatin-logistics-park.

Individuals wishing to comment may do so in writing to the Planning Division prior to the hearing and/or present written and/or verbal testimony to the Architectural Review Board at the hearing. To be included in the materials packet published ahead of the hearing, comments must be **received by February 23, 2022**. Hearings begin with a staff presentation, followed by testimony by proponents, testimony by opponents, and rebuttal. The time of individual testimony may be limited. If a

participant requests before the hearing is closed, the record shall remain open for at least 7 days after the hearing.

All citizens are invited to attend and be heard upon the Architectural Features application: Failure of an issue to be raised in the hearing, in person, or by letter, or failure to provide sufficient specificity to afford the decision maker an opportunity to respond to the issue precludes appeal to the State Land Use Board of Appeals (LUBA) based on that issue. The failure of the applicant to raise constitutional or other issues relating to the proposed conditions of approval with sufficient specificity to the decision maker to respond to the issue precludes an action for damages in circuit court.

Type III Architectural Review Criteria: Tualatin Municipal Code Titles 3, 4 and Development Code Chapters: 32, 33, 61, 63, 73A-D, 74, 75

A staff report will available seven day prior to the public hearing, published at www.tualatinoregon.gov/meetings. This meeting and any materials being considered can be made accessible upon request.

Written comments and questions can be submitted to: eengman@tualatin.gov.

Erin Engman

Senior Planner

City of Tualatin | Planning Division

503.691.3024 | www.tualatinoregon.gov

AFFIDAVIT OF MAILING

STATE OF OREGON)
) ss
COUNTY OF WASHINGTON)

I, Lindsey Hagerman being first duly sworn, depose and say:

That on the 10 day of November, I served upon the persons shown on Exhibit A, attached hereto and by this reference incorporated herein, a copy of a Notice of Hearing marked Exhibit B, attached hereto and by this reference incorporated herein, by mailing to them a true and correct copy of the original hereof. I further certify that the addresses reflect information received from the relevant party or agency, and that said envelopes were placed in the United States Mail at Tualatin, Oregon, prepared to receive postage administered by city staff.

Dated this 10 of 11, 2021

Lindsey Hag
Signature

SUBSCRIBED AND SWORN to before me this 11 day of November, 2021.

OFFICIAL STAMP
GLADYS GOMEZ
NOTARY PUBLIC - OREGON
COMMISSION NO. 1003223
MY COMMISSION EXPIRES AUGUST 30, 2024

Notary Public for Oregon

My commission expires: August 30, 2024

RE: AR 21-0011 TUALATIN LOGISTICS PARK PROJECT
LOCATED AT: 20400 SW CIPOLE ROAD

OWNERADDR	OWNERCITY	OWNERSTATE	OWNERZIP
30905 NE MICHAEL RD	NEWBERG	OR	97132
100 WILSHIRE BLVD STE 940	SANTA MONICA	CA	90401
12345 SW MYSLONY ST	TUALATIN	OR	97062
9760 SW FREEMAN DR	WILSONVILLE	OR	97070
9760 SW FREEMAN DR	WILSONVILLE	OR	97070
26909 SW LABROUSSE RD	SHERWOOD	OR	97140
5122 NE WISTARIA DR	PORTLAND	OR	97213
23295 SW MAIN ST	SHERWOOD	OR	97140
12250 SW MYSLONY RD	TUALATIN	OR	97062
121 SW SALMON ST	PORTLAND	OR	97204
PO BOX 1938	WILSONVILLE	OR	97070
5005 MEADOWS RD STE 420	LAKE OSWEGO	OR	97035
5005 MEADOWS RD STE 420	LAKE OSWEGO	OR	97035
220 NW 2ND AVE	PORTLAND	OR	97209
220 NW 2ND AVE	PORTLAND	OR	97209
PO BOX 532	TUALATIN	OR	97062
PO BOX 473	TUALATIN	OR	97062
19975 SW CIPOLE RD	SHERWOOD	OR	97140
		OR	00000
18818 TELLER AVE #277	IRVINE	CA	92612
1101 SE TECH CENTER DR STE 160	VANCOUVER	WA	98683
1101 SE TECH CENTER DR STE 160	VANCOUVER	WA	98683
1101 SE TECH CENTER DR STE 160	VANCOUVER	WA	98683
20340 SW CIPOLE RD	TUALATIN	OR	97062
20340 SW CIPOLE RD	TUALATIN	OR	97062
307 LEWERS ST 6TH FLOOR	HONOLULU	HI	96815
16315 SW BARROWS RD #105A	BEAVERTON	OR	97007
7823 SW KINGFISHER WAY	PORTLAND	OR	97224
900 FIRST AVE N	BILLINGS	MT	59101
20400 SW CIPOLE RD	TUALATIN	OR	97062
101 W ELM ST STE 600	CONSHOHOCKEN	PA	19428
101 W ELM ST STE 600	CONSHOHOCKEN	PA	19428
25652 SW CANYON CREEK RD #Q104	WILSONVILLE	OR	97070-5661
PO BOX 69	TUALATIN	OR	97062
PO BOX 69	TUALATIN	OR	97062
12777 SW TUALATIN-SHERWOOD RD	TUALATIN	OR	97062
PO BOX 69	TUALATIN	OR	97062
19990 SW CIPOLE RD	TUALATIN	OR	97062
PO BOX 30428	CHARLOTTE	NC	28230
PO BOX 30428	CHARLOTTE	NC	28230
PO BOX 30428	CHARLOTTE	NC	28230
PO BOX 1363	SHERWOOD	OR	97140
PO BOX 23025	PORTLAND	OR	97281
12505 SW HERMAN RD	TUALATIN	OR	97062
12080 SW MYSLONY ST	TUALATIN	OR	97062
3933 S KELLY AVE	PORTLAND	OR	97239

NOTICE THAT SCHEDULED HEARING HAS BEEN POSTPONED FOR:

CASE FILE: AR 21-0011— TUALATIN LOGISTICS PARK

NOTICE IS HEREBY GIVEN that the public hearing before the Architectural Review Board scheduled on:

November 17, 2021 at 6:30 pm

HAS BEEN POSTPONED

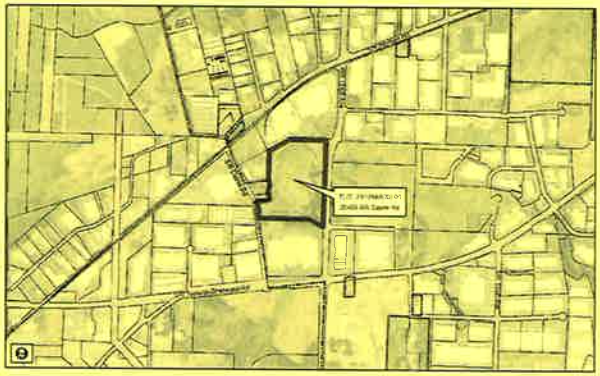
The applicant has requested that the scheduled hearing be postponed to a future date. Notice will be sent no fewer than 20 days before the confirmed hearing date.

AR 21-0011
Tualatin Logistics Park

VLMK Engineering, on behalf of Fore-Sight Balboa LLC, is requesting approval to construct an approximately 455,000 square foot multi-tenant distribution warehouse on a 24.16 acre site.

To view the application materials, visit:
www.tualatinoregon.gov/projects

The property is located at: 20400 SW Cipole Road **Tax Lot:** 2S128A000100



You received this mailing because you own property within 1,000 feet (ft) of the site or within a residential subdivision which is partly within 1,000 ft.

For additional information contact:
Erin Engman, Senior Planner, eengman@tualatin.gov and 503-691-3024

Exhibit B.

AFFIDAVIT OF MAILING

I, Lindsey Hagerman, being first duly sworn, depose and say:

That on the 11 day of October, 2021, I served upon the persons shown on Exhibit A, attached hereto and by this reference incorporated herein, a copy of a Notice of Hearing marked Exhibit B, attached hereto and by this reference incorporated herein, by mailing to them a true and correct copy of the original hereof. I further certify that the addresses shown on said Exhibit A are their regular addresses as determined from the books and records of the Washington County and/or Clackamas County Departments of Assessment and Taxation Tax Rolls, and that said envelopes were placed in the United States Mail at Tualatin, Oregon, with postage fully prepared thereon.

Dated this 11 of October, 2021 Lindsey Hag
Signature

21-0011
RE: AR ~~20-0007~~ Notice of Hearing Mailing: Tualatin Logistics Park project
Located at: 20400 SW Cipole Rd, Lots: 2S128A000100

TLID	OWNER1	OWNERADDR	OWNERCITY	OWNERSTATE	OWNERZIP
2S128A001700	WIRKKALA JEFFREY G & WIRKKALA JAYNIE A	30905 NE MICHAEL RD	NEWBERG	OR	97132
2S128D001100	WILSHIRE SHERWOOD OWNER LLC	100 WILSHIRE BLVD STE 940	SANTA MONICA	CA	90401
2S122CC00400	VERUS PROPERTIES LLC	12345 SW MYSLONY ST	TUALATIN	OR	97062
2S127BB00100	TUALATIN 124 LLC	9760 SW FREEMAN DR	WILSONVILLE	OR	97070
2S127BB00200	TUALATIN 124 LLC	9760 SW FREEMAN DR	WILSONVILLE	OR	97070
2S127BC90141	TRUTH-WEST INC	26909 SW LABROUSSE RD	SHERWOOD	OR	97140
2S122CC00100	THOMAS TUALATIN ONE LLC	5122 NE WISTARIA DR	PORTLAND	OR	97213
2S128A000103	SHERWOOD SCHOOL DIST #88J	23295 SW MAIN ST	SHERWOOD	OR	97140
2S122C001601	RICHARDS PROPERTY LLC	12250 SW MYSLONY RD	TUALATIN	OR	97062
2S127C000500	PORTLAND GENERAL ELECTRIC CO	121 SW SALMON ST	PORTLAND	OR	97204
2S121DD01200	PETER COTTONTAIL ENTERPRISES LLC	PO BOX 1938	WILSONVILLE	OR	97070
2S121DC01000	NSA PROPERTY HOLDINGS LLC	5005 MEADOWS RD STE 420	LAKE OSWEGO	OR	97035
2S128A000601	NSA PROPERTY HOLDINGS LLC	5005 MEADOWS RD STE 420	LAKE OSWEGO	OR	97035
2S128A000600	NORTHWEST NATURAL GAS CO	220 NW 2ND AVE	PORTLAND	OR	97209
2S128A000603	NORTHWEST NATURAL GAS CO	220 NW 2ND AVE	PORTLAND	OR	97209
2S128A000505	MARK MANAGEMENT ASSOCIATES LLC	PO BOX 532	TUALATIN	OR	97062
2S121DC00600	LUDWIG LARRY W & LUDWIG JUDY K	PO BOX 473	TUALATIN	OR	97062
2S128A000700	JNA PROPERTIES LLC	19975 SW CIPOLE RD	SHERWOOD	OR	97140
2S127BC90000	ITEL CORPORATE CENTER CONDOMINIUMS OWNERS OF ALL UNITS			OR	00000
2S127BC00200	IPT TUALATIN DC LLC	18818 TELLER AVE #277	IRVINE	CA	92612
2S127BC90111	ICC 2 LLC	1101 SE TECH CENTER DR STE 160	VANCOUVER	WA	98683
2S127BC90121	ICC 2 LLC	1101 SE TECH CENTER DR STE 160	VANCOUVER	WA	98683
2S127BC90131	ICC 2 LLC	1101 SE TECH CENTER DR STE 160	VANCOUVER	WA	98683
2S128A000102	HAGG JOHN D & HAGG DENISE C	20340 SW CIPOLE RD	TUALATIN	OR	97062
2S128A000200	HAGG JOHN D JR & HAGG DENISE C	20340 SW CIPOLE RD	TUALATIN	OR	97062
2S121DD00400	GULSONS	307 LEWERS ST 6TH FLOOR	HONOLULU	HI	96815
2S121DD00300	GUAN'S OREGON LLC	16315 SW BARROWS RD #105A	BEAVERTON	OR	97007
2S121D000600	GRAY ROBERT A TRUST	7823 SW KINGFISHER WAY	PORTLAND	OR	97224
2S122C001600	FOUR-S CORP & STANAWAY DONALD F II	900 FIRST AVE N	BILLINGS	MT	59101
2S128A000100	FORE-SIGHT BALBOA LLC	20400 SW CIPOLE RD	TUALATIN	OR	97062
2S121DD00201	EXETER 19855 SW 124TH LP	101 W ELM ST STE 600	CONSHOHOCKEN	PA	19428
2S128A000104	EXETER 19855 SW 124TH LP	101 W ELM ST STE 600	CONSHOHOCKEN	PA	19428
2S127C000700	DTI PROPERTIES LLC	25652 SW CANYON CREEK RD #Q104	WILSONVILLE	OR	97070-5661
2S121DC00800	DEEP VALLEY LLC	PO BOX 69	TUALATIN	OR	97062
2S121DC00801	DEEP VALLEY LLC	PO BOX 69	TUALATIN	OR	97062
2S128A000300	COLUMBIA CORRUGATED BOX CO INC	12777 SW TUALATIN-SHERWOOD RD	TUALATIN	OR	97062
2S121DC00700	CIPOLE PROPERTIES LLC	PO BOX 69	TUALATIN	OR	97062
2S121DC00900	CIPOLE FARMHOUSE LLC	19990 SW CIPOLE RD	TUALATIN	OR	97062
2S128A000503	CIPOLE LLC	PO BOX 30428	CHARLOTTE	NC	28230
2S128A001800	CIPOLE LLC	PO BOX 30428	CHARLOTTE	NC	28230
2S128A001900	CIPOLE LLC	PO BOX 30428	CHARLOTTE	NC	28230
2S128A000400	CHAVEZ ALAN J & CHAVEZ DEANNA	PO BOX 1363	SHERWOOD	OR	97140
2S121DD00800	BELMONT PROPERTY LLC & JAMFEE3 LLC	PO BOX 23025	PORTLAND	OR	97281
2S121DD00100	BEHBAHANY PROPERTIES LLC	12505 SW HERMAN RD	TUALATIN	OR	97062
2S122C001501	ALBINA PIPE BENDING CO INC	12080 SW MYSLONY ST	TUALATIN	OR	97062
	VLMK ENGINEERING, ATTN: HAVLIN KEMP	3933 S KELLY AVE	PORTLAND	OR	97239

Ex. A

Ex. B

NOTICE OF APPLICATION SUBMITTAL AND OPPORTUNITY TO COMMENT
CASE FILE: AR 21-0011— TUALATIN LOGISTICS PARK

NOTICE IS HEREBY GIVEN that a public hearing before the Architectural Review Board will be held:

Wednesday, November 17, 2021 at 6:30 pm

Zoom Teleconference: Link with log-in instructions available www.tualatinoregon.gov/meetings

AR 21-0011
Tualatin Logistics Park

VLMK Engineering, on behalf of Fore-Sight Balboa LLC, is requesting approval to construct an approximately 452,800 square foot multi-tenant distribution warehouse on a 24.16 acre site.

To view the application materials, visit:
www.tualatinoregon.gov/projects

Comments and questions may be submitted to:
eengman@tualatin.gov
Planning Division
Attn: Erin Engman

The property is located at: 20400 SW Cipole Road **Tax Lot:** 2S128A000100

- **Type III Architectural Review Criteria**: Tualatin Municipal Code Titles 3, 4 and Development Code Chapters: 32, 33, 61, 63, 73A-D, 74, 75
- **Staff report** will be available at least seven days before the hearing for inspection at no cost, and copies will be provided at a reasonable cost.
- **Print copies** of the application are available at a reasonable cost.
- **Individuals wishing to comment on the application** must do so in writing to the Planning Division prior to the hearing, or in writing and/or orally at the hearing. Materials must be received by October 27, to be included in the hearing packet.

CITY OF TUALATIN
Planning Division

- **The public hearing will begin** with a staff presentation, followed by testimony by proponents, testimony by opponents, and rebuttal. The time of individual testimony may be limited. If a participant requests, before the hearing is closed, the record shall remain open for at least 7 days after the hearing.
- **All citizens are invited to attend and be heard:** Failure of an issue to be raised in the hearing, in person, or by letter, or failure to provide sufficient specificity to afford the decision maker an opportunity to respond to the issue precludes appeal to the State Land Use Board of Appeals (LUBA) based on that issue. The failure of the applicant to raise constitutional or other issues relating to the proposed conditions of approval with sufficient specificity to the decision maker to respond to the issue precludes an action for damages in circuit court.
- **Notice of the Decision** will only be provided to those who submit written comments regarding that application or testify at the hearing.

You received this mailing because you own property within 1,000 feet (ft) of the site or within a residential subdivision which is partly within 1,000 ft.

For additional information contact:
Erin Engman, Senior Planner, eengman@tualatin.gov and 503-691-3024

WIRKKALA JEFFREY G & WIRKKALA
JAYNIE A
30905 NE MICHAEL RD
NEWBERG, OR
97132

FIRE CODE / LAND USE / BUILDING REVIEW APPLICATION

Tualatin Valley Fire & Rescue

North Operating Center
11945 SW 70th Avenue
Tigard, OR 97223
Phone: 503-649-8577

South Operating Center
8445 SW Elligsen Rd
Wilsonville, OR 97070
Phone: 503-649-8577

REV 6-30-20

Project Information

Applicant Name: VLMK Engineering + Design
ATTN: Amy Tallent
Address:3933 S Kelly Ave., Portland, OR 97239
Phone: 503-222-4453
Email: amyt@vlmk.com
Site Address: 21400 SW Cipole Road
City: Tualatin
Map & Tax Lot #: 2S128A 000100
Business Name: Tualatin Logistics Park
Land Use/Building Jurisdiction: Tualatin
Land Use/ Building Permit # Not Assigned yet

Choose from: Beaverton, Tigard, Newberg, Tualatin, North Plains, West Linn, Wilsonville, Sherwood, Rivergrove, Durham, King City, Washington County, Clackamas County, Multnomah County, Yamhill County

Project Description

Construction of a proposed 452,795 sft. Distribution Warehouse. The building will be permitted as a Shell building and designed for one to four future tenants.

Permit/Review Type (check one):

X Land Use / Building Review - Service Provider Permit

☐ Emergency Radio Responder Coverage Install/Test

☐ LPG Tank (Greater than 2,000 gallons)

☐ Flammable or Combustible Liquid Tank Installation (Greater than 1,000 gallons)

- Exception: Underground Storage Tanks (UST) are deferred to DEQ for regulation.

☐ Explosives Blasting (Blasting plan is required)

☐ Exterior Toxic, Pyrophoric or Corrosive Gas Installation (in excess of 810 cu.ft.)

☐ Tents or Temporary Membrane Structures (in excess of 10,000 square feet)

☐ Temporary Haunted House or similar

☐ OLCC Cannabis Extraction License Review

☐ Ceremonial Fire or Bonfire (For gathering, ceremony or other assembly)

For Fire Marshal's Office Use Only

TVFR Permit # 2021-0089
Permit Type: SPP
Submittal Date: August 24, 2021
Assigned To: Tom Mooney
Due Date:
Fees Due: Possible MERRC Fee
Fees Paid: 0

Approval/Inspection Conditions

(For Fire Marshal's Office Use Only)

This section is for application approval only

Tom Mooney — 8/24/2021
Fire Marshal or Designee — Date

Conditions:

See conditions on attached plans.

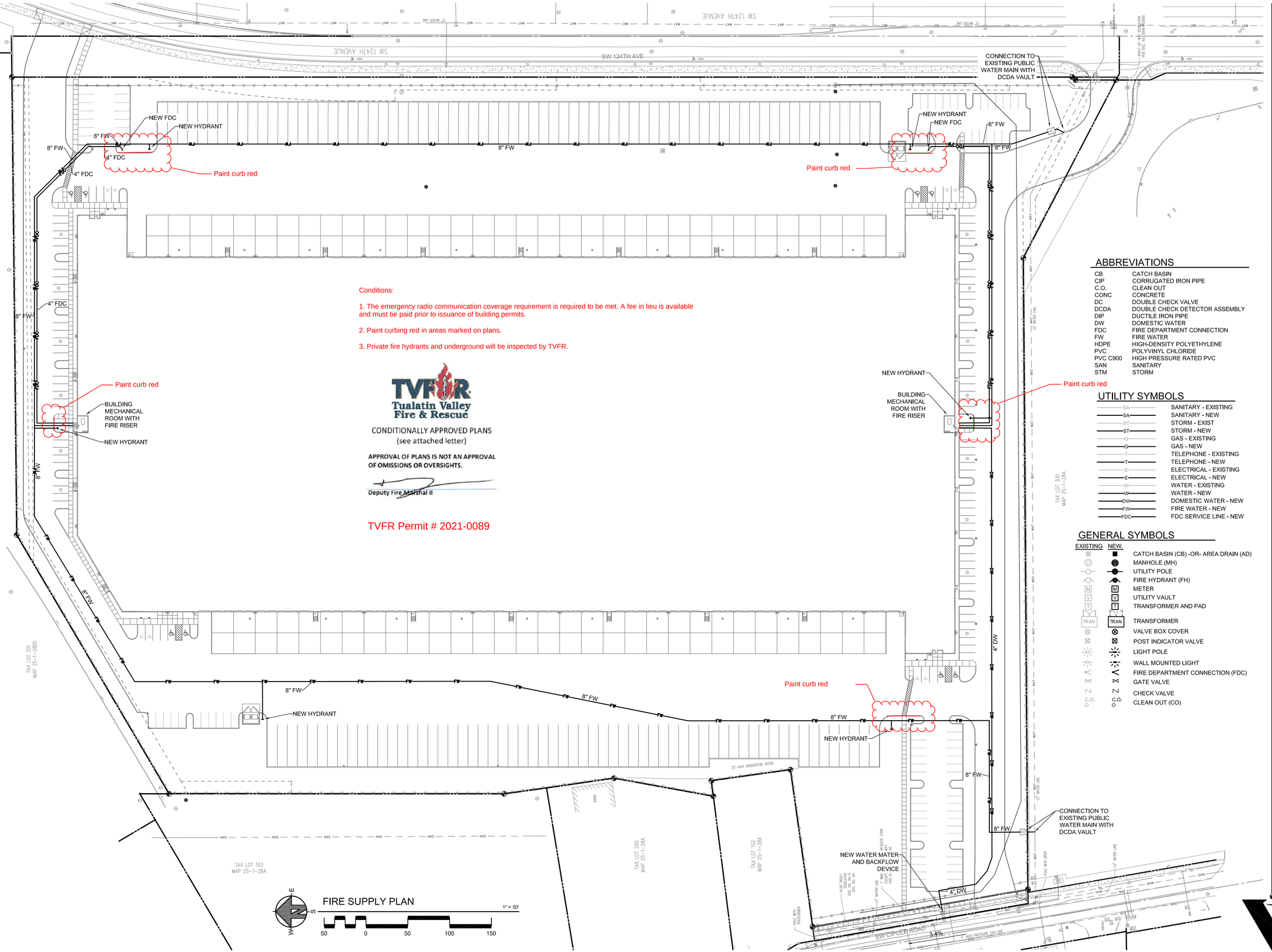
See Attached Conditions: ☒ Yes ☐ No

Site Inspection Required: ☒ Yes ☐ No

This section used when site inspection is required

Inspection Comments:

Final TVFR Approval Signature & Emp ID — Date



ABBREVIATIONS

CB	CATCH BASIN
CIP	CORRUGATED IRON PIPE
C.O.	CLEAN OUT
CONC	CONCRETE
DC	DOUBLE CHECK VALVE
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY
DIP	DUCTILE IRON PIPE
DW	DOMESTIC WATER
FDC	FIRE DEPARTMENT CONNECTION
FW	FIRE WATER
HDPE	HIGH-DENSITY POLYETHYLENE
PVC	POLYVINYL CHLORIDE
PVC C900	HIGH PRESSURE RATED PVC
SAN	SANITARY
STM	STORM

UTILITY SYMBOLS

SA	SANITARY - EXISTING
SA	SANITARY - NEW
ST	STORM - EXIST
ST	STORM - NEW
G	GAS - EXISTING
G	GAS - NEW
T	TELEPHONE - EXISTING
T	TELEPHONE - NEW
E	ELECTRICAL - EXISTING
E	ELECTRICAL - NEW
W	WATER - EXISTING
W	WATER - NEW
DW	DOMESTIC WATER - NEW
FW	FIRE WATER - NEW
FDC	FDC SERVICE LINE - NEW

GENERAL SYMBOLS

EXISTING	NEW.	
	■	CATCH BASIN (CB) -OR- AREA DRAIN (AD)
	●	MANHOLE (MH)
	●	UTILITY POLE
	▲	FIRE HYDRANT (FH)
M	M	METER
V	V	UTILITY VAULT
T	T	TRANSFORMER AND PAD
TRAN	TRAN	TRANSFORMER
⊗	⊗	VALVE BOX COVER
⊠	⊠	POST INDICATOR VALVE
	✳	LIGHT POLE
	✳	WALL MOUNTED LIGHT
	▲	FIRE DEPARTMENT CONNECTION (FDC)
	⋈	GATE VALVE
	⋈	CHECK VALVE
C.O.	C.O.	CLEAN OUT (CO)

VLMK
ENGINEERING + DESIGN
3933 S Kelly Avenue
Portland, Oregon 97239
503.222.4453
VLMK.COM

SPECHT
10260 SW Greenburg Road
Suite 170
Portland, Oregon 97223
503.646.2202
SPECHTPROP.COM

PROJECT NAME
TUALATIN LOGISTICS PARK

20400 SW Cipole Road
TUALATIN, OREGON 97062

REVISIONS

	DATE	DESCRIPTION

DATE
APRIL 2021

SCALE	PROJ. NO.
AS NOTED	20190311
DRAWN	CHECKED
CLT	HGK

FIRE SUPPLY PLAN

FS-1

G:\Acad\2019\20190311\0-Drawing\100 C2.0 Utility Plan.dwg6/19/2021 2:23 PM

M E M O R A N D U M

Date: February 24, 2022

To: Erin Engman, Senior Planner, City of Tualatin

From: Jackie Sue Humphreys, Clean Water Services (CWS)

Subject: Tualatin Logistics Park, AR 21-0011, 2S128A000100

Please include the following comments when writing your conditions of approval:

PRIOR TO ANY WORK ON THE SITE

A Clean Water Services (CWS) Storm Water Connection Permit Authorization must be obtained. Application for CWS Permit Authorization must be in accordance with the requirements of the Design and Construction Standards, Resolution and Order No. 19-5 as amended by R&O 19-22, or prior standards as meeting the implementation policy of R&O 18-28, and is to include:

a. Detailed plans prepared in accordance with Chapter 2, Section 2.04.

b. Detailed grading and erosion control plan. An Erosion Control Permit will be required. Area of Disturbance must be clearly identified on submitted construction plans. If site area and any offsite improvements required for this development exceed one-acre of disturbance, project will require a 1200-CN Erosion Control Permit. If site area and any offsite improvements required for this development exceed five-acres of disturbance, project will require a 1200-C Erosion Control Permit.

c. Detailed plans showing the development having direct access by gravity to public storm and sanitary sewer.

d. Provisions for water quality in accordance with the requirements of the above named design standards. Water Quality is required for all new development and redevelopment areas per R&O 19-5, Section 4.04. Access shall be provided for maintenance of facility per R&O 19-5, Section 4.07.6.

e. If use of an existing offsite or regional Water Quality Facility is proposed, it must be clearly identified on plans, showing its location, condition, capacity to treat this site and, any additional improvements and/or upgrades that may be needed to utilize that facility.

f. If private lot LIDA systems proposed, must comply with the current CWS Design and Construction Standards. A private maintenance agreement, for the proposed private lot LIDA systems, needs to be provided to the City for review and acceptance.

g. Show all existing and proposed easements on plans. Any required storm sewer, sanitary sewer, and water quality related easements must be granted to the City.

h. Application may require additional permitting and plan review from CWS Source Control Program. For any questions or additional information, please contact Source Control at (503) 681-5175.

i. Applicant shall comply with the conditions as set forth in the Service Provider Letter No. 21-002052, dated August 31, 2021.

j. If there is any activity within the sensitive area, the applicant shall gain authorization for the project from the Oregon Department of State Lands (DSL) and US Army Corps of Engineers (USACE). The applicant shall provide Clean Water Services or its designee (appropriate city) with copies of all DSL and USACE project authorization permits.

k. Any proposed offsite construction activities will require an update or amendment to the current Service Provider Letter for this project.

CONCLUSION

This Land Use Review does not constitute CWS approval of storm or sanitary sewer compliance to the NPDES permit held by CWS. CWS, prior to issuance of any connection permits, must approve final construction plans and drainage calculations.

February 16, 2022

To: **Erin Engman – Senior Planner**

From: **Naomi Vogel – Associate Planner**

RE: **Tualatin Logistics Park**
City File Number: AR 21-0011
County File Number: CP 22-904
Tax Map and Lot Number: 2S128A000100
Location: 20400 SW Cipole Road

Washington County Department of Land Use and Transportation has reviewed this development application to construct an approximately 455,000 square foot multi-tenant distribution warehouse with approximately 197 passenger vehicle parking spaces, 133 trailer parking spaces, 115 dock doors and 4 grade doors that will replace the existing Tualatin Island Greens golf/miniature golf course. The site will obtain access via a new right-in/right-out access on SW 124th Avenue and an existing driveway on SW Cipole Road, a County-maintained Collector.

The applicant submitted a Traffic Impact Analysis dated December 15, 2021 (Lancaster/Mobley) for the proposed development. County Traffic Engineering has reviewed the TIA and supplemental analysis for compliance with County R&O 86-95 "Determining Safety Improvements for Traffic". The required traffic mitigation measures have been included in the conditions of approval noted below.

CONDITIONS OF APPROVAL

I. PRIOR TO APPROVAL OF PUBLIC IMPROVEMENT PERMIT BY THE CITY OF TUALATIN:

A. Obtain a Washington County Facility Permit for all public improvements on SW Cipole Road as noted below.

1. Submit to Washington County Public Assurance Staff: A completed "Design Option" form (original copy), City's Notice of Decision (NOD) and County's Letter dated February 16, 2022.

2. **$25,000.00** Administration Deposit

   NOTE: The Administration Deposit is a cost-recovery account used to pay for County services provided to the developer, including plan review and approval, field inspections, as-built approval, and permit processing. The Administration Deposit amount noted above is an estimate of what it will cost to provide these services. If, during the project, the Administration Deposit account is running low, additional funds will be requested to cover the estimated time left on the project (at then-current rates per the adopted Washington County Fee Schedule). If there are any unspent funds at project close out, they will be refunded to the applicant. Any point of contact with County staff can be a chargeable cost. If project plans are not complete or do not comply with County standards and codes, costs will be higher. There is a charge to cover the cost of every field inspection. Costs for enforcement actions will also be charged to the applicant.

3. Electronic submittal of engineering plans, geotech/pavement report, engineer's estimate, preliminary sight distance certification and the "Engineer's Checklist" (Appendix 'E' of County Road Standards) for construction of the following public improvements:

   Note: Improvements within the ROW may be required to be relocated or modified to permit the construction of public improvements. All public improvements and modifications shall meet current County and ADA standards. Public improvements that do not meet County standards shall submit a design exception to the County Engineer for approval.

   a. Completion of the half-street improvement of a County C-1 standard along the site's frontage of SW Cipole Road. The half-street shall include a C-1 pavement width, buffered bike lane, gutter/curb, 6 foot sidewalk with a 6 foot planter strip and street trees (root barrier per County detail).

   b. Installation of continuous street lighting and conduit along the site's frontage of SW Cipole Road to County standards.

   c. Access driveway to SW Cipole Road to County standards. Turning templates for the largest truck using the access shall be included.

   d. Construction access and traffic circulation/control plan.

   e. Preliminary Sight Distance Certification for access to SW Cipole Road.

II. PRIOR TO ISSUANCE OF A WASHINGTON COUNTY FACILITY PERMIT:

A. The following shall be recorded with Washington County Survey Division (Survey Division – John Kidd @ 503.846.7932):

1. Provision of a non-access restriction along the site's frontage of SW Cipole Road.

2. Dedication of additional right-of-way to meet 38 feet of right-of-way from the centerline of SW Cipole Road.

3. Dedication of an 8-foot PUE along the site's frontage of SW Cipole Road.

III. PRIOR TO OCCUPANCY BY THE CITY OF TUALATIN:

A. The road improvements required in condition **I.A.3.** above shall be completed and accepted by Washington County, including final sight distance certification for access to SW Cipole Road.

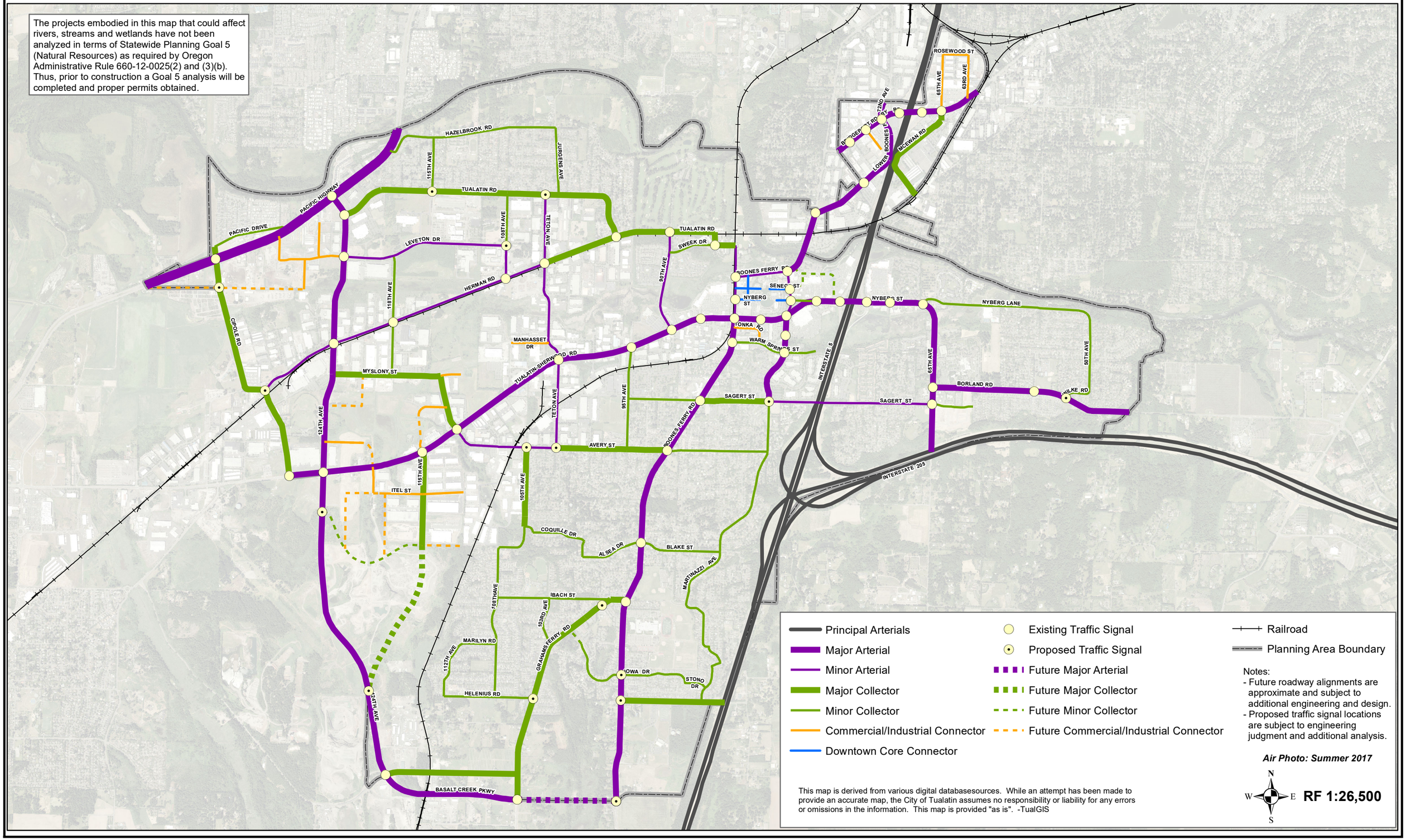
If you have any questions, please contact me at 503-846-7639.

Cc: Road Engineering Services
Traffic Engineering Services
Assurances Section

Map 8-1: Functional Classification and Traffic Signal Plan

TUALGIS

The projects embodied in this map that could affect rivers, streams and wetlands have not been analyzed in terms of Statewide Planning Goal 5 (Natural Resources) as required by Oregon Administrative Rule 660-12-0025(2) and (3)(b). Thus, prior to construction a Goal 5 analysis will be completed and proper permits obtained.



Principal Arterials
Major Arterial
Minor Arterial
Major Collector
Minor Collector
Commercial/Industrial Connector
Downtown Core Connector

Existing Traffic Signal
Proposed Traffic Signal
Future Major Arterial
Future Major Collector
Future Minor Collector
Future Commercial/Industrial Connector

Railroad
Planning Area Boundary

Notes:
- Future roadway alignments are approximate and subject to additional engineering and design.
- Proposed traffic signal locations are subject to engineering judgment and additional analysis.

Air Photo: Summer 2017

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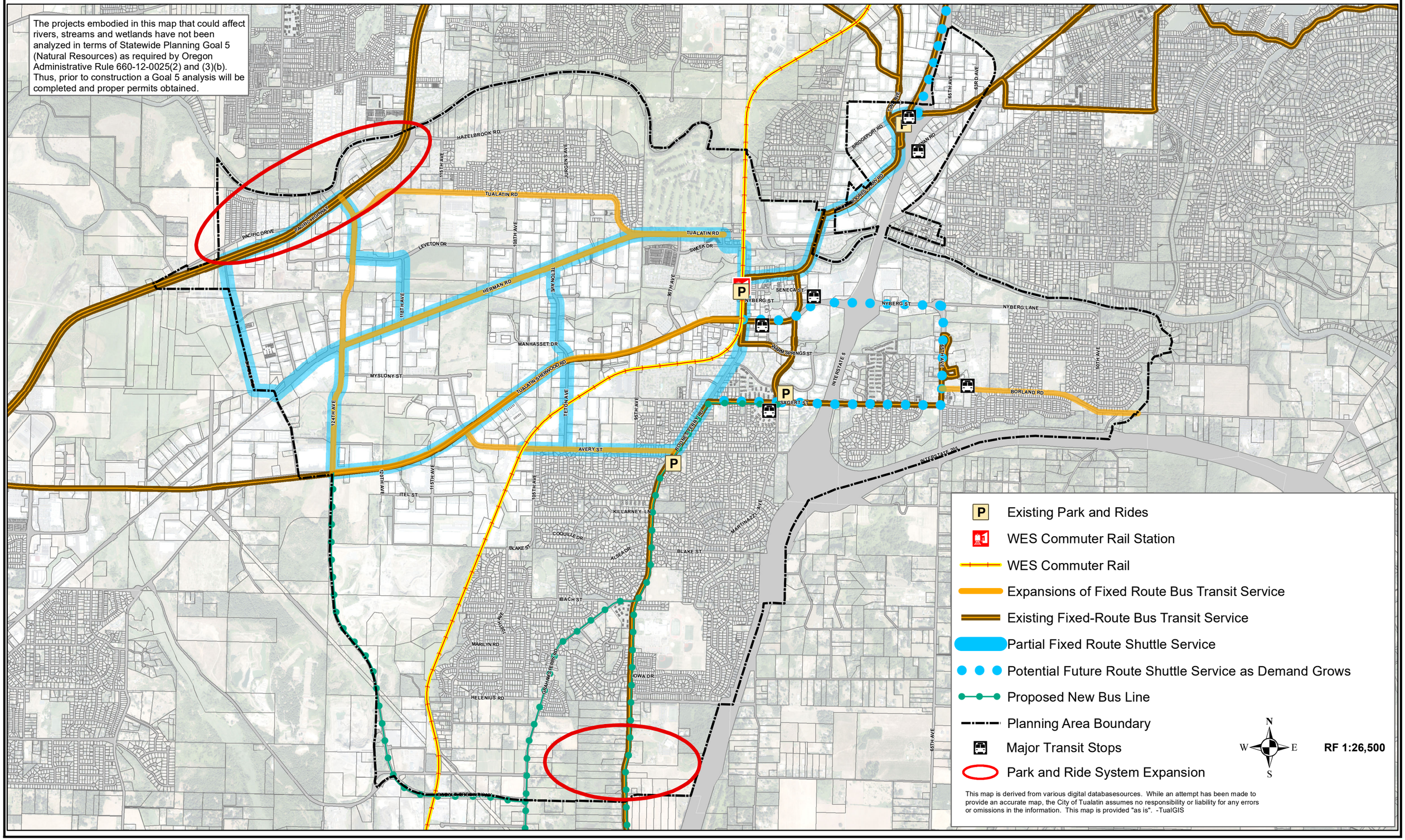
RF 1:26,500

This map is derived from various digital databasesources. While an attempt has been made to provide an accurate map, the City of Tualatin assumes no responsibility or liability for any errors or omissions in the information. This map is provided "as is". -TualGIS

Map 8-5: Tualatin Transit Plan

TUALGIS

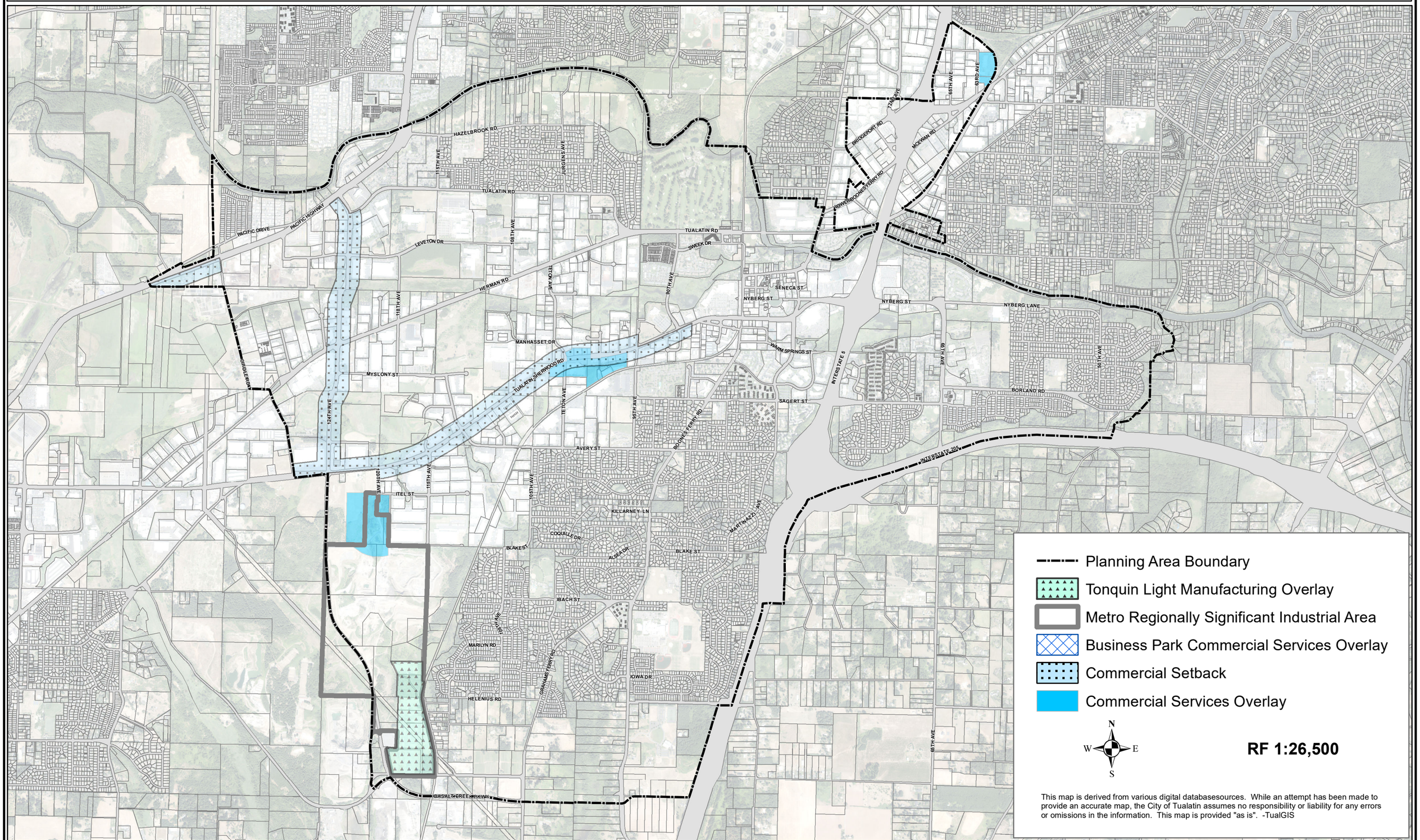
The projects embodied in this map that could affect rivers, streams and wetlands have not been analyzed in terms of Statewide Planning Goal 5 (Natural Resources) as required by Oregon Administrative Rule 660-12-0025(2) and (3)(b). Thus, prior to construction a Goal 5 analysis will be completed and proper permits obtained.



This map is derived from various digital databasesources. While an attempt has been made to provide an accurate map, the City of Tualatin assumes no responsibility or liability for any errors or omissions in the information. This map is provided "as is". -TualGIS

Map 10-5: Commercial Setback & Commercial Services Overlay

TUALGIS



- Planning Area Boundary
- Tonquin Light Manufacturing Overlay
- Metro Regionally Significant Industrial Area
- Business Park Commercial Services Overlay
- Commercial Setback
- Commercial Services Overlay

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Technical Memorandum

Date: September 20, 2021

Project: 20-2737.0408

To: Mr. Tony Doran, Engineering Associate
City of Tualatin

From: Claire DeVoe, PE

Reviewed By: Brian Ginter, PE

Re: Water System Capacity Analysis – Tualatin Logistics Park

Introduction

As requested, this memorandum has been prepared to present the findings of our analysis of the water service to the proposed Tualatin Logistics Park located at 20400 SW Cipole Road. This memorandum presents the findings of this analysis for the City's use in determining the water system improvements necessary to meet fire flow and pressure requirements.

Background

The City's water system hydraulic model was used to perform a hydraulic analysis of pressure and fire flow performance in the City's water system under maximum day demand conditions with fire flow events evaluated at the proposed connection points to the existing east-west 12-inch diameter main connecting SW Cipole Rd to 124th Ave at the south side of the property. The hydraulic model was updated to include a proposed 8-inch connection to the existing 12-inch in the southwest as presented in the preliminary design drawings (C2.0) submitted to the City by VMLK Engineering and Design (drawings dated April 2021). The proposed development is zoned as industrial with a 3,000 gpm fire flow and limited domestic demand. The proposed development is located within the City's existing Pressure Zone A, served by the A level reservoirs at a nominal hydraulic grade (HGL) of 300 feet above mean sea level (msl). Figure 1 illustrates the development site and adjacent water system infrastructure.

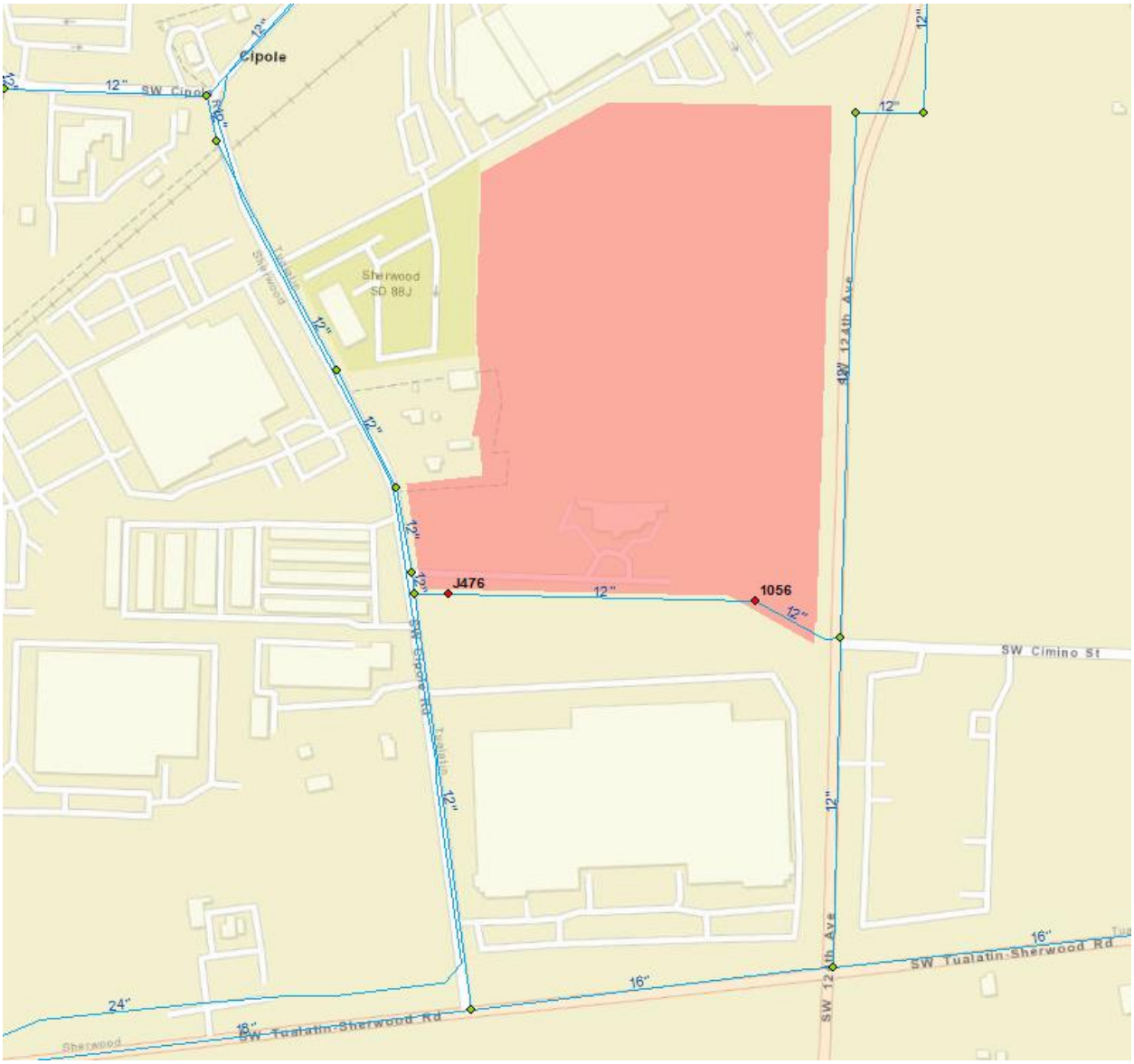

Figure 1. Proposed Development Site and Existing Water System Infrastructure

Analysis and Findings

The hydraulic model was updated as described above and fire flow performance tested at the location of the proposed 8-inch diameter connections.

A summary of specific model conditions for this analysis is presented below. The A Level is relatively isolated from the B and C Levels, therefore only A Level settings are shown.

Demand Conditions: 2040 Maximum Day Demand

Fire Flow: 3,000 gpm

Reservoir Levels: Operational, Equalization, and Fire Storage Depleted (A Level Reservoirs at 42 ft, 290 ft HGL)

Portland Supply Valves: Winter High Settings (400 gpm at Leveton, 700 gpm at 108th/Ops, 100 gpm at Park, 700 gpm at 72nd)

Physical Condition: Existing facilities plus proposed connections

The model nodes representing the proposed connections, the fire flow capacity tested, and the calculated minimum pressure within the area influenced by the fire flow in Pressure Zone A are summarized in Table 1 below:

Table 1
Fire Flow Analysis Results

Model Node ID	Location	Elevation (ft)	Fire Flow Rate (gpm)	Static Pressure (psi)	Residual Pressure (psi)
J476	Approx. 100 ft west of SW Cipole Rd, @ proposed 8" connection	170	3,000	50	42
1056	Approx. 200 ft east of SW 124th Ave, @ proposed 8" connection	171	3,000	50	41

Based on the findings of this analysis and a review of overall system improvement needs presented in the Water System Master Plan, there are no required water system improvements necessary to serve domestic and fire suppression flows to the proposed development, up to 3,000 gpm. The existing 12-inch diameter main between SW 124th Ave and SW Cipole Rd is adequate to serve the required fire flow and continue to meet flow and pressure requirements for the surrounding area without further improvements. It is the developer's responsibility to size internal (private) fire and domestic mains for adequate service pressure, private hydrants, and fire suppression sprinkler systems as these facilities are outside the scope of this analysis.

Please do not hesitate to contact us if you have any questions or comments in this regard. We would be happy to meet with you personally to discuss the findings presented in this memorandum.

From: Steve Koper
To: Erin Engman
Subject: Fwd: TIG/124th easement
Date: Wednesday, March 9, 2022 4:29:19 PM
Attachments: image001.png
TLP Site Plan Exhibit - 2-18-22-11x17 earth.pdf
TLP 100 G1.0 Site Plan - 11x17.pdf

Begin forwarded message:

From: Peter Skei <pskei@spechtprop.com>
Date: March 7, 2022 at 2:29:23 PM PST
To: Kim McMillan <kmcmillan@tualatin.gov>
Cc: Steve Koper <skoper@tualatin.gov>, Tyler Reeves <treeves@spechtprop.com>, Havlin Kemp <havlin@vlmk.com>
Subject: FW: TIG/124th easement

Kim,

See below email chain with Steve Tanner confirming to Charlie Johnson that the bullet points below and attached exhibits are acceptable (including that we would ONLY provide the easements, not construct anything).

Pease confirm this email is sufficient for you to delete reference to the construction of improvements in the revised conditions of approval (only include that we will provide the easements).

Thank you,

PETER SKEI
VICE PRESIDENT | PARTNER
Specht Development, Inc. | Specht Properties, Inc.
503.646.2202 | Cell 503.320.9201

From: CJ's Sterling Acct <cj1@sterling.net>
Sent: Monday, March 7, 2022 1:54 PM
To: Peter Skei <pskei@spechtprop.com>
Subject: Fwd: TIG/124th easement

Peter,

See Steve Tanner's response below.

Sent via iPhone

Begin forwarded message:

> **From:** Personal <ccb.stanner@gmail.com>
> **Date:** March 7, 2022 at 1:37:35 PM PST
> **To:** Charlie Johnson <cj@sterling.net>
> **Subject: Re: TIG/124th easement**
>
> Charlie,
> Your proposal looks like it covers all the bases for Our future needs , as long as the City understands that CCB will be proceeding with the application process in the near future and We intend to make the access project happen shortly. I appreciate what You have done, everything looks Great . Thanks for Your help. We are looking forward to seeing Your project move forward.
>
> Steve
>
> Sent from my iPhone
>
> > On Mar 7, 2022, at 1:00 PM, Charlie Johnson <cj@sterling.net> wrote:
> >
> > Steve,
> >
> > Here is a bulletin summary of the easement that we will be providing you for the construction of your driveway access onto 124th Ave. We want to make sure that this is what you are looking for from us. It is what the city would need to enable you to go forward with your access.
> >
> > Please review and let us know ASAP if this is acceptable to you. We have an Architectural Review heating on Wednesday night and it is

important that the city knows that you and I are comfortable with this arrangement. We will include this in our submittal and will proceed to the necessary documents art the appropriate time.

Thank you for your immediate attention to this,

Charlie

It is agreeable that tax lot ID 2S128A000300 (TLP site) will grant to tax lot ID 2S128A000100 (CCB site) the following easements for the purpose of the future construction and use of a driveway for the exclusive use by tax lot ID 2S128A000100:

- A permanent access easement
- A permanent slope easement
- A temporary construction easement
- The easements shall be in a form acceptable to the owner of tax lot ID 2S128A000100
- The easements shall be located and dimensioned generally consistent with the attached exhibits
- The owner of tax lot ID 2S128A000300 (TLP site) shall not be required to clear, grade, construct, or otherwise improve the easement areas. Such improvements will be the sole responsibility of the grantee (TLID 2S128A000100) when and if chooses to utilize such access.

Click each image below to get the full view of the plan.

PROPOSED BUILDING
452,795 SQ. FT.

50'
60'
525'
50'
60'

159.19' - S 89°45'44" E

TAX LOT 300
MAP 2S-1-28A

SLOPE EASEMENT
AND TEMPORARY
CONSTRUCTION
EASEMENT
773 SQ. FT.

15.00' WATER LINE EASEMENT
PER DOC. NO. 91-050054

248.38' - S 61°45'44" E

30.0'
390.0'
150.0'

FUTURE EXPANSION
58,500 SQ. FT.

ASSUMED 40.0' DRIVEWAY

22.0'
15.0'
18.0'

PERMANENT
ACCESS EASEMENT
529 SQ. FT.

℄ of CIMINO ST.

SW 124th Ave

EXISTING COLUMBIA CORRUGATED BOX

130
260
100
130
250
50
110
130

Scale: 1" = 60'-0"

G:\Acad\2019\20190311\0-Drawing\CCB Dwgs\EXHIBITS 2-9-22\TLP Site Plan Exhibit - 2-16-22.dwg - 2/18/2022 1:33 PM

PROPOSED BUILDING
452,795 SQ. FT.

RELOCATED PUBLIC
WATER LINE

REVISED WATER
QUALITY DETENTION
POND

FUTURE EXPANSION
58,500 SQ. FT.

EXISTING COLUMBIA CORRUGATED BOX

PHASE II

SLOPE EASEMENT
AND TEMPORARY
CONSTRUCTION
EASEMENT
773 SQ. FT.

PERMANENT
ACCESS EASEMENT
529 SQ. FT.

ASSUMED
40.0'
DRIVEWAY

TAX LOT 102
MAP 2S-1-28A

TAX LOT 300
MAP 2S-1-28A

SHEET 3

SHEET 4

SW J CIR OL ROAD

C of CIMINO ST.

50'

525'

60'

30'-0"

scale: 1" = 80'-0"

G:\Acad2019\201903110-Drawing\CCB Dwgs\EXHIBITS 2-9-22\TLP 00 G1.0 Site Plan.dwg - 2/18/2022 1:36 PM

From: Roggy Pflug
To: Erin Engman
Subject: FW: AR 21-0011 Tualatin Logistics Park, 20400 SW Cipole Road
Date: Tuesday, February 22, 2022 3:45:10 PM

Hello Erin,

I have previously spoken to Tony Doran about the above referenced project. I am not sure if you were included in this correspondence so I wanted to make sure our position regarding the entry point was known. Thank you, and if you have any questions please feel free to call at 503 490 8435.

Roggy Pflug
Columbia Corrugated Box

---------- Forwarded message ---------
From: **Roggy Pflug** <roggy@p-r-c.com>
Date: Thu, Feb 17, 2022 at 11:52 AM
Subject: AR 21-0011 Tualatin Logistics Park, 20400 SW Cipole Road
To: <tdoran@tualatin.gov>

Hello Tony,

Thank you for advising us to be diligent checking the website for updates of the above referenced project. I recently reviewed the updated traffic study and wanted to make sure we, Columbia Corrugated Box, continue to make our preferences known. To reiterate, we would like a full access point (as in current city plan) at 124th and Cimino. As a "worst case scenario" we could live with a right in/ right out access at that location. The traffic study severely understated our desire for a full access point.

I am out of the office until next Tuesday. I would like to schedule a call if possible to get your advice on how to insure we present our interests correctly. Please let me know a good time to call.

Roggy Pflug
Columbia Corrugated Box
503 490 8435

Exhibit K – Revised Conditions of Approval (3-9-2022)

GENERAL:

A1. This Architectural Review approval shall expire after two years unless a building, or grading permit submitted in conjunction with a building permit application, has been issued and substantial construction pursuant thereto has taken place and an inspection performed by a member of the Building Division, or an extension is granted under the terms of Section 33.020(10).

PRIOR TO EROSION CONTROL, PUBLIC WORKS, AND WATER QUALITY PERMIT ISSUANCE:

Submit to eTrakit for review and approval:

A2. In accordance with code section TMC 3-3, TDC 74.330 and 74.610, and the Public Works Construction Code the applicant must submit final water plans that show:

a. A gate valve at the main for each lateral.
b. Adjacent to rights-of-way within a public utility easement or adjacent to the existing public water easement near the south property line:
    i. Reduced pressure backflow prevention and water meter for the domestic lateral.
    ii. Irrigation after a domestic meter and reduced pressure backflow device, routed to the planter strips for SW 124th Avenue and SW Cipole Road.
    iii. The fire vault surrounded by five feet of public utility easement.
    iv. As needed to maintain a public easement from the main to the vault, a 10-foot wide easement centered on the lateral.
    v. If a vault is located in a drive aisle, then the cover/hatch must be rated for truck traffic as approved by the City Engineer.

A3. In accordance with code section TMC 3-2, TDC 74.330, 74.620, and the Public Works Construction Code the applicant must:

a. Submit sanitary sewer system plans that show:
    i. Location of the sanitary sewer lines, grade, materials, and other details.
    ii. Laterals serving the lot.
    iii. A cleanout at the right-of-way and public easements the laterals.
    iv. Construction of laterals to the existing and proposed manholes on TLID 2S128A000103 to the northwest of this development that does not affect the private stormwater systems.
b. Comply with the contractor insurance and bond requirements of the City of Tualatin.

A4. In accordance with TMC 3-5-200 through 3-5-430, TDC 74.630 and 74.650, Public Works Construction Code (PWCC), and Clean Water Services' (CWS) Design and Construction Standards (D&CS) Chapter 4 the applicant must submit:

a. Final stormwater plans and calculations certified by an Oregon registered, professional engineer in accordance with TMC 3-5-390(1) proving proposed systems:
    i. In accordance with CWS D&CS 1.03.39 and 5.09.3(a) (1) and (4) with gravity flow from five feet from the outside the established line of the building to the public stormwater system or as otherwise approved by the City Engineer.
    ii. All private catch basins located outside of public sanitary sewer, stormwater, and water easements.
    iii. Address runoff from all new and modified private and public impervious areas.
    iv. Treat new and modified impervious areas in accordance with CWS D&CS 4.08.1.d meeting phosphorous removal in accordance with TMC 3-5-350 per the design storm in accordance with TMC 3-5-360 and CWS D&CS 4.08.2.
        1. Public water quality facilities may be LIDA street swales within appropriately sized planter strips.

2. Additional dedication of right-of-way may be required to accommodate public stormwater facilities.

v. Detain up to the 25 year storm event in accordance with TMC 3-5-220(4), TMC 3-5-230, and CWS D&CS 4.08.

vi. Show onsite facilities to accommodate hydromodification including release rates for ½ the 2-year or 5-year storm events for proposed new and modified impervious areas in accordance with CWS D&CS 4.03.5.

vii. Submit conveyance calculations that accommodates up to a 25-year storm event with 100-year overland flow to the public stormwater system in accordance with TDC 74.640 and CWS D&CS 5.05.2.d.

viii. Demonstrate compliance with the submitted Clean Water Services' Service Provider Letter CWS File Number 21-002052 conditions to obtain a Stormwater Connection Permit Authorization Letter in accordance with TDC 74.650(2) and CWS D&CS 3.01.2(d) including mitigation of Vegetated Corridor impacts must be met through purchase of Wetland Mitigation Bank Credit.

ix. Comply with all requirements stated within the Service Provider Letter and CWS Memo dated February 24, 2022 and included as Exhibit D.

b. Submit financial assurance for construction performance in accordance with TMC 3-390(c), PWCC 102.14.00, and amount per CWS D&CS 2.07 Table 2-1.

c. Submit a copy of the recorded private stormwater maintenance agreement. The agreement must assure the owner as responsible for maintenance of the constructed portions of private stormwater systems within their lot. The identified system must include all conveyance, detention, hydromodification, and treatment.

A5. In accordance with TMC 3-5-050 and 3-5-060, TDC 74.640, Public Works Construction Code, and Clean Water Services' Design and Construction Standards Chapters 2 and 6 the applicant must submit:

a. Grading within public easements as approved by the City Engineer.

b. Final erosion control plans that minimize the impact of stormwater from the development to adjacent properties.

c. A copy of the National Pollution Discharge Elimination System (NPDES) 1200-C Construction Erosion Control permit from Oregon DEQ.

A6. In accordance with code sections TDC 74.120, 74.130, 74.210, 74.320, 74.330, 74.420, 74.425, 74.450, 74.470, 74.485, 74.765, 75.020, 75.040, and 75.140(6)(c)(iv)(B).

a. For 124th Avenue, the applicant shall construct a full site access at SW Cimino Street **or** a limited site access (right-in-right-out) at the northeast corner of the site with the following mitigations:

1. Dedication of right-of-way adequate to construct a minimum 12-foot wide sidewalk behind the existing curb and planter strip. At the discretion of the City Engineer, the sidewalk may be placed within a public access easement.

2. Construction of a 12-foot wide sidewalk behind the existing curb and planter strip. The existing sidewalk may be utilized as part of the construction if it meets ADA requirements.

~~3. Asphalt overlay 2-inch minimum, and grind along the curb or gutter to match grade, or as directed by the City Engineer, of existing pavement from to the centerline/median to curb adjacent to the lot's frontage.~~

~~4. A striping plan to consist of two 12-foot wide travel lanes and one 6-foot wide bike lane.~~
~~5.~~**3.** Replacement of existing street light fixtures to the LED, Option A standard.
~~6. Construction of a continuation of the 12-foot wide multi-use path improvement to SW Tualatin-Sherwood Road across the adjacent property to the south (Tax Lot: 2S128A000100) within the existing right-of-way. If inadequate right-of-way exists, the City Engineer may approve modifications within the existing right-of-way including, but not limited to, eliminating this requirement.~~
~~7.~~**4.** ~~Construction of an access a~~**A**t the southeast corner of the site, between SW Cimino Street and TLID 2S128A000300, ~~consisting of a paved minimum 40-foot wide driveway, located within~~ a permanent access easement dedicated to lot TLID 2S128A000300, adequate construction easement**(**s**)** **as determined by the City Engineer**, and permanent slope **and maintenance** easement.
~~8. Construction of a northerly extension of the existing median within 124th Avenue, as determined by the City Engineer, to limit turning movements from the site access.~~

b. For 124th Avenue, verification of adequate queue lengths for southbound SW 124th Avenue left-turn movement to SW Tualatin-Sherwood Road must be constructed by this developer, exist, or proof of Washington County agreement to construct with their widening of SW Tualatin-Sherwood Road

c. For 124th Avenue, fee in lieu of construction based on an Engineer's cost estimate of material and construction, of 12-foot wide multi-use path improvement between the south property line of the site, across the adjacent property to the south (Tax Lot: 2S128A000100, to SW Tualatin-Sherwood Road.

d. For SW Cipole Road the applicant must submit final plans that show construction to include:
   1. An 8-foot wide public utility easement adjacent to right-of-way
   2. A total of 38 feet of right-of-way from the centerline plus any additional to accommodate final accepted future public stormwater LIDA management
   3. A 6-foot wide sidewalk
   4. A 6-foot wide planter or wider on the west side to accommodate a LIDA swale (6 feet plus 1 foot shy adjacent to the sidewalk)
   5. Street lights
   6. Approvable street trees and planting locations with irrigation
   7. A 2-foot wide curb and gutter
   8. A 6-foot wide bike lane
   9. A 12-foot wide travel lane
   10. Half of a 12-foot wide turn lane

e. For SW Cipole Road the applicant must provide Washington County with recorded documents for a non-access restriction for the frontage, additional right-of-way to provide 38 feet from centerline, and an 8-foot PUE along the site's frontage.

PRIOR TO BUILDING OR ENGINEERING PERMIT ISSUANCE:

Submit to eTrakit for review and approval:

A7. The applicant must obtain a Facility Permit from Washington County and Erosion Control, Public Works, and Water Quality Permits from the City of Tualatin. Per TDC 74.120, work must not be undertaken on any public improvement until after the construction plans have been approved by the City Engineer and permits issued and the required fees paid.

A8. In accordance with code sections TDC 74.120, 74.210, 74.420, 74.425, 74.470, 74.485, and 74.765 the applicant must submit a copy of recorded dedication of sufficient right-of-way for SW Cipole Road including 38 feet of right-of-way and **sufficient right-of-way for** SW 124th Avenue **to satisfy Condition of Approval A6** ~~including a total of 55 feet of right-of-way from the centerline plus any additional to accommodate final accepted public stormwater LIDA management~~.

A9. In accordance with TDC 74.330, the applicant must submit a copy of recorded easements:
   a. 8-foot wide public utility easement adjacent to SW Cipole Road.
   b. Five feet public water easement surrounding fire vaults.
   c. As needed to maintain a public easement from the main to the fire vault, a 10-foot wide easement centered on the lateral.

A10. Submit a copy of recorded permanent access easement, construction easement, and permanent slope easement to enable the lot to the south to construct a 40 foot-wide driveway to their site in accordance with TDC 75.140(6)(c)(iv)(B). Provide written documentation of acceptance of the easements from the CCB property owners.

A11. The applicant must submit a Final Site Plan Set (in PDF format) to the Planning Division that is in substantial conformance to the submitted site plans and includes:
   a. Walkways must be a minimum of five feet and provided between the main building entrances and sidewalks along the public right-of-way, consistent with TDC 73A.500(1).
   b. Trees identified for retention in Tree Assessment Report (Exhibit A3) must be identified on the grading plan, consistent with TDC 73B.080(3). This includes on-site Tree 447 and off-site Trees 353-358, 417, 421, 431, 432, 434, 436- 439, and 442. Tree protection fencing and other preservation measures recommended by the Arborist should also be specified on the grading plan.
   c. Details to demonstrate that proposed bicycle parking meets the standards of TDC 73C.050(2) (a), (b), and (c), and 45 spaces are provided, with 14 covered, in conformance with TDC 73C.100(1).
   d. Site driveways must comply with ~~a minimum~~ **maximum** pavement width of 40 feet or as approved by the City Manager, in accordance with TDC 73C.130(~~3~~**6**) and 75.040(9).
   e. Trees, as approved by the Architectural Review Board, must be planted no more than 30 feet apart on the perimeter of vehicle circulation areas consistent with TDC 73C.230(3). Such trees may be omitted where the perimeter area is also within a Public Utility Easement as required by the City Engineer, and where there are existing trees at or near the property line.

f. A minimum of 3,400 square feet or 25 square feet per parking stall improved with parking lot landscape island area with one deciduous shade trees for every four parking spaces, consistent with TDC 73C.240(4).
g. Demonstrate that an adequate waste and recyclables management solution is provided in compliance with TDC 73D. If the minimum standards method is chosen, a minimum of 2,727 square feet of trash enclosure area must be shown on the plans. These facilities must comply with the location, design, and access standards in TDC 73D.070.

A12. The applicant must demonstrate property owner permission for removal of the 26 off-site trees identified in the Tree Assessment Report, submitted as Exhibit A3 and located on Tax Lot: 2S128A000300. Alternatively, the applicant must provide a revised grading and landscaping plan showing all off-site trees as preserved, with adequate protection for trees at the property line from all impacts of development.

A13. The applicant must address that the TVF&R emergency radio communication coverage requirement is met, consistent with Exhibit C. A fee in lieu is available and must be paid prior to issuance of building permits.

A14. The applicant must submit a solid waste and recyclables storage area plan that is in substantial conformance with the Minimum Standards Method described in TDC 73D.060 or other design method listed in TDC 73.020.

DURING CONSTRUCTION ACTIVITY:

A15. The applicant must install the tree protection fencing consistent with the Tree Assessment Report submitted as Exhibit A3 and Section 73B.080(3). Please contact the Planning Division to schedule an inspection with a minimum of 48 hours' notice. Where site conditions make grading or other similar encroachment upon a preserved tree's drip-line area, such grading or similar encroachment must only be permitted under the direction of a qualified arborist.

PRIOR TO ISSUANCE OF CERTIFICATE OF ~~OCCUPANCY~~COMPLETION:

A16. The applicant must complete all work associated with the City's Public Works Permit and Water Quality Permit, as well as Washington County's Facility Permit.

A17. Per TDC 74.120, except as specially provided, all public improvements must be installed at the expense of the applicant. All public improvements installed by the applicant must be constructed and guaranteed as to workmanship and material as required by the Public Works Construction Code prior to acceptance by the City. **The applicant must, subject to prior review and approval by the City Engineer, provide a fee-in-lieu equal to Engineer's cost estimate plus 15% contingency for an asphalt overlay 3-inch minimum, and full grind from curb to centerline curb along the site frontage, of existing pavement from to the centerline/median to curb adjacent to the lot's frontage with SW 124th Avenue. Any other fee-in-lieu must be equal to an Engineer's cost estimate of materials and construction plus 15% contingency, subject to prior review and approval by the City Engineer.**

A18. Walkways through parking areas, drive aisles, and loading areas must be of a different appearance than the adjacent paved vehicular areas, pursuant to TDC 73A.500(1).

A19. Provide an identification system which clearly locates buildings and their entries for patrons and emergency services, pursuant to TDC 73A.500(4)(d). Building identification approved by TVF&R must be placed in a position that is plainly legible and visible from the street fronting the property. Numbers must contrast with their background, be a minimum of 4 inches high, and have a minimum stroke width of 1/2 inch. It is recommended to double this size on large buildings.

A20. Fire lane curbing must be painted red in areas marked on Exhibit C. Private fire hydrants and underground must be inspected by TVFR.

A21. Areas impacted by grading and all areas not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas, or undisturbed natural areas must be landscaped, pursuant to TDC 73B.060(1).

A22. The applicant must install bicycle parking signage and vanpool/carpool parking signage per MUTCD standards, pursuant to TDC 73C.010(2)(xi) and TDC 73C.050(2)(d).

A23. The applicant must construct proposed buildings and all site improvements as illustrated on the approved Final Site Plan and Final Color Architectural Elevations. The applicant must contact the Planning Division for a site inspection at least 72 hours prior to requesting a certificate of occupancy. This inspection is separate from inspection(s) done by the Building Division.

THE FOLLOWING ITEMS APPLY TO THE SITE IN AN ON-GOING MANNER:

A24. The site has been permitted as warehouse and freight movement uses (TDC 39.440). A conditional use permit must be required if warehousing of building materials and supplies is proposed by future tenants. Future proposals that change the use of the property will be subject to review and limited to uses permitted in the General Manufacturing (MG) District, as identified in Table 61-1. If the use of a property changes, thereby increasing off-street parking or loading requirements, the increased parking/loading area must be provided prior to commencement of the new use, in accordance with TDC 73C.010(2)(a)(v).

A25. Consistent with the Transportation Impact Analysis dated December 15, 2021 prepared by Lancaster Mobley (Exhibit A4), future land uses on the site are must not generate more than 246 PM Peak Hour Trips and/or 1,690 Average Daily Trips. Alterations to this limitation require submittal and approval of a new Architectural Review application with corresponding traffic study under TDC 32.020(7), and in accordance with TDC 74.440.

A26. No commercial uses, including parking or outdoor storage and display areas, are permitted within the Limited Commercial Setback, located 300 feet from the centerline of SW 124th Avenue, and identified on Exhibit H - Map 10-5.

A27. All uses must be conducted within a completely enclosed building, except off-street parking and loading, and basic utilities, pursuant to TDC 61.310(1).

A28. The proposed development must comply with the Environmental Regulations of TDC 63.

A29. All mechanical equipment must be screened in accordance with TDC 73A.300(5). Prior to approval of a mechanical permit, the applicant or property owner must submit scaled elevations illustrating

that above-grade or on-grade equipment will be screened by parapet, sight-obscuring fence, landscaping, or other method.

A30. All sign permits require separate sign permit approval per TDC Chapter 38. This approval does not constitute sign permit approval.

A31. All site, building exterior, and landscaping improvements approved through the AR process must be continually maintained, so as to remain substantially similar to original approval through the AR process, except as permitted under TDC 33.020(7) *(Modifications to Previously Approved Final Architectural Review Decisions)*.

A32. All parking spaces shall be continuously maintained in compliance with the dimensional standards specified in TDC Figure 73-1.

A33. No vehicular parking, hedge, planting, fence, wall structure, or temporary/permanent physical obstruction is permitted between 30 inches and eight feet above the established height of the curb in the vision clearance area specified in TDC Figure 73-2.