



CITY OF MOLALLA PLANNING COMMISSION MEETING AGENDA

Council Chambers | Molalla Civic Center - 315 Kennel Avenue - Molalla
Wednesday | November 6, 2024 | 6:30 PM

NOTICE: Planning Commission will hold this meeting in-person and through video Live-Streaming on the City's Facebook Page and YouTube Channel. Written comments may be delivered to City Hall or emailed to communityplanner@cityofmolalla.com. Submissions must be received by 12:00 p.m. the day of the meeting.

Commission Chair Doug Eaglebear
Commissioner Clint Ancell
Commissioner David Potts

Commission Vice-Chair Connie Sharp
Commissioner Martin Ornelas
Commissioner Brady Rickey

[This institution is an equal opportunity employer.](#)

1. CALL TO ORDER AND FLAG SALUTE

2. ROLL CALL

3. CONSENT AGENDA

- A. Planning Commission Meeting minutes – October 2, 2024
- B. Planning Commission Meeting minutes – September 4, 2024

4. PRESENTATIONS, PROCLAMATIONS, CEREMONIES

5. PUBLIC COMMENT & WRITTEN COMMUNICATIONS

Citizens are allowed up to 3 minutes to present information relevant to the city but not listed as an item on the agenda. Prior to speaking, citizens shall complete a comment form and deliver it to the support staff. The Planning Commission does not generally engage in dialog with those making comments but may refer the issue to the Community Development Director. Complaints shall first be addressed at the department level prior to addressing the Planning Commission.

6. PUBLIC HEARINGS

- A. SUB01-2024 – Proposed Industrial Subdivision on West Main Street (Zinder)

7. GENERAL BUSINESS

- A. Holiday Logo (Wirth)
- B. Joint Meeting with City Council and Planning Commission (Wirth)

8. STAFF COMMUNICATION

9. COMMISSION COMMUNICATION

10. ADJOURN

Agenda posted at City Hall, Library, and the City Website at <http://www.cityofmolalla.com/meetings>. This meeting location is wheelchair accessible. Disabled individuals requiring other assistance must make their request known 48 hours preceding the meeting by contacting the City Recorder's Office at 503-829-6855.



Community Development Department

315 Kennel Ave/PO Box 248

Molalla, OR 97038

Phone 503.759.0205

www.cityofmolalla.com

Planning Commission Meeting Minutes September 4, 2024

The September 4, 2024, meeting of the Molalla Planning Commission was called to order by Commission Chair Eaglebear at 6:30 pm, followed by the Flag Salute.

COMMISSIONER ATTENDANCE:

Commission Chair Doug Eaglebear – Present
Commissioner Connie Sharp - Present
Commissioner Clint Ancell - Present
Commissioner Martin Ornelas – Present
Commissioner David Potts – Present
Commissioner Brady Rickey – Present

STAFF IN ATTENDANCE:

Mac Corthell, Assistant City Manager - Present
Jessica Wirth, Community Development Tech - Present
Sam Miller, Engineering Sec Manager – Absent
Dan Zinder, Senior Planner – Present

CONSENT AGENDA

- A. Planning Commission Meeting Minutes – August 7, 2024

ACTION:

Commissioner Ancell moved to approve the Consent Agenda; Commissioner Rickey seconded. Motion passed 6-0.

AYES: Sharp, Ancell, Ornelas, Potts, Rickey, Eaglebear

NAYS: None

ABSTENTIONS: None

PRESENTATIONS, PROCLAMATIONS, CEREMONIES

Mr. Zinder did a presentation on Support Commercial (SC) Overlay, included.

PUBLIC COMMENT & WRITTEN COMMUNICATIONS

None.

PUBLIC HEARINGS

None.

GENERAL BUSINESS

Miss Wirth noted Joint Planning commission and City Council Meeting, November 20th, 6:30PM. (Commissioner Sharp will be out of town).

STAFF COMMUNICATION

- Mr. Corthell asked if “6:30pm start time for Commission meetings to begin is best for everyone”, consensus is yes. Mr. Corthell mentioned that Celebrate Molalla was great. He updated everyone with the application for a

subdivision, application status is currently incomplete. Mr. Corthell also updated: the Sidewalk Improvement Program is live, the police department camera is live and posted, Waste Water Treatment Facility received four bids with the lowest being 36 Million and the highest being 48 Million. The contract will be awarded at the 9/11 Council meeting. Mr. Corthell mentioned the pavement assessment is complete, street tree lights have been repaired, Water Intake was awarded to Tetra Tech. He also provided updates in regards to Long Park, Chief Yelkus Park, and Fox Park projects.

- Miss Wirth, no comments.

COMMISSION COMMUNICATION

- Commissioner Potts stated that it makes land more valuable to have the overlay.
- Commissioner Sharp asked if there was a mock-up map of proposed properties. Stated she will be out of town for the joint council meeting November 20th.
- Commissioner Rickey asked what the effect on homes on those properties would be.
- Chairperson Eaglebear stated that it makes sense.
- Commissioner Ancell questioned if the overlay would affect the EOA process, noting that it would be beneficial to property owners to be able to keep it residential.

ADJOURN

Commissioner Ancell made a motion to adjourn the meeting at 7:18pm, seconded by Commissioner Potts. Motion passed unanimously.

PLANNING COMMISSION MEETING CAN BE VIEWED IN ITS ENTIRETY HERE:

<https://drive.google.com/file/d/1FmqhUliC0ikm4hYFCbAKCMVvXMaYUgxm/view?pli=1>

Doug Eaglebear, Planning Commission Chair

Date

Attested by: _____
Mac Corthell, Assistant City Manager

Date



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Doug Eaglebear, Planning Commission Chair

Date

Attested by: _____
Mac Corthell, Assistant City Manager

Date



Planning & Community Dev.
 117 N Molalla Avenue
 PO Box 248
 Molalla, Oregon 97038
 Phone: (503) 759-0205
 communityplanner@cityofmolalla.com

Staff Report

Date: October 30, 2024

File No.: SUB01-2024

Proposal: Preliminary Plat approval for a 12-lot subdivision – Molalla Industrial Park

Address: 525, 535, 545 and 565 OR-211, Molalla, OR 97038

Tax Lots: 7600, 7700, 7800, 9100, 9200 & 9300 on Clackamas County Tax Map 52E08A

Owner / Applicant: Woodburn Industrial Capital Group, LLC, Tim Kerr
 P.O. Box 1060
 Woodburn, OR 97071

Representatives: Weden Engineering, LLC, Craig Harris, P.E.
 P.O. Box 3246
 Ferndale, WA 98248

Kellington Law Group LLC, Wendie Kellington
 4500 Kruse Way, Suite 340
 Lake Oswego, OOR 97035

Applicable Standards: From Molalla Municipal Code, Title 17, Development Code
Division II, Zoning Regulations
Section 17-2.2.040 Lot and Development Standards (for M1 & M2 zones)
Section 17-2.4.030 Water Resources Overlay (pertaining to wetlands)
Division III Community Design Standards
Section 17- 3.1.020 (table) and 17.3.2 (for structures to remain)
Division IV, Application Review Procedures and Approval Standards
Section 17-4.3.020 General Requirements
Section 17-4.3.040 Lot Size Averaging, Flag Lots, and Infill Development
Section 17-4.3.070 Preliminary Plat Approval Standards



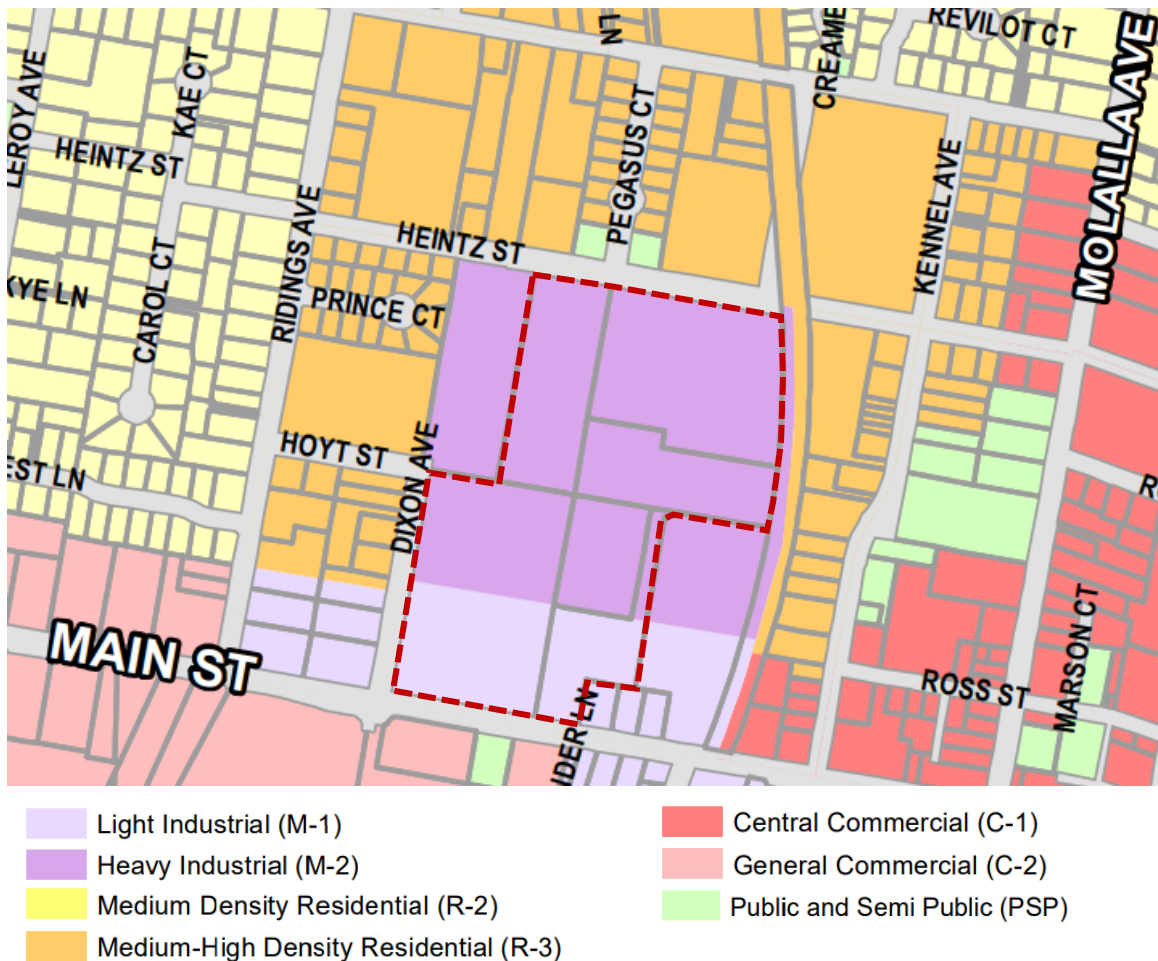
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- II. Recommendations
- III. Conditions of Approval

EXHIBITS:

- EXHIBIT A: Findings of Fact for SUB01-2024
- EXHIBIT B: Comments from Molalla Public Works
- EXHIBIT C: Comments from Oregon Department of Transportation
- EXHIBIT D: Comments from Oregon Department of State Lands
- EXHIBIT E: Comments from Molalla Fire
- EXHIBIT F: Applicant narrative, plans and studies for SUB01-2024

Figure 1. Portion of the Molalla Zoning Map with subdivision boundary shown in red dashed line.



I. EXECUTIVE SUMMARY

Proposal:

Woodburn Industrial Capital Group, applicant, seeks preliminary plat approval for a 12-lot subdivision, specific to the combined area of six tax lots, totaling approximately 21.62 acres. Tax lots 9300 and 9100 near are split zoned with the portions closest to OR-211 zoned M-1, Light Industrial and the northern portions zoned M-2, heavy industrial. The remaining four tax lots (7600, 7700, 7800 and 9200) are zoned M-2, Heavy Industrial. There is no proposal to re-zone the subject properties. The applicant's preliminary subdivision plan shows, proposed lots 1 through 3 would be zoned Light Industrial (M-1) and proposed lots 4 through 12 would be zoned Heavy Industrial (M-2).

All lots subject to preliminary subdivision consideration are not proposed for development at this time. One existing on-site building will remain and will reside on the proposed Lot 7. All other existing on-site structures will be removed. A private street is proposed, providing a north-south connection between OR-211 (south) and W Heintz ST (north). Public utilities, including sanitary sewer, water and storm drainage, are proposed for extension through the site and half-street improvements are proposed to existing streets along the subdivision boundary. Molalla Industrial Park is the name identified for this application. No other land use applications (e.g., Variance, Conditional Use) are subject to consideration and no other land use applications are necessary.

Site Description:

The subject site is generally located south of W Heintz ST, east of Dixon Ave and north of OR-211 (see outlined area on aerial photo, page one). As explained on page 5 of the applicant's narrative (Exhibit F) a lumber mill once operated on the subject site (Avison Lumber Mill). The applicant identifies other former businesses and uses that once operated / occupied the site, including a machine shop and equipment storage use. According to the applicant, a portion of the subject property is currently used by Rainer Amusement for storage of amusement equipment. Two existing businesses, Elder Demolition and Pro Vac, occupy the existing building on proposed Lot 7. According to the applicant, the subject property is mostly flat with a gradual slope. The applicant also notes that there are no existing wells or septic facilities on site.

The applicant's narrative states that there are no natural features on the site such as natural streams and ponds. As explained in this report to further detail, the applicant acknowledges Molalla's Local Wetland Inventory (LWI) to identify wetlands to a portion of the site where the former mill had utilized as a log pond. The applicant further explains how Oregon Administrative Rules (OAR) in Sections 141-085-0515 and 515(7) exclude log ponds from the "waters of the state" definition therein. the applicant also

explains how a city water pipe (underground and within the site) has been leaking, thereby causing water to pond above-ground.

Staff refer to the findings herein that address this topic in further detail (also prepared in response to MMC 17-2.4.030, Exhibit A) and summary of comments received from the Department of State Lands (DSL) to date. Also, Exhibit F includes the applicant wetland delineation report and corresponding Downstream Waterway Connection Analysis, both prepared by Environmental Science & Assessment LLC (ES&A). Exhibit F also includes a letter from the applicant's legal representative that addresses this topic in further detail.

Surrounding Zoning and Land Uses:

Abutting land to the northwest and southeast is primarily industrial and utilized for material and equipment storage. Land to the south, on the opposite side of OR-211, is developed for commercial use (retail and auto wash). Land to the north, on the opposite side of W Heintz ST, is vacant and residential. Land to the northeast contains a portion of the former Southern Pacific Railroad (right-of-way remaining) with existing residential beyond / opposite east side.

Figure 1, shown above on Page Two of this report, includes a portion of the Molalla Zoning Map depicting land use zones for the site and surrounding vicinity.

Public Agency Responses:

City Staff submitted the application for review to the Oregon Department of State Lands (DSL) Wetland Land Use Notice (WLUN) portal on September 17, 2024. On October 8, 2024, Staff routed the applicant's plans and materials to Molalla Engineering, The Oregon Department of Transportation (ODOT), and Molalla Fire. Their comments are included as Exhibits C, D, and E of this report. Comments received from city staff liaisons and other agency representatives are included with this report and integrated to the findings and proposed conditions of approval.

Timeframe for Decision Making, Public Notice and Comments:

On September 5, 2024, the applicant deemed the application complete, via an option as described in ORS 227.178(2)(a). The Commission hearing on November 6 is day 62 of the 120-day clock as described in ORS 227.178. On October 14, 2024, notice of the pending land use decision was sent to all property owners within 300-foot vicinity of the subject site and to all interested parties, as required by MMC 17-4.1.040. On October 14, 2024, notice was also posted on-site the by the applicant and on October 16, 2024, notice was published in the Molalla Pioneer. To the date of this report, no written statements from the public have been received in response to notice and materials identified as part of the record.

II. Recommendation

Based on the findings that demonstrate compliance with applicable standards, or the ability to demonstrate compliance with applicable standards, via conditions of approval as described herein, staff recommends the Planning Commission **approve** Subdivision SUB01-2024 with proposed conditions of approval listed below. This recommendation for approval is based on the applicant's written narrative, plans, and studies. Any modifications to the approved plans, other than those acknowledged by the conditions of approval, would require a new land use application and subsequent approval.

III. Proposed Conditions of Approval

1. Conditions Requiring Resolution Prior To Final Plat Approval

- a. Final Plat approval by the City of Molalla (MMC 17-4.3.090) will be required prior to filing and recording with Clackamas County (MMC 17-4.3.100). The City will provide a letter to Clackamas County confirming when all conditions required prior to final plat approval have been fulfilled.
- b. Applicant shall be required to submit sanitary sewer design plans to Oregon DEQ for review and approval. Applicant shall provide a Certificate of Capacity to Oregon DEQ at time of plan submission. No Public Works or Building Permits can be issued without DEQ's approval of the sewer system and the certificate of capacity.
- c. No building permits or final plat may be issued until all required public facility improvements are in place and approved by the Public Works Department, or otherwise bonded, in conformance with the provisions of this Code and Public Works Design Standards.
- d. The Applicant shall submit for final plat approval within two years of preliminary plat approval or otherwise receive an extension in accordance with MMC 17-4.3.030 to prevent a lapse of the decision herein.
- e. The Applicant shall confirm a unique name for the proposed replat with the Clackamas County Surveyors office to ensure compliance with ORS Chapter 92.
- f. The Applicant shall obtain all required state or federal permits, as applicable, prior to final plat approval. No Building Permit will be issued until final plat approval.
- g. Access to subdivision lots shall be taken from the private road that will extend north/south through the property, with the exception of Lot 3 which will obtain access from Dixon Ave. New approaches are to be signed and submitted with building

permit approval plans. No additional access will be granted without the applicable roadway authority approval.

- h. Dedication of right-of-way along OR-211/OR-211 is necessary to accommodate ODOT-required improvements to OR-211. Applicant shall donate enough right-of-way along variable width improvements consistent with City of Molalla Transportation Systems Master Plan (TSP) cross-section. ODOT requires donations of right-of-way to follow the requirements of Chapter 5.322-Developer Mitigation Donation in the ODOT Right-of-Way Manual. Donations must be completed and recorded prior to submitting the subdivision plat to the City of Molalla. Applicant shall provide copies of record right-of-way dedication with the final plat application.
- i. Public Works Standards require 10-foot Public Utility Easement (PUE) along roadway frontages. If none exists, applicant shall record a 10-foot Public Utility Easement (PUE) along street frontages on the final plat. No structures will be permitted within that PUE. If a PUE already exists, the applicant is to provide documentation to the Molalla Public Works Department with final plat application.
- j. Detailed engineering plans demonstrating compliance with the MMC and City of Molalla Public Works Standards. All public improvement designs shall meet the requirements of the Molalla Standard Specifications for Public Works Construction as amended by the Public Works Director. All public utility/improvement plans submitted for review shall be submitted in a 22"x 34" format. The engineering plans shall also include design for the following improvements for review and approval of the City:
 - I. Based on ODOT's comments, the applicant is to obtain a State Highway Approach Road Permit from ODOT for access to the State highway (OR-211).
 - II. Design and construct an east-bound left-turn lane meeting ODOT specifications leading to development's proposed main access from OR-211.
 - III. Design and construct the north side intersection at OR-211 (HWY211) & Dixon Ave and construct half street improvements along Dixon Ave.
 - IV. Design and construct Site Access and Lighting Improvements on the south side of Heintz street.
 - V. Per MMC 17-3.3040 applicant to design and construct accesses and drive aisle to meet Oregon Fire Code Standards. Individual site accesses to be evaluated during design review.

- VI. Applicant proposes to connect to the City storm system on W Heintz ST. Applicant shall meet connection requirements to City system. All storm improvements on City right-of-way shall be designed to meet City requirements.
- VII. Applicant shall be required to extend Public Sewer System to serve the development from Hwy-211 (OR-211) north within the new private street and shall be center in a public utility easement meeting Public Work Standards and facility master plans and stub out services to each individual lot.
- VIII. Design and construct a new 8-inch waterline extending from the stubbed waterline near the northeast corner of property known as Map 52E08A Tax Lot 07800 (535 OR-211.), bearing roughly southward along the abandoned Wittenberg roadway alignment, around the east side of the building onsite, to the southeast corner of 535 OR-211, and reconnecting to the waterline at approximately that location. Applicant shall relocate and record the location of the existing utility easement to correspond the location of the relocated waterline.
- IX. City of Molalla is undertaking a project to install Pressure Reducing Valves throughout the City's Public Water System. This has been identified as a goal for the City following completion of our Water Management, Conservation and Water System Master Plan (WMCWSMP) which found there to be relatively high-water pressure on the west side of the City's distribution system. To remedy this, the City will be splitting the distribution system into three pressure zones by way of installing PRV's within the water system. City has conducted a feasibility study to determine suitable locations for the installation of the PRVs. They have determined one of the locations to be at the northeast corner of W Main Street & Dixon intersection (within the southwest corner of Lot 3). City is asking for additional dedication for constructing of this Facility.
- X. Should Fire Department regulations require additional fire flow that results in looping the water line through the site, then applicants engineer shall coordinate with Public Works for the extension of a public water line, and dedication of easement.
- XI. From the material submitted, it appears that the storm drain, domestic water and sanitary sewer facilities will be obtained from main line connections

and/or extensions. Separate engineering drawings reflecting the installation of these public utilities will be required.

- k. Applicant shall apply for a demolition permit with the City of Molalla and Clackamas Building Department to remove existing outbuildings. Utilities to be abandoned at the time of demolition in accordance with Molalla Public Works Standards.
- l. Prior to final plat approval, the application shall provide the city with a street maintenance agreement document intended for recording with the final plat. A draft of the agreement is to be submitted to the City of Molalla for review and approval by the City. The maintenance agreement shall identify perpetual maintenance needs, including the need for re-planting landscape if designed for water quality purposes, and for upkeep of all roadway signs (e.g., no parking signs). Owners of all lots shown to front and access the private road are to be bound by this agreement. The agreement is also to describe the financial means and administration necessary for continued maintenance assurance. The agreement shall also describe the means and contact for enforcement as needed if / when no-parking signs (where posted) are ineffective as a deterrent. Final plat shall contain a note stating the ownership agreement and contact.
- m. The final plat shall show the location of a public utility easement over the private north-south road for public sanitary sewer and water service, and the south side of Lot 5 for sanitary sewer as shown. The City of Molalla shall be the easement beneficiary. For water, applicant shall relocate and record the location of the existing utility easement to correspond with the location of the relocated waterline.
- n. Until a determination is made by the Department of State Lands (DSL) as to wetlands jurisdiction, Wetlands A, B and C, where identified to the applicant's wetland delineation report, are to be retained and there shall be no grading, paving or fill activity to an area extending 25-feet from respective wetland boundaries. The boundary shall be demarked by protective fencing if grading / fill is to commence on other portions of the subdivision site that do not contain wetlands. If DSL concurs with the applicant determination that wetlands are non-jurisdictional fencing can then be removed and grading / fill can commence after City approval of engineered construction drawings. If DSL disagrees with the applicant's determination, the applicant may submit for administrative review of a plan modification, identifying certain plan adjustments including but not limited to adjustment of private street location and (utilities for wetland preservation, or mitigation if necessary). The modification plan would be subject to review of criteria in MMC 17-2.4.030.E. and findings in support.

2. Conditions Requiring Resolution Prior to Building Permit Submission

- a. With the exception of Lot 7, addressed separately below, all lots shall undergo design review for proposed uses/buildings.
- b. The applicant will be required to extend separate Water, Sewer and Storm connections from the main for each parcel prior to development.
- c. Applicant shall conform to all emergency access, building, and fire code standards, as applicable. Applicant will be required to meet Oregon Unified Fire Code / Specialty Code at the time of building permit submission.

3. Conditions Pertaining to Lot 7 Requiring Resolution Prior to Occupancy

- a. Proposed Lot 7 will contain an existing building that will be the resultant site for two businesses that applied for change of use/occupancy in 2024 under the Molalla City File Numbers COU10-2024 and COU11-2024. Any and all outstanding conditions from those decisions remain in effect prior to occupancy of Lot 7 with the following exception; Condition 8 from COU10-2024 and Condition 7 from COU11-2024 may be superseded by the common access tract proposed in this review.

Exhibit A:

City Staff's Findings of Fact for SUB01-2024

Molalla Municipal Code (MMC) in Section 17-4.3.070.A authorizes the Planning Commission to approve, approve with conditions, or deny applications for preliminary subdivision plat. The Planning Commission decision must be based on findings of compliance with the applicable approval criteria. These criteria (1 through 9 under A of 17-4.3.070) are shown in **bold blue**. Related MMC standards in response to approval criteria are shown in **purple**. Staff findings of fact (in review of plans, materials, and the applicant’s written response for SUB01-2024) follow.

A. Approval Standards. The Planning Commission may approve, approve with conditions, or deny a preliminary plat. The Planning Commission decision shall be based on findings of compliance with all of the following approval standards:

1. The land division application shall conform to the requirements of Chapter 17-4.3;

FINDINGS: Staff incorporate the applicant’s written narrative and burden of proof statement, dated June 28, Exhibit F, in addition to the studies and delineation reports as provided (included as part of Exhibit F). In response to the above, the applicant refers to that part of the narrative having addressed applicable provisions of Chapter 17-4.3. These provisions are identified below.

17-4.3.020 General Requirements

17-4.3.020(A) Subdivision and Partition Approval Through Two-Step Process. Applications for subdivision or partition approval shall be processed by means of a preliminary plat evaluation and a final plat evaluation, according to the following two steps:

- 1. The preliminary plat must be approved before the final plat can be submitted for approval consideration; and**
- 2. The final plat must demonstrate compliance with all conditions of approval of the preliminary plat.**

FINDINGS: This application is for a preliminary plat approval. Proposed conditions of preliminary approval explain the need for construction of site improvements, primarily within the boundaries of the site. After these site improvements are substantially complete or otherwise bonded, the applicant will submit the final plat to the city and associated documents (e.g., private street maintenance agreement) for further review before signatures. Subsequently, the final plat and documents are recorded.

17-4.3.020(B) Compliance with ORS Chapter 92. All subdivision and partition proposals shall conform to state regulations in ORS Chapter 92 Subdivisions and Partitions.

FINDINGS: This proposal conforms to the regulations in ORS Chapter 92 (pertaining to land divisions). The proposal meets this standard.

17-4.3.020(C) Future Re-Division Plan. When subdividing or partitioning tracts into large lots (i.e., greater than three times or 300 percent the minimum lot size allowed by the underlying land use district), the lots shall be of such size, shape, and orientation as to facilitate future re-division and extension of streets and utilities. The applicant shall submit a future re-division plan, or shadow plan, indicating how re-division of oversized lots and extension of planned public facilities to adjacent parcels can occur in the future. (See also Section 17-4.3.040 Pre-Planning for Large Sites.)

FINDINGS: The subject parcels are zoned M-1 and M-2. Provisions in Section 17-4.3.020(C) are not applicable as city zones M-1 and M-2 identify no standard (minimum) for lot size.

17-4.3.020(D) Adequate Utilities. All lots created through land division shall have adequate public utilities and facilities such as streets, water, sewer, gas, and electrical systems, pursuant to Chapter 17-3.6. These systems shall be located and constructed underground where feasible.

FINDINGS: Staff incorporated the findings as received from Public Works (Exhibit B). Findings in support of the utility adequacy are explained in response to Criteria 3 and 5, addressed later in this report.

17-4.3.020(E) Adequate Drainage. *All subdivision and partition proposals shall have adequate surface water drainage facilities that reduce exposure to flood damage and improve water quality. Water quality or quantity control improvements may be required, pursuant to Chapter 17-3.6.*

FINDINGS: Staff incorporate the findings as received from Public Works (Exhibit B). Findings in support of drainage adequacy are explained in response to Criteria 3 and 5, addressed later in this report. Staff observe the proposed private street to incorporate water quality and water quantity control (within the landscape strip shown between curb and gutter). Future development of each lot (TBD) is to address code provisions for water quality or quantity – lot by lot. Plans and documents submitted for future lot-by-lot development are to identify / show the amount of impervious surface and the type / location of proposed water quality / quantity control facilities.

17-4.3.020(F) Adequate Access. All lots created or reconfigured shall have adequate vehicle access and parking, as may be required, pursuant to Chapter 17-3.3. (Ord. 2017-08 §1)

FINDINGS: Except for Lot 3 where shown, primary vehicle access will be to the proposed private north-south road as shown through the site. Lot 3, situated at northeast corner of OR-211 and Dixon Ave, will gain access from Dixon Ave. Certain access spacing distance standards apply to OR-211 because of the arterial street classification. Staff proposes a condition of approval that recognizes existing state access restrictions to OR-211 accordingly. Compliance with City master plans and access standards are further evaluated in response to Criterion 3 of this report.

17-4.3.030 Preliminary Plat Approvals Process

A. **Review of Preliminary Plat.** Preliminary plats for partitions shall be processed using the Type II procedure under Section 17-4.1.030. Subdivisions shall be processed using the Type III procedure under Section 17-4.1.040. All preliminary plats, including partitions and subdivisions, are subject to the approval standards in Section 17-4.3.070.

FINDINGS: The Applicant’s proposal consists of 12 lots and is a replat of six existing taxlots. Four or more lots created by land division application qualify for subdivision. Accordingly, the applicant’s proposal is subject to the Type III procedure as more than four additional lots are created.

B. **Preliminary Plat Approval Period.** Preliminary plat approval shall be effective for a period of two years from the date of approval. The preliminary plat shall lapse if a final plat has not been submitted or other assurance provided, pursuant to Section 17-4.3.090, within the two-year period. The Planning Commission may approve phased subdivisions, pursuant to subsection D, with an overall time frame of more than two years between preliminary and final plat approvals.

FINDINGS: Notice of Decision will inform the applicant accordingly. Staff observe no proposal to phase subdivision improvements (e.g., complete portions of identified improvements and record separate plats to these areas).

17-4.3.050 Lot Size Averaging, Flag Lots, and Infill Development

FINDINGS: M-1 and M-2 zones do not identify lot size minimum or maximums and therefore these standards do not apply.

Staff also observe “Mid-block lanes” as described in 17-4.3.050, to pertain to private drives serving more than two dwelling units (residential use). As the subject lots are intended for future industrial development, staff finds the provisions of 17-4.3.050 to be not applicable.

2. All proposed lots, blocks, and proposed land uses shall conform to the applicable provisions of Division II Zoning Regulations, except as modified by the provisions of Chapter 17-4.3 (e.g., lot size averaging);

FINDINGS: Staff incorporate the applicant's written narrative and burden of proof statement, Exhibit F, in addition to the studies and delineation reports as provided (also included part of Exhibit F). Applicable provisions of Division II are identified and addressed below.

17-2.2.030 Allowed Uses

Findings: As explained in the executive summary, all lots subject to preliminary subdivision consideration are not proposed for development at this time. The subdivision is intended to accommodate future industrial uses. One lot (Lot 7) will retain the existing building. Two industrial businesses currently occupy the existing building and there is not a proposal for new use(s) to occupy. As previously mentioned, proposed lots 1 through 3, where shown, would be zoned Light Industrial (M-1) and proposed lots 4 through 12 would be zoned Heavy Industrial (M-2).

17-2.2.040 Lot and Development Standards

Findings: Staff incorporated the applicant's statement provided in response to lot development standards (pages 9 and 10 of the narrative and burden of proof statement). According to the applicant, all proposed lots meet the dimensional standards of Table 17-2.2.040.E and the "I zones" applicable to M1 and M-2 industrial zones. Staff also incorporated the applicant's site plan that shows proposed / resulting building distances for the existing building to remain on Lot 7. Generally, building setbacks of "I zones" are unspecified (zero) unless a proposed building has a street-facing garage or carport entry. Also, a minimum 10-foot setback is applicable if adjacent to properties zoned residential (R). The existing development on Lot 7 meets these standards and future development will be evaluated to meet these standards through subsequent design review.

Applicant proposes to demolish existing onsite structures other than the structure on proposed Lot 7. As the applicant indicates, all buildings are to be removed except for the building on Lot 7 as mentioned. As those buildings may cause incongruencies with lot and development standards if they remain, Staff finds in support of a condition approval whereby the applicant is to obtain a demolition permit through the city and remove these buildings prior to final plat approval. Utilities to be abandoned at the time of demolition in accordance with Molalla Public Works Standards. Staff observe other standards shown to the Table in

2.2.040.E (e.g., building height, maximum lot coverage and setbacks) only applicable when lots of this subdivision are developed at a future date, TBD.

17-2.4.030 Water Resources (WR) Overlay

Findings: As noted in the executive summary of this report, the applicant’s narrative explains how wet areas of the site relate to mapped wetlands as shown to the Molalla Local Wetlands Inventory (LWI). The applicant’s narrative also explains how OAR 141-085-0515 and 515(7), describe the types of waters and jurisdictional limits of the Oregon Department of State Lands (DSL) in regulating “waters of the state” as defined.

According to applicant, state law prohibits former log pond sites from being characterized as wetlands (from page 5 of the narrative). The applicant also explains how ponding has occurred on-site because of a leaking water pipe (below ground). In response to the applicant’s statement, staff first confirm “log storage” to be among listed artificially created wetlands shown to OAR 141-085-0515(7) that are exempt from the “waters of the state” definition.

Staff also observe materials submitted by the applicant (Exhibit F) to include a wetland delineation report and corresponding Downstream Waterway Connection Supplemental Analysis, both prepared by Environmental Science & Assessment LLC (August 2024, ES&A). In part, the downstream waterway connection analysis identifies the location of a broken city waterline (on map). The same analysis makes site observations in support of a claim that the mapped waters and wetlands features of the site lack a continuous surface connection and therefore cannot be determined as federally jurisdictional.

Exhibit F also includes a letter prepared by the applicant’s legal representative Wendie L. Kellington, dated September 5, 2024. In part, Ms. Kellington’s letter refers to provisions from MMC 17-2.4.030 (city wetland resources overlay standards) and observes how there are no stream corridors or floodplains that are identified on the subject property. Ms. Kellington’s letter also refers to the analysis prepared by ES&A that accounts for past use of the site and other circumstances for how certain wetlands were created artificially and are therefore presumed to be non-jurisdictional.

In part, MMC 17-2.4.030 explains how the Oregon Department of State Lands shall be notified in writing of all applications to the City of Molalla for development activities, including applications for “...development proposals within the Molalla UGB, that may affect any wetlands, creeks or waterways identified in the Local Wetlands Inventory or Natural Features Inventory.”

On September 17, 2024, DSL was notified accordingly and on October 15, 2024, DSL responded with the attached document (Exhibit D). On page 2, DSL acknowledges receipt of the applicant’s materials but also states how the Department is reviewing this delineation to

determine if the wetlands and waters identified on-site meet jurisdictional criteria. On page 2, DSL also states: “Once we have determined the jurisdiction of these features, we will be able to determine if a permit is required for this project.”

On October 16, 2024, staff followed-up with a telephone call to DSL, inquiring as to when a jurisdictional determination is expected. DSL verbally informed staff that the determination is expected to be issued by the end of November 2024. Conceivably, if DSL were to disagree with the applicant’s claim that wetlands are non-jurisdictional, the applicant could explore other options, one being to preserve the wetlands and the other to mitigate for removal.

Staff observe regulations in MMC 17-2.4.030.G to be applicable in review of jurisdictional wetlands for proposed development of property, including subdivision improvements in the subject case. Also, staff observe these regulations to be stringent and prohibit building, paving, grading and fill with certain exceptions. Also, if isolated wetlands are to be preserved, MMC 17-2.4.030.B describes a 25-foot riparian buffer setback as measured from the edge of the wetland. Staff also observe the provision to allow wetland modification / alteration (MCC 17-2.4.030.E) subject to criteria that in part requires the alteration to be approved by the U.S. Army Corps of Engineers and the Oregon Division of State Lands.

With a determination from DSL not expected until the end of November, Staff recommends adopting a condition of subdivision approval that precludes grading, paving or fill activity to portions of site where wetlands are identified in addition to a 25-foot buffer until a determination is issued. The same proposed condition explains two scenarios: 1) if DSL concurs with the applicant’s determination that the wetlands are non-jurisdictional and, 2) if DSL disagrees with the applicant’s determination. If DSL disagrees, staff will work with the applicant on a plan modification, such as shifting of the north-south street to the west. Under proposed conditions of this report, staff proposes a condition for the Commission to consider on November 6.

3. Access to individual lots, and public improvements necessary to serve the development, including, but not limited to, water, sewer, and streets, shall conform to Division III Community Design Standards;

Findings: Staff incorporates the findings as received from Public Works (Exhibit B). In part, findings received from Public Works explain the need for securing a performance bond to assure construction of site improvements to city standards where applicable. Additional findings are provided below.

Vehicle Access: Findings from Public Works engineering staff (Exhibit B) explain how the subject property / site area has a nonconforming access from OR-211 and off W Heintz ST. Public Works also acknowledge the applicant’s proposal to extend a proposed private road through the property, providing connection between OR-211 and W Heintz ST. Findings from Public Works also explain how the applicant will be required to bring both access into

conformance with the standard of the applicable roadway authority; The City of Molalla for W Heintz ST and ODOT for W Main ST / OR 211.

Findings from Public Works also explain how vehicle access to certain lots of this subdivision may be limited to a single street and usually the lower classification street if abutting two streets. Access spacing must also conform to the Transportation Systems Plan and Molalla's Standard Specifications for Public Works Construction. Findings and details of street access and spacing are explained in further detail by Public Works (Exhibit B) primarily in response to street improvement standards described in MMC 17-3.6.020.

Staff also incorporate the comments received from ODOT Region 1, dated October 22, 2024 (Exhibit C). In part, ODOT comments describe the minimum access spacing distances applicable along this segment of OR 211 as 350-feet between accesses – measured driveway-to-driveway. Comments received from ODOT acknowledge the applicant's Traffic Impact Analysis (included as part of Exhibit F) and how the private road is intended for primary vehicle access. A State Highway Approach Road Permit is required by ODOT for access. ODOT also recommends that the City of Molalla condition application approval to install the 3-lane section along the site's highway frontage, consistent with the city's TSP three-lane cross section for this facility.

Street Lighting: Streetlights are required on all new developments. Findings received from Public Works explain how the applicant will be required to install roadway lighting. Location and number shall be determined in review of detailed construction plans (MMC 17-3.6.020).

Public and Franchise Utilities: All public and franchise utilities shall be placed underground. No new overhead wires / cables are to be added along or to cross public right-of-way, or the private street. Along all street frontages, staff recommends a condition of approval showing the location of a 10-foot-wide public utility easement (to the final plat) with utility providers as beneficiaries. Notes to the final plat are to describe purpose and beneficiary of the easement.

Sanitary Sewer: Findings from Public Works (Exhibit B) explain the need for extending public sewer through the site (via the new private street as proposed) from Hwy-211 / OR-211. Findings also explain the need for recording a public utility easement for this purpose. Sewers are to be designed and constructed for conformance with Oregon state plumbing laws, rules of the Oregon DEQ and to applicable City Standards. A proposed condition of approval (hereto) requires the applicant to submit a Sewer Capacity Analysis Request Form to the Oregon Department of Environmental Quality (DEQ) for approval per OAR Rule 340-52. Capacity Analysis for dry line to be submitted with construction plans. Subsequent capacity analyses to be submitted with design reviews.

Water: Findings from Public Works refer to conditions of past land use approval specific to Lot 7, developed with existing building to remain. The existing building on Lot 7 currently lies on top of a 6-inch public waterline that runs north-south through the subject lot area, along

the abandoned Wittenberg right-of-way. The applicant will be required to design and construct a new 8-inch waterline extending from the stubbed waterline near the northeast corner of existing Map 52E08A Tax Lot 07800, 535 OR-211, bearing roughly southward along the abandoned Wittenberg roadway alignment, around the east side of the building onsite, to the southeast corner of 535 OR-211, and reconnecting to the waterline at approximately that location. Applicant is also to relocate and record the location of the existing utility easement to correspond with the location of the relocated waterline.

Water for Emergency Service Provider Response:

Findings in Exhibit B also explain how extensions for fire protection may be required and how all public water lines are to be within a public easement. Applicant provided proposed hydrant locations on site plan to be revised in Civil Review. Molalla Fire Marshal commented in an October 23rd email that occupancy will not be granted until testing for fire flow is completed and deficiencies corrected. Per MMC 17-3.3040 applicant shall design and construct access and drive aisle to meet Oregon Fire Code. Individual site accesses to be evaluated during design review.

Streets:

The subject site abuts existing portions of W Heintz ST, OR-211 and Dixon Ave. As a condition of approval, street frontage improvements are to be constructed to standards as described in the Molalla Development Code, Transportation Systems Plan and Master Plan, and ODOT highway standards.

Staff incorporate comments received from Public Works (Exhibit B). In summary, Staff finds in support of the following street frontage improvements. Staff further finds these improvements to be roughly proportional to the impacts identified by the applicant, in part by the analysis and trip generation forecasted by the applicant's Transportation Impact Analysis (included as part of Exhibit F). These street frontage improvements include the following:

OR-211 / OR 211 along the subject site: OR-211 is an Arterial under ODOT jurisdiction, subject to design standards of the Molalla Transportation Systems Master Plan (TSP). The applicant shall construct half street improvements to meet all requirements of the TSP and access requirements as determined by ODOT. Development will be required to construct significant improvements along OR 211, including addition of a center turn lane, bicycle lanes and sidewalk and include frontage improvements. If required during construction plan review, additional striping and pavement tapers may be required, as necessary. The applicant will also be required to construct street improvements and right-of-way donation as necessary for consistency with the Molalla TSP adopted cross section of which includes a 14 ft. Center/turn lane, 12 ft. travel lane, 2 ft. bike buffer, 5 ft. bike lane, 6 1/2 ft. sidewalk, 1 1/2 ft. back of sidewalk buffer. Staff refer to additional improvements identified Exhibit C (comments from ODOT) and the applicant will need to obtain an ODOT State Highway Approach Road Permit.

Dixon Ave along the site: Dixon Ave is a Local Street under City of Molalla jurisdiction. The applicant shall construct street improvements to City standards and right-of-way donations necessary for consistency with the Molalla TSP, adopted cross sections of which include construction of a three-lane intersection approach with a 12 foot turn lane and two 11 foot drive lanes at the intersection of OR-211 & Dixon Ave, with 10 ft. travel lane, 8-foot parking lane, curb & gutter, and 6 foot wide curb tight sidewalk on the east side. The applicant shall also be responsible for installing all associated signing for crosswalks and 25 mph speed signs per City requirements.

W Heintz ST along the site: W Heintz ST is a Local Street under City of Molalla jurisdiction. W Heintz ST was reconstructed in 2016 from Kennel Avenue south to Riding Avenue as a City public improvement project (15-14 Molalla Urban Renewal Project – W Heintz ST). The applicant shall construct and/or bring existing approach for private street connection to City standards and shall be required to install roadway lighting along property frontage on the south portion of W Heintz ST fronting the property. Location and number of pole-mounted lights shall be determined during civil plan review.

4. The proposed plat name is not already recorded for another subdivision, and satisfies the provisions of ORS Chapter 92;

Findings: Staff observe the role of the County Surveyor, in part, to review and approve the plat name, prior to recording. The applicant is to confirm a unique name for the proposed subdivision (or replat if determined to be such) with the Clackamas County Surveyor to ensure compliance with ORS Chapter 92.

5. The proposed streets, utilities, and surface water drainage facilities conform to City of Molalla adopted master plans and applicable engineering standards, and allow for transitions to existing and potential future development on adjacent lands. The preliminary plat shall identify all proposed public improvements and dedications;

Findings: Staff incorporate comments received from Public Works hereto (Exhibit B). In part, criterion No. 5 is met by the applicant satisfying conditions of approval as described.

Water and Sewer:

Staff incorporate the findings in response to Criterion #3 and comments from Public Works (Exhibit B).

Drainage and Surface Water:

Staff incorporate comments received from Public Works hereto (Exhibit B). Standards for storm drainage and surface water management are found in MMC 17-3.6.050.

In part, findings from Public Works explain the need for submitting design and construction requirements for stormwater and surface water management at the time of Public Works Permit application for the private storm system within the private street and to provide details on water quality. As explained in further detail to Exhibit B, at a time when the owners of individual lots seek development approval through the city, a storm drainage plan will be necessary, and the plan will need to demonstrate compliance with City Public Works Standards. Specifically, the design shall be in accordance with Section 3 of the Molalla Standard Specifications for Public Works Construction and Stormwater Master Plan. Exhibit B further explains the means / methods for collection of storm systems development changes (SDCs).

Also, in response MCC 17-3.6.050.E (existing watercourse as cited in Exhibit B) findings of Exhibit B explain the need for meeting the regulatory requirements of the Oregon Department of State Lands, ODFW, U.S. Fish and Wildlife Department, U.S. Army Corps of Engineers, National Marine Fisheries Service, and any other state and federal agencies having jurisdiction if any watercourse, drainage way and channels are determined within the development, if and as applicable.

Streets:

Staff incorporate the findings herein prepared in response to Criterion #3.

Future Connections:

Review of the Molalla TSP and Functional Classification Map found no street recognized / desired for future street continuation (through the site) and connections with other streets. The applicant's proposed private north-south street is not proposed for TSP map compliance.

6. All proposed private common areas and improvements, if any, are identified on the preliminary plat and maintenance of such areas is assured through appropriate legal instrument;

Findings: No private common areas (i.e., intended for open space / recreation) are proposed. However, the north-south private street where shown will be privately maintained and the applicant's plans identify a tract to be created for this purpose. Staff finds in support of a condition of approval that requires recording a maintenance agreement document with the final plat. The maintenance agreement is expected to explain how the owners of lots within subdivision are to pay and maintain the private street to ensure safe vehicle and pedestrian travel through the site. Staff also recommends the formation of an owners association for this purpose. The same proposed condition of approval explains how the City is to first review and approve the maintenance agreement document before recording with the final plat. The document is to explain how the owners are to enforce no parking to portions of

street where no-parking signs are posted as a deterrent. Final plat shall contain a note stating the ownership agreement and contact.

7. Evidence that any required state and federal permits, as applicable, have been obtained or can reasonably be obtained prior to development;

Findings: This standard is met subject to conditions of approval. The applicant is to obtain all required state or federal permits, as applicable, prior to final plat approval or construction as applicable. As previously mentioned, the applicant will need to obtain a State Highway Approach Road Permit is required by ODOT for access to OR 211 / OR-211. Additional state and federal permits are identified as part of the Public Works comments and recommended conditions (Exhibit B).

8. Evidence that improvements or conditions required by the City, road authority, Clackamas County, special districts, utilities, and/or other service providers, as applicable to the project, have been or can be met; and

Findings: Required improvements and/or conditions for this application will be met through conditions the applicant must satisfy either before final plat approval or building permits are approved. Staff incorporate the findings as stated above for findings in support of criterion No. 8.

9. The architectural standards of Section 17-3.2.030.D are met.

Findings: As explained in the executive summary, all lots subject to preliminary subdivision consideration are not proposed for development at this time. One existing on-site building will remain (shown to Lot 7 of the proposed subdivision). All other existing structures will be removed.

Staff observe the provisions within Section 17-3.2.030.D to be primarily architectural building standards, applicable at a time when development of each lot is proposed (TBD). Staff therefore conclude that architectural standards of Section 17-3.2.030.D are not applicable.

Conclusion: Based on the findings above, staff conclude criteria in A of 17-4.3.070 (1 through 9 above) are met or can be met by satisfying conditions of approval identified in Part III of this report.

Exhibit B:

Comments From Molalla Public Works



Community Development Department

315 Kennel Ave/PO Box 248

Molalla, OR 97038

Phone 503.759.0205

www.cityofmolalla.com

October 15, 2024

TO: Mac Corthell, Community Development Director
Dan Zinder, Planning Director
Jessica Wirth, Planning Tech

FROM: Sam Miller, Engineering Section Manager

RE: 535 W Main ST. Industrial Lots – SUB01-2024

Based on a review of the materials submitted, Staff has prepared the following comments. These comments are applicable to the subject application; any subsequent modifications may require amendments and/or additions. These conditions do not include requirements already set forth in the municipal code.

1. Conditions Requiring Resolution Prior To Final Plat Approval

- a. Final Plat approval by the City of Molalla (MMC 17-4.3.090) will be required prior to filing and recording with Clackamas County (MMC 17-4.3.100). The City will provide a letter to Clackamas County confirming when all conditions required prior to final plat approval have been fulfilled.
- b. Applicant shall be required to submit sanitary sewer design plans to Oregon DEQ for review and approval. Applicant shall provide a Certificate of Capacity to Oregon DEQ at time of plan submission. No. Public Works or Building permits can be issued with our DEQ's approval of the sewer system and the certificate of Capacity.
- c. No building permits or final plat may be issued until all required public facility improvements are in place and approved by the Public Works Department, or otherwise bonded, in conformance with the provisions of this Code and Public Works Design Standards.
- d. The Applicant shall submit for final plat approval within two years of preliminary plat approval or otherwise receive an extension in accordance with MMC 17-4.3.030 to prevent a lapse of the decision herein.

- e. The Applicant shall confirm a unique name for the proposed replat with the Clackamas County Surveyors office to ensure compliance with ORS Chapter 92.
- f. The Applicant shall obtain any and all required state or federal permits, as applicable, prior to final plat approval. No Building Permit will be issued until final plat approval.
- g. Access to subdivision Parcels shall be taken from the private road that will extend through the property, with the exception of Parcel 3 which will take access from Dixon Ave. New approaches to be signed and submitted with building permit approval plans. No additional access will be grant without the applicable roadway authority approval.
- h. Dedication of right-of-way along OR-211/W Main Street to accommodate ODOT-required improvements to OR-211. Applicant shall donate enough right-of-way along variable width improvements consistent with City of Molalla (TSP) Transportation Mater Plan cross section. ODOT requires donations of right-of-way to follow the requirements of Chapter 5.322-Developer Mitigation Donation in the ODOT Right-of-Way Manual. Donations must be completed and recorded prior to submitting the subdivision plat to the City of Molalla. Applicant shall provide copies of record right-of-way dedication with the final plat application.
- i. Public Works Standards require 10' Public Utility Easement (PUE) along roadway frontages. If none exists, applicant shall dedicate and record a 10' Public Utility Easement (PUE) along Street frontage for the proposed development and to be shown on the final plat. No structures will be permitted within that PUE. If a PUE already exists, provide documentation to the Molalla Public Works Department with final plat application.
- j. Detailed engineering plans demonstrating compliance with the MMC and City of Molalla Public Works Standards. All public improvement designs shall meet the requirements of the Molalla Standard Specifications for Public Works Construction as amended by the Public Works Director. All public utility/improvement plans submitted for review shall be submitted in a 22"x 34" format. The engineering plans shall also include design for the following improvements for review and approval of the City:
 - I. Based on ODOT's comments,
 - II. Design and construction east-bound left-turn lane with XXX feet of storage at the OR-211 and developments main access

- III. Design and construct the north side intersection at W Main Street (HWY211) & Dixon Ave and construct half street improvements along Dixon Ave.
- IV. Design and construct Site Access and Lighting Improvements on the south side of Heintz street.
- V. Applicant proposes to connect to the City storm system on W Heintz Street. Applicant shall meet connection requirements to City system. All storm improvements on City right-of-way shall be designed to meet City requirements.
- VI. *Applicant shall be required to extend Public Sewer System to serve the development from Hwy-211 (W Main Street) north within the new private street and shall be center in a public utility easement meeting Public Work Standards and facility master plans and stub out services to each individual lot.*
- VII. *Design and construct a new 8-inch waterline extending form the stubbed waterline near the northeast corner of property known as Map 52E08A Tax Lot 07800 (535 W Main St.), bearing roughly southward along the abandoned Wittenberg roadway alignment, around the east side of the building onsite, to the southeast corner of 535 W Main St, and reconnecting to the waterline at approximately that location. Applicant shall relocate and record the location of the existing utility easement to correspond the location of the relocated waterline.*
- VIII. *Should Fire Department regulations require additional fire flow that results in looping the water line through the site, then applicants engineer shall coordinate with Public Works for the extension of a public water line, and dedication of easement.*
- IX. *From the material submitted, it appears that the storm drain, domestic water and sanitary sewer facilities will be obtained from main line connections and/or extensions. Separate engineering drawings reflecting the installation of these public utilities will be required.*

2. Conditions Requiring Resolution Prior to Building Permit Approval

- a. The Applicant will be required to extend separate Water, Sewer and Storm service connections from the main for each parcel prior to development.
- b. Applicant shall conform to all emergency access, building, and fire code standards, as applicable. Applicant will be required to meet Oregon Unified Fire Code at the time of building permit submission.
- c. Sidewalk development in accordance with the Neighborhood Street cross section will be required at the time of building permitting.

PUBLIC WORKS CONDITIONS & FINDINGS

Chapter 17-3.6 Public Facilities

17-3.6.010 Purpose and Applicability:

A. *Purpose.* The standards of Chapter [17-3.6](#) implement the public facility policies of the City of Molalla Comprehensive Plan and adopted City plans.

B. *Applicability.* Chapter [17-3.6](#) applies to all new development, including projects subject to Land Division (Subdivision or Partition) approval and developments subject to Site Design Review where public facility improvements are required. All public facility improvements within the city shall occur in accordance with the standards and procedures of this chapter. When a question arises as to the intent or application of any standard, the City Engineer shall interpret the Code pursuant to Chapter [17-1.5](#).

C. *Public Works Design Standards.* All public facility improvements, including, but not limited to, sanitary sewer, water, transportation, surface water and storm drainage and parks projects, whether required as a condition of development or provided voluntarily, shall conform to the City of Molalla Public Works Design Standards. Where a conflict occurs between this Code and the Public Works Design Standards, the provisions of the Public Works Design Standards shall govern.

D. *Public Improvement Requirement.* No building permit may be issued until all required public facility improvements are in place and approved by the City Engineer, or otherwise bonded, in conformance with the provisions of this Code and the Public Works Design Standards. Improvements required as a condition of development approval, when not voluntarily provided by the applicant, shall be roughly proportional to the impact of the development on public facilities. Findings in the development approval shall indicate how the required improvements directly relate to and are roughly proportional to the impact of development.

Findings: Applicant will be required to connect to services by main line or main line extension. Utility connections cannot be made until acquired permitting has been issued and all SDC & connection fees have been made. The Applicant will also be required to submit information necessary to calculate system development charges at time of building plan submittal. Start of building construction activities are subject to compliance with development requirements for Planning and Public Works as well as requirements tied

to TCO and CO. No TCO or CO's can be issued until public improvements are completed and accepted under both City PW and ODOT permits.

17-3.6.020 Transportation Standards:

A. General Requirements

1. 17-3.6.020. A.2 - All street improvements, including the extension or widening of existing streets and public access ways, shall conform to Section [17-3.6.020](#), and shall be constructed consistent with the City of Molalla Public Works Design Standards.

Findings: OR 211: OR 211 (W Main Street) is an arterial street under Oregon Department of Transportation (ODOT) jurisdiction. Applicant will be required to meet all requirements of the Transportation System Master Plan and access requirements as determined by ODOT. Development will be required to construct significant improvements along OR 211, including adding a center turn lane, bicycle lanes and sidewalk and include frontage improvements. If required during design review, additional striping and pavement tapers may be required as necessary. Applicant will be required to construct street improvements and right of way donation as necessary to be consistent with the Transportation System Plan adopted cross section which includes a 14ft Center/turn lane, 12ft travel lane, 2ft bike buffer, 5ft bike lane, 6 1/2ft sidewalk, 1 1/2ft back of sidewalk buffer.

Findings: Dixon Avenue: Dixon Ave is a Local Street under City of Molalla jurisdiction. Applicant shall be required to construct street improvements to City standards and right-of-way donations necessary to be consistent with the Transportation System Plan adopted cross section which includes construction of a three-lane intersection approach with a 12 foot turn lane and two 11 foot drive lanes at intersection of HWY211 & Dixon Ave, 10ft travel lane, 8' Parking lane, curb & gutter, and 6 foot wide curb tight sidewalk on the east side. Developer shall be responsible for installing all associated signing for crosswalks and 25 mph speed signs per City requirements.

Findings: W Heintz Street: W Heintz Street is a Neighborhood Street under City of Molalla jurisdiction. W Heintz Street was reconstructed in 2016 from Kennel Avenue south to Riding Avenue as a City public improvement project 15-14 Molalla Urban Renewal Project – W Heintz Street. Applicant shall construction and/or bring existing approach for private street connection to City standards and shall be required to install roadway lighting along property frontage on the south portion of W Heintz. Location and number shall be determined during civil plan review.

Findings: The property has a nonconforming access from W Main Street and off W Heintz Street. The applicant proposes updating the private road to extend through the property, connecting the property to both W Main (south side of the subject property) and to W. Heintz Street (situated at the north side of the subject property). Applicant will be required to bring both access into conformance with the standard of the applicable roadway authority.

Findings: Double frontage lots and corner lots on these streets may be limited to access from a single street, usually the lower classification street. If additional driveways on a frontage are approved by the City's authorized representative, a finding shall be made that no eminent traffic hazard would result and impacts on through traffic would be minimal. Restrictions may be imposed on additional driveways, such as limited turn movements, shared access between uses, closure of existing driveways, or other access management actions. Access spacing shall conform to the Transportation Systems Plan. The proposed width of access shall meet the Molalla Standard Specifications for Public Works Construction. Access for commercial developments driveway access on local street

classification shall be a minimum of 150 feet from the nearest intersection (as measured from Centerline of driveway to near face of curb at intersection).

Roadway lighting is required on all new developments. Applicant shall be required to install roadway lighting. Location and number shall be determined during design review (MMC 17-3.6.020)

Transportation SDC's – In accordance with MMC 13.14 this 12 Lot Industrial Subdivision development does increase the impacts to the public improvement facility and is therefore not exempt from transportation SDC charges. SDC's shall be calculated at the time of building permit application for each lot in accordance with the SDC methodology.

2. 17-3.6.020. A.4 - A Transportation Impact Analysis (TIA) is required for developments that are expected to have an impact on the transportation system. The analysis shall be based upon the latest edition of the ITE Trip Generation Manual or an agreed-upon alternative methodology where credible data is available to support the alternative methodology.

Findings: Per MMC 17-3.6.020. A.4. The proposed development meets thresholds for Traffic Impact Analysis (TIA) due to exceeding the peak hour trip count of 25. For projects abutting OR-211, the City requires signal warrant analysis for all nine warrants regarding the OR-211 and Leroy Ave intersection to determine when the traffic signal designated in the Molalla Transportation Systems Plan is required. TIA content information shall be included in the TIA submitted to the City. Additional information specified by the City in the scoping summary or through the pre-application meeting shall also be included per section 17-3.6.020.4. Applicant has provided a TIA with their application. The proposed development is estimated to generate 192 morning peak hour and 169 evening peak hour, and 1,266 daily trips. Upon review of the TIA, the proposed industrial subdivision will only add through trips on the highway and will not result in intersection meeting traffic signal warrants for W Main Street (OR-211) & Leroy Avenue intersection. Therefore, no safety-related mitigation is recommended at this time.

B. Street Location, Alignment, Extension, and Grades

1. 17-3.6.20. B.2. Specific street locations and alignments shall be determined in relation to existing and planned streets, topographic conditions, public convenience, and safety, and in appropriate relation to the proposed use of the land to be served by such street.

Findings: All streets, to the extent practicable, shall connect to the existing street network and allow for the continuation of an interconnected street network, consistent with adopted public facility plans and pursuant to subsection D Transportation Connectivity and Future Street Plans. Applicant shall make improvements along all ROW fronting the development meet all requirements set forth in City of Molalla Transportation System Master Plan, Public Works Standards and as determined by ODOT.

2. 17-3.6.20. B.5 - Where the locations of planned streets are shown on a local street network plan, the development shall implement the street(s) shown on the plan.

Findings: Applicant proposed a new private roadway connection between W Heintz Street and W Main Street (OR 211) within the development, Access shall be taken from this roadway, all other access shall be review and approved by the roadway authority.

C. Rights-of-Way and Street Section Widths.

1. 17-3.6.20. C.1 - Street rights-of-way and section widths shall comply with the current version of the Public Works Design Standards and Transportation System Plan. The standards are intended: to provide for streets of suitable location, width, and design to accommodate expected vehicle, pedestrian, and bicycle traffic; to afford satisfactory access to law enforcement, fire protection, sanitation, and road maintenance equipment; and to provide a convenient and accessible network of streets, avoiding undue hardships to adjoining properties.

Findings: Dedications/Donations: If right of way dedication fronts streets under the jurisdiction of the City of Molalla, Applicant shall submit dedication on formats approved by the Public Works Department. On ODOT rights of way, applicant shall be required to donate sufficient right-of-way along variable width improvements and construct street widening City of Molalla TSP and to ODOT standards. ODOT requires donations of right-of-way to follow the requirements of Chapter 5.322. Developer Mitigation Donation in the ODOT Right-of-Way Manual. Applicant is advised that donation must be completed and recorded prior to submission of final plat or final partition plat in order for Public Works to process plat documents. Applicant will be required to dedicate a 10-foot-wide public utility easement fronting the public right-of-way if one does not exist. Applicant shall provide proof of existing dedication.

2. 17-3.6.20.C.2 - All streets shall be improved in accordance with the construction standards and specifications of the applicable roadway authority, including requirements for pavement, curbs, drainage, striping, and traffic control devices. Where a planter strip is provided it shall consist of a minimum five-foot-wide strip between the sidewalk and the curb or roadway. Where a swale is provided, it shall either be placed between the roadway and sidewalk or behind the sidewalk on private property, subject to City Engineer approval and recording of required public drainage way and drainage way maintenance easements. Streets with parking on one side only should be avoided. When used, they must be posted NO PARKING.

Findings: Applicant shall improve all affected street abounding subject property(s) spelled out in section 17-3.6.020 (A) General Requirements. Street designs shall provide for safe and efficient travel to the motoring public. Streets shall be designed to carry the recommended traffic volumes identified for each street classification. Classification of existing and proposed roads is established by the City of Molalla's TSP. Streets shall be designed to meet or exceed minimum guidelines. These guidelines are set forth in the "AASHTO Policy on Geometric Design of Highways and Streets" (latest edition). Traffic Control Devices shall conform to the "Manual on Uniform Traffic Control Devices for Streets and Highways," Federal Highway Administration, with Oregon Supplements, Oregon Dept. of Transportation's (latest edition) and in accordance with Molalla Standards Specifications for Public Works Construction Section 2 – Street Improvements Design & Construction Standards.

D. Transportation Connectivity and Future Street Plans.

1. 17-3.6.20 – D.1 Intersections. Streets shall be located and designed to intersect as nearly as possible to a right angle. Street intersections shall meet the current requirements of the Public Works Design Standards and Transportation System Plan.

Findings: The interior angle at Dixon Avenue shall be kept as near 90 degrees as possible, unless existing development or topography make it impracticable. Where intersecting streets cannot be kept at right angles, the interior angle shall in no case be less than 75 degrees. Connecting street intersections shall be located to provide for traffic flow, safety and turning movements, as conditions

warrant. Curb Radii shall meet the street function classification minimum turning radius and dedication of right-of-way sufficient to facilitate construction of the Radius.

2. 17-3.6.20 – D.2 Access Ways. *The Planning Commission, in approving a land use application with conditions shall require a developer to provide an access way where the creation of a cul-de-sac or dead-end street is unavoidable and the access way connects or may in the future connect, the end of the street to another street, a park, or a public access way, except where the City Engineer and City Planner determine the access way is not feasible. Where an access way is required, it shall be not less than 10 feet wide and shall contain a minimum eight-foot-wide concrete surface or other all-weather surface approved by the City Engineer. Access ways shall be contained within a public right-of-way or public access easement, as required by the City.*

Findings: The property has a nonconforming access off W Main Street and access off W Heintz Street. The applicant proposes updating the private road to extend through the property, connecting the property to both W Main (south side of the subject property) and to W. Heintz Street (situated at the north side of the subject property). Applicant will be required to bring both access into conformance with the standard of the applicable roadway authority.

17-3.6.030 Public Use Areas:

A. Dedication of Public Use Areas.

1. *Where a proposed park, playground, or other public use shown in a plan adopted by the City is located in whole or in part in a subdivision, the City may require the dedication or reservation of this area on the final plat for the subdivision, provided that the impact of the development on the City park system is roughly proportionate to the dedication or reservation being made.*

Findings: Not applicable, no proposed park, playground or other public use is shown in a plan adopted by the City.

1. *The City may purchase or accept voluntary dedication or reservation of areas within the subdivision that are suitable for the development of parks and other public uses; however, the City is under no obligation to accept such areas offered for dedication or sale.*

Findings: Not applicable, applicant is not proposing any voluntary dedication or reservation of areas within the development.

B. *System Development Charge Credit. Dedication of land to the City for public use areas, voluntary or otherwise, may be eligible as a credit toward any required system development charge for parks. (Ord. 2017-08 §1)*

Findings: development does not propose any dedication of land to the City. Parks SDC's – In accordance with MMC 13.70.110 this 12 Lot Industrial Subdivision development is exempt from parks SDC charges.

17-3.6.040 Sanitary Sewer and Water Service Improvements:

- A. **Sewers and Water Mains Required.** All new development is required to connect to City water and sanitary sewer systems. Sanitary sewer and water system improvements shall be installed to serve each new development and to connect developments to existing mains in accordance with the adopted facility master plans and applicable Public Works Design Standards. Where streets are required to be stubbed to the edge of the subdivision, sewer and water system improvements and other utilities shall also be stubbed with the streets, except as may be waived by the City Engineer where alternate alignment(s) are provided.

Findings: Sewer- Applicant will be required to extend Public Sewer System to serve the development from Hwy-211 (W Main Street) north within the new private street and shall be center in a public utility easement meeting Public Work Standards and facility master plans. The site will be served from the extension of sewer main by gravity system. All sanitary sewers shall be designed and constructed so as to conform to the requirements of the Oregon state plumbing laws and rules of the Oregon DEQ and to City Standards. Prior to extension and/or connection to the Public Sewer System. Applicant Shall be required to submit a Sewer Capacity Analysis Request Form to the departmental of DEQ for approval per OAR Rule 340-52. The City recommends Certificate of Capacity to be submitted prior to their land use or permit application.

Findings: Water – Lot 7 has undergone a Site Design Review. Applicant agree to comply with all conditions of approval set forth in COU10-2023. The existing building on Lot 7 parcel currently lies on top of a 6-inch public waterline that runs N/S through the subject parcel along the abandoned Wittenberg right-of-way. Applicant will be required to design and construct a new 8-inch waterline extending form the stubbed waterline near the northeast corner of property known as Map 52E08A Tax Lot 07800 (535 W Main St.), bearing roughly southward along the abandoned Wittenberg roadway alignment, around the east side of the building onsite, to the southeast corner of 535 W Main St, and reconnecting to the waterline at approximately that location. Applicant shall relocate and record the location of the existing utility easement to correspond the location of the relocated waterline.

Findings: Extensions for fire protection may be required and all public utility lines shall be within a public easement on formats approved by the Public Works Department. Should Fire Department regulations require additional fire flow that results in upsizing and/or looping the water line through the site, then applicants engineer shall coordinate with Public Works for the extension of public waterline, and dedication of easements.

Sewer & Water SDC's – In accordance with MMC 13.14 this 12 Lot Industrial Subdivision development does increase the impact to the public improvement facility and is therefore not exempt from Sewer & Water SDC charges. SDC's shall be calculated at the time of building permit application for each lot in accordance with the SDC methodology.

- B. **Sewer and Water Plan Approval.** Development permits for sewer and water improvements shall not be issued until the City Engineer has approved all sanitary sewer and water plans in conformance with City standards.

Findings: Applicant will be required to submit a Public Works Permit and assurances in accordance with Section 1 of the Molalla Standard Specifications for Public Works Construction prior to any public construction begins.

- C. **Over-Sizing.** The City may require as a condition of development approval that sewer and water lines serving new development be sized to accommodate future development within the area as projected by the applicable facility master plans, and the City may authorize other cost-recovery or cost-sharing methods as provided under state law.

Findings: Applicant shall be required to meet all requirements for extension of the sewer main in accordance with the Wastewater Master Plan and CIP for design.

- D. **Inadequate Facilities.** Development permits may be restricted or rationed by the Planning Commission where a deficiency exists in the existing water or sewer system that cannot be rectified by the development and which, if not rectified, will result in a threat to public health or safety, surcharging of existing mains, or violations of state or federal standards pertaining to operation of domestic water and sewerage treatment systems. The City Engineer may require water booster pumps, sanitary sewer lift stations, and other critical facilities be installed with backup power. (Ord. 2017-08 §1)

Findings: There are no identified existing deficiency within Cities Master Plan that indicates Inadequate Facilities within the limits of the proposed development for sewer and water.

17-3.6.050 Storm Drainage and Surface Water Management Facilities:

- A. **General Provisions.** The City shall issue a development permit only where adequate provisions for stormwater runoff have been made in conformance with the requirements of the current version of the Public Works Design Standards and Stormwater Master Plan.

Findings: Applicant will be required to submit design and construction requirements for stormwater and surface water management at the time of Public Works Permit application for the private storm system within the private street and provide water quality. At the time that owners of individual lots seek development approval, they will be required to comply with City Public Works Standards. Design shall be in accordance with Section 3 of the Molalla Standard Specifications for Public Works Construction and Stormwater Master Plan.

Stormwater SDC's – In accordance with MMC 13.14 this 12 Lot Industrial Subdivision development does increase the impacts to the public improvement facility and is therefore not exempt from stormwater SDC charges. SDC's shall be calculated at the time of building permit application for each lot in accordance with the SDC methodology.

- B. **Accommodation of Upstream Drainage.** Culverts and other drainage facilities shall be large enough to accommodate existing and potential future runoff from the entire upstream drainage area, whether inside or outside the development. Such facilities shall be subject to review and approval by the City Engineer.

Findings: At the time owners of individual lots seek development approval. Site development shall address all on-site and off-site drainage concerns for both upstream and downstream of the project and provide Storm water calculations in accordance with Molalla Standards for Public Works Section 3 -STORMWATER DESIGN & CONSTRUCITON STANDARDS.

- C. **Effect on Downstream Drainage.** Where it is anticipated by the City Engineer that the additional runoff resulting from the development will overload an existing drainage facility, the City shall withhold approval of the development until provisions have been made for improvement of the potential condition or until provisions have been made for storage of additional runoff caused by the development in accordance with City standards.

Findings: At the time owners of individual lots seek development approval. Site development shall address all on-site and off-site drainage concerns for both upstream and downstream of the project and provide Storm water calculations in accordance with Molalla Standards for Public Works Section 3 -STORMWATER DESIGN & CONSTRUCITON STRANDARDS.

- D. **Over-Sizing.** The City may require as a condition of development approval that sewer, water, or storm drainage systems serving new development be sized to accommodate future development within the area as projected by the applicable facility master plan, provided that the City may grant the developer credit toward any required system development charge for the same pursuant to the System Development Charge.

Findings: See findings under 17-3.6.050 "A" & "B"

- E. **Existing Watercourse.** Where a proposed development is traversed by a watercourse, drainage way, channel, or stream, the City may require a stormwater easement or drainage right-of-way conforming substantially with the lines of such watercourse and such further width as will be adequate for conveyance and maintenance to protect the public health and safety. (Ord. 2017-08 §1)

Findings: Applicant shall comply with the regulatory requirements of the Oregon Department of State Lands, ODFW, U.S. Fish and Wildlife Department, U.S. Army Corps of Engineers, National Marine Fisheries Service, and any other state and federal agencies having jurisdiction if any watercourse, drainage way and channels are determined within the development.

17-3.6.060 Utilities:

B. **Underground Utilities.**

1. **General Requirement.** The requirements of the utility service provider shall be met. All utility lines in new subdivisions, including, but not limited to, those required for electric, communication, and lighting, and related facilities, shall be placed underground, except where the City Engineer determines that placing utilities underground would adversely impact adjacent land uses. The Planning Official may require screening and buffering of above ground facilities to protect the public health, safety, or welfare.

Findings: All utilities for the project shall be served by underground services. No overhead crossings of public right of way shall be approved by the City.

17-3.6.070 Easements:

- A. **Provision.** The developer shall make arrangements with the City and applicable utility providers for each utility franchise for the provision and dedication of utility easements necessary to provide full services to the development.

Findings: Applicant will be required to dedicate a 10-foot-wide public utility easement fronting the public right-of-way if one does not exist. Applicant shall provide proof of existing dedication.

Finding: City of Molalla is undertaking a project to install Pressure Reducing Valves throughout the City's Public Water System. This has been identified as a goal for the City following completion of our Water Management, Conservation and Water System Master Plan (WMCWSMP) which found there to be relatively high-water pressure on the west side of the City's distribution system. To remedy this, the City will be splitting the distribution system into three pressure zones by way of installing PRV's within the water system. City has conducted a feasibility study to determine suitable locations for the installation of

the PRVs. They have determined one of the locations to be at the northeast corner of W Main Street & Dixon intersection (within the southwest corner of Lot 3). City is asking for additional dedication for constructing of this Facility.

C. **Recordation.** All easements for sewers, storm drainage and water quality facilities, water mains, electric lines, or other utilities shall be recorded and referenced on a survey or final plat, as applicable. See Chapter [17-4.2](#) Site Design Review, and Chapter [17-4.3](#) Land Divisions and Property Line Adjustments.

Findings: Public sanitary, storm sewer, and water lines on private property shall be centered in a permanent easement granted to the City. The minimum width of a public pipeline easement shall be 15 feet and no permanent structures shall be allowed within an easement area.

17-3.6.080 Construction Plan Approval:

No development, including sanitary sewers, water, streets, parking areas, buildings, or other development, shall commence without plans having been approved by the City of Molalla Public Works Department and permits issued. Permit fees are required to defray the cost and expenses incurred by the City for construction and other services in connection with the improvement. Permit fees are as set by City Council resolution.

Findings: Applicant shall apply for a Public Works Permit in accordance with Section 1.15 DEVELOPMENT PROCESS REQUIREMENTS of Molalla Standards. No work will be performed, not materials stored, nor encroachment made on or within right-of-way, Public easement, or Public utility easement until all requirements have been met and permit has been issued.

17-3.6.100 Performance Guarantee and Warranty:

A. **Performance Guarantee Required.** The City at its discretion may approve a final plat or building permit when it determines that all of the public improvements required for the site development or land division, or phase thereof, are complete and the applicant has an acceptable assurance for the balance of said improvements. The applicant shall provide a performance and payment bond in accordance with the current version of the Public Works Design Standards.

Findings: A Performance Bond must be in place prior to issuance of permit and before any public construction begins.

B. **Determination of Sum.** The assurance of performance shall be for a sum determined by the City Engineer as required to cover the cost of the improvements and repairs, including related engineering and incidental expenses, plus reasonable inflationary costs. The assurance shall not be less than 150 percent of the estimated improvement costs.

Findings: The sum of the Performance Bond will be based on Engineering Cost Estimates provide at time of application submittal

C. **Itemized Improvement Estimate.** The applicant shall furnish to the City an itemized improvement estimate, certified by a registered civil engineer, to assist the City in calculating the amount of the performance assurance.

Findings: See findings under 17-3.6.100 "A" & "B"

D. **Agreement.** A written agreement between the City and applicant shall be signed and recorded. The agreement may include a provision for the construction of the improvements in stages and for the extension of time under specific conditions. The agreement shall contain all of the following:

1. The period within which all required improvements and repairs shall be completed.
2. A provision that if work is not completed within the period specified, the City may complete the work and recover the full cost and expenses from the applicant.
3. The required improvement fees and deposits.

Findings: Applicant shall not be granted a building permit or final plat approval (as applicable), until all required improvements are completed and accepted by the City, or an agreement and financial assurance acceptable to the City for all outstanding public improvements is recorded against the property.

E. **When Applicant Fails to Perform.** In the event the applicant fails to carry out all provisions of the agreement and the City has un-reimbursed costs or expenses resulting from such failure, the City shall call on the bond, cash deposit, or letter of credit for reimbursement.

Findings: The applicant shall perform the public improvements as required and in accordance with the City of Molalla's public works standards. In the event applicant fails to perform within the period of time that the land use decision from which the requirement flows remains valid, the City will call on the financial assurance to complete said improvements.

F. **Termination of Performance Guarantee.** The applicant shall not cause termination, nor allow expiration, of the guarantee without first securing written authorization from the City.

Findings: At completion of the project and acceptance of Warranty Bond, the City will release the Performance Bond. If the applicant allows the financial assurance to expire, or terminate without written authorization from the City, a stop work order will be placed on the project and no occupancy will be granted. Additionally, the city will seek all available remedies under the law.

G. **Warranty Bond.** A warranty bond good for two years is required on all public improvements and landscaping when installed in the public right-of-way. The warranty bond shall equal 120 percent of the total cost of improvements and begin upon acceptance of said improvements by the City. (Ord. 2017-08 §1)

Findings: Warranty Bond shall be in place prior to final completion and acceptance of the project and meeting the requirements in subsection 1.15.9 of the Molalla Standards and subject to all easements and legal documents have been recorded with the County.

17-3.6.090 Facility Installation:

DESIGN REQUIREMENTS & POLICIES

- A. **Conformance Required.** Improvements installed by the developer, either as a requirement of these regulations or at the developer's option, shall conform to the requirements of this chapter, approved construction plans, and to improvement standards and specifications adopted by the City.
- B. **Adopted Installation Standards.** The City of Molalla has adopted Public Works Design Standards for public improvements and private utility installation within the public right-of-way.
- C. **Commencement.** Work in a public right-of-way shall not begin until all applicable agency permits have been approved and issued.
- E. **Resumption.** If work is discontinued for more than six months, it shall not be resumed until the Public Works Director is notified in writing and grants approval of an extension.
- F. **City Inspection.** Improvements shall be constructed under the inspection of the City Engineer. The City Engineer may approve minor changes in typical sections and details if unusual conditions arising during construction warrant such changes in the public interest, except that substantive changes to the approved design shall be subject to review under Chapter [17-4.5](#) Modifications to Approved Plans and Conditions of Approval. Any survey monuments that are disturbed before all improvements are completed by the developer or subdivider shall be replaced at the developer or subdivider's expense prior to final acceptance of the improvements.
- G. **Engineer's Certification and As-Built Plans.** In accordance with the current version of the Public Works Design Standards, a registered civil engineer shall provide written certification in a form required by the City that all improvements, workmanship, and materials meet current and standard engineering and construction practices, conform to approved plans and conditions of approval, and are of high grade, prior to City's acceptance of the public improvements, or any portion thereof, for operation and maintenance. The developer's engineer shall also provide two sets of "as-built" plans, one paper set and one electronic set for permanent filing with the City. If required by the City, the developer or subdivider shall provide a warranty bond pursuant to Section [17-3.6.100](#). (Ord. 2017-08 §1
- H. **Residential Development Projects,** No building permit may be issued until all required public facility improvements are in place and approved by the City Engineer, or otherwise bonded, in conformance with the provision of the Code and the Public Works Design Standards in accordance with MMC 17-3.6 Public Facilities. All public facilities shall be completed and accepted by the Public Works Department prior to issuance of final occupancy.
- I. **Materials Submitted,** it appears that the storm drain, domestic water and sanitary sewer facilities will be obtained from main line connections and/or extensions. Separate engineering drawings reflecting the installation of these public utilities will be required.
- J. **Construction and/or Connection,** No construction of, or connection to, any existing or proposed public utility/improvements will be permitted until all plans are approved by Staff, all fees have been paid, all necessary permits, bonding, right-of-way and easements have been obtained and approved by staff, and Staff is notified a minimum of 24 hours in advance.
- K. **Revisions/Modifications,** Staff reserves the right to require revisions/modifications to the public improvement construction plans and completed street improvements, if additional modifications or expansion of the sight distance onto adjacent streets is required.

- L. **Civil Review**, All public utility/improvement plans submitted for review shall be based upon a 22"x 34" format and shall be prepared in accordance with the City of Molalla Public Work's Standards as described in Section 1 of the Molalla Standard Specifications for Public Works Construction.
- M. **Monuments**, All survey monuments on the subject site or that may be subject to disturbance within the construction area, or the construction of any off-site improvements shall be adequately referenced and protected prior to commencement of any construction activity. If the survey monuments are disturbed, moved, relocated or destroyed as a result of any construction, the project shall, at its cost, retain the services of a registered professional land surveyor in the State of Oregon to restore the monument to its original condition and file the necessary surveys as required by Oregon State law. A copy of any recorded survey shall be submitted to Staff.
- N. **Existing Wells**, The applicant shall contact the Oregon Water Resources Department and inform them of any existing wells located on the subject site. Any existing well shall be limited to irrigation purposes only. Proper separation, in conformance with applicable State standards, shall be maintained between irrigation systems, public water systems, and public sanitary systems. Should the project abandon any existing wells, they shall be properly abandoned in conformance with State standards and supply the City with a copy of the final document.
- O. **Sanitary Sewer**, designs require review by Oregon Department of Environmental Quality. Applicant shall be responsible for submission of plans to state agency and all associated fees. Applicant's Engineer will be required to submit final report to DEQ and provide a copy of the report to the City.
- P. **Utilities**, All utilities will be stubbed out to the far end of each street for future extension. The project shall utilize existing water, sewer, and storm water 'stub-outs' wherever possible. Water for domestic and fire protection shall be looped through the proposed site. Any 'stub-outs' determined to be not needed for the proposed development or any future development of the subject property shall be abandoned in accordance with the Molalla Standard Specifications for Public Works Construction.
- Q. **Public Improvements**, All public improvement designs shall meet the requirements of the Molalla Standard Specifications for Public Works Construction as amended by the Public Works Director.
- R. **General Easements** – A 10-foot-wide public utility easement shall be dedicated to the City adjacent to all public right-of-way and no structures are allowed to encroach into the easement. Applicant shall be required to submit a legal description and exhibit map for review and sign City easements. Once completed, applicant will be required to record easements with the County Recorder's Office and return the original document to the City prior to final occupancy.
- S. **General Wetland Requirements** – The applicant will be required to provide Public Works with a letter of concurrence from the Department of State Lands regarding any wetlands on the subject property.
- T. **General Erosion Control** – The applicant shall install, operate, and maintain adequate erosion control measures in conformance with the standards adopted by the City of Molalla and DEQ during the construction of any public/private utility and building improvements until such time as approved permanent vegetative materials have been installed. Applicant or Applicant's Contractor shall be responsible for all erosion control requirements under the 1200-C permit and shall coordinate directly with DEQ for questions related to 1200-C permit compliance.

Exhibit C:

*Comments From Oregon Depart. of
Transportation (ODOT)*



October 22, 2024

ODOT # 13095

ODOT Formal Response

Project Name: Molalla Industrial Park	Applicant: Tim Kerr, Woodburn Industrial Capital Group, LLC
Jurisdiction: City of Molalla	Jurisdiction Case #: SUB01-2024
Site Address: 525/535/545/565 W Main Street	State Highway: W Main Street (OR 211)

The site of this proposed land use action is adjacent to W Main Street (OR 211). ODOT has permitting authority for this facility and an interest in ensuring that this proposed land use is compatible with its safe and efficient operation.

These comments, standards, and requirements are current as of the date of this letter. If the project scope and/or timeline is modified, the applicant should contact the ODOT Region 1 Development Review program (ODOT_R1_DevRev@odot.oregon.gov) for an updated letter as updated comments may be necessary.

LAND USE PROPOSAL

ODOT received formal notice of a land use application submitted to City of Molalla for a proposed 12-lot industrial subdivision. The approximately 21.62-acre site includes existing tax lots: 7600, 7700, 7800, 9100, 9200, and 9300. As part of the proposal, the applicant will develop a new private roadway connection between W Heintz Street and W Main Street (OR 211). The new road will provide access to lots 1, 2, and 4-12. Lot 3 will obtain access off Dixon Avenue. The existing building on proposed lot 7 will remain. All other structures on the site will be removed and no development is proposed.

COMMENTS/FINDINGS

Traffic Impacts

As part of the materials provided to ODOT for review, ODOT received a copy of a Transportation Impact Study (TIS) prepared by Lancaster Mobley and dated May 23, 2024. ODOT has reviewed the study and supports the TIS' finding of a left-turn lane warrant projected to be met for the eastbound approach onto the W Main Street (OR 211) access. Therefore, ODOT recommends the City of Molalla condition the applicant to install the 3-lane section along the site's highway frontage consistent with the City of Molalla's Transportation System Plan (TSP).

State Highway Frontage Improvements

From the pre-application conference, ODOT understands that City of Molalla will be requiring the applicant to complete frontage improvements along the State highway. ODOT supports this requirement. Frontage improvements on OR 211 shall be consistent with the City's TSP 3-lane cross section for this facility. As outlined on page 61 of Molalla's TSP, these improvements shall be consistent with the **Arterial with Buffered Bike Lanes and Center Turn Lane (68-foot ROW, 52-foot Paved Width)** cross section, shown below. The applicant is advised that ODOT standards will require curb tight sidewalks, and any trees must be planted behind sidewalk and out of the clear zone to not compromise

site distance. Permits are required by ODOT for all work in the State highway right of way (ROW). The applicant should be aware that additional ROW may be necessary to accommodate the required frontage improvements.



Arterial with Buffered Bike Lanes and Center Turn Lane (68-foot ROW, 52-foot Paved Width)

The applicant should contact the District Contact indicated below to obtain application information, determine permit requirements, and begin the process for donations and ODOT plan review. It may take **up to 6 months** to transfer property to ODOT and receive ODOT permitting. Therefore, the applicant is encouraged to contact the District Contact early in the permitting process. All ODOT permits and approvals must reach 100% plans before the District Contact signs off on a local jurisdiction building permit or other necessary requirement before construction.

Vehicular Access to the State Highway

ODOT understands the proposed 30-foot-wide access lies within the existing access (Mile Post (MP) ± 12.49) that spans the shared tax lot (TL) line of lots 9100, 9300, 9200, 7800, 7700 and 7600. The proposed subdivision will remove another existing access at MP ± 12.455 . The Spacing Standard for this highway section is 350 feet between accesses (driveway to driveway, roadway to driveway, etc.). The proposed access is ± 450 feet from Dixon Avenue and ± 225 feet from TL 9400's access. While ODOT would prefer to ensure adequate spacing distance between both accesses, ODOT understands the proposed access lies on various existing easements and are amenable to its location. We understand the access will be relegated to truck traffic only due to surrounding facilities not being rated for this traffic type. ODOT will require truck turning templates along with An Application for State Highway Approach for the proposed access. A State Highway Approach Road Permit is **required** by ODOT for access to the State highway.

ODOT Technical Review Requirements

All alterations within the State highway ROW are subject to ODOT standards. Alterations along the State highway but outside of the ODOT ROW may also be subject to ODOT review pending its potential impact on the safe operation of the State highway.

The following ODOT manuals may apply:

- ODOT Traffic Manual
- ODOT Highway Design Manual
- ODOT Hydraulics Design Manual

The ODOT Traffic Manual (TM) identifies items that require ODOT Region Traffic Engineer (RTE) approval. Items requiring RTE approval must be prepared by an Oregon-registered Professional Engineer (P.E.) and will be reviewed by the ODOT Region 1 Technical Center. See the TM for information on authorities and required approvals. Some approvals require a unique request form (Traffic Approval).

Deviations from ODOT Standards

Proposed alterations that deviate from ODOT standards will require a Design Exception/Deviation prepared by an Oregon-registered Professional Engineer (P.E.) for review by the ODOT Region 1 Technical Center. ODOT can only determine if design elements will require a Design Exception/Deviation or RTE approval once detailed plans have been reviewed.

Note: A Design Exception/Deviation or RTE approval items may take **6 months or longer to process**. The preparation of a Design Exception or RTE approval does not guarantee its ultimate approval.

ODOT RECOMMENDED CONDITIONS OF APPROVAL FOR LOCAL JURISDICTION

State Highway Improvements

- A turn lane shall be installed on W Main Street (OR 211) to implement the jurisdiction's planned 3-lane cross section for this facility, consistent with ODOT Highway Design and Traffic Manual.
- Curb, sidewalk, curb ramps, and bikeways shall be constructed as necessary to implement the jurisdiction's planned cross section along the State highway consistent with ODOT Highway Design Manual, ODOT Traffic Manual, and Americans with Disabilities Act (ADA) standards.

Note: Ownership of public frontage improvements constructed by the development shall be consistent with jurisdictional boundaries.

- Right of way shall be donated to ODOT as necessary to accommodate the planned cross section of 34 feet of right of way from centerline on the State highway. The donation deed must be to the State of Oregon - Oregon Department of Transportation and shall be recorded with the County. The property owner must be the signatory for the deed and will be responsible for a certified environmental assessment of the site before the property is transferred to ODOT. The ODOT District Contact will assist in coordinating the transfer. ODOT should verify with the local jurisdiction that this requirement has been fulfilled prior to final permitting.

Note: All public frontage improvements on State owned facilities must be within State owned right of way. Donation of additional property to ODOT may be necessary to construct required improvements.

Note: It may take **6 months or longer** to transfer property ownership to ODOT.

Vehicular Access to the State Highway

- An ODOT State Highway Approach Road Permit is required for State highway access with approval of an Application for State Highway Approach. With application submittal, design vehicle turning templates will need to be provided. Site access to the State highway is regulated by OAR 734-051. For application information go to:

<https://www.oregon.gov/odot/engineering/pages/access-management.aspx>

Note: It may take up to **6 months or longer** to process an Application for State Highway Approach depending on the level of project complexity and plan review necessary. A general review timeline for Application for State Highway Approach is shown in the link below:

https://www.oregon.gov/odot/Engineering/Docs_AccessMngt/TimeLine.pdf

Permits and Agreements to Work in State Highway Right of Way

- ☒ An ODOT Miscellaneous Permit must be obtained for all work in the State highway. When the total value of improvements within the State highway is estimated to be \$100,000 or more, a Cooperative Improvement Agreement (CIA) with ODOT is required. A CIA will address the transfer of the improvements to ODOT and any associated technical and administrative costs for projects that meet this improvement threshold. Agreements shall address the work standards that must be followed, maintenance responsibilities, and compliance with ORS 276.071, which includes State of Oregon prevailing wage requirements.

Note: If a CIA is required, it may take **6 months or longer** to process.

- ☒ An ODOT Miscellaneous Permit is required for new or modified connections to State highway drainage facilities. Connections will only be considered if the site’s drainage naturally enters the State highway drainage facility. The applicant must provide ODOT District with a preliminary drainage plan showing impacts to the State highway drainage facility.

A drainage study prepared by an Oregon-registered Professional Engineer (P.E.) is usually required by ODOT if:

1. Modification to site development or State highway facility trigger the need for treatment, detention and drainage modifications per both local and state standards; or
2. Total peak runoff entering the State highway drainage facility is more significant than 1.77 cubic feet per second; or
3. The improvements increase the impervious surface area to greater than 10,758 square feet.

Note: If a drainage study is required, it shall be prepared to meet the requirements of the ODOT Hydraulics Manual. The applicant is advised that ODOT standards may differ from the local jurisdiction.

ADVISORY INFORMATION

- ☒ Illumination within the State right of way must be consistent with AASHTO illumination standards, ODOT Traffic Lighting Design Manual, and the ODOT Lighting Policy and Guidelines, which states that local jurisdictions must enter into an Intergovernmental Agreement (IGA) with ODOT wherein the local jurisdiction is responsible for installation, maintenance, operation, and energy costs. ODOT Region Traffic Engineer (RTE) approval will be required and is how the design will be documented to meet the above stated standards.

Note: It may take **6 months or longer** to process a RTE approval.

Contact the ODOT Development Review Planner identified below for further coordination or questions regarding ODOT comments and requirements during the land use process.

Please send a copy of the Notice of Decision/Staff Report with conditions of approval to:

ODOT_R1_DevRev@odot.oregon.gov

Development Review Planner: Melissa Gonzalez	Melissa.gonzalez-gabriel2@odot.oregon.gov
District Contact: District 2C	D2CAP@odot.oregon.gov

Exhibit D:

*Comments from the Oregon Department of
State Lands (DSL)*



Response Page

Department of State Lands (DSL) WN# *

WN2024-0646

Responsible Jurisdiction

Staff Contact	Jurisdiction Type	Municipality
Dan Zinder	City	Molalla
Local case file #	County	
SUB01-2024	Clackamas	

Activity Location

Township	Range	Section	QQ section	Tax Lot(s)
05S	02E	08	A	7600,7700 ,7800,910 0,9200,93 00

Street Address

525-565 W Main St

Address Line 2

City

Molalla

Postal / Zip Code

97038

State / Province / Region

OR

Country

Clackamas

Latitude

45.150861

Longitude

-122.580923

Wetland/Waterway/Other Water Features

- There are/may be wetlands, waterways or other water features on the property that are subject to the State Removal-Fill Law based upon a review of wetland maps, the county soil survey and other available information.
- The National Wetlands Inventory shows wetland, waterway or other water features on the property
- Local Wetlands Inventory shows wetland, waterway or other water features on the property

Your Activity

- It appears that the proposed project **may** impact wetlands and **may** require a State permit.

Applicable Oregon Removal-Fill Permit Requirement(s)



- A state permit is required for 50 cubic yards or more of fill removal or other ground alteration in wetlands, below ordinary high water of waterways, within other waters of the state, or below highest measured tide.

DSL Review



Wetland Ecologist Comments

A wetland delineation has been submitted for this project (WD2024-0518). The Department is reviewing this delineation to determine if the wetlands and waters identified onsite meet our jurisdictional criteria. Once we have determined the jurisdiction of these features, we will be able to determine if a permit is required for this project.

This is a preliminary jurisdictional determination and is advisory only.

This report is for the State Removal-Fill law only. City or County permits may be required for the proposed activity.

- A Federal permit may be required by The Army Corps of Engineers: (503)808-4373

Contact Information

For information on permitting, use of a state-owned water, wetland determination or delineation report requirements please contact the respective DSL Aquatic Resource, Proprietary or Jurisdiction Coordinator for the site county.

Response Date

10/11/2024

Response by:

Chris Stevenson

Response Phone:

503-798-7622

Exhibit E:

Comments From Molalla Fire Department

From: [Mike Penunuri](#)
To: [Dan Zinder](#)
Cc: [Scott Whyte](#)
Subject: RE: Comments Requested for SUB01-2024
Date: Thursday, October 24, 2024 5:24:31 PM

West main Sorry. River meadows they just need to address a few items with the hydrants. I sent those off last week

Mike Penunuri
Lieutenant/Paramedic
Molalla Fire District
503-829-2200 Ext. 104

This message is confidential. It may also be privileged or otherwise protected by work product immunity or other legal rules. If you have received it by mistake, please let us know by e-mail reply and delete it from your system; you may not copy this message or disclose its contents to anyone.

From: Dan Zinder <dzinder@cityofmolalla.com>
Sent: Wednesday, October 23, 2024 12:55 PM
To: Mike Penunuri <penunuri@molallafire.org>
Cc: Scott Whyte <SWhyte@mwvcog.org>
Subject: RE: Comments Requested for SUB01-2024

Hi Mike,

Are these comments with regard to the industrial subdivision on W Main ST or River Meadows? This is the project we're referring to:

<https://www.dropbox.com/scl/fo/am9wtqnyab0mybuy47po6/ADxiCKc478RNMqjirlyuELM?rlkey=0ljtk3lzb0smj9bocvvnckdhl&st=fs69kqcm&dl=0>

Asking because the preliminary plat shows revised hydrant locations for this subdivision and they'll be replacing the remaining waterline. Also, I would anticipate comments vis a vis the shopping street accommodation of emergency apparatus.

Dan Zinder
503.759.0226

From: Mike Penunuri <penunuri@molallafire.org>
Sent: Wednesday, October 23, 2024 6:55 AM
To: Dan Zinder <dzinder@cityofmolalla.com>; ODOT_R1_DevRev <ODOT_R1_DevRev@odot.oregon.gov>; DANIELSON Marah B <Marah.B.DANIELSON@odot.oregon.gov>
Cc: Scott Whyte <SWhyte@mwvcog.org>; Vince Stafford <vstafford@molallafire.org>; Mac Corthell <mcorthell@cityofmolalla.com>; Sam Miller <smiller@cityofmolalla.com>
Subject: RE: Comments Requested for SUB01-2024

I am still waiting on the test reports for the fire suppression system. As far as Fire is concerned,

nothing should move forward or the existing buildings occupied until the testing has been completed and deficiencies have been corrected. If these tests and corrections have already been completed, please forward copies to penunuri@molallafire.org

Mike Penunuri
Lieutenant/Paramedic
Molalla Fire District
503-829-2200 Ext. 104

This message is confidential. It may also be privileged or otherwise protected by work product immunity or other legal rules. If you have received it by mistake, please let us know by e-mail reply and delete it from your system; you may not copy this message or disclose its contents to anyone.

From: Dan Zinder <dzinder@cityofmolalla.com>
Sent: Tuesday, October 22, 2024 2:44 PM
To: 'ODOT_R1_DevRev' <ODOT_R1_DevRev@odot.oregon.gov>; DANIELSON Marah B <Marah.B.DANIELSON@odot.oregon.gov>; Mike Penunuri <penunuri@molallafire.org>
Cc: Scott Whyte <SWhyte@mwvcog.org>
Subject: RE: Comments Requested for SUB01-2024

Mike/Marah,

Checking in to see if you will be providing comments on this subdivision application as today is the deadline.

Best,
Dan Zinder
503.759.0226

From: Dan Zinder
Sent: Tuesday, October 8, 2024 8:58 AM
To: ODOT_R1_DevRev <ODOT_R1_DevRev@odot.oregon.gov>; 'DANIELSON Marah B' <Marah.B.DANIELSON@odot.oregon.gov>; Mike Penunuri <penunuri@molallafire.org>; Sam Miller <smiller@cityofmolalla.com>
Cc: 'Scott Whyte' <SWhyte@mwvcog.org>
Subject: Comments Requested for SUB01-2024

Good morning all,

Please provide comments by Tuesday, October 22 2024 for a replatted subdivision off of W Main ST/OR-211 in Molalla.

<https://www.dropbox.com/scl/fo/am9wtqnyab0mybuy47po6/ADxiCKc478RNMqjirlyuELM?rlkey=0ljtk3lzb0smj9bocvvnckdhl&st=fs69kqcm&dl=0>

Response within the Agency Comment folder in Dropbox is preferred. For everyone's reference, this project is associated with the pre-app conferences PRE16-2023, and PRE02-2024.

Apologies for the late notice.

Best,

Dan Zinder

Senior Planner, City of Molalla

117 N Molalla Ave | PO Box 248

Direct: 503.759.0226 | Office: 503.829.6855

Exhibit F:

Applicant's Submittal for SUB01-2024

SUBDIVISION APPLICATION
APPLICATION NARRATIVE & BURDEN OF PROOF STATEMENT
CITY OF MOLALLA, OREGON

FILE NO. _____

NARRATIVE DATE	June 28, 2024
REQUEST	Subdivision approval for a 12 Lot Industrial subdivision – “Molalla Industrial Park”
APPLICANTS/ OWNERS	Tim Kerr Woodburn Industrial Capital Group, LLC PO Box 1060 Woodburn, OR 97071 Phone: 971-235-5003 Email: Tkerr@kerrcontractors.com
APPLICANT’S LEGAL REPRESENTATIVE	Wendie Kellington Kellington Law Group, PC 4500 Kruse Way, Ste #340 Lake Oswego, OR 97035 Phone: 503-636-0069 Email: wk@klgpc.com
APPLICANT’S ENGINEER	Craig Harris, P.E. Weden Engineering, LLC PO Box 3246 2636 Nubgaard Rd Ferndale, WA 98248 Phone: 503.348.5064 Email: craig@wedenengineering.com
SITE ADDRESS/	525/535/545/565 W. Main Street Molalla, OR 97038
SITE AREA	Approximately 21.62 acres
ZONING	SPLIT: M-1 (Light Industrial)

M-2 (Heavy Industrial)

FIRE PROTECTION: Molalla Fire Department

POLICE: Molalla Police Department

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EXHIBITS

- EXHIBIT A – PRELIMINARY PLAT AND PRELIMINARY PLAT UTILITIES**
- EXHIBIT B – TRAFFIC IMPACT ANALYSIS**
- EXHIBIT C – ODOT LETTER AND CONDITIONS**
- EXHIBIT D – CITY LETTER AND CONDITIONS**
- EXHIBIT E – PROVAC SITE DECISION APPROVAL**
- EXHIBIT F – ELDER DEMO SITE DESIGN APPROVAL**

I. SUMMARY OF REQUEST

The proposal is to create an industrial subdivision, subdividing approximately 21.62 acres into 12 lots, composed of 3 lots zoned M-1 (Light Industrial) and 9 lots zoned M-2 (Heavy Industrial) zoning district. No uses or new structures are proposed under this application. The lots are proposed to range in size from 56,462 to 104,310 square feet. The existing 34,000 square foot building on proposed lot 7 will remain. All other existing structures on the subject property will be removed.

With respect to Lot 7, it has already undergone a Site Design Review. See Exhibits E and F. And a supplementary Planning Director Review. See Exhibit D. The Applicant agrees to comply with all conditions of approval listed on Exhibits D, E and F. This includes the condition concerning the water line replacement:

6. *The building on the subject parcel currently lies on top of a 6" public waterline that runs N/S through the subject parcel along the abandoned Wittenberg Ave right-of-way. This arrangement was never lawful under any version of Molalla Municipal Code. Prior to occupancy, Applicant will be required to design and construct a new 8" waterline extending from the stubbed waterline near the northeast corner of property known as Map 52E08A Tax lot 07800 (535 W Main St.), bearing roughly southward along the abandoned Wittenberg roadway alignment, around the east side of the building on site, to the southeast corner of 535 W Main ST, and reconnecting to the waterline at approximately that location. Applicant shall relocate and record the location of the existing utility easement to correspond the location of the relocated waterline.*

Therefore, the only issue relevant to *this subdivision application* concerning Lot 7 is the proposed subdivision itself that will create Lot 7 as a discrete lot. Development related standards (such as landscaping, parking and lighting) do not apply to the subdivision because no development is proposed. Development related standards similarly do not apply to the existing development on Lot 7 because those standards have already been applied, evaluated and conditions imposed by the Exhibit D, E and F land use decisions. Applicant understands and acknowledges that the owner of Lot 7 (currently the Applicant here) is required to comply with the land use conditions imposed in the Exhibit D, E and F City decisions. The only exception is that with the approval of the proposed subdivision, COU11-2023 Condition 7 and COU10-022 Condition 8 will be adjusted to reflect the requirement for access to OR 211 will occur via the proposed new private road and the existing conditions below in those two decisions, will no longer apply:

7. In accordance with MMC 17-3.3.030 I, The applicant shall record cross-over access easements to access OR 211 via tax lot 9100 for tax lots 7800, 7700, 7600, 9200, and 9300 with the County Assessor to facilitate future shared access.
8. In accordance with MMC 17-3.3.030 I, The applicant shall record cross-over access easements to access OR 211 via tax lot 9100 for tax lots 7800, 7700, 7600, 9200, and 9300 with the County Assessor to facilitate future shared access.

The City held a pre-application conferences on September 27, 2023 and April 10, 2024, with the Applicant and its development team.

II. SURROUNDING ZONING AND LAND USE:

The surrounding properties are zoned as follows:

North: R-3, PSP.
South: C-2, PSP;
East: M-1, M-2, R-3;
West: M-1, M-2, R-3;

III. SITE CHARACTERISTICS:

The subject property is the site of the former Avison Lumber Mill, which operated on the property for several decades -roughly between 1950 until the mid-1990s. The lumber mill featured log ponds, log decks, an office, and various lumber related outbuildings. The site is relatively flat and largely paved. A rail corridor ran along the eastern perimeter of the site and a spur entered the site from the mainline through the property to the former log decks. After the mill closed, the subject property has been used variously to support a machine shop, storage and parking for an amusement park operator, offices and storage for a telecommunications company and manufacturing. The rail line and spur were removed and filled with gravel and soil. The area where the spur was now extends into proposed lot 11. The city now uses the area of the former rail line as part of its storm water conveyance system. Currently, the property is being used by Rainer Amusement that uses both lots 1 and 12 for storing amusement equipment. As noted above, Elder Demolition occupies a part of the existing building on proposed Lot 7 and ProVac uses a part of Lot 7.

A. Access: The property has access from W. Main Street. The Applicant proposes updating the private road to extend through the property to, connecting the property to both W Main Street (on the south side of the subject property) and to W. Heintz Street (situated at the north side of the subject property).

B. Topography: The property is mostly flat with a gradual slope.

C. Natural Features: There are no natural features on the site. The local wetland inventory indicates that the area of the former log ponds are wetlands. But state law prohibits former log pond sites from being characterized as wetlands. OAR 141-085-0515 and 515(7) excluded log ponds from the definition of “waters of the state.” Other wet areas on the subject property are similarly artificially created. In this regard, the city’s underground piping including a water main for its water delivery system under the subject property has been leaking significantly for many years – on an order of magnitude of one million gallons of water per month. Some but not all of the leaks have been repaired. A significant quantity of water is still leaking underground at the site. That leaking water causes water to pond above-ground. That ponded water is artificial and does not contain food and game fish and therefore by administrative rule, is not jurisdictional. OAR 141-085-0515(8)(b). The former railroad bed that the city now uses to convey stormwater, was artificially constructed from upland and similarly is not jurisdictional.

D. Natural Hazards: There are no known natural hazards at the site.

E. Well/Septic: There are no wells or septic tanks on the subject property. The subject property is served by city water and sewer.

F. Surrounding Land Use: The property is surrounded by R-3, PSP zoning to the North, C-2, PSP zoning to the South, and M-1, M-2, and R-3 zoning to the East and West.

IV. PROCEDURE: LIMITED LAND USE DECISION

197.015 Definitions for ORS chapters 195, 196, 197 and ORS 197A.300 to 197A.325.

(12) “Limited land use decision”:

(a) Means a final decision or determination made by a local government pertaining to a site within an urban growth boundary that concerns:

(A) The approval or denial of a tentative subdivision or partition plan, as described in ORS 92.040 (1).

(B) The approval or denial of an application based on discretionary standards designed to regulate the physical characteristics of a use permitted outright, including but not limited to site review and design review.

(b) Does not mean a final decision made by a local government pertaining to a site within an urban growth boundary that concerns approval or denial of a final subdivision or partition plat or that determines whether a final subdivision or partition plat substantially conforms to the tentative subdivision or partition plan.

Applicant’s Response: Approving or denying a tentative subdivision plat within an urban growth boundary is a limited land use decision and therefore not a “permit” decision. *Frewing v. City of Tigard*, 59 Or LUBA 23 (2009). This application meets the definition of a limited land use decision. It is within the urban growth boundary of the City of Molalla, it seeks the approval of the tentative subdivision shown on Exhibit A, it discusses approval criteria relating to site and design review below, and does not pertain to a not-yet-extant final subdivision plat. Therefore, this case should be processed as a “limited land use decision.”

The statute governing LLUDs is found at ORS 197.195. This provision states:

197.195 Limited land use decision; procedures. (1) A limited land use decision shall be consistent with applicable provisions of city or county comprehensive plans and land use regulations. Such a decision may include conditions authorized by law. Within two years of September 29, 1991, cities and counties shall incorporate all comprehensive plan standards applicable to limited land use decisions into their land use regulations. A decision to incorporate all, some, or none of the applicable comprehensive plan standards into land use regulations shall be undertaken as a post-acknowledgment amendment under ORS 197.610 to 197.625. If a city or county does not incorporate its comprehensive plan provisions

into its land use regulations, the comprehensive plan provisions may not be used as a basis for a decision by the city or county or on appeal from that decision.

(2) A limited land use decision is not subject to the requirements of ORS 197.797.

(3) A limited land use decision is subject to the requirements of paragraphs (a) to (c) of this subsection.

- (a) In making a limited land use decision, the local government shall follow the applicable procedures contained within its acknowledged comprehensive plan and land use regulations and other applicable legal requirements.***
- (b) For limited land use decisions, the local government shall provide written notice to owners of property within 100 feet of the entire contiguous site for which the application is made. The list shall be compiled from the most recent property tax assessment roll. For purposes of review, this requirement shall be deemed met when the local government can provide an affidavit or other certification that such notice was given. Notice shall also be provided to any neighborhood or community organization recognized by the governing body and whose boundaries include the site.***
- (c) The notice and procedures used by local government shall:***
 - (A) Provide a 14-day period for submission of written comments prior to the decision;***
 - (B) State that issues which may provide the basis for an appeal to the Land Use Board of Appeals shall be raised in writing prior to the expiration of the comment period. Issues shall be raised with sufficient specificity to enable the decision maker to respond to the issue;***
 - (C) List, by commonly used citation, the applicable criteria for the decision;***
 - (D) Set forth the street address or other easily understood geographical reference to the subject property;***
 - (E) State the place, date and time that comments are due;***
 - (F) State that copies of all evidence relied upon by the applicant are available for review, and that copies can be obtained at cost;***
 - (G) Include the name and phone number of a local government contact person;***
 - (H) Provide notice of the decision to the applicant and any person who submits comments under subparagraph (A) of this paragraph. The notice of decision must include an explanation of appeal rights; and***
 - (I) Briefly summarize the local decision making process for the limited land use decision being made.***

(4) Approval or denial of a limited land use decision shall be based upon and accompanied by a brief statement that explains the criteria and standards considered relevant to the decision, states the facts relied upon in rendering the decision and explains the justification for the decision based on the criteria, standards and facts set forth.

(5) A local government may provide for a hearing before the local government on appeal of a limited land use decision under this section. The hearing may be limited to the record developed pursuant to the initial hearing under subsection (3) of this section or may allow for the introduction of additional testimony or evidence. A hearing on appeal that allows the introduction of additional testimony or evidence shall comply with the requirements of ORS 197.797. Written notice of the decision rendered on appeal shall be given to all parties who appeared, either orally or in writing, before the hearing. The notice of decision shall include an explanation of the rights of each party to appeal the decision. [1991 c.817 §3; 1995 c.595 §1; 1997 c.844 §1]

Applicant's Response: The Legislature created the limited land use decision ("LLUD") in 1991, in part to simplify the land use process for land divisions in urban areas. The benefit to using the LLUD process is that it allows for simplified procedures. ORS 197.195. ORS 197.195 discusses the procedure under which limited land use decisions are required to be made.

An application for a limited land use decision is decided at the staff level, through a notice and comment process, and a local government may provide a right of local appeal. ORS 197.195(5). In such an appeal, the appeal hearing may be based on the existing administrative record or new evidence may be allowed. Should an appeal hearing allow the introduction of new evidence, the hearing is subject to the quasi-judicial hearing procedures set forth in ORS 197.797. Because this case will be processed as a limited land use decision, the city should make that intent clear in the initial public notice. *Gensman v. City of Tigard*, 29 Or LUBA 505 (1995).

Second, the statute requires each local government to incorporate into its development code all of its comprehensive plan standards which it considered relevant to deciding a limited land use decision. The deadline for completing this task was Sept. 29, 1991. The statute states that after that date, a "comprehensive plan provisions may not be used as a basis for a decision by a city or county or on appeal from that decision." ORS 197.195.

In *Oster v. City of Silverton*, 79 Or LUBA 447 (2019), LUBA held that traffic performance standards in the local government's transportation system plan (TSP) are not approval criteria applicable to a limited land use decision that were incorporated pursuant to ORS 197.195(1), where the applicable criteria either do not refer to the TSP at all or where they only generally "incorporate[] by reference the city's public facility master plans, including plans for domestic water, sanitary sewer, storm drainage, parks, and transportation."

In *Paterson v. City of Bend*, 49 Or LUBA 160 (2005), *aff'd, in part, rev'd and rem'd on other grounds*, 201 Or App 344, 118 P3d 842 (2005), LUBA rejected a city's attempt to use vague incorporation by reference statements. LUBA held that in order to "incorporate" a comprehensive plan standard into a local government's land use regulations within the meaning of ORS 197.195(1) and thus apply that plan standard to a limited land use decision as an approval criterion, the local government must at least amend its land use regulation to identify specific plan policies or provisions that apply to a limited land use decision as approval criteria. A code requirement to "comply with the comprehensive plan" is insufficient to incorporate any comprehensive plan standard under ORS 197.195(1). *Forest Park Neigh. Assoc. v. City of Portland*, 27 Or LUBA 215 (1994).

V. APPROVAL STANDARDS

Chapter 17-2.2 ZONING DISTRICT REGULATIONS

§17-2.2.030 Allowed Uses

A. Uses Allowed in Base Zones. Allowed uses include those that are permitted, those that are permitted subject to special use standards, and those that are allowed subject to approval of a conditional use permit, as identified by Table 17-2.2.030. Allowed uses fall into four general categories: Residential, Public and Institutional, Commercial, and Other. If Table 17-2.2.030 does not list a specific use, and Division V Definitions does not identify the use or include it as an example of an allowed use, the City may find that use is allowed, or is not allowed, by following the procedures of Section 17-1.5.010 Code Interpretations. Uses not listed in Table 17-2.2.030 and not found to be similar to an allowed use are prohibited.

Applicant's Response: The lots subject to this application are all zoned M-1 and M-2, which is the Industrial District, defined in MCC 17-2.1.020(C).

§ 17-2.2.040. Lot and development standards.

A. Development Standards. Section 17-2.2.040 provides the general lot and development standards for each of the City's base zoning districts. The standards of Section 17-2.2.040 are organized into two tables: Table 17-2.2.040.D applies to residential zones, and Table 17-2.2.040.E applies to non-residential zones.

Table 17-2.2.040.E Lot and Development Standards for Non-Residential Zones

(Except as provided by 17-4.3.050, Chapter 17-4.7 Adjustments and Variances, or as approved under Chapter 17-4.8 Master Planned Developments.)

Standard	C Zones	I Zones	PSP
<i>Minimum Lot Area (square feet)</i> *Development must conform to lot width, depth, yard setback, and coverage standards.	None	None	None
<i>Minimum Lot Width and Depth</i>	None	None	None
<i>Building and Structure Height</i>			

Standard	C Zones	I Zones	PSP
<u>Standard</u> maximum height	55 ft	55 ft	55 ft
<i>*[Height Increase. The City may increase the standard height, above, for specific projects with approval of a Conditional Use Permit (CUP), per Chapter 17-4.4.]</i>	Yes	Yes	Yes
<u>Fences and Non-Building Walls</u> Maximum Height – Front Yard Maximum Height – Interior Side Maximum Height – Rear Yard Maximum Height – Street-Side or Reverse Frontage Lot (rear) (See also Section 17-3.4.040 .)	4 ft 6 ft 6 ft 4 ft, or 6 ft with 5 ft landscape buffer	Same as for C zones, except where City requires screens	
Lot Coverage. Maximum Lot Coverage (foundation plane as % of site area)	100%	100%	NA
Minimum Landscape Area (% site area), includes required parking lot landscaping and any required screening. This standard does not apply to individual, detached single-family dwellings. Landscape area may include street trees and civic space improvements in some zones, per Sections 17-3.2.050 and 17-3.4.030 .	5%	5%	10%

Table 2.2.040.E Lot and Development Standards for Non-Residential Zones

(Except as provided by 17-4.3.050, Chapter 17-4.7 Adjustments and Variances, or as approved under Chapter 17-4.8 Master Planned Developments.)

Standard	C Zones	I Zones	PSP
Minimum Setback Yards (feet): (See also Section 17-2.2.050) <u>Front, Street-Side, Interior Side, and Rear</u> property lines, except garage or carport, or as required by other code provisions <u>Garage or Carport Entry</u> , set back from street <u>Alley</u> <u>Adjacent to R Districts</u>	0 ft 20 ft 3 ft 10 ft	0 ft 20 ft 3 ft 10 ft	0 ft 20 ft 3 ft 10 ft
Build-To Line (feet): <u>New Buildings Only:</u> At least one primary building entrance shall be built no farther from the street right-of-way than the build-to line; except where a greater setback is required for a Planned Street Improvement, then the build-to line increases proportionately. The build-to line may also be increased through Site Design Review when pedestrian amenities are provided between a primary building entrance and the street right-of-way. To avoid encroachment into the right-of-way, doorways are not required to be flush with the build-to line.	0 ft; may be increased when pedestrian amenities are provided between a primary building entrance and street		Not Applicable

Applicant’s Response: Applicant understands “I zones” refer to the city’s M-1 and M-2 zones that are applied to the subject site. All of the proposed lots meet the above dimensional standards. The existing building on proposed Lot 7, meets the dimensional and setback requirements specified above.

B. Design Standards. City standards for Access, Circulation, Site and Building Design, Parking, Landscaping, Fences and Screening, and Public Improvements, among others, are located in Division III. Notwithstanding the provisions of Section 17-2.2.040 and Division III, different standards may apply in specific locations, such as at street intersections, within overlay zones,

adjacent to natural features, and other areas as may be regulated by this Code or subject to state or federal requirements. For requirements applicable to the City's overlay zones, please refer to Chapter 17-2.4.

Applicant's Response: This site is not within an overlay zone or adjacent to natural features. The site is generally flat. It is not expected that "different standards" that in Section 17-2.2.040 and Division III will apply.

C. Disclaimer. Property owners are responsible for verifying whether a proposed development meets the applicable standards of this Code. Submittal of a Zoning Checklist for review and approval by the Planning Official may be required in order to determine whether use is allowed on a given site, and whether further land use review is required. D. Lot and Development Standards for Residential Districts. The development standards in Table 17-2.2.040.D apply to all new development as of November 10, 2017 in residential zones.

Applicant's Response: This disclaimer is informational in nature and is not a mandatory approval standard. City comments were gathered during and after a pre-application conference, and are accounted for in this application narrative, as are all standards Applicant understands to apply for this action.

Chapter 17-3.1 DESIGN STANDARDS ADMINISTRATION

17-3.1.020 Applicability

The provisions of Division III apply to permits and approvals granted under this Code, and other City actions, as summarized in Table 17-3.1.020.

Approvals	17-3.2 Building Design	17-3.3 Access Circulation	17-3.4 Landscaping, Fences and Walls, Outdoor Lighting	17-3.5 Parking & Loading	17-3.6 Public Facilities
Subdivision or Replat of >3 lots (See also Chapter 17-4.3)	Y (if bldg exists)	Y	Y (for flag lot)	Y (if use exists)	Y

Applicant's Response: This table has been presented here truncated to only show the relevant type of approval sought. A building does exist on the property, so Applicant responds to each section below.

17-3.2.040 Non-Residential Buildings

A. Purpose and Applicability. The following requirements apply to non-residential development, including individual buildings and developments with multiple buildings such as shopping centers, office complexes, mixed-use developments, and institutional campuses. The standards are intended to create and maintain a built environment that is conducive to pedestrian accessibility, reducing dependency on

the automobile for short trips, while providing civic space for employees and customers, supporting natural surveillance of public spaces, and creating human-scale design. The standards require buildings placed close to streets, with storefront windows (where applicable), with large building walls divided into smaller planes, and with architectural detailing.

Applicant's Response: This subdivision is proposed for an area that is currently mostly vacant land, secondarily a large driveway and parking lot installed by the prior owner, and tertiarily a single industrial building. No building permits are sought with this proposal. Building design will be examined when buildings are proposed by owners of individual lot owners after subdivision approval.

B. Building Orientation. The following standards apply to new buildings and building additions that are subject to Site Design Review. The Planning Official may approve adjustments to the standards as part of a Site Design Review approval, pursuant to Chapters 17-4.2 and 17-4.7, respectively.

Applicant's Response: No new buildings or building additions are proposed. Individual lot owners will be required to comply with these standards during the permitting process for new buildings or additions to buildings, at such time as they are proposed.

C. Large-Format Developments. Plans for new developments, or any phase thereof, with a total floor plate area (ground floor area of all buildings) greater than 35,000 square feet, shall meet all of the following standards in subsections C.1 through 9, as generally illustrated in Figure 17-3.2-7. The Planning Official may approve adjustments to the standards as part of a Site Design Review approval, pursuant to Chapters 17-4.2 and 17-4.7, respectively.

Applicant's Response: No new development with any buildings is proposed. Regardless, the city requested that Applicant address 17-3.2.040(C) and so it is addressed here.

- 1. The site plan or preliminary subdivision plan, as applicable, shall comply with the street connectivity standards of Section 17-3.6.020. The plan approval shall bind on all future phases of the development, if any, to the approved block layout.***

Applicant's Response: the preliminary subdivision plan complies with the street connectivity standards of Section 17-3.6.020. Compliance with that standard is demonstrated under that standard below.

- 2. Except as provided by subsections C.6 through 9, the site shall be configured into blocks with building pads that have frontage onto improved streets meeting City standards, and shall contain interior parking courts and with interconnected pedestrian walkways.***

Applicant's Response: The site is configured into blocks of individual subdivision lots as shown on the Exhibit A proposed plat. Each lot has frontage onto the proposed private street that will run north to south through the subject property – from Main Street to W Heintz. That private

street will be improved to city standards. It is impossible to know at this time how the interior buildings and parking on individual lots will be arranged. Therefore, it is not possible at this time to show the location of interior parking courts and interconnected pedestrian walkways. The Applicant suggests a condition of approval of individual lot development approval that when each lot develops that they contain interior parking courts and interconnected pedestrian walkways stubbed to the adjoining lots on either side.

- 3. Off-street parking, trash storage facilities, and ground-level utilities (e.g., utility vaults), and similar obstructions shall not be placed between building entrances and the street(s) to which they are oriented. To the extent practicable, such facilities shall be oriented internally to the block and accessed by alleys or driveways.**

Applicant's Response: It is impossible to know at this time the location of off-street parking, trash storage, and ground-level utilities. At the time of individual lot development approval, off-street parking, trash storage facilities, and ground-level utilities (e.g., utility vaults), and similar obstructions will be required to comply with this standard.

- 4. Walkways shall connect the street right-of-way to all primary building entrances, and shall connect all primary building entrances to one another, including required pedestrian crossings through interior parking areas, if any, in accordance with Section 17-3.3.040. The Planning Official may condition development to provide facilities exceeding those required by Section 17-3.3.040, including a requirement for lighting, stairways, ramps, and midblock pedestrian access ways (e.g., to break up an otherwise long block) to ensure reasonably safe, direct, and convenient pedestrian circulation. Development in the right-of-way shall be approved by the City Engineer.**

Applicant Response: No primary building structures are being proposed. Therefore, it is not possible to show the required connections at this time. When individual lots develop, they will be required to comply with this standard to include providing for any required walkways.

- 5. Buildings placed at a block corner shall have a primary entrance oriented to the block corner. That entrance shall be located no more than 20 feet from the corner, as measured from the street curb and shall have a direct and convenient pedestrian walkway connecting to the corner side-walk.**

Applicant Response: No buildings are proposed. Individual lot development proposals will be required to demonstrate that primary entrances meet this standard.

- 6. All buildings shall orient to a street, pursuant to subsection B. Where it is not practical to orient all buildings to streets due to existing parcel configuration or a similar site constraints, buildings may orient to a "shopping street" providing, at a minimum, on-street parking (parallel or angled parking), 10-foot sidewalks (which shall include a four-foot zone for street trees and furnishings such as benches and other street furniture), and pedestrian-scale lighting. Shopping street dimensions do not apply to the public right-of-way.**

Applicant Response: No buildings are proposed, so it is impossible to establish any particular orientation for particular buildings. No “shopping street” is proposed or anticipated because the property is zoned Industrial and not commercial.

7. Each building that is proposed as orienting to a shopping street shall comply with the orientation standards of subsection B in reference to the shopping street, and shall have at least one primary entrance oriented to the shopping street.

Applicant Response: No buildings are proposed. When individual lots seek development approval, they will be required to comply with this standard.

8. Where a building fronts both a shopping street and a public street, that building shall contain at least one primary entrance oriented to each street; except that an entrance is not required where the public street is not improved with a sidewalk and the City determines that sidewalk improvements to the public street cannot be required as a condition of approval.

Applicant Response: No buildings are proposed. When individual lot owners seek development approval they will be required to comply with this standard.

CHAPTER 17-3.3 ACCESS AND CIRCULATION

§ 17-3.3.010. Purpose. Chapter 17-3.3 contains standards for vehicular and pedestrian access, circulation, and connectivity. The standards promote safe, reasonably direct, and convenient options for walking and bicycling, while accommodating vehicle access to individual properties, as needed.

Applicant’s Response: This purpose statement is not a mandatory approval standard.

§ 17-3.3.020. Applicability. Chapter 17-3.3 applies to new development and changes in land use necessitating a new or modified street or highway connection. Except where the standards of a roadway authority other than the City supersede City standards, Chapter 17-3.3 applies to all connections to a street or highway, and to driveways and walkways. The Planning Official, through a Type II procedure, may grant adjustments to Chapter 17-3.3, pursuant to the criteria of Chapter 17-4.7 Adjustments and Variances. For street improvement requirements, refer to Section 17-3.6.020.

Applicant’s Response: The Applicant proposes new street connection, a private road to connect to each lot, with entrances on W Heintz Street to the north and W Main Street to the south. Therefore, Chapter 17-3.3 applies to this case. In addition, Lot 3 will take access from Dixon Ave. at a specific location to be decided when the owner of Lot 3 applies to the city to develop that property.

§ 17-3.3.030. Vehicular Access and Circulation.

A. Purpose and Intent. Section 17-3.3.030 implements the street access policies of the City of Molalla Transportation System Plan. It is intended to promote safe vehicle access and egress to properties, while maintaining traffic operations in conformance with adopted standards. "Safety," for the purposes of this chapter, extends to all modes of transportation.

Applicant's Response: This purpose statement is not a mandatory approval standard, although it does define the term "safety" for purposes of other approval standards.

B. Permit Required. Vehicular access to a public street (e.g., a new or modified driveway connection to a street or highway) requires an approach permit approved by the applicable roadway authority.

Applicant's Response: This provision is informational in nature and does not create a mandatory approval standard. An approach permit will be obtained from ODOT for the Main Street connection and from the City for the W Heintz St connection to Lot 3. The City should impose a condition of approval requiring both approach permits be obtained before final plat approval.

C. Traffic Study Requirements. The City, in reviewing a development proposal or other action requiring an approach permit, may require a traffic impact analysis, pursuant to Section 17-3.6.020, to determine compliance with this Code.

Applicant's Response: The Applicant's Traffic Impact Analysis is attached at Exhibit B.

D. Approach and Driveway Development Standards. Approaches and driveways shall conform to all of the following development standards:

- 1. The number of approaches on higher classification streets (e.g., collector and arterial streets) shall be minimized; where practicable, access shall be taken first from a lower classification street.***

Applicant's Response: MCC does not define the term "approach," but we assume it means the location where vehicles enter a property – here each individual lot. Applicant proposes a private street to provide access to the lots of its proposed subdivision. The private road will have only one entrance on each of the two City roads adjacent to the property and will be properly permitted. Lot 3 will connect to Dixon Ave., which is a local access street.

- 2. Approaches shall conform to the spacing standards of subsections E and F, below, and shall conform to minimum sight distance and channelization standards of the roadway authority.***

Applicant's Response: Applicant shall comply with the spacing standards as well as minimum sight distance and channelization standards.

- 3. Driveways shall be paved and meet applicable construction standards. Where permeable paving surfaces are allowed or required, such surfaces shall conform to applicable Public Works Design Standards.***

Applicant's Response: No driveways are proposed. When individual lot owners seek development approval, they will be required to demonstrate compliance with this standard.

- 4. The City Engineer may limit the number or location of connections to a street, or limit directional travel at an approach to one-way, right-turn only, or other restrictions, where the roadway authority requires mitigation to alleviate safety or traffic operations concerns.***

Applicant's Response: No purpose would be served in limiting the number of connections to the private street and so no limits are anticipated. No particular limits are anticipated at the private street connections to W Main St or to W Heintz because no operational issues were flagged either in the traffic analysis or by the city to date.

- 5. Where the spacing standards of the roadway authority limit the number or location of connections to a street or highway, the City Engineer may require a driveway extend to one or more edges of a parcel and be designed to allow for future extension and inter-parcel circulation as adjacent properties develop. The City Engineer may also require the owner(s) of the subject site to record an access easement for future joint use of the approach and driveway as the adjacent property(ies) develop(s).**

Applicant's Response: No particular limits are anticipated at the private street connections to Main St or to W Heintz or the driveway connection for Lot 3 to Dixon Ave., because no operational issues were flagged either in the traffic analysis or by the city to date.

- 6. Where applicable codes require emergency vehicle access, approaches and driveways shall be designed and constructed to accommodate emergency vehicle apparatus and shall conform to applicable fire protection requirements. The City Engineer may restrict parking, require signage, or require other public safety improvements pursuant to the recommendations of an emergency service provider.**

Applicant's Response: The internal private road shall conform to fire protection requirements and accommodate emergency vehicles as will the Dixon Ave., approach for Lot 3.

- 7. As applicable, approaches and driveways shall be designed and constructed to accommodate truck/trailer-turning movements.**

Applicant's Response: All approaches will meet this standard. A condition of approval to that effect is anticipated.

- 8. Except where the City Engineer and roadway authority, as applicable, permit an open access with perpendicular or angled parking, driveways shall accommodate all projected vehicular traffic on-site without vehicles stacking or backing up onto a street. 9. Driveways shall be designed so that vehicle areas, including, but not limited to, driveup and drive-through facilities and vehicle storage and service areas, do not obstruct any public right-of-way.**

Applicant's Response: The driveways into the interior lots cannot yet be designed because we do not know how the individual lots will be developed. But the approach opening to the lots will be wide enough to meet this standard. The city should impose a condition of individual lot development that requires compliance with this standard.

- 10. Approaches and driveways shall not be wider than necessary to safely accommodate projected peak hour trips and turning movements, and shall be designed to minimize crossing distances for pedestrians.**

Applicant's Response: As shown on Exhibit A, Preliminary Plat, the approaches – the openings - to each of the interior lots are designed to the width necessary to safely accommodate peak hour trips and turning movements. Pedestrian access will be designed as individual lots develop.

11. As it deems necessary for pedestrian safety, the City Engineer, in consultation with the roadway authority, as applicable, may require that traffic-calming features, textured driveway surfaces (e.g., pavers or similar devices), curb extensions, signage or traffic control devices, or other features, be installed on or in the vicinity of a site as a condition of development approval.

Applicant's Response: Traffic calming is not anticipated to be necessary.

12. Construction of approaches along acceleration or deceleration lanes, and along tapered (reduced width) portions of a roadway, shall be avoided; except where no reasonable alternative exists and the approach does not create safety or traffic operations concern.

Applicant's Response: There is no proposal to construct approaches in the areas this standard seeks to avoid.

13. Approaches and driveways shall be located and designed to allow for safe maneuvering in and around loading areas, while avoiding conflicts with pedestrians, parking, landscaping, and buildings.

Applicant's Response: The approaches to both Main Street and W. Heintz St. as well as Dixon Ave., are located to allow, and will be designed to allow, for safe maneuvering and to avoid conflicts as much as practicable. The interior lot circulation is not known until each individual lot develops. Compliance with this standards will be required when individual lot owners seek development approval.

14. Where sidewalks or walkways occur adjacent to a roadway, driveway aprons constructed of concrete shall be installed between the driveway and roadway edge. The roadway authority may require the driveway apron be installed outside the required sidewalk or walkway surface, consistent with Americans with Disabilities Act (ADA) requirements, and to manage surface water runoff and protect the roadway surface.

Applicant's Response: This standard will be met for the proposed interior private road between W. Main Street and W. Heintz St., as well as the Lot 3 driveway access at Dixon Ave. See Exhibit A Preliminary Plat.

15. Where an accessible route is required pursuant to ADA, approaches and driveways shall meet accessibility requirements where they coincide with an accessible route.

Applicant's Response: This standard will be met for the approaches to both W. Main Street and W. Heintz Steet. No driveways are proposed at this time. Individual lot owners will be required to comply with this standard at the time they seek development approval.

16. The City Engineer may require changes to the proposed configuration and design of an approach, including the number of drive aisles or lanes, surfacing, traffic-calming features, allowable turning movements, and other changes or mitigation, to ensure traffic safety and operations.

Applicant's Response: No particular limits are anticipated at the private street connections to Main St or to W Heintz or Dixon Ave., because no operational issues were flagged either in the traffic analysis or by the city to date.

17. Where a new approach onto a state highway or a change of use adjacent to a state highway requires ODOT approval, the applicant is responsible for obtaining ODOT approval. The City Engineer may approve a development conditionally, requiring the applicant first obtain required ODOT permit(s) before commencing development, in which case the City will work cooperatively with the applicant and ODOT to avoid unnecessary delays.

Applicant's Response: Applicant shall obtain ODOT approval as required. The Applicant has met with ODOT and the city and ODOT has proposed conditions of approval (Exhibit C), which are acceptable to the Applicant.

18. Where an approach or driveway crosses a drainage ditch, canal, railroad, or other feature that is under the jurisdiction of another agency, the applicant is responsible for obtaining all required approvals and permits from that agency prior to commencing development.

Applicant's Response: The approaches do not cross a drainage ditch, canal, railroad, or other feature. No driveways are proposed at this time. At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

19. Where a proposed driveway crosses a culvert or drainage ditch, the City Engineer may require the developer to install a culvert extending under and beyond the edges of the driveway on both sides of it, pursuant to applicable Public Works Design Standards.

Applicant's Response: The approaches do not cross a culvert or drainage ditch. No driveways are proposed at this time. At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

20. Except as otherwise required by the applicable roadway authority or waived by the City Engineer temporary driveways providing access to a construction site or staging area shall be paved or graveled to prevent tracking of mud onto adjacent paved streets.

Applicant's Response: The site is already paved and so no further paving, or gravel installations will be required to avoid mud tracking to adjacent streets when individual lots develop

21. Development that increases impervious surface area shall conform to the storm drainage and surface water management requirements of Section 17-3.6.050.

Applicant's Response: No new development is proposed; only an industrial subdivision is proposed. At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

E. Approach Separation from Street Intersections. Except as provided by subsection H, minimum distances shall be maintained between approaches and street intersections consistent with the current version of the Public Works Design Standards and Transportation System Plan.

Applicant's Response: The proposed private street approaches on W Main ST and W Heintz ST already exist but regardless the proposed private street approach complies with this standard as demonstrated on the attached site plan (Exhibit A). Similarly, the proposed approach for Lot 3's access to Dixon Ave., meets this requirement.

F. Approach Spacing. Except as provided by subsection H or as required to maintain street operations and safety, the following minimum distances shall be maintained between approaches consistent with the current version of the Public Works Design Standards and Transportation System Plan.

Applicant's Response: The approach spacing for the private street connecting the property to W Main St. and to W Heintz St. and the Dixon Ave. approach comply with the Public Works Design standards.

G. Vision Clearance. No visual obstruction (e.g., sign, structure, solid fence, or shrub vegetation) greater than 2.5 feet in height shall be placed in "vision clearance areas" at street intersections. The minimum vision clearance area may be modified by the Planning Official through a Type I procedure, upon finding that more or less sight distance is required (i.e., due to traffic speeds, roadway alignment, etc.). Placement of light poles, utility poles, and tree trunks should be avoided within vision clearance areas.

Applicant's Response: No development is proposed that triggers this standard. Regardless, as demonstrated by the Applicant's TIA, the site distance at the private road connections to both W Main St and W Heintz Street comply with this standard. Site distance is also met at the Lot 3 approach to Dixon Ave.

H. Exceptions and Adjustments. The City Engineer may approve adjustments to the spacing standards of subsections E and F, above, where an existing connection to a City street does not meet the standards of the roadway authority and the proposed development moves in the direction of code compliance. The Planning Official through a Type II procedure may also approve a deviation to the spacing standards on City streets where it finds that mitigation measures, such as consolidated access (removal of one access), joint use driveways (more than one property uses same access), directional limitations (e.g., one way), turning restrictions (e.g., right-in/right-out only), or other mitigation alleviate all traffic operations and safety concerns.

Applicant's Response: This is an information statement and is not a required approval response. Regardless, spacing standards are met and there are no unique conditions that would require any adjustments.

I. Joint Use Access Easement and Maintenance Agreement. Where the City approves a joint use driveway, the property owners shall record an easement with the deed allowing joint use of and cross access between adjacent properties. The owners of the properties agreeing to joint use of the driveway shall record a joint maintenance agreement with the deed, defining maintenance responsibilities of property owners. The applicant shall provide a fully executed copy of the agreement to the City for its records, but the City is not responsible for maintaining the driveway or resolving any dispute between property owners.

Applicant's Response: A joint use access easement and maintenance agreement will be recorded with the final plat.

§ 17-3.3.040. Pedestrian Access and Circulation.

A. Purpose and Intent. Section 17-3.3.040 implements the pedestrian access and connectivity policies of the City of Molalla Transportation System. It is intended to provide for safe, reasonably direct, and convenient pedestrian access and circulation.

Applicant's Response: This purpose statement is not a mandatory approval standard.

B. Standards. Developments shall conform to all of the following standards for pedestrian access and circulation as generally illustrated in Figure 17-3.3-3:

1. Continuous Walkway System. A pedestrian walkway system shall extend throughout the development site and connect to adjacent sidewalks, if any, and to all future phases of the development, as applicable.

Applicant's Response: Sidewalks are proposed along the private street and Dixon half-street improvement, as shown on the Exhibit A Preliminary Plat.

2. Safe, Direct, and Convenient. Walkways within developments shall provide safe, reasonably direct, and convenient connections between primary building entrances and all adjacent parking areas, recreational areas, playgrounds, and public rights-of way conforming to the following standards:

a. The walkway is reasonably direct when it follows a route that does not deviate unnecessarily from a straight line or it does not involve a significant amount of out-of-direction travel.

b. The walkway is designed primarily for pedestrian safety and convenience, meaning it is reasonably free from hazards and provides a reasonably smooth and consistent surface and direct route of travel between destinations. The Planning Official may require landscape buffering between walkways and adjacent parking lots or driveways to mitigate safety concerns.

c. The walkway network connects to all primary building entrances, consistent with the building design standards of Chapter 17-3.2 and, where required, Americans with

Disabilities Act (ADA) requirements. 3. Vehicle/Walkway Separation. Except as required for crosswalks, per subsection 4, below, where a walkway abuts a driveway or street it shall be raised six inches and curbed along the edge of the driveway or street. Alternatively, the Planning Official may approve a walkway abutting a driveway at the same grade as the driveway if the walkway is physically separated from all vehicle-maneuvering areas. An example of such separation is a row of bollards (designed for use in parking areas) with adequate minimum spacing between them to prevent vehicles from entering the walkway.

Applicant's Response: There are no building entrances under the proposal. At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

- 4. Crosswalks. Where a walkway crosses a parking area or driveway ("crosswalk"), it shall be clearly marked with contrasting paving materials (e.g., pavers, light-color concrete inlay between asphalt, or similar contrasting material). The crosswalk may be part of a speed table to improve driver-visibility of pedestrians. Painted or thermos-plastic striping and similar types of non-permanent applications are discouraged, but may be approved for lesser used crosswalks not exceeding 24 feet in length.**

Applicant's Response: No parking area or particular driveways are established by the proposal. At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

- 5. Walkway Width and Surface. Walkways, including access ways required for subdivisions pursuant to Chapter 17-4.3, shall be constructed of concrete, asphalt, brick or masonry pavers, or other durable surface, as approved by the City Engineer, and not less than six feet wide. Multi-use paths (i.e., designed for shared use by bicyclists and pedestrians) shall be concrete or asphalt and shall conform to the current version of the Public Works Design Standards and Transportation System Plan.**

Applicant's Response: The proposed sidewalks along the private street comply with this standard as do the proposed sidewalks along Dixon Ave., to be constructed as a part of the half street improvement. See Exhibit A Preliminary Plat.

- 6. Walkway Construction (Private). Walkway surfaces may be concrete, asphalt, brick or masonry pavers, or other City-approved durable surface meeting ADA requirements. Walkways shall be not less than six feet in width in commercial and mixed use developments and where access ways are required for subdivisions under Division IV.**

Applicant's Response: The proposed sidewalks along the proposed private road and considered "private" and meet this standard. See Exhibit A.

- 7. Multi-Use Pathways. Multi-use pathways, where approved, shall be a minimum width and constructed of materials consistent with the current version of the Public Works Design Standards and Transportation System Plan.**

Applicant's Response: No multiuse paths are proposed. If any are proposed by owners of individual lots in the future, then they will be required to comply with this standard.

CHAPTER 17-3.4 LANDSCAPING, FENCES AND WALLS, OUTDOOR LIGHTING

§ 17-3.4.010. Purpose. Chapter 17-3.4 contains standards for landscaping and screening, fences, and accessory walls, and outdoor lighting. The regulations are intended to protect public health, safety, and welfare by reducing development impacts (e.g., glare, noise, and visual impacts) on adjacent uses; minimizing erosion; slowing the rate of surface water runoff, thereby reducing infrastructure costs; buffering pedestrians from vehicle maneuvering areas; cooling buildings and parking lots in summer months with shade; and enhancing the City's appearance.

Applicant's Response: This purpose statement is not a mandatory approval standard.

§ 17-3.4.020. Applicability.

A. Section 17-3.4.030 establishes design standards for landscaping and screening. Projects requiring Site Design Review or Land Division approval shall meet the landscape standards of the applicable zone, including the standards in Tables 17-2.2.040.D and 17-2.2.040.E and any Special Use requirements under Chapter 17-2.3, and the requirements of Section 17-3.4.030. Property owners are required to maintain landscaping and screening pursuant to Section 17-3.4.030.G.

Applicant's Response: The proposal is for a subdivision and so this provision is facially applicable. Table 17-2.2.040.E applies to nonresidential zones. That standard requires that 5% of the entire subject site be landscaped. The only portion of the property proposed for development here is the improvement of the private street which includes sidewalks and planter strips that will count toward the overall 5% landscaping requirements. However, because no particular development of any lot is proposed it is respectfully submitted that the landscaping standard for the entire site will be applied at the time when individual lots are developed. It is noted that the improvements on proposed Lot 7 have already been evaluated under this standard and no further landscaping is required for Lot 7.

B. Section 17-3.4.040 establishes design standards for when a fence, or a wall not attached to a building, is to be erected, extended, or otherwise altered. It also applies to situations where this Code requires screening or buffering (e.g., outdoor or unenclosed storage uses). The standards of Section 17-3.4.040 supplement the development standards in Tables 17-2.2.030 and 17-2.2.040 and any applicable Special Use requirements under Chapter 17-2.3.

Applicant's Response: No walls or fences are proposed. This standard will be applied when individual lots develop and propose such features.

C. Section 17-3.4.050, Outdoor Lighting, applies to all new outdoor lighting, i.e., lighting that is installed after November 10, 2017.

Applicant's Response: No new outdoor lighting is proposed. At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

D. The Planning Official, through a Type II procedure, may grant adjustments to Chapter 17-3.4, pursuant to the criteria of Chapter 17-4.7 Adjustments and Variances.

Applicant's Response: This is an information statement.

§ 17-3.4.030. Landscaping and Screening.

A. General Landscape Standard. All portions of a lot not otherwise developed with buildings, accessory structures, vehicle maneuvering areas, or parking shall be landscaped.

Applicant's Response: It is not possible to apply this standard at this time because the location of any required buildings are not yet known. Each new lot on the subject property will be developed in compliance with this standard.

B. Minimum Landscape Area. All lots shall conform to the minimum landscape area standards of the applicable zoning district, as contained in Tables 17-2.2.040.D and 17-2.2.040.E. The Planning Official, consistent with the purposes in Section 17-3.4.010, may allow credit toward the minimum landscape area for existing vegetation that is retained in the development.

Applicant's Response: All lots will be required to comply with this standard when they are approved for specific development.

C. Plant Selection. A combination of deciduous and evergreen trees, shrubs, and ground covers shall be used for all planted areas, the selection of which shall be based on local climate, exposure, water availability, and drainage conditions, among other factors. When new vegetation is planted, soils shall be amended and irrigation shall be provided, as necessary, to allow for healthy plant growth. The selection of plants shall be based on all of the following standards and guidelines:

Applicant's Response: Applicant acknowledges that proper vegetation must be planted with appropriate irrigation if irrigation is necessary and soil amendments. Applicant acknowledges that hardy plants that do not require irrigation are preferred and so irrigation is unlikely to be necessary to be installed because the Applicant intends to plant vegetation that does not require the same.

- 1. Use plants that are appropriate to the local climate, exposure, and water availability. The presence of utilities and drainage conditions shall also be considered.**

Applicant's Response: Applicant acknowledges that vegetation will be planted that is appropriate to the climate and that it will plant vegetation along the proposed private street considering utilities and drainage. At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

- 2. Plant species that do not require irrigation once established (naturalized) are preferred over species that require irrigation.***

Applicant's Response: Plant species will be planted in the private street that do not require irrigation once established. At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

- 3. Trees shall be not less than two-inch caliper for street trees and one and one-half-inch caliper for other trees at the time of planting. Trees to be planted under or near power lines shall be selected so as to not conflict with power lines at maturity.***

Applicant's Response: Any trees that are planted in the planter strip along the private road, along Dixon Ave., and along W Main St., will comply with this standard. However, no development is proposed and so the location of particular trees on individual lots is unknown. At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

- 4. Shrubs shall be planted from five-gallon containers, minimum, where they are for required screens or buffers, and two-gallon containers minimum elsewhere.***

Applicant's Response: Where the city requires individual lots to install buffers or screen upon development approval, then such lot owners shall install the same as the city requires. However, this standard does not apply at this juncture because there is no development to buffer or screen.

- 5. Shrubs shall be spaced in order to provide the intended screen or canopy cover within two years of planting.***

Applicant's Response: The Applicant acknowledges that when shrubs are planted to provide a screen or buffer that they shall meet this standard. It is anticipated that the city will impose this requirement on individual lots as they develop.

- 6. All landscape areas, whether required or not, that are not planted with trees and shrubs or covered with allowable non-plant material, shall have ground cover plants that are sized and spaced to achieve plant coverage of not less than 75 percent at maturity.***

Applicant's Response: The Applicant acknowledges that all landscaped areas must meet this standard. For the proposed subdivision, the landscaped areas will be along the private road. At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

- 7. Bark dust, chips, aggregate, or other non-plant ground covers may be used, but shall cover not more than 35 percent of any landscape area. Non-plant ground covers cannot be a substitute for required ground cover plants.***

Applicant's Response: The Applicant acknowledges that all landscaped areas must meet this standard.

- 8. Where stormwater retention or detention, or water quality treatment facilities are proposed, they shall meet the requirements of the current version of the Public Works Design Standards.**

Applicant's Response: Each individual lot when it develops shall be required to comply with this standard.

- 9. Existing mature trees that can thrive in a developed area and that do not conflict with other provisions of this Code shall be retained where specimens are in good health, have desirable aesthetic characteristics, and do not present a hazard.**

Applicant's Response: The Applicant does not believe that the property has any trees in this category. However, the extent to which any particular lot does have such trees will be evaluated at the time of individual lot development approval.

- 10. Landscape plans shall avoid conflicts between plants and buildings, streets, walkways, utilities, and other features of the built environment.**

Applicant's Response: Landscape plans will be submitted by individual lot owners when they seek development approval from the city. Those landscape plans will be required to comply with this standard.

- 11. Evergreen plants shall be used where a sight-obscuring landscape screen is required.**

Applicant's Response: Applicant acknowledges this standard will apply to any individual lot that is required to provide a site obscuring landscape screen.

- 12. Deciduous trees should be used where summer shade and winter sunlight is desirable.**

Applicant's Response: This provision is written in aspirational terms and is not a mandatory approval standard. City will apply this provision if appropriate when individual lots develop.

- 13. Landscape plans should provide focal points within a development, for example, by preserving large or unique trees or groves or by using flowering plants or trees with fall color.**

Applicant's Response: This provision is written in aspirational terms and is not a mandatory approval standard. Regardless, city will apply this provision if appropriate when individual lots develop.

- 14. Landscape plans should use a combination of plants for seasonal variation in color and yearlong interest.**

Applicant's Response: This provision is written in aspirational terms and is not a mandatory approval standard. Regardless, city will apply this provision if appropriate when individual lots develop.

15. Where plants are used to screen outdoor storage or mechanical equipment, the selected plants shall have growth characteristics that are compatible with such features.

Applicant's Response: Applicant acknowledges this standard will apply to any individual lot that is required to provide a site obscuring landscape screen for outdoor storage or mechanical equipment.

16. Landscape plans shall provide for both temporary and permanent erosion control measures, which shall include plantings where cuts or fills, including berms, swales stormwater detention facilities, and similar grading, is proposed.

Applicant's Response: Applicant acknowledges this standard will apply to individual lots when development applications are submitted for them, in order to ensure appropriate erosion control.

17. When new vegetation is planted, soils shall be amended and irrigation provided, as necessary, until the plants are naturalized and able to grow on their own.

Applicant's Response: Applicant acknowledges this standard will apply to any individual lot as its owner seeks development approval from the city.

D. Central Commercial C-1 District Streetscape Standard. Developers of projects within the Central Commercial C-1 zoning district can meet the landscape area requirement of subsection B, in part, by installing street trees in front of their projects. The Planning Official shall grant credit toward the landscape area requirement using a ratio of 1:1, where one square foot of planted area (e.g., tree well or planter surface area) receives one square foot of credit. The Planning Official may grant additional landscape area credit by the same ratio where the developer widens the sidewalk or creates a plaza or other civic space pursuant to Section 17-3.2.050.

Applicant's Response: This standard is not applicable because the subject property is zoned M-1 and M-2.

E. Parking Lot Landscaping. All of the following standards shall be met for parking lots. If a development contains multiple parking lots, then the standards shall be evaluated separately for each parking lot.

Applicant's Response: No parking lots are proposed. Individual lots will be required to comply with this standard when they seek development approval from the city.

1. A minimum of 10 percent of the total surface area of all parking areas, as measured around the perimeter of all parking spaces and maneuvering areas, shall be landscaped. Such landscaping shall consist of shade trees distributed throughout the parking area. A combination of deciduous and evergreen trees, shrubs, and ground cover plants is required. The trees shall be planned so that they provide a partial canopy cover over the

parking lot within five years. At a minimum, one tree per 12 parking spaces on average shall be planted over and around the parking area.

Applicant's Response: No parking lots are proposed. Individual lots will be required to comply with this standard when they seek development approval from the city.

- 2. All parking areas with more than 20 spaces shall provide landscape islands with trees that break up the parking area into rows of not more than 10 contiguous parking spaces. Landscape islands and planters shall have dimensions of not less than 48 square feet of area and no dimension of less than six feet, to ensure adequate soil, water, and space for healthy plant growth.***

Applicant's Response: No parking lots are proposed. Individual lots will be required to comply with this standard when they seek development approval from the city..

- 3. All required parking lot landscape areas not otherwise planted with trees must contain a combination of shrubs and groundcover plants so that, within two years of planting, not less than 50 percent of that area is covered with living plants.***

Applicant's Response: No parking lots are proposed. Individual lots will be required to comply with this standard when they seek development approval from the city.

- 4. Wheel stops, curbs, bollards, or other physical barriers are required along the edges of all vehicle-maneuvering areas to protect landscaping from being damaged by vehicles. Trees shall be planted not less than two feet from any such barrier.***

Applicant's Response: No vehicle maneuvering areas are proposed. Individual lots will be required to comply with this standard when they seek development approval from the city.

- 5. Trees planted in tree wells within sidewalks or other paved areas shall be installed with root barriers, consistent with applicable nursery standards.***

Applicant's Response: Any trees installed in the private street planter strip will comply with this standard. Similarly, any street trees in Dixon and W Main will comply with this standard. At the time that individual lot owners apply to the city for development approval on their lot, this standard will apply if tree wells are proposed or required.

F. Screening Requirements. Screening is required for outdoor storage areas, unenclosed uses, and parking lots, and may be required in other situations as determined by the Planning Official. Landscaping shall be provided pursuant to the standards of subsections F.1 through 3. (See also Figure 17-3.4-4.)

- 1. Outdoor Storage and Unenclosed Uses. All areas of a site containing or proposed to contain outdoor storage of goods, materials, equipment, and vehicles (other than required parking lots and service and delivery areas, per Site Design Review), and areas containing junk, salvage materials, or similar contents, shall be screened from view from adjacent rights-of-way and***

residential uses by a sight-obscuring fence, wall, landscape screen, or combination of screening methods. See also Section 17-3.4.040 for related fence and wall standards.

Applicant's Response: No outdoor storage or unenclosed uses or new parking lots are proposed. Therefore, this standard does not apply. This standard will apply to particular development proposals on individual lots that proposes outdoor uses or outdoor storage.

2. Parking Lots. The edges of parking lots shall be screened to minimize vehicle headlights shining into adjacent rights-of-way and residential yards. Parking lots abutting a sidewalk or walkway shall be screened using a low-growing hedge or low garden wall to a height of between three feet and four feet.

Applicant's Response: No parking lots are proposed. This standard will apply at the time of individual lot approval.

3. Other Uses Requiring Screening. The Planning Official may require screening in other situations as authorized by this Code, including, but not limited to, outdoor storage areas, blank walls, Special Uses pursuant to Chapter 17-2.3, flag lots, and as mitigation where an applicant has requested an adjustment pursuant to Chapter 17-4.7.

Applicant's Response: The proposed land division does not propose any use and so this standard does not apply.

G. Maintenance. All landscaping shall be maintained in good condition, or otherwise replaced by the property owner.

Applicant's Response: Landscaping in the proposed planter strip along the private road as well as in the street improvement areas of Dixon and W Main, will comply with this standard.

§ 17-3.4.040. Fences and Walls.

A. Purpose. This section provides general development standards for fences, and walls that are not part of a building, such as screening walls and retaining walls.

Applicant's Response: This provision does not apply as there are no fences or unattached walls proposed. It is also observed that this purpose statement is not a mandatory approval standard.

B. Applicability. Section 17-3.4.040 applies to all fences, and to walls that are not part of a building, including modifications to existing fences and walls.

Applicant's Response: There are no proposed fences or walls that are not a part of any building proposed and so this standard does not apply. This standard will apply to any individual lot development that proposes fences or walls that are unattached to buildings.

C. Height.

1. Residential Zones.

Applicant's Response: Not applicable. No fences or unattached walls are proposed. Regardless, the subject property is in a nonresidential zone.

2. ***Non-Residential Zones. Fences and freestanding walls (i.e., exclusive of building walls) for non-residential uses shall not exceed the following height above grade, where grade is measured from the base of the subject fence or wall.***
 - a. ***Within Front or Street-Facing Side Yard Setback. Four feet, except the following additional height is allowed for properties located within an industrial, public, or institutional zone:***
 - (1) ***Where approved by the City Planning Official, a fence constructed of open chain link or other "see-through" composition that allows 90 percent light transmission may reach a height of up to eight feet.***
 - b. ***Within an Interior Side or Rear Yard Setback. Eight feet; except the fence or wall height, as applicable, shall not exceed the distance from the fence or wall line to the nearest primary structure on an adjacent property.***

Applicant's Response: N/A.

3. ***All Zones. Fences and walls shall comply with the vision clearance standards of Section 17-3.3.030.G. Other provisions of this Code, or the requirements of the roadway authority, may limit allowable height of a fence or wall below the height limits of this section.***

Applicant's Response: N/A.

D. Materials. Prohibited fence and wall materials include straw bales, tarps, barbed or razor wire (except in the M-2 Heavy Industrial zone); scrap lumber, untreated wood (except cedar or redwood), corrugated metal, sheet metal, scrap materials; dead, diseased, or dying plants; and materials similar to those listed herein.

Applicant's Response: This standard will not apply to the two lots zoned M-2. However, as noted above, this standard does not apply at all to the proposal because no walls or unattached walls are proposed.

E. Permitting. A Type I approval is required to install a fence of six feet or less in height, or a wall that is four feet or less in height. All other walls and fences require review and approval by the Planning Official through a Type II procedure. The Planning Official may require installation of walls or fences as a condition of approval for development, as provided by other Code sections. A building permit may be required for some fences and walls, pursuant to applicable building codes. Walls greater than four feet in height shall be designed by a Professional Engineer licensed in the State of Oregon.

Applicant's Response: N/A.

F. Maintenance. Fences and walls shall be maintained in good condition, or otherwise replaced by the property owner.

Applicant's Response: N/A.

§ 17-3.4.050. Outdoor Lighting.

A. Purpose. This section contains regulations requiring adequate levels of outdoor lighting while minimizing negative impacts of light pollution.

Applicant's Response: No new outdoor lighting is proposed and therefore this standard does not apply. This purpose statement is not a mandatory approval standard in any event.

B. Applicability. All outdoor lighting shall comply with the standards of this section.

Applicant's Response: No new outdoor lighting is proposed. Therefore, this standard does not apply. The standard will apply when individual lots develop.

C. Standards.

- 1. Light poles, except as required by a roadway authority or public safety agency, shall not exceed a height of 20 feet; pedestal- or bollard-style lighting shall be used to illuminate walkways. Flag poles, utility poles, and streetlights are exempt from this requirement.**
- 2. Where a light standard is placed over a sidewalk or walkway, a minimum vertical clearance of eight feet shall be maintained.**
- 3. Outdoor lighting levels shall be subject to review and approval through Site Design Review. As a guideline, lighting levels shall be no greater than necessary to provide for pedestrian safety, property or business identification, and crime prevention.**
- 4. Except as provided for up-lighting of flags and permitted building-mounted signs, all outdoor light fixtures shall be directed downward, and have full cutoff and full shielding to preserve views of the night sky and to minimize excessive light spillover onto adjacent properties.**
- 5. Lighting shall be installed where it will not obstruct public ways, driveways, or walkways. 6. Walkway lighting in private areas shall have a minimum average illumination of not less than 0.2 foot-candles. Lighting along public walkways shall meet the current version of the Public Works Design Standards and AASHTO lighting requirements.**
- 7. Active building entrances shall have a minimum average illumination of not less than two foot-candles.**
- 8. Surfaces of signs shall have an illumination level of not more than two foot-candles.**

9. ***Parking lots and outdoor services areas, including quick vehicle service areas, shall have a minimum illumination of not less than 0.2 foot-candles, average illumination of approximately 0.8 foot-candles, and a uniformity ratio (maximum-to-minimum ratio) of not more than 20:1.***
10. ***Where illumination grid lighting plans cannot be reviewed or if fixtures do not provide photometrics and bulbs are under 2,000 lumens, use the following guidelines:***
 - a. ***Poles should be no greater in height than four times the distance to the property line.***
 - b. ***Maximum lumen levels should be based on fixture height.***
 - c. ***Private illumination shall not be used to light adjoining public right-of-way.***
11. ***Where a light standard is placed within a walkway, an unobstructed pedestrian through zone not less than 48 inches wide shall be maintained.***
12. ***Lighting subject to this section shall consist of materials approved for outdoor use and shall be installed according to the manufacturer's specifications.***

Applicant's Response: N/A.

D. Permitting. A Type I approval is required to install or replace outdoor lighting. The Planning Official may require lighting as a condition of approval for some projects, pursuant to other Code requirements.

Applicant's Response: No new outdoor lighting is proposed to be installed initially or to be replaced.

E. Maintenance. For public health and safety, outdoor lighting shall be maintained in good condition, or otherwise replaced by the property owner.

Applicant's Response: N/A.

CHAPTER 17-3.5 PARKING AND LOADING

§ 17-3.5.010. Purpose. Chapter 17-3.5 contains requirements for automobile and bicycle parking. This Code is intended to be flexible in requiring adequate parking, rather than a minimum number of parking spaces, for each use. It provides standards for the location, size, and design of parking areas to ensure such areas can be accessed safely and efficiently. This Code also encourages non-motorized transportation by requiring bicycle parking for some uses. (Ord. 2017-08 §1)

Applicant's Response: This purpose statement is not a mandatory approval standard.

§ 17-3.5.020. Applicability and General Regulations.

A. Where the Regulations Apply. The regulations of this chapter apply to all parking areas in all zones, at all times, whether parking is required by this Code or put in for the convenience of property owners or users.

Applicant's Response: No parking is proposed and therefore this section does not apply. Regardless, Applicant acknowledges this information statement.

B. Occupancy. All required parking areas must be developed in accordance with the requirements of this Code prior to occupancy of any structure on the subject site. Where landscaping, screening, or other improvements are required pursuant to this Code, all such improvements must be installed and approved by the Planning Official prior to occupancy.

Applicant's Response: N/A.

C. Calculations of Amounts of Required and Allowed Parking.

- 1. When computing parking spaces based on floor area, parking structures and non-leasable floor spaces, such as storage closets, mechanical equipment rooms, and similar spaces, are not counted.**
- 2. The number of parking spaces is computed based on the primary uses on the site except as stated in subsection C.3. When there are two or more separate primary uses on a site, the minimum and maximum parking for the site is the sum of the required or allowed parking for the individual primary uses. For shared parking, see Section 17-3.5.030.D.**
- 3. When more than 50 percent of the floor area on a site is in an accessory use, the required or allowed parking is calculated separately for the accessory use. An example would be a 10,000 square foot building with a 7,000 square foot warehouse and a 3,000 square foot accessory retail area. The minimum and maximum parking would be computed separately for the retail and warehouse uses.**
- 4. Required parking spaces periodically used for the storage of equipment or goods may be counted toward meeting minimum parking standards, provided that such storage is an allowed use under Section 17-2.2.030, and is permitted as a Temporary Use under Section 17-2.3.160.**

Applicant's Response: N/A

D. Use of Required Parking Spaces. Except as otherwise provided by this section, required parking spaces must be available for residents, customers, or employees of the use. Fees may be charged for the use of required parking spaces. Required parking spaces may not be assigned in any way to a use on another site, except for shared parking pursuant to Section 17-3.5.030.D.

Applicant's Response: N/A.

E. Proximity of Parking to Use. Required parking spaces for residential uses must be located on the site of the use or on a parcel or tract owned in common by all the owners of the properties that will use the parking area. Required parking spaces for nonresidential uses must be located on the site of the use or in a parking area that has its closest pedestrian access point within 800 feet of the site.

Applicant’s Response: The subject property is not in a residential zone; therefore, this standard is not applicable.

F. Improvement of Parking Areas. Motorized vehicle parking is allowed only on streets with an improved shoulder of sufficient width; within garages, carports, and other approved structures; and on driveways or parking lots that have been developed in conformance with this Code. For applicable design standards, see Chapter 17-3.2 Building Orientation and Design; Chapter 17-3.3 Access and Circulation; Chapter 17-3.4 Landscaping, Fences and Walls, Outdoor Lighting and Chapter 17-3.6 Public Facilities.

Applicant’s Response: N/A.

§ 17-3.5.030. Automobile Parking.

A. Minimum Number of Off-Street Automobile Parking Spaces. Except as provided by this subsection A, or as required for Americans with Disabilities Act compliance under subsection G, off-street parking shall be provided pursuant to one of the following three standards: 1. The standards in Table 17-3.5.030.A; 2. A standard from Table 17-3.5.030.A for a use that the Planning Official determines is similar to the proposed use; or 3. Subsection B Exceptions, which includes a Parking Demand Analysis option.

Table 17-3.5.030.A Automobile Parking Spaces by Use	
Use Categories	Minimum Parking per Land Use
(Chapter 17-5 contains examples of uses and definitions.)	(Fractions are rounded down to the closest whole number.)
Residential Categories	
Household Living	
Single-Family Dwelling, including manufactured homes on lots	1 space per dwelling
Duplex	3 spaces per duplex
Accessory Dwelling (second dwelling on a single-family lot)	1 space total for primary dwelling and accessory dwelling
Multifamily	1.5 spaces for a 1-bedroom unit 2 spaces for a 2-bedroom unit 2.5 spaces for a 3 bedroom unit
Group living, such as nursing or convalescent homes, rest homes, assisted living,	0.5 space per 4 bedrooms.

congregate care, and similar special needs housing.	
Commercial Categories	
Commercial Outdoor Recreation	per Conditional Use Permit review (Chapter 17-4.4)
Bed and Breakfast Inn	1 space per use, plus 1 space for each bedroom offered as lodging
Educational Services, not a school (e.g., tutoring or similar services)	1 space per 300 sq. ft. floor area
Entertainment, Major Event	per Conditional Use Permit review (Chapter 17-4.4)
Hotels, Motels, and similar uses	0.75 space per guest room. See also parking requirements for associated uses, such as restaurants, entertainment uses, drinking establishments, assembly facilities.
Mortuary or Funeral Home	1 space per 300 sq. ft. floor area
Offices	General Office: 1 space per 500 sq. ft. floor area Medical or Dental Office: 1 space per 500 sq. ft. floor area
Outdoor Recreation, Commercial	per Conditional Use Permit review (Chapter 17-4.4)
Surface Parking Lot, when not accessory to a permitted use	per Conditional Use Permit review (Chapter 17-4.4)
Quick Vehicle Servicing or Vehicle Repair	2 spaces, excluding vehicle service or queuing area, or per Conditional Use Permit review (Chapter 17-4.4)
Retail Sales and Commercial Service	<u>Bank</u> : 1 space per 300 sq. ft. floor area <u>Retail</u> : 1 space per 400 sq. ft. floor area, except 1 space per 1,000 sq. ft. for bulk retail (e.g., auto sales, nurseries, lumber and construction materials, furniture, appliances, and similar sales) <u>Restaurants and Bars</u> : 1 space per 200 sq. ft. floor area <u>Health Clubs, Gyms, Continuous Entertainment</u> (e.g., bowling alleys): 1 space per 500 sq. ft. <u>Theaters and Cinemas</u> : 1 space per 6 seats
Self-Service Storage	2 spaces, plus adequate space for loading and unloading
Industrial Categories	

Industrial Service	1 space per 1,000 sq. ft. of floor area
Manufacturing and Production	1 space per 1,000 sq. ft. of floor area; or as required by Conditional Use Permit review (Chapter 17-4.4)
Warehouse and Freight Movement	0.5 space per 1,000 sq. ft. of floor area; or as required by Conditional Use Permit review (Chapter 17-4.4)
Waste-Related	per Conditional Use Permit review (Chapter 17-4.4)
Wholesale Sales, e.g., Building Materials, Heavy Equipment, Agricultural Supplies, etc.	1 space per 1,000 sq. ft.
Institutional Categories	
Basic Utilities	Parking based on applicant's projected parking demand, subject to City approval
Community Service, including Government Offices and Services	Parking based on applicant's projected parking demand, subject to City approval, except as specifically required elsewhere in this table for individual uses (See public assembly, office, retail, housing, etc.)
Daycare	Family Daycare: 1 space, plus required parking for dwelling Daycare Center: 1 space per 400 sq. ft of floor area
Medical Center or Hospital	1 space per 500 sq. ft floor area
Parks and Open Space	Parking based on projected parking demand for planned uses
Public Assembly	1 space per 75 sq. ft. of public assembly area; or as required by Conditional Use Permit (Chapter 17-4.4)
Religious Institutions and Houses of Worship	1 space per 75 sq. ft. of main assembly area; or as required by Conditional Use Permit (Chapter 17-4.4)
Schools	Pre-School through Middle-School: 1 space per classroom High Schools: Parking based on applicant's projected parking demand, subject to City approval. A Transportation Demand Management Plan is also required. Colleges: 1 space per 400 sq. ft. of floor area exclusive of dormitories, plus 1

	space per 2 dorm rooms. A Transportation Demand Management Plan is also required.
Other Categories	
Accessory Uses	Parking standards for accessory shall be based on applicant's projected parking demand, subject to City approval.
Agriculture	None, except as required for accessory uses
Radio Frequency Transmission Facilities	None, except as required by Conditional Use Permit (Chapter 17-4.4)
Temporary Uses	Parking standards for temporary uses are the same as for primary uses, except that the Planning Official may reduce or waive certain development and designs standards for temporary uses
Transportation Facilities (operation, maintenance, preservation, and construction)	None, except for park-and-ride facilities; and where temporary parking is required for construction staging areas

Applicant's Response: This standard will be applied to each lot owner's applications to develop individual lots in the proposed subdivision, except that Lot 7 has already been evaluated under this standard.

B. Carpool and Vanpool Parking Requirements.

1. Carpool and vanpool parking spaces shall be identified for the following uses:

- a. New commercial and industrial developments with 50 or more parking spaces;**
- b. New institutional or public assembly uses; and**
- c. Transit park-and-ride facilities with 50 or more parking spaces.**

2. Of the total spaces available for employee, student, and commuter parking, at least five percent, but not fewer than two, shall be designated for exclusive carpool and vanpool parking.

3. Carpool and vanpool parking spaces shall be located closer to the main employee, student or commuter entrance than all other parking spaces with the exception of ADA parking spaces. Required carpool/vanpool spaces shall be clearly marked "Reserved—Carpool/Vanpool Only."

Applicant's Response: This standard will be applied to each lot owner's applications to develop individual lots in the proposed subdivision.

C. Exceptions and Reductions to Off-Street Parking.

- 1. There is no minimum number of required automobile parking spaces for uses within the Central Commercial C-1 zone.**

Applicant's Response: This exception is not applicable, zoning is M-1 and M-2.

- 2. The applicant may propose a parking standard that is different than the standard under subsections A.1 and 2, for review and action by the Planning Official through a Type I or II procedure. The applicant's proposal shall consist of a written request and a parking analysis prepared by a qualified professional. The parking analysis, at a minimum, shall assess the average parking demand and available supply for existing and proposed uses on the subject site; opportunities for shared parking with other uses in the vicinity; existing public parking in the vicinity; transportation options existing or planned near the site, such as frequent bus service, carpools, or private shuttles; and other relevant factors. This parking analysis applies to a request in the reduction or an increase in parking ratios.**

Applicant's Response: This standard will be applied to each lot owner's applications to develop individual lots in the proposed subdivision.

- 3. The Planning Official, through a Type II procedure, may reduce the off-street parking standards of Table 17-3.5.030.A for sites with one or more of the following features:**
 - a. Sites containing or adjacent to a bus stop with frequent transit service, whose frontage is improved with a bus stop waiting shelter consistent with the standards of the applicable transit provider, are allowed a 20 percent reduction to the standard number of automobile parking spaces.**
 - b. Space being dedicated for a transit facility such as a park-and-ride, bus pull-out, or other transit facility: Allow up to a 10 percent reduction in the number of automobile parking spaces.**
 - c. Site has dedicated parking spaces for carpool or vanpool vehicles: Allow up to a 10 percent reduction to the standard number of automobile parking spaces.**
 - d. Site has dedicated parking spaces for motorcycles, scooters, or electric carts: Allow reductions to the standard dimensions for parking spaces.**
 - e. Site has more than the minimum number of required bicycle parking spaces: Allow up to a 10 percent reduction to the number of automobile parking spaces. f. Site has off-street parking or other public parking in the vicinity of the site.**

Applicant's Response: No parking is proposed, rather only a subdivision. Regardless, Applicant acknowledges this informational provision.

- 4. The number of required off-street parking spaces may be reduced through the provision of shared parking, pursuant to subsection E.**

Applicant's Response: N/A.

- 5. The Planning Official through a Type I procedure may reduce the off-street parking standards of Table 3.5.030.A by one parking space for every two on-street parking spaces located adjacent to the subject site, provided the parking spaces meet the dimensional standards of subsection F.**

Applicant's Response: N/A.

- 6. The Planning Official, through a Type I procedure, may allow property owners of existing non-residential development to replace up to 10 percent of existing parking spaces with bus shelters and other pedestrian and transit amenities located adjacent to streets with existing or planned transit routes.**

Applicant's Response: There is no proposal to change existing parking. This standard does not apply.

D. Maximum Number of Off-Street Automobile Parking Spaces. The maximum number of off-street automobile parking spaces allowed per site equals the minimum number of required spaces for the use pursuant to Table 17-3.5.030.A, times a factor of:

- 1. 1.2 spaces for uses fronting a street with adjacent on-street parking spaces; or**
- 2. 1.5 spaces, for uses fronting no street with adjacent on-street parking; or**
- 3. A factor based on applicant's projected parking demand, subject to City approval.**

Applicant's Response: N/A.

E. Shared Parking. Required parking facilities for two or more uses, structures, or parcels of land may be satisfied by the same parking facilities used jointly, to the extent that the owners or operators show that the need for parking facilities does not materially overlap (e.g., uses primarily of a daytime versus nighttime nature; weekday uses versus weekend uses), and provided that the right of joint use is evidenced by a recorded deed, lease, contract, or similar written instrument establishing the joint use. Shared parking requests shall be subject to review and approval through a Type I Review.

Applicant's Response: N/A.

F. Parking Stall Design and Minimum Dimensions. Where a new off-street parking area is proposed, or an existing off-street parking area is proposed for expansion, the entire parking area shall be improved in conformance with this Code. At a minimum the parking spaces and drive aisles shall be paved with asphalt, concrete, or other City-approved materials, provided the Americans with

Disabilities Act requirements are met, and shall conform to the minimum dimensions in Table 17-3.5.030.F and the figures below. All off-street parking areas shall contain wheel stops, perimeter curbing, bollards, or other edging as required to prevent vehicles from damaging buildings or encroaching into walkways, side-walks, landscapes, or the public right-of-way. Parking areas shall also provide for surface water management, pursuant to Section 17-3.6.050.

Table 17-3.5.030.F Parking Area Minimum Dimensions*

Parking Angle < °	Curb Length	Stall Depth		Aisle Width		Bay Width		Stripe Length
		Single D1	Double D2	One Way A1	Two Way A2	One Way B1	Two Way B2	
90°	8'-6"	18'	36'	23'	23'	59'	59'	18'
60°	10'	20'	40'	17'	18'	57'	58'	23'
30°	17'	16'-6"	33'	12'	18'	45'	51'	32'-8"
0°	22'	8'-6"	17'	12'	18'	29'	35'	8'-6"

Applicant’s Response: This standard will be applied to each lot owner’s applications to develop individual lots in the proposed subdivision.

G. Adjustments to Parking Area Dimensions. The dimensions in subsection E are minimum standards. The Planning Official, through a Type II procedure, may adjust the dimensions based on evidence that a particular use will require more or less maneuvering area. For example, the Planning Official may approve an adjustment where an attendant will be present to move vehicles, as with valet parking. In such cases, a form of guarantee must be filed with the City ensuring that an attendant will always be present when the lot is in operation.

Applicant’s Response: N/A.

H. Americans with Disabilities Act (ADA). Parking shall be provided consistent with ADA requirements, including, but not limited to, the minimum number of spaces for automobiles, van-accessible spaces, location of spaces relative to building entrances, accessible routes between parking areas and building entrances, identification signs, lighting, and other design and construction requirements.

Applicant’s Response: N/A.

I. Electric Charging Stations. Charging stations for electric vehicles are allowed as an accessory use to parking areas developed in conformance with this Code, provided the charging station complies with applicable building codes and any applicable state or federal requirements.

Applicant’s Response: N/A.

§ 17-3.5.040. Bicycle Parking

A. Standards. Bicycle parking spaces shall be provided with new development and, where a change of use occurs, at a minimum, shall follow the standards in Table 17-3.5.040.A. Where an application is subject to Conditional Use Permit approval or the applicant has requested a reduction to an automobile-parking standard, pursuant to Section 17-3.5.030.C, the Planning Official may require bicycle parking spaces in addition to those in Table 17-3.5.040.A.

Applicant's Response: N/A.

B. Design. Bicycle parking shall consist of staple-design steel racks or other City-approved racks, lockers, or storage lids providing a safe and secure means of storing a bicycle, consistent with the Public Works Design Standards.

Applicant's Response: N/A.

C. Exemptions. This section does not apply to single-family and duplex housing, home occupations, and agricultural uses.

Applicant's Response: N/A.

D. Hazards. Bicycle parking shall not impede or create a hazard to pedestrians or vehicles, and shall be located so as to not conflict with the vision clearance standards of Section 17-3.3.030.G

Applicant's Response: N/A.

§ 17-3.5.050. Loading Areas.

A. Purpose. The purpose of Section 17-3.5.050 is to provide adequate loading areas for commercial and industrial uses that do not interfere with the operation of adjacent streets.

Applicant's Response: This purpose statement is not a mandatory approval standard.

B. Applicability. Section 17-3.5.050 applies to uses that are expected to have service or delivery truck visits. It applies only to uses visited by trucks with a 40-foot or longer wheelbase, at a frequency of one or more vehicles per week. The Planning Official shall determine through a Type I review the number, size, and location of required loading areas, if any.

Applicant's Response: This is an information statement.

C. Standard. Where an off-street loading space is required, it shall be large enough to accommodate the largest vehicle that is expected to serve the use without obstructing vehicles or pedestrian traffic on adjacent streets and driveways. The Planning Official may restrict the use of other public rights-of-way, so applicants are advised to provide complete and accurate information about the potential need for loading spaces.

Applicant's Response: No off-street loading is proposed. This standard does not apply.

D. Placement, Setbacks, and Landscaping. Loading areas shall conform to the standards of Chapter 17-3.2 Building Orientation and Design; Chapter 17-3.3 Access and Circulation; and Chapter 17-3.4 Landscaping, Fences and Walls, Outdoor Lighting. Where parking areas are prohibited between a building and the street, loading areas are also prohibited.

Applicant's Response: N/A.

E. Exceptions and Adjustments. The Planning Official, through a Type I Review, may approve a loading area adjacent to or within a street right-of-way where it finds that loading and unloading operations are short in duration (i.e., less than one hour), infrequent, do not obstruct traffic during peak traffic hours, do not interfere with emergency response services, and are acceptable to the applicable roadway authority.

Applicant's Response: This is an information statement.

CHAPTER 17-3.6 PUBLIC FACILITIES

§ 17-3.6.010. Purpose and Applicability.

A. Purpose. The standards of Chapter 17-3.6 implement the public facility policies of the City of Molalla Comprehensive Plan and adopted City plans.

Applicant's Response: This purpose statement is not a mandatory approval standard.

B. Applicability. Chapter 17-3.6 applies to all new development, including projects subject to Land Division (Subdivision or Partition) approval and developments subject to Site Design Review where public facility improvements are required. All public facility improvements within the city shall occur in accordance with the standards and procedures of this chapter. When a question arises as to the intent or application of any standard, the City Engineer shall interpret the Code pursuant to Chapter 17-1.5.

Applicant's Response: This application seeks approval of a proposed subdivision; Applicant is proposing half street improvements on Dixon Ave., as well as SE Main Street. These road improvements will be designed to meet the City and ODOT standards. The improvements on Dixon will include a new curb, sidewalk, landscape strip and pavement widening to meet the City standard for a Local Street per the Molalla Transportation System Plan. The improvements on SE Main will include half street improvements to include a new curb, sidewalk, landscape strip, and pavement widening meeting ODOT standards

C. Public Works Design Standards. All public facility improvements, including, but not limited to, sanitary sewer, water, transportation, surface water and storm drainage and parks projects, whether required as a condition of development or provided voluntarily, shall conform to the City of Molalla Public Works Design Standards. Where a conflict occurs between this Code and the Public Works Design Standards, the provisions of the Public Works Design Standards shall govern.

Applicant's Response: Applicant understands that any public facility improvements must comply with Public Works Design Standards.

D. Public Improvement Requirement. No building permit may be issued until all required public facility improvements are in place and approved by the City Engineer, or otherwise bonded, in conformance with the provisions of this Code and the Public Works Design Standards. Improvements required as a condition of development approval, when not voluntarily provided by the applicant, shall be roughly proportional to the impact of the development on public facilities. Findings in the development approval shall indicate how the required improvements directly relate to and are roughly proportional to the impact of development.

Applicant's Response: Applicant is proposing half street improvements on Dixon Ave., as well as SE Main Street. These road improvements will be designed to meet the City and ODOT standards. The improvements on Dixon will include a new curb, sidewalk, landscape strip and pavement widening to meet the City standard for a Local Street per the Molalla Transportation System Plan. The improvements on SE Main will include half street improvements to include a new curb, sidewalk, landscape strip, and pavement widening meeting ODOT standards.

E. Limitations on Public Improvement Requirement. If the applicant asserts that it cannot legally be required, as a condition of building permit or site plan approval, to provide easements, dedications, or improvements at the level otherwise required by this section, then:

- 1. The building permit, site plan review, or appeal application shall include a rough proportionality report, prepared by a qualified civil or traffic engineer, as appropriate, showing:**
 - a. The estimated extent, on a quantitative basis, to which the improvements will be used by persons served by the building or development, whether the use is for safety or for convenience;**
 - b. The estimated level, on a quantitative basis, of improvements needed to meet the estimated extent of use by persons served by the building or development;**
 - c. The estimated impact, on a quantitative basis, of the building or development on the public infrastructure system of which the improvements will be a part;**
 - d. The estimated level, on a quantitative basis, of improvements needed to mitigate the estimated impact on the public infrastructure system; and**
- 2. The applicant shall, instead, be required to provide easements, dedications, and improvements that are roughly proportional to what is needed for the safety or convenience**

of persons served by the building or development, plus those additional easements, dedications, and improvements that are roughly proportional to what is needed to mitigate the impact of the building or development on the public infrastructure system of which the improvements will be a part, if the impacts are not fully mitigated by the easements, dedications, and improvements needed for the safety or convenience of persons served by the building or development.

Applicant's Response: Applicant will construct the proposed private road to required private street standards..

§ 17-3.6.020. Transportation Standards.

A. General Requirements.

- 1. Except as provided by subsection A.5, existing substandard streets and planned streets within or abutting a proposed development shall be improved in accordance with the standards of Chapter 17-3.6 as a condition of development approval.***

Applicant's Response: There are no substandard streets within the development. No substandard streets abut the subject property. The Applicant will improve Dixon Ave with a half street to meet the City standard for a Local Street per the Molalla Transportation System Plan. The improvements on SE Main will include half street improvements to include a new curb, sidewalk, landscape strip, and pavement widening meeting ODOT standards, consistent with ODOT's requested conditions of approval outlined in ODOT's letter attached as Exhibit C to this application.

- 2. All street improvements, including the extension or widening of existing streets and public access ways, shall conform to Section 17-3.6.020, and shall be constructed consistent with the City of Molalla Public Works Design Standards.***

Applicant's Response: Applicant complying with ODOT's requested conditions will meet these standards.

- 3. All new streets shall be contained within a public right-of-way. Public access ways (e.g., pedestrian ways) may be contained within a right-of-way or a public access easement, subject to review and approval of the City Engineer.***

Applicant's Response: The only new street that is proposed is a private street, not a public street. This standard does not apply.

- 4. The purpose of this subsection is to coordinate the review of land use applications with roadway authorities and to implement Section 660-012-0045(2)(e) of the State Transportation Planning Rule, which requires the City to adopt a process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities. The following provisions also establish when a proposal must be reviewed for potential traffic impacts; when a Transit Analysis Letter (TAL) or Traffic Impact Analysis (TIA) must be submitted with a development application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; the required contents of a TAL/TIA; and who is qualified to prepare the analysis.***

Applicant's Response: This purpose statement is not a mandatory approval standard.

a. Determining the Required Level of Transportation Analysis and Documentation. A Transportation Impact Analysis (TIA) is required for developments that are expected to have an impact on the transportation system. The analysis shall be based upon the latest edition of the ITE Trip Generation Manual or an agreed-upon alternative methodology where credible data is available to support the alternative methodology. When specific criteria generally associated with small developments are met, a Transportation Analysis Letter (TAL) may be substituted for the required TIA. At the discretion of the City Engineer, a TAL may satisfy the City's transportation analysis requirements, in lieu of a TIA when a development meets all the following criteria:

- (1) The development generates fewer than 25 peak hour trips during either the AM or PM peak hour. (Two examples of common developments generating fewer trips than these threshold levels are: a subdivision containing 25 or fewer single-family residences or a general office building less than 15,000 square feet.)***
- (2) The development is not expected to impact intersections that currently fail to meet the City's level of service standards or intersections that are operating near the limits of the acceptable level of service thresholds during a peak operating hour.***
- (3) The development is not expected to significantly impact adjacent roadways and intersections that are high accident locations, areas that contain an identified safety concern, or high concentration of pedestrians or bicyclists such as school zones.***
- (4) The development generates an increase in use of adjacent streets by vehicles exceeding the 20,000-pound gross vehicle weights by less than 10 vehicles per day.***

Applicant's Response: A TIA has been prepared that meets these requirements and is Exhibit B to this application.

b. Transportation Analysis Letter Contents. If the City determines, based on information provided by the applicant and in accordance with the criteria specified in Section 3.1, that a TAL is the appropriate document to submit. the following requirements shall apply.

- (1) The TAL shall be prepared by or prepared under the direct supervision of a registered professional engineer who shall sign and stamp the TAL.***

Applicant's Response: Applicant has prepared a TIA, this standard does not apply..

(2) The TAL shall include the following:

- i. The expected trip generation of the proposed development including the AM peak hour, the PM peak hour, daily traffic, and other germane periods as may be appropriate, together with appropriate documentation and references.***

- ii. Site plan showing the location of all access driveways or private streets where they intersect with public streets plus driveways of abutting properties and driveways on the opposite side of the street from the proposed development.**
- iii. Documentation that all site access driveways meet City of Molalla Private Access Driveway Width Standards.**
- iv. Documentation that all site access driveways meet City of Molalla's Minimum City Street Intersection Spacing Standards. v. Documentation that all new site accesses and/or public street intersections meet AASHTO intersection sight distance guidelines.**
- vi. Documentation that there are no inherent safety issues associated with the design and location of the site access driveways.**
- vii. Documentation that the applicant has reviewed the City's TSP and that proposed streets and frontage improvements do or will comply with any applicable standards regarding the functional classification, typical sections, access management, traffic calming and other attributes as appropriate.**

Applicant's Response: N/A.

c. Transportation Impact Analysis Contents. The following information shall be included in each TIA submitted to the City. Additional information specified by the City in the scoping summary or through the pre-application meeting or other project meetings shall also be included.

- (1) Completed TIA checklist signed by the professional engineer responsible for the preparation of the TIA.**
- (2) Table of Contents—Listings of all sections, figures, and tables included in the report.**
- (3) Executive Summary—A summary of key points, findings, conclusions, and recommendation including a mitigation plan.**
- (4) Introduction, including: i. Proposed land use action including site location, zoning, building size, and project scope. ii. Map showing the proposed site, building footprint, access driveways, and parking facilities. iii. Map of the study area that shows site location and surrounding roadway facilities.**
- (5) Existing Conditions.**
 - i. Existing site conditions and adjacent land uses.**
 - ii. Roadway characteristics of important transportation facilities and modal opportunities located within the study area, including roadway functional classifications, street cross-section, posted speeds, bicycle and pedestrian facilities, on-street parking, and transit facilities.**
 - iii. Existing lane configurations and traffic control devices at the study area intersections.**

- iv. Existing traffic volumes and operational analysis of the study area roadways and intersections.**
- v. Roadway and intersection crash history analysis.**
- vi. Intersection and stopping sight distance related to new and impacted driveways and intersections.**

(6) Background Conditions (Without the Proposed Land Use Action).

- i. Approved in-process developments and funded transportation improvements in the study area.**
- ii. Traffic growth assumptions.**
- iii. Addition of traffic from other planned developments. iv. Background traffic volumes and operational analysis.**

(7) Full Buildout Traffic Conditions (With the Proposed Land Use Action).

- i. Description of the proposed development plans.**
- ii. Trip generation characteristics of proposed project (including trip reduction documentation). iii. Trip distribution assumptions.**
- iii. iv. Full buildout traffic volumes and intersection operational analysis.**
- iv. v. Site circulation and parking.**
- v. vi. Intersection and site-access driveway queuing analysis.**
- vi. vii. Recommended roadway and intersection mitigation measures (if necessary).**

(8) Conclusions and recommendations.

(9) Appendix—With Dividers or Tabs.

Traffic count summary sheets.

Crash analysis summary sheets.

- iii. Existing, background, and full buildout traffic operational analysis worksheets with detail to review capacity calculations. iv. Signal, left-turn, and right-turn lane warrant evaluation calculations. v. Signal timing sheets depicting the timing and phasing used in analysis. vi. Other analysis summary sheets such as queuing.**

(10) To present the information required to analyze the transportation impacts of development, the following figures shall be included in the TIS:

- i. Vicinity Map.**
- ii. Existing Lane Configurations and Traffic Control Devices.**
- iii. Existing Traffic Volumes and Levels of Service for each required time period.**

iv. Future Year Background Traffic Volumes and Levels of Service for each required time period. v. Proposed Site Plan, including access points for abutting parcels and for those across the street from the proposed development.

vi. Future Year Assumed Lane Configurations and Traffic Control City of Molalla,

Applicant's Response: Applicant's TIA complies with these requirements.

Devices.

Estimated Trip Distribution/Assignment Pattern.

viii. Trip reductions (pass-by trips at site access(es)).

ix. Site-Generated Traffic Volumes for each required time period.

x. Full Buildout Traffic Volumes and Levels of Service for each required time period.

5. The City Engineer may waive or allow deferral of standard street improvements, including side-walk, roadway, bicycle lane, undergrounding of utilities, and landscaping, as applicable, where one or more of the following conditions in subdivisions (a) through (d) is met. Where the City Engineer agrees to defer a street improvement, it shall do so only where the property owner agrees not to remonstrate against the formation of a local improvement district in the future.

a. The standard improvement conflicts with an adopted capital improvement plan.

b. The standard improvement would create a safety hazard.

c. It is unlikely due to the developed condition of adjacent property that the subject improvement would be extended in the foreseeable future, and the improvement under consideration does not by itself significantly improve transportation operations or safety. d. The improvement under consideration is part of an approved partition and the proposed partition does not create any new street.

d. The improvement under consideration is part of an approved partition and the proposed partition does not create any new street.

B. Street Location, Alignment, Extension, and Grades.

1. All new streets, to the extent practicable, shall connect to the existing street network and allow for the continuation of an interconnected street network, consistent with adopted public facility plans and pursuant to subsection D Transportation Connectivity and Future Street Plans.

2. Specific street locations and alignments shall be determined in relation to existing and planned streets, topographic conditions, public convenience and safety, and in appropriate relation to the proposed use of the land to be served by such streets.

3. Grades of streets shall conform as closely as practicable to the original (predevelopment) topography to minimize grading.

4. New streets and street extensions exceeding a grade of 10 percent over a distance more than 200 feet, to the extent practicable, shall be avoided. Where such grades are unavoidable, the City Engineer may approve an exception to the 200-foot standard and require mitigation, such as a secondary access for the subdivision, installation of fire protection sprinkler systems in dwellings, or other mitigation to protect public health and safety.

5. Where the locations of planned streets are shown on a local street network plan, the development shall implement the street(s) shown on the plan.

6. Where required local street connections are not shown on an adopted City street plan, or the adopted street plan does not designate future streets with sufficient specificity, the development shall provide for the reasonable continuation and connection of existing streets to adjacent developable properties, conforming to the standards of this Code.

7. Existing street-ends that abut a proposed development site shall be extended with the development, unless prevented by environmental or topographical constraints, existing development patterns, or compliance with other standards in this Code. In such situations, the applicant must provide evidence that the environmental or topographic constraint precludes reasonable street connection.

8. Proposed streets and any street extensions required pursuant to this section shall be located, designed, and constructed to allow continuity in street alignments and to facilitate future development of vacant or redevelopable lands.

Applicant's Response: Applicant's TIA shows property trip distribution. ODOT's letter (Exhibit C), includes requested improvements to West Main St (OR 211). The Applicant agrees to make the improvements requested by ODOT.

C. Rights-of-Way and Street Section Widths.

1. Street rights-of-way and section widths shall comply with the current version of the Public Works Design Standards and Transportation System Plan. The standards are intended: to provide for streets of suitable location, width, and design to accommodate expected vehicle, pedestrian, and bicycle traffic; to afford satisfactory access to law enforcement, fire protection, sanitation, and road maintenance equipment; and to provide a convenient and accessible network of streets, avoiding undue hardships to adjoining properties.

2. All streets shall be improved in accordance with the construction standards and specifications of the applicable roadway authority, including requirements for pavement, curbs, drainage, striping, and traffic control devices. Where a planter strip is provided it shall consist of a minimum five-foot-wide strip between the sidewalk and the curb or roadway. Where a swale is provided, it shall either be placed between the roadway and sidewalk or behind the sidewalk on private property, subject to City Engineer approval and recording of required public drainage

way and drainage way maintenance easements. Streets with parking on one side only should be avoided. When used, they must be posted NO PARKING.

3. Where a range of street width or improvement options is indicated, the City Engineer shall determine requirements based on the advice of a qualified professional and all of the following factors:

a. Street classification and requirements of the roadway authority, if different than the City's street classifications and requirements;

b. Existing and projected street operations relative to applicable standards;

c. Safety of motorists, pedestrians, bicyclists, and South Clackamas Transit District (SCTD) users, including consideration of accident history;

d. Convenience and comfort for pedestrians, bicyclists, and SCTD users;

e. Provision of on-street parking;

f. Placement of utilities;

g. Street lighting;

h. Slope stability, erosion control, and minimizing cuts and fills;

i. Surface water management and storm drainage requirements;

j. Emergency vehicles or apparatus and emergency access, including evacuation needs;

k. Transitions between varying street widths (i.e., existing streets and new streets); and

l. Other factors related to public health, safety, and welfare.

Applicant's Response: All affected street meet relevant standards other than improvements are required to OR 211. This standard is met by complying with ODOT's requested conditions. The Applicant will improve Dixon Ave with a half street to meet the City standard for a Local Street per the Molalla Transportation System Plan. The improvements on SE Main will include half street improvements to include a new curb, sidewalk, landscape strip, and pavement widening meeting ODOT standards, consistent with ODOT's requested conditions of approval outlined in ODOT's letter attached as Exhibit C to this application.

D. Transportation Connectivity and Future Street Plans. The following standards apply to the creation of new streets:

1. Intersections. Streets shall be located and designed to intersect as nearly as possible to a right angle. Street intersections shall meet the current requirements of the Public Works Design Standards and Transportation System Plan.

2. Access Ways. *The Planning Commission, in approving a land use application with conditions shall require a developer to provide an access way where the creation of a cul-de-sac or dead-end street is unavoidable and the access way connects or may in the future connect, the end of the street to another street, a park, or a public access way, except where the City Engineer and City Planner determine the access way is not feasible. Where an access way is required, it shall be not less than 10 feet wide and shall contain a minimum eight-foot-wide concrete surface or other all-weather surface approved by the City Engineer. Access ways shall be contained within a public right-of-way or public access easement, as required by the City.*

3. Connectivity to Abutting Lands. *The street system of a proposed subdivision shall be designed to connect to existing, proposed, and planned streets adjacent to the subdivision. Wherever a proposed development abuts unplatted land or a future development phase of an existing development, street stubs shall be provided to allow access to future abutting subdivisions and to logically extend the street system into the surrounding area. Street ends shall be designed to facilitate future extension in terms of grading, width, and temporary barricades.*

4. Street Connectivity and Formation of Blocks. *In order to promote efficient vehicular and pedestrian circulation throughout the City, subdivisions and site developments shall be served by an interconnected street network, pursuant to the current version of the Public Works Design Standards and Transportation System Plan. Where a street connection cannot be made due to physical site constraints, approach spacing requirements, access management requirements, or similar restrictions; a pedestrian access way connection shall be provided pursuant to Chapter 17-3.3. Streets and accessways need not be required where one or more of the following conditions exist:*

- a. Physical or topographic conditions make a street or accessway connection impracticable. Such conditions include, but are not limited to, freeways, railroads, steep slopes, wetlands or other bodies of water where a connection could not reasonably be provided:*
- b. Buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or c. Where streets or accessways would violate provisions of leases, easements, covenants, restrictions or other agreements existing as of May 1, 1995, which preclude a required street or accessway connection.*
- c. Where streets or accessways would violate provisions of leases, easements, covenants, restrictions or other agreements existing as of May 1, 1995, which preclude a required street or accessway connection.*

5. Cul-de-Sac Streets. *A cul-de-sac street shall only be used where the City Engineer determines that environmental or topographical constraints, existing development patterns, or compliance with other applicable City requirements preclude a street extension. Where the City determines that a cul-de-sac is allowed, cul-de-sac length, turn-around type, and pedestrian access to adjoining properties shall meet the requirements of the current version of the Public Works Design Standards and Transportation System Plan and subsection D.2.*

Applicant's Response: The only new street is the proposed private street and it meets all of these requirements to the extent that they apply.

6. Future Street Plan. Where a subdivision is proposed adjacent to other developable land, a future street plan shall be filed by the applicant in conjunction with an application for a subdivision in order to facilitate orderly development of the street system. The plan shall show the pattern of existing and proposed future streets from the boundaries of the proposed land division and shall include other divisible parcels within 600 feet surrounding and adjacent to the proposed subdivision. The street plan is binding when part of a multi-phased master planned development. The plan must demonstrate, pursuant to City standards, that the proposed development does not preclude future street connections to adjacent development land.

Applicant's Response: Not applicable.

7. Private Streets and Gated Drives. Private streets and gated drives serving more than two dwellings (i.e., where a gate limits access to a development from a public street), are prohibited.

Applicant's Response: This standard applies to private drives servicing dwellings. This standard does not apply.

E. Engineering Design Standards. Street design shall conform to the standards of the applicable roadway authority; for City streets that is the current version of the Public Works Design Standards and Transportation System Plan. Where a conflict occurs between this Code and the Public Works Design Standards, the provisions of the Design Standards shall govern.

Applicant's Response: The private road and proposed Dixon Ave. partial improvements of a half street per the City standard for a Local Street per the Molalla Transportation System Plan, will meet these requirements. The Applicant will improve its OR 211 frontage as ODOT has requested in its Exhibit C letter.

F. Fire Code Standards. Where Fire Code standards conflict with City standards, the City shall consult with the Fire Marshal in determining appropriate requirements. The City shall have the final determination regarding applicable standards.

Applicant's Response: The proposed private road meets both city and Fire Code Standards.

G. Substandard Existing Right-of-Way. Where an existing right-of-way adjacent to a proposed development is less than the standard width, the City Engineer may require the dedication of additional rights-of-way at the time of Subdivision, Partition, or Site Plan Review, pursuant to the standards in the Public Works Design Standards and Transportation System Plan.

Applicant's Response: Applicant will dedicate right-of-way on West Main (OR 211) as per ODOT's Exhibit C letter. Right of way will be dedicated on Dixon as shown on the attached Preliminary Plat.

H. Traffic Calming. *The City may require the installation of traffic calming features such as traffic circles, curb extensions, reduced street width (parking on one side), medians with pedestrian crossing refuges, speed tables, speed humps, or special paving to slow traffic in neighborhoods or commercial areas with high pedestrian traffic.*

Applicant's Response: Applicant does not anticipate the need for traffic calming. This standard does not apply.

I. Sidewalks, Planter Strips, and Bicycle Lanes. *Except where the City Engineer grants a deferral of public improvements, pursuant to Chapter 17-4.2 or Chapter 17-4.3, sidewalks, planter strips, and bicycle lanes shall be installed concurrent with development or widening of new streets, pursuant to the requirements of this chapter. Maintenance of sidewalks and planter strips in the right-of-way is the continuing obligation of the adjacent property owner.*

Applicant's Response: No deferral is requested or anticipated.

J. Streets Adjacent to Railroad Right-of-Way. *When a transportation improvement is proposed within 300 feet of a railroad crossing, or a modification is proposed to an existing railroad crossing, the Oregon Department of Transportation and the rail service provider shall be notified and given an opportunity to comment, in conformance with the provisions of Division IV. Private crossing improvements are subject to review and licensing by the rail service provider.*

Applicant's Response: Not applicable.

K. Street Names. *No new street name shall be used which will duplicate or be confused with the names of existing streets in the City of Molalla or vicinity. Street names shall be submitted to the City for review and approval in consultation with Clackamas County and emergency services.*

Applicant's Response: The private road will be named in accordance with this standard.

L. Survey Monuments. *Upon completion of a street improvement and prior to acceptance by the City, it shall be the responsibility of the developer's registered professional land surveyor to provide certification to the City that all boundary and interior monuments have been reestablished and protected.*

Applicant's Response: This standard applies to public streets and not the private street proposed within the subdivision. Applicant shall comply with this standard when public street improvements are completed.

M. Street Signs. *The city, county, or state with jurisdiction shall install all signs for traffic control and street names. The cost of signs required for new development shall be the responsibility of the developer. Street name signs shall be installed at all street intersections. Stop signs and other signs may be required.*

Applicant's Response: Applicant shall comply with this standard.

N. Streetlight Standards. Streetlights shall be relocated or new lights installed, as applicable, with street improvement projects. Streetlights shall conform to City standards, be directed downward, and full cutoff and full shielding to preserve views of the night sky and to minimize excessive light spillover onto adjacent properties.

Applicant's Response: Streetlights conforming to these requirements shall be installed on the proposed private street and will comply with applicable lightning standards.

O. Mail Boxes. Mailboxes shall conform to the requirements of the United States Postal Service and the State of Oregon Structural Specialty Code. P. Street Cross-Sections. The final lift of pavement shall be placed on all new constructed public roadways prior to final City acceptance of the roadway.

Applicant's Response: The subject property has existing mail facilities. When individual lots develop, mailboxes will conform to this standard.

§ 17-3.6.030. Public Use Areas.

A. Dedication of Public Use Areas.

1. Where a proposed park, playground, or other public use shown in a plan adopted by the City is located in whole or in part in a subdivision, the City may require the dedication or reservation of this area on the final plat for the subdivision, provided that the impact of the development on the City park system is roughly proportionate to the dedication or reservation being made.

2. The City may purchase or accept voluntary dedication or reservation of areas within the subdivision that are suitable for the development of parks and other public uses; however, the City is under no obligation to accept such areas offered for dedication

Applicant's Response: Not applicable.

B. System Development Charge Credit. Dedication of land to the City for public use areas, voluntary or otherwise, may be eligible as a credit toward any required system development charge for parks.

Applicant's Response: This is an information statement.

§ 17-3.6.040. Sanitary Sewer and Water Service Improvements. (Ord. 2017-08 §1)

A. Sewers and Water Mains Required. All new development is required to connect to City water and sanitary sewer systems. Sanitary sewer and water system improvements shall be installed to serve each new development and to connect developments to existing mains in accordance with the adopted facility master plans and applicable Public Works Design Standards. Where streets are required to be stubbed to the edge of the subdivision, sewer and water system improvements and other utilities shall also be stubbed with the streets, except as may be waived by the City Engineer where alternate alignment(s) are provided.

Applicant's Response: No development is proposed with this application. At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

B. Sewer and Water Plan Approval. Development permits for sewer and water improvements shall not be issued until the City Engineer has approved all sanitary sewer and water plans in conformance with City standards.

Applicant's Response: At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

C. Over-Sizing. The City may require as a condition of development approval that sewer and water lines serving new development be sized to accommodate future development within the area as projected by the applicable facility master plans, and the City may authorize other cost-recovery or cost-sharing methods as provided under state law.

Applicant's Response: This is an information statement.

D. Inadequate Facilities. Development permits may be restricted or rationed by the Planning Commission where a deficiency exists in the existing water or sewer system that cannot be rectified by the development and which, if not rectified, will result in a threat to public health or safety, surcharging of existing mains, or violations of state or federal standards pertaining to operation of domestic water and sewerage treatment systems. The City Engineer may require water booster pumps, sanitary sewer lift stations, and other critical facilities be installed with backup power.

Applicant's Response: At the time that owners of individual lots seek development approval, they will be required to comply with this standard.

§ 17-3.6.050. Storm Drainage and Surface Water Management Facilities. or sale.

A. General Provisions. The City shall issue a development permit only where adequate provisions for stormwater runoff have been made in conformance with the requirements of the current version of the Public Works Design Standards and Stormwater Master Plan.

Applicant's Response: This is an informational statement that Applicant recognizes will apply when any Applicant seeks a development permit.

B. Accommodation of Upstream Drainage. Culverts and other drainage facilities shall be large enough to accommodate existing and potential future runoff from the entire upstream drainage area, whether inside or outside the development. Such facilities shall be subject to review and approval by the City Engineer.

Applicant's Response: At the time that owners of individual lots seek development approval, they will be required to comply with this standard. The Applicant is providing water quality for the private road by installing planter boxes.

C. Effect on Downstream Drainage. *Where it is anticipated by the City Engineer that the additional runoff resulting from the development will overload an existing drainage facility, the City shall withhold approval of the development until provisions have been made for improvement of the potential condition or until provisions have been made for storage of additional runoff caused by the development in accordance with City standards.*

Applicant's Response: Runoff from any development in the proposed subdivision is not anticipated to result in the problems noted by this standard. Regardless, this standard will apply at the time that owners of individual lots seek development approval.

D. Over-Sizing. *The City may require as a condition of development approval that sewer, water, or storm drainage systems serving new development be sized to accommodate future development within the area as projected by the applicable facility master plan, provided that the City may grant the developer credit toward any required system development charge for the same pursuant to the System Development Charge.*

Applicant's Response: No development is proposed by the requested subdivision approval that requires a connection to city storm, sewer or water facilities. This standard does not apply.

E. Existing Watercourse. *Where a proposed development is traversed by a watercourse, drainage way, channel, or stream, the City may require a stormwater easement or drainage right-of-way conforming substantially with the lines of such watercourse and such further width as will be adequate for conveyance and maintenance to protect the public health and safety.*

Applicant's Response: No development is proposed. Additionally, there is no watercourse or stream on the subject property. Rather, broken city water pipes contribute water to the site.

§ 17-3.6.060. Utilities. *The following standards apply to new development where extension of electric power, gas, or communication lines is required:*

A. General Provision. *The developer of a property is responsible for coordinating the development plan with the applicable utility providers and paying for the extension and installation of utilities not otherwise available to the subject property.*

B. Underground Utilities.

- 1. General Requirement.** *The requirements of the utility service provider shall be met. All utility lines in new subdivisions, including, but not limited to, those required for electric, communication, and lighting, and related facilities, shall be placed underground, except where the City Engineer determines that placing utilities underground would adversely impact adjacent land uses. The Planning Official may require screening and buffering of above ground facilities to protect the public health, safety, or welfare.*

Applicant's Response: Applicant will place the listed utilities underground as required and any surface mounted equipment shall be placed out of vehicle traffic for the private road.

2. **Subdivisions. In order to facilitate underground placement of utilities, the following additional standards apply to all new subdivisions:**
 - a. **The developer shall make all necessary arrangements with the serving utility to provide the underground services. Care shall be taken to ensure that no aboveground equipment obstructs vision clearance areas for vehicular traffic, per Chapter 17-3.3 Access and Circulation.**
 - b. **The City Engineer reserves the right to approve the location of all surface mounted facilities.**
 - c. **All underground utilities installed in streets must be constructed and approved by the applicable utility provider prior to the surfacing of the streets. d. Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.**
 - d. **Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.**

Applicant's Response: The Applicant will meet these requirements by placing utilities as required in the private drive and stubbing them to individual lots. Individual lot owners will be responsible for extending utilities as needed and required by the city to facilitate their particular development proposals.

C. Exception to Undergrounding Requirement. The City Engineer may grant exceptions to the undergrounding standard where existing physical constraints, such as geologic conditions, streams, or existing development conditions make underground placement impractical.

Applicant's Response: No exceptions are sought.

§ 17-3.6.070. Easements.

A. Provision. The developer shall make arrangements with the City and applicable utility providers for each utility franchise for the provision and dedication of utility easements necessary to provide full services to the development.

B. Standard. Utility easements shall conform to the requirements of the utility service provider. All other easements shall conform to the City of Molalla Public Works Design Standards.

C. Recordation. All easements for sewers, storm drainage and water quality facilities, water mains, electric lines, or other utilities shall be recorded and referenced on a survey or final plat, as applicable. See Chapter 17-4.2 Site Design Review, and Chapter 17-4.3 Land Divisions and Property Line Adjustments.

Applicant's Response: Applicant will be placing a 10-foot Private Utility Easement along the right of way frontages of all the lots, as shown on the Preliminary Plat Utilities plans.

§ 17-3.6.080. Construction Plan Approval.

No development, including sanitary sewers, water, streets, parking areas, buildings, or other development, shall commence without plans having been approved by the City of Molalla Public Works Department and permits issued. Permit fees are required to defray the cost and expenses incurred by the City for construction and other services in connection with the improvement. Permit fees are as set by City Council resolution.

Applicant's Response: Applicant shall obtain required public works approval to establish the proposed private street and sidewalks for that private street, as required. Permits for the work in the ODOT ROW on W. Main will be obtained from ODOT.

§ 17-3.6.090. Facility Installation.

A. Conformance Required. Improvements installed by the developer, either as a requirement of these regulations or at the developer's option, shall conform to the requirements of this chapter, approved construction plans, and to improvement standards and specifications adopted by the City.

Applicant's Response: Applicant understands that the proposed private street and sidewalks in the private street as well as that are a part of the Dixon half street improvement, must meet the requirements of this chapter. However, the improvements to W Main (OR 211) will comply with ODOT requirements rather than city requirements.

B. Adopted Installation Standards. The City of Molalla has adopted Public Works Design Standards for public improvements and private utility installation within the public right-of-way.

Applicant's Response: The city Public Works Design Standards will not apply within the W Main (OR 211) public right-of-way, because that area is governed by ODOT regulations. The proposed new street within the proposed subdivision is a private street and there is no public ROW associated with it. This requirement will be met for utilities in the Applicant's half street improvement area of Dixon Ave.

C. Commencement. Work in a public right-of-way shall not begin until all applicable agency permits have been approved and issued.

Applicant's Response: Applicant shall obtain all applicable agency permits before any work in the public right of wall shall begin.

D. Resumption. If work is discontinued for more than six months, it shall not be resumed until the Public Works Director is notified in writing and grants approval of an extension.

Applicant's Response: This is an informational statement.

E. City Inspection. Improvements shall be constructed under the inspection of the City Engineer. The City Engineer may approve minor changes in typical sections and details if unusual conditions arising during construction warrant such changes in the public interest, except that substantive changes to the approved design shall be subject to review under Chapter 17-4.5 Modifications to Approved Plans and Conditions of Approval. Any survey monuments that are disturbed before all

improvements are completed by the developer or subdivider shall be replaced at the developer or subdivider's expense prior to final acceptance of the improvements.

Applicant's Response: This is an informational statement.

F. Engineer's Certification and As-Built Plans. In accordance with the current version of the City of Molalla, OR § Public Works Design Standards, a registered civil engineer shall provide written certification in a form required by the City that all improvements, workmanship, and materials meet current and standard engineering and construction practices, conform to approved plans and conditions of approval, and are of high grade, prior to City's acceptance of the public improvements, or any portion thereof, for operation and maintenance. The developer's engineer shall also provide two sets of "as-built" plans, one paper set and one electronic set for permanent filing with the City. If required by the City, the developer or subdivider shall provide a warranty bond pursuant to Section 17-3.6.100.

Applicant's Response: Applicant shall comply with this standard for the proposed private street and private sidewalks along that street as well as for the half street improvements on Dixon Ave.

§ 17-3.6.100. Performance Guarantee and Warranty

A. Performance Guarantee Required. The City at its discretion may approve a final plat or building permit when it determines that all of the public improvements required for the site development or land division, or phase thereof, are complete and the applicant has an acceptable assurance for the balance of said improvements. The applicant shall provide a performance and payment bond in accordance with the current version of the Public Works Design Standards.

Applicant's Response: This is an informational requirement.

B. Determination of Sum. The assurance of performance shall be for a sum determined by the City Engineer as required to cover the cost of the improvements and repairs, including related engineering and incidental expenses, plus reasonable inflationary costs. The assurance shall not be less than 150 percent of the estimated improvement costs.

Applicant's Response: This is an informational requirement.

C. Itemized Improvement Estimate. The applicant shall furnish to the City an itemized improvement estimate, certified by a registered civil engineer, to assist the City in calculating the amount of the performance assurance.

Applicant's Response: Applicant shall supply an itemized improvement estimate for the proposed Dixon Ave half street improvements.

D. Agreement. A written agreement between the City and applicant shall be signed recorded. The agreement may include a provision for the construction of the improvements in stages

and for the extension of time under specific conditions. The agreement shall contain all of the following:

- 1. The period within which all required improvements and repairs shall be completed;**
- 2. A provision that if work is not completed within the period specified, the City may complete the work and recover the full cost and expenses from the applicant;**
- 3. The required improvement fees and deposits.**

If required 's Response: The Applicant will sign such a written agreement for the required ODOT improvements to W Main (OR 211). Applicant will sign such an agreement for the Dixon Ave local road half street improvements discussed above.

E. When Applicant Fails to Perform. In the event the applicant fails to carry out all provisions of the agreement and the City has un-reimbursed costs or expenses resulting from such failure, the City shall call on the bond, cash deposit, or letter of credit for reimbursement.

Applicant's Response: This is understood.

F. Termination of Performance Guarantee. The applicant shall not cause termination, nor allow expiration, of the guarantee without first securing written authorization from the City.

Applicant's Response: This is understood.

G. Warranty Bond. A warranty bond good for two years is required on all public improvements and landscaping when installed in the public right-of-way. The warranty bond shall equal 120 percent of the total cost of improvements and begin upon acceptance of said improvements by the City.

Applicant's Response: Applicant acknowledges this provision.

CHAPTER 17-4.3 LAND DIVISIONS AND PROPERTY LINE ADJUSTMENTS

§ 17-4.3.050. Lot Size Averaging, Flag Lots, and Infill Development.

A. Lot Size Averaging. To allow flexibility in subdivision design and to address physical constraints, such as topography, existing development, significant trees, and other natural and built features, the approval body may grant a 20 percent modification to the lot area and/or lot dimension (width/depth) standards in Chapter 17-2.2, provided that the overall density of the subdivision does not exceed the allowable density of the district and the approval body finds that all of the following are met:

- 1. Granting the modification is necessary to achieve planned housing densities, as allowed by the underlying zone, or to improve development compatibility with natural features or adjacent land uses;**

2. The Planning Official may require screening, buffering, or other transitions in site design where substandard lots are proposed to abut standard- or larger-sized lots.

Applicant's Response: Applicant does not anticipate the need to modify the proposed lot areas.

B. Flag Lots. Flag lots may be created only when a through street cannot be extended to serve abutting uses or future development. A flag lot driveway ("flag pole") shall serve not more than two dwelling units, including accessory dwellings and dwellings on individual lots. The City Engineer may approve additional units. The layout of flag lots, the placement of buildings on such lots, and the alignment of shared drives shall be designed so that future street connections can be made as adjacent properties develop, to the extent practicable, and in accordance with the standards of Section 17-3.6.020.D.

Applicant's Response: There is no proposed flag lots proposed or now on the property. This standard is not applicable.

C. Infill Development and Mid-Block Lanes. Where consecutive flag lot developments or other infill development could have the effect of precluding local street extensions through a long block, the Planning Official and City Engineer may require the improvement of a mid-block lanes through the block. Mid-block lanes are a private drives serving more than two dwelling units with reciprocal access easements; such lanes are an alternative to requiring public right-of-way street improvements where physical site constraints preclude the development of a standard street. Mid-block lanes, at a minimum, shall be paved, have adequate storm drainage (surface retention, where feasible, is preferred), meet the construction standards for alleys, and conform to the standards of subsections D and E.

Applicant's Response: This standard is not applicable to the proposal.

D. Emergency Vehicle Access. A drive serving more than one lot shall have a reciprocal access and maintenance easement recorded for all lots it serves. No fence, structure, or other obstacle shall be placed within the drive area. Where required, emergency vehicle apparatus lanes, including any required turn-around, shall conform to applicable building and fire code requirements. Fire sprinklers may also be required for buildings that cannot be fully served by fire hydrants (i.e., due to distance from hydrant or insufficient fire flow).

Applicant's Response: The proposed private road will record a reciprocal access and maintenance agreement at the time final plat approval is sought.

E. Maximum Drive Lane Length. The maximum length of a drive serving more than one dwelling is subject to requirements of the Uniform Fire Code.

Applicant's Response: This is not applicable as there are no dwellings served by the private road..

§ 17-4.3.060. Preliminary Plat Submission Requirements.

Applications for Preliminary Plat approval shall contain all of the following information:

A. General Submission Requirements.

1. Information required for a Type III review (see Section 17-4.1.040); and

2. Public Facilities and Services Impact Study. The impact study shall quantify and assess the effect of the development on public facilities and services. The City shall advise as to the scope of the study, which shall address, at a minimum, the transportation system, including required improvements for motorized and nonmotorized vehicles and pedestrians; the drainage system; the parks system (for subdivisions and planned unit developments of 20 or more dwelling units); water system; and sewer system. For each system and type of impact, the study shall propose improvements necessary to meet City standards under adopted ordinances and facility master plans. The City may require a Traffic Impact Analysis pursuant to Section 17-3.6.020.A.4.

B. Preliminary Plat Information. In addition to the general information described in subsection A, above, the preliminary plat application shall consist of drawings and supplementary written material (i.e., on forms and/or in a written narrative) adequate to provide all of the following information, in quantities determined by the Planning Official:

1. General Information.

a. Name of subdivision (partitions are named by year and file number), which shall not duplicate the name of another land division in Clackamas County (check with County Surveyor);

b. Date, north arrow, and scale of drawing;

c. Location of the development sufficient to define its location in the city, boundaries, and a legal description of the site;

d. Zoning district of parcel to be divided, including any overlay zones;

e. A title block including the names, addresses, and telephone numbers of the owners of the subject property and, as applicable, the name of the engineer and surveyor, and the date of the survey; and

f. Identification of the drawing as a "preliminary plat."

Applicant's Response: Exhibit A complies with these requirements.

2. Existing Conditions. Except where the Planning Official deems certain information is not relevant, applications for Preliminary Plat approval shall contain all of the following information on existing conditions of the site:

- a. **Streets.** Location, name, and present width of all streets, alleys, and rights-of-way on and abutting the site;
- b. **Easements.** Width, location and purpose of all existing easements of record on and abutting the site;
- c. **Utilities.** Location and identity of all utilities on and abutting the site. If water mains and sewers are not on or abutting the site, indicate the direction and distance to the nearest one and show how utilities will be brought to standards;
- d. **Ground elevations shown by contour lines at two-foot vertical intervals.** Such ground elevations shall be related to some established benchmark or other datum approved by the County Surveyor; the Planning Commission may waive this standard for partitions when grades, on average, are less than six percent;
- e. **The location and elevation of the closest benchmark(s) within or adjacent to the site (i.e., for surveying purposes);**
- f. **The Base Flood Elevation, per FEMA Flood Insurance Rate Maps, as applicable;**
- g. **North arrow and scale; and**
- h. **Other information, as deemed necessary by the Planning Official for review of the application. The City may require studies or exhibits prepared by qualified professionals to address specific site features and code requirements.**

Applicant's Response: This information is provided on the attached Exhibit A.

3. **Proposed Development.** Except where the Planning Official deems certain information is not relevant, applications for Preliminary Plat approval shall contain all of the following information on the proposed development:
 - a. **Proposed lots, streets, tracts, open space, and park land (if any); location, names, right-of-way dimensions, approximate radius of street curves; and approximate finished street center line grades. All streets and tracts that are being held for private use and all reservations and restrictions relating to such private tracts shall be identified;**
 - b. **Easements: location, width, and purpose of all proposed easements;**
 - c. **Lots and private tracts (e.g., private open space, common area, or street): approximate dimensions, area calculation (e.g., in square feet), and identification numbers for all proposed lots and tracts;**
 - d. **Proposed uses of the property, including all areas proposed to be dedicated as public right-of-way or reserved as open space for the purpose of surface water management, recreation, or other use;**
 - e. **Proposed public street improvements, pursuant to Chapter 17-3.6;**
 - f. **On slopes exceeding an average grade of 10 percent, as determined by the City Engineer, the preliminary location of development on lots (e.g., building envelopes), demonstrating that future development can meet minimum required setbacks and applicable engineering design standards;**
 - g. **Preliminary design for extending City water and sewer service to each lot, per Chapter 17-3.6;**
 - h. **Proposed method of stormwater drainage and treatment, if required, pursuant to Chapter 17-3.6;**
 - i. **The approximate location and identity of other utilities, including the locations of street lighting fixtures, as applicable;**
 - j. **Evidence of compliance with applicable overlay zones; and**

k. Evidence of contact with the applicable road authority for proposed new street connections.

Applicant's Response: Exhibit A contains this required information.

§ 17-4.3.070. Preliminary Plat Approval Criteria.

A. Approval Criteria. The Planning Commission may approve, approve with conditions, or deny a preliminary plat. The Planning Commission decision shall be based on findings of compliance with all of the following approval criteria:

- 1. The land division application shall conform to the requirements of Chapter 17-4.3;***

Applicant's Response: Applicant has demonstrated compliance with Chapter 17-4.3 in the above narrative.

- 2. All proposed lots, blocks, and proposed land uses shall conform to the applicable provisions of Division II Zoning Regulations, except as modified by the provisions of Chapter 17-4.3 (e.g., lot size averaging);***

Applicant's Response: All lots conform as required.

- 3. Access to individual lots, and public improvements necessary to serve the development, including, but not limited to, water, sewer, and streets, shall conform to Division III Community Design Standards;***

Applicant's Response: All access to the proposed lots conforms to these requirements and utilities are adequate to serve the proposed lots.

- 4. The proposed plat name is not already recorded for another subdivision, and satisfies the provisions of ORS Chapter 92;***

Applicant's Response: The proposed plat meets the requirements of ORS Chapter 92.

- 5. The proposed streets, utilities, and surface water drainage facilities conform to City of Molalla adopted master plans and applicable engineering standards, and allow for transitions to existing and potential future development on adjacent lands. The preliminary plat shall identify all proposed public improvements and dedications;***

Applicant's Response: The preliminary plat identifies proposed public improvements and dedications. It also conforms to the City of Molalla's master plans and applicable engineering standards.

- 6. All proposed private common areas and improvements, if any, are identified on the preliminary plat and maintenance of such areas is assured through appropriate legal instrument;***

Applicant's Response: The required reciprocal easement and maintenance agreement that assures access to and maintenance of the proposed private street will be recorded at the time of final plat approval.

7. Evidence that any required state and federal permits, as applicable, have been obtained or can reasonably be obtained prior to development;

Applicant's Response: Applicant shall obtain a 1200C permit from the State for erosion control. This permit is standard, and there is no reason to believe that the Applicant will have any trouble getting it from DEQ.

8. Evidence that improvements or conditions required by the City, road authority, Clackamas County, special districts, utilities, and/or other service providers, as applicable to the project, have been or can be met; and

Applicant's Response: Exhibit C demonstrates that ODOT standards can be met for the proposed subdivision. No other standards apply to the proposal at this time.

9. The architectural standards of Section 17-3.2.030.D are met.

Applicant's Response: No structures are proposed. These standards do not apply.

B. Conditions of Approval. The Planning Commission may attach such conditions as are necessary to carry out provisions of this Code, and other applicable ordinances and regulations.

Applicant's Response: This is an informational statement.

September 5, 2024

Via Electronic Mail
Dan Zinder
City of Molalla Planning
315 Kennel Ave
Molalla, Or 97038

RE: SUB01-2024; Industrial Subdivision at 525-565 W. Main Street, Molalla

Dear Dan,

This letter responds to your incompleteness letter dated July 30, 2024. Please include this letter and its exhibits in the record for the above-referenced matter. Thank you for your continuing courtesies regarding this application.

In response to the city's incompleteness letter, the applicant provides all of the requested materials per ORS 227.178(2)(a). Please note that no other information will be provided in response to the city's incompleteness letter and that the application must therefore be deemed complete upon receipt of this letter and its exhibits. ORS 227.178(2). The information requested and provided is identified below:

CITY REQUEST: An existing conditions plan that provides the information described in MMC 17-4.3.060.B.2:

RESPONSE: Exhibit A is Preliminary Plat map and Exhibit B is a Preliminary Plat map with aeriels. Information required by MMC 17-4.3-060.B2 a-e, and (g) are shown on the Exhibit B exiting conditions map, MMC 17-4.3-060.B2 f. Base Flood Elevation is not applicable. Exhibit E, Downstream Waterway Connection Analysis shows the stormwater/utilities pathway.

CITY REQUEST: "Regarding MMC 17-4.3.060.B.2.h – in previous correspondence, the Planning Official explained that MMC 17-2.4.030 D requires a site plan to be submitted with land use applications in areas where there are water resources overlay concerns. The minimum requirement is a plan showing the 2001 LWI or most recent delineation overlaid over the proposed lots so the City can review the requirement of this section. Narrative responses to 17-2.4.030 are necessary that discuss the history of the potential wetlands and the status of the DSL delineation process. i.e. – that the inventory shows a wetland but you believe it to have been created by leaking waterlines and are working through that with DSL."

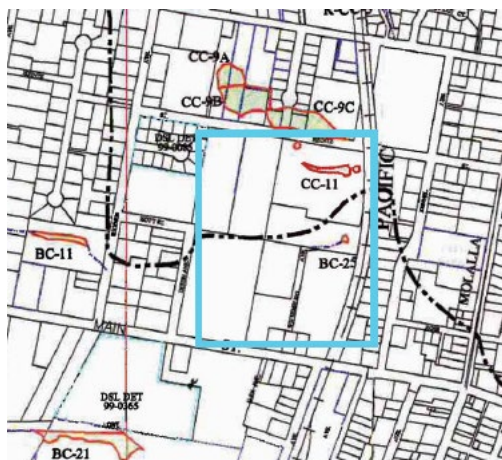
RESPONSE: MMC 17-4.3.060.B.2.h requires that the application provide information concerning "existing conditions of the site" and (h) of that section states that the planning director may seek information that is not otherwise listed as a submittal requirement: (h) "Other information, as deemed necessary by the Planning Official for review of the application. The

City may require studies or exhibits prepared by qualified professionals to address specific site features and code requirements.” The information you require in this incompleteness request is not listed as a code submittal requirement, but rather is information the planning director now seeks to complete the application. Your letter indicates that information per MMC 17-2.4.030 Water Resources (WR) Overlay must be provided. MMC 17-2.4.030 states as follows:

“The Water Resources (WR) Overlay District is intended to protect and enhance significant wetlands, stream corridors and floodplains *identified on the Molalla Natural Features Inventory* by:

- A. Conserving significant riparian corridors, undeveloped floodplains and locally significant wetlands in keeping with the requirements of State Planning Goal 5 (Natural Resources) and applicable state statutes and administrative rules, and the Molalla Comprehensive Plan;
- B. Protecting and enhancing water quality;
- C. Preventing property damage during floods and storms;
- D. Limiting development activity in designated riparian corridors;
- E. Protecting native plant species; F. Maintaining and enhancing fish and wildlife habitats; and
- G. Conserving associated scenic and recreational values.” (Emphasis supplied.)

There are no stream corridors or floodplains that are identified on the subject property on the City’s “Local Wetlands and Riparian Inventory” dated June 2001 (hereinafter “2001 Inventory”). The 2001 Inventory is the referenced “Molalla Natural Features Inventory. The 2001 Inventory indicates that the subject property has two small wetland areas identified as areas “C-11” and “BC-25”



Relevant excerpts from the City’s 2002 Inventory are attached as Exhibit F.

In the application narrative, the applicant explained the following regarding these areas:

“There are no natural features on the site. The local wetland inventory indicates that the area of the former log ponds are wetlands. But state law prohibits former log pond sites from being characterized as wetlands. OAR 141-085-0515 and 515(7) excluded log ponds from the definition of “waters of the state.” Other wet areas on the subject property are similarly artificially created. In this regard, the city’s underground piping including a water main for its water delivery system under the subject property has been leaking significantly for many years – on an order of magnitude of one million gallons of water per month. Some but not all of the leaks have been repaired. A significant quantity of water is still leaking underground at the site. That leaking water causes water to pond above-ground. That ponded water is artificial and does not contain food and game fish and therefore by administrative rule, is not jurisdictional. OAR 141-085-0515(8)(b). The former railroad bed that the city now uses to convey stormwater, was artificially constructed from upland and similarly is not jurisdictional.

Per the City’s request, this response provides greater detail and supporting evidence from wetland scientist, Jack Dalton (Exhibits D & E).

The 2001 Inventory describes area C-11 as being composed of 0.27 acres of “small remnant pieces of former log pond”:

Comments:

OFF-SITE. West of railroad tracks, south of Heintz Street. Small remnant pieces of former log pond. Disturbed. Adjacent land use and zoning is heavy industrial.

The 2001 Inventory describes the B-25 Area as 0.03 acres of a disturbed small remnant piece of former palustrine scrub-shrub wetland:

Comments:

OFF-SITE. West of railroad tracks, south of Heintz Street. Small remnant piece of former palustrine scrub-shrub wetland. Disturbed. Zoning is heavy industrial. Adjacent land use is heavy industrial and residential.

These are the only two wetland areas that are identified on the subject properties by the 2001 Inventory. Therefore, these are the only two areas relevant to this standard.

Exhibit D is the wetland delineation report of Jack Dalton of Environmental Science & Assessment, LLC. Dalton concludes that the wetlands identified on the City’s 2001 Inventory do not exist (Exhibit D, p 15):

DEVIATION FROM LWI OR NWI

The National Wetland Inventory maps two resources within the project area. It maps a freshwater pond, a palustrine unconsolidated bottom artificially flooded excavated pond (PUBKx). This pond on the NWI is north of the two depressional basins that hold standing water that were delineated onsite. No other pond resource was observed onsite.

The Local Wetland Inventory (LWI) for the city of Molalla maps three small potentially jurisdictional wetlands (CC-11) within the study area onsite. The wetlands are designated on the LWI as within the Creamery Creek watershed (Figure 3). **These wetlands mapped on the LWI do not correspond with any resources delineated onsite.**

Therefore, there are no relevant resources to this standard and no further explanation about those areas with reference to that standard are possible or required.

While irrelevant to this standard which, as noted, looks only to resources on the City's 2001 Inventory, the Dalton delineation identifies a total of 0.171 ac of wetlands on the property that are labeled as Wetland A, B and C. Wetland B & C are considered created wetlands but they were created in 2003 for settlement ponds and, therefore, are presumed to be non-jurisdictional. Wetland A is composed of 709 sq. ft (0.016 ac) which is the only area that may be jurisdictional (but not on the City's 2001 Inventory). Dalton's wetland delineation has been submitted to DSL for concurrence. This small 709 sq. ft. wetland is not significant. Dalton describes it as a wetland associated with an artificially created west-east storm ditch that begins as a culvert and contains invasive and non-native plant communities:

Wetland A

Within the northwest corner of the site, there is a wetland associated with an artificially constructed west-east storm ditch channel that flows east to west that begins from a culvert input (Figure 6). This wetland encompasses 709 SF and is classified as Riverine Impounding (RI) and Palustrine Unconsolidated Bottom of cobble-gravel that has been partly drained/ditched and is seasonally flooded and excavated (PUB1Cdx). This classification is due to the extensive gravel fill onsite as well as how this wetland is connected to a very incised ditch drainage channel to the east.

The plant community surrounding this wetland is comprised of invasive and non-native woody forbs and grasses, with no canopy or understory cover. The herbaceous stratum is comprised of lamp rush, reed canarygrass, poison hemlock, curly dock, and annual ryegrass (DP-4).

The wetland and ditch convey water flow from a stormwater outfall, as well as overland flow from the City of Molalla broken water line. The depression is seasonally flooded and approximately 2 feet in depth. Input flow comes from the west via an 18-inch culvert and flows through the wetland eastward within a channelized incised ditch and continues east towards the northeastern corner of the project site.

Soils data recorded in the wetland during the September field investigation reflect the presence of surface water. Wetland and saturation criteria were met for Redox Dark Surface (F6) (DP-4). During the December and February field visits, this wetland was observed to have slow-flowing / standing water.

In the event Wetland A is determined to be jurisdictional by DSL, the intention is to fill it and to buy wetland credits as necessary. Dalton's report concludes:

We

Conclusions

This site has an extensive history of alterations that have heavily impacted the existing conditions observed onsite during the field inspection and wetland delineation. Due to the impermeability of the soil and gravel fill onsite, it appears that water sits and collects onsite during precipitation events/ the wet season periodically.

While historical aerial imagery shows a man-made resource (logging pond) has been within the project area since the 1950s, it has been filled and it was determined to have no remnant resources onsite (See the Historical Aerials attachment within the wetland delineation report).

The city of Molalla identified a water main leak onsite, which has caused over one million gallons of water per month to disperse within this area of the project site (Attachment B). Two ditches have channelized this water flow over time. In the north, this directs water to exit the site from the northeastern corner. In the south, water is channelized within the remnant railroad ditch, then collects in two large wetlands which direct flow north then to exit the site from the northeast corner.

Please let me know if you have any questions or wish to discuss this application further, at any point in the process. We look forward to working with you.

Very truly yours,



Wendie L. Kellington

Attachments:

- Exhibit A: Preliminary Plat
- Exhibit A-1: Preliminary Plan w/ Utilities
- Exhibit B: Existing Conditions
- Exhibit C: Preliminary Plat with Aerial
- Exhibit D: Wetland Delineation Report
- Exhibit E: Downstream Stormwater Pathway Analysis
- Exhibit F: Excerpts from 2001 Inventory

MOLALLA INDUSTRIAL PARK PRELIMINARY PLAT

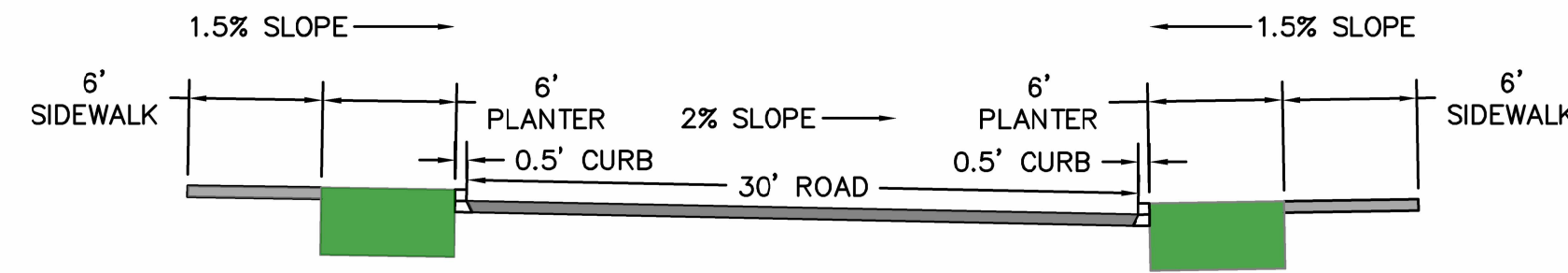
OWNER:
CASCADE CIVIL DEVELOPMENT
395 SHENANDOAH LN
WOODBURN, OR 97071

ENGINEER:
WEDEN ENGINEERING
PO BOX 3246
FERNDALE, WA 98248

SURVEYOR:
NORTHWEST SURVEYING INC
1815 NW 169TH PL, SUITE 2090
BEAVERTON, OR 97006

PROJECT LOCATION
535 W. MAIN STREET
MOLALLA, OR 97038

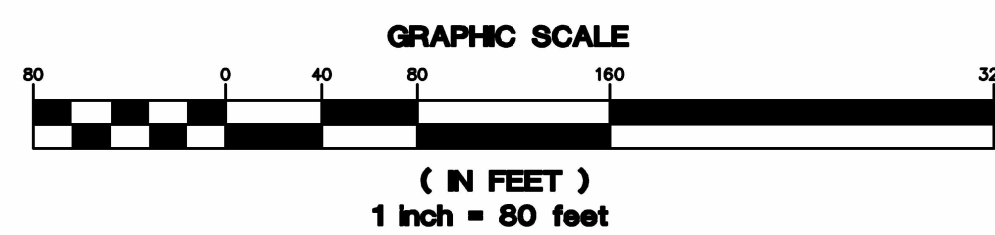
ZONING CLASSIFICATION
LIGHT INDUSTRIAL, M-1 (LOTS 1-3)
HEAVY INDUSTRIAL, M-2 (LOTS 4-12)



PRIVATE ROAD CROSS SECTION
SCALE: NTS

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- CONCRETE SIDEWALK SURFACING
- ASPHALT SURFACING
- PLANTER SURFACING
- EXISTING SIDEWALK TO REMAIN



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No.	REVISIONS / SUBMISSIONS	DATE

REVIEWED: CNH DRAWN: TRH
PROJECT NO.: 2309-01

PROJECT TITLE
MOLALLA INDUSTRIAL PARK

DRAWING TITLE
PRELIMINARY PLAT

DATE: 6/25/2024
DRAWING No.

MOLALLA INDUSTRIAL PARK PRELIMINARY PLAT

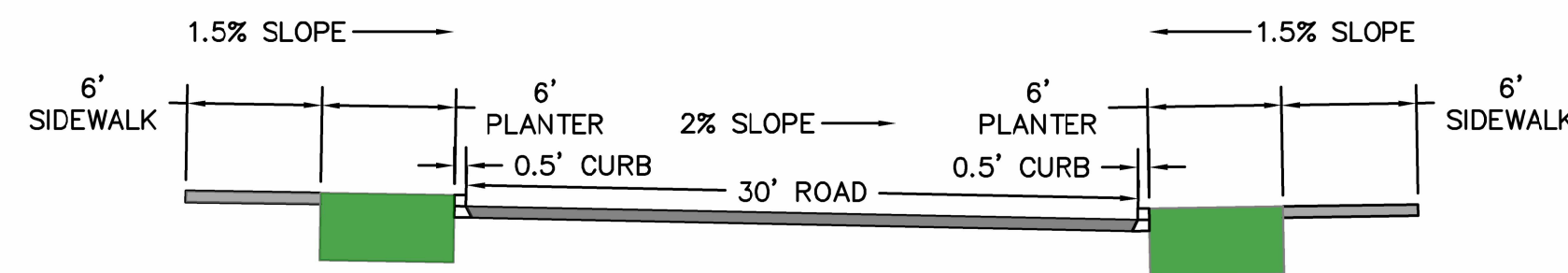
OWNER:
CASCADE CIVIL DEVELOPMENT
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ENGINEER:
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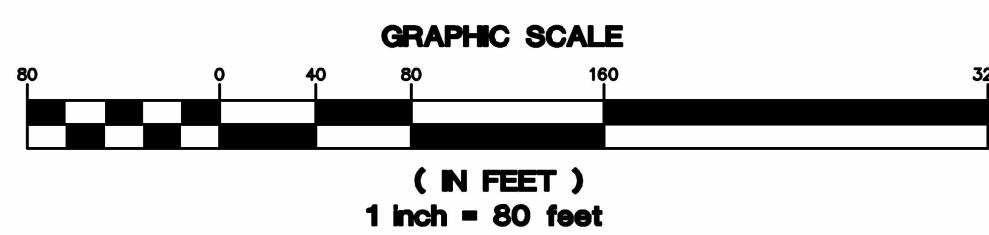
ZONING CLASSIFICATION
LIGHT INDUSTRIAL, M-1 (LOTS 1-3)
HEAVY INDUSTRIAL, M-2 (LOTS 4-12)



PRIVATE ROAD CROSS SECTION
SCALE: NTS

LEGEND

- PROPERTY LINE ———
- EASEMENT LINE - - - - -
- CONCRETE SIDEWALK SURFACING [Pattern]
- ASPHALT SURFACING [Pattern]
- PLANTER SURFACING [Pattern]
- EXISTING SIDEWALK TO REMAIN [Pattern]



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No.	REVISIONS / SUBMISSIONS	DATE

REVIEWED: CNH DRAWN: TRH
PROJECT NO.: 2309-01

PROJECT TITLE
MOLALLA INDUSTRIAL PARK

DRAWING TITLE
PRELIMINARY PLAT UTILITIES

DATE: 6/25/2024
DRAWING No.

MOLALLA INDUSTRIAL PARK PRELIMINARY PLAT

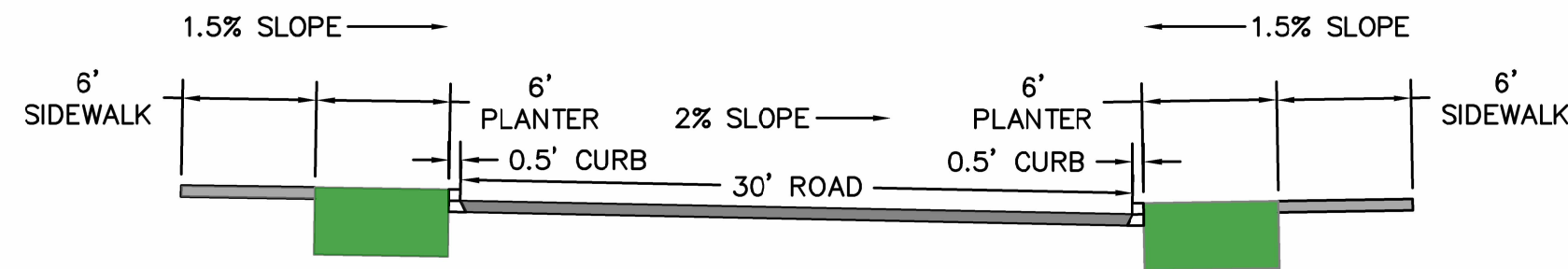
OWNER:
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ENGINEER:
WEDEN ENGINEERING
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SURVEYOR:
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1815 NW 169TH PL, SUITE 2090
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PROJECT LOCATION
535 W. MAIN STREET
MOLALLA, OR 97038

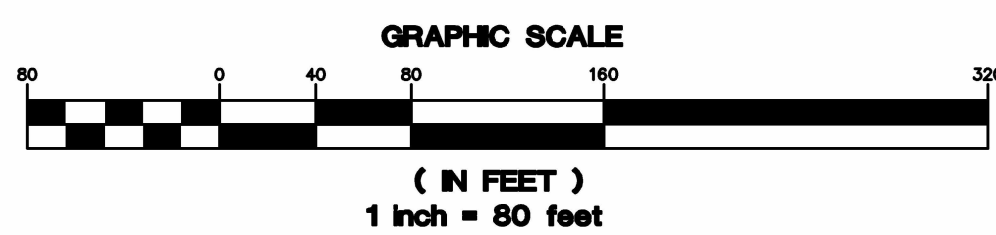
ZONING CLASSIFICATION
LIGHT INDUSTRIAL, M-1 (LOTS 1-3)
HEAVY INDUSTRIAL, M-2 (LOTS 4-12)



PRIVATE ROAD CROSS SECTION
SCALE: NTS

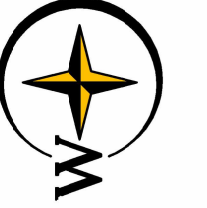
LEGEND

- PROPERTY LINE
- EASEMENT LINE
- CONCRETE SIDEWALK SURFACING
- ASPHALT SURFACING
- PLANTER SURFACING
- EXISTING SIDEWALK TO REMAIN



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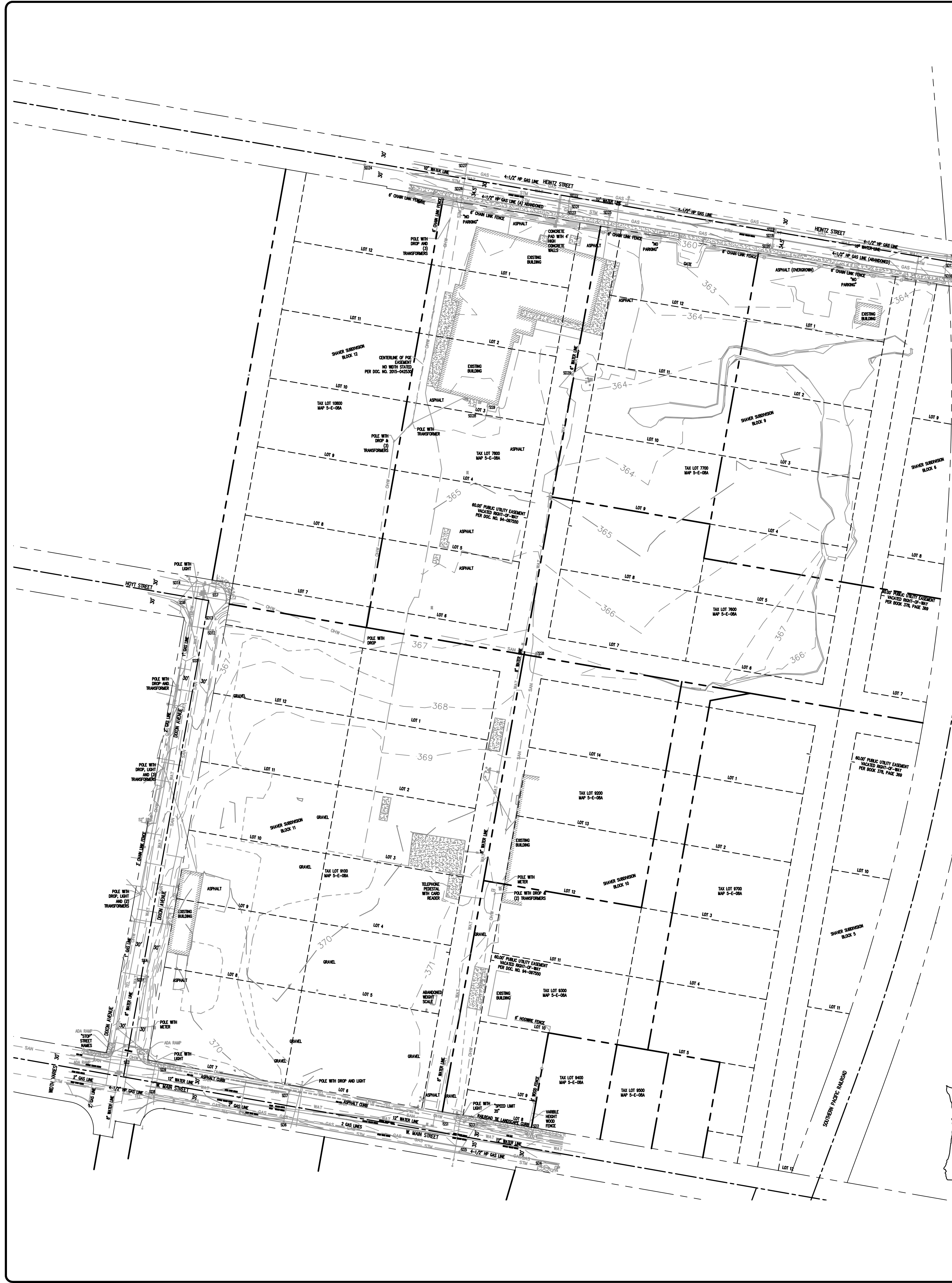
No.	REVISIONS / SUBMISSIONS	DATE

REVIEWED: CNH
DRAWN: TRH
PROJECT NO.: 2309-01

PROJECT TITLE
MOLALLA INDUSTRIAL PARK

DRAWING TITLE
PRELIMINARY PLAT

DATE: 6/25/2024
DRAWING No.



SANITARY SEWER INFORMATION

- SS1 MANHOLE
RIM = 371.61'
8" I.E. IN (SW) = 359.2' STUB?
12" I.E. IN (SE) = 358.9'
12" I.E. OUT (NW) = 358.7'
- SS2 MANHOLE
RIM = 368.19'
8" I.E. IN (SW) = 357.2'
12" I.E. IN (SE) = 357.1'
12" I.E. OUT (NW) = 357.0'
- SS3 MANHOLE
RIM = 365.02'
8" I.E. IN (SW) = 353.4'
12" I.E. IN (SE) = 353.3'
12" I.E. OUT (NW) = 353.1'

STORM SEWER INFORMATION

- SD2 CMP CULVERT
24" I.E. IN (SE) = 370.2'
24" I.E. OUT (NW) = 370.1'
- SD3 DITCH INLET
RIM TOP = 371.35'
RIM BOTTOM = 369.75'
10" I.E. OUT (SW) = 369.3'
- SD4 CATCH BASIN
RIM = 372.70'
12" I.E. OUT (NW) = 369.1'
- SD5 CATCH BASIN
RIM = 371.82'
10" I.E. IN (NE) = 368.0'
12" I.E. IN (SE) = 368.0'
12" I.E. OUT (NW) = 367.8'
- SD6 CATCH BASIN
RIM = 369.79'
12" I.E. IN (NE) = 366.1'
15" I.E. IN (SE) = 366.1'
15" I.E. OUT (NW) = 366.1'
- SD7 CATCH BASIN
RIM = 369.87'
12" I.E. OUT (SW) = 367.5'
- SD8 CATCH BASIN
RIM = 369.02'
12" I.E. IN (NE) = 365.3'
15" I.E. IN (S) = 365.2'
15" I.E. IN (SE) = 365.1'
18" I.E. OUT (NW) = 365.0'
- SD9 CATCH BASIN
RIM = 368.40'
12" I.E. OUT (SW) = 365.9'
- SD10 CATCH BASIN
RIM = 365.49'
18" I.E. IN (SE) = 362.3'
18" I.E. OUT (NW) = 362.2'

- SURVEY NOTES**
- 1) THE FIELD SURVEY FOR THIS MAP WAS COMPLETED ON DECEMBER 5, 2023.
 - 2) ELEVATIONS AND CONTOURS ARE BASED ON GPS MEASUREMENTS ON THE ORGN REAL TIME NETWORK. THE ELEVATIONS ARE ON THE NAVD 1988 DATUM.
 - 3) THE BASIS OF BEARINGS FOR THIS SURVEY IS THE OREGON STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD(83).
 - 4) THE RIGHT-OF-WAY WIDTHS WERE ESTABLISHED USING INFORMATION FROM RECORD SURVEYS, PLATS AND THE TAX ASSESSOR'S MAP.
 - 5) THE EASEMENTS SHOWN ON THIS MAP ARE BASED ON THE PRELIMINARY TITLE REPORT, PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, WITH ORDER NUMBER 7000-4092708 AND WITH AN EFFECTIVE DATE OF AUGUST 3, 2023 AT 8:00 A.M.
 - 6) THE UNDERGROUND UTILITIES ARE BASED ON THE MARKINGS PER LOCATE TICKET NUMBERS 23278676, 23278681 AND 23278693.

NORTHWEST SURVEYING, Inc.
1815 NW 169th PLAGE, SUITE 2090
BEAVERTON, OR 97006
PHONE: 503-848-2127 FAX: 503-848-2179
www.nwsrvy.com

SANITARY SEWER INFORMATION

- SS4 MANHOLE
RIM = 366.20'
8" I.E. IN (SW) = 358.1'
8" I.E. OUT (NE) = 358.0'
- SS5 MANHOLE
RIM = 363.97'
8" I.E. IN (SW) = 355.5'
8" I.E. OUT (NW) = 355.4'
- SS6 MANHOLE
RIM = 363.34'
8" I.E. IN (NE) = 355.7'
8" I.E. IN (SE) = 354.8'
8" I.E. OUT (NW) = 354.7'
- SS7 MANHOLE
RIM = 363.87'
8" I.E. IN (SE) = 358.7'
8" I.E. IN (NE) = 356.7'
8" I.E. OUT (SW) = 356.6'

STORM SEWER INFORMATION

- SD11 CATCH BASIN
RIM = 364.97'
10" I.E. OUT (SW) = 363.5'
- SD12 CATCH BASIN
RIM = 362.58'
8" I.E. OUT (W) = 360.5'
- SD13 CATCH BASIN
RIM = 362.80'
6" I.E. OUT (NW) = 361.6'
- SD14 CATCH BASIN
RIM = 362.32'
6" I.E. IN (SE) = 360.6'
12" I.E. OUT (NW) = 360.1'
- SD15 COMBINATION INLET
RIM = 364.10'
10" I.E. OUT (S) = 360.5'
- SD16 COMBINATION INLET
RIM = 363.93'
12" I.E. OUT (N) = 360.5'
- SD17 MANHOLE
RIM = 364.41'
10" I.E. IN (N) = 360.2'
10" I.E. IN (S) = 360.2'
12" I.E. OUT (NW) = 360.0'
- SD18 MANHOLE
RIM = 360.61'
10" I.E. IN (N) = 356.5'
10" I.E. IN (S) = 356.3'
12" I.E. IN (SE) = 354.7'
30" I.E. OUT (NW) = 353.4'
- SD19 COMBINATION INLET
RIM = 360.17'
10" I.E. OUT (S) = 356.7'
- SD20 COMBINATION INLET
RIM = 360.20'
10" I.E. OUT (N) = 356.8'
- SD21 MANHOLE
RIM = 359.08'
10" I.E. IN (N) = 354.7'
10" I.E. IN (S) = 354.7'
30" I.E. IN (SE) = 353.1'
30" I.E. OUT (NW) = 353.0'
- SD22 COMBINATION INLET
RIM = 358.72'
10" I.E. OUT (S) = 354.5'
- SD23 COMBINATION INLET
RIM = 358.64'
10" I.E. OUT (N) = 354.9'
- SD24 FLOW CONTROL MANHOLE
RIM = 357.68'
10" I.E. IN (S) = 354.4'
10" I.E. IN (N) = 354.4'
30" IN (SE) = 352.7'
12" VERTICAL PIPE OUT (NW)
- SD25 MANHOLE
RIM = 359.26'
8" I.E. IN (SW) = 356.8'
10" I.E. OUT (NW) = 356.7'
- SD26 MANHOLE (* SEE NOTE ABOVE)
RIM = 358.27'
8" I.E. IN (S) = 355.8'
10" I.E. IN (E) = 355.8'
10" I.E. OUT (NE) = 355.8'
- SD27 MANHOLE (* SEE NOTE ABOVE)
RIM = 363.68'
10" I.E. IN (S) = 355.5'
15" I.E. IN (E) = 352.4'
18" I.E. OUT (W) = 352.4'

SANITARY SEWER INFORMATION

- SS8 MANHOLE
RIM = 368.24'
8" I.E. IN (S) = 364.0'
10" I.E. OUT (W) = 363.9'
- SS9 MANHOLE
RIM = 363.90'

STORM SEWER INFORMATION

- SD28 LYNCH STYLE CATCH BASIN
RIM = 363.38'
TRAP (E)
- SD29 LYNCH STYLE CATCH BASIN
RIM = 363.29'
TRAP (NE)

LEGEND

CONIFEROUS TREE	
FIRE HYDRANT	
FIRE DEPARTMENT CONNECTION	
WATER METER	
WATER VALVE	
SANITARY SEWER CLEAN OUT	
SANITARY SEWER MANHOLE	
STORM SEWER CLEAN OUT	
STORM SEWER DITCH INLET	
STORM SEWER CATCH BASIN	
STORM SEWER MANHOLE	
GAS METER	
GAS VALVE	
GUY WIRE ANCHOR	
UTILITY POLE	
ELECTRICAL METER	
STREET LIGHT	
TELEPHONE/TELEVISION MANHOLE	
TELEPHONE/TELEVISION VAULT	
TELEPHONE/TELEVISION JUNCTION BOX	
TELEPHONE/TELEVISION RISER	
MAILBOX	
SIGN	
BOLLARD	
FOUND SURVEY MONUMENT	
RIGHT-OF-WAY LINE	
BOUNDARY LINE	
PROPERTY LINE	
CENTERLINE	
CURB	
EDGE OF PAVEMENT	
EASEMENT	
FENCE LINE	
GRAVEL EDGE	
POWER LINE	
OVERHEAD WIRE	
TELEPHONE LINE	
GAS LINE	
STORM SEWER LINE	
SANITARY SEWER LINE	
WATER LINE	
WETLAND BOUNDARY	

GRAPHIC SCALE

0 40 80 160 320

(IN FEET)
1 inch = 80 feet

NORTH

SCALE

WEDEN ENGINEERING, LLC
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No.	REVISIONS / SUBMISSIONS	DATE

REVIEWED: CNH
DRAWN: TRH
PROJECT NO.: 2309-01

MOLALLA INDUSTRIAL PARK
WATER MAIN IMPROVEMENTS
EXISTING CONDITIONS

DATE: 7/1/2024
DRAWING No.



**lancaster
moble**

Kerr Industrial Subdivision

Transportation Impact Study
Molalla, Oregon

Date:

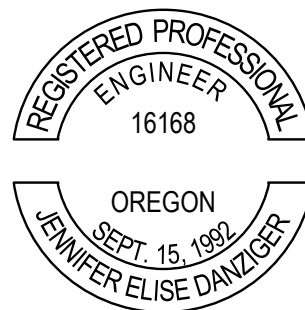
May 23, 2024

Prepared for:

Kerr Contractors Oregon, LLC

Prepared by:

Myla Cross,
Jennifer Danziger, PE



RENEWS: 12/31/2025

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Executive Summary

1. The proposed Kerr Industrial Subdivision project will develop six existing tax lots (Map No. 52E08A Tax Lots 7600, 7700, 7800, 9100, 9200, and 9300), totaling approximately 21.62 acres (per Clackamas Maps Assessment), with a 12-lot industrial subdivision. After the dedication of public right-of-way and creation of a private roadway, the 12 industrial lots will total 787,590 square feet (SF) or approximately 18.08 acres.
2. A new private roadway connection between W Heintz Street and W Main Street (OR 211) will be created with the subdivision. Eleven (11) lots will access from this roadway; access to the southwestern lot will be provided along Dixon Avenue.
3. The proposed development is estimated to generate 192 morning peak hour (including 2 truck trips), 169 evening peak hour, and 1,266 daily trips including 3 truck trips in each peak hour and 66 daily truck trips. After deducting estimates of trip generation for the existing site development, the proposal will result in a net increase of 154 morning peak hour, 136 evening peak hour, and 1,016 average weekday trips. The net increase in truck traffic is estimated at 2 morning peak hour, 2 evening peak hour, and 54 daily trips.
4. A review of the most recent five years of available crash data yielded the following conclusions:
 - The signalized intersection of W Main Street (OR 211) & Cascade Hwy S (OR 213) has a crash rate that exceeds ODOT's 90th percentile rates for similar types of intersections; however, it is not listed in the worst 15 percent of their priority list. The signal has historically operated with protected-permissive phasing, which may have contributed to the higher collision rate, but is now operating with protected left-turn phasing that may reduce crash rates over time. Although an intersection capacity improvement is listed in the TSP, it is unlikely to change the crash rate; therefore, no safety mitigation is recommended.
 - The W Main Street (OR 211) & Leroy Avenue also has a crash rate that exceeds ODOT's 90th percentile rates but is not listed in the worst 15 percent of their priority list. Although the Molalla TSP identifies a future traffic signal at this intersection, neither the forecast traffic volumes nor the crash history is sufficient to meet the warrant thresholds for signal installation. The proposed Kerr Industrial Subdivision will only add through trips on the highway and will not result in the intersection meeting traffic signal warrants. Therefore, no safety-related mitigation is recommended.
 - At the other study intersections, no significant trends or crash patterns were identified, and no safety mitigation is recommended per the crash data analysis.
5. Upon removal of onsite foliage, sight distance requirements can be met at site access intersections on the public roadways. Additionally, achieving adequate sight distance should be a factor in the location of driveways within the subdivision, particularly lots 6, 10, and 11, which are located along the curves of the private street.
6. Access spacing standards are met on W Main Street (OR 211) and W Heintz Street. City access spacing standards should be considered with the placement of site driveways to individual parcels on Dixon Avenue and the private roadway.

7. Left-turn lane warrants are projected to be met for the eastbound approach for the site access on W Main Street, and not met for the site access on W Heintz Street or Dixon Avenue.
8. Right-turn lane warrants are not projected to be met for the any of the site accesses.
9. Based on the preliminary analysis, traffic signal warrants are not projected to be met for any of the study intersections. Accordingly, no signalization of the unsignalized study intersections is necessary or recommended.
10. All study intersections are projected to operate within ODOT and the City of Molalla standards under all analysis scenarios.
11. Queuing analysis results show the 95th percentile queues at the study intersections can be accommodated within existing turn lanes under buildout conditions.



Project Description

Introduction

The proposed Kerr Industrial Subdivision project will develop six existing tax lots (Map No. 52E08A Tax Lots 7600, 7700, 7800 9100, 9200, and 9300), totaling approximately 21.62 acres (per Clackamas Maps Assessment), with a 12-lot industrial subdivision.

This report examines the traffic impacts of the proposed development on the transportation system in the vicinity of the project site. Based on correspondence with City of Molalla and ODOT staff, this report conducts safety and capacity/level of service analyses at the following 10 intersections:

1. W Main Street (OR 211) & Cascade Highway South (OR 213)
2. W Main Street (OR 211) & S Ona Way
3. W Main Street (OR 211) & Leroy Avenue
4. W Main Street (OR 211) & Ridings Avenue
5. W Main Street (OR 211) & Dixon Avenue
6. W Main Street (OR 211) & Site Access
7. W Main Street (OR 211) & Molalla Avenue
8. W Heintz Street & Site Access
9. W Heintz Street & Molalla Avenue
10. Dixon Avenue & Site Access

All supporting data and calculations are included in the appendix to this report.

Location Description

The project site is located on six existing tax lots (Map No. 52E08A Tax Lots 7600, 7700, 7800 9100, 9200, and 9300), encompassing approximately 21.62 acres, and is located east of Dixon Street and west of Kennel Street between W Heintz Street and W Main Street (OR 211). After the dedication of public right-of-way and creation of a private roadway, the 12 industrial lots will total 787,590 square feet (SF) or approximately 18.08 acres.

A new private roadway connection between W Heintz Street and W Main Street (OR 211) will be created with the subdivision. Eleven (11) lots will access from this roadway; access to the southwestern lot will be provided along Dixon Avenue.

Figure 1 displays a vicinity map of the project area, with the project site outlined in yellow. A detailed site plan is included in Appendix A.



Figure 1: Project Location (© Google Earth)

Several existing buildings on the project site are present on the site which were measured using Google Earth:

- 1 building measuring approximately 31,000 square feet (SF) on Tax Lot 7800
- 2 buildings measuring a total of approximately 9,500 SF on Tax Lot 9100
- 1 building measuring approximately 8,500 SF on Tax Lot 9200
- 1 building measuring approximately 2,500 SF on Tax Lot 9300

The total size of the existing buildings on the site is estimated at 51,500 SF.

Vicinity Streets

The study area includes eight roadways expected to be impacted by the proposed development. Table 1 provides a description of each of the vicinity roadways.

Table 1: Roadway Characteristics

Street Name	Functional Classification	Travel Lanes	Speed	Curbs & Sidewalks	On-Street Parking	Bicycle Facilities
ODOT Jurisdiction						
W Main Street (OR 211)	Arterial & District Highway	2-3	35 mph	Partial both sides	Prohibited	Partial both sides
Cascade Hwy S (OR 213)	Arterial & District Highway	2-3	35 mph	Partial both sides	Prohibited	Partial both sides

Table 1: Roadway Characteristics

Street Name	Functional Classification	Travel Lanes	Speed	Curbs & Sidewalks	On-Street Parking	Bicycle Facilities
City of Molalla Jurisdiction						
S Ona Way	Major Collector	2	25 mph	None	Prohibited	None
Leroy Avenue	Major Collector	2	25 mph	Continuous	Prohibited	None
Ridings Avenue	Minor Collector	2	25 mph	Partial both sides	Permitted	None
Dixon Avenue	Local	2	25 mph	None	Permitted	None
Molalla Avenue	Arterial	2	25 mph	Continuous	Permitted	None
W Heintz Street	Local/ Neighborhood Street	2	25 mph	Continuous	Permitted	None

Notes: Functional Classification based on the Molalla Transportation System Plan

Study Intersections









Through coordination with the City of Molalla and ODOT, 10 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 2.

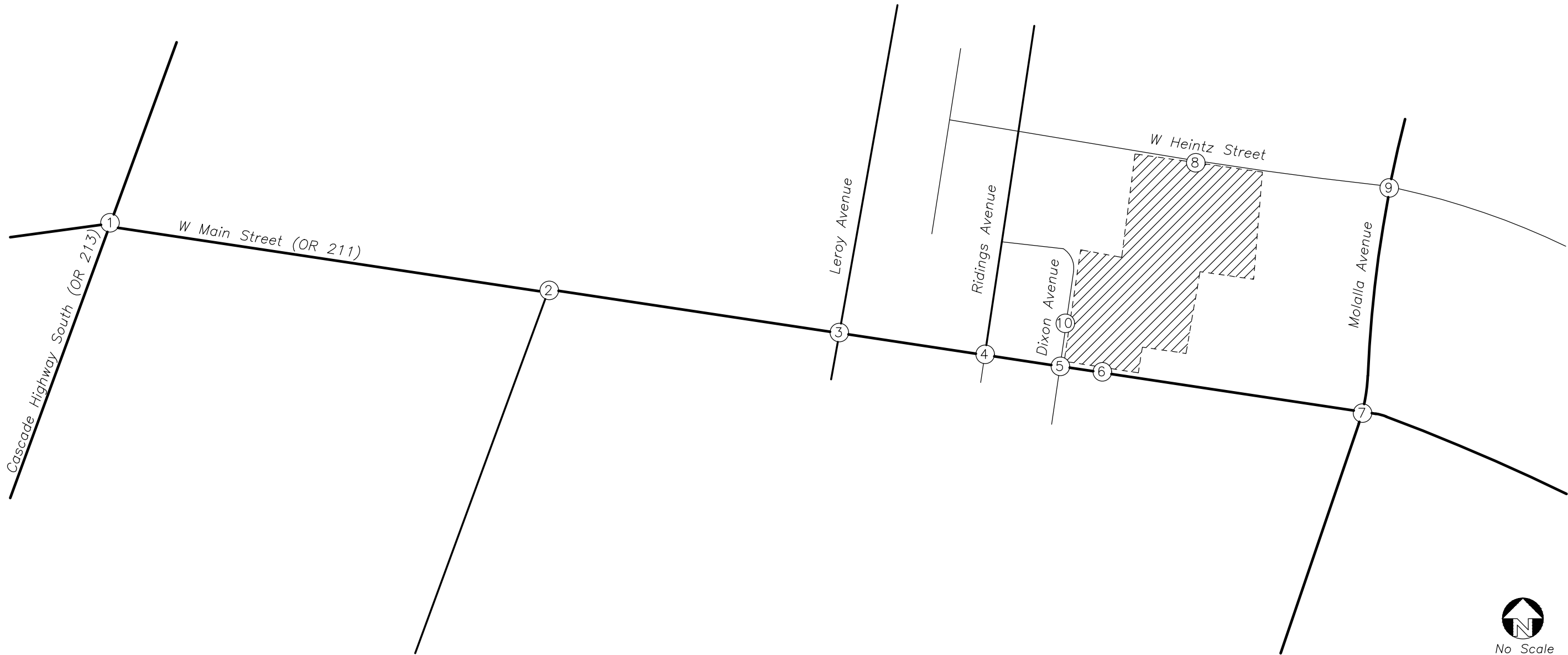
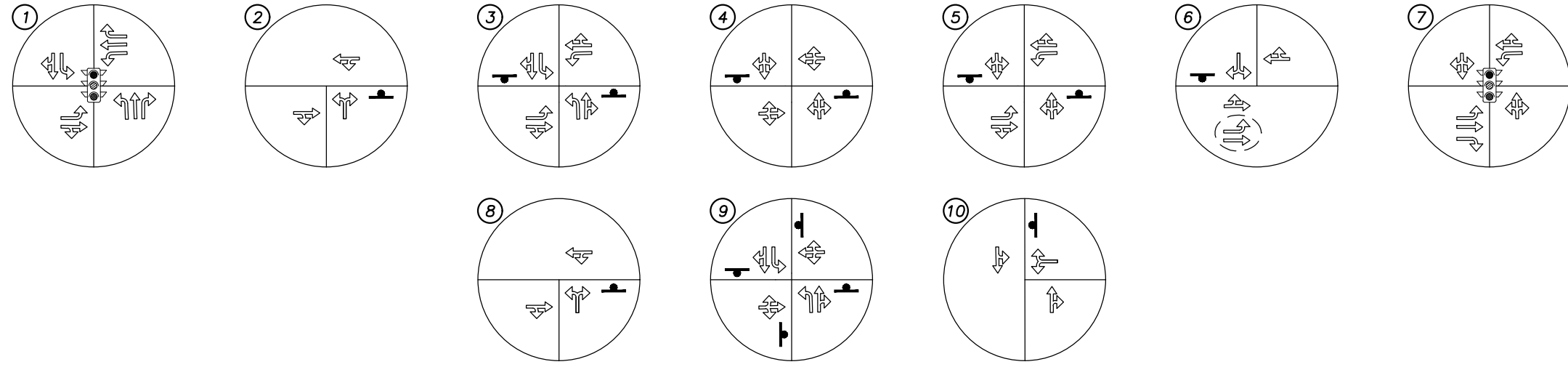
Table 2: Vicinity Intersection Descriptions

	Intersection	Geometry	Traffic Control	Phasing/Stopped Approaches
1	W Main Street (OR 211) & Cascade Hwy S (OR 213)	4-Leg	Signalized	Protected/Permitted Left Turn for All Approaches
2	W Main Street (OR 211) & S Ona Way	3-Leg	Stop Controlled	NB Stop
3	W Main Street (OR 211) & Leroy Avenue	4-Leg	Stop Controlled	NB/SB Stop
4	W Main Street (OR 211) & Ridings Avenue	4-Leg	Stop Controlled	NB/SB Stop
5	W Main Street (OR 211) & Dixon Avenue	4-Leg	Stop Controlled	NB/SB Stop
6	W Main Street (OR 211) & Site Access	3-Leg	Stop-Controlled	SB Stop
7	W Main Street (OR 211) & Molalla Avenue	4-Leg	Signalized	EB/WB Protected Left Turn
8	W Heintz Street & Site Access	3-Leg	Stop-Controlled	NB Stop
9	W Heintz Street & Molalla Avenue	4-Leg	Stop-Controlled	All-Way Stop
10	Dixon Avenue & Site Access	3-Leg	Stop-Controlled	WB Stop



LEGEND

-  STUDY INTERSECTION
-  STOP SIGN
-  TRAFFIC SIGNAL
-  FUTURE CONFIGURATION
-  PROJECT SITE
-  ARTERIAL
-  COLLECTOR ROADWAY
-  LOCAL ROADWAY



VICINITY MAP

Lane Configuration & Traffic Control



Transit

South Clackamas Transit District has three routes that serve the City of Molalla. The Molalla City Bus route has a bus stop just over 1/3-mile walking/biking distance from the project site at the Ross Street Transit Center. The Molalla City route loops throughout the City in a largely clockwise direction. The bus runs from 7:30 AM to 5:35 PM, Monday through Friday, 9:30 AM to 3:45 PM, and has no service on Sunday. Headways are roughly one hour.



Site Trips

To estimate the number of trips that are projected to be generated by the development, trip rates from the *Trip Generation Manual*¹ were used. Currently, no specific buildings or tenants are proposed for the proposed 12-lot industrial subdivision; only the acreage of the lots is available. To estimate trip generation, approximately 1/3 of the 18.08-acre site, equal to approximately 260,000 SF of the site was assumed to be covered by buildings.

All of the existing buildings on the site will be demolished with redevelopment of the site except for the approximately 31,000-SF building on Lot 5. This building is initially anticipated to remain with site redevelopment; however, Lot 5 may eventually get redeveloped as well.

Since a variety of existing tenants currently occupy the site and future tenants are unknown, data from the land use code 110, General Light Industrial was used for the trip calculations based on the estimated building floor areas.

The resulting trip generation estimates are summarized in Table 3. Detailed trip generation calculations are included in Appendix A.

Table 3: Trip Generation Summary

ITE Code	Intensity	Vehicle Type	Morning Peak Hour			Evening Peak Hour			Weekday
			In	Out	Total	In	Out	Total	
Existing Development									
110 – General Light Industrial	51.5 KSF	All Vehicles	33	5	38	5	28	33	250
		Trucks	1	0	1	1	0	1	12
Proposed Development									
110 – General Light Industrial	260 KSF	All Vehicles	169	23	192	24	145	169	1,266
		Trucks	2	1	3	2	1	3	66
Net Increase	208.5 KSF	All Vehicles	136	18	154	19	117	136	1,016
		Trucks	1	1	2	1	1	2	54

KSF = 1,000 square feet

The proposed development is estimated to generate 192 morning peak hour (including 2 truck trips), 169 evening peak hour, and 1,266 daily trips including 3 truck trips in each peak hour and 66 daily truck trips. After deducting estimates of trip generation for the existing site development, the proposal will result in a net increase of 154 morning peak hour, 136 evening peak hour, and 1,016 average weekday trips. The net increase in truck traffic is estimated at 2 morning and evening peak hour trips and 54 daily trips.

¹ Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, 2021.

Trip Distribution

The directional distribution of site trips to and from the proposed development was estimated based on locations of likely trip destinations, locations of major transportation facilities in the site vicinity, and existing travel patterns at the study area intersections. The following trip distribution is proposed for primary trips:

- Approximately 30 percent of trips will travel to/from the west along W Main Street (OR 211)
 - Approximately 20 percent will continue west along W Main Street (OR 211)
 - Approximately 10 percent will travel to/from the south along Cascade Highway (OR 213)
- Approximately 20 percent of trips will travel to/from the east along W Main Street (OR 211)
 - Approximately 10 percent will continue east along W Main Street (OR 211)
 - Approximately 10 percent will travel to/from the south along Molalla Avenue
- Approximately 20 percent of trips will travel to/from the west along W Heintz Street
 - Approximately 15 percent will travel to/from local destinations within Molalla
 - Approximately 5 percent will travel to/from the north along Cascade Highway (OR 213) via Toliver Road
- Approximately 30 percent of will travel to/from the east along W Heintz Street
 - Approximately 25 percent of trips will travel to/from the north along Molalla Avenue
 - Approximately 5 percent of trips will travel to/from the east to local destinations within Molalla

Access to the site will be provided via a new roadway connection between W Heintz Street and W Main Street (OR 211). Access to the southwestern lot will be provided along Dixon Avenue. The distribution of the passenger vehicle traffic at the three accesses is estimated at:

- Approximately 46 percent of trips using the site access on W Main Street (OR 211)
- Approximately 46 percent of trips using the site access on W Heintz Street
- Approximately 8 percent of trips using the site access on Dixon Avenue

All trucks will use the access on W Main Street.

The trip distribution and assignment for the total site trips generated during the morning and evening peak hours are shown in Figure 3.

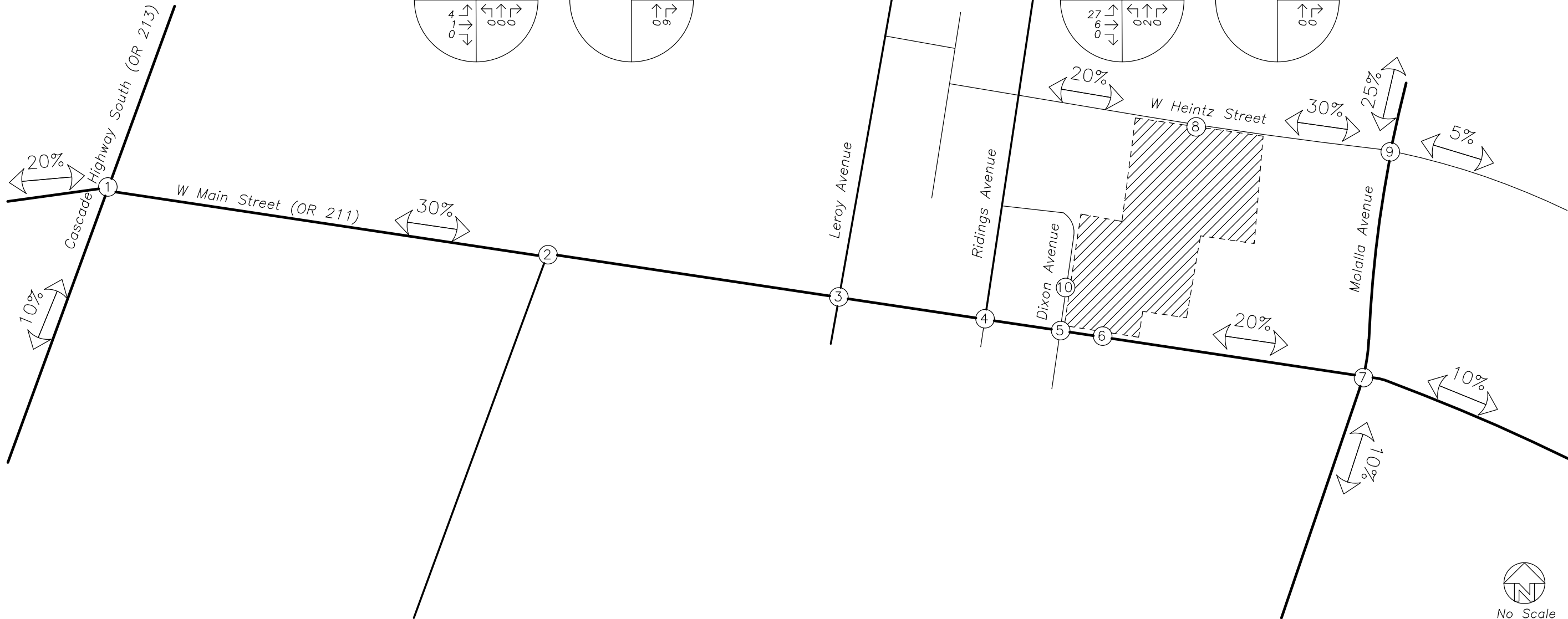
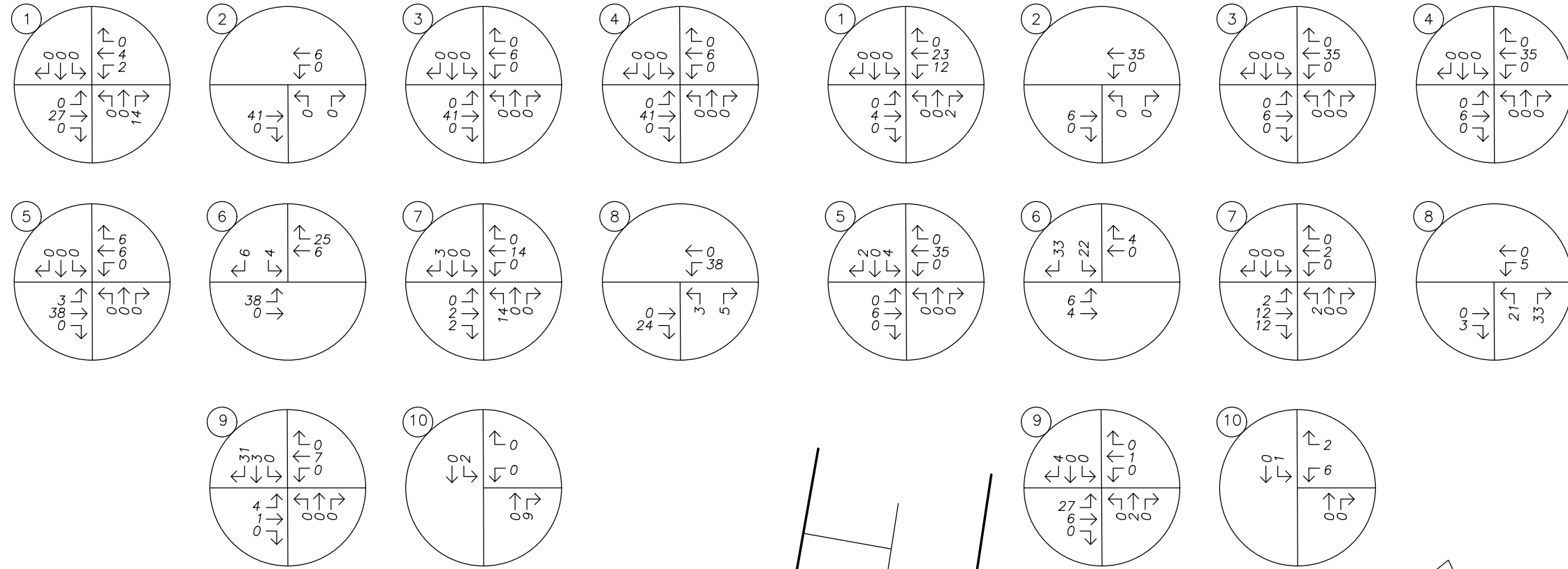
LEGEND

XX% PERCENT OF PROJECT TRIPS

TRIP GENERATION			
	IN	OUT	TOTAL
AM	136	18	154
PM	19	117	136

AM PEAK HOUR

PM PEAK HOUR



SITE TRIP DISTRIBUTION & ASSIGNMENT

AM & PM Peak Hours

Figure 3

Kerr Industrial Subdivision

February 28, 2024



Traffic Volumes

Existing Conditions

Traffic counts were conducted at the study intersections on Thursday, December 7, 2023, from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM. Each intersection's respective morning and evening peak hours were used for analysis. The count data is included in Appendix B.

Highway volumes were seasonally adjusted using the commuter factors in ODOT's 2023 Seasonal Trend Table. An adjustment factor of 1.13 was applied to all volumes at the intersection of OR 211 and OR 213 and all through movements on OR 211 at the other study intersections. The factor calculation is included in Appendix B.

Figure 4 shows the existing traffic volumes at the study intersections during the morning and evening peak hours.

Background Conditions

To analyze the impact of the proposed development on the nearby transportation facilities, an estimate of future traffic volumes is required. A buildout year of 2026 is assumed for the proposed development.

To account for general background growth through the year 2026, an annual 1.0 percent growth rate was applied to the year 2023 existing volumes for three years. This growth rate was derived using data corresponding to milepost 12.25 on OR 211 (ODOT highway number 161) on the ODOT Future Volumes Table (2042). The future forecast data is included in Appendix B.

In addition to the general growth, the following nearby developments are approved but were not yet constructed at the time of the traffic counts will be included as in-process traffic:

- Cascade Plaza remaining pads
- Dairy Queen
- 1400 Fountain Way
- 710 W Main
- Home First Affordable Housing I & II

Figure 5 shows year 2026 background traffic volumes at the study intersections during the morning and evening peak hours.

Buildout Conditions

The trips to be generated by the proposed development (see *Site Trips* section) were added to the year 2026 background traffic volumes and the existing volumes using the site accesses were subtracted from the network to estimate the year 2026 traffic volumes with the full buildout and occupancy of the proposed development.

Figure 6 shows year 2026 buildout traffic volumes at the study intersections during the morning and evening peak hours.

AM PEAK HOUR

PM PEAK HOUR

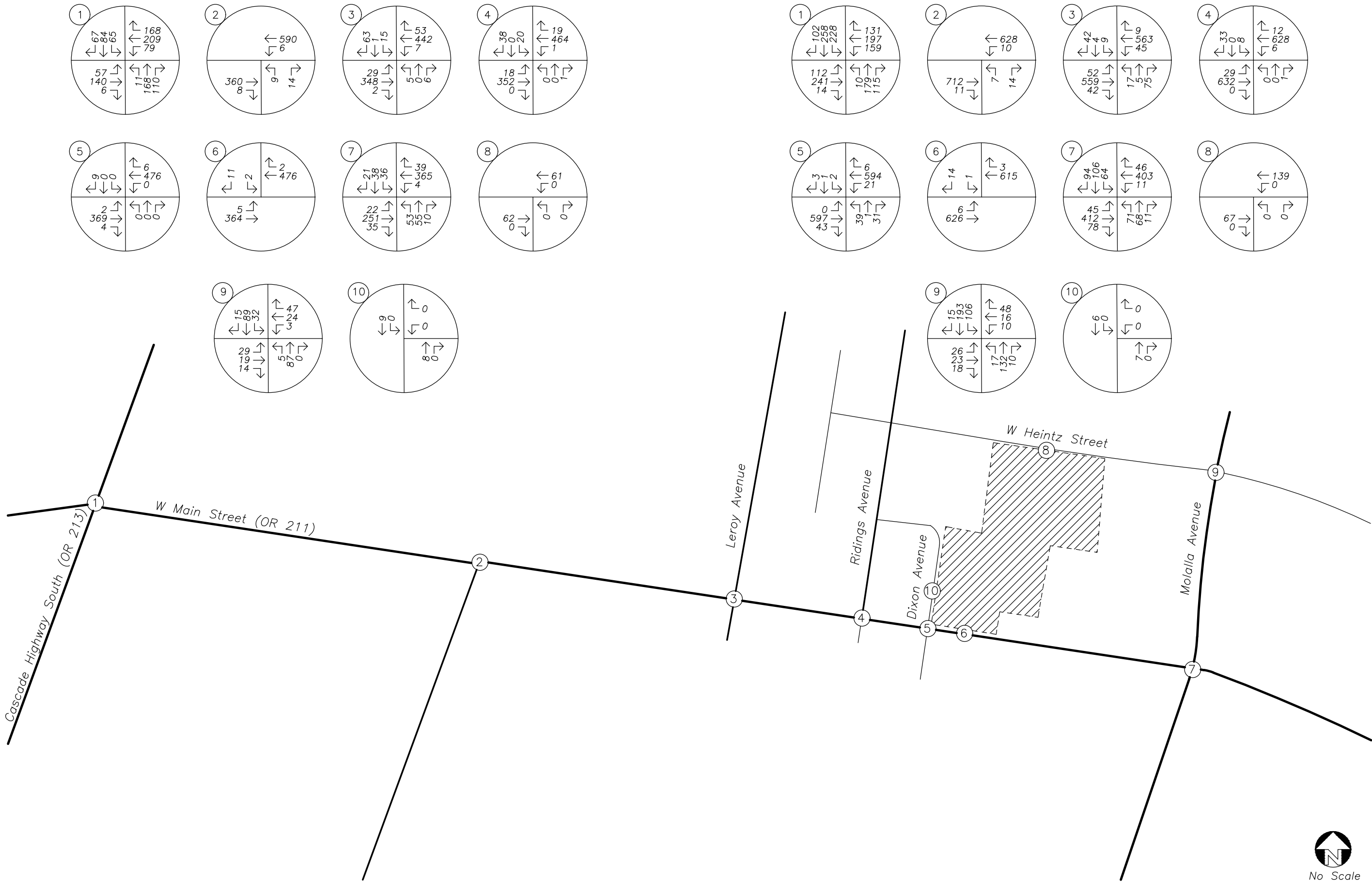


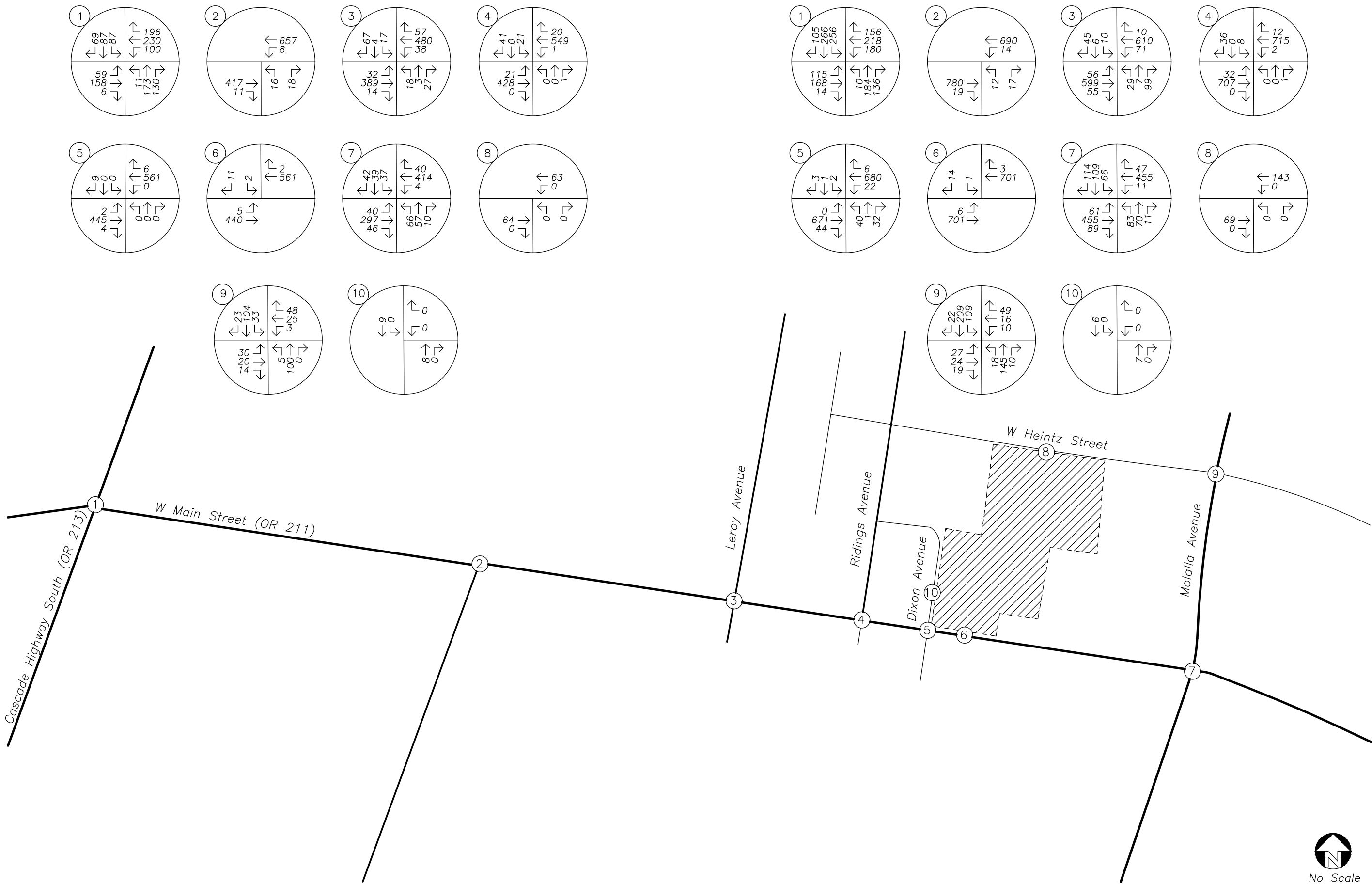
Figure 4
Kerr Industrial Subdivision
February 28, 2024

TRAFFIC VOLUMES
Year 2023 Existing Conditions
AM & PM Peak Hours



AM PEAK HOUR

PM PEAK HOUR



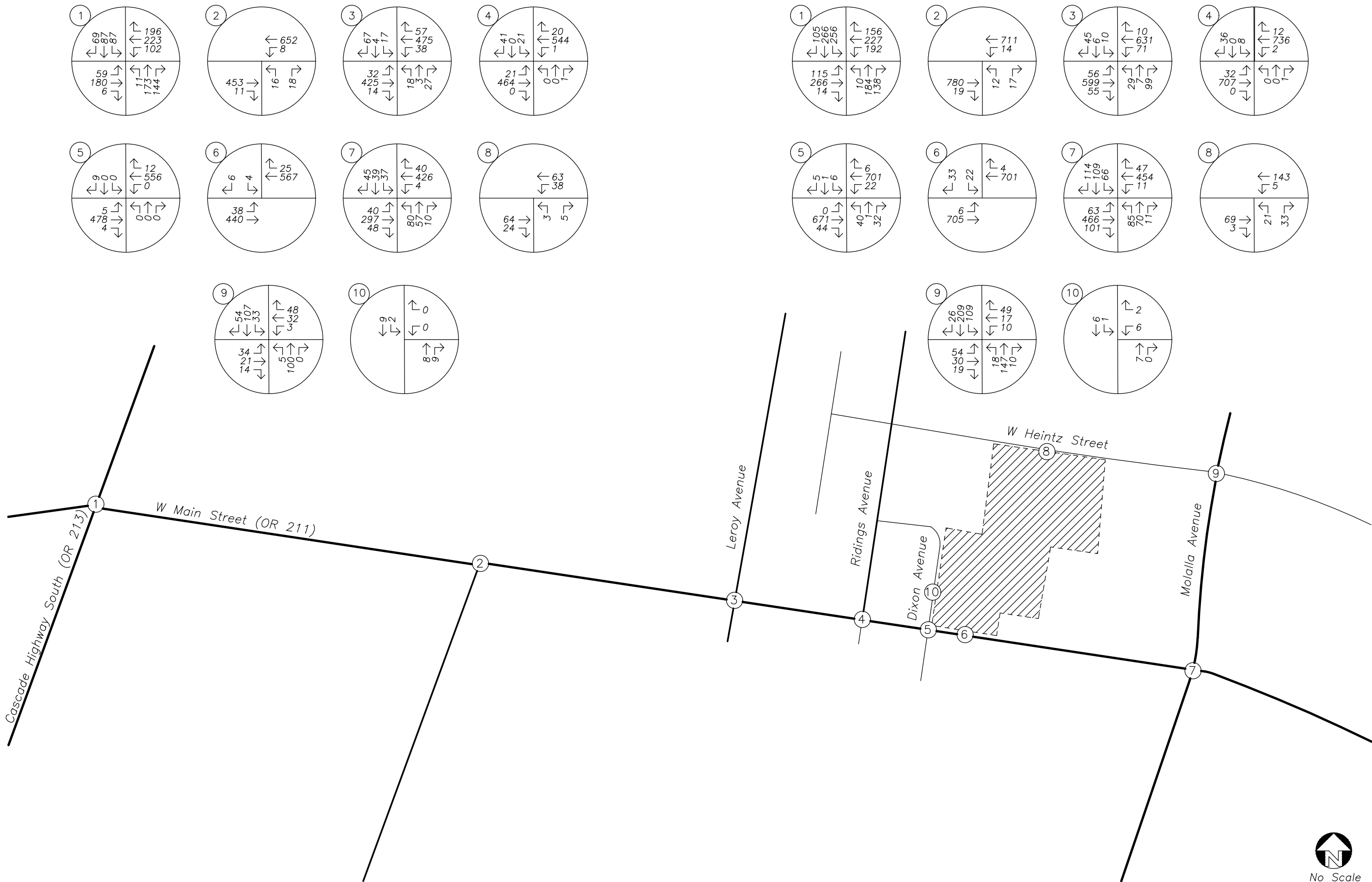
TRAFFIC VOLUMES
 Year 2026 Background Conditions
 AM & PM Peak Hours

Figure 5
 Kerr Industrial Subdivision
 February 28, 2024



AM PEAK HOUR

PM PEAK HOUR



TRAFFIC VOLUMES
 Year 2026 Buildout Conditions
 AM & PM Peak Hours

Figure 6
 Kerr Industrial Subdivision
 February 28, 2024

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 2018 through December 2022) 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)
- Suspected Minor Injury (Injury B)
- Suspected Serious Injury (Injury A)
- 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 hour volume (PHV) represents approximately 10 percent of the average daily traffic (ADT) at the intersection.

Table 4 provides a summary of crash types while Table 5 summarizes crash severities and rates for each of the study intersections. Detailed crash data is provided in Appendix C.

Table 4: Crash Type Summary

	Intersection	Crash Type					Total Crashes	
		Turn	Rear End	Angle	Fixed Object	Other		Ped/ Bike
1	W Main Street (OR 211) & Cascade Hwy S (OR 213)	15	11	2	0	1	1	30
2	W Main Street (OR 211) & S Ona Way	1	4	0	0	0	0	5
3	W Main Street (OR 211) & Leroy Avenue	3	5	3	0	0	0	11
4	W Main Street (OR 211) & Ridings Avenue	1	1	0	0	0	0	2
7	W Main Street (OR 211) & Molalla Avenue	5	5	2	1	0	1	14
9	W Heintz Street & Molalla Avenue	0	0	1	0	0	1	2



Table 5: Crash Severity and Rate Summary

	Intersection	Severity					Total Crashes	PHV	Crash Rate	90 th % Rate
		PDO	C	B	A	Fatal				
1	W Main Street (OR 211) & Cascade Hwy S (OR 213)	14	6	10	0	0	30	1746	0.941	0.860
2	W Main Street (OR 211) & S Ona Way	2	3	0	0	0	5	1,382	0.198	0.293
3	W Main Street (OR 211) & Leroy Avenue	2	4	5	0	0	11	1,422	0.424	0.408
4	W Main Street (OR 211) & Ridings Avenue	1	0	1	0	0	2	1345	0.081	0.408
7	W Main Street (OR 211) & Molalla Avenue	7	6	1	0	0	14	1,409	0.544	0.860
9	W Heintz Street & Molalla Avenue	1	0	0	0	1	2	614	0.178	0.408

Crash Severity

None of the crashes reported in the five-year analysis period resulted in an Injury A classification but one of the crashes resulted in a fatality. At the intersection of W Heintz Street & Molalla Avenue, a passenger vehicle struck a pedestrian crossing in the crosswalk, the directions the passenger vehicle and the pedestrian were traveling were not reported. The driver of the passenger vehicle was not reported to have sustained any injuries, the pedestrian was killed. The passenger vehicle is reported to have not yielded the right-of-way to the pedestrian. The collision occurred under rainy, wet, daytime conditions. Since this fatal collision occurred, traffic control at this intersection was changed from two-way to all-way stop control and crosswalks were striped on all four approaches.

Pedestrian and Bicycle Collisions

Three of the reported crashes involved a pedestrian during the five-year analysis period:

- The intersection of W Main Street (OR 211) & Cascade Hwy S (OR 213) had one crash that involved a pedestrian. The collision occurred when a northbound passenger vehicle traveling straight struck an eastbound pedestrian crossing the intersection in the roadway. The pedestrian sustained injuries consistent with Injury B classification; no injuries were sustained by the individual in the vehicle. The pedestrian is reported to have been illegally in the roadway and had been wearing non-visible clothing. The collision occurred under clear, dry, daytime conditions.
- As described under the *Crash Severity* section, a passenger vehicle struck a pedestrian crossing in the crosswalk at the intersection of W Heintz Street & Molalla Avenue. The pedestrian was killed; no injuries were sustained by the individual in the vehicle.
- The W Main Street (OR 211) & Molalla Avenue had one crash that involved a pedestrian. The collision occurred when a northbound passenger vehicle turning left from Molalla Avenue struck a northbound pedestrian crossing the intersection in the west crosswalk. The pedestrian sustained injuries consistent



with Injury C classification; no injuries were sustained by the individual in the vehicle. The driver of the passenger vehicle was reported to have not yielded the right-of-way to the pedestrian, and the pedestrian is reported to have been wearing non-visible clothing. The collision occurred under clear, dry, daytime conditions.

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".

Two of the study area intersections were calculated to have a crash rate that exceeds the 90th percentile crash rates for similar unsignalized intersections.

W Main Street (OR 211) & Cascade Hwy S (OR 213)

The intersection of W Main Street (OR 211) & Cascade Hwy S (OR 213) was identified as having a crash rate of 0.941 CMEV during the five-year study period, exceeding ODOT 90th percentile crash rate of 0.86 CMEV for similar intersections. Thirty (30) crashes were reported over the five-year analysis period.

Fourteen (14) of the intersection-related crashes were reported as turning collisions. While most of the crashes were distributed in different directions, 5 involved a collision between a vehicle making a westbound left turn and an eastbound vehicle traveling through the intersection. The traffic signal is now protected left-turn movements only but it has historically been protected-permissive phasing, which may have contributed to the higher collision rate. No other discernible patterns are noted.

Eleven (11) of the intersection-related crashes were reported as rear-end collisions. Six (6) of the crashes were reported in the southbound direction, 3 crashes were reported in the westbound direction, 1 was reported in the northbound direction, and 1 was unknown. The reason for the dominant pattern in the southbound direction is unclear.

The Molalla TSP identifies Project M21, which would "install a separate right-turn lane at the southbound approach if/when adjacent property redevelops" as a low priority project. The TSP improvements are unlikely to change crash patterns at the intersection; therefore, Project M21 is not recommended as safety mitigation for the high crash rate.

W Main Street (OR 211) & Leroy Avenue

The W Main Street (OR 211) & Leroy Avenue intersection had 11 reported crashes over the five-year analysis period. Five (5) were reported as rear-end collisions, 3 were reported as turning collisions, and 3 were reported as angle collisions.

This intersection has seen an increase in crashes with the development of the Cascade Plaza shopping center on the south side of the highway. Although a traffic signal was considered during the development review process, traffic volumes were not sufficient to meet the warrant thresholds for signal installation. Although crash rates have increased, they are still below the warrant criteria for signal installation.

The Molalla TSP identifies Project M23, which would "widen OR 211 [W Main Street] to provide an eastbound left-turn lane and install a traffic signal when warranted" as a low priority project. The Cascade Plaza shopping

center widened the roadway to provide a three-lane cross-section along its frontage, which completed part of TSP Project M23 but signal warrants were not met, as noted previously.

The proposed Kerr Industrial Subdivision will only add through trips on the highway and will not result in the intersection meeting traffic signal warrants. Therefore, no safety-related mitigation is recommended.

ODOT SPIS Review

The ODOT 2022 Safety Priority Index System (SPIS) list is based on reported crash data for the years 2019 through 2021. None of the study area intersections were listed in the worst 15 percent of SPIS list:

Conclusion

The signalized intersection of W Main Street (OR 211) & Cascade Hwy S (OR 213) has a crash rate that exceeds ODOT's 90th percentile rates for similar types of intersections; however, it is not listed in the worst 15 percent of their priority list. The signal has historically operated with protected-permissive phasing, which may have contributed to the higher collision rate, but is now operating with protected left-turn phasing that may reduce crash rates over time. Although an intersection capacity improvement is listed in the TSP, it is unlikely to change the crash rate; therefore, no safety mitigation is recommended.

The W Main Street (OR 211) & Leroy Avenue also has a crash rate that exceeds ODOT's 90th percentile rates but is not listed in the worst 15 percent of their priority list. Although the Molalla TSP identifies a future traffic signal at this intersection, neither the forecast traffic volumes nor the crash history is sufficient to meet the warrant thresholds for signal installation. The proposed Kerr Industrial Subdivision will only add through trips on the highway and will not result in the intersection meeting traffic signal warrants. Therefore, no safety-related mitigation is recommended.

At the other study intersections, no significant trends or crash patterns were identified, and no safety mitigation is recommended per the crash data analysis.

Sight Distance Evaluation

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.

To evaluate the sight distance available at these intersections, intersection sight distance was measured and recommended in accordance with the current AASHTO manual². According to AASHTO, 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

² American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, 7th Edition, 2018.

of 3.5 feet above the minor-street approach pavement. The vehicle driver's eye-height along the major-street approach is assumed to be 3.5 feet above the cross-street pavement.

Sight Distance Calculations

W Main Street (OR 211) has a posted speed limit of 35 mph west of the site that drops to 25 mph just east of the proposed site access. Using a future three-lane cross-section, the minimum recommended ISD is 415 feet looking to the west (right) and 295 looking to the east (left). The required SSD is 250 feet looking to the west and 155 feet looking to the east.

W Heintz Street has a posted speed limit of 25 mph and has a two-lane cross-section, thus the minimum recommended ISD is 280 feet in both directions and the required SSD is 155 feet in both directions.

Dixon Avenue has no posted speed so a statutory speed of 25 mph was used for analysis. With a two-lane cross-section, the minimum recommended ISD is 280 feet in both directions and the required SSD is 155 feet in both directions.

Available Sight Distance

A field investigation was conducted on Friday, December 8, 2023, to measure sight distance at the site access locations.

The following observations were made at the site access off W Main Street:

- Sight distance was measured to exceed 500 feet west of the site access, which meets the minimum recommended ISD.
- Sight distance was measured to exceed 400 feet east of the site access driveway, which meets the minimum recommended ISD.

The following observations were made at the site access off W Heintz Street:

- Sight distance was measured to exceed approximately 450 feet west of the site access which meets the minimum recommended ISD.
- Sight distance was measured to exceed approximately 450 feet east of the site access which meets the minimum recommended ISD.

A specific location for the site access on Dixon Avenue has not been identified. The minimum access spacing on local road is 150 feet from the closest public street as measured edge of pavement to edge of driveway. This spacing would achieve the minimum required SSD of 155 feet. On-site foliage should be cleared to provide clear sight lines to achieve an ISD of 280 feet to the north.

The same access spacing from the corner of a public street and sight line recommendations should be applied for the private street. Additionally, achieving adequate sight distance should be a factor in the location of driveways within the subdivision, particularly lots 6, 10, and 11, which are located along the curves of the private street.

Access Spacing

The Oregon Highway Plan (OHP)³ establishes the access spacing standards for W Main Street (OR 211). For a district highway, the minimum spacing is 350 feet on sections with a posted speed of 35 mph and 250 feet on section with a posted speed of 25 mph measured centerline to centerline on the same side of the street. The proposed private street will be located approximately 460 feet east of Dixon Avenue and 250 feet west of a driveway serving a private residence; thus, the access spacing standards will be met.

W Heintz Street is classified as local street west of Molalla Avenue in the Molalla Transportation System Plan (TSP).⁴ Per Table 10, the access spacing standard is 150 feet from a public street and 50 feet from a private access drive. The proposed private street will be located approximately 625 feet east of a private residence and 550 feet west of the private access road for the Twin Fir Mobile Park; thus, the access spacing standards will be met.

Dixon Avenue is also classified as a local street in the Molalla TSP. The driveway for Lot 3 should be located a minimum of 150 feet north of the corner at W Main Street (OR 211). The north property line for Lot 3 is more than 330 feet from the closest driveway to the north. Therefore, the access spacing standards can be met.

Although a private road is proposed, local street access spacing standards are recommended with regard to spacing from the public streets (i.e., W Main Street and W Heintz Street).

Warrant Analysis

Turn lane and preliminary traffic signal warrants were examined for the study intersections near the site where such treatments would be applicable.

Left-Turn Lane Warrants

A left-turn refuge lane is primarily a safety consideration for the major-street, removing left-turning vehicles from the through traffic stream. The warrants examined implement the design curves developed by the Texas Transportation Institute (TTI), as adopted by ODOT in its *Analysis Procedures Manual*. These warrants are evaluated based on the number of left-turning vehicles, the number of advancing and opposing vehicles, the number of lanes, and the roadway travel speed. Left-turn lane warrants were examined for the private street accesses on W Main Street and W Heintz Street.

Left-turn lane warrants are projected to be met for the eastbound approach for the site access on W Main Street, and not met for the site access on W Heintz Street. A left-turn lane is planned on W Main Street (OR 211) along the site frontage.

Right-Turn Lane Warrants

Right-turn lane warrants were examined the site accesses using the ODOT methodology. These turn-lane warrants were evaluated based on the number of right-turning vehicles, the number of advancing vehicles, and

³ Oregon Department of Transportation, 1999 Oregon Highway Plan, Including amendments November 1999 through May 2015, 1999.

⁴ City of Molalla, Transportation System Plan , Adopted September 26, 2018 by Ordinance 2018-14.

the roadway travel speed. Based on the preliminary analysis, right-turn lane warrants are not projected to be met for any of the site accesses.

Preliminary Traffic Signal Warrants

ODOT's preliminary traffic signal warrants were examined for all unsignalized study intersections to determine whether the installation of a new traffic signal will be warranted at the intersections by the project buildout year 2026.

Based on the preliminary analysis, traffic signal warrants are not projected to be met for any of the study intersections. Accordingly, no signalization of the unsignalized study intersections is necessary or recommended.



Operational Analysis

Intersection Capacity Analysis

A capacity and delay analysis were conducted for each of the study intersections per the signalized and unsignalized intersection analysis methodologies in the *Highway Capacity Manual (HCM)*⁵. 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.

Performance Standards

For the study intersections under ODOT jurisdiction, the applicable performance targets are established in Table 6 of the OHP and are based on the v/c ratio of the intersection. Since OR 213 and OR 211 are District Highways located in the City’s Urban Growth Boundary and one leg of OR 211 has a posted speed of 45 mph, the target maximum allowable v/c ratio is 0.90 at the intersection of the two highways. East of Cascade Highway (OR 213), W Main Street (OR 211) has a posted speed of 35 mph or less and intersections along this segment should have target maximum allowable v/c ratio of 0.95.

The City of Molalla TSP, Development Code, or Public Works Standards contain no performance thresholds.

Delay & Capacity Analysis

The LOS, delay, and v/c results of the capacity analysis are shown in Table 6 for the morning and evening peak hours. Detailed outputs are contained in Appendix D.

Table 6: Capacity Analysis Summary

Intersection & Condition	Mobility Target	Morning Peak Hour			Evening Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
1. W Main Street (OR 211) & Cascade Highway South (OR 213)							
2023 Existing Conditions	0.90	B	15	0.42	B	18	0.57
2026 Background Conditions		B	16	0.46	B	20	0.61
2026 Buildout Conditions		B	16	0.46	B	20	0.61
2. W Main Street (OR 211) & S Ona Way							
2023 Existing Conditions	0.95	B	13	0.05	C	17	0.07
2026 Background Conditions		B	14	0.09	C	19	0.11
2026 Buildout Conditions		B	15	0.10	C	19	0.11

⁵ Transportation Research Board, *Highway Capacity Manual 7th Edition*, 2022.



Table 6: Capacity Analysis Summary

Intersection & Condition	Mobility Target	Morning Peak Hour			Evening Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
3. W Main Street (OR 211) & Leroy Avenue							
2023 Existing Conditions	0.95	D	26	0.15	F	52	0.20
2026 Background Conditions		E	38	0.19	F	97	0.45
2026 Buildout Conditions		E	40	0.19	F	103	0.47
4. W Main Street (OR 211) & Ridings Avenue							
2023 Existing Conditions	0.95	C	16	0.16	C	19	0.14
2026 Background Conditions		C	19	0.20	C	23	0.19
2026 Buildout Conditions		C	20	0.21	C	24	0.19
5. W Main Street (OR 211) & Dixon Avenue							
2023 Existing Conditions	0.95	B	13	0.02	E	36	0.39
2026 Background Conditions		B	14	0.02	F	52	0.51
2026 Buildout Conditions		B	14	0.02	F	55	0.53
6. W Main Street (OR 211) & Site Access							
2023 Existing Conditions	0.95	B	14	0.03	B	15	0.04
2026 Background Conditions		C	16	0.04	C	16	0.05
2026 Buildout Conditions		C	20	0.05	D	29	0.28
7. W Main Street (OR 211) & Molalla Avenue							
2023 Existing Conditions	0.95	A	10	0.51	B	13	0.65
2026 Background Conditions		B	11	0.55	B	14	0.68
2026 Buildout Conditions		B	11	0.58	B	14	0.68
8. W Heintz Street & Site Access							
2026 Buildout Conditions	N/A	A	9	0.04	A	9	0.06
9. W Heintz Street & Molalla Avenue							
2023 Existing Conditions	N/A	A	9	0.20	A	9	0.31
2026 Background Conditions		A	9	0.25	A	10	0.34
2026 Buildout Conditions		A	10	0.31	A	10	0.36
10. Dixon Avenue & Site Access							
2026 Buildout Conditions	N/A	A	8	<0.01	A	9	0.01



As shown in Table 6, all study intersections are projected to meet ODOT standards under all analysis scenarios and the proposed development is not anticipated to add traffic to any of the critical movements where intersections are shown to have longer delays. The intersections under city jurisdiction all perform with minimal delays.

Queuing Analysis

To determine the expected queuing which may form at critical study area movements, a queuing analysis was conducted based on the results of Synchro/SimTraffic simulations, with the reported values representing 95th percentile queue lengths. The 95th percentile queue is a statistical measurement that 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 theoretically never be met or observed in the field.

The 95th percentile queue lengths reported in the simulation are presented in Table 7 for the morning and evening peak hours. Reported queue lengths were rounded to a multiple of 25 feet or the approximate length of one vehicle. All queues more than 5 feet longer than a multiple of 25 were rounded up. Those that were 5 feet or less were rounded down since 5 feet is equivalent to the space between queued vehicles. Detailed queuing analysis reports are included in Appendix D.

Note, a left-turn lane is assumed to be constructed for the eastbound approach at the W Main Street (OR 211) & Site Access intersection under buildout conditions.

Table 7: 95th Percentile Queuing Analysis Summary

Intersection/Movement	Available Storage (ft)	2026 Background Queue (ft)		2026 Buildout Queue (ft)	
		Morning	Evening	Morning	Evening
1. W Main Street (OR 211) & Cascade Highway South (OR 213)					
NB Left-Turn Lane	250	25	25	25	25
NB Right-Turn Lane	260	50	75	75	50
SB Left-Turn Lane	310	75	200	100	200
EB Left-Turn Lane	260	50	100	50	100
WB Left-Turn Lane	235	100	150	100	150
WB Right-Turn Lane	230	100	100	125	100
2. W Main Street (OR 211) & S Ona Way					
NB Approach	100	50	50	50	50
3. W Main Street (OR 211) & Leroy Avenue					
NB Left-Turn Lane	120	50	75	50	50
NB Through-Right Lane	200	50	75	50	75
SB Left-Turn Lane	100	50	50	75	50
SB Through-Right Lane	200	75	75	75	75
EB Left-Turn Lane	100	50	50	50	50
WB Left-Turn Lane	100	50	75	50	75

Table 7: 95th Percentile Queuing Analysis Summary

Intersection/Movement	Available Storage (ft)	2026 Background Queue (ft)		2026 Buildout Queue (ft)	
		Morning	Evening	Morning	Evening
4. W Main Street (OR 211) & Ridings Avenue					
NB Approach	200	25	25	25	25
SB Approach	150	75	50	75	50
5. W Main Street (OR 211) & Dixon Avenue					
NB Approach	200	-	75	-	75
SB Approach	150	50	25	50	50
EB Left-Turn Lane	175	25	-	25	-
WB Left-Turn Lane	225	-	50	-	50
6. W Main Street (OR 211) & Site Access					
SB Approach	250	75	50	50	100
EB Left-Turn Lane	TBD	-	-	50	25
7. W Main Street (OR 211) & Molalla Avenue					
EB Left-Turn Lane	150	50	100	75	100
EB Right-Turn Lane	150	50	100	50	100
WB Left-Turn Lane	150	25	50	25	50
8. W Heintz Street & Site Access					
NB Approach	250	-	-	25	50
9. W Heintz Street & Molalla Avenue					
NB Left-Turn Lane	150	25	50	25	50
SB Left-Turn Lane	150	50	75	50	75
10. Dixon Avenue & Site Access					
WB Approach	150	-	-	-	25

As shown Table 7, the queuing analysis results show the 95th percentile queues at the study intersections are anticipated to provide adequate vehicle storage space that does not inhibit safe and expeditious travel under all scenarios.

Conclusions

Key findings of this study include:

- A review of the most recent five years of available crash data yielded the following conclusions:
 - The signalized intersection of W Main Street (OR 211) & Cascade Hwy S (OR 213) has a crash rate that exceeds ODOT's 90th percentile rates for similar types of intersections; however, it is not listed in the worst 15 percent of their priority list. The signal has historically operated with protected-permissive phasing, which may have contributed to the higher collision rate, but is now operating with protected left-turn phasing that may reduce crash rates over time. Although an intersection capacity improvement is listed in the TSP, it is unlikely to change the crash rate; therefore, no safety mitigation is recommended.
 - The W Main Street (OR 211) & Leroy Avenue also has a crash rate that exceeds ODOT's 90th percentile rates but is not listed in the worst 15 percent of their priority list. Although the Molalla TSP identifies a future traffic signal at this intersection, neither the forecast traffic volumes nor the crash history is sufficient to meet the warrant thresholds for signal installation. The proposed Kerr Industrial Subdivision will only add through trips on the highway and will not result in the intersection meeting traffic signal warrants. Therefore, no safety-related mitigation is recommended.
 - At the other study intersections, no significant trends or crash patterns were identified, and no safety mitigation is recommended per the crash data analysis.
- Upon removal of onsite foliage, sight distance requirements can be met at site access intersections on the public roadways. Additionally, achieving adequate sight distance should be a factor in the location of driveways within the subdivision, particularly lots 6, 10, and 11, which are located along the curves of the private street.
- Access spacing standards are met on W Main Street (OR 211) and W Heintz Street. City access spacing standards should be considered with the placement of site driveways to individual parcels on Dixon Avenue and the private roadway.
- Left-turn lane warrants are projected to be met for the eastbound approach for the site access on W Main Street, and not met for the site access on W Heintz Street or Dixon Avenue.
- Right-turn lane warrants are not projected to be met for the any of the site accesses.
- Based on the preliminary analysis, traffic signal warrants are not projected to be met for any of the study intersections. Accordingly, no signalization of the unsignalized study intersections is necessary or recommended.
- All study intersections are projected to operate within ODOT and the City of Molalla standards under all analysis scenarios and the proposed development is not anticipated to add traffic to any of the critical movements where intersections are shown to have longer delays.
- Queuing analysis results show the 95th percentile queues at the study intersections can be accommodated within existing turn lanes under buildout conditions.

Appendix A – Site Information

Site Plan

Trip Generation Calculations

KERR MOLALLA PRELIMINARY PLAT

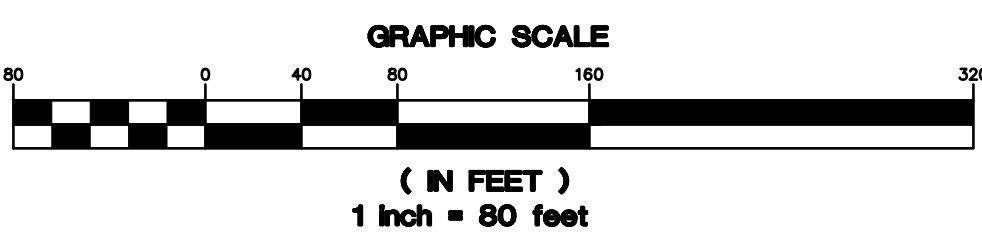
OWNER:
CASCADE CIVIL DEVELOPMENT
395 SHENANDOAH LN
WOODBURN, OR 97071

ENGINEER:
WEDEN ENGINEERING
PO BOX 3246
FERNDALE, WA 98248

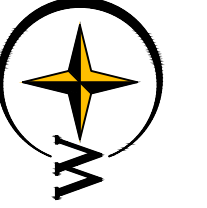
SURVEYOR:
NORTHWEST SURVEYING INC
1815 NW 169TH PL, SUITE 2090
BEAVERTON, OR 97006

PROJECT LOCATION
535 W. MAIN STREET
MOLALLA, OR 97038

ZONING CLASSIFICATION
LIGHT INDUSTRIAL, M-1 (LOTS 1-3)
HEAVY INDUSTRIAL, M-2 (LOTS 4-12)



WEDEN ENGINEERING, LLC
Civil Engineering • Planning • Project Management



2636 N. Ingham Rd., Ferndale, WA 98248
(360) 535-8800
info@wedenengineering.com

No.	REVISIONS / SUBMISSIONS	DATE

REVIEWED: CNH DRAWN: TRH
PROJECT NO.: 2309-01

PROJECT TITLE
KERR MOLALLA

DRAWING TITLE
PRELIMINARY PLAT

DATE: 2/13/2024

DRAWING No.



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: **51.500**

AM PEAK HOUR

Trip Rate: 0.74

	Enter	Exit	Total
Directional Split	88%	12%	
Trip Ends	33	5	38

PM PEAK HOUR

Trip Rate: 0.65

	Enter	Exit	Total
Directional Split	14%	86%	
Trip Ends	5	28	33

WEEKDAY

Trip Rate: 4.87

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	125	125	250

SATURDAY

Trip Rate: 0.69

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	18	18	36



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: **51.500**

AM PEAK HOUR

Trip Rate: 0.01

	Enter	Exit	Total
Directional Split	60%	40%	
Trip Ends	1	0	1

PM PEAK HOUR

Trip Rate: 0.01

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	1	0	1

WEEKDAY

Trip Rate: 0.25

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	6	6	12

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: 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: **260.000**

AM PEAK HOUR

Trip Rate: 0.74

	Enter	Exit	Total
Directional Split	88%	12%	
Trip Ends	169	23	192

PM PEAK HOUR

Trip Rate: 0.65

	Enter	Exit	Total
Directional Split	14%	86%	
Trip Ends	24	145	169

WEEKDAY

Trip Rate: 4.87

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	633	633	1,266

SATURDAY

Trip Rate: 0.69

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	90	90	180



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: **260.000**

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	2	1	3

PM PEAK HOUR

Trip Rate: 0.01

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	2	1	3

WEEKDAY

Trip Rate: 0.25

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	33	33	66

SATURDAY

Trip Rate: 0

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	NA	NA	NA

Appendix B – Volumes

Traffic Counts

Seasonal Adjustment Factor

Future Volume Growth Rate

In-Process Trips



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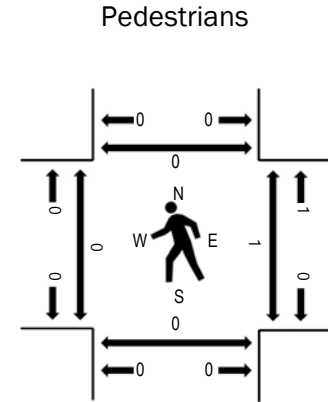
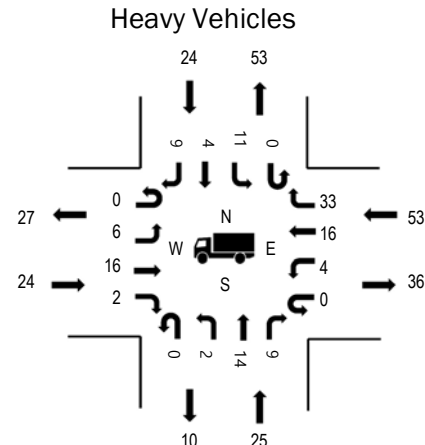
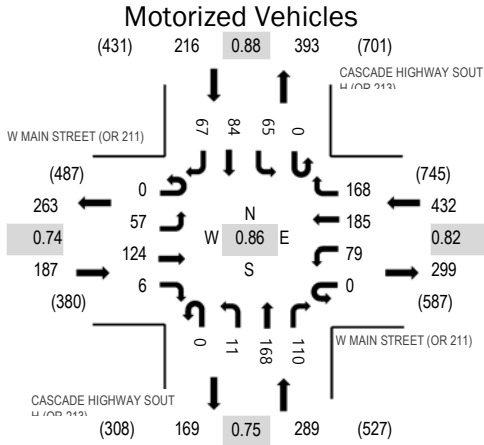
Location: 1 CASCADE HIGHWAY SOUTH (OR 213) & W MAIN STREET (OR 211) AM

Date: Thursday, December 7, 2023

Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	12.8%	0.74
WB	12.3%	0.82
NB	8.7%	0.75
SB	11.1%	0.88
All	11.2%	0.86

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				CASCADE HIGHWAY SOUTH (OR 213) Northbound				CASCADE HIGHWAY SOUTH (OR 213) 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	6	11	0	0	5	15	21	0	0	6	9	0	3	5	6	87	1,124
7:05 AM	0	6	7	0	0	8	15	11	0	1	19	6	0	4	9	8	94	1,112
7:10 AM	0	2	8	0	0	3	12	14	0	0	17	5	0	8	9	3	81	1,092
7:15 AM	0	7	15	0	0	12	21	19	0	2	11	8	0	3	4	7	109	1,085
7:20 AM	0	5	5	0	0	11	14	21	0	0	16	13	0	6	9	4	104	1,051
7:25 AM	0	3	20	0	0	1	14	19	0	0	25	12	0	10	6	2	112	1,029
7:30 AM	0	4	13	0	0	10	14	16	0	1	14	15	0	4	5	8	104	993
7:35 AM	0	4	8	1	0	7	18	10	0	3	6	5	0	4	6	6	78	965
7:40 AM	0	4	10	0	0	8	23	10	0	1	17	10	0	4	6	7	100	960
7:45 AM	0	3	1	3	0	5	17	6	0	0	7	10	0	10	16	3	81	945
7:50 AM	0	7	16	1	0	4	12	15	0	2	20	11	0	3	7	8	106	950
7:55 AM	0	6	10	1	0	5	10	6	0	1	10	6	0	6	2	5	68	930
8:00 AM	0	1	6	1	0	7	10	14	0	1	9	4	0	4	14	4	75	959
8:05 AM	0	2	10	0	0	6	10	7	0	0	15	9	0	8	3	4	74	
8:10 AM	0	4	7	5	0	7	16	11	0	0	4	6	0	9	2	3	74	
8:15 AM	0	6	8	1	0	4	8	11	0	1	10	10	0	2	6	8	75	
8:20 AM	0	9	8	1	0	4	12	10	0	2	13	10	0	6	4	3	82	
8:25 AM	0	4	11	1	0	4	16	5	0	1	10	11	0	7	4	2	76	
8:30 AM	0	2	14	0	0	2	9	7	0	0	11	6	0	11	8	6	76	
8:35 AM	0	3	11	0	0	3	14	7	0	2	10	7	0	4	5	7	73	
8:40 AM	0	4	9	0	0	7	17	8	0	2	14	8	0	5	3	8	85	
8:45 AM	0	7	7	0	0	4	10	18	0	3	9	1	0	9	8	10	86	
8:50 AM	0	10	15	1	0	5	15	5	0	0	14	7	0	2	5	7	86	
8:55 AM	0	12	13	0	0	5	6	9	0	3	13	12	0	11	9	4	97	
Count Total	0	121	243	16	0	137	328	280	0	26	300	201	0	143	155	133	2,083	
Peak Hour	0	57	124	6	0	79	185	168	0	11	168	110	0	65	84	67	1,124	

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	1	1	2	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	3	0	4	7	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	1	1	5	3	10	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	2	1	5	0	8	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	2	2	4	4	12	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	6	3	8	2	19	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	1	2	11	1	15	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	1	1	8	1	11	7:35 AM	0	0	0	0	0	7:35 AM	0	0	1	0	1
7:40 AM	2	3	2	3	10	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	2	0	2	2	6	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	4	7	3	1	15	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	3	2	4	2	11	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	3	2	5	2	12	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	2	2	0	2	6	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	2	2	7	3	14	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	5	3	2	4	14	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	1	4	1	3	9	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	3	3	6	3	15	8:25 AM	0	0	0	0	0	8:25 AM	0	0	1	0	1
8:30 AM	2	1	1	2	6	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	1	2	4	3	10	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	0	5	2	4	11	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	2	1	4	1	8	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	6	2	5	1	14	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	2	0	4	2	8	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	53	52	94	54	253	Count Total	0	0	0	0	0	Count Total	0	0	2	0	2
Peak Hour	24	25	53	24	126	Peak Hour	0	0	0	0	0	Peak Hour	0	0	1	0	1



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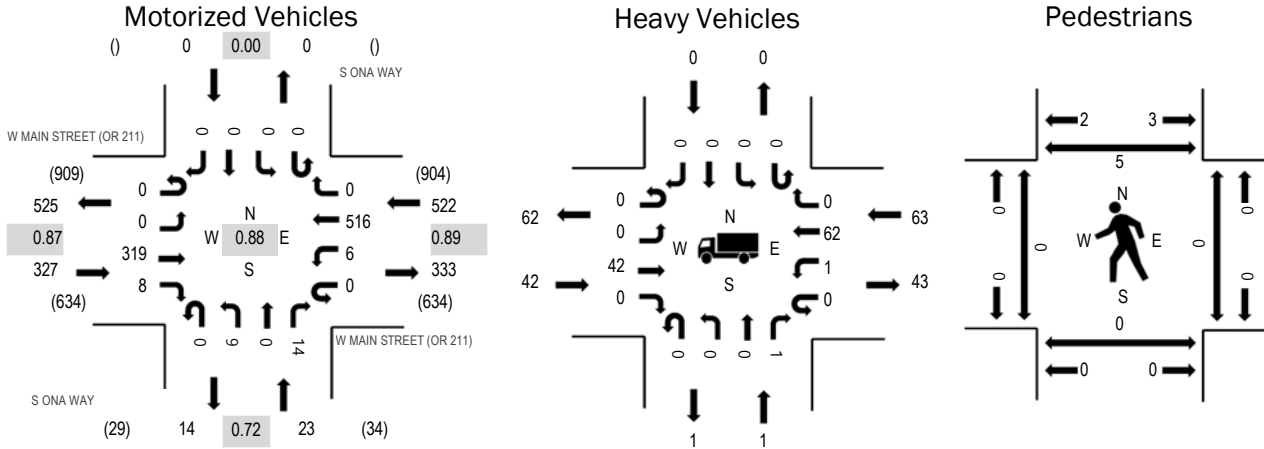
Location: 2 S ONA WAY & W MAIN STREET (OR 211) AM

Date: Thursday, December 7, 2023

Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:20 AM - 07:35 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	12.8%	0.87
WB	12.1%	0.89
NB	4.3%	0.72
SB	0.0%	0.00
All	12.2%	0.88

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				S ONA WAY Northbound				S ONA WAY 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	27	0	0	0	56	0	0	0	0	1	0	0	0	0	84	872
7:05 AM	0	0	19	1	0	0	31	0	0	1	0	1	0	0	0	0	53	839
7:10 AM	0	0	20	1	0	0	49	0	0	0	0	2	0	0	0	0	72	850
7:15 AM	0	0	25	1	0	0	48	0	0	1	0	3	0	0	0	0	78	835
7:20 AM	0	0	23	0	0	0	49	0	0	1	0	1	0	0	0	0	74	809
7:25 AM	0	0	40	0	0	1	42	0	0	0	0	1	0	0	0	0	84	795
7:30 AM	0	0	31	0	0	1	54	0	0	2	0	1	0	0	0	0	89	770
7:35 AM	0	0	23	0	0	0	40	0	0	0	0	3	0	0	0	0	66	741
7:40 AM	0	0	26	0	0	2	36	0	0	1	0	0	0	0	0	0	65	739
7:45 AM	0	0	26	2	0	0	39	0	0	2	0	0	0	0	0	0	69	736
7:50 AM	0	0	33	1	0	2	33	0	0	1	0	1	0	0	0	0	71	729
7:55 AM	0	0	26	2	0	0	39	0	0	0	0	0	0	0	0	0	67	718
8:00 AM	0	0	16	0	0	2	33	0	0	0	0	0	0	0	0	0	51	700
8:05 AM	0	0	24	1	0	1	35	0	0	2	0	1	0	0	0	0	64	
8:10 AM	0	0	25	1	0	0	31	0	0	0	0	0	0	0	0	0	57	
8:15 AM	0	0	23	0	0	1	25	0	0	3	0	0	0	0	0	0	52	
8:20 AM	0	0	26	1	0	0	32	0	0	1	0	0	0	0	0	0	60	
8:25 AM	0	0	34	0	0	0	25	0	0	0	0	0	0	0	0	0	59	
8:30 AM	0	0	30	2	0	0	28	0	0	0	0	0	0	0	0	0	60	
8:35 AM	0	0	22	0	0	0	42	0	0	0	0	0	0	0	0	0	64	
8:40 AM	0	0	22	0	0	2	38	0	0	0	0	0	0	0	0	0	62	
8:45 AM	0	0	21	1	0	0	36	0	0	3	0	1	0	0	0	0	62	
8:50 AM	0	0	28	1	0	1	30	0	0	0	0	0	0	0	0	0	60	
8:55 AM	0	0	28	1	0	0	20	0	0	0	0	0	0	0	0	0	49	
Count Total	0	0	618	16	0	13	891	0	0	18	0	16	0	0	0	0	1,572	
Peak Hour	0	0	319	8	0	6	516	0	0	9	0	14	0	0	0	0	872	

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	3	1	2	0	6	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	3	0	6	0	9	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	2	0	2	0	4	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	3	0	6	0	9	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	2	0	6	0	8	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	8	0	13	0	21	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	3	0	9	0	12	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	2	0	7	0	9	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	4	0	1	0	5	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	3	0	2	0	5	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	3	3
7:50 AM	5	0	2	0	7	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	4	0	7	0	11	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	2	2
8:00 AM	3	0	3	0	6	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	5	0	2	0	7	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	3	0	4	0	7	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	2	2
8:15 AM	7	0	2	0	9	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	3	0	3	0	6	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	5	0	6	0	11	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	3	0	2	0	5	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	3	0	6	0	9	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	3	0	2	0	5	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	3	0	6	0	9	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	4	0	3	0	7	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	1	0	5	0	6	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	85	1	107	0	193	Count Total	0	0	0	0	0	Count Total	0	0	0	7	7
Peak Hour	42	1	63	0	106	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	5	5



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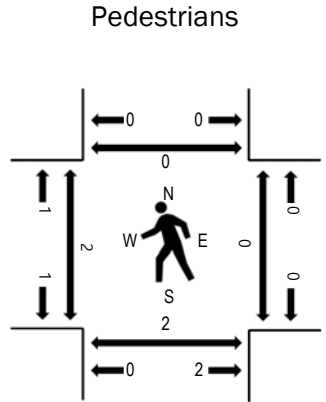
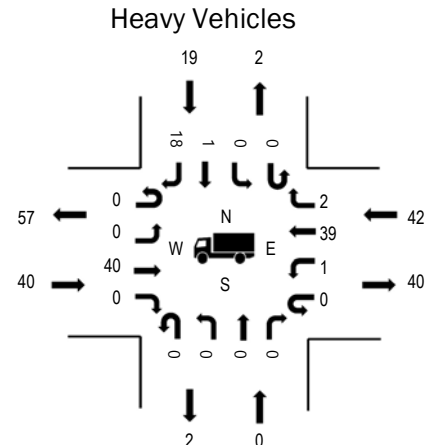
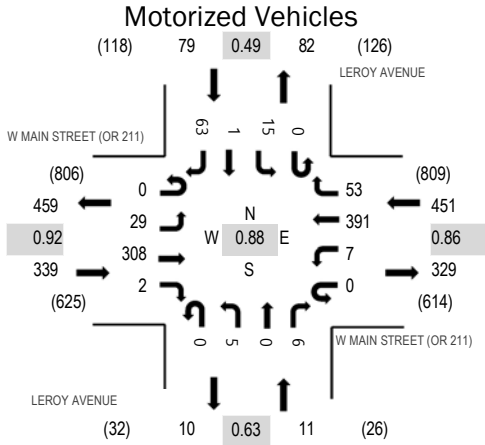
Location: 3 LEROY AVENUE & W MAIN STREET (OR 211) AM

Date: Thursday, December 7, 2023

Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	11.8%	0.92
WB	9.3%	0.86
NB	0.0%	0.63
SB	24.1%	0.49
All	11.5%	0.88

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				LEROY AVENUE Northbound				LEROY AVENUE 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	3	29	0	0	1	41	3	0	1	0	0	0	1	0	3	82	880
7:05 AM	0	2	28	0	0	0	24	4	0	1	0	2	0	0	0	8	69	848
7:10 AM	0	3	21	0	0	0	32	6	0	0	0	2	0	1	1	6	72	843
7:15 AM	0	3	26	1	0	0	37	8	0	1	0	0	0	5	0	4	85	826
7:20 AM	0	3	19	1	0	0	33	15	0	0	0	0	0	2	0	11	84	802
7:25 AM	0	6	28	0	0	0	22	8	0	0	0	0	0	4	0	13	81	769
7:30 AM	0	3	29	0	0	3	35	1	0	1	0	1	0	1	0	9	83	747
7:35 AM	0	0	26	0	0	1	40	1	0	1	0	0	0	0	0	3	72	725
7:40 AM	0	2	23	0	0	0	31	2	0	0	0	0	0	0	0	2	60	710
7:45 AM	0	1	27	0	0	1	30	0	0	0	0	0	0	0	0	2	61	716
7:50 AM	0	0	27	0	0	0	28	2	0	0	0	1	0	1	0	2	61	710
7:55 AM	0	3	25	0	0	1	38	3	0	0	0	0	0	0	0	0	70	709
8:00 AM	0	0	13	0	0	1	31	2	0	0	0	0	0	3	0	0	50	698
8:05 AM	0	2	22	2	0	1	30	1	0	0	0	0	0	0	0	6	64	
8:10 AM	0	1	24	1	0	1	22	4	0	0	0	0	0	1	0	1	55	
8:15 AM	0	1	25	1	0	2	28	1	0	2	0	0	0	0	0	1	61	
8:20 AM	0	2	18	0	0	1	27	2	0	0	0	0	0	0	0	1	51	
8:25 AM	0	0	29	1	0	2	21	0	0	0	1	2	0	2	0	1	59	
8:30 AM	0	3	31	0	0	0	25	1	0	0	0	0	0	0	0	1	61	
8:35 AM	0	1	13	0	0	0	32	3	0	1	0	1	0	0	0	6	57	
8:40 AM	0	3	23	0	0	0	28	5	0	1	0	2	0	1	0	3	66	
8:45 AM	0	0	18	0	0	2	26	4	0	0	0	1	0	1	0	3	55	
8:50 AM	0	0	27	0	0	2	26	0	0	0	1	0	0	2	1	1	60	
8:55 AM	0	2	23	0	0	3	20	4	0	1	0	2	0	1	1	2	59	
Count Total	0	44	574	7	0	22	707	80	0	10	2	14	0	26	3	89	1,578	
Peak Hour	0	29	308	2	0	7	391	53	0	5	0	6	0	15	1	63	880	

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	0	0	0	5	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	3	0	5	0	8	7:05 AM	0	0	0	0	0	7:05 AM	1	0	0	0	1
7:10 AM	2	0	2	2	6	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	3	0	6	0	9	7:15 AM	0	0	0	0	0	7:15 AM	0	1	0	0	1
7:20 AM	1	0	3	2	6	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	7	0	4	8	19	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	2	0	4	6	12	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	1	1
7:35 AM	2	0	6	1	9	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	5	0	2	0	7	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	3	0	3	0	6	7:45 AM	0	0	0	0	0	7:45 AM	0	1	0	0	1
7:50 AM	2	0	3	0	5	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	5	0	4	0	9	7:55 AM	0	0	0	0	0	7:55 AM	1	0	0	0	1
8:00 AM	3	0	3	0	6	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	4	0	3	0	7	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	2	2
8:10 AM	2	0	4	1	7	8:10 AM	0	0	0	0	0	8:10 AM	0	1	0	0	1
8:15 AM	8	0	4	0	12	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	3	0	1	0	4	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	2	0	5	1	8	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	4	0	3	0	7	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	1	1
8:35 AM	1	0	6	1	8	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	2	0	3	0	5	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	1	0	7	0	8	8:45 AM	0	0	0	0	0	8:45 AM	0	1	0	0	1
8:50 AM	4	0	2	0	6	8:50 AM	0	0	0	0	0	8:50 AM	0	2	0	0	2
8:55 AM	0	1	3	0	4	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	74	1	86	22	183	Count Total	0	0	0	0	0	Count Total	2	6	0	4	12
Peak Hour	40	0	42	19	101	Peak Hour	0	0	0	0	0	Peak Hour	2	2	0	1	5



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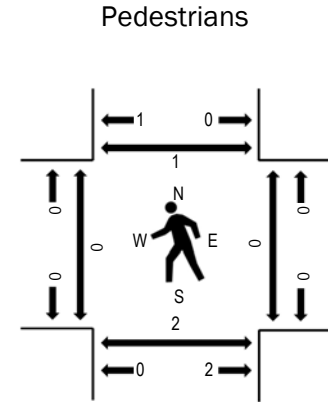
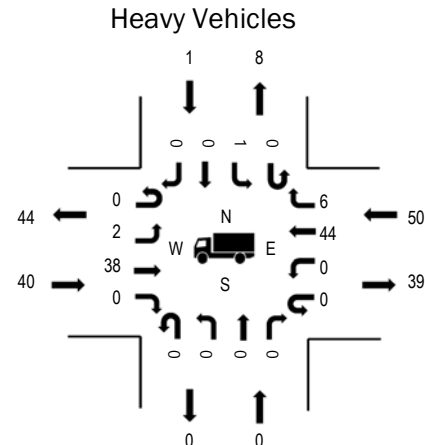
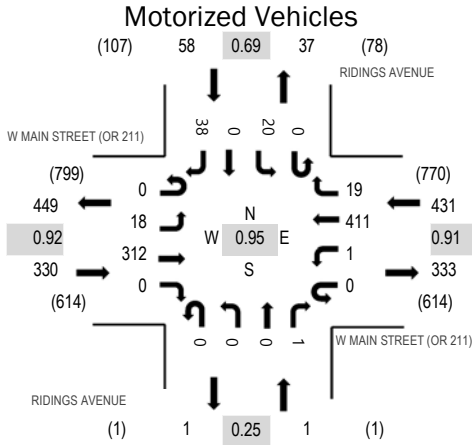
Location: 4 RIDINGS AVENUE & W MAIN STREET (OR 211) AM

Date: Thursday, December 7, 2023

Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:10 AM - 07:25 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	12.1%	0.92
WB	11.6%	0.91
NB	0.0%	0.25
SB	1.7%	0.69
All	11.1%	0.95

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				RIDINGS AVENUE Northbound				RIDINGS AVENUE 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	4	27	0	0	0	42	1	0	0	0	0	0	2	0	3	79	820
7:05 AM	0	1	30	0	0	0	25	2	0	0	0	0	0	1	0	2	61	797
7:10 AM	0	1	22	0	0	0	30	1	0	0	0	0	0	1	0	6	61	794
7:15 AM	0	0	33	0	0	0	44	3	0	0	0	0	0	4	0	3	87	783
7:20 AM	0	1	19	0	0	0	40	0	0	0	0	0	0	3	0	4	67	755
7:25 AM	0	3	25	0	0	0	27	1	0	0	0	0	0	1	0	3	60	738
7:30 AM	0	1	35	0	0	0	36	4	0	0	0	1	0	1	0	5	83	736
7:35 AM	0	1	25	0	0	0	41	0	0	0	0	0	0	2	0	2	71	709
7:40 AM	0	2	20	0	0	0	33	0	0	0	0	0	0	2	0	1	58	690
7:45 AM	0	2	22	0	0	0	27	3	0	0	0	0	0	2	0	3	59	701
7:50 AM	0	1	32	0	0	1	30	0	0	0	0	0	0	1	0	2	67	696
7:55 AM	0	1	22	0	0	0	36	4	0	0	0	0	0	0	0	4	67	686
8:00 AM	0	0	18	0	0	0	32	5	0	0	0	0	0	1	0	0	56	672
8:05 AM	0	1	21	0	0	0	31	0	0	0	0	0	0	1	0	4	58	
8:10 AM	0	3	21	0	0	0	21	1	0	0	0	0	0	1	0	3	50	
8:15 AM	0	1	24	0	0	0	25	3	0	0	0	0	0	0	0	6	59	
8:20 AM	0	2	14	0	0	0	26	2	0	0	0	0	0	0	0	6	50	
8:25 AM	0	2	32	0	0	0	18	1	0	0	0	0	0	1	0	4	58	
8:30 AM	0	0	28	0	0	0	25	1	0	0	0	0	0	1	0	1	56	
8:35 AM	0	2	11	0	0	0	33	3	0	0	0	0	0	2	0	1	52	
8:40 AM	0	2	26	0	0	0	33	4	0	0	0	0	0	2	0	2	69	
8:45 AM	0	2	16	0	0	0	32	2	0	0	0	0	0	1	0	1	54	
8:50 AM	0	0	27	0	0	0	23	3	0	0	0	0	0	0	0	4	57	
8:55 AM	0	1	30	0	0	0	15	0	0	0	0	0	0	3	0	4	53	
Count Total	0	34	580	0	0	1	725	44	0	0	0	1	0	33	0	74	1,492	
Peak Hour	0	18	312	0	0	1	411	19	0	0	0	1	0	20	0	38	820	

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	4	0	0	0	4	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	3	0	6	0	9	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	2	0	3	0	5	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	3	0	6	0	9	7:15 AM	0	0	0	0	0	7:15 AM	0	1	0	0	1
7:20 AM	1	0	4	0	5	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	5	0	5	0	10	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	4	0	6	1	11	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	2	0	7	0	9	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	1	1
7:40 AM	5	0	2	0	7	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	1	0	4	0	5	7:45 AM	0	0	0	0	0	7:45 AM	0	1	0	0	1
7:50 AM	4	0	3	0	7	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	6	0	4	0	10	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	1	1
8:00 AM	3	0	3	0	6	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	5	0	3	0	8	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	1	1
8:10 AM	2	0	3	0	5	8:10 AM	0	0	0	0	0	8:10 AM	0	1	0	0	1
8:15 AM	8	0	5	0	13	8:15 AM	0	0	0	0	0	8:15 AM	0	2	0	0	2
8:20 AM	2	0	2	0	4	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	3	0	6	0	9	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	3	0	3	0	6	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	1	1
8:35 AM	2	0	6	0	8	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	3	0	3	0	6	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	1	0	6	0	7	8:45 AM	0	0	1	0	1	8:45 AM	0	1	0	1	2
8:50 AM	2	0	2	0	4	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	2	0	1	0	3	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	76	0	93	1	170	Count Total	0	0	1	0	1	Count Total	0	6	0	5	11
Peak Hour	40	0	50	1	91	Peak Hour	0	0	0	0	0	Peak Hour	0	2	0	2	4



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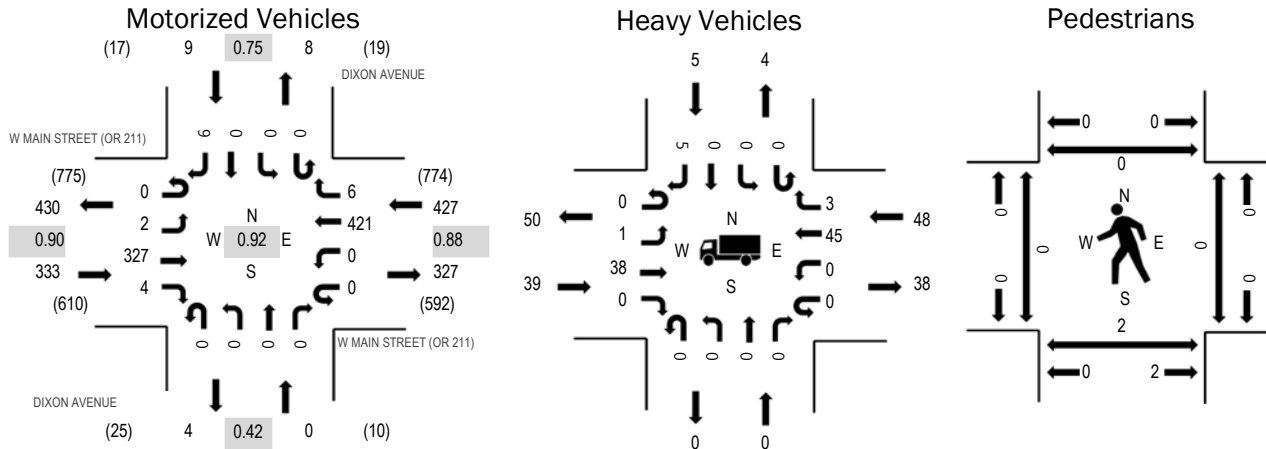
Location: 5 DIXON AVENUE & W MAIN STREET (OR 211) AM

Date: Thursday, December 7, 2023

Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	11.7%	0.90
WB	11.2%	0.88
NB	0.0%	0.42
SB	55.6%	0.75
All	12.0%	0.92

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				DIXON AVENUE Northbound				DIXON AVENUE 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	30	0	0	0	40	0	0	0	0	0	0	0	0	0	1	71	769
7:05 AM	0	0	27	1	0	0	27	0	0	0	0	0	0	0	0	0	1	56	757
7:10 AM	0	0	20	0	0	0	34	1	0	0	0	0	0	0	0	0	0	55	751
7:15 AM	0	0	37	0	0	0	44	0	0	0	0	0	0	0	0	0	0	81	738
7:20 AM	0	1	24	0	0	0	42	0	0	0	0	0	0	0	0	0	0	67	708
7:25 AM	0	0	20	1	0	0	30	0	0	0	0	0	0	0	0	0	0	51	686
7:30 AM	0	0	38	0	0	0	38	2	0	0	0	0	0	0	0	0	1	79	686
7:35 AM	0	0	30	0	0	0	44	0	0	0	0	0	0	0	0	0	2	76	667
7:40 AM	0	1	24	0	0	0	30	0	0	0	0	0	0	0	0	0	0	55	637
7:45 AM	0	0	18	2	0	0	29	0	0	0	0	0	0	0	0	0	2	51	654
7:50 AM	0	0	36	0	0	0	30	1	0	0	0	0	0	0	0	0	0	67	655
7:55 AM	0	0	23	0	0	0	33	2	0	0	0	0	0	0	0	0	2	60	641
8:00 AM	0	1	19	0	0	0	37	0	0	0	0	0	0	1	0	1	1	59	642
8:05 AM	0	0	20	0	0	0	29	1	0	0	0	0	0	0	0	0	0	50	
8:10 AM	0	0	21	1	0	0	19	0	0	0	0	0	0	0	0	1	1	42	
8:15 AM	0	0	20	1	0	1	29	0	0	0	0	0	0	0	0	0	0	51	
8:20 AM	0	0	14	1	0	0	27	2	0	0	0	0	0	0	0	1	1	45	
8:25 AM	0	0	32	1	0	0	17	0	0	0	0	0	0	0	0	1	1	51	
8:30 AM	0	1	29	1	0	1	25	0	0	2	0	1	0	0	0	0	0	60	
8:35 AM	0	0	10	1	0	0	33	0	0	0	0	1	0	0	0	1	1	46	
8:40 AM	0	1	23	2	0	2	38	2	0	1	0	1	0	1	0	1	1	72	
8:45 AM	0	0	19	1	0	0	30	1	0	1	0	0	0	0	0	0	0	52	
8:50 AM	0	0	23	3	0	0	25	0	0	0	0	2	0	0	0	0	0	53	
8:55 AM	0	1	27	4	0	1	26	1	0	0	0	1	0	0	0	0	0	61	
Count Total	0	6	584	20	0	5	756	13	0	4	0	6	0	2	0	15	1,411		
Peak Hour	0	2	327	4	0	0	421	6	0	0	0	0	0	0	0	9	769		

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	4	0	0	0	4	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	2	0	6	0	8	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	3	0	3	0	6	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	3	0	7	0	10	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	2	0	3	0	5	7:20 AM	0	0	0	0	0	7:20 AM	0	1	0	0	1
7:25 AM	3	0	6	0	9	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	3	0	5	0	8	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	3	0	6	1	10	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	5	0	2	0	7	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	1	0	4	2	7	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	4	0	3	0	7	7:50 AM	0	0	0	0	0	7:50 AM	0	1	0	0	1
7:55 AM	6	0	3	2	11	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	3	0	2	2	7	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	4	0	4	0	8	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	1	0	2	1	4	8:10 AM	0	0	0	0	0	8:10 AM	0	1	0	1	2
8:15 AM	6	0	5	0	11	8:15 AM	0	0	0	0	0	8:15 AM	0	2	0	0	2
8:20 AM	3	0	4	0	7	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	3	0	4	1	8	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	3	3
8:30 AM	4	0	3	0	7	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	1	0	5	1	7	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	3	1	7	1	12	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	1	0	4	0	5	8:45 AM	0	0	1	0	1	8:45 AM	0	1	0	1	2
8:50 AM	2	0	2	0	4	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	2	0	1	0	3	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	72	1	91	11	175	Count Total	0	0	1	0	1	Count Total	0	6	0	5	11
Peak Hour	39	0	48	5	92	Peak Hour	0	0	0	0	0	Peak Hour	0	2	0	0	2



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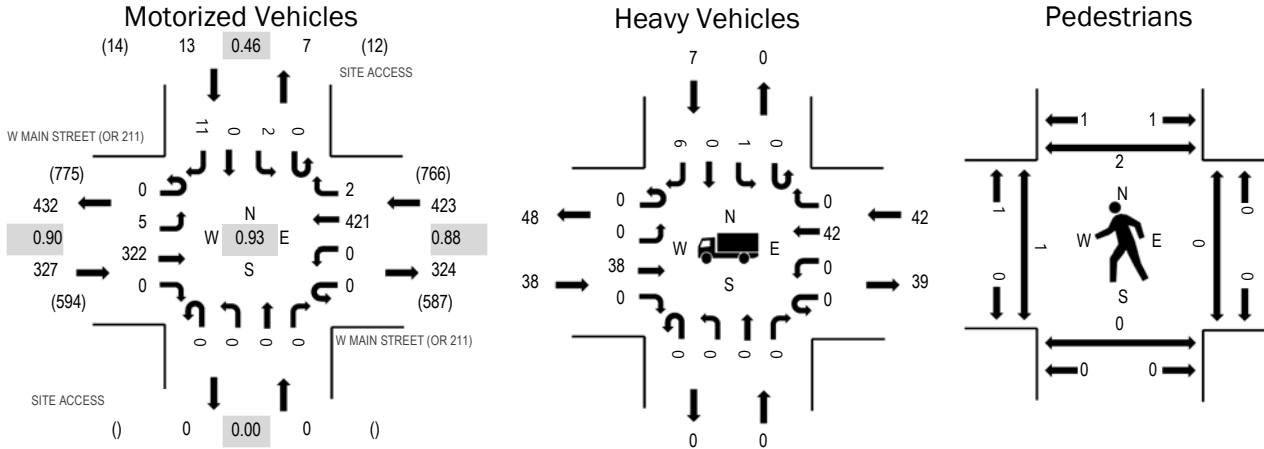
Location: 6 SITE ACCESS & W MAIN STREET (OR 211) AM

Date: Thursday, December 7, 2023

Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	11.6%	0.90
WB	9.9%	0.88
NB	0.0%	0.00
SB	53.8%	0.46
All	11.4%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				SITE ACCESS Northbound				SITE ACCESS 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	4	26	0	0	0	39	0	0	0	0	0	0	0	0	0	69	763
7:05 AM	0	0	27	0	0	0	29	0	0	0	0	0	0	0	0	0	56	751
7:10 AM	0	0	21	0	0	0	34	0	0	0	0	0	0	0	0	0	55	743
7:15 AM	0	1	32	0	0	0	46	0	0	0	0	0	0	1	0	1	81	728
7:20 AM	0	0	27	0	0	0	40	0	0	0	0	0	0	0	0	1	68	700
7:25 AM	0	0	21	0	0	0	29	0	0	0	0	0	0	0	0	2	52	672
7:30 AM	0	0	37	0	0	0	36	1	0	0	0	0	0	0	0	3	77	672
7:35 AM	0	0	31	0	0	0	43	0	0	0	0	0	0	0	0	2	76	655
7:40 AM	0	0	23	0	0	0	30	0	0	0	0	0	0	0	0	0	53	622
7:45 AM	0	0	17	0	0	0	29	0	0	0	0	0	0	0	0	1	47	640
7:50 AM	0	0	38	0	0	0	29	1	0	0	0	0	0	0	0	0	68	643
7:55 AM	0	0	22	0	0	0	37	0	0	0	0	0	0	1	0	1	61	621
8:00 AM	0	0	20	0	0	0	37	0	0	0	0	0	0	0	0	0	57	611
8:05 AM	0	1	18	0	0	0	29	0	0	0	0	0	0	0	0	0	48	
8:10 AM	0	1	20	0	0	0	19	0	0	0	0	0	0	0	0	0	40	
8:15 AM	0	0	22	0	0	0	31	0	0	0	0	0	0	0	0	0	53	
8:20 AM	0	0	11	0	0	0	29	0	0	0	0	0	0	0	0	0	40	
8:25 AM	0	0	34	0	0	0	18	0	0	0	0	0	0	0	0	0	52	
8:30 AM	0	1	30	0	0	0	28	1	0	0	0	0	0	0	0	0	60	
8:35 AM	0	0	10	0	0	0	33	0	0	0	0	0	0	0	0	0	43	
8:40 AM	0	1	27	0	0	0	42	0	0	0	0	0	0	0	0	1	71	
8:45 AM	0	0	19	0	0	0	31	0	0	0	0	0	0	0	0	0	50	
8:50 AM	0	0	23	0	0	0	23	0	0	0	0	0	0	0	0	0	46	
8:55 AM	0	0	29	0	0	0	22	0	0	0	0	0	0	0	0	0	51	
Count Total	0	9	585	0	0	0	763	3	0	0	0	0	0	2	0	12	1,374	
Peak Hour	0	5	322	0	0	0	421	2	0	0	0	0	0	2	0	11	763	

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	4	0	0	0	4	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	2	0	7	0	9	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	3	0	2	0	5	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	3	0	6	2	11	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	2	0	4	0	6	7:20 AM	0	0	0	0	0	7:20 AM	1	0	0	1	2
7:25 AM	3	0	3	2	8	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	3	0	5	1	9	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	3	0	4	1	8	7:35 AM	1	0	0	0	1	7:35 AM	0	0	0	0	0
7:40 AM	4	0	2	0	6	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	1	0	3	1	5	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	4	0	3	0	7	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	6	0	3	0	9	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	1	1
8:00 AM	4	0	3	0	7	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	3	0	3	0	6	8:05 AM	0	0	0	0	0	8:05 AM	0	1	0	0	1
8:10 AM	2	0	2	0	4	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	1	1
8:15 AM	6	0	5	0	11	8:15 AM	0	0	0	0	0	8:15 AM	0	2	0	0	2
8:20 AM	2	0	4	0	6	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	3	0	4	0	7	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	3	3
8:30 AM	4	0	3	0	7	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	0	0	6	0	6	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	6	0	6	0	12	8:40 AM	0	0	0	0	0	8:40 AM	0	1	0	0	1
8:45 AM	1	0	5	0	6	8:45 AM	0	0	1	0	1	8:45 AM	0	0	0	1	1
8:50 AM	2	0	1	0	3	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	2	0	1	0	3	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	73	0	85	7	165	Count Total	1	0	1	0	2	Count Total	1	4	0	7	12
Peak Hour	38	0	42	7	87	Peak Hour	1	0	0	0	1	Peak Hour	1	0	0	2	3



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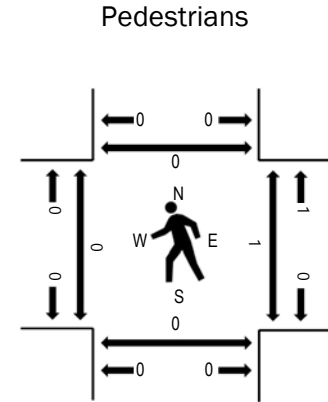
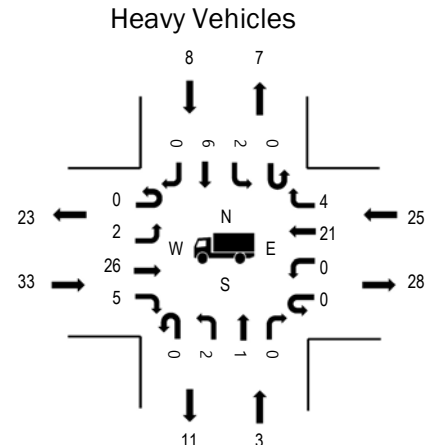
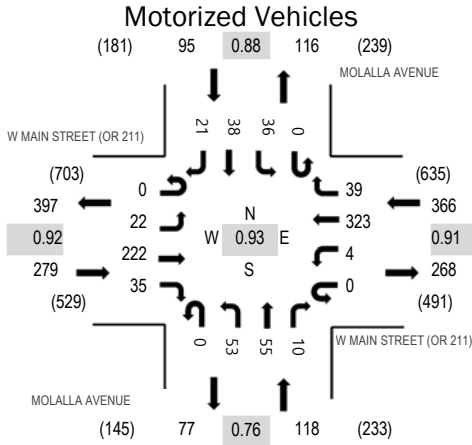
Location: 7 MOLALLA AVENUE & W MAIN STREET (OR 211) AM

Date: Thursday, December 7, 2023

Peak Hour: 07:10 AM - 08:10 AM

Peak 15-Minutes: 07:20 AM - 07:35 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	11.8%	0.92
WB	6.8%	0.91
NB	2.5%	0.76
SB	8.4%	0.88
All	8.0%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				MOLALLA AVENUE Northbound				MOLALLA AVENUE 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	3	16	3	0	0	23	1	0	8	1	0	0	2	3	2	62	844
7:05 AM	0	4	23	0	0	0	18	1	0	7	6	2	0	2	1	1	65	850
7:10 AM	0	3	19	2	0	1	25	0	0	6	5	0	0	4	2	0	67	858
7:15 AM	0	2	24	2	0	0	34	2	0	6	4	2	0	2	1	0	79	840
7:20 AM	0	2	22	1	0	0	24	7	0	7	5	1	0	3	5	1	78	820
7:25 AM	0	1	14	2	0	1	21	2	0	8	7	0	0	6	2	4	68	789
7:30 AM	0	3	29	5	0	0	29	5	0	4	1	1	0	2	2	4	85	785
7:35 AM	0	1	21	2	0	0	31	2	0	4	0	1	0	4	2	4	72	759
7:40 AM	0	2	16	1	0	0	21	1	0	3	5	0	0	4	2	1	56	747
7:45 AM	0	2	12	3	0	1	22	2	0	3	4	0	0	3	2	1	55	760
7:50 AM	0	2	21	7	0	0	30	4	0	1	5	1	0	1	6	2	80	764
7:55 AM	0	1	20	4	0	1	28	6	0	6	3	2	0	3	3	0	77	740
8:00 AM	0	2	12	1	0	0	25	5	0	4	6	1	0	2	8	2	68	734
8:05 AM	0	1	12	5	0	0	33	3	0	1	10	1	0	2	3	2	73	
8:10 AM	0	2	12	3	0	0	12	6	0	2	4	0	0	3	4	1	49	
8:15 AM	0	1	17	1	0	0	19	4	0	4	3	2	0	3	2	3	59	
8:20 AM	0	1	6	0	0	0	20	0	0	3	3	2	0	2	6	4	47	
8:25 AM	0	3	26	3	0	0	18	2	0	1	6	0	0	1	4	0	64	
8:30 AM	0	2	16	4	0	0	16	5	0	5	5	1	0	1	3	1	59	
8:35 AM	0	3	12	4	0	1	21	2	0	3	7	0	0	3	1	3	60	
8:40 AM	0	1	18	6	0	0	23	6	0	4	2	1	0	1	0	7	69	
8:45 AM	0	1	11	2	0	0	20	3	0	8	7	1	0	1	3	2	59	
8:50 AM	0	1	16	2	0	1	18	5	0	2	4	1	0	4	2	0	56	
8:55 AM	0	6	14	7	0	1	19	4	0	2	8	0	0	3	1	6	71	
Count Total	0	50	409	70	0	7	550	78	0	102	111	20	0	62	68	51	1,578	
Peak Hour	0	22	222	35	0	4	323	39	0	53	55	10	0	36	38	21	858	

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	1	0	0	0	1	7:00 AM	0	0	0	0	0	7:00 AM	0	0	1	0	1
7:05 AM	2	1	3	0	6	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	4	0	1	0	5	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	2	0	4	0	6	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	1	0	3	1	5	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	1	1	1	1	4	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	6	0	3	0	9	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	2	0	3	0	5	7:35 AM	0	0	0	0	0	7:35 AM	0	0	1	0	1
7:40 AM	1	0	0	0	1	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	1	0	3	0	4	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	4	0	3	0	7	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	6	1	1	1	9	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	2	0	1	3	6	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	3	1	2	2	8	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	1	1	1	1	4	8:10 AM	0	0	0	0	0	8:10 AM	0	2	4	0	6
8:15 AM	2	1	3	1	7	8:15 AM	0	0	0	0	0	8:15 AM	0	0	2	1	3
8:20 AM	2	1	3	5	11	8:20 AM	0	0	0	0	0	8:20 AM	0	1	0	2	3
8:25 AM	3	2	2	2	9	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	2	1	2	0	5	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	3	0	1	1	5	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	3	0	5	0	8	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	1	1	3	1	6	8:45 AM	0	0	1	0	1	8:45 AM	0	0	0	0	0
8:50 AM	2	1	2	0	5	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	3	0	3	0	6	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	1	1
Count Total	58	12	53	19	142	Count Total	0	0	1	0	1	Count Total	0	3	8	4	15
Peak Hour	33	3	25	8	69	Peak Hour	0	0	0	0	0	Peak Hour	0	0	1	0	1



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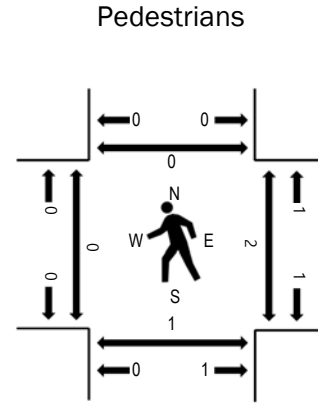
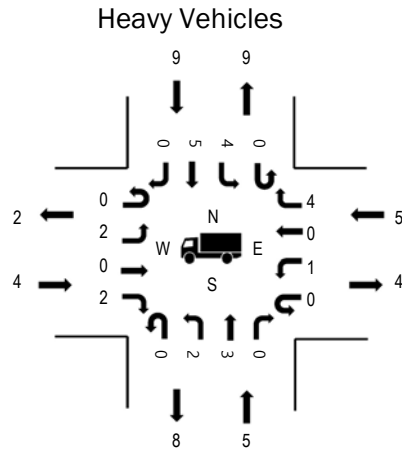
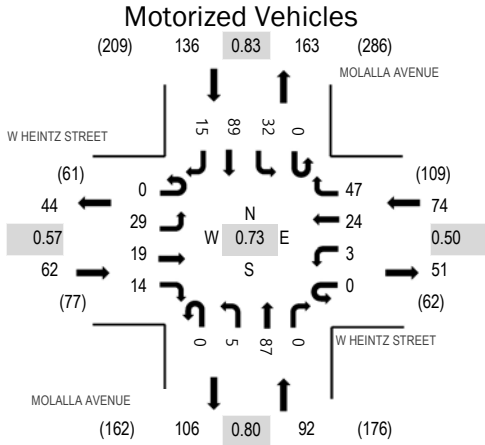
Location: 8 MOLALLA AVENUE & W HEINTZ STREET AM

Date: Thursday, December 7, 2023

Peak Hour: 07:50 AM - 08:50 AM

Peak 15-Minutes: 08:10 AM - 08:25 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	6.5%	0.57
WB	6.8%	0.50
NB	5.4%	0.80
SB	6.6%	0.83
All	6.3%	0.73

Traffic Counts - Motorized Vehicles

Interval Start Time	W HEINTZ STREET Eastbound				W HEINTZ STREET Westbound				MOLALLA AVENUE Northbound				MOLALLA AVENUE 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	1	0	0	0	0	0	2	0	0	4	0	0	2	2	0	11	215
7:05 AM	0	1	0	0	0	0	0	3	0	0	11	0	0	1	2	2	20	221
7:10 AM	0	3	0	0	0	0	0	3	0	0	9	0	0	1	2	2	20	231
7:15 AM	0	2	0	0	0	0	1	2	0	1	3	0	0	1	4	1	15	248
7:20 AM	0	1	0	0	0	0	0	1	0	0	4	0	0	0	5	0	11	268
7:25 AM	0	1	0	1	0	0	1	3	0	0	8	0	0	0	4	0	18	310
7:30 AM	0	0	0	0	0	0	0	2	0	0	6	0	0	0	1	0	9	328
7:35 AM	0	0	0	0	0	0	0	2	0	0	8	0	0	0	2	0	12	343
7:40 AM	0	0	0	0	0	0	2	1	0	1	7	0	0	1	4	0	16	354
7:45 AM	0	0	0	0	0	0	1	4	0	0	9	0	0	2	5	0	21	363
7:50 AM	0	5	0	0	0	0	1	4	0	0	7	0	0	1	9	2	29	364
7:55 AM	0	3	0	0	0	1	1	4	0	0	10	0	0	3	10	1	33	361
8:00 AM	0	2	0	1	0	0	0	2	0	0	6	0	0	3	3	0	17	356
8:05 AM	0	4	1	0	0	0	2	4	0	0	9	0	0	0	10	0	30	
8:10 AM	0	5	4	3	0	0	3	8	0	1	8	0	0	0	2	3	37	
8:15 AM	0	2	3	2	0	0	6	5	0	1	10	0	0	2	3	1	35	
8:20 AM	0	2	4	2	0	0	7	10	0	1	12	0	0	3	10	2	53	
8:25 AM	0	2	3	2	0	0	4	3	0	1	6	0	0	3	10	2	36	
8:30 AM	0	1	2	0	0	0	0	1	0	0	8	0	0	3	7	2	24	
8:35 AM	0	0	1	1	0	1	0	2	0	1	2	0	0	3	10	2	23	
8:40 AM	0	3	0	1	0	1	0	3	0	0	4	0	0	5	8	0	25	
8:45 AM	0	0	1	2	0	0	0	1	0	0	5	0	0	6	7	0	22	
8:50 AM	0	1	0	1	0	0	0	4	0	0	6	0	0	1	10	3	26	
8:55 AM	0	2	1	0	0	0	1	2	0	0	7	0	0	1	13	1	28	
Count Total	0	41	20	16	0	3	30	76	0	7	169	0	0	42	143	24	571	
Peak Hour	0	29	19	14	0	3	24	47	0	5	87	0	0	32	89	15	364	

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	1	0	1	2	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	0	1	0	1	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	1	0	0	3	4	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	1	1	1	3	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	0	0	2	2	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	1	0	0	1	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	3	0	0	3	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	1	0	0	1	2	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	1	0	1	1	3	7:55 AM	0	0	0	0	0	7:55 AM	0	0	1	0	1
8:00 AM	0	1	0	0	1	8:00 AM	0	0	1	0	1	8:00 AM	0	1	0	1	2
8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	0	1	0	0	1	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	0	0	1	1	2	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	1	3	1	5	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	3	3	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0	8:30 AM	0	1	1	0	2
8:35 AM	1	2	0	1	4	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	1	0	0	0	1	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	2	0	1	3	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	0	0	0	2	2	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	5	13	7	20	45	Count Total	0	0	1	0	1	Count Total	0	2	2	1	5
Peak Hour	4	5	5	9	23	Peak Hour	0	0	1	0	1	Peak Hour	0	2	2	1	5



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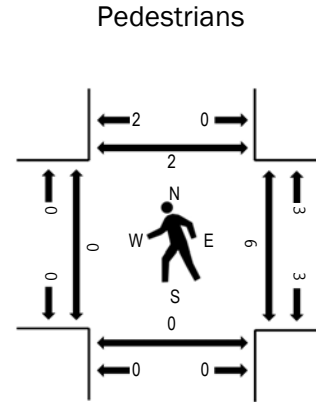
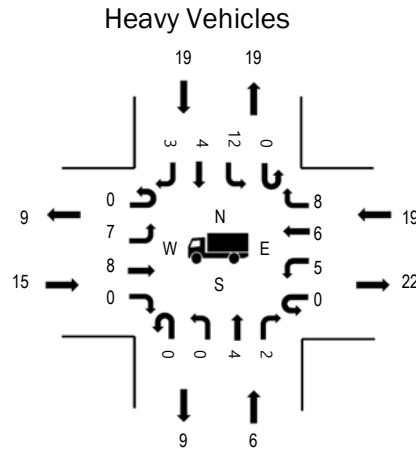
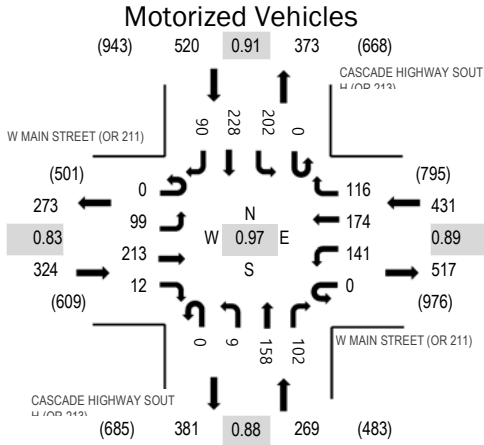
Location: 1 CASCADE HIGHWAY SOUTH (OR 213) & W MAIN STREET (OR 211) PM

Date: Thursday, December 7, 2023

Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:35 PM - 04:50 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.6%	0.83
WB	4.4%	0.89
NB	2.2%	0.88
SB	3.7%	0.91
All	3.8%	0.97

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				CASCADE HIGHWAY SOUTH (OR 213) Northbound				CASCADE HIGHWAY SOUTH (OR 213) 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	15	22	0	0	14	16	8	0	1	18	6	0	15	15	11	141	1,544
4:05 PM	0	5	18	1	0	12	11	9	0	1	11	5	0	14	23	8	118	1,535
4:10 PM	0	7	33	1	0	14	17	10	0	1	12	6	0	10	19	4	134	1,542
4:15 PM	0	7	7	1	0	18	11	5	0	1	16	6	0	29	21	8	130	1,528
4:20 PM	0	6	21	1	0	7	8	7	0	0	12	14	0	13	28	8	125	1,524
4:25 PM	0	18	17	1	0	17	18	13	0	1	14	11	0	14	9	5	138	1,524
4:30 PM	0	8	13	0	0	9	14	13	0	0	10	7	0	17	15	6	112	1,503
4:35 PM	0	7	17	0	0	12	12	15	0	1	15	9	0	18	25	10	141	1,497
4:40 PM	0	8	15	1	0	7	20	11	0	0	14	6	0	18	20	7	127	1,447
4:45 PM	0	7	17	3	0	17	12	10	0	1	9	11	0	19	16	7	129	1,430
4:50 PM	0	8	12	3	0	6	11	6	0	1	14	10	0	19	24	11	125	1,381
4:55 PM	0	3	21	0	0	8	24	9	0	1	13	11	0	16	13	5	124	1,333
5:00 PM	0	1	17	1	0	11	10	5	0	2	16	10	0	24	29	6	132	1,286
5:05 PM	0	13	18	0	0	11	22	13	0	1	8	5	0	15	14	5	125	
5:10 PM	0	6	21	0	0	14	15	9	0	3	12	8	0	13	11	8	120	
5:15 PM	0	14	18	2	0	16	15	10	0	1	14	11	0	8	11	6	126	
5:20 PM	0	12	24	1	0	8	18	3	0	0	4	5	0	15	27	8	125	
5:25 PM	0	3	18	1	0	8	17	16	0	0	18	5	0	13	14	4	117	
5:30 PM	0	3	16	1	0	6	15	10	0	3	10	7	0	11	18	6	106	
5:35 PM	0	6	15	0	0	13	12	7	0	0	11	3	0	14	6	4	91	
5:40 PM	0	6	21	0	0	8	11	8	0	1	9	7	0	24	14	1	110	
5:45 PM	0	2	6	0	0	5	6	9	0	0	6	10	0	12	19	5	80	
5:50 PM	0	6	14	3	0	4	7	5	0	0	7	4	0	9	14	4	77	
5:55 PM	0	1	15	0	0	3	7	7	0	1	5	7	0	16	11	4	77	
Count Total	0	172	416	21	0	248	329	218	0	21	278	184	0	376	416	151	2,830	
Peak Hour	0	99	213	12	0	141	174	116	0	9	158	102	0	202	228	90	1,544	

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	1	3	2	8	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	1	1
4:05 PM	1	0	3	2	6	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	2	0	0	1	3	4:10 PM	0	0	0	0	0	4:10 PM	0	0	1	0	1
4:15 PM	1	0	1	3	5	4:15 PM	0	0	0	0	0	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	0	3	1	5	4:25 PM	0	0	0	0	0	4:25 PM	0	0	1	1	2
4:30 PM	1	2	2	3	8	4:30 PM	0	0	0	0	0	4:30 PM	0	0	2	0	2
4:35 PM	1	1	2	1	5	4:35 PM	0	0	0	0	0	4:35 PM	0	0	2	0	2
4:40 PM	1	1	0	1	3	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
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	1	0	1	1	3	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	1	0	2	3	6	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	1	5	1	1	8	5:00 PM	0	0	0	0	0	5:00 PM	0	0	1	0	1
5:05 PM	1	0	0	1	2	5:05 PM	0	0	0	0	0	5:05 PM	0	0	1	0	1
5:10 PM	2	1	4	2	9	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	1	3	2	6	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	2	0	2	2	6	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	3	3	2	1	9	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	1	1	1	3	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	2	1	1	1	5	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	1	0	0	3	4	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	2	0	2	0	4	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	1	0	1	2	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	2	0	1	3	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	29	21	35	35	120	Count Total	0	0	0	0	0	Count Total	0	0	8	2	10
Peak Hour	15	6	19	19	59	Peak Hour	0	0	0	0	0	Peak Hour	0	0	6	2	8



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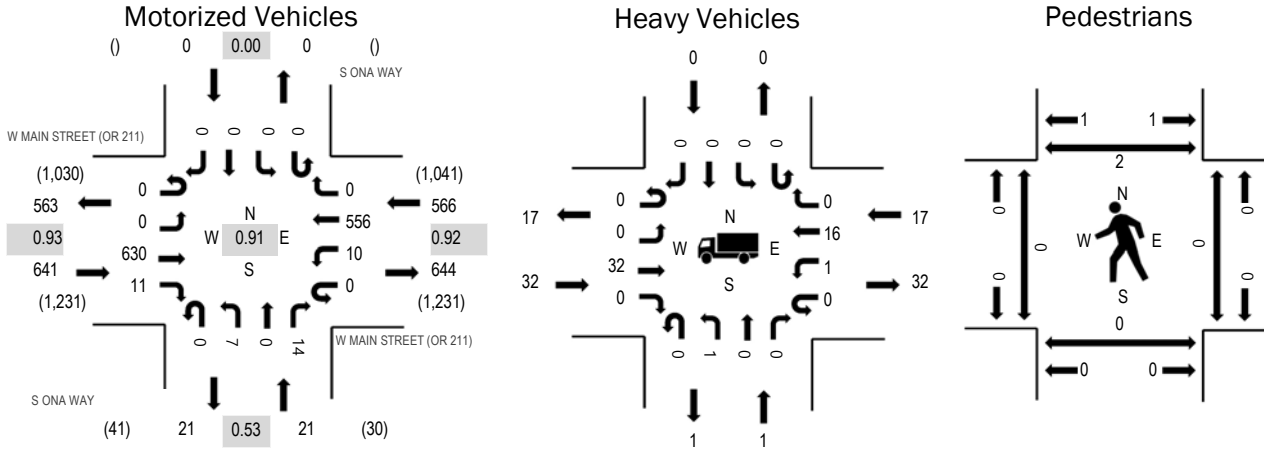
Location: 2 S ONA WAY & W MAIN STREET (OR 211) PM

Date: Thursday, December 7, 2023

Peak Hour: 04:10 PM - 05:10 PM

Peak 15-Minutes: 04:55 PM - 05:10 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	5.0%	0.93
WB	3.0%	0.92
NB	4.8%	0.53
SB	0.0%	0.00
All	4.1%	0.91

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				S ONA WAY Northbound				S ONA WAY 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	58	1	0	3	44	0	0	0	0	0	0	0	0	0	106	1,206
4:05 PM	0	0	44	0	0	0	46	0	0	0	0	1	0	0	0	0	91	1,211
4:10 PM	0	0	59	1	0	3	49	0	0	1	0	1	0	0	0	0	114	1,228
4:15 PM	0	0	60	1	0	0	33	0	0	2	0	1	0	0	0	0	97	1,219
4:20 PM	0	0	50	1	0	2	42	0	0	0	0	4	0	0	0	0	99	1,217
4:25 PM	0	0	49	2	0	3	39	0	0	1	0	2	0	0	0	0	96	1,220
4:30 PM	0	0	37	1	0	1	50	0	0	1	0	2	0	0	0	0	92	1,225
4:35 PM	0	0	60	0	0	0	53	0	0	0	0	0	0	0	0	0	113	1,209
4:40 PM	0	0	41	1	0	1	43	0	0	0	0	0	0	0	0	0	86	1,178
4:45 PM	0	0	54	1	0	0	44	0	0	0	0	1	0	0	0	0	100	1,182
4:50 PM	0	0	50	1	0	0	44	0	0	0	0	0	0	0	0	0	95	1,152
4:55 PM	0	0	52	0	0	0	64	0	0	1	0	0	0	0	0	0	117	1,125
5:00 PM	0	0	58	2	0	0	49	0	0	0	0	2	0	0	0	0	111	1,096
5:05 PM	0	0	60	0	0	0	46	0	0	1	0	1	0	0	0	0	108	
5:10 PM	0	0	48	1	0	1	55	0	0	0	0	0	0	0	0	0	105	
5:15 PM	0	0	57	0	0	0	38	0	0	0	0	0	0	0	0	0	95	
5:20 PM	0	0	57	1	0	3	39	0	0	0	0	2	0	0	0	0	102	
5:25 PM	0	0	48	0	0	0	53	0	0	0	0	0	0	0	0	0	101	
5:30 PM	0	0	37	1	0	0	37	0	0	1	0	0	0	0	0	0	76	
5:35 PM	0	0	46	0	0	1	34	0	0	0	0	1	0	0	0	0	82	
5:40 PM	0	0	57	1	0	1	31	0	0	0	0	0	0	0	0	0	90	
5:45 PM	0	0	41	2	0	0	25	0	0	1	0	1	0	0	0	0	70	
5:50 PM	0	0	35	0	0	2	30	0	0	0	0	1	0	0	0	0	68	
5:55 PM	0	0	53	2	0	0	32	0	0	1	0	0	0	0	0	0	88	
Count Total	0	0	1,211	20	0	21	1,020	0	0	10	0	20	0	0	0	0	2,302	
Peak Hour	0	0	630	11	0	10	556	0	0	7	0	14	0	0	0	0	1,228	

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	3	0	6	0	9	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	1	0	0	0	1	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	4	0	2	0	6	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	6	0	1	0	7	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	4	0	2	0	6	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	1	0	1	0	2	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	1	1
4:30 PM	3	0	2	0	5	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	1	0	2	0	3	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	1	0	1	0	2	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	2	0	1	0	3	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	1	0	2	0	3	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	2	1	1	0	4	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	5	0	0	0	5	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	1	1
5:05 PM	2	0	2	0	4	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	4	0	5	0	9	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	0	4	0	5	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	4	0	3	0	7	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	2	0	3	0	5	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	2	0	2	0	4	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	1	1
5:35 PM	2	0	0	0	2	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	4	0	1	0	5	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	3	0	1	0	4	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	1	0	0	0	1	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	59	1	42	0	102	Count Total	0	0	0	0	0	Count Total	0	0	0	3	3
Peak Hour	32	1	17	0	50	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	2	2



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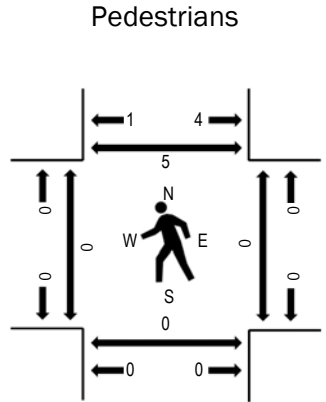
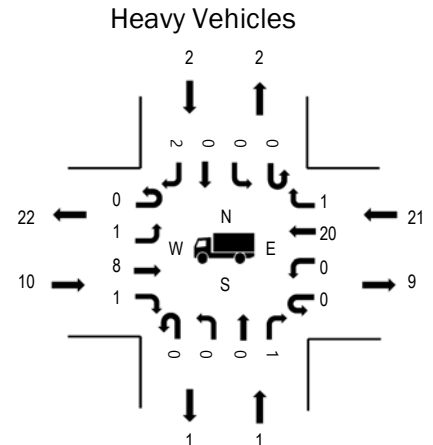
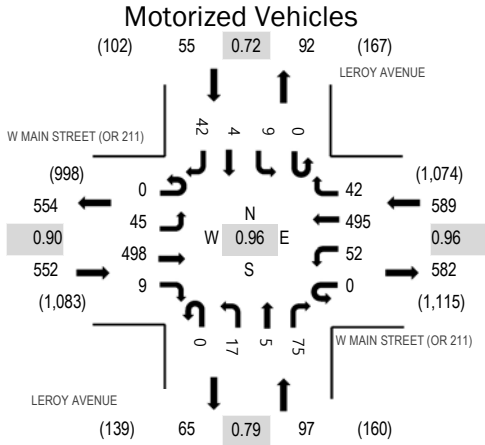
Location: 3 LEROY AVENUE & W MAIN STREET (OR 211) PM

Date: Thursday, December 7, 2023

Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.8%	0.90
WB	3.6%	0.96
NB	1.0%	0.79
SB	3.6%	0.72
All	2.6%	0.96

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				LEROY AVENUE Northbound				LEROY AVENUE 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	1	45	2	0	1	38	3	0	0	0	0	0	0	1	3	94	1,258
4:05 PM	0	5	43	0	0	9	39	1	0	3	0	6	0	2	0	3	111	1,269
4:10 PM	0	4	39	1	0	3	47	6	0	2	0	1	0	0	1	1	105	1,265
4:15 PM	0	7	47	1	0	7	28	5	0	4	0	2	0	0	0	1	102	1,281
4:20 PM	0	3	47	0	0	4	37	3	0	2	0	5	0	1	1	5	108	1,276
4:25 PM	0	3	31	1	0	3	37	3	0	2	0	5	0	2	1	4	92	1,279
4:30 PM	0	2	35	1	0	4	43	2	0	2	0	9	0	1	1	7	107	1,293
4:35 PM	0	3	45	0	0	1	39	3	0	2	1	7	0	0	1	1	103	1,289
4:40 PM	0	2	36	2	0	12	35	2	0	2	0	7	0	1	0	1	100	1,265
4:45 PM	0	3	42	1	0	1	38	12	0	2	3	8	0	2	0	4	116	1,262
4:50 PM	0	2	41	1	0	4	34	5	0	3	0	7	0	1	0	7	105	1,221
4:55 PM	0	5	43	2	0	4	52	2	0	0	0	2	0	0	0	5	115	1,190
5:00 PM	0	1	40	0	0	6	45	2	0	0	0	3	0	1	1	6	105	1,161
5:05 PM	0	8	46	1	0	3	37	1	0	1	0	8	0	0	0	2	107	
5:10 PM	0	3	42	0	0	7	49	2	0	2	0	9	0	1	0	6	121	
5:15 PM	0	7	48	0	0	4	24	2	0	2	1	6	0	1	0	2	97	
5:20 PM	0	4	40	1	0	3	49	6	0	1	0	4	0	1	1	1	111	
5:25 PM	0	5	40	0	0	3	50	3	0	0	0	5	0	0	0	0	106	
5:30 PM	0	6	40	0	0	9	35	1	0	1	0	5	0	4	2	0	103	
5:35 PM	0	3	30	2	0	7	30	3	0	2	0	2	0	0	0	0	79	
5:40 PM	0	2	48	2	0	5	26	2	0	1	3	5	0	1	0	2	97	
5:45 PM	0	1	40	0	0	1	27	1	0	0	1	3	0	0	0	1	75	
5:50 PM	0	0	32	2	0	2	25	3	0	0	1	5	0	1	0	3	74	
5:55 PM	0	2	39	2	0	4	28	2	0	0	0	2	0	0	0	7	86	
Count Total	0	82	979	22	0	107	892	75	0	34	10	116	0	20	10	72	2,419	
Peak Hour	0	45	498	9	0	52	495	42	0	17	5	75	0	9	4	42	1,293	

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	0	6	0	8	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	1	1
4:10 PM	5	0	1	0	6	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	2	0	1	0	3	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	4	1	2	0	7	4:20 PM	0	0	0	0	0	4:20 PM	0	1	0	0	1
4:25 PM	1	0	0	0	1	4:25 PM	0	0	0	0	0	4:25 PM	0	1	0	0	1
4:30 PM	1	0	1	1	3	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	2	2
4:35 PM	0	0	1	0	1	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	1	0	1	0	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	0	2	0	2	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	1	0	1	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	2	0	1	0	3	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	2	0	6	0	8	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	2	2
5:15 PM	1	0	3	0	4	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	2	1	3	0	6	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	1	0	2	0	3	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	1	1
5:30 PM	1	0	1	0	2	5:30 PM	0	0	0	0	0	5:30 PM	2	0	0	0	2
5:35 PM	2	0	0	0	2	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	3	3
5:40 PM	3	0	0	0	3	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	3	0	0	0	3	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	2	1	1	0	4	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	1	0	1	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	35	3	34	2	74	Count Total	0	0	0	0	0	Count Total	2	2	0	9	13
Peak Hour	10	1	21	2	34	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	5	5



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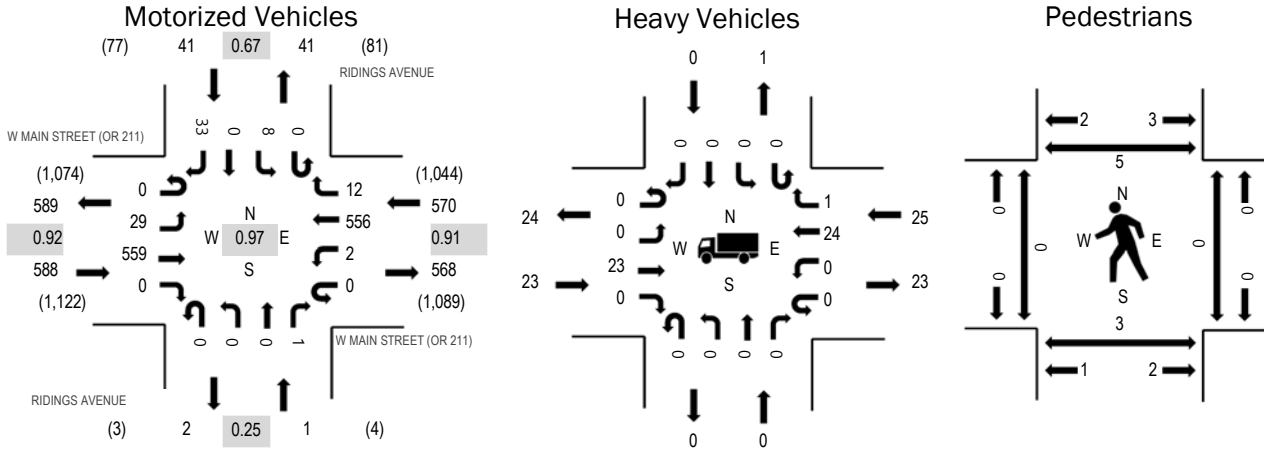
Location: 4 RIDINGS AVENUE & W MAIN STREET (OR 211) PM

Date: Thursday, December 7, 2023

Peak Hour: 04:35 PM - 05:35 PM

Peak 15-Minutes: 04:55 PM - 05:10 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	3.9%	0.92
WB	4.4%	0.91
NB	0.0%	0.25
SB	0.0%	0.67
All	4.0%	0.97

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				RIDINGS AVENUE Northbound				RIDINGS AVENUE 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	3	44	0	0	0	41	0	0	1	0	0	0	0	0	1	90	1,161
4:05 PM	0	2	49	0	0	0	44	1	0	0	0	0	0	1	0	6	103	1,170
4:10 PM	0	1	39	0	0	0	51	1	0	0	0	0	0	1	0	4	97	1,167
4:15 PM	0	4	44	0	0	0	39	0	0	0	0	0	0	1	0	2	90	1,178
4:20 PM	0	2	53	0	0	0	44	2	0	0	0	0	0	1	0	0	102	1,181
4:25 PM	0	1	35	0	0	0	41	1	0	0	0	0	0	1	1	3	83	1,180
4:30 PM	0	4	41	0	0	0	42	2	0	1	0	0	0	3	0	2	95	1,198
4:35 PM	0	2	51	0	0	0	44	0	0	0	0	0	0	1	0	2	100	1,200
4:40 PM	0	3	41	0	0	0	44	2	0	0	0	0	0	0	0	2	92	1,173
4:45 PM	0	3	50	0	0	0	52	1	0	0	0	0	0	0	0	1	107	1,175
4:50 PM	0	0	46	0	0	0	43	1	0	0	0	0	0	0	0	1	91	1,135
4:55 PM	0	1	46	0	0	0	57	3	0	0	0	0	0	2	0	2	111	1,119
5:00 PM	0	7	40	0	0	0	48	1	0	0	0	0	0	1	0	2	99	1,086
5:05 PM	0	5	49	0	0	0	40	0	0	0	0	0	0	1	0	5	100	
5:10 PM	0	4	46	0	0	1	51	0	0	0	0	0	0	1	0	5	108	
5:15 PM	0	1	55	0	0	1	31	1	0	0	0	0	0	1	0	3	93	
5:20 PM	0	0	45	0	0	0	52	1	0	0	0	0	0	1	0	2	101	
5:25 PM	0	2	40	0	0	0	53	1	0	0	0	1	0	0	0	4	101	
5:30 PM	0	1	50	0	0	0	41	1	0	0	0	0	0	0	0	4	97	
5:35 PM	0	1	33	0	0	0	36	0	0	0	0	1	0	1	0	1	73	
5:40 PM	0	3	51	0	0	0	37	1	0	0	0	0	0	1	0	1	94	
5:45 PM	0	1	37	0	0	0	25	1	0	0	0	0	0	2	0	1	67	
5:50 PM	0	2	42	0	0	0	28	3	0	0	0	0	0	0	0	0	75	
5:55 PM	0	2	40	0	0	0	32	2	0	0	0	0	0	0	0	2	78	
Count Total	0	55	1,067	0	0	2	1,016	26	0	2	0	2	0	20	1	56	2,247	
Peak Hour	0	29	559	0	0	2	556	12	0	0	0	1	0	8	0	33	1,200	

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	3	0	6	0	9	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	1	1
4:10 PM	4	0	2	0	6	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	1	1
4:15 PM	3	0	1	0	4	4:15 PM	0	0	0	0	0	4:15 PM	0	1	0	0	1
4:20 PM	4	0	3	0	7	4:20 PM	0	0	0	0	0	4:20 PM	0	1	0	0	1
4:25 PM	1	0	1	0	2	4:25 PM	0	0	0	0	0	4:25 PM	0	1	0	1	2
4:30 PM	4	0	0	1	5	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	1	0	1	4:35 PM	0	0	0	0	0	4:35 PM	0	2	0	0	2
4:40 PM	1	0	1	0	2	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	1	0	1	0	2	4:45 PM	0	0	0	0	0	4:45 PM	0	1	0	0	1
4:50 PM	0	0	3	0	3	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	1	0	1	0	2	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	4	0	1	0	5	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	1	0	2	0	3	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	2	0	5	0	7	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	2	0	2	0	4	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	2	2
5:20 PM	4	0	4	0	8	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	2	2
5:25 PM	2	0	3	0	5	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	5	0	1	0	6	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	1	1
5:35 PM	2	0	0	0	2	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	2	2
5:40 PM	2	0	1	0	3	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	3	0	0	1	4	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	1	0	0	0	1	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	2	0	2	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	50	0	41	2	93	Count Total	0	0	0	0	0	Count Total	0	6	0	10	16
Peak Hour	23	0	25	0	48	Peak Hour	0	0	0	0	0	Peak Hour	0	3	0	5	8



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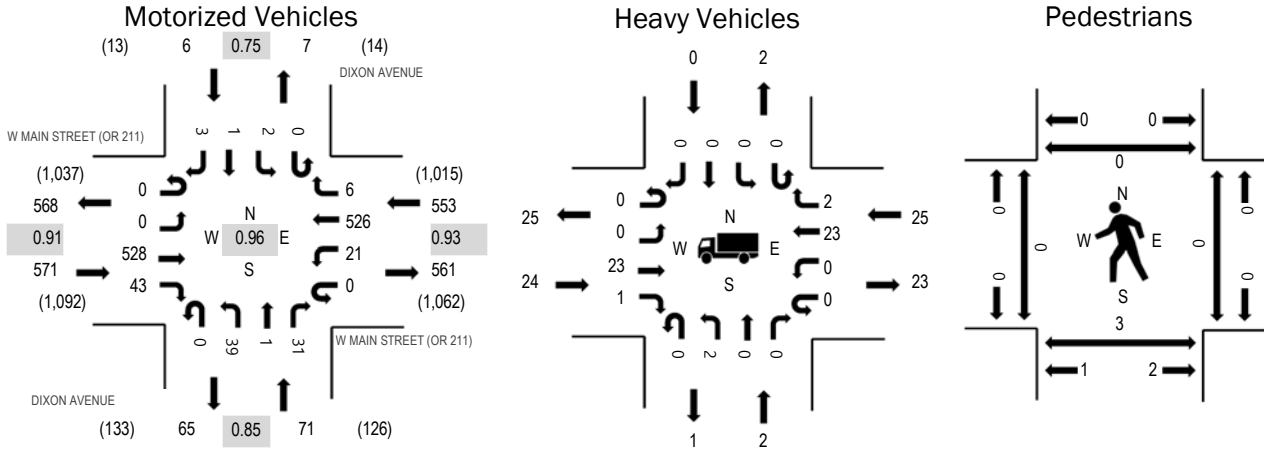
Location: 5 DIXON AVENUE & W MAIN STREET (OR 211) PM

Date: Thursday, December 7, 2023

Peak Hour: 04:35 PM - 05:35 PM

Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.2%	0.91
WB	4.5%	0.93
NB	2.8%	0.85
SB	0.0%	0.75
All	4.2%	0.96

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				DIXON AVENUE Northbound				DIXON AVENUE 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	42	2	0	3	36	2	0	3	0	1	0	1	0	0	90	1,178
4:05 PM	0	0	49	2	0	2	40	0	0	4	0	4	0	0	0	1	102	1,180
4:10 PM	0	0	37	3	0	2	50	0	0	2	0	2	0	0	0	1	97	1,172
4:15 PM	0	0	40	6	0	4	36	0	0	2	0	1	0	0	0	0	89	1,182
4:20 PM	0	0	46	6	0	1	47	1	0	3	0	4	0	0	0	1	109	1,193
4:25 PM	0	1	35	3	0	2	39	0	0	2	0	4	0	0	0	0	86	1,185
4:30 PM	0	0	39	6	0	1	43	0	0	2	0	0	0	1	0	0	92	1,198
4:35 PM	0	0	48	3	0	2	38	2	0	4	0	5	0	0	0	0	102	1,201
4:40 PM	0	0	39	3	0	5	43	1	0	3	0	1	0	2	0	0	97	1,175
4:45 PM	0	0	45	5	0	1	48	1	0	3	0	4	0	0	0	0	107	1,163
4:50 PM	0	0	44	2	0	1	38	0	0	6	0	2	0	0	1	0	94	1,128
4:55 PM	0	0	41	4	0	1	61	0	0	2	0	3	0	0	0	1	113	1,109
5:00 PM	0	0	39	4	0	4	43	0	0	2	0	0	0	0	0	0	92	1,068
5:05 PM	0	0	42	8	0	3	37	1	0	2	1	0	0	0	0	0	94	
5:10 PM	0	0	47	2	0	2	49	0	0	3	0	3	0	0	0	1	107	
5:15 PM	0	0	56	2	0	2	32	1	0	3	0	4	0	0	0	0	100	
5:20 PM	0	0	40	4	0	0	50	0	0	3	0	4	0	0	0	0	101	
5:25 PM	0	0	39	2	0	0	50	0	0	4	0	3	0	0	0	1	99	
5:30 PM	0	0	48	4	0	0	37	0	0	4	0	2	0	0	0	0	95	
5:35 PM	0	0	34	3	0	3	30	1	0	3	0	2	0	0	0	0	76	
5:40 PM	0	0	43	3	0	0	33	0	0	3	0	3	0	0	0	0	85	
5:45 PM	0	1	36	4	0	0	25	0	0	2	1	2	0	0	1	0	72	
5:50 PM	0	0	36	4	0	2	30	0	0	1	0	1	0	1	0	0	75	
5:55 PM	0	0	36	4	0	1	28	0	0	2	0	1	0	0	0	0	72	
Count Total	0	2	1,001	89	0	42	963	10	0	68	2	56	0	5	2	6	2,246	
Peak Hour	0	0	528	43	0	21	526	6	0	39	1	31	0	2	1	3	1,201	

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	3	0	7	1	11	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	4	0	1	1	6	4:10 PM	0	0	0	0	0	4:10 PM	0	1	0	0	1
4:15 PM	2	0	1	0	3	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	5	0	3	0	8	4:20 PM	0	0	0	0	0	4:20 PM	1	1	0	0	2
4:25 PM	1	0	1	0	2	4:25 PM	0	0	0	0	0	4:25 PM	0	1	0	0	1
4:30 PM	4	0	0	0	4	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	1	0	1	4:35 PM	0	0	0	0	0	4:35 PM	0	1	0	0	1
4:40 PM	2	0	1	0	3	4:40 PM	0	0	0	0	0	4:40 PM	0	1	0	0	1
4:45 PM	0	1	0	0	1	4:45 PM	0	0	0	0	0	4:45 PM	0	1	0	0	1
4:50 PM	0	0	3	0	3	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	2	0	1	0	3	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	4	0	1	0	5	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	1	0	3	0	4	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	1	0	5	0	6	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	3	0	3	0	6	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	4	0	5	0	9	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	1	0	2	0	3	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	6	1	0	0	7	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	2	0	0	0	2	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	1	1
5:40 PM	2	0	1	0	3	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	2	2
5:45 PM	4	0	1	0	5	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	52	2	41	2	97	Count Total	0	0	0	0	0	Count Total	1	6	0	3	10
Peak Hour	24	2	25	0	51	Peak Hour	0	0	0	0	0	Peak Hour	0	3	0	0	3



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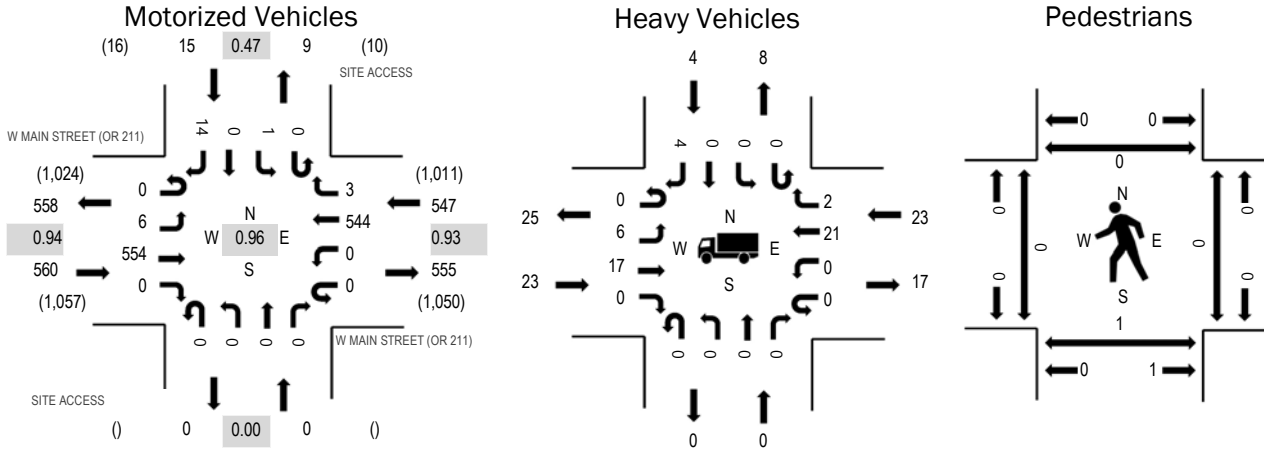
Location: 6 SITE ACCESS & W MAIN STREET (OR 211) PM

Date: Thursday, December 7, 2023

Peak Hour: 04:35 PM - 05:35 PM

Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.1%	0.94
WB	4.2%	0.93
NB	0.0%	0.00
SB	26.7%	0.47
All	4.5%	0.96

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211) Eastbound				W MAIN STREET (OR 211) Westbound				SITE ACCESS Northbound				SITE ACCESS 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	1	0	45	0	0	0	41	0	0	0	0	0	0	0	0	0	87	1,086
4:05 PM	0	0	50	0	0	0	40	0	0	0	0	0	0	0	0	0	90	1,091
4:10 PM	0	0	39	0	0	0	53	0	0	0	0	0	0	0	0	0	92	1,085
4:15 PM	0	0	40	0	0	0	40	0	0	0	0	0	0	0	0	1	81	1,095
4:20 PM	0	0	48	0	0	0	47	0	0	0	0	0	0	0	0	0	95	1,107
4:25 PM	0	0	41	0	0	0	40	0	0	0	0	0	0	0	0	0	81	1,105
4:30 PM	0	1	37	0	0	0	44	0	0	0	0	0	0	0	0	0	82	1,119
4:35 PM	0	0	52	0	0	0	42	0	0	0	0	0	0	0	0	0	94	1,122
4:40 PM	0	1	42	0	0	0	50	0	0	0	0	0	0	0	0	0	93	1,096
4:45 PM	0	0	49	0	0	0	48	0	0	0	0	0	0	0	0	1	98	1,081
4:50 PM	0	0	45	0	0	0	42	2	0	0	0	0	0	0	0	0	89	1,048
4:55 PM	0	1	43	0	0	0	57	0	0	0	0	0	0	0	0	3	104	1,032
5:00 PM	0	1	41	0	0	0	47	1	0	0	0	0	0	0	0	2	92	998
5:05 PM	0	0	41	0	0	0	40	0	0	0	0	0	0	0	0	3	84	
5:10 PM	0	0	50	0	0	0	51	0	0	0	0	0	0	1	0	0	102	
5:15 PM	0	0	58	0	0	0	33	0	0	0	0	0	0	0	0	2	93	
5:20 PM	0	1	40	0	0	0	52	0	0	0	0	0	0	0	0	0	93	
5:25 PM	0	1	45	0	0	0	47	0	0	0	0	0	0	0	0	2	95	
5:30 PM	0	1	48	0	0	0	35	0	0	0	0	0	0	0	0	1	85	
5:35 PM	0	0	32	0	0	0	36	0	0	0	0	0	0	0	0	0	68	
5:40 PM	0	0	46	0	0	0	32	0	0	0	0	0	0	0	0	0	78	
5:45 PM	0	0	39	0	0	0	26	0	0	0	0	0	0	0	0	0	65	
5:50 PM	0	0	42	0	0	0	31	0	0	0	0	0	0	0	0	0	73	
5:55 PM	0	0	36	0	0	0	34	0	0	0	0	0	0	0	0	0	70	
Count Total	1	7	1,049	0	0	0	1,008	3	0	0	0	0	0	1	0	15	2,084	
Peak Hour	0	6	554	0	0	0	544	3	0	0	0	0	0	1	0	14	1,122	

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	4	0	7	0	11	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	1	1
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	4	0	1	0	5	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	2	0	1	0	3	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	5	0	3	0	8	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	1	1
4:25 PM	0	0	1	0	1	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	4	0	0	0	4	4:30 PM	0	0	0	0	0	4:30 PM	0	1	0	0	1
4:35 PM	0	0	1	0	1	4:35 PM	0	0	0	0	0	4:35 PM	0	1	0	0	1
4:40 PM	2	0	1	0	3	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	4	0	4	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	2	0	0	1	3	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	4	0	2	0	6	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	1	0	2	1	4	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	1	0	5	0	6	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	2	0	1	2	5	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	2	0	5	0	7	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	3	0	2	0	5	5:25 PM	0	0	0	0	0	5:25 PM	0	2	0	0	2
5:30 PM	6	0	0	0	6	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	2	0	0	0	2	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	1	1
5:40 PM	2	0	1	0	3	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	3	0	1	0	4	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	2	2
5:50 PM	1	0	0	0	1	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	1	0	0	1
Count Total	51	0	39	4	94	Count Total	0	0	0	0	0	Count Total	0	5	0	5	10
Peak Hour	23	0	23	4	50	Peak Hour	0	0	0	0	0	Peak Hour	0	3	0	0	3



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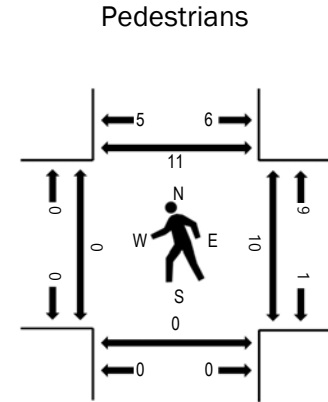
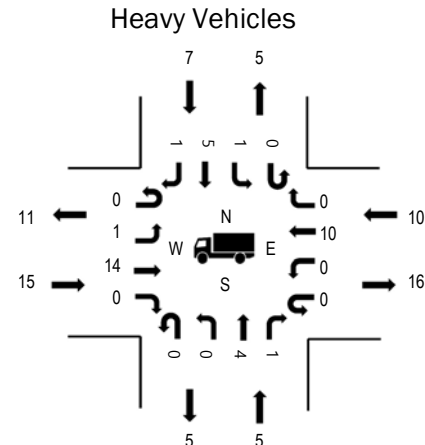
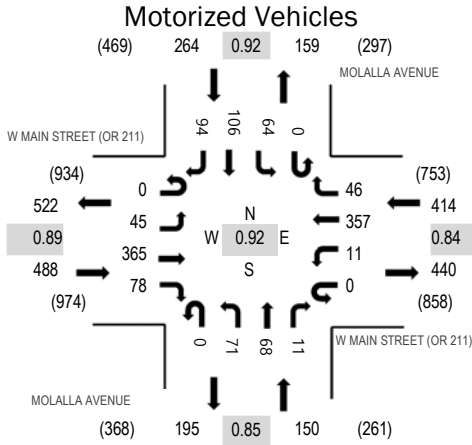
Location: 7 MOLALLA AVENUE & W MAIN STREET (OR 211) PM

Date: Thursday, December 7, 2023

Peak Hour: 04:05 PM - 05:05 PM

Peak 15-Minutes: 04:50 PM - 05:05 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	3.1%	0.89
WB	2.4%	0.84
NB	3.3%	0.85
SB	2.7%	0.92
All	2.8%	0.92

Traffic Counts - Motorized Vehicles

Interval Start Time	W MAIN STREET (OR 211)				W MAIN STREET (OR 211)				MOLALLA AVENUE				MOLALLA AVENUE				Total	Rolling Hour
	Eastbound				Westbound				Northbound				Southbound					
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	4	39	5	0	2	26	5	0	4	4	0	0	7	9	5	110	1,304
4:05 PM	0	3	38	8	0	0	23	4	0	2	4	1	0	6	10	7	106	1,316
4:10 PM	0	6	28	6	0	1	32	3	0	6	3	0	0	5	10	11	111	1,297
4:15 PM	0	4	28	7	0	2	22	5	0	9	9	0	0	7	4	9	106	1,297
4:20 PM	0	5	29	4	0	2	30	6	0	7	3	0	0	6	6	8	106	1,296
4:25 PM	0	3	32	5	0	0	20	4	0	4	3	3	0	8	5	9	96	1,295
4:30 PM	0	2	26	6	0	1	31	5	0	7	3	2	0	6	7	9	105	1,306
4:35 PM	0	3	32	4	0	1	31	2	0	4	9	1	0	7	12	7	113	1,287
4:40 PM	0	4	38	5	0	0	26	4	0	7	5	0	0	4	12	8	113	1,251
4:45 PM	0	3	25	9	0	0	27	4	0	12	6	3	0	1	9	2	101	1,231
4:50 PM	0	7	29	12	0	0	38	3	0	3	7	0	0	3	12	8	122	1,212
4:55 PM	0	4	22	8	0	2	37	4	0	6	7	1	0	6	9	9	115	1,183
5:00 PM	0	1	38	4	0	2	40	2	0	4	9	0	0	5	10	7	122	1,153
5:05 PM	0	0	24	8	0	0	27	2	0	8	7	0	0	2	5	4	87	
5:10 PM	0	3	32	9	0	0	27	6	0	6	5	0	0	5	12	6	111	
5:15 PM	0	5	41	8	0	2	22	3	0	7	5	0	0	4	4	4	105	
5:20 PM	0	6	32	5	0	2	33	5	0	3	5	0	0	2	6	6	105	
5:25 PM	0	8	29	4	0	2	37	2	0	3	1	2	0	6	7	6	107	
5:30 PM	0	4	27	9	0	0	22	4	0	5	0	0	0	5	7	3	86	
5:35 PM	0	4	21	3	0	1	17	2	0	4	5	0	0	3	8	9	77	
5:40 PM	0	5	35	2	0	2	21	1	0	5	4	1	0	6	6	5	93	
5:45 PM	0	7	29	6	0	1	19	3	0	4	3	0	0	0	6	4	82	
5:50 PM	0	5	27	9	0	1	21	4	0	3	3	1	0	3	11	5	93	
5:55 PM	0	2	24	5	0	0	16	1	0	5	5	3	0	8	6	10	85	
Count Total	0	98	725	151	0	24	645	84	0	128	115	18	0	115	193	161	2,457	
Peak Hour	0	45	365	78	0	11	357	46	0	71	68	11	0	64	106	94	1,316	

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	0	5	2	9	4:00 PM	0	0	0	0	0	4:00 PM	0	0	1	1	2
4:05 PM	0	0	1	0	1	4:05 PM	0	0	0	0	0	4:05 PM	0	0	1	1	2
4:10 PM	3	0	1	1	5	4:10 PM	0	0	0	0	0	4:10 PM	0	0	2	3	5
4:15 PM	2	2	1	0	5	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	1	1
4:20 PM	3	0	1	0	4	4:20 PM	0	0	0	0	0	4:20 PM	0	0	3	2	5
4:25 PM	1	0	0	0	1	4:25 PM	0	0	0	0	0	4:25 PM	0	0	1	0	1
4:30 PM	2	0	1	1	4	4:30 PM	0	0	0	0	0	4:30 PM	0	0	1	0	1
4:35 PM	0	1	1	0	2	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	1	0	0	0	1	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	1	0	0	1	2	4:45 PM	0	0	0	0	0	4:45 PM	0	0	1	2	3
4:50 PM	0	0	2	1	3	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	2	2
4:55 PM	1	2	0	2	5	4:55 PM	0	0	0	0	0	4:55 PM	0	0	1	0	1
5:00 PM	1	0	2	1	4	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	2	0	1	1	4	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	2	1	1	4	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	1	0	1	5:15 PM	0	0	0	0	0	5:15 PM	0	0	1	1	2
5:20 PM	1	0	2	0	3	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	2	1	3	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	3	3
5:30 PM	3	0	0	0	3	5:30 PM	0	0	0	0	0	5:30 PM	0	0	1	0	1
5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0	5:35 PM	0	0	1	0	1
5:40 PM	2	0	1	0	3	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	1	1
5:45 PM	1	0	0	0	1	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	2	2
5:50 PM	2	0	0	0	2	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	1	1
5:55 PM	2	0	3	0	5	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	30	7	26	12	75	Count Total	0	0	0	0	0	Count Total	0	0	14	20	34
Peak Hour	15	5	10	7	37	Peak Hour	0	0	0	0	0	Peak Hour	0	0	10	11	21



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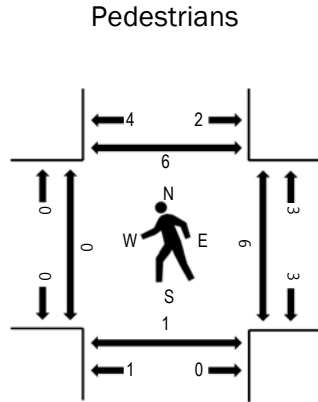
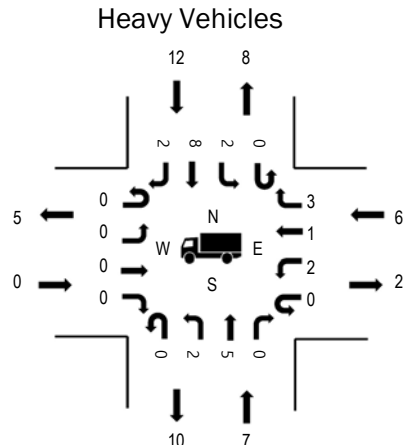
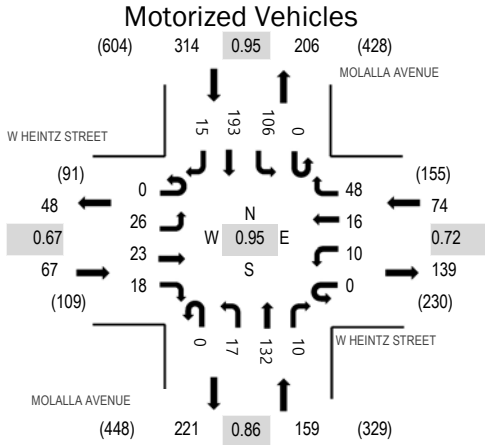
Location: 8 MOLALLA AVENUE & W HEINTZ STREET PM

Date: Thursday, December 7, 2023

Peak Hour: 04:15 PM - 05:15 PM

Peak 15-Minutes: 04:50 PM - 05:05 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.67
WB	8.1%	0.72
NB	4.4%	0.86
SB	3.8%	0.95
All	4.1%	0.95

Traffic Counts - Motorized Vehicles

Interval Start Time	W HEINTZ STREET Eastbound				W HEINTZ STREET Westbound				MOLALLA AVENUE Northbound				MOLALLA AVENUE 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	1	0	1	0	1	1	5	0	0	14	2	0	8	16	1	50	597
4:05 PM	0	3	1	2	0	1	2	6	0	1	12	0	0	10	15	4	57	604
4:10 PM	0	2	0	2	0	0	1	9	0	0	5	0	0	5	8	2	34	591
4:15 PM	0	4	3	2	0	2	0	8	0	2	8	0	0	10	17	2	58	614
4:20 PM	0	2	1	0	0	1	1	3	0	1	14	1	0	11	19	3	57	603
4:25 PM	0	4	2	0	0	0	0	2	0	0	8	0	0	7	10	2	35	597
4:30 PM	0	1	3	4	0	1	4	4	0	0	9	1	0	6	18	2	53	595
4:35 PM	0	7	2	2	0	1	2	5	0	1	15	0	0	10	9	2	56	602
4:40 PM	0	1	1	1	0	0	2	3	0	1	13	1	0	9	11	1	44	594
4:45 PM	0	0	2	0	0	1	1	4	0	3	7	1	0	5	24	0	48	604
4:50 PM	0	0	3	1	0	1	1	3	0	3	12	2	0	12	21	0	59	611
4:55 PM	0	0	4	1	0	0	2	5	0	1	12	1	0	6	13	1	46	598
5:00 PM	0	2	0	2	0	1	1	6	0	2	12	2	0	13	15	1	57	600
5:05 PM	0	2	1	2	0	1	2	2	0	2	13	1	0	4	14	0	44	
5:10 PM	0	3	1	3	0	1	0	3	0	1	9	0	0	13	22	1	57	
5:15 PM	0	1	4	0	0	1	1	3	0	2	15	0	0	5	14	1	47	
5:20 PM	0	1	0	1	0	0	2	6	0	0	15	0	0	4	19	3	51	
5:25 PM	0	1	0	1	0	1	0	2	0	2	8	0	0	2	15	1	33	
5:30 PM	0	1	4	3	0	1	2	4	0	0	16	1	0	6	22	0	60	
5:35 PM	0	0	0	0	0	0	1	5	0	0	16	1	0	4	21	0	48	
5:40 PM	0	1	3	2	0	1	2	4	0	0	16	2	0	5	17	1	54	
5:45 PM	0	1	1	0	0	0	1	7	0	0	11	0	0	7	24	3	55	
5:50 PM	0	0	1	1	0	2	1	2	0	2	13	1	0	5	17	1	46	
5:55 PM	0	0	3	0	0	0	2	4	0	2	12	1	0	5	18	1	48	
Count Total	0	38	40	31	0	18	32	105	0	26	285	18	0	172	399	33	1,197	
Peak Hour	0	26	23	18	0	10	16	48	0	17	132	10	0	106	193	15	614	

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	2	2	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	1	1	2	4:05 PM	0	0	1	0	1	4:05 PM	0	0	0	2	2
4:10 PM	1	0	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	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	2	0	3	5	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	2	2	4:25 PM	0	0	0	0	0	4:25 PM	0	0	1	3	4
4:30 PM	0	0	0	1	1	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	1	1	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	1	1	4:40 PM	0	0	0	0	0	4:40 PM	0	0	1	2	3
4:45 PM	0	0	0	1	1	4:45 PM	0	0	0	0	0	4:45 PM	0	1	3	0	4
4:50 PM	0	1	2	0	3	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	2	1	1	4	4:55 PM	0	0	0	0	0	4:55 PM	0	0	1	0	1
5:00 PM	0	0	1	0	1	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	1	1
5:05 PM	0	0	1	0	1	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	1	1	2	4	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	2	0	1	3	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	1	1	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	1	1	1	3	5:25 PM	0	0	0	0	0	5:25 PM	0	0	1	0	1
5:30 PM	1	0	0	1	2	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	1	1
5:35 PM	0	1	0	0	1	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	1	1
5:40 PM	0	1	0	0	1	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	3	3	5:45 PM	0	0	0	0	0	5:45 PM	0	2	0	0	2
5:50 PM	0	1	0	1	2	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	1	1	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	2	13	8	25	48	Count Total	0	0	1	0	1	Count Total	0	3	7	10	20
Peak Hour	0	7	6	12	25	Peak Hour	0	0	0	0	0	Peak Hour	0	1	6	6	13

SEASONAL TREND TABLE (Updated: 11/08/2023)																									
TREND	1-Jan	15-Jan	1-Feb	15-Feb	1-Mar	15-Mar	1-Apr	15-Apr	1-May	15-May	1-Jun	15-Jun	1-Jul	15-Jul	1-Aug	15-Aug	1-Sep	15-Sep	1-Oct	15-Oct	1-Nov	15-Nov	1-Dec	15-Dec	Seasonal Trend Peak Period Factor
INTERSTATE URBANIZED	10869	11041	10688	10335	10182	10028	0.9995	0.9962	0.9901	0.9840	0.9641	0.9443	0.9502	0.9562	0.9510	0.9458	0.9575	0.9692	0.9791	0.9891	1.0107	1.0324	1.0532	1.0739	0.9443
INTERSTATE NONURBANIZED	12459	12915	12286	11657	10907	10158	1.0059	0.9960	0.9728	0.9496	0.9128	0.8760	0.8650	0.8540	0.8612	0.8684	0.8905	0.9126	0.9488	0.9850	1.0336	1.0822	1.1777	1.2612	0.8540
COMMUTER	10905	10986	10636	10285	10162	10038	0.9959	0.9879	0.9814	0.9749	0.9631	0.9512	0.9614	0.9717	0.9608	0.9500	0.9548	0.9595	0.9634	0.9673	1.0090	1.0507	1.0733	1.0958	0.9500
COASTAL DESTINATION	12064	11715	11234	10753	10545	10337	1.0372	1.0407	1.0216	1.0024	0.9586	0.9147	0.8760	0.8372	0.8371	0.8370	0.8678	0.8985	0.9578	1.0170	1.0730	1.1290	1.1823	1.2357	0.8370
COASTAL DESTINATION ROUTE	13983	12917	12245	11594	11247	10901	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911	1.0911
AGRICULTURE	14537	14624	13705	12786	12139	11492	1.1207	1.0923	1.0075	0.9226	0.8742	0.8258	0.8348	0.8439	0.8422	0.8405	0.7976	0.7547	0.8073	0.8598	1.0041	1.1484	1.3339	1.5194	0.7547
RECREATIONAL SUMMER	16049	15814	14924	14034	13208	12382	1.2380	1.2377	1.0939	0.9500	0.8669	0.7839	0.7392	0.6945	0.7065	0.7185	0.7404	0.7624	0.8468	0.9311	1.1270	1.3230	1.5064	1.6879	0.6945
RECREATIONAL SUMMER WINTER	10075	0.9570	0.9184	0.8799	0.9701	1.0603	1.0675	1.0747	1.0843	1.0939	1.0045	0.9151	0.8244	0.7336	0.7795	0.8254	0.9368	1.0482	1.1794	1.3105	1.4969	1.6833	1.8470	1.0108	0.7336
RECREATIONAL WINTER**	0.8059	0.8770	0.9479	0.9240	0.7462	0.8685	0.9307	0.9928	1.1496	1.3064	1.2173	1.1282	0.9996	0.8709	0.9526	1.0342	1.1225	1.2108	1.4081	1.6019	1.9826	2.3699	1.6332	0.9026	0.6240
SUMMER	12374	12352	11733	11114	10786	10459	1.0330	1.0202	0.9851	0.9500	0.9160	0.8819	0.8560	0.8501	0.8561	0.8620	0.8891	0.9161	0.9430	0.9698	1.0523	1.1352	1.2202	1.2653	0.8501
SUMMER < 2500	12836	12576	11943	11310	11011	10712	1.0448	1.0184	0.9833	0.9382	0.8861	0.8641	0.8609	0.8578	0.8695	0.8813	0.8874	0.8936	0.9165	0.9394	1.0500	1.1607	1.2535	1.3463	0.8578

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

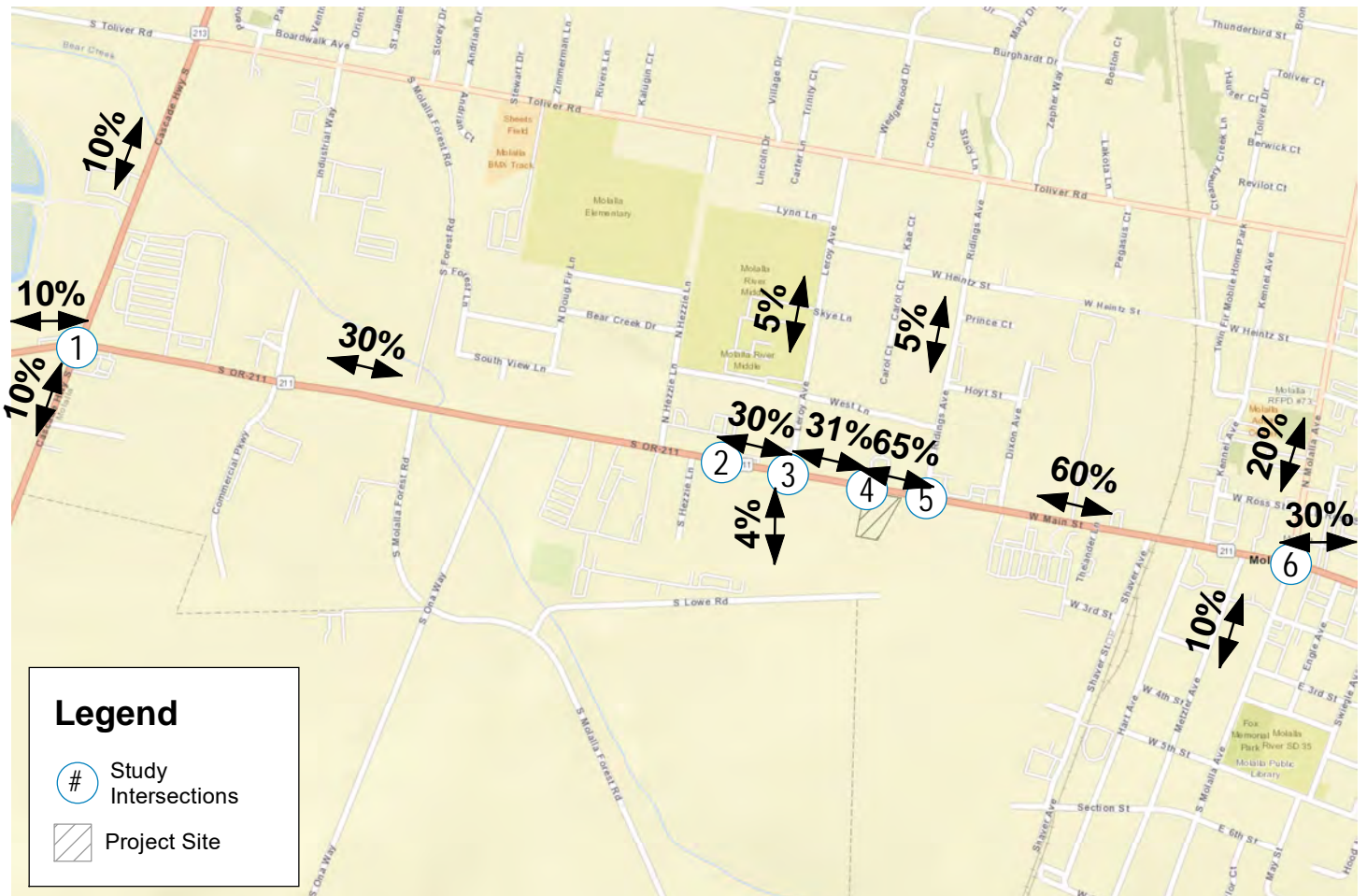
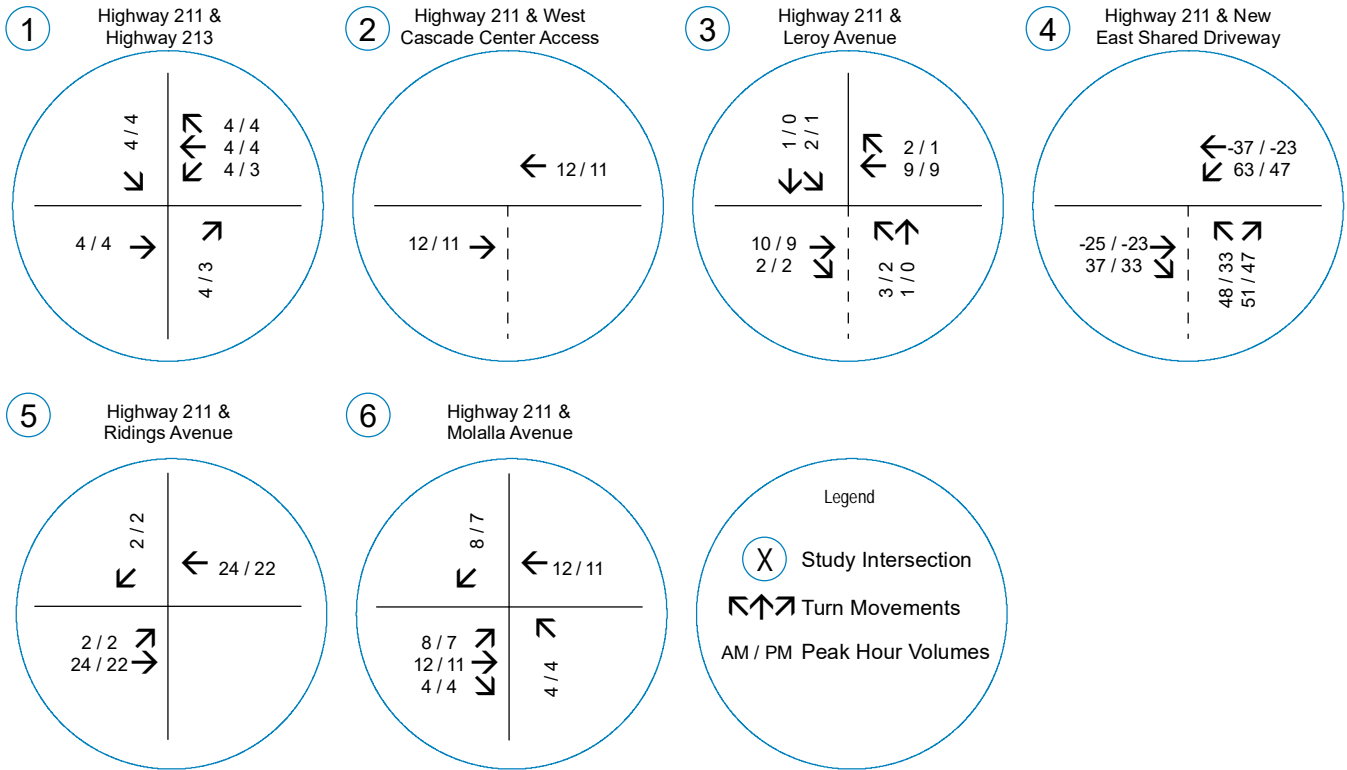
**Use Recreation Winter Trend with Caution! ATR site was down for most of 2022 due to loop issues and was estimated while the site was down

count date: 12/7/2023 COMMUTER 1130

Site id	HWY	MP	DIR	HS	Description	2019	2021	2022	2042	RSQ
3446	161	0.15	1		East of Pacific Highway East (OR99E) and Hillsboro-Silverton Highway (OR214) [0.15 mile]			6600	9100	MODEL
3447	161	2.63	1		West of S Meridian Road, Marion-Clackamas County Line [1.15 miles]			7300	8200	0.2675
3448	161	5.20	1		East of Barlow Road [0.05 mile]			5300	6400	MODEL
3449	161	7.69	1		East of S Canby-Marquam Road [0.10 mile]			6000	6900	MODEL
3450	161	11.26	1		West of Cascade Highway South (OR213) [0.05 mile]			6100	7500	MODEL
3451	161	11.36	1		East of Cascade Highway South (OR213) [0.05 mile]			12900	15800	MODEL
3452	161	12.25	1		East of LeRoy Avenue [0.09 mile]			12000	14300	MODEL
3453	161	13.27	1		West of Stowers Lane [0.02 mile]			8000	9500	MODEL
3454	161	13.67	1		NE of S Mathias Road [0.24 mile]			6000	7100	MODEL
3455	161	15.41	1		At Molalla River			6600	7000	MODEL
3457	161	16.34	1		North of Meadowbrook Road [0.03 mile]			6800	7600	MODEL
3458	161	18.23	1		East of S Paveletz Road [0.19 mile]			5700	5800	MODEL
3460	161	21.20	1		East of Wall Street, At Colton [0.02 mile]			4600	5900	MODEL
3461	161	21.69	1		NE of Schieffer Road [0.02 mile]			3300	4300	MODEL
3014	161	24.23	1		NE of Wall Street [3.05 miles] (Colton ATR, Sta. 03-014)			3200	4100	MODEL
3463	161	26.43	1		North of S Highland Road [0.02 mile]			3300	4200	MODEL
3464	161	28.79	1		North of Hillock Burn Road [0.02 mile]			3700	4700	MODEL
3465	161	30.73	1		North of Day Hill Road (South Jct.) [0.02 mile]			4100	5200	MODEL
3466	161	32.55	1		North of Hayden Road [0.02 mile]			6800	8400	MODEL
3467	161	33.20	1		East of Day Hill Road (North Jct.) [0.02 mile]			6900	8600	MODEL
3468	161	33.40	1		South of Clackamas Highway (OR224), south city limits Estacada [0.09 mile]			7500	8400	MODEL

Growth Rate

1.0%





April 29, 2022

Mac Corthell
Community Development Director
City of Molalla
PO Box 248
Molalla, OR 97038

RE: Fountain Way Food Carts Parking Area - Traffic Analysis Letter

Dear Mr. Corthell,

This letter is prepared for the proposed new food cart pod parking area to be located just north of the Molalla River Brewing Company at 180 Industrial Way in Molalla, OR. The proposed food cart pod will consist of six food carts, five of which will be new to the site. A site plan showing the location of the proposed food carts, parking lot and private driveway access is provided on sheet 3 of the application plan set.

Per section 2.2.26.i.3 (DRIVEWAYS) of the 2020 Molalla Standard Design Standards and Standard Detail R-1095: Minimum and maximum driveway widths for a Commercial driveway are 30' and 40' respectively. The proposed driveway width is 30 feet; therefore, this code is satisfied.

Per Section 2.2.26.c: Commercial or Industrial developments, driveway access shall be a minimum of 100 feet from the nearest intersection (as measured from the centerline of drive way to the near face of curb at intersection) unless otherwise approved by in writing by the City's authorized representative. The centerline of the proposed driveway is 145 feet form the inner curb of Fountain Way; therefore, this code is satisfied.

Per AASHTO intersection sight distance requirements for a local road with a posted speed of 35mph, a sight distance of 350 lineal feet is required. The proposed driveway location on Industrial Way sits in a relatively flat portion of the street, with no physical obstructions to the line of sight at the proposed driveway location to the south. Road is not anticipated to continue north past the proposed driveway at a distance greater than 350 feet. The requisite sight distance is met at the proposed driveway location. The location, width and slope of the proposed driveway does not pose any inherent safety issues.

Per the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, for the assigned Land Use 926: Food Cart Pod, the weekday peak PM hour trips generated per Food Cart is 3.08 Trips. The proposed Food Cart Pod Will introduce 5 carts, the trips generated in the weekday peak PM hours is 15.4. Food Cart Pod will not be open during the AM peak and therefore will not produce any new AM peak hour trips.

The location, width and slope of the proposed driveway does not pose any inherent safety issues.

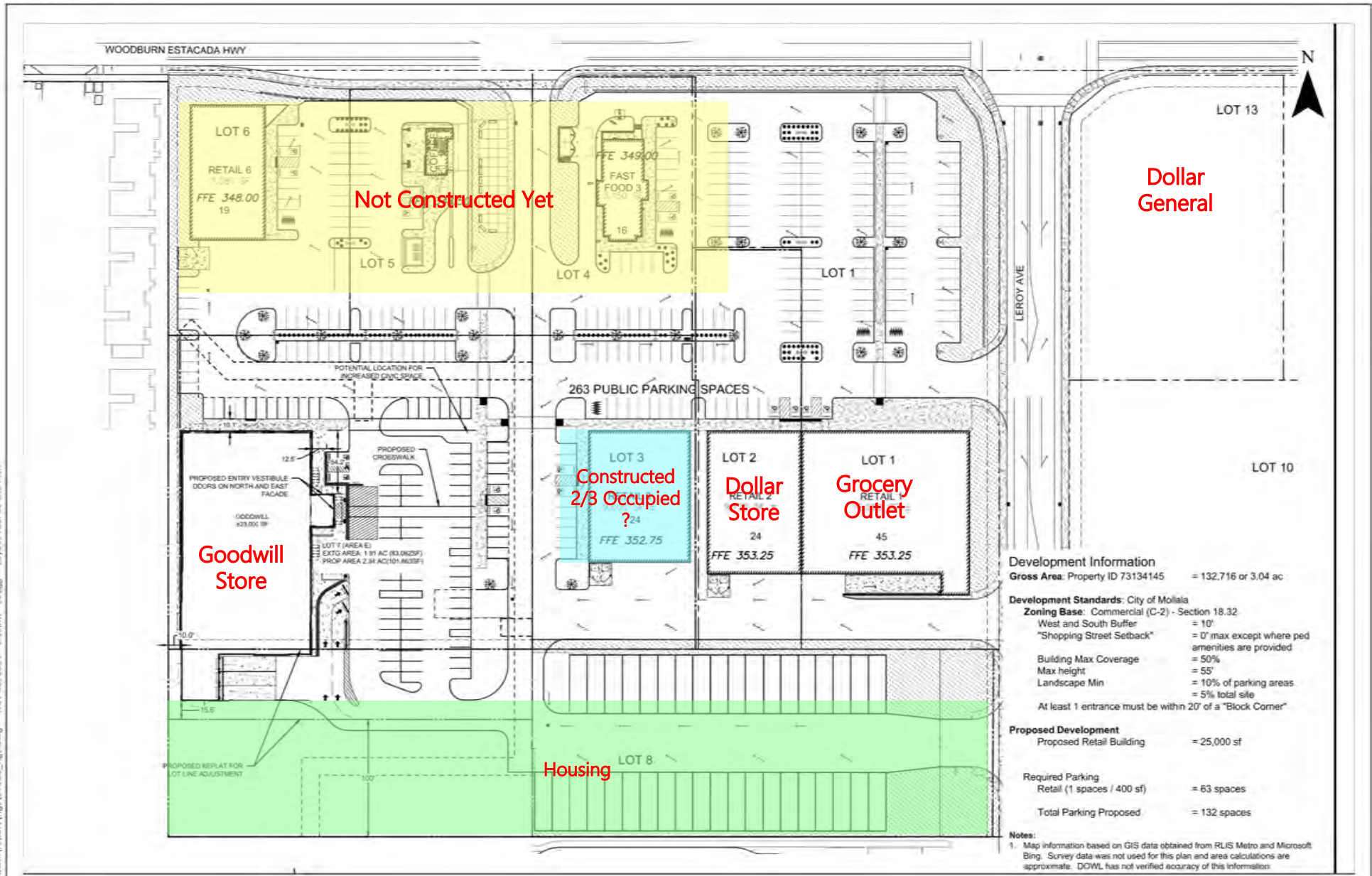
We have reviewed the City's Transportation System Plan (TSP) and the proposed driveway access complies with the applicable standards.

Feel free to contact me with any questions or clarifications.

Best Regards,



Kelli A. Grover, P.E.
Project Engineer



Development Information
 Gross Area: Property ID 73134145 = 132.716 or 3.04 ac

Development Standards: City of Molalla
Zoning Base: Commercial (C-2) - Section 18.32
 West and South Buffer = 10'
 "Shopping Street Setback" = 0' max except where ped amenities are provided
 Building Max Coverage = 50%
 Max height = 55'
 Landscape Min = 10% of parking areas = 5% total site
 At least 1 entrance must be within 20' of a "Block Corner"

Proposed Development
 Proposed Retail Building = 25,000 sf

Required Parking
 Retail (1 spaces / 400 sf) = 63 spaces
 Total Parking Proposed = 132 spaces

Notes:
 1. Map information based on GIS data obtained from RLIS Metro and Microsoft Bing. Survey data was not used for this plan and area calculations are approximate. DOWL has not verified accuracy of this information.

Site plan provided on 10/11/2021

Revised Site Plan
 Molalla, Oregon

Figure
 1

HA2\27156 - Molalla Goodwill\yemort\fig\27156_fig.dwg - Nov 08, 2021 - 1:10pm - rbuag - Layout Tab: 02 Site Plan

Table 1. Updated Trip Generation

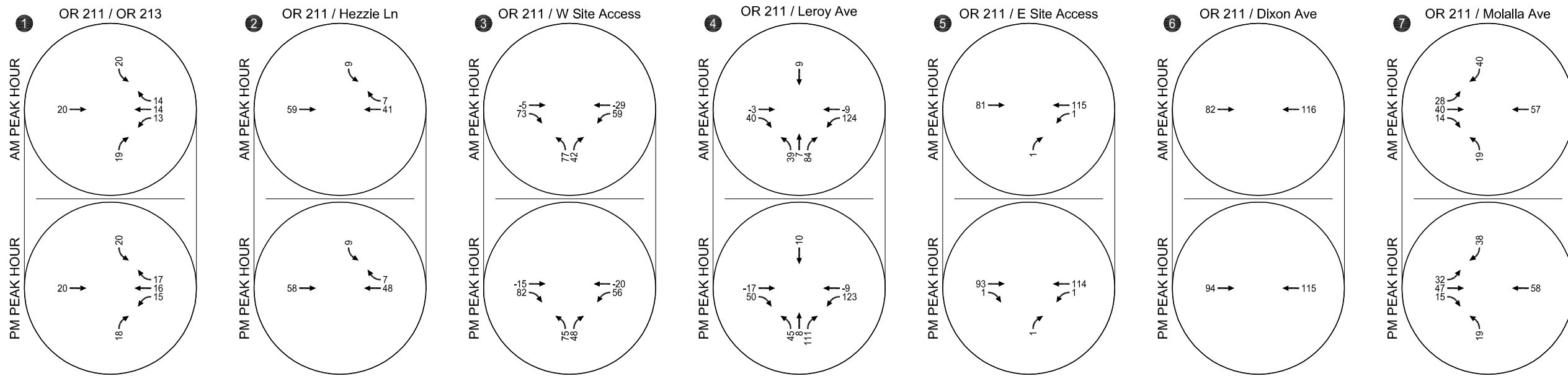
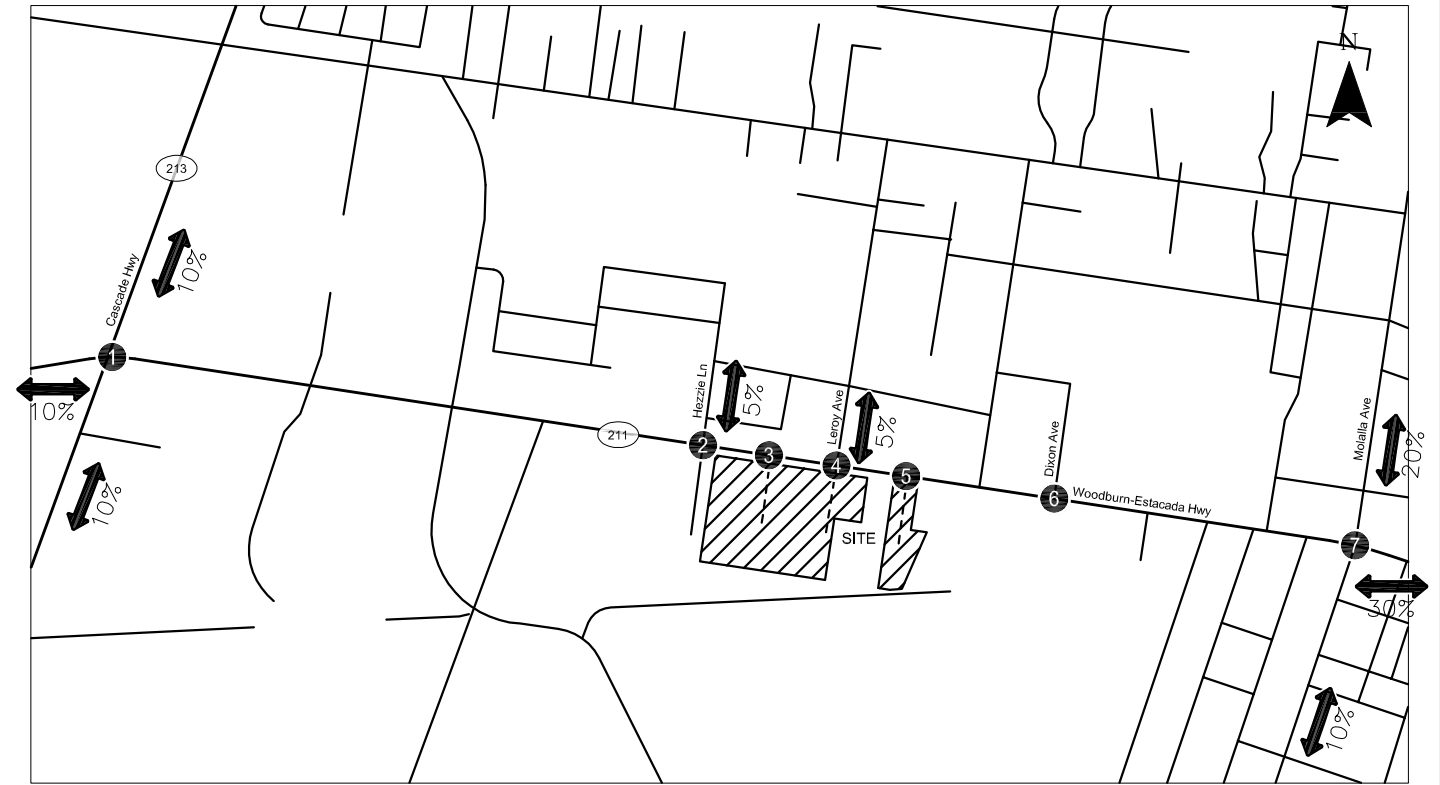
Original Cascade Center Land Uses - Submitted August 2019									
Land Use	ITE Code	Size	Weekday Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Fast Food Restaurant with Drive Through	934	6,300 ft ²	2,966	253	129	124	206	107	99
<i>Less Internal (17% Daily, 3% AM, 14% PM)</i>			-504	-8	-4	-4	-29	-15	-14
<i>Less Pass-by (50% Daily, 49% AM, 50% PM)</i>			1,232	120	60	60	88	44	44
Coffee Shop with Drive Through	937	1,400 ft ²	1,148	124	63	61	61	30	31
<i>Less Internal (17% Daily, 3% AM, 14% PM)</i>			-196	-4	-2	-2	-9	-4	-5
<i>Less Pass-by (89% Daily, 89% AM, 89% PM)</i>			-848	-106	-53	-53	-46	-23	-23
Shopping Center (fitted)	820	63,281 ft ²	4,404	184	114	70	387	209	178
<i>Less Internal (17% Daily, 3% AM, 14% PM)</i>			-748	-6	-3	-3	-54	-29	-25
<i>Less Pass-by (34% Daily, 34% PM)</i>			-1,244	0	0	0	-114	-57	-57
Storage Units	151	256 units	46	2	1	1	5	3	2
Free-Standing Discount Store	815	9,100 ft ²	484	11	8	3	44	22	22
<i>Less Pass-by (34% Daily, 34% PM)</i>			-164	0	0	0	-14	-7	-7
Gross Trips			9,048	574	315	259	703	371	332
<i>Less Internal</i>			-1,448	-18	-9	-9	-92	-48	-44
<i>Less Pass-by</i>			-3,488	-226	-113	-113	-262	-131	-131
Net New Trips			4,112	330	193	137	349	192	157
Revised Cascade Center Land Uses with Expanded Goodwill Store									
Fast Food Restaurant with Drive Through	934	3,150 ft ²	1,484	127	65	62	103	54	49
<i>Less Internal (13% Daily, 4% AM, 10% PM)</i>			-192	-5	-3	-2	-10	-5	-5
<i>Less Pass-by (50% Daily, 49% AM, 50% PM)</i>			-646	-60	-30	-30	-46	-23	-23
Coffee Shop with Drive Through	937	1,400 ft ²	1,148	124	63	61	61	30	31
<i>Less Internal (13% Daily, 4% AM, 10% PM)</i>			-150	-5	-3	-2	-6	-3	-3
<i>Less Pass-by (89% Daily, 89% AM, 89% PM)</i>			-888	-106	-53	-53	-48	-24	-24
Shopping Center (fitted)	820	67,681 ft ²	230 4,610	9 186	6 115	3 71	20 407	10 195	10 212
<i>Less Internal (13% Daily, 4% AM, 10% PM)</i>			-30 -600	0 -7	0 -5	0 -2	-2 -41	-1 -20	-1 -21
<i>Less Pass-by (34% Daily, 34% PM)</i>			-68 -1,364	0	0	0	-6 -124	-3 -62	-3 -62
Storage Units	151	256 units	46	2	1	1	5	3	2
Free Standing Discount Store	815	9,100 ft²	484	11	8	3	44	22	22
<i>Less Pass-by (34% Daily, 34% PM)</i>			-164	0	0	0	-14	-7	-7
Gross Trips			2862 7,772	260 450	134 252	126 198	184 620	94 304	90 316
<i>Less Internal</i>			-372 -942	-10 -17	-6 -11	-4 -6	-18 -57	-9 -28	-9 -29
<i>Less Pass-by</i>			-160 23,062	-166 -166	-83 -83	-83 -83	-100 -232	-50 -116	-50 -116
Net New Trips			888 3,768	84 267	45 158	39 109	66 331	35 160	31 171
Revised Land Uses with Expanded Goodwill Store minus Original Cascade Center Land Uses									
Net New Trips			-344	-63	-35	-28	-18	-32	14

95%
Constructed
and Occupied
Deleted from
Project
Constructed

% Primary

25%

20%



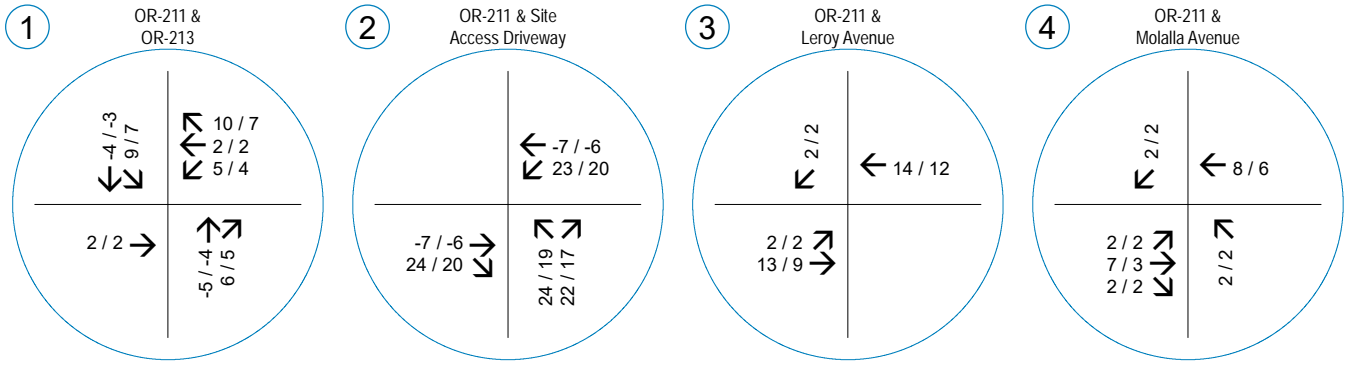
Remaining to be constructed: ~25%

Remaining to be constructed: ~20%

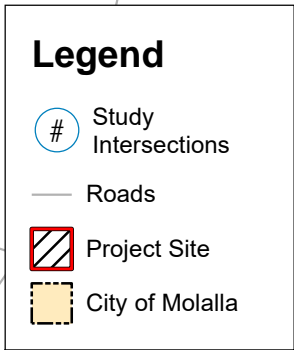
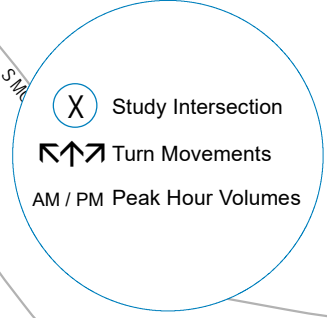
Negative values indicate pass-by trips

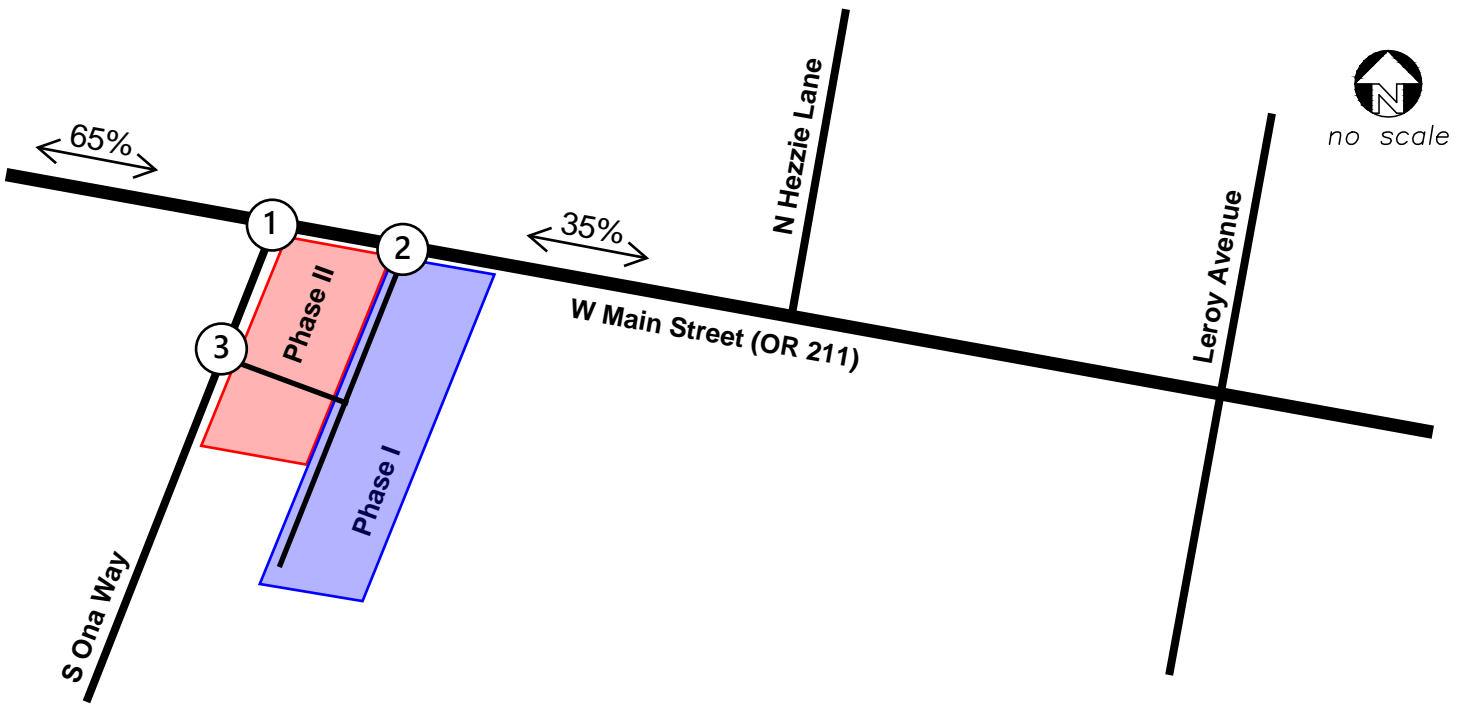
Site-Generated Trips
Weekday AM and PM Peak Hours
Molalla, Oregon

Figure
6



Legend



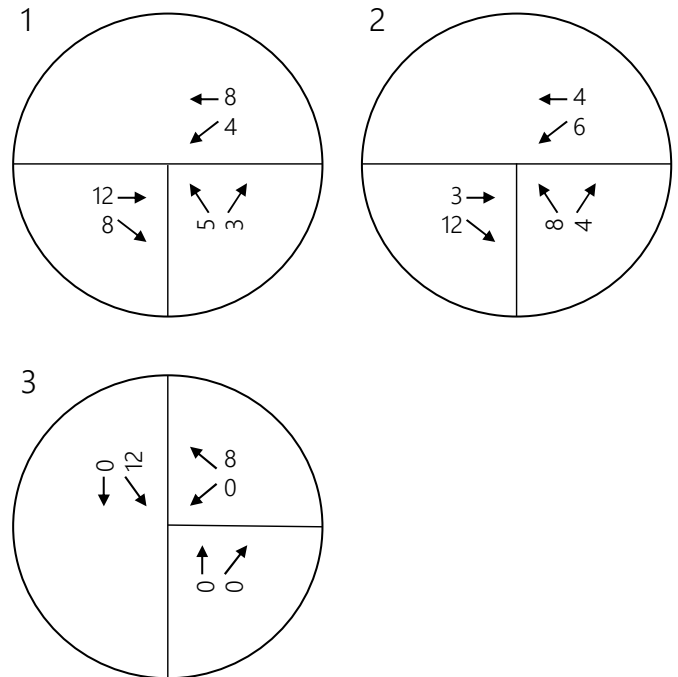
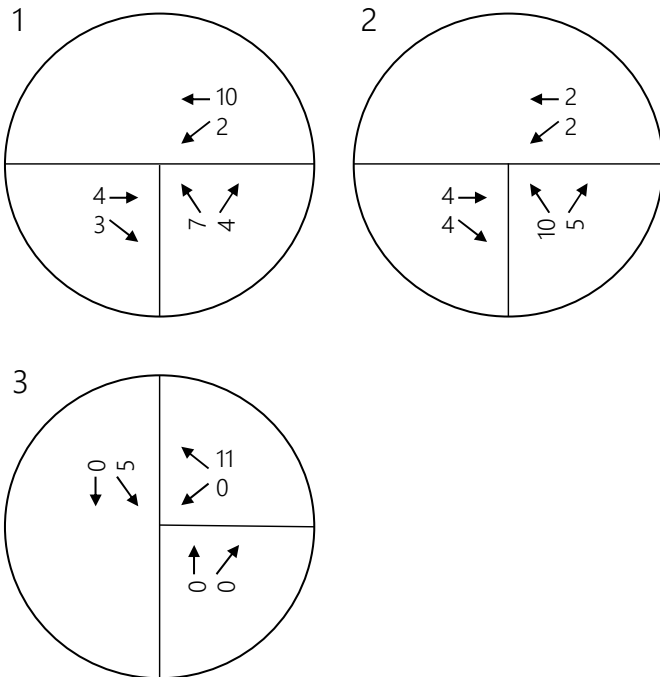


LEGEND

- ← Turning Movement
- # Traffic Volume

AM PEAK HOUR

PM PEAK HOUR



Appendix C - Safety

Crash History Data

Left-Turn Lane Warrant Analysis

Right-Turn Lane Warrant Analysis

Preliminary Signal Warrant Analysis

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING
MAIN ST at LEROY AVE, City of Molalla, Clackamas County, 01/01/2018 to 12/31/2022

9 - 11 of 11 Crash records shown.

SER#	P	R	J	S	W	DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	SPCL USE	MOVE	INJ	G	E	LICNS	PED	ERROR	ACT	EVENT	CAUSE										
INVEST	E	A	U	I	C	DAY	DIST	FIRST STREET		(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR	QTY		A	S												
RD DPT	E	L	G	N	H	R TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED									
UNLOC?	D	C	S	V	L	K LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE			
															02	NONE	0	STRGHT													
																PRVTE	E -W										000	013	00		
																PSNGR	CAR		01	DRVR	NONE	28	M	OR-Y		000	000		00		
															03	NONE	0	STOP													
																PRVTE	N -S										022		00		
																PSNGR	CAR		01	DRVR	NONE	33	F	OR-Y		000	000		00		
03453	N	N	N	N	N	10/28/2022	16	LEROY AVE	INTER	3-LEG	N	N	RAIN	ANGL-OTH	01	NONE	0	STRGHT											02		
CITY								FR		MAIN ST		CN		STOP SIGN	N	WET	ANGL		PRVTE								000		00		
N						5A			01	0		N	DLIT	INJ		PSNGR	CAR		01	DRVR	INJB	49	M	OR-Y		000	000		00		
N						45 8 55.77	-122 35	016100100S00																							
							21.09																								
																02	NONE	0	STRGHT												
																PRVTE	N -S											015		00	
																PSNGR	CAR		01	DRVR	INJC	79	F	OR-Y		028	000		02		
02811	N	N	N	N	N	09/10/2022	16	LEROY AVE	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE	9	STRGHT										082	40,02		
CITY								SA		MAIN ST		CN		STOP SIGN	N	DRY	ANGL		N/A								000		00		
N						2P			01	0		N	DAY	PDO		PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00		
N						45 8 55.77	-122 35	016100100S00																							
							21.09																								
																02	NONE	9	STRGHT												
																N/A												000		00	
																PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00		

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 reports 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 requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

161: WOODBURN-ESTACADA

Highway 161 ALL ROAD TYPES, MP 11.26 to 11.36 01/01/2018 to 12/31/2022, Both Add and Non-Add mileage

1 - 2 of 2 Crash records shown.

SER#	P	R	J	S	W	DATE	COUNTY	RD#	FC	CONN#	RD CHAR	INT-TYPE	SPCL USE	MOVE	A	S	INJ	G	E	LICNS	PED	ERROR	ACT	EVENT	CAUSE						
INVEST	E	A	U	I	C	O	CITY	COMPNT	FIRST STREET	DIRECT	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR	QTY	FROM	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE	
RD DPT	E	L	G	N	H	R	URBAN AREA	MLG	TYP	SECOND STREET	LOCTN	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE	
UNLOC?	D	C	S	V	L	K	LONG	MILEPNT	LRS		(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO													
02749	N	N	N	N		08/07/2018	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	ANGL-STP	01	NONE	9											29	
NONE						TU		MN	0		E		TRF SIGNAL	N	DRY	TURN	N/A												000	00	
N						3P	MOLALLA UA	11.31			05	0		N	DAY	PDO	PSNGR CAR			01	DRVR	NONE	00	Unk	UNK		000	000	00		
N						45 9 2.53	-122 36 22.92			016100100S00																					
																	02	NONE	9												
																	N/A												011	00	
																	PSNGR CAR			01	DRVR	NONE	00	Unk	UNK		000	000	00		
02217	N	N	N	N	N	Y	08/01/2021	CLACKAMAS	1	16	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE	9											29	
CITY						SU		MN	0		E		TRF SIGNAL	N	DRY	REAR	N/A												000	00	
N						7P	MOLALLA UA	11.31			06	0		N	DAY	PDO	PSNGR CAR			01	DRVR	NONE	00	Unk	UNK		000	000	00		
N						45 9 2.53	-122 36 22.92			016100100S00																					
																	02	NONE	9												
																	N/A												011	00	
																	PSNGR CAR			01	DRVR	NONE	00	Unk	UNK		000	000	00		

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 reports 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 requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

SER#	S P R J S W	DATE	CLASS	CITY STREET	INT-TYPE	SPCL USE																				
INVEST	E A U I C O	DAY	DIST	FIRST STREET	RD CHAR	TRLR QTY	MOVE																			
RD DPT	E L G N H R	TIME	FROM	SECOND STREET	DIRECT	OWNER	FROM																			
UNLOC?	D C S V L K	LAT	LONG	LRS	LOCTN	V# TYPE	TO																			
02998	N N Y N	09/11/2018	17	HEINTZ ST	INTER	01 NONE 0	STRGHT																			
CITY		TU	0	MOLALLA AVE	UN		UN-UN																			
N		9A			05																					
N		45 9 4.45	-122 34																							
			34.58																							
02823	N N N N N N	10/19/2020	17	HEINTZ ST	INTER	01 NONE 9	STRGHT																			
CITY		MO	0	MOLALLA AVE	CN		W -E																			
N		4P			04																					
N		45 9 4.45	-122 34																							
			34.58																							

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF MOLALLA, CLACKAMAS COUNTY

MAIN ST at MOLALLA AVE, City of Molalla, Clackamas County, 01/01/2018 to 12/31/2022

10 - 14 of 14 Crash records shown.

SER#	P	R	J	S	W	DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	SPCL USE	TRLR QTY	MOVE	A	S	P	T	INJ	G	E	LICNS	PED	ERROR	ACT	EVENT	CAUSE				
INVEST	E	A	U	I	C	O	DIST	FIRST STREET	DIRECT	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED	ERROR	ACT	EVENT	CAUSE				
RD DPT	E	L	G	N	H	R	TIME	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED	ERROR	ACT	EVENT	CAUSE				
UNLOC?	D	C	S	V	L	K	LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE	
												02	NONE	9		TURN-L														
												N/A				NW-NE														
												PSNGR	CAR					01	DRVR	NONE	00	Unk	UNK							
02642	N	N	N	N	N		08/02/2019	16	MAIN ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE	9												
NONE							FR		MOLALLA AVE	CN		STOP SIGN	N	DRY	ANGL	N/A														
N							9A			03	0		N	DAY	PDO	PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK					
N							45 8 51.11	-122 34 37.59	016100100S00																					
												02	NONE	9		STRGHT														
												N/A				W -E														
												PSNGR	CAR					01	DRVR	NONE	00	Unk	UNK							
03780	N	N	N	N	N		10/28/2019	16	MAIN ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE	9												
NONE							MO		MOLALLA AVE	CN		STOP SIGN	N	DRY	TURN	N/A														
N							9A			04	0		N	DAY	PDO	PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK					
N							45 8 51.1	-122 34 37.56	016100100S00																					
												02	NONE	9		TURN-L														
												N/A				SW-NW														
												PSNGR	CAR					01	DRVR	NONE	00	Unk	UNK							
00159	N	N	N	N	N		01/18/2021	16	MAIN ST	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE	0												
NONE							MO		MOLALLA AVE	CN		STOP SIGN	N	DRY	TURN	PRVTE														
N							1P			04	0		N	DAY	INJ	PSNGR	CAR			01	DRVR	NONE	30	M	OR-Y					
N							45 8 51.11	-122 34 37.56	016100100S00																					
												02	NONE	0		TURN-L														
												PRVTE				N -E														
												PSNGR	CAR					01	DRVR	INJC	40	M	OTH-Y							
02080	N	N	N	N	N		07/22/2021	16	MAIN ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE	9												
NO RPT							TH		MOLALLA AVE	CN		STOP SIGN	N	DRY	TURN	N/A														
N							8P			03	0		N	DAY	PDO	PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK					
N							45 8 51.09	-122 34 37.54	016100100S00																					
												02	NONE	9		STRGHT														
												N/A				NW-SE														
												PSNGR	CAR					01	DRVR	NONE	00	Unk	UNK							

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 reports 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 requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

Turn Lane Evaluation (E-W Hwy Orientation)



Evaluation:	Industrial Access at W Main
Highway:	OR 211
MP:	
Posted Speed:	35
Analyst:	Lancaster Mobley
Condition:	2026 Buildout

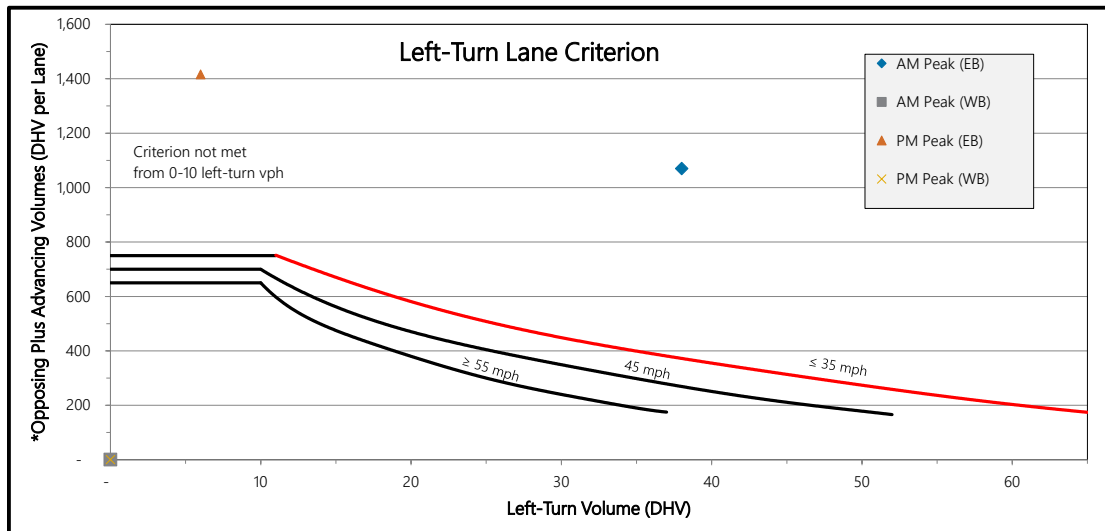
Turn Movement Volumes

						SBR	SBT	SBL						
EBL	38	AM			25	WBR	EBL	6	PM			4	WBR	
EBT	440				567	WBT	EBT	705						
EBR	-				-	WBL	EBR	-						
						NBL	NBT	NBR						
						33	-	22						
						-	-	-						
						-	-	-						
						-	-	-						

		EB	WB
Through Lanes (Including Shared):		1	1

Left-Turn Evaluation

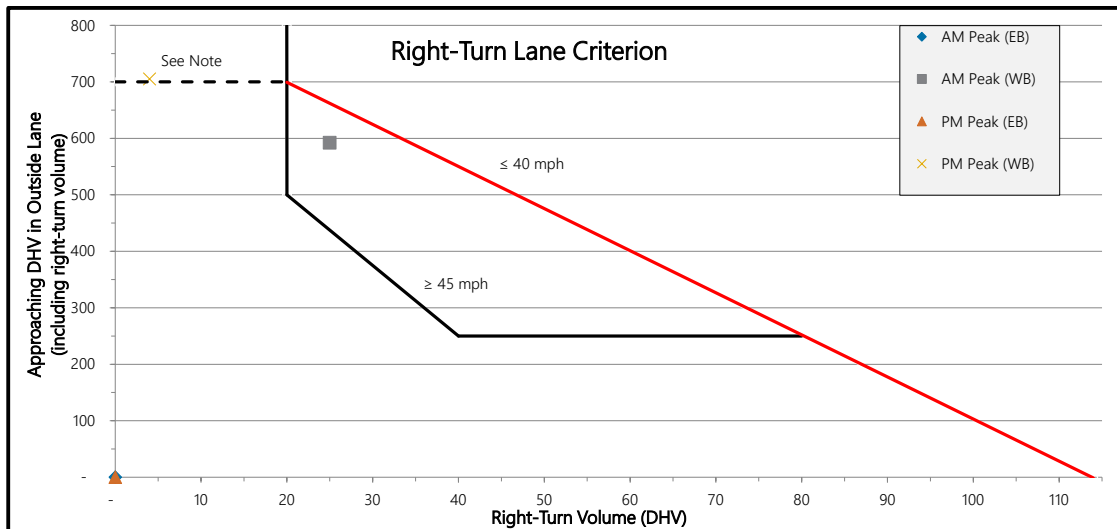
	AM	PM
EB DHV Lefts =	38	6
WB DHV Lefts =	-	-
EB DHV (Opposing + Advancing) =	1,070	1,416
WB DHV (Opposing + Advancing) =	-	-



* (Advancing Volume/Advancing Thru Lanes) + (Opposing Volume/Opposing Thru Lanes). Opposing left-turns are not counted as opposing volumes.

Right-Turn Evaluation

	AM	PM
EB DHV Rights =	-	-
WB DHV Rights =	25	4
EB Approaching DHV in Outside Lane =	-	-
WB Approaching DHV in Outside Lane =	592	705



Note: If there is no right turn lane, a taper should be considered. If this intersection is in a rural area and is a connection to a public street, a right turn lane is needed.

Turn Lane Evaluation (E-W Hwy Orientation)



Evaluation:	Industrial Access at W Heintz St
Highway:	
MP:	
Posted Speed:	25
Analyst:	Lancaster Mobley
Condition:	2026 Buildout

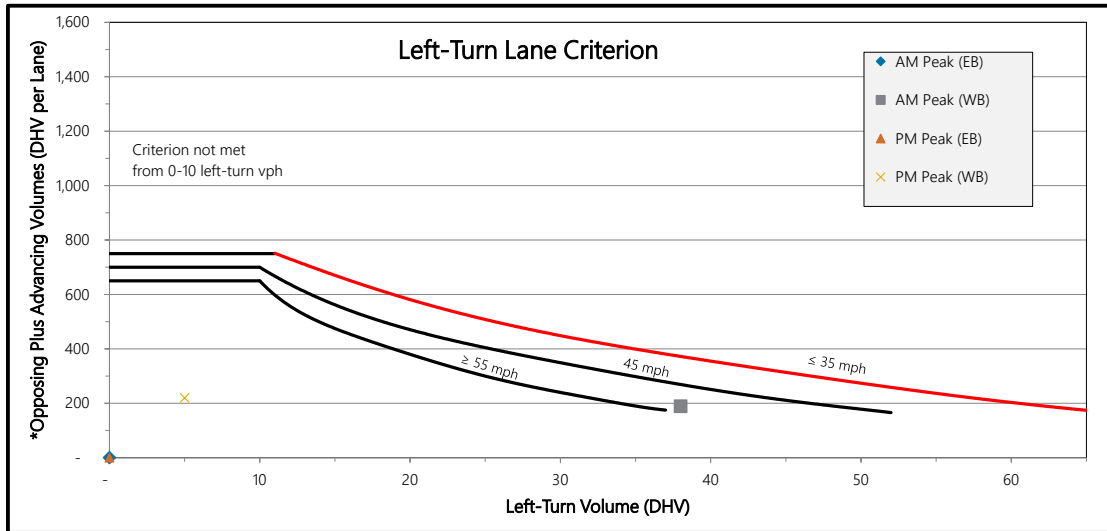
Turn Movement Volumes

						SBR	SBT	SBL							SBR	SBT	SBL		
EBL	-					-			WBR	EBL	-					-			WBR
EBT	64					63			WBT	EBT	69					143			WBT
EBR	24					38			WBL	EBR	3					5			WBL
						NBL	NBT	NBR							NBL	NBT	NBR		
						3	-	5							21	-	33		

	EB	WB
Through Lanes (Including Shared):	1	1

Left-Turn Evaluation

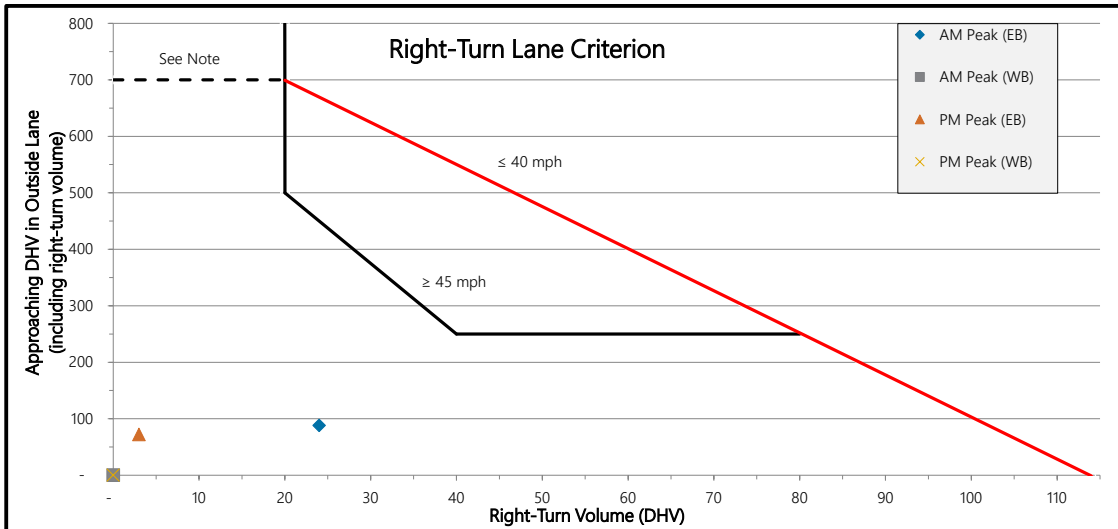
	AM	PM
EB DHV Lefts =	-	-
WB DHV Lefts =	38	5
EB DHV (Opposing + Advancing) =	-	-
WB DHV (Opposing + Advancing) =	189	220



* (Advancing Volume/Advancing Thru Lanes) + (Opposing Volume/Opposing Thru Lanes). Opposing left-turns are not counted as opposing volumes.

Right-Turn Evaluation

	AM	PM
EB DHV Rights =	24	3
WB DHV Rights =	-	-
EB Approaching DHV in Outside Lane =	88	72
WB Approaching DHV in Outside Lane =	-	-

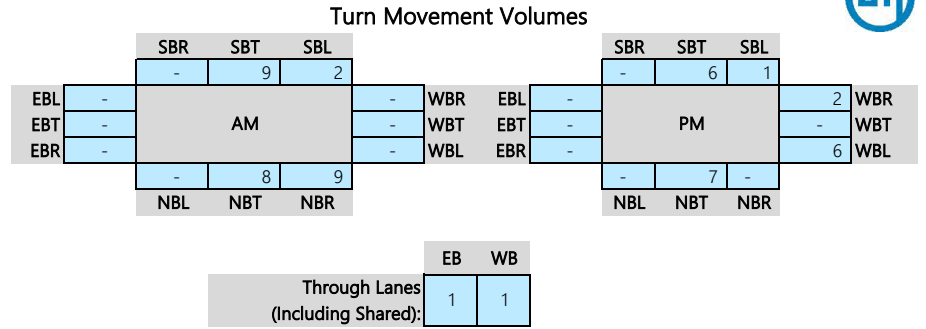


Note: If there is no right turn lane, a taper should be considered. If this intersection is in a rural area and is a connection to a public street, a right turn lane is needed.

Turn Lane Evaluation (E-W Hwy Orientation)

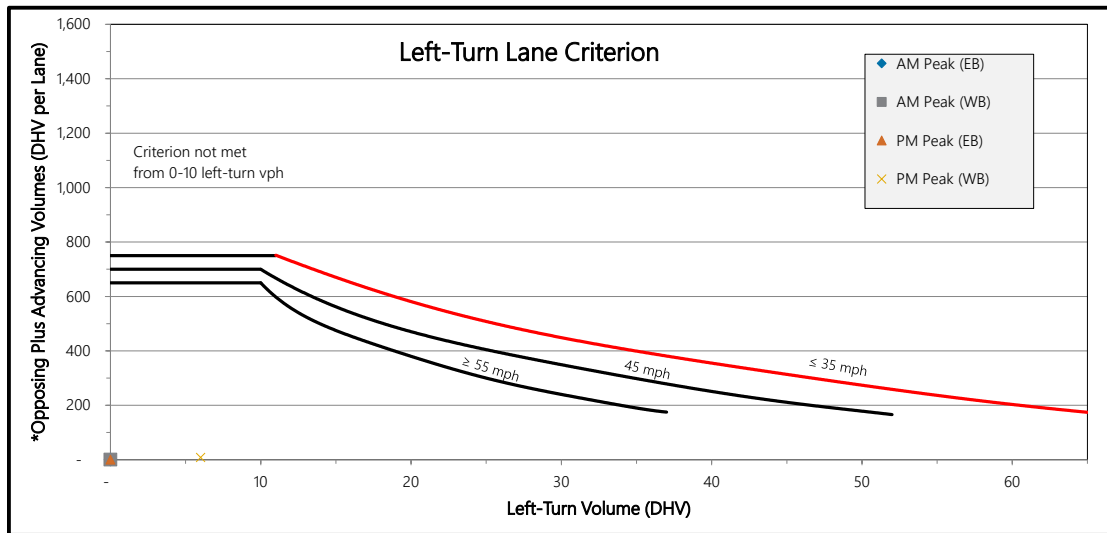


Evaluation:	Industrial Access at Dixon Aven
Highway:	
MP:	
Posted Speed:	25
Analyst:	Lancaster Mobley
Condition:	2026 Buildout



Left-Turn Evaluation

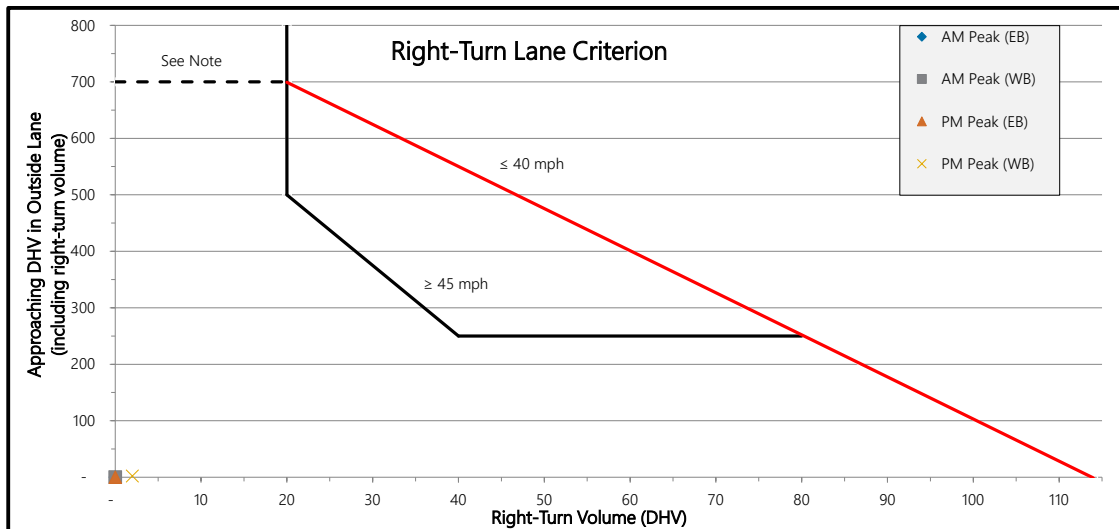
	AM	PM
EB DHV Lefts =	-	-
WB DHV Lefts =	-	6
EB DHV (Opposing + Advancing) =	-	-
WB DHV (Opposing + Advancing) =	-	8



* (Advancing Volume/Advancing Thru Lanes) + (Opposing Volume/Opposing Thru Lanes). Opposing left-turns are not counted as opposing volumes.

Right-Turn Evaluation

	AM	PM
EB DHV Rights =	-	-
WB DHV Rights =	-	2
EB Approaching DHV in Outside Lane =	-	-
WB Approaching DHV in Outside Lane =	-	2



Note: If there is no right turn lane, a taper should be considered. If this intersection is in a rural area and is a connection to a public street, a right turn lane is needed.



Preliminary Traffic Signal Warrant Analysis

Project: 23141 - Kerr Industrial
 Date: 5/1/2024
 Scenario: 2026 Buildout PM

Major Street:	W Main (OR 211)	Minor Street:	Ona Way	
Number of Lanes:	1	Number of Lanes:	1	
Peak Hour Volumes:	1524	Peak Hour Volumes:	29	Total
			17	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)	
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
<u>WARRANT 1, CONDITION A</u>					
		100%	70%	100%	70%
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
<u>WARRANT 1, CONDITION B</u>					
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?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	15,240	8,850	
Minor Street*	210	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	15,240	13,300	
Minor Street*	210	1,350	No
<i>Combination Warrant</i>			
Major Street	15,240	10,640	
Minor Street*	210	2,120	No

* Minor street right-turning traffic volumes reduced by 50%.



Preliminary Traffic Signal Warrant Analysis

Project: 23141 - Kerr Industrial
 Date: 5/1/2024
 Scenario: 2026 Buildout PM

Major Street:	W Main (OR 211)	Minor Street:	Leroy Ave	
Number of Lanes:	1	Number of Lanes:	1	
Peak Hour Volumes:	1422	Peak Hour Volumes:	135	Total
			99	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)	
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
WARRANT 1, CONDITION A					
		100%	70%	100%	70%
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?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	14,220	8,850	
Minor Street*	360	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	14,220	13,300	
Minor Street*	360	1,350	No
<i>Combination Warrant</i>			
Major Street	14,220	10,640	
Minor Street*	360	2,120	No

* Minor street right-turning traffic volumes reduced by 100%.



Preliminary Traffic Signal Warrant Analysis

Project: 23141 - Kerr Industrial
 Date: 5/1/2024
 Scenario: 2026 Buildout PM

Major Street:	W Main (OR 211)	Minor Street:	Ridings Ave	
Number of Lanes:	1	Number of Lanes:	1	
Peak Hour Volumes:	1489	Peak Hour Volumes:	44	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)	
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
<u>WARRANT 1, CONDITION A</u>					
		100%	70%	100%	70%
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
<u>WARRANT 1, CONDITION B</u>					
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?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	14,890	8,850	
Minor Street*	260	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	14,890	13,300	
Minor Street*	260	1,350	No
<i>Combination Warrant</i>			
Major Street	14,890	10,640	
Minor Street*	260	2,120	No

* Minor street right-turning traffic volumes reduced by 50%.



Preliminary Traffic Signal Warrant Analysis

Project: 23141 - Kerr Industrial
 Date: 5/1/2024
 Scenario: 2026 Buildout PM

Major Street:	W Main (OR 211)	Minor Street:	Dixon Ave	
Number of Lanes:	1	Number of Lanes:	1	
Peak Hour Volumes:	1444	Peak Hour Volumes:	73	Total
			32	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)	
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
WARRANT 1, CONDITION A					
		100%	70%	100%	70%
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?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	14,440	8,850	
Minor Street*	570	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	14,440	13,300	
Minor Street*	570	1,350	No
<i>Combination Warrant</i>			
Major Street	14,440	10,640	
Minor Street*	570	2,120	No

* Minor street right-turning traffic volumes reduced by 50%.



Preliminary Traffic Signal Warrant Analysis

Project: 23141 - Kerr Industrial
 Date: 5/1/2024
 Scenario: 2026 Buildout PM

Major Street:	W Main (OR 211)	Minor Street:	Site Access	
Number of Lanes:	1	Number of Lanes:	1	
Peak Hour Volumes:	1416	Peak Hour Volumes:	55	Total
			33	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)	
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
<u>WARRANT 1, CONDITION A</u>					
		100%	70%	100%	70%
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
<u>WARRANT 1, CONDITION B</u>					
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?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	14,160	8,850	
Minor Street*	390	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	14,160	13,300	
Minor Street*	390	1,350	No
<i>Combination Warrant</i>			
Major Street	14,160	10,640	
Minor Street*	390	2,120	No

* Minor street right-turning traffic volumes reduced by 50%.



Preliminary Traffic Signal Warrant Analysis

Project: 23141 - Kerr Industrial
 Date: 5/1/2024
 Scenario: 2026 Buildout PM

Major Street:	W Heintz Street	Minor Street:	Site Access	
Number of Lanes:	1	Number of Lanes:	1	
Peak Hour Volumes:	220	Peak Hour Volumes:	54	Total
			33	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)	
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
<u>WARRANT 1, CONDITION A</u>					
		100%	70%	100%	70%
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
<u>WARRANT 1, CONDITION B</u>					
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?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	2,200	8,850	
Minor Street*	380	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	2,200	13,300	
Minor Street*	380	1,350	No
<i>Combination Warrant</i>			
Major Street	2,200	10,640	
Minor Street*	380	2,120	No

* Minor street right-turning traffic volumes reduced by 50%.



Preliminary Traffic Signal Warrant Analysis

Project: 23141 - Kerr Industrial
 Date: 5/1/2024
 Scenario: 2026 Buildout PM

Major Street:	Molalla Avenue	Minor Street:	W Heintz Street
Number of Lanes:	1	Number of Lanes:	1
Peak Hour Volumes:	519	Peak Hour Volumes:	103
			19
			50%
			Total Rights 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)	
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
<u>WARRANT 1, CONDITION A</u>					
		100%	70%	100%	70%
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
<u>WARRANT 1, CONDITION B</u>					
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?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	5,190	8,850	
Minor Street*	940	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	5,190	13,300	
Minor Street*	940	1,350	No
<i>Combination Warrant</i>			
Major Street	5,190	10,640	
Minor Street*	940	2,120	No

* Minor street right-turning traffic volumes reduced by 50%.



Preliminary Traffic Signal Warrant Analysis

Project: 23141 - Kerr Industrial
 Date: 5/1/2024
 Scenario: 2026 Buildout PM

Major Street:	Dixon Avenue	Minor Street:	Site Access	
Number of Lanes:	1	Number of Lanes:	1	
Peak Hour Volumes:	14	Peak Hour Volumes:	8	Total
			2	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)	
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
<u>WARRANT 1, CONDITION A</u>					
		100%	70%	100%	70%
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
<u>WARRANT 1, CONDITION B</u>					
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?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	140	8,850	
Minor Street*	70	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	140	13,300	
Minor Street*	70	1,350	No
<i>Combination Warrant</i>			
Major Street	140	10,640	
Minor Street*	70	2,120	No

* Minor street right-turning traffic volumes reduced by 50%.

Appendix D - Operations

Definitions

Synchro Reports

Queuing Reports





Level of Service Definitions

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

- *Level of service A:* Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.
- *Level of service B:* Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.
- *Level of service C:* Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.
- *Level of service D:* Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.
- *Level of service E:* Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.
- *Level of service F:* Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.



Level of Service Criteria
For Signalized Intersections

Level of Service (LOS)	Control Delay per Vehicle (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

Level of Service Criteria
For Unsignalized Intersections

Level of Service (LOS)	Control Delay per Vehicle (Seconds)
A	<10
B	10-15
C	15-25
D	25-35
E	35-50
F	>50

HCM Signalized Intersection Capacity Analysis

1: OR 213 & OR 211/OR 211 (W Main)

02/28/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	140	6	79	209	168	11	168	110	65	84	67
Future Volume (vph)	57	140	6	79	209	168	11	168	110	65	84	67
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
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	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		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1471	1539		1484	1563	1328	1525	1606	1336	1497	1472	
Flt Permitted	0.56	1.00		0.55	1.00	1.00	0.64	1.00	1.00	0.46	1.00	
Satd. Flow (perm)	868	1539		863	1563	1328	1037	1606	1336	737	1472	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	66	163	7	92	243	195	13	195	128	76	98	78
RTOR Reduction (vph)	0	1	0	0	0	135	0	0	93	0	25	0
Lane Group Flow (vph)	66	169	0	92	243	60	13	195	35	76	151	0
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	13%	13%	13%	12%	12%	12%	9%	9%	9%	11%	11%	11%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		
Actuated Green, G (s)	22.8	18.6		26.8	20.6	20.6	18.8	18.3	18.3	30.0	24.5	
Effective Green, g (s)	24.8	19.6		28.8	21.6	21.6	20.8	19.3	19.3	31.0	25.5	
Actuated g/C Ratio	0.36	0.28		0.41	0.31	0.31	0.30	0.28	0.28	0.44	0.37	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	353	432		420	483	410	319	444	369	411	537	
v/s Ratio Prot	0.01	0.11		c0.02	c0.16		0.00	c0.12		c0.02	c0.10	
v/s Ratio Perm	0.05			0.07		0.05	0.01		0.03	0.06		
v/c Ratio	0.18	0.39		0.21	0.50	0.14	0.04	0.43	0.09	0.18	0.28	
Uniform Delay, d1	15.2	20.2		12.9	19.7	17.4	17.3	20.7	18.7	11.6	15.6	
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	0.1	0.4		0.1	0.6	0.1	0.0	0.5	0.0	0.1	0.2	
Delay (s)	15.3	20.6		13.1	20.3	17.5	17.3	21.3	18.8	11.8	15.8	
Level of Service	B	C		B	C	B	B	C	B	B	B	
Approach Delay (s/veh)		19.2			18.0			20.2			14.6	
Approach LOS		B			B			C			B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	69.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 7th Signalized Intersection Summary

1: OR 213 & OR 211/OR 211 (W Main)

02/28/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	140	6	79	209	168	11	168	110	65	84	67
Future Volume (veh/h)	57	140	6	79	209	168	11	168	110	65	84	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1573	1573	1573	1586	1586	1586	1627	1627	1627	1600	1600	1600
Adj Flow Rate, veh/h	66	163	7	92	243	195	13	195	128	76	98	78
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	13	13	13	12	12	12	9	9	9	11	11	11
Cap, veh/h	407	404	17	497	448	380	392	343	290	386	215	171
Arrive On Green	0.08	0.27	0.25	0.10	0.28	0.28	0.04	0.21	0.21	0.09	0.26	0.24
Sat Flow, veh/h	1498	1497	64	1511	1586	1344	1550	1627	1376	1524	824	656
Grp Volume(v), veh/h	66	0	170	92	243	195	13	195	128	76	0	176
Grp Sat Flow(s),veh/h/ln	1498	0	1561	1511	1586	1344	1550	1627	1376	1524	0	1480
Q Serve(g_s), s	1.4	0.0	4.2	2.0	6.2	5.8	0.3	5.1	3.8	1.7	0.0	4.8
Cycle Q Clear(g_c), s	1.4	0.0	4.2	2.0	6.2	5.8	0.3	5.1	3.8	1.7	0.0	4.8
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	407	0	421	497	448	380	392	343	290	386	0	386
V/C Ratio(X)	0.16	0.00	0.40	0.19	0.54	0.51	0.03	0.57	0.44	0.20	0.00	0.46
Avail Cap(c_a), veh/h	631	0	1215	767	1302	1103	530	1096	926	958	0	1495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	0.0	14.2	10.4	14.4	14.3	13.6	16.8	16.3	12.4	0.0	14.9
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.1	0.8	0.8	0.0	1.1	0.8	0.2	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	1.3	0.5	1.9	1.5	0.1	1.7	1.1	0.5	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.9	0.0	14.7	10.5	15.2	15.1	13.6	17.9	17.1	12.6	0.0	15.6
LnGrp LOS	B		B	B	B	B	B	B	B	B		B
Approach Vol, veh/h	236		530				336		252			
Approach Delay, s/veh	13.6		14.4				17.4		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	8.5	16.8	5.8	16.4	7.9	17.4	8.2	14.0				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	12.0	36.0	5.0	47.0	10.0	38.0	21.0	31.0				
Max Q Clear Time (g_c+I1), s	4.0	6.2	2.3	6.8	3.4	8.2	3.7	7.1				
Green Ext Time (p_c), s	0.1	1.8	0.0	0.7	0.1	4.3	0.2	1.6				

Intersection Summary													
HCM 7th Control Delay, s/veh			15.1										
HCM 7th LOS			B										

Notes
User approved pedestrian interval to be less than phase max green.

HCM 7th TWSC
2: S Ona Way & OR 211 (W Main)

02/28/2024

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	360	8	6	590	9	14
Future Vol, veh/h	360	8	6	590	9	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	13	13	12	12	4	4
Mvmt Flow	409	9	7	670	10	16

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	418	0	1098
Stage 1	-	-	-	-	414
Stage 2	-	-	-	-	684
Critical Hdwy	-	-	4.22	-	6.44
Critical Hdwy Stg 1	-	-	-	-	5.44
Critical Hdwy Stg 2	-	-	-	-	5.44
Follow-up Hdwy	-	-	2.308	-	3.536
Pot Cap-1 Maneuver	-	-	1089	-	233
Stage 1	-	-	-	-	663
Stage 2	-	-	-	-	497
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1089	-	231
Mov Cap-2 Maneuver	-	-	-	-	360
Stage 1	-	-	-	-	663
Stage 2	-	-	-	-	492

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.08	12.79
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	488	-	-	18	-
HCM Lane V/C Ratio	0.054	-	-	0.006	-
HCM Control Delay (s/veh)	12.8	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

HCM 7th TWSC
3: Leroy Ave & OR 211 (W Main)

02/28/2024

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	29	348	2	7	442	53	5	0	6	15	1	63
Future Vol, veh/h	29	348	2	7	442	53	5	0	6	15	1	63
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
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, %	12	12	12	9	9	9	0	0	0	24	24	24
Mvmt Flow	33	395	2	8	502	60	6	0	7	17	1	72

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	563	0	0	400	0	0	985	1043	399	1010	1014	534
Stage 1	-	-	-	-	-	-	465	465	-	548	548	-
Stage 2	-	-	-	-	-	-	521	578	-	461	466	-
Critical Hdwy	4.22	-	-	4.19	-	-	7.1	6.5	6.2	7.34	6.74	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.34	5.74	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.34	5.74	-
Follow-up Hdwy	2.308	-	-	2.281	-	-	3.5	4	3.3	3.716	4.216	3.516
Pot Cap-1 Maneuver	961	-	-	1122	-	-	229	231	656	199	219	505
Stage 1	-	-	-	-	-	-	582	567	-	483	483	-
Stage 2	-	-	-	-	-	-	542	504	-	540	527	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	961	-	-	1120	-	-	187	221	654	189	209	504
Mov Cap-2 Maneuver	-	-	-	-	-	-	187	221	-	189	209	-
Stage 1	-	-	-	-	-	-	561	546	-	480	479	-
Stage 2	-	-	-	-	-	-	460	501	-	516	508	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.68	0.11	17.07	15.91
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	187	654	961	-	-	1120	-	-	189	493
HCM Lane V/C Ratio	0.03	0.01	0.034	-	-	0.007	-	-	0.09	0.147
HCM Control Delay (s/veh)	24.9	10.6	8.9	-	-	8.2	-	-	25.9	13.6
HCM Lane LOS	C	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.1	0	0.1	-	-	0	-	-	0.3	0.5

HCM 7th TWSC
4: OR 211 (W Main) & Ridings Ave

02/28/2024

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	18	352	0	1	464	19	0	0	1	20	0	38
Future Vol, veh/h	18	352	0	1	464	19	0	0	1	20	0	38
Conflicting Peds, #/hr	1	0	2	2	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	12	12	12	12	12	12	0	0	0	2	2	2
Mvmt Flow	19	371	0	1	488	20	0	0	1	21	0	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	509	0	0	373	0	0	901	922	373	910	912	499
Stage 1	-	-	-	-	-	-	410	410	-	502	502	-
Stage 2	-	-	-	-	-	-	491	512	-	408	410	-
Critical Hdwy	4.22	-	-	4.22	-	-	7.1	6.5	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.308	-	-	2.308	-	-	3.5	4	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1006	-	-	1133	-	-	261	272	678	255	274	571
Stage 1	-	-	-	-	-	-	622	599	-	552	542	-
Stage 2	-	-	-	-	-	-	563	540	-	620	595	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1005	-	-	1131	-	-	236	265	677	248	266	571
Mov Cap-2 Maneuver	-	-	-	-	-	-	236	265	-	248	266	-
Stage 1	-	-	-	-	-	-	606	583	-	551	541	-
Stage 2	-	-	-	-	-	-	523	539	-	604	580	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.42			0.02			10.33			15.8		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	677	88	-	-	4	-	-	394
HCM Lane V/C Ratio	0.002	0.019	-	-	0.001	-	-	0.155
HCM Control Delay (s/veh)	10.3	8.6	0	-	8.2	0	-	15.8
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.5

HCM 7th TWSC
5: Dixon Avenue & OR 211 (W Main)

02/28/2024

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗		↘	↗			↕			↕	
Traffic Vol, veh/h	2	369	4	0	476	6	0	0	0	0	0	9
Future Vol, veh/h	2	369	4	0	476	6	0	0	0	0	0	9
Conflicting Peds, #/hr	0	0	2	2	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	12	12	12	11	11	11	0	0	0	56	56	56
Mvmt Flow	2	401	4	0	517	7	0	0	0	0	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	524	0	0	407	0	0	927	934	405	926	932	521
Stage 1	-	-	-	-	-	-	410	410	-	521	521	-
Stage 2	-	-	-	-	-	-	517	524	-	405	412	-
Critical Hdwy	4.22	-	-	4.21	-	-	7.1	6.5	6.2	7.66	7.06	6.76
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.66	6.06	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.66	6.06	-
Follow-up Hdwy	2.308	-	-	2.299	-	-	3.5	4	3.3	4.004	4.504	3.804
Pot Cap-1 Maneuver	994	-	-	1104	-	-	251	268	650	201	218	463
Stage 1	-	-	-	-	-	-	623	599	-	452	453	-
Stage 2	-	-	-	-	-	-	545	533	-	528	511	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	994	-	-	1102	-	-	245	267	649	200	217	463
Mov Cap-2 Maneuver	-	-	-	-	-	-	245	267	-	200	217	-
Stage 1	-	-	-	-	-	-	620	597	-	452	453	-
Stage 2	-	-	-	-	-	-	533	533	-	526	509	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.05	0	0	12.95
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	994	-	-	1102	-	-	463
HCM Lane V/C Ratio	-	0.002	-	-	-	-	-	0.021
HCM Control Delay (s/veh)	0	8.6	-	-	0	-	-	12.9
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	5	364	476	2	2	11
Future Vol, veh/h	5	364	476	2	2	11
Conflicting Peds, #/hr	2	0	0	2	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	12	12	10	10	54	54
Mvmt Flow	5	391	512	2	2	12

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	516	0	-	0	917
Stage 1	-	-	-	-	515
Stage 2	-	-	-	-	402
Critical Hdwy	4.22	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	5.94
Critical Hdwy Stg 2	-	-	-	-	5.94
Follow-up Hdwy	2.308	-	-	-	3.986
Pot Cap-1 Maneuver	1001	-	-	-	245
Stage 1	-	-	-	-	507
Stage 2	-	-	-	-	576
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	999	-	-	-	243
Mov Cap-2 Maneuver	-	-	-	-	243
Stage 1	-	-	-	-	502
Stage 2	-	-	-	-	575

Approach	EB	WB	SB
HCM Control Delay, s/v	0.12	0	14.11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	24	-	-	-	409
HCM Lane V/C Ratio	0.005	-	-	-	0.034
HCM Control Delay (s/veh)	8.6	0	-	-	14.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM Signalized Intersection Capacity Analysis

7: Molalla Ave & OR 211 (W Main)

02/28/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	251	35	4	365	39	53	55	10	36	38	21
Future Volume (vph)	22	251	35	4	365	39	53	55	10	36	38	21
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	3.5	3.5	4.0	3.5			3.5			3.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			0.99			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			0.99	
Frt	1.00	1.00	0.85	1.00	0.98			0.98			0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.98	
Satd. Flow (prot)	1484	1563	1328	1554	1612			1639			1528	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.83			0.86	
Satd. Flow (perm)	1484	1563	1328	1554	1612			1399			1340	
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)	24	270	38	4	392	42	57	59	11	39	41	23
RTOR Reduction (vph)	0	0	20	0	4	0	0	5	0	0	13	0
Lane Group Flow (vph)	24	270	18	4	430	0	0	122	0	0	90	0
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	12%	12%	12%	7%	7%	7%	3%	3%	3%	9%	9%	9%
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)	0.9	18.9	18.9	0.7	18.7			9.6			9.6	
Effective Green, g (s)	0.9	19.4	19.4	0.7	19.2			10.1			10.1	
Actuated g/C Ratio	0.02	0.47	0.47	0.02	0.47			0.25			0.25	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5			2.5			2.5	
Lane Grp Cap (vph)	32	735	625	26	751			342			328	
v/s Ratio Prot	c0.02	0.17		0.00	c0.27							
v/s Ratio Perm			0.01					c0.09			0.07	
v/c Ratio	0.75	0.36	0.02	0.15	0.57			0.35			0.27	
Uniform Delay, d1	20.0	6.9	5.8	19.9	8.0			12.8			12.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	62.8	0.2	0.0	2.0	0.8			0.4			0.3	
Delay (s)	82.8	7.2	5.8	21.9	8.8			13.3			12.9	
Level of Service	F	A	A	C	A			B			B	
Approach Delay (s/veh)		12.5			8.9			13.3			12.9	
Approach LOS		B			A			B			B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	41.2	Sum of lost time (s)	11.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 7th Signalized Intersection Summary
 7: Molalla Ave & OR 211 (W Main)

02/28/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	251	35	4	365	39	53	55	10	36	38	21
Future Volume (veh/h)	22	251	35	4	365	39	53	55	10	36	38	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1586	1586	1586	1654	1654	1654	1709	1709	1709	1627	1627	1627
Adj Flow Rate, veh/h	24	270	38	4	392	42	57	59	11	39	41	23
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	7	7	7	3	3	3	9	9	9
Cap, veh/h	53	713	604	10	618	66	265	230	34	223	196	83
Arrive On Green	0.04	0.45	0.45	0.01	0.42	0.41	0.24	0.26	0.24	0.24	0.26	0.24
Sat Flow, veh/h	1511	1586	1344	1576	1469	157	503	903	133	365	768	326
Grp Volume(v), veh/h	24	270	38	4	0	434	127	0	0	103	0	0
Grp Sat Flow(s),veh/h/ln	1511	1586	1344	1576	0	1626	1539	0	0	1459	0	0
Q Serve(g_s), s	0.6	4.3	0.6	0.1	0.0	8.0	0.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	4.3	0.6	0.1	0.0	8.0	2.4	0.0	0.0	2.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.10	0.45		0.09	0.38		0.22
Lane Grp Cap(c), veh/h	53	713	604	10	0	684	509	0	0	483	0	0
V/C Ratio(X)	0.45	0.38	0.06	0.39	0.00	0.63	0.25	0.00	0.00	0.21	0.00	0.00
Avail Cap(c_a), veh/h	357	1645	1394	372	0	1686	1323	0	0	1253	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	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.0	7.0	5.9	18.8	0.0	8.7	11.6	0.0	0.0	11.4	0.0	0.0
Incr Delay (d2), s/veh	4.3	0.2	0.0	16.8	0.0	0.7	0.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.0	0.1	0.1	0.0	2.1	0.7	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.4	7.2	6.0	35.7	0.0	9.5	11.7	0.0	0.0	11.6	0.0	0.0
LnGrp LOS	C	A	A	D		A	B			B		
Approach Vol, veh/h		332			438			127			103	
Approach Delay, s/veh		8.2			9.7			11.7			11.6	
Approach LOS		A			A			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	20.6		13.2	5.3	19.5		13.2				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	9.0	39.0		30.0	9.0	39.0		30.0				
Max Q Clear Time (g_c+I1), s	2.1	6.3		4.0	2.6	10.0		4.4				
Green Ext Time (p_c), s	0.0	3.5		0.4	0.0	5.5		0.5				
Intersection Summary												
HCM 7th Control Delay, s/veh			9.6									
HCM 7th LOS			A									

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↵		↵	↵	
Traffic Vol, veh/h	29	19	14	3	24	47	5	87	0	32	89	15
Future Vol, veh/h	29	19	14	3	24	47	5	87	0	32	89	15
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles, %	7	7	7	7	7	7	5	5	5	7	7	7
Mvmt Flow	40	26	19	4	33	64	7	119	0	44	122	21
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay, s/veh	8.6	8.2	9	9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	47%	4%	100%	0%
Vol Thru, %	0%	100%	31%	32%	0%	86%
Vol Right, %	0%	0%	23%	64%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	87	62	74	32	104
LT Vol	5	0	29	3	32	0
Through Vol	0	87	19	24	0	89
RT Vol	0	0	14	47	0	15
Lane Flow Rate	7	119	85	101	44	142
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.011	0.173	0.115	0.128	0.069	0.201
Departure Headway (Hd)	5.716	5.213	4.887	4.542	5.688	5.084
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	626	688	732	788	629	705
Service Time	3.456	2.953	2.925	2.578	3.426	2.821
HCM Lane V/C Ratio	0.011	0.173	0.116	0.128	0.07	0.201
HCM Control Delay, s/veh	8.5	9	8.6	8.2	8.8	9.1
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0.6	0.4	0.4	0.2	0.7

HCM Signalized Intersection Capacity Analysis

1: OR 213 & OR 211/OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	112	241	14	159	197	131	10	179	115	228	258	102	
Future Volume (vph)	112	241	14	159	197	131	10	179	115	228	258	102	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
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	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		1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00		
Flpb, ped/bikes	0.99	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1582	1653		1583	1667	1385	1630	1716	1419	1595	1611		
Flt Permitted	0.60	1.00		0.34	1.00	1.00	0.54	1.00	1.00	0.44	1.00		
Satd. Flow (perm)	1009	1653		570	1667	1385	928	1716	1419	755	1611		
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)	115	248	14	164	203	135	10	185	119	235	266	105	
RTOR Reduction (vph)	0	2	0	0	0	98	0	0	90	0	12	0	
Lane Group Flow (vph)	115	260	0	164	203	37	10	185	29	235	359	0	
Confl. Peds. (#/hr)	2					2			6	6			
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	4%	4%	4%	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		
Protected Phases	5	2		1	6		3	8		7	4		
Permitted Phases	2			6		6	8		8	4			
Actuated Green, G (s)	25.7	18.7		31.5	21.6	21.6	19.7	19.1	19.1	39.3	33.7		
Effective Green, g (s)	27.7	19.7		33.5	22.6	22.6	21.7	20.1	20.1	40.3	34.7		
Actuated g/C Ratio	0.33	0.24		0.40	0.27	0.27	0.26	0.24	0.24	0.49	0.42		
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5		
Lane Grp Cap (vph)	392	392		363	454	377	256	416	344	531	674		
v/s Ratio Prot	0.03	c0.16		c0.06	0.12		0.00	0.11		c0.09	c0.22		
v/s Ratio Perm	0.07			0.12		0.03	0.01		0.02	0.13			
v/c Ratio	0.29	0.66		0.45	0.44	0.09	0.03	0.44	0.08	0.44	0.53		
Uniform Delay, d1	19.8	28.6		17.0	24.9	22.5	22.7	26.6	24.2	13.2	18.0		
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	0.3	3.7		0.6	0.5	0.0	0.0	0.5	0.0	0.4	0.6		
Delay (s)	20.1	32.4		17.7	25.4	22.6	22.7	27.2	24.3	13.6	18.6		
Level of Service	C	C		B	C	C	C	C	C	B	B		
Approach Delay (s/veh)		28.6			22.1			25.9			16.7		
Approach LOS		C			C			C			B		
Intersection Summary													
HCM 2000 Control Delay (s/veh)			22.4									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.57										
Actuated Cycle Length (s)			82.9									Sum of lost time (s)	16.0
Intersection Capacity Utilization			65.0%									ICU Level of Service	C
Analysis Period (min)			15										

c Critical Lane Group

HCM 7th Signalized Intersection Summary

1: OR 213 & OR 211/OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	241	14	159	197	131	10	179	115	228	258	102
Future Volume (veh/h)	112	241	14	159	197	131	10	179	115	228	258	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	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	1682	1682	1682	1682	1682	1682	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	115	248	14	164	203	135	10	185	119	235	266	105
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, %	5	5	5	5	5	5	2	2	2	4	4	4
Cap, veh/h	446	394	22	429	468	395	305	353	295	494	388	153
Arrive On Green	0.09	0.25	0.23	0.12	0.28	0.28	0.03	0.21	0.21	0.16	0.34	0.32
Sat Flow, veh/h	1602	1576	89	1602	1682	1420	1641	1723	1439	1615	1153	455
Grp Volume(v), veh/h	115	0	262	164	203	135	10	185	119	235	0	371
Grp Sat Flow(s),veh/h/ln	1602	0	1665	1602	1682	1420	1641	1723	1439	1615	0	1608
Q Serve(g_s), s	3.1	0.0	8.5	4.3	6.0	4.6	0.3	5.8	4.3	6.2	0.0	12.0
Cycle Q Clear(g_c), s	3.1	0.0	8.5	4.3	6.0	4.6	0.3	5.8	4.3	6.2	0.0	12.0
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	446	0	416	429	468	395	305	353	295	494	0	541
V/C Ratio(X)	0.26	0.00	0.63	0.38	0.43	0.34	0.03	0.52	0.40	0.48	0.00	0.69
Avail Cap(c_a), veh/h	593	0	1022	584	1088	919	420	914	763	824	0	1280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	20.2	14.1	17.9	17.4	17.9	21.3	20.8	13.4	0.0	17.4
Incr Delay (d2), s/veh	0.2	0.0	1.2	0.4	0.5	0.4	0.0	0.9	0.7	0.5	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	1.0	0.0	3.2	1.4	2.1	1.4	0.1	2.2	1.4	2.0	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.5	0.0	21.3	14.5	18.3	17.7	17.9	22.2	21.4	13.9	0.0	18.5
LnGrp LOS	B		C	B	B	B	B	C	C	B		B
Approach Vol, veh/h		377			502			314			606	
Approach Delay, s/veh		19.3			16.9			21.8			16.7	
Approach LOS		B			B			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.2	19.1	5.8	24.3	9.5	20.8	13.7	16.4				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	12.0	36.0	5.0	47.0	10.0	38.0	21.0	31.0				
Max Q Clear Time (g_c+I1), s	6.3	10.5	2.3	14.0	5.1	8.0	8.2	7.8				
Green Ext Time (p_c), s	0.3	2.8	0.0	1.6	0.1	3.2	0.7	1.5				

Intersection Summary

HCM 7th Control Delay, s/veh	18.2
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th TWSC
 2: S Ona Way & OR 211 (W Main)

03/01/2024

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	712	11	10	628	7	14
Future Vol, veh/h	712	11	10	628	7	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	5	5	3	3	5	5
Mvmt Flow	782	12	11	690	8	15

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	795	0	1501
Stage 1	-	-	-	-	788
Stage 2	-	-	-	-	712
Critical Hdwy	-	-	4.13	-	6.45
Critical Hdwy Stg 1	-	-	-	-	5.45
Critical Hdwy Stg 2	-	-	-	-	5.45
Follow-up Hdwy	-	-	2.227	-	3.545
Pot Cap-1 Maneuver	-	-	822	-	132
Stage 1	-	-	-	-	443
Stage 2	-	-	-	-	481
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	822	-	129
Mov Cap-2 Maneuver	-	-	-	-	267
Stage 1	-	-	-	-	443
Stage 2	-	-	-	-	470

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.15	16.49
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	336	-	-	28	-
HCM Lane V/C Ratio	0.069	-	-	0.013	-
HCM Control Delay (s/veh)	16.5	-	-	9.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Vol, veh/h	52	559	42	45	563	9	17	5	75	9	4	42
Future Vol, veh/h	52	559	42	45	563	9	17	5	75	9	4	42
Conflicting Peds, #/hr	5	0	0	0	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	4	4	4	1	1	1	4	4	4
Mvmt Flow	54	582	44	47	586	9	18	5	78	9	4	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	601	0	0	626	0	0	1395	1407	604	1383	1424	596
Stage 1	-	-	-	-	-	-	713	713	-	690	690	-
Stage 2	-	-	-	-	-	-	682	695	-	693	734	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.11	6.51	6.21	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.509	4.009	3.309	3.536	4.036	3.336
Pot Cap-1 Maneuver	976	-	-	946	-	-	119	140	500	120	134	500
Stage 1	-	-	-	-	-	-	425	437	-	432	443	-
Stage 2	-	-	-	-	-	-	441	445	-	430	423	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	972	-	-	946	-	-	95	125	500	87	120	497
Mov Cap-2 Maneuver	-	-	-	-	-	-	95	125	-	87	120	-
Stage 1	-	-	-	-	-	-	401	413	-	409	419	-
Stage 2	-	-	-	-	-	-	379	421	-	339	399	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.71			0.66			21.95			21.37		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	95	421	972	-	-	946	-	-	87	391
HCM Lane V/C Ratio	0.187	0.198	0.056	-	-	0.05	-	-	0.108	0.123
HCM Control Delay (s/veh)	51.6	15.7	8.9	-	-	9	-	-	51.4	15.5
HCM Lane LOS	F	C	A	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	0.6	0.7	0.2	-	-	0.2	-	-	0.4	0.4

HCM 7th TWSC
4: OR 211 (W Main) & Ridings Ave

03/01/2024

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	29	632	0	2	628	12	0	0	1	8	0	33
Future Vol, veh/h	29	632	0	2	628	12	0	0	1	8	0	33
Conflicting Peds, #/hr	5	0	3	3	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	4	4	4	4	4	4	0	0	0	0	0	0
Mvmt Flow	30	652	0	2	647	12	0	0	1	8	0	34

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	665	0	0	655	0	0	1366	1383	655	1374	1377	659
Stage 1	-	-	-	-	-	-	714	714	-	663	663	-
Stage 2	-	-	-	-	-	-	652	669	-	711	714	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.236	-	-	2.236	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	915	-	-	923	-	-	126	145	470	124	146	467
Stage 1	-	-	-	-	-	-	425	438	-	454	462	-
Stage 2	-	-	-	-	-	-	460	459	-	427	438	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	911	-	-	920	-	-	110	136	469	116	137	465
Mov Cap-2 Maneuver	-	-	-	-	-	-	110	136	-	116	137	-
Stage 1	-	-	-	-	-	-	402	414	-	450	458	-
Stage 2	-	-	-	-	-	-	425	455	-	404	414	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	0.4		0.03		12.7		19.31	
HCM LOS					B		C	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	469	79	-	-	6	-	-	294
HCM Lane V/C Ratio	0.002	0.033	-	-	0.002	-	-	0.144
HCM Control Delay (s/veh)	12.7	9.1	0	-	8.9	0	-	19.3
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.5

HCM 7th TWSC
5: Dixon Avenue & OR 211 (W Main)

03/01/2024

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	0	597	43	21	594	6	39	1	31	2	1	3
Future Vol, veh/h	0	597	43	21	594	6	39	1	31	2	1	3
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	5	5	5	3	3	3	0	0	0
Mvmt Flow	0	622	45	22	619	6	41	1	32	2	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	625	0	0	670	0	0	1310	1316	647	1288	1335	622
Stage 1	-	-	-	-	-	-	647	647	-	666	666	-
Stage 2	-	-	-	-	-	-	663	669	-	622	670	-
Critical Hdwy	4.14	-	-	4.15	-	-	7.13	6.53	6.23	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.1	5.5	-
Follow-up Hdwy	2.236	-	-	2.245	-	-	3.527	4.027	3.327	3.5	4	3.3
Pot Cap-1 Maneuver	947	-	-	906	-	-	135	157	469	142	155	490
Stage 1	-	-	-	-	-	-	458	465	-	452	461	-
Stage 2	-	-	-	-	-	-	449	455	-	478	459	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	947	-	-	904	-	-	130	153	468	128	151	490
Mov Cap-2 Maneuver	-	-	-	-	-	-	130	153	-	128	151	-
Stage 1	-	-	-	-	-	-	457	463	-	441	449	-
Stage 2	-	-	-	-	-	-	434	444	-	444	457	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0			0.31			35.46			22.52		
HCM LOS							E			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	190	947	-	-	904	-	-	212
HCM Lane V/C Ratio	0.389	-	-	-	0.024	-	-	0.03
HCM Control Delay (s/veh)	35.5	0	-	-	9.1	-	-	22.5
HCM Lane LOS	E	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.7	0	-	-	0.1	-	-	0.1

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	6	626	615	3	1	14
Future Vol, veh/h	6	626	615	3	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	4	27	27
Mvmt Flow	6	652	641	3	1	15

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	644	0	-	0	1307 642
Stage 1	-	-	-	-	642 -
Stage 2	-	-	-	-	665 -
Critical Hdwy	4.14	-	-	-	6.67 6.47
Critical Hdwy Stg 1	-	-	-	-	5.67 -
Critical Hdwy Stg 2	-	-	-	-	5.67 -
Follow-up Hdwy	2.236	-	-	-	3.743 3.543
Pot Cap-1 Maneuver	932	-	-	-	156 432
Stage 1	-	-	-	-	479 -
Stage 2	-	-	-	-	468 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	932	-	-	-	155 432
Mov Cap-2 Maneuver	-	-	-	-	155 -
Stage 1	-	-	-	-	474 -
Stage 2	-	-	-	-	468 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.08	0	14.72
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	17	-	-	-	386
HCM Lane V/C Ratio	0.007	-	-	-	0.04
HCM Control Delay (s/veh)	8.9	0	-	-	14.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM Signalized Intersection Capacity Analysis

7: Molalla Ave & OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	412	78	11	403	46	71	68	11	64	106	94
Future Volume (vph)	45	412	78	11	403	46	71	68	11	64	106	94
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	3.5		4.0	3.5			3.5			3.5	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Frt	1.00	0.97		1.00	0.98			0.99			0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.98	
Satd. Flow (prot)	1614	1658		1614	1667			1623			1594	
Flt Permitted	0.95	1.00		0.95	1.00			0.77			0.89	
Satd. Flow (perm)	1614	1658		1614	1667			1291			1440	
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	448	85	12	438	50	77	74	12	70	115	102
RTOR Reduction (vph)	0	7	0	0	5	0	0	3	0	0	22	0
Lane Group Flow (vph)	49	526	0	12	483	0	0	160	0	0	265	0
Confl. Peds. (#/hr)	11						11		10	10		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	3.7	24.9		0.8	22.0			17.0			17.0	
Effective Green, g (s)	3.7	25.4		0.8	22.5			17.5			17.5	
Actuated g/C Ratio	0.07	0.46		0.01	0.41			0.32			0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	
Lane Grp Cap (vph)	109	769		23	685			413			460	
v/s Ratio Prot	c0.03	c0.32		0.01	0.29							
v/s Ratio Perm								0.12			c0.18	
v/c Ratio	0.44	0.68		0.52	0.70			0.38			0.57	
Uniform Delay, d1	24.5	11.4		26.7	13.3			14.4			15.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.1	2.3		15.3	3.0			0.4			1.4	
Delay (s)	26.6	13.8		42.0	16.4			14.8			16.9	
Level of Service	C	B		D	B			B			B	
Approach Delay (s/veh)		14.8			17.0			14.8			16.9	
Approach LOS		B			B			B			B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	54.7	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 7th Signalized Intersection Summary
 7: Molalla Ave & OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	412	78	11	403	46	71	68	11	64	106	94
Future Volume (veh/h)	45	412	78	11	403	46	71	68	11	64	106	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	0.99		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	1709	1709	1709	1709	1709	1709	1695	1695	1695	1709	1709	1709
Adj Flow Rate, veh/h	49	448	85	12	438	50	77	74	12	70	115	102
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	3	3	3
Cap, veh/h	99	654	124	30	642	73	260	215	29	170	193	146
Arrive On Green	0.06	0.47	0.47	0.02	0.43	0.42	0.26	0.27	0.26	0.26	0.27	0.26
Sat Flow, veh/h	1628	1393	264	1628	1504	172	533	802	106	263	720	542
Grp Volume(v), veh/h	49	0	533	12	0	488	163	0	0	287	0	0
Grp Sat Flow(s),veh/h/ln	1628	0	1658	1628	0	1675	1441	0	0	1524	0	0
Q Serve(g_s), s	1.3	0.0	11.4	0.3	0.0	10.7	0.0	0.0	0.0	3.7	0.0	0.0
Cycle Q Clear(g_c), s	1.3	0.0	11.4	0.3	0.0	10.7	3.9	0.0	0.0	7.6	0.0	0.0
Prop In Lane	1.00		0.16	1.00		0.10	0.47		0.07	0.24		0.36
Lane Grp Cap(c), veh/h	99	0	778	30	0	715	489	0	0	492	0	0
V/C Ratio(X)	0.49	0.00	0.69	0.40	0.00	0.68	0.33	0.00	0.00	0.58	0.00	0.00
Avail Cap(c_a), veh/h	324	0	1449	324	0	1464	1040	0	0	1094	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	0.0	9.4	21.9	0.0	10.5	13.6	0.0	0.0	14.9	0.0	0.0
Incr Delay (d2), s/veh	2.8	0.0	0.8	6.1	0.0	0.9	0.3	0.0	0.0	0.8	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	0.5	0.0	3.1	0.2	0.0	3.1	1.2	0.0	0.0	2.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.3	0.0	10.2	28.1	0.0	11.4	13.9	0.0	0.0	15.8	0.0	0.0
LnGrp LOS	C		B	C		B	B			B		
Approach Vol, veh/h	582		500				163		287			
Approach Delay, s/veh	11.3		11.8				13.9		15.8			
Approach LOS	B		B				B		B			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	4.8	24.7	15.6		6.8	22.8	15.6					
Change Period (Y+Rc), s	4.0	4.0	4.0		4.0	4.0	4.0					
Max Green Setting (Gmax), s	9.0	39.0	30.0		9.0	39.0	30.0					
Max Q Clear Time (g_c+I1), s	2.3	13.4	9.6		3.3	12.7	5.9					
Green Ext Time (p_c), s	0.0	6.8	1.2		0.0	6.1	0.7					
Intersection Summary												
HCM 7th Control Delay, s/veh			12.6									
HCM 7th LOS			B									

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↵		↵	↵	
Traffic Vol, veh/h	26	23	18	10	16	48	17	132	10	106	193	15
Future Vol, veh/h	26	23	18	10	16	48	17	132	10	106	193	15
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
Heavy Vehicles, %	0	0	0	8	8	8	4	4	4	4	4	4
Mvmt Flow	27	24	19	11	17	51	18	139	11	112	203	16
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay, s/veh	8.7	8.6	9.3	9.8
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	39%	14%	100%	0%
Vol Thru, %	0%	93%	34%	22%	0%	93%
Vol Right, %	0%	7%	27%	65%	0%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	142	67	74	106	208
LT Vol	17	0	26	10	106	0
Through Vol	0	132	23	16	0	193
RT Vol	0	10	18	48	0	15
Lane Flow Rate	18	149	71	78	112	219
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.029	0.217	0.1	0.107	0.174	0.307
Departure Headway (Hd)	5.768	5.215	5.104	4.952	5.598	5.044
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	619	686	699	720	639	709
Service Time	3.52	2.967	3.161	3.008	3.344	2.791
HCM Lane V/C Ratio	0.029	0.217	0.102	0.108	0.175	0.309
HCM Control Delay, s/veh	8.7	9.4	8.7	8.6	9.5	10
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.8	0.3	0.4	0.6	1.3

HCM Signalized Intersection Capacity Analysis

1: OR 213 & OR 211/OR 211 (W Main)

03/01/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	59	158	6	100	230	196	11	173	130	87	87	69	
Future Volume (vph)	59	158	6	100	230	196	11	173	130	87	87	69	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
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	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		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00		
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1471	1540		1484	1563	1328	1525	1606	1336	1497	1472		
Flt Permitted	0.46	1.00		0.53	1.00	1.00	0.64	1.00	1.00	0.45	1.00		
Satd. Flow (perm)	727	1540		842	1563	1328	1033	1606	1336	724	1472		
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	
Adj. Flow (vph)	69	184	7	116	267	228	13	201	151	101	101	80	
RTOR Reduction (vph)	0	1	0	0	0	164	0	0	109	0	25	0	
Lane Group Flow (vph)	69	190	0	116	267	64	13	201	42	101	156	0	
Confl. Peds. (#/hr)									1	1			
Heavy Vehicles (%)	13%	13%	13%	12%	12%	12%	9%	9%	9%	11%	11%	11%	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		
Protected Phases	5	2		1	6		3	8		7	4		
Permitted Phases	2			6		6	8		8	4			
Actuated Green, G (s)	24.0	18.2		25.8	19.1	19.1	19.4	18.8	18.8	31.6	26.0		
Effective Green, g (s)	26.0	19.2		27.8	20.1	20.1	21.4	19.8	19.8	32.6	27.0		
Actuated g/C Ratio	0.36	0.27		0.39	0.28	0.28	0.30	0.28	0.28	0.46	0.38		
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5		
Lane Grp Cap (vph)	335	413		396	439	373	320	444	369	425	555		
v/s Ratio Prot	0.02	0.12		c0.03	c0.17		0.00	c0.13		c0.03	0.11		
v/s Ratio Perm	0.06			0.08		0.05	0.01		0.03	0.08			
v/c Ratio	0.20	0.45		0.29	0.60	0.17	0.04	0.45	0.11	0.23	0.28		
Uniform Delay, d1	15.3	21.8		14.5	22.2	19.4	17.7	21.3	19.2	11.6	15.4		
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	0.5		0.3	2.0	0.1	0.0	0.5	0.0	0.2	0.2		
Delay (s)	15.5	22.4		14.8	24.2	19.5	17.7	21.9	19.3	11.8	15.6		
Level of Service	B	C		B	C	B	B	C	B	B	B		
Approach Delay (s/veh)		20.5			20.7			20.7			14.3		
Approach LOS		C			C			C			B		
Intersection Summary													
HCM 2000 Control Delay (s/veh)			19.5		HCM 2000 Level of Service					B			
HCM 2000 Volume to Capacity ratio			0.46										
Actuated Cycle Length (s)			71.5		Sum of lost time (s)					16.0			
Intersection Capacity Utilization			46.4%		ICU Level of Service					A			
Analysis Period (min)			15										
c Critical Lane Group													

HCM 7th Signalized Intersection Summary
 1: OR 213 & OR 211/OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	158	6	100	230	196	11	173	130	87	87	69
Future Volume (veh/h)	59	158	6	100	230	196	11	173	130	87	87	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1573	1573	1573	1586	1586	1586	1627	1627	1627	1600	1600	1600
Adj Flow Rate, veh/h	69	184	7	116	267	228	13	201	151	101	101	80
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	13	13	13	12	12	12	9	9	9	11	11	11
Cap, veh/h	391	421	16	488	472	400	388	345	292	382	223	177
Arrive On Green	0.08	0.28	0.26	0.10	0.30	0.30	0.04	0.21	0.21	0.09	0.27	0.25
Sat Flow, veh/h	1498	1505	57	1511	1586	1344	1550	1627	1376	1524	826	654
Grp Volume(v), veh/h	69	0	191	116	267	228	13	201	151	101	0	181
Grp Sat Flow(s),veh/h/ln	1498	0	1562	1511	1586	1344	1550	1627	1376	1524	0	1481
Q Serve(g_s), s	1.6	0.0	5.1	2.6	7.2	7.3	0.3	5.6	4.9	2.4	0.0	5.2
Cycle Q Clear(g_c), s	1.6	0.0	5.1	2.6	7.2	7.3	0.3	5.6	4.9	2.4	0.0	5.2
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	391	0	437	488	472	400	388	345	292	382	0	400
V/C Ratio(X)	0.18	0.00	0.44	0.24	0.57	0.57	0.03	0.58	0.52	0.26	0.00	0.45
Avail Cap(c_a), veh/h	594	0	1138	725	1218	1032	515	1025	866	898	0	1399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.3	0.0	15.0	10.9	15.1	15.1	14.5	18.0	17.7	12.9	0.0	15.6
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.2	0.8	0.9	0.0	1.2	1.1	0.3	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.6	0.7	2.3	2.0	0.1	1.9	1.4	0.7	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	11.5	0.0	15.5	11.1	15.9	16.0	14.6	19.2	18.8	13.1	0.0	16.2
LnGrp LOS	B		B	B	B	B	B	B	B	B		B
Approach Vol, veh/h		260			611			365				282
Approach Delay, s/veh		14.5			15.0			18.8				15.1
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	18.2	5.8	17.7	8.1	19.1	8.8	14.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	12.0	36.0	5.0	47.0	10.0	38.0	21.0	31.0				
Max Q Clear Time (g_c+I1), s	4.6	7.1	2.3	7.2	3.6	9.3	4.4	7.6				
Green Ext Time (p_c), s	0.2	2.1	0.0	0.7	0.1	4.8	0.3	1.8				

Intersection Summary												
HCM 7th Control Delay, s/veh				15.9								
HCM 7th LOS				B								

Notes
 User approved pedestrian interval to be less than phase max green.

HCM 7th TWSC
2: S Ona Way & OR 211 (W Main)

03/01/2024

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	417	11	8	657	16	18
Future Vol, veh/h	417	11	8	657	16	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	13	13	12	12	4	4
Mvmt Flow	474	13	9	747	18	20

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	486	0	1245 480
Stage 1	-	-	-	-	480 -
Stage 2	-	-	-	-	765 -
Critical Hdwy	-	-	4.22	-	6.44 6.24
Critical Hdwy Stg 1	-	-	-	-	5.44 -
Critical Hdwy Stg 2	-	-	-	-	5.44 -
Follow-up Hdwy	-	-	2.308	-	3.536 3.336
Pot Cap-1 Maneuver	-	-	1027	-	190 582
Stage 1	-	-	-	-	618 -
Stage 2	-	-	-	-	456 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1027	-	187 582
Mov Cap-2 Maneuver	-	-	-	-	320 -
Stage 1	-	-	-	-	618 -
Stage 2	-	-	-	-	449 -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.1	14.44
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	420	-	-	22	-
HCM Lane V/C Ratio	0.092	-	-	0.009	-
HCM Control Delay (s/veh)	14.4	-	-	8.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

HCM 7th TWSC
3: Leroy Ave & OR 211 (W Main)

03/01/2024

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	32	389	14	38	480	57	18	3	27	17	4	67
Future Vol, veh/h	32	389	14	38	480	57	18	3	27	17	4	67
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
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, %	12	12	12	9	9	9	0	0	0	24	24	24
Mvmt Flow	36	442	16	43	545	65	20	3	31	19	5	76

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	610	0	0	460	0	0	1161	1221	452	1181	1197	580
Stage 1	-	-	-	-	-	-	525	525	-	664	664	-
Stage 2	-	-	-	-	-	-	636	697	-	516	533	-
Critical Hdwy	4.22	-	-	4.19	-	-	7.1	6.5	6.2	7.34	6.74	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.34	5.74	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.34	5.74	-
Follow-up Hdwy	2.308	-	-	2.281	-	-	3.5	4	3.3	3.716	4.216	3.516
Pot Cap-1 Maneuver	922	-	-	1065	-	-	174	181	612	151	169	475
Stage 1	-	-	-	-	-	-	540	533	-	416	426	-
Stage 2	-	-	-	-	-	-	469	446	-	503	491	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	922	-	-	1063	-	-	130	167	611	130	155	474
Mov Cap-2 Maneuver	-	-	-	-	-	-	130	167	-	130	155	-
Stage 1	-	-	-	-	-	-	517	511	-	399	409	-
Stage 2	-	-	-	-	-	-	373	428	-	456	471	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.67			0.56			22.28			19.72		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	130	482	922	-	-	1063	-	-	130	425
HCM Lane V/C Ratio	0.157	0.071	0.039	-	-	0.041	-	-	0.149	0.19
HCM Control Delay (s/veh)	37.7	13	9.1	-	-	8.5	-	-	37.6	15.4
HCM Lane LOS	E	B	A	-	-	A	-	-	E	C
HCM 95th %tile Q(veh)	0.5	0.2	0.1	-	-	0.1	-	-	0.5	0.7

HCM 7th TWSC
4: OR 211 (W Main) & Ridings Ave

03/01/2024

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	428	0	1	549	20	0	0	1	21	0	41
Future Vol, veh/h	21	428	0	1	549	20	0	0	1	21	0	41
Conflicting Peds, #/hr	1	0	2	2	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	12	12	12	12	12	12	0	0	0	2	2	2
Mvmt Flow	22	451	0	1	578	21	0	0	1	22	0	43

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	600	0	0	453	0	0	1077	1099	453	1086	1088	589
Stage 1	-	-	-	-	-	-	497	497	-	592	592	-
Stage 2	-	-	-	-	-	-	580	602	-	495	497	-
Critical Hdwy	4.22	-	-	4.22	-	-	7.1	6.5	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.308	-	-	2.308	-	-	3.5	4	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	930	-	-	1057	-	-	198	214	611	194	216	508
Stage 1	-	-	-	-	-	-	559	548	-	493	494	-
Stage 2	-	-	-	-	-	-	504	492	-	557	545	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	929	-	-	1055	-	-	175	207	610	187	208	507
Mov Cap-2 Maneuver	-	-	-	-	-	-	175	207	-	187	208	-
Stage 1	-	-	-	-	-	-	540	530	-	492	493	-
Stage 2	-	-	-	-	-	-	460	491	-	538	527	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	0.42		0.01		10.91		19.06	
HCM LOS					B		C	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	610	84	-	-	3	-	-	321
HCM Lane V/C Ratio	0.002	0.024	-	-	0.001	-	-	0.203
HCM Control Delay (s/veh)	10.9	9	0	-	8.4	0	-	19.1
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.7

HCM 7th TWSC
5: Dixon Avenue & OR 211 (W Main)

03/01/2024

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗		↘	↗			↕			↕	
Traffic Vol, veh/h	2	445	4	0	561	6	0	0	0	0	0	9
Future Vol, veh/h	2	445	4	0	561	6	0	0	0	0	0	9
Conflicting Peds, #/hr	0	0	2	2	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	12	12	12	11	11	11	0	0	0	56	56	56
Mvmt Flow	2	484	4	0	610	7	0	0	0	0	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	616	0	0	490	0	0	1102	1109	488	1101	1107	613
Stage 1	-	-	-	-	-	-	492	492	-	613	613	-
Stage 2	-	-	-	-	-	-	610	616	-	488	494	-
Critical Hdwy	4.22	-	-	4.21	-	-	7.1	6.5	6.2	7.66	7.06	6.76
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.66	6.06	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.66	6.06	-
Follow-up Hdwy	2.308	-	-	2.299	-	-	3.5	4	3.3	4.004	4.504	3.804
Pot Cap-1 Maneuver	917	-	-	1028	-	-	191	212	584	150	168	407
Stage 1	-	-	-	-	-	-	562	551	-	399	408	-
Stage 2	-	-	-	-	-	-	485	485	-	472	466	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	917	-	-	1026	-	-	185	211	583	149	168	407
Mov Cap-2 Maneuver	-	-	-	-	-	-	185	211	-	149	168	-
Stage 1	-	-	-	-	-	-	560	548	-	399	408	-
Stage 2	-	-	-	-	-	-	474	485	-	471	464	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.04	0	0	14.07
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	917	-	-	1026	-	-	407
HCM Lane V/C Ratio	-	0.002	-	-	-	-	-	0.024
HCM Control Delay (s/veh)	0	8.9	-	-	0	-	-	14.1
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	5	440	561	2	2	11
Future Vol, veh/h	5	440	561	2	2	11
Conflicting Peds, #/hr	2	0	0	2	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	12	12	10	10	54	54
Mvmt Flow	5	473	603	2	2	12

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	607	0	-	0	1090 607
Stage 1	-	-	-	-	606 -
Stage 2	-	-	-	-	484 -
Critical Hdwy	4.22	-	-	-	6.94 6.74
Critical Hdwy Stg 1	-	-	-	-	5.94 -
Critical Hdwy Stg 2	-	-	-	-	5.94 -
Follow-up Hdwy	2.308	-	-	-	3.986 3.786
Pot Cap-1 Maneuver	924	-	-	-	190 413
Stage 1	-	-	-	-	456 -
Stage 2	-	-	-	-	525 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	922	-	-	-	188 412
Mov Cap-2 Maneuver	-	-	-	-	188 -
Stage 1	-	-	-	-	452 -
Stage 2	-	-	-	-	524 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.1	0	15.78
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	20	-	-	-	348
HCM Lane V/C Ratio	0.006	-	-	-	0.04
HCM Control Delay (s/veh)	8.9	0	-	-	15.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM Signalized Intersection Capacity Analysis

7: Molalla Ave & OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	297	46	4	414	40	66	57	10	37	39	42
Future Volume (vph)	40	297	46	4	414	40	66	57	10	37	39	42
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	3.5	3.5	4.0	3.5			3.5			3.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			0.99			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			0.99	
Frt	1.00	1.00	0.85	1.00	0.98			0.98			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.98	
Satd. Flow (prot)	1484	1563	1328	1554	1614			1638			1505	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.84			0.89	
Satd. Flow (perm)	1484	1563	1328	1554	1614			1421			1368	
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)	43	319	49	4	445	43	71	61	11	40	42	45
RTOR Reduction (vph)	0	0	23	0	4	0	0	4	0	0	26	0
Lane Group Flow (vph)	43	319	26	4	484	0	0	139	0	0	101	0
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	12%	12%	12%	7%	7%	7%	3%	3%	3%	9%	9%	9%
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)	2.3	24.7	24.7	0.7	23.1			9.9			9.9	
Effective Green, g (s)	2.3	25.2	25.2	0.7	23.6			10.4			10.4	
Actuated g/C Ratio	0.05	0.53	0.53	0.01	0.50			0.22			0.22	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5			2.5			2.5	
Lane Grp Cap (vph)	72	832	707	22	805			312			300	
v/s Ratio Prot	c0.03	0.20		0.00	c0.30							
v/s Ratio Perm			0.02					c0.10			0.07	
v/c Ratio	0.59	0.38	0.03	0.18	0.60			0.44			0.33	
Uniform Delay, d1	22.0	6.4	5.2	23.0	8.4			15.9			15.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	10.6	0.2	0.0	2.8	1.0			0.7			0.4	
Delay (s)	32.6	6.7	5.2	25.9	9.5			16.6			16.0	
Level of Service	C	A	A	C	A			B			B	
Approach Delay (s/veh)		9.2			9.6			16.6			16.0	
Approach LOS		A			A			B			B	

Intersection Summary		
HCM 2000 Control Delay (s/veh)	11.1	HCM 2000 Level of Service B
HCM 2000 Volume to Capacity ratio	0.55	
Actuated Cycle Length (s)	47.3	Sum of lost time (s) 11.0
Intersection Capacity Utilization	54.2%	ICU Level of Service A
Analysis Period (min)	15	

c Critical Lane Group

HCM 7th Signalized Intersection Summary

7: Molalla Ave & OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	297	46	4	414	40	66	57	10	37	39	42
Future Volume (veh/h)	40	297	46	4	414	40	66	57	10	37	39	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1586	1586	1586	1654	1654	1654	1709	1709	1709	1627	1627	1627
Adj Flow Rate, veh/h	43	319	49	4	445	43	71	61	11	40	42	45
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	7	7	7	3	3	3	9	9	9
Cap, veh/h	85	783	663	10	659	64	269	197	28	178	159	124
Arrive On Green	0.06	0.49	0.49	0.01	0.44	0.43	0.23	0.24	0.23	0.23	0.24	0.23
Sat Flow, veh/h	1511	1586	1344	1576	1485	144	589	820	117	275	661	514
Grp Volume(v), veh/h	43	319	49	4	0	488	143	0	0	127	0	0
Grp Sat Flow(s),veh/h/ln	1511	1586	1344	1576	0	1629	1526	0	0	1451	0	0
Q Serve(g_s), s	1.2	5.4	0.8	0.1	0.0	10.1	0.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	5.4	0.8	0.1	0.0	10.1	3.0	0.0	0.0	3.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.09	0.50		0.08	0.31		0.35
Lane Grp Cap(c), veh/h	85	783	663	10	0	722	476	0	0	443	0	0
V/C Ratio(X)	0.51	0.41	0.07	0.39	0.00	0.68	0.30	0.00	0.00	0.29	0.00	0.00
Avail Cap(c_a), veh/h	321	1479	1254	335	0	1519	1176	0	0	1117	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	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.4	6.8	5.6	21.0	0.0	9.4	13.5	0.0	0.0	13.5	0.0	0.0
Incr Delay (d2), s/veh	3.4	0.3	0.0	16.9	0.0	0.8	0.3	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.3	0.2	0.1	0.0	2.7	1.0	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.8	7.1	5.7	37.9	0.0	10.2	13.7	0.0	0.0	13.7	0.0	0.0
LnGrp LOS	C	A	A	D		B	B			B		
Approach Vol, veh/h		411			492			143			127	
Approach Delay, s/veh		8.5			10.4			13.7			13.7	
Approach LOS		A			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.3	24.4		13.7	6.4	22.3		13.7				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	9.0	39.0		30.0	9.0	39.0		30.0				
Max Q Clear Time (g_c+I1), s	2.1	7.4		5.0	3.2	12.1		5.0				
Green Ext Time (p_c), s	0.0	4.3		0.5	0.0	6.2		0.5				
Intersection Summary												
HCM 7th Control Delay, s/veh				10.5								
HCM 7th LOS				B								

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↵		↵	↵	
Traffic Vol, veh/h	30	20	14	3	25	48	5	100	0	33	104	23
Future Vol, veh/h	30	20	14	3	25	48	5	100	0	33	104	23
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles, %	7	7	7	7	7	7	5	5	5	7	7	7
Mvmt Flow	41	27	19	4	34	66	7	137	0	45	142	32
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

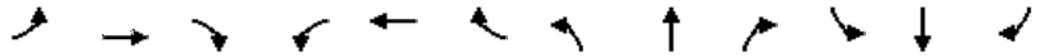
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay, s/veh	8.8	8.5	9.4	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	47%	4%	100%	0%
Vol Thru, %	0%	100%	31%	33%	0%	82%
Vol Right, %	0%	0%	22%	63%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	100	64	76	33	127
LT Vol	5	0	30	3	33	0
Through Vol	0	100	20	25	0	104
RT Vol	0	0	14	48	0	23
Lane Flow Rate	7	137	88	104	45	174
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.011	0.201	0.122	0.135	0.072	0.247
Departure Headway (Hd)	5.775	5.271	5.025	4.677	5.731	5.101
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	618	679	711	764	624	703
Service Time	3.522	3.018	3.072	2.722	3.475	2.844
HCM Lane V/C Ratio	0.011	0.202	0.124	0.136	0.072	0.248
HCM Control Delay, s/veh	8.6	9.4	8.8	8.5	8.9	9.5
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0.7	0.4	0.5	0.2	1

HCM Signalized Intersection Capacity Analysis

1: OR 213 & OR 211/OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	115	268	14	180	218	156	10	184	136	256	266	105	
Future Volume (vph)	115	268	14	180	218	156	10	184	136	256	266	105	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
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	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		1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00		
Flpb, ped/bikes	0.99	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1582	1655		1583	1667	1385	1630	1716	1419	1595	1611		
Flt Permitted	0.57	1.00		0.29	1.00	1.00	0.53	1.00	1.00	0.43	1.00		
Satd. Flow (perm)	956	1655		493	1667	1385	918	1716	1419	732	1611		
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)	119	276	14	186	225	161	10	190	140	264	274	108	
RTOR Reduction (vph)	0	2	0	0	0	116	0	0	107	0	12	0	
Lane Group Flow (vph)	119	288	0	186	225	45	10	190	33	264	370	0	
Confl. Peds. (#/hr)	2					2			6	6			
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	4%	4%	4%	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		
Protected Phases	5	2		1	6		3	8		7	4		
Permitted Phases	2			6		6	8		8	4			
Actuated Green, G (s)	27.0	20.0		33.8	23.4	23.4	20.2	19.6	19.6	41.3	35.7		
Effective Green, g (s)	29.0	21.0		35.8	24.4	24.4	22.2	20.6	20.6	42.3	36.7		
Actuated g/C Ratio	0.33	0.24		0.41	0.28	0.28	0.26	0.24	0.24	0.49	0.42		
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5		
Lane Grp Cap (vph)	377	400		346	469	389	248	407	337	533	681		
v/s Ratio Prot	0.03	c0.17		c0.07	0.14		0.00	0.11		c0.10	c0.23		
v/s Ratio Perm	0.08			0.15		0.03	0.01		0.02	0.14			
v/c Ratio	0.31	0.72		0.53	0.47	0.11	0.04	0.46	0.09	0.49	0.54		
Uniform Delay, d1	20.7	30.1		17.9	25.8	23.1	24.1	28.3	25.8	14.0	18.7		
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	0.3	5.9		1.2	0.5	0.0	0.0	0.6	0.0	0.5	0.7		
Delay (s)	21.1	36.0		19.2	26.4	23.2	24.1	28.9	25.8	14.6	19.4		
Level of Service	C	D		B	C	C	C	C	C	B	B		
Approach Delay (s/veh)		31.7			23.1			27.5			17.4		
Approach LOS		C			C			C			B		
Intersection Summary													
HCM 2000 Control Delay (s/veh)			23.8	HCM 2000 Level of Service					C				
HCM 2000 Volume to Capacity ratio			0.61										
Actuated Cycle Length (s)			86.7	Sum of lost time (s)					16.0				
Intersection Capacity Utilization			69.7%	ICU Level of Service					C				
Analysis Period (min)			15										

c Critical Lane Group

HCM 7th Signalized Intersection Summary

1: OR 213 & OR 211/OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	268	14	180	218	156	10	184	136	256	266	105
Future Volume (veh/h)	115	268	14	180	218	156	10	184	136	256	266	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	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	1682	1682	1682	1682	1682	1682	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	119	276	14	186	225	161	10	190	140	264	274	108
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, %	5	5	5	5	5	5	2	2	2	4	4	4
Cap, veh/h	433	412	21	419	496	419	295	349	291	492	400	158
Arrive On Green	0.09	0.26	0.24	0.13	0.29	0.29	0.03	0.20	0.20	0.17	0.35	0.33
Sat Flow, veh/h	1602	1586	80	1602	1682	1420	1641	1723	1438	1615	1154	455
Grp Volume(v), veh/h	119	0	290	186	225	161	10	190	140	264	0	382
Grp Sat Flow(s),veh/h/ln	1602	0	1667	1602	1682	1420	1641	1723	1438	1615	0	1609
Q Serve(g_s), s	3.5	0.0	10.4	5.3	7.2	6.0	0.3	6.6	5.7	7.7	0.0	13.6
Cycle Q Clear(g_c), s	3.5	0.0	10.4	5.3	7.2	6.0	0.3	6.6	5.7	7.7	0.0	13.6
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	433	0	433	419	496	419	295	349	291	492	0	557
V/C Ratio(X)	0.27	0.00	0.67	0.44	0.45	0.38	0.03	0.54	0.48	0.54	0.00	0.69
Avail Cap(c_a), veh/h	554	0	928	532	987	834	398	830	693	749	0	1162
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.4	0.0	22.1	15.0	19.1	18.6	19.9	23.8	23.4	14.8	0.0	18.7
Incr Delay (d2), s/veh	0.3	0.0	1.3	0.5	0.5	0.4	0.0	1.0	0.9	0.7	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	1.2	0.0	3.9	1.8	2.6	1.8	0.1	2.6	1.9	2.6	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.6	0.0	23.4	15.6	19.5	19.1	20.0	24.7	24.3	15.5	0.0	19.9
LnGrp LOS	B		C	B	B	B	B	C	C	B		B
Approach Vol, veh/h	409			572			340			646		
Approach Delay, s/veh	21.2			18.1			24.4			18.1		
Approach LOS	C			B			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	21.2	5.8	27.0	10.0	23.6	15.4	17.4				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	12.0	36.0	5.0	47.0	10.0	38.0	21.0	31.0				
Max Q Clear Time (g_c+I1), s	7.3	12.4	2.3	15.6	5.5	9.2	9.7	8.6				
Green Ext Time (p_c), s	0.3	3.1	0.0	1.6	0.1	3.7	0.8	1.7				

Intersection Summary

HCM 7th Control Delay, s/veh	19.8
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	780	19	14	690	12	17
Future Vol, veh/h	780	19	14	690	12	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	5	5	3	3	5	5
Mvmt Flow	857	21	15	758	13	19

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	878	0	1657 868
Stage 1	-	-	-	-	868 -
Stage 2	-	-	-	-	789 -
Critical Hdwy	-	-	4.13	-	6.45 6.25
Critical Hdwy Stg 1	-	-	-	-	5.45 -
Critical Hdwy Stg 2	-	-	-	-	5.45 -
Follow-up Hdwy	-	-	2.227	-	3.545 3.345
Pot Cap-1 Maneuver	-	-	765	-	106 348
Stage 1	-	-	-	-	406 -
Stage 2	-	-	-	-	442 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	765	-	102 348
Mov Cap-2 Maneuver	-	-	-	-	237 -
Stage 1	-	-	-	-	406 -
Stage 2	-	-	-	-	427 -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.19	18.88
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	291	-	-	36	-
HCM Lane V/C Ratio	0.109	-	-	0.02	-
HCM Control Delay (s/veh)	18.9	-	-	9.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	56	599	55	71	610	10	29	7	99	10	6	45
Future Vol, veh/h	56	599	55	71	610	10	29	7	99	10	6	45
Conflicting Peds, #/hr	5	0	0	0	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	4	4	4	1	1	1	4	4	4
Mvmt Flow	58	624	57	74	635	10	30	7	103	10	6	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	651	0	0	681	0	0	1556	1568	653	1538	1591	646
Stage 1	-	-	-	-	-	-	769	769	-	794	794	-
Stage 2	-	-	-	-	-	-	786	799	-	744	798	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.11	6.51	6.21	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.509	4.009	3.309	3.536	4.036	3.336
Pot Cap-1 Maneuver	935	-	-	902	-	-	92	111	469	93	106	468
Stage 1	-	-	-	-	-	-	395	412	-	379	397	-
Stage 2	-	-	-	-	-	-	387	399	-	403	395	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	931	-	-	902	-	-	67	95	469	58	91	466
Mov Cap-2 Maneuver	-	-	-	-	-	-	67	95	-	58	91	-
Stage 1	-	-	-	-	-	-	370	386	-	346	363	-
Stage 2	-	-	-	-	-	-	314	365	-	289	371	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.72			0.96			35.4			28.78		
HCM LOS							E			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	67	373	931	-	-	902	-	-	58	314
HCM Lane V/C Ratio	0.45	0.296	0.063	-	-	0.082	-	-	0.179	0.169
HCM Control Delay (s/veh)	96.6	18.7	9.1	-	-	9.3	-	-	79.7	18.8
HCM Lane LOS	F	C	A	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	1.8	1.2	0.2	-	-	0.3	-	-	0.6	0.6

HCM 7th TWSC
4: OR 211 (W Main) & Ridings Ave

03/01/2024

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	32	707	0	2	715	12	0	0	1	8	0	36
Future Vol, veh/h	32	707	0	2	715	12	0	0	1	8	0	36
Conflicting Peds, #/hr	5	0	3	3	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	4	4	4	4	4	4	0	0	0	0	0	0
Mvmt Flow	33	729	0	2	737	12	0	0	1	8	0	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	754	0	0	732	0	0	1539	1556	732	1547	1550	748
Stage 1	-	-	-	-	-	-	798	798	-	752	752	-
Stage 2	-	-	-	-	-	-	741	759	-	795	798	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.236	-	-	2.236	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	847	-	-	864	-	-	95	114	425	94	115	415
Stage 1	-	-	-	-	-	-	383	401	-	405	421	-
Stage 2	-	-	-	-	-	-	411	418	-	384	401	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	843	-	-	861	-	-	80	105	423	87	106	414
Mov Cap-2 Maneuver	-	-	-	-	-	-	80	105	-	87	106	-
Stage 1	-	-	-	-	-	-	356	374	-	402	417	-
Stage 2	-	-	-	-	-	-	373	414	-	358	374	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.41			0.03			13.52			22.95		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	423	78	-	-	5	-	-	246
HCM Lane V/C Ratio	0.002	0.039	-	-	0.002	-	-	0.185
HCM Control Delay (s/veh)	13.5	9.4	0	-	9.2	0	-	22.9
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.7

HCM 7th TWSC
5: Dixon Avenue & OR 211 (W Main)

03/01/2024

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗		↘	↗			↕			↕	
Traffic Vol, veh/h	0	671	44	22	680	6	40	1	32	2	1	3
Future Vol, veh/h	0	671	44	22	680	6	40	1	32	2	1	3
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	5	5	5	3	3	3	0	0	0
Mvmt Flow	0	699	46	23	708	6	42	1	33	2	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	715	0	0	748	0	0	1480	1485	725	1457	1505	711
Stage 1	-	-	-	-	-	-	725	725	-	757	757	-
Stage 2	-	-	-	-	-	-	755	760	-	699	748	-
Critical Hdwy	4.14	-	-	4.15	-	-	7.13	6.53	6.23	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.1	5.5	-
Follow-up Hdwy	2.236	-	-	2.245	-	-	3.527	4.027	3.327	3.5	4	3.3
Pot Cap-1 Maneuver	877	-	-	847	-	-	103	124	423	109	122	436
Stage 1	-	-	-	-	-	-	415	429	-	403	419	-
Stage 2	-	-	-	-	-	-	399	413	-	433	423	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	877	-	-	845	-	-	99	120	422	97	119	436
Mov Cap-2 Maneuver	-	-	-	-	-	-	99	120	-	97	119	-
Stage 1	-	-	-	-	-	-	414	427	-	392	407	-
Stage 2	-	-	-	-	-	-	385	402	-	398	422	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0			0.29			52			27.44		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	149	877	-	-	845	-	-	167
HCM Lane V/C Ratio	0.51	-	-	-	0.027	-	-	0.038
HCM Control Delay (s/veh)	52	0	-	-	9.4	-	-	27.4
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2.5	0	-	-	0.1	-	-	0.1

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	6	701	701	3	1	14
Future Vol, veh/h	6	701	701	3	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	4	27	27
Mvmt Flow	6	730	730	3	1	15

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	733	0	-	0	1474 732
Stage 1	-	-	-	-	732 -
Stage 2	-	-	-	-	743 -
Critical Hdwy	4.14	-	-	-	6.67 6.47
Critical Hdwy Stg 1	-	-	-	-	5.67 -
Critical Hdwy Stg 2	-	-	-	-	5.67 -
Follow-up Hdwy	2.236	-	-	-	3.743 3.543
Pot Cap-1 Maneuver	862	-	-	-	122 383
Stage 1	-	-	-	-	434 -
Stage 2	-	-	-	-	429 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	862	-	-	-	121 383
Mov Cap-2 Maneuver	-	-	-	-	121 -
Stage 1	-	-	-	-	429 -
Stage 2	-	-	-	-	429 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.08	0	16.29
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	15	-	-	-	334
HCM Lane V/C Ratio	0.007	-	-	-	0.047
HCM Control Delay (s/veh)	9.2	0	-	-	16.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM Signalized Intersection Capacity Analysis

7: Molalla Ave & OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	455	89	11	455	47	83	70	11	66	109	114
Future Volume (vph)	61	455	89	11	455	47	83	70	11	66	109	114
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	3.5	3.5	4.0	3.5			3.5			3.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99			0.99			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			0.99	
Frt	1.00	1.00	0.85	1.00	0.98			0.99			0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.98	
Satd. Flow (prot)	1614	1699	1444	1614	1669			1622			1586	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.71			0.89	
Satd. Flow (perm)	1614	1699	1444	1614	1669			1185			1443	
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)	66	495	97	12	495	51	90	76	12	72	118	124
RTOR Reduction (vph)	0	0	50	0	4	0	0	3	0	0	26	0
Lane Group Flow (vph)	66	495	47	12	542	0	0	175	0	0	288	0
Confl. Peds. (#/hr)	11					11			10	10		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8				4
Permitted Phases			2				8			4		
Actuated Green, G (s)	4.0	28.5	28.5	0.9	25.4			19.0			19.0	
Effective Green, g (s)	4.0	29.0	29.0	0.9	25.9			19.5			19.5	
Actuated g/C Ratio	0.07	0.48	0.48	0.01	0.43			0.32			0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5			2.5			2.5	
Lane Grp Cap (vph)	106	815	693	24	715			382			465	
v/s Ratio Prot	c0.04	c0.29		0.01	c0.32							
v/s Ratio Perm			0.03					0.15			c0.20	
v/c Ratio	0.62	0.60	0.06	0.50	0.75			0.45			0.61	
Uniform Delay, d1	27.4	11.5	8.4	29.5	14.5			16.2			17.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	9.4	1.0	0.0	11.4	4.3			0.6			2.0	
Delay (s)	36.9	12.6	8.4	40.9	18.9			16.8			19.3	
Level of Service	D	B	A	D	B			B			B	
Approach Delay (s/veh)		14.4			19.4			16.8			19.3	
Approach LOS		B			B			B			B	

Intersection Summary		
HCM 2000 Control Delay (s/veh)	17.2	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.68	B
Actuated Cycle Length (s)	60.4	Sum of lost time (s)
Intersection Capacity Utilization	63.7%	11.0
Analysis Period (min)	15	ICU Level of Service
		B

c Critical Lane Group

HCM 7th Signalized Intersection Summary

7: Molalla Ave & OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	455	89	11	455	47	83	70	11	66	109	114
Future Volume (veh/h)	61	455	89	11	455	47	83	70	11	66	109	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	0.99		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	1709	1709	1709	1709	1709	1709	1695	1695	1695	1709	1709	1709
Adj Flow Rate, veh/h	66	495	97	12	495	51	90	76	12	72	118	124
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	3	3	3
Cap, veh/h	116	851	713	30	677	70	249	183	24	155	183	165
Arrive On Green	0.07	0.50	0.50	0.02	0.45	0.44	0.26	0.27	0.26	0.26	0.27	0.26
Sat Flow, veh/h	1628	1709	1432	1628	1522	157	532	672	87	256	675	608
Grp Volume(v), veh/h	66	495	97	12	0	546	178	0	0	314	0	0
Grp Sat Flow(s),veh/h/ln	1628	1709	1432	1628	0	1678	1291	0	0	1539	0	0
Q Serve(g_s), s	2.0	10.6	1.9	0.4	0.0	13.9	0.0	0.0	0.0	3.8	0.0	0.0
Cycle Q Clear(g_c), s	2.0	10.6	1.9	0.4	0.0	13.9	5.8	0.0	0.0	9.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.09	0.51		0.07	0.23		0.39
Lane Grp Cap(c), veh/h	116	851	713	30	0	747	443	0	0	488	0	0
V/C Ratio(X)	0.57	0.58	0.14	0.40	0.00	0.73	0.40	0.00	0.00	0.64	0.00	0.00
Avail Cap(c_a), veh/h	283	1303	1092	283	0	1280	863	0	0	957	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	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.3	9.2	7.0	25.1	0.0	11.8	15.8	0.0	0.0	17.3	0.0	0.0
Incr Delay (d2), s/veh	3.3	0.5	0.1	6.3	0.0	1.0	0.4	0.0	0.0	1.1	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	0.8	3.2	0.5	0.2	0.0	4.3	1.6	0.0	0.0	3.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.6	9.7	7.1	31.5	0.0	12.9	16.2	0.0	0.0	18.4	0.0	0.0
LnGrp LOS	C	A	A	C		B	B			B		
Approach Vol, veh/h		658			558			178			314	
Approach Delay, s/veh		11.0			13.3			16.2			18.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	29.3		17.6	7.7	26.6		17.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	9.0	39.0		30.0	9.0	39.0		30.0				
Max Q Clear Time (g_c+I1), s	2.4	12.6		11.6	4.0	15.9		7.8				
Green Ext Time (p_c), s	0.0	7.1		1.3	0.1	6.7		0.7				
Intersection Summary												
HCM 7th Control Delay, s/veh			13.6									
HCM 7th LOS			B									

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Vol, veh/h	27	24	19	10	16	49	18	145	10	109	209	22
Future Vol, veh/h	27	24	19	10	16	49	18	145	10	109	209	22
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
Heavy Vehicles, %	0	0	0	8	8	8	4	4	4	4	4	4
Mvmt Flow	28	25	20	11	17	52	19	153	11	115	220	23
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay, s/veh	8.9	8.7	9.6	10.1
HCM LOS	A	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	39%	13%	100%	0%
Vol Thru, %	0%	94%	34%	21%	0%	90%
Vol Right, %	0%	6%	27%	65%	0%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	155	70	75	109	231
LT Vol	18	0	27	10	109	0
Through Vol	0	145	24	16	0	209
RT Vol	0	10	19	49	0	22
Lane Flow Rate	19	163	74	79	115	243
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.031	0.239	0.106	0.111	0.179	0.342
Departure Headway (Hd)	5.814	5.265	5.197	5.048	5.63	5.06
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	613	679	685	706	636	708
Service Time	3.573	3.023	3.262	3.111	3.382	2.812
HCM Lane V/C Ratio	0.031	0.24	0.108	0.112	0.181	0.343
HCM Control Delay, s/veh	8.8	9.7	8.9	8.7	9.6	10.4
HCM Lane LOS	A	A	A	A	A	B
HCM 95th-tile Q	0.1	0.9	0.4	0.4	0.6	1.5

HCM Signalized Intersection Capacity Analysis

1: OR 213 & OR 211/OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	180	6	102	223	196	11	173	144	87	87	69
Future Volume (vph)	59	180	6	102	223	196	11	173	144	87	87	69
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
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	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		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1471	1541		1484	1563	1328	1525	1606	1336	1497	1472	
Flt Permitted	0.48	1.00		0.48	1.00	1.00	0.64	1.00	1.00	0.46	1.00	
Satd. Flow (perm)	753	1541		764	1563	1328	1033	1606	1336	727	1472	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	69	209	7	119	259	228	13	201	167	101	101	80
RTOR Reduction (vph)	0	1	0	0	0	165	0	0	120	0	25	0
Lane Group Flow (vph)	69	215	0	119	259	63	13	201	47	101	156	0
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	13%	13%	13%	12%	12%	12%	9%	9%	9%	11%	11%	11%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		
Actuated Green, G (s)	23.3	17.6		25.5	18.7	18.7	19.4	18.8	18.8	31.5	25.9	
Effective Green, g (s)	25.3	18.6		27.5	19.7	19.7	21.4	19.8	19.8	32.5	26.9	
Actuated g/C Ratio	0.36	0.26		0.39	0.28	0.28	0.30	0.28	0.28	0.46	0.38	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	336	404		375	434	368	322	448	373	427	558	
v/s Ratio Prot	0.02	0.14		c0.03	c0.17		0.00	c0.13		c0.03	0.11	
v/s Ratio Perm	0.05			0.09		0.05	0.01		0.03	0.08		
v/c Ratio	0.20	0.53		0.31	0.59	0.17	0.04	0.44	0.12	0.23	0.27	
Uniform Delay, d1	15.4	22.4		14.5	22.1	19.4	17.4	21.0	19.0	11.4	15.2	
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	1.0		0.3	1.8	0.1	0.0	0.5	0.1	0.2	0.2	
Delay (s)	15.7	23.4		14.9	24.0	19.5	17.4	21.5	19.1	11.6	15.4	
Level of Service	B	C		B	C	B	B	C	B	B	B	
Approach Delay (s/veh)		21.5			20.5			20.3			14.1	
Approach LOS		C			C			C			B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	70.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 7th Signalized Intersection Summary

1: OR 213 & OR 211/OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	180	6	102	223	196	11	173	144	87	87	69
Future Volume (veh/h)	59	180	6	102	223	196	11	173	144	87	87	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1573	1573	1573	1586	1586	1586	1627	1627	1627	1600	1600	1600
Adj Flow Rate, veh/h	69	209	7	119	259	228	13	201	167	101	101	80
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	13	13	13	12	12	12	9	9	9	11	11	11
Cap, veh/h	394	419	14	465	469	398	391	348	294	383	225	178
Arrive On Green	0.08	0.28	0.26	0.10	0.30	0.30	0.04	0.21	0.21	0.09	0.27	0.25
Sat Flow, veh/h	1498	1513	51	1511	1586	1344	1550	1627	1376	1524	826	654
Grp Volume(v), veh/h	69	0	216	119	259	228	13	201	167	101	0	181
Grp Sat Flow(s),veh/h/ln	1498	0	1563	1511	1586	1344	1550	1627	1376	1524	0	1481
Q Serve(g_s), s	1.6	0.0	5.9	2.7	7.0	7.3	0.3	5.6	5.5	2.4	0.0	5.2
Cycle Q Clear(g_c), s	1.6	0.0	5.9	2.7	7.0	7.3	0.3	5.6	5.5	2.4	0.0	5.2
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	394	0	433	465	469	398	391	348	294	383	0	403
V/C Ratio(X)	0.17	0.00	0.50	0.26	0.55	0.57	0.03	0.58	0.57	0.26	0.00	0.45
Avail Cap(c_a), veh/h	597	0	1138	701	1217	1031	518	1024	866	898	0	1398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.4	0.0	15.4	11.1	15.1	15.2	14.5	17.9	17.9	12.8	0.0	15.5
Incr Delay (d2), s/veh	0.2	0.0	0.7	0.2	0.8	1.0	0.0	1.1	1.3	0.3	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.9	0.8	2.2	2.0	0.1	1.9	1.6	0.7	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	11.5	0.0	16.1	11.3	15.8	16.1	14.5	19.0	19.1	13.1	0.0	16.1
LnGrp LOS	B		B	B	B	B	B	B	B	B		B
Approach Vol, veh/h		285			606			381				282
Approach Delay, s/veh		15.0			15.1			18.9				15.0
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	18.1	5.8	17.8	8.1	19.1	8.8	14.9				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	12.0	36.0	5.0	47.0	10.0	38.0	21.0	31.0				
Max Q Clear Time (g_c+I1), s	4.7	7.9	2.3	7.2	3.6	9.3	4.4	7.6				
Green Ext Time (p_c), s	0.2	2.4	0.0	0.7	0.1	4.7	0.3	1.9				

Intersection Summary

HCM 7th Control Delay, s/veh	16.0
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th TWSC
2: S Ona Way & OR 211 (W Main)

03/01/2024

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	453	11	8	652	16	18
Future Vol, veh/h	453	11	8	652	16	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	13	13	12	12	4	4
Mvmt Flow	515	13	9	741	18	20

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	527	0	1280	521
Stage 1	-	-	-	-	521	-
Stage 2	-	-	-	-	759	-
Critical Hdwy	-	-	4.22	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.308	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	991	-	181	551
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	459	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	991	-	178	551
Mov Cap-2 Maneuver	-	-	-	-	313	-
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	452	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.11	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	406	-	-	22	-
HCM Lane V/C Ratio	0.095	-	-	0.009	-
HCM Control Delay (s/veh)	14.8	-	-	8.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

HCM 7th TWSC
3: Leroy Ave & OR 211 (W Main)

03/01/2024

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	32	425	14	38	475	57	18	3	27	17	4	67
Future Vol, veh/h	32	425	14	38	475	57	18	3	27	17	4	67
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
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, %	12	12	12	9	9	9	0	0	0	24	24	24
Mvmt Flow	36	483	16	43	540	65	20	3	31	19	5	76

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	605	0	0	501	0	0	1196	1257	493	1216	1232	574
Stage 1	-	-	-	-	-	-	566	566	-	659	659	-
Stage 2	-	-	-	-	-	-	630	691	-	557	574	-
Critical Hdwy	4.22	-	-	4.19	-	-	7.1	6.5	6.2	7.34	6.74	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.34	5.74	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.34	5.74	-
Follow-up Hdwy	2.308	-	-	2.281	-	-	3.5	4	3.3	3.716	4.216	3.516
Pot Cap-1 Maneuver	926	-	-	1028	-	-	164	173	580	143	161	479
Stage 1	-	-	-	-	-	-	513	511	-	419	429	-
Stage 2	-	-	-	-	-	-	473	449	-	477	470	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	926	-	-	1026	-	-	123	159	579	122	148	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	123	159	-	122	148	-
Stage 1	-	-	-	-	-	-	492	490	-	401	411	-
Stage 2	-	-	-	-	-	-	376	430	-	431	451	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	0.61		0.58		23.42		20.21	
HCM LOS					C		C	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	123	458	926	-	-	1026	-	-	122	424
HCM Lane V/C Ratio	0.166	0.074	0.039	-	-	0.042	-	-	0.159	0.19
HCM Control Delay (s/veh)	40	13.5	9	-	-	8.7	-	-	40.1	15.5
HCM Lane LOS	E	B	A	-	-	A	-	-	E	C
HCM 95th %tile Q(veh)	0.6	0.2	0.1	-	-	0.1	-	-	0.5	0.7

HCM 7th TWSC
4: OR 211 (W Main) & Ridings Ave

03/01/2024

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	464	0	1	544	20	0	0	1	21	0	41
Future Vol, veh/h	21	464	0	1	544	20	0	0	1	21	0	41
Conflicting Peds, #/hr	1	0	2	2	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	12	12	12	12	12	12	0	0	0	2	2	2
Mvmt Flow	22	488	0	1	573	21	0	0	1	22	0	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	595	0	0	490	0	0	1109	1131	490	1119	1121	584
Stage 1	-	-	-	-	-	-	535	535	-	586	586	-
Stage 2	-	-	-	-	-	-	575	597	-	533	535	-
Critical Hdwy	4.22	-	-	4.22	-	-	7.1	6.5	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.308	-	-	2.308	-	-	3.5	4	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	934	-	-	1023	-	-	189	205	582	184	206	511
Stage 1	-	-	-	-	-	-	533	527	-	496	497	-
Stage 2	-	-	-	-	-	-	507	495	-	531	524	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	933	-	-	1021	-	-	166	197	581	177	199	511
Mov Cap-2 Maneuver	-	-	-	-	-	-	166	197	-	177	199	-
Stage 1	-	-	-	-	-	-	515	509	-	495	496	-
Stage 2	-	-	-	-	-	-	463	493	-	513	506	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.39			0.02			11.21			19.56		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	581	78	-	-	3	-	-	312
HCM Lane V/C Ratio	0.002	0.024	-	-	0.001	-	-	0.209
HCM Control Delay (s/veh)	11.2	9	0	-	8.5	0	-	19.6
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.8

HCM 7th TWSC
5: Dixon Avenue & OR 211 (W Main)

03/01/2024

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗		↘	↗			↕			↕	
Traffic Vol, veh/h	5	478	4	0	556	12	0	0	0	0	0	9
Future Vol, veh/h	5	478	4	0	556	12	0	0	0	0	0	9
Conflicting Peds, #/hr	0	0	2	2	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	12	12	12	11	11	11	0	0	0	56	56	56
Mvmt Flow	5	520	4	0	604	13	0	0	0	0	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	617	0	0	526	0	0	1139	1152	524	1141	1148	611
Stage 1	-	-	-	-	-	-	535	535	-	611	611	-
Stage 2	-	-	-	-	-	-	604	617	-	530	537	-
Critical Hdwy	4.22	-	-	4.21	-	-	7.1	6.5	6.2	7.66	7.06	6.76
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.66	6.06	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.66	6.06	-
Follow-up Hdwy	2.308	-	-	2.299	-	-	3.5	4	3.3	4.004	4.504	3.804
Pot Cap-1 Maneuver	916	-	-	997	-	-	180	199	557	140	159	408
Stage 1	-	-	-	-	-	-	533	527	-	400	409	-
Stage 2	-	-	-	-	-	-	488	484	-	446	445	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	916	-	-	995	-	-	174	198	556	139	157	408
Mov Cap-2 Maneuver	-	-	-	-	-	-	174	198	-	139	157	-
Stage 1	-	-	-	-	-	-	529	523	-	400	409	-
Stage 2	-	-	-	-	-	-	477	484	-	443	441	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.09	0	0	14.04
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	916	-	-	995	-	-	408
HCM Lane V/C Ratio	-	0.006	-	-	-	-	-	0.024
HCM Control Delay (s/veh)	0	9	-	-	0	-	-	14
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↘		↙	
Traffic Vol, veh/h	38	440	567	25	4	6
Future Vol, veh/h	38	440	567	25	4	6
Conflicting Peds, #/hr	2	0	0	2	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	12	12	10	10	54	54
Mvmt Flow	41	473	610	27	4	6

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	639	0	-	0	1180 626
Stage 1	-	-	-	-	625 -
Stage 2	-	-	-	-	555 -
Critical Hdwy	4.22	-	-	-	6.94 6.74
Critical Hdwy Stg 1	-	-	-	-	5.94 -
Critical Hdwy Stg 2	-	-	-	-	5.94 -
Follow-up Hdwy	2.308	-	-	-	3.986 3.786
Pot Cap-1 Maneuver	899	-	-	-	166 402
Stage 1	-	-	-	-	446 -
Stage 2	-	-	-	-	484 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	897	-	-	-	158 401
Mov Cap-2 Maneuver	-	-	-	-	158 -
Stage 1	-	-	-	-	425 -
Stage 2	-	-	-	-	483 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.73	0	20.15
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	897	-	-	-	248
HCM Lane V/C Ratio	0.046	-	-	-	0.043
HCM Control Delay (s/veh)	9.2	-	-	-	20.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

HCM Signalized Intersection Capacity Analysis

7: Molalla Ave & OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	297	48	4	426	40	80	57	10	37	39	45
Future Volume (vph)	40	297	48	4	426	40	80	57	10	37	39	45
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	3.5	3.5	4.0	3.5			3.5			3.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			0.99			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			0.99	
Frt	1.00	1.00	0.85	1.00	0.98			0.99			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.98	
Satd. Flow (prot)	1484	1563	1328	1554	1614			1636			1502	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.82			0.89	
Satd. Flow (perm)	1484	1563	1328	1554	1614			1379			1372	
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)	43	319	52	4	458	43	86	61	11	40	42	48
RTOR Reduction (vph)	0	0	24	0	3	0	0	4	0	0	27	0
Lane Group Flow (vph)	43	319	28	4	498	0	0	154	0	0	103	0
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	12%	12%	12%	7%	7%	7%	3%	3%	3%	9%	9%	9%
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8				4
Permitted Phases			2				8			4		
Actuated Green, G (s)	2.3	25.7	25.7	0.7	24.1			10.5			10.5	
Effective Green, g (s)	2.3	26.2	26.2	0.7	24.6			11.0			11.0	
Actuated g/C Ratio	0.05	0.54	0.54	0.01	0.50			0.22			0.22	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5			2.5			2.5	
Lane Grp Cap (vph)	69	836	711	22	811			310			308	
v/s Ratio Prot	c0.03	0.20		0.00	c0.31							
v/s Ratio Perm			0.02					c0.11			0.07	
v/c Ratio	0.62	0.38	0.03	0.18	0.61			0.49			0.33	
Uniform Delay, d1	22.8	6.6	5.3	23.8	8.7			16.5			15.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	14.1	0.2	0.0	2.8	1.1			0.9			0.4	
Delay (s)	37.0	6.8	5.3	26.7	9.9			17.4			16.3	
Level of Service	D	A	A	C	A			B			B	
Approach Delay (s/veh)		9.7			10.0			17.4			16.3	
Approach LOS		A			B			B			B	

Intersection Summary

HCM 2000 Control Delay (s/veh)	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	48.9	Sum of lost time (s)	11.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 7th Signalized Intersection Summary

7: Molalla Ave & OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	297	48	4	426	40	80	57	10	37	39	45
Future Volume (veh/h)	40	297	48	4	426	40	80	57	10	37	39	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1586	1586	1586	1654	1654	1654	1709	1709	1709	1627	1627	1627
Adj Flow Rate, veh/h	43	319	52	4	458	43	86	61	11	40	42	48
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	7	7	7	3	3	3	9	9	9
Cap, veh/h	85	792	672	10	670	63	289	176	25	173	154	128
Arrive On Green	0.06	0.50	0.50	0.01	0.45	0.44	0.23	0.24	0.23	0.23	0.24	0.23
Sat Flow, veh/h	1511	1586	1344	1576	1489	140	670	738	105	269	645	535
Grp Volume(v), veh/h	43	319	52	4	0	501	158	0	0	130	0	0
Grp Sat Flow(s),veh/h/ln	1511	1586	1344	1576	0	1629	1514	0	0	1449	0	0
Q Serve(g_s), s	1.2	5.4	0.9	0.1	0.0	10.5	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	5.4	0.9	0.1	0.0	10.5	3.5	0.0	0.0	3.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.09	0.54		0.07	0.31		0.37
Lane Grp Cap(c), veh/h	85	792	672	10	0	733	473	0	0	438	0	0
V/C Ratio(X)	0.51	0.40	0.08	0.39	0.00	0.68	0.33	0.00	0.00	0.30	0.00	0.00
Avail Cap(c_a), veh/h	315	1454	1232	329	0	1493	1148	0	0	1097	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	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.8	6.8	5.6	21.3	0.0	9.4	13.9	0.0	0.0	13.8	0.0	0.0
Incr Delay (d2), s/veh	3.5	0.2	0.0	16.9	0.0	0.8	0.3	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.3	0.2	0.1	0.0	2.8	1.2	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.2	7.0	5.6	38.3	0.0	10.3	14.2	0.0	0.0	14.1	0.0	0.0
LnGrp LOS	C	A	A	D		B	B			B		
Approach Vol, veh/h		414			505			158				130
Approach Delay, s/veh		8.5			10.5			14.2				14.1
Approach LOS		A			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.3	25.0		13.8	6.4	22.9		13.8				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	9.0	39.0		30.0	9.0	39.0		30.0				
Max Q Clear Time (g_c+I1), s	2.1	7.4		5.1	3.2	12.5		5.5				
Green Ext Time (p_c), s	0.0	4.3		0.5	0.0	6.4		0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh				10.7								
HCM 7th LOS				B								

HCM 7th TWSC
8: Site Access & W Heintz Street

03/01/2024

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	64	24	38	63	3	5
Future Vol, veh/h	64	24	38	63	3	5
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	7	7	7	7	0	0
Mvmt Flow	88	33	52	86	4	7

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	122	0	296
Stage 1	-	-	-	-	105
Stage 2	-	-	-	-	190
Critical Hdwy	-	-	4.17	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.263	-	3.5
Pot Cap-1 Maneuver	-	-	1435	-	700
Stage 1	-	-	-	-	924
Stage 2	-	-	-	-	847
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1434	-	672
Mov Cap-2 Maneuver	-	-	-	-	672
Stage 1	-	-	-	-	923
Stage 2	-	-	-	-	814

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.86	9.43
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	825	-	-	677	-
HCM Lane V/C Ratio	0.013	-	-	0.036	-
HCM Control Delay (s/veh)	9.4	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↵	↵		↵	↵	
Traffic Vol, veh/h	34	21	14	3	32	48	5	100	0	33	107	54
Future Vol, veh/h	34	21	14	3	32	48	5	100	0	33	107	54
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles, %	7	7	7	7	7	7	5	5	5	7	7	7
Mvmt Flow	47	29	19	4	44	66	7	137	0	45	147	74
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay, s/veh	9	8.8	9.5	9.9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	49%	4%	100%	0%
Vol Thru, %	0%	100%	30%	39%	0%	66%
Vol Right, %	0%	0%	20%	58%	0%	34%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	100	69	83	33	161
LT Vol	5	0	34	3	33	0
Through Vol	0	100	21	32	0	107
RT Vol	0	0	14	48	0	54
Lane Flow Rate	7	137	95	114	45	221
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.011	0.204	0.136	0.152	0.073	0.309
Departure Headway (Hd)	5.874	5.37	5.163	4.826	5.787	5.047
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	607	664	691	739	617	708
Service Time	3.636	3.132	3.221	2.883	3.541	2.801
HCM Lane V/C Ratio	0.012	0.206	0.137	0.154	0.073	0.312
HCM Control Delay, s/veh	8.7	9.5	9	8.8	9	10.1
HCM Lane LOS	A	A	A	A	A	B
HCM 95th-tile Q	0	0.8	0.5	0.5	0.2	1.3

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	T		T			T
Traffic Vol, veh/h	0	0	8	9	2	9
Future Vol, veh/h	0	0	8	9	2	9
Conflicting Peds, #/hr	2	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	75	75	75	75	75	75
Heavy Vehicles, %	7	7	0	0	56	56
Mvmt Flow	0	0	11	12	3	12

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	36	17	0	0	23
Stage 1	17	-	-	-	-
Stage 2	19	-	-	-	-
Critical Hdwy	6.47	6.27	-	-	4.66
Critical Hdwy Stg 1	5.47	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-
Follow-up Hdwy	3.563	3.363	-	-	2.704
Pot Cap-1 Maneuver	964	1048	-	-	1304
Stage 1	993	-	-	-	-
Stage 2	991	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	960	1048	-	-	1304
Mov Cap-2 Maneuver	960	-	-	-	-
Stage 1	993	-	-	-	-
Stage 2	987	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	1.41
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	327
HCM Lane V/C Ratio	-	-	-	0.002
HCM Control Delay (s/veh)	-	-	0	7.8
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

HCM Signalized Intersection Capacity Analysis

1: OR 213 & OR 211/OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	115	266	14	192	227	156	10	184	138	256	266	105	
Future Volume (vph)	115	266	14	192	227	156	10	184	138	256	266	105	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
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	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		1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00		
Flpb, ped/bikes	0.99	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1582	1655		1583	1667	1385	1630	1716	1419	1595	1611		
Flt Permitted	0.56	1.00		0.29	1.00	1.00	0.53	1.00	1.00	0.43	1.00		
Satd. Flow (perm)	938	1655		492	1667	1385	918	1716	1419	731	1611		
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)	119	274	14	198	234	161	10	190	142	264	274	108	
RTOR Reduction (vph)	0	2	0	0	0	115	0	0	108	0	12	0	
Lane Group Flow (vph)	119	286	0	198	234	46	10	190	34	264	370	0	
Confl. Peds. (#/hr)	2					2			6	6			
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	4%	4%	4%	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		
Protected Phases	5	2		1	6		3	8		7	4		
Permitted Phases	2			6		6	8		8	4			
Actuated Green, G (s)	27.0	20.0		34.2	23.6	23.6	20.2	19.6	19.6	41.3	35.7		
Effective Green, g (s)	29.0	21.0		36.2	24.6	24.6	22.2	20.6	20.6	42.3	36.7		
Actuated g/C Ratio	0.33	0.24		0.42	0.28	0.28	0.26	0.24	0.24	0.49	0.42		
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5		
Lane Grp Cap (vph)	372	399		350	471	392	247	406	336	531	680		
v/s Ratio Prot	0.03	c0.17		c0.08	0.14		0.00	0.11		c0.10	c0.23		
v/s Ratio Perm	0.08			0.16		0.03	0.01		0.02	0.14			
v/c Ratio	0.31	0.71		0.56	0.49	0.11	0.04	0.46	0.10	0.49	0.54		
Uniform Delay, d1	20.8	30.2		17.9	25.9	23.0	24.2	28.4	25.9	14.1	18.8		
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	0.3	5.6		1.7	0.6	0.0	0.0	0.6	0.0	0.5	0.7		
Delay (s)	21.2	35.9		19.6	26.5	23.1	24.2	29.0	26.0	14.7	19.5		
Level of Service	C	D		B	C	C	C	C	C	B	B		
Approach Delay (s/veh)		31.6			23.3			27.6			17.5		
Approach LOS		C			C			C			B		
Intersection Summary													
HCM 2000 Control Delay (s/veh)			23.9		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.61										
Actuated Cycle Length (s)			86.9		Sum of lost time (s)					16.0			
Intersection Capacity Utilization			70.3%		ICU Level of Service					C			
Analysis Period (min)			15										

c Critical Lane Group

HCM 7th Signalized Intersection Summary

1: OR 213 & OR 211/OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	266	14	192	227	156	10	184	138	256	266	105
Future Volume (veh/h)	115	266	14	192	227	156	10	184	138	256	266	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	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	1682	1682	1682	1682	1682	1682	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	119	274	14	198	234	161	10	190	142	264	274	108
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, %	5	5	5	5	5	5	2	2	2	4	4	4
Cap, veh/h	429	408	21	425	501	423	293	348	290	490	399	157
Arrive On Green	0.09	0.26	0.24	0.13	0.30	0.30	0.03	0.20	0.20	0.17	0.35	0.33
Sat Flow, veh/h	1602	1586	81	1602	1682	1420	1641	1723	1438	1615	1154	455
Grp Volume(v), veh/h	119	0	288	198	234	161	10	190	142	264	0	382
Grp Sat Flow(s),veh/h/ln	1602	0	1667	1602	1682	1420	1641	1723	1438	1615	0	1609
Q Serve(g_s), s	3.5	0.0	10.4	5.7	7.6	6.0	0.3	6.6	5.9	7.8	0.0	13.7
Cycle Q Clear(g_c), s	3.5	0.0	10.4	5.7	7.6	6.0	0.3	6.6	5.9	7.8	0.0	13.7
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	429	0	429	425	501	423	293	348	290	490	0	556
V/C Ratio(X)	0.28	0.00	0.67	0.47	0.47	0.38	0.03	0.55	0.49	0.54	0.00	0.69
Avail Cap(c_a), veh/h	548	0	920	527	978	826	395	822	687	743	0	1152
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.6	0.0	22.4	15.0	19.2	18.6	20.1	24.0	23.7	15.0	0.0	18.9
Incr Delay (d2), s/veh	0.3	0.0	1.4	0.6	0.5	0.4	0.0	1.0	0.9	0.7	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	1.2	0.0	4.0	1.9	2.8	1.9	0.1	2.6	1.9	2.6	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.9	0.0	23.7	15.6	19.7	19.1	20.2	25.0	24.6	15.7	0.0	20.1
LnGrp LOS	B		C	B	B	B	C	C	C	B		C
Approach Vol, veh/h		407			593			342			646	
Approach Delay, s/veh		21.4			18.1			24.7			18.3	
Approach LOS		C			B			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	21.3	5.8	27.2	10.0	24.0	15.5	17.5				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	12.0	36.0	5.0	47.0	10.0	38.0	21.0	31.0				
Max Q Clear Time (g_c+I1), s	7.7	12.4	2.3	15.7	5.5	9.6	9.8	8.6				
Green Ext Time (p_c), s	0.3	3.1	0.0	1.6	0.1	3.8	0.8	1.7				

Intersection Summary

HCM 7th Control Delay, s/veh	20.0
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	780	19	14	711	12	17
Future Vol, veh/h	780	19	14	711	12	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	5	5	3	3	5	5
Mvmt Flow	857	21	15	781	13	19

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	878	0	1680 868
Stage 1	-	-	-	-	868 -
Stage 2	-	-	-	-	812 -
Critical Hdwy	-	-	4.13	-	6.45 6.25
Critical Hdwy Stg 1	-	-	-	-	5.45 -
Critical Hdwy Stg 2	-	-	-	-	5.45 -
Follow-up Hdwy	-	-	2.227	-	3.545 3.345
Pot Cap-1 Maneuver	-	-	765	-	102 348
Stage 1	-	-	-	-	406 -
Stage 2	-	-	-	-	431 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	765	-	99 348
Mov Cap-2 Maneuver	-	-	-	-	233 -
Stage 1	-	-	-	-	406 -
Stage 2	-	-	-	-	416 -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.19	19.01
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	289	-	-	35	-
HCM Lane V/C Ratio	0.11	-	-	0.02	-
HCM Control Delay (s/veh)	19	-	-	9.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	56	599	55	71	631	10	29	7	99	10	6	45
Future Vol, veh/h	56	599	55	71	631	10	29	7	99	10	6	45
Conflicting Peds, #/hr	5	0	0	0	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	4	4	4	1	1	1	4	4	4
Mvmt Flow	58	624	57	74	657	10	30	7	103	10	6	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	673	0	0	681	0	0	1578	1590	653	1560	1613	668
Stage 1	-	-	-	-	-	-	769	769	-	815	815	-
Stage 2	-	-	-	-	-	-	808	821	-	744	798	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.11	6.51	6.21	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.509	4.009	3.309	3.536	4.036	3.336
Pot Cap-1 Maneuver	918	-	-	902	-	-	89	108	469	90	103	455
Stage 1	-	-	-	-	-	-	395	412	-	368	388	-
Stage 2	-	-	-	-	-	-	376	390	-	403	395	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	914	-	-	902	-	-	64	92	469	56	88	453
Mov Cap-2 Maneuver	-	-	-	-	-	-	64	92	-	56	88	-
Stage 1	-	-	-	-	-	-	370	386	-	336	355	-
Stage 2	-	-	-	-	-	-	304	356	-	289	370	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.73			0.93			36.88			29.8		
HCM LOS							E			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	64	370	914	-	-	902	-	-	56	304
HCM Lane V/C Ratio	0.469	0.299	0.064	-	-	0.082	-	-	0.186	0.175
HCM Control Delay (s/veh)	102.9	18.8	9.2	-	-	9.3	-	-	83.3	19.3
HCM Lane LOS	F	C	A	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	1.8	1.2	0.2	-	-	0.3	-	-	0.6	0.6

HCM 7th TWSC
4: OR 211 (W Main) & Ridings Ave

03/01/2024

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	32	707	0	2	736	12	0	0	1	8	0	36
Future Vol, veh/h	32	707	0	2	736	12	0	0	1	8	0	36
Conflicting Peds, #/hr	5	0	3	3	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	4	4	4	4	4	4	0	0	0	0	0	0
Mvmt Flow	33	729	0	2	759	12	0	0	1	8	0	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	776	0	0	732	0	0	1561	1578	732	1569	1572	770
Stage 1	-	-	-	-	-	-	798	798	-	774	774	-
Stage 2	-	-	-	-	-	-	763	780	-	795	798	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.236	-	-	2.236	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	831	-	-	864	-	-	92	110	425	91	111	404
Stage 1	-	-	-	-	-	-	383	401	-	394	411	-
Stage 2	-	-	-	-	-	-	400	409	-	384	401	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	827	-	-	861	-	-	77	102	423	84	103	402
Mov Cap-2 Maneuver	-	-	-	-	-	-	77	102	-	84	103	-
Stage 1	-	-	-	-	-	-	356	373	-	391	408	-
Stage 2	-	-	-	-	-	-	361	405	-	357	373	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.41			0.02			13.52			23.67		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	423	78	-	-	5	-	-	238
HCM Lane V/C Ratio	0.002	0.04	-	-	0.002	-	-	0.191
HCM Control Delay (s/veh)	13.5	9.5	0	-	9.2	0	-	23.7
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.7

HCM 7th TWSC
5: Dixon Avenue & OR 211 (W Main)

03/01/2024

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	0	671	44	22	701	6	40	1	32	6	1	5
Future Vol, veh/h	0	671	44	22	701	6	40	1	32	6	1	5
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	5	5	5	3	3	3	0	0	0
Mvmt Flow	0	699	46	23	730	6	42	1	33	6	1	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	736	0	0	748	0	0	1501	1507	725	1479	1527	733
Stage 1	-	-	-	-	-	-	725	725	-	779	779	-
Stage 2	-	-	-	-	-	-	777	782	-	699	748	-
Critical Hdwy	4.14	-	-	4.15	-	-	7.13	6.53	6.23	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.1	5.5	-
Follow-up Hdwy	2.236	-	-	2.245	-	-	3.527	4.027	3.327	3.5	4	3.3
Pot Cap-1 Maneuver	860	-	-	847	-	-	100	120	423	105	119	424
Stage 1	-	-	-	-	-	-	415	429	-	392	409	-
Stage 2	-	-	-	-	-	-	389	403	-	433	423	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	860	-	-	845	-	-	95	117	422	93	115	424
Mov Cap-2 Maneuver	-	-	-	-	-	-	95	117	-	93	115	-
Stage 1	-	-	-	-	-	-	414	427	-	381	398	-
Stage 2	-	-	-	-	-	-	372	392	-	398	422	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.28	55.05	32.9
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	144	860	-	-	845	-	-	141
HCM Lane V/C Ratio	0.528	-	-	-	0.027	-	-	0.088
HCM Control Delay (s/veh)	55.1	0	-	-	9.4	-	-	32.9
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2.6	0	-	-	0.1	-	-	0.3

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	705	701	4	22	33
Future Vol, veh/h	6	705	701	4	22	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	4	27	27
Mvmt Flow	6	734	730	4	23	34

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	734	0	-	0	1479 732
Stage 1	-	-	-	-	732 -
Stage 2	-	-	-	-	747 -
Critical Hdwy	4.14	-	-	-	6.67 6.47
Critical Hdwy Stg 1	-	-	-	-	5.67 -
Critical Hdwy Stg 2	-	-	-	-	5.67 -
Follow-up Hdwy	2.236	-	-	-	3.743 3.543
Pot Cap-1 Maneuver	862	-	-	-	122 382
Stage 1	-	-	-	-	434 -
Stage 2	-	-	-	-	427 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	862	-	-	-	121 382
Mov Cap-2 Maneuver	-	-	-	-	121 -
Stage 1	-	-	-	-	430 -
Stage 2	-	-	-	-	427 -

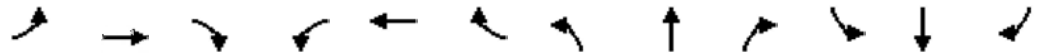
Approach	EB	WB	SB
HCM Control Delay, s/v	0.08	0	29.27
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	862	-	-	-	205
HCM Lane V/C Ratio	0.007	-	-	-	0.28
HCM Control Delay (s/veh)	9.2	-	-	-	29.3
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	1.1

HCM Signalized Intersection Capacity Analysis

7: Molalla Ave & OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	466	101	11	454	47	85	70	11	66	109	114
Future Volume (vph)	63	466	101	11	454	47	85	70	11	66	109	114
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	3.5	3.5	4.0	3.5			3.5			3.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99			0.99			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			0.99	
Frt	1.00	1.00	0.85	1.00	0.98			0.99			0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.98	
Satd. Flow (prot)	1614	1699	1444	1614	1669			1622			1586	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.70			0.89	
Satd. Flow (perm)	1614	1699	1444	1614	1669			1177			1443	
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)	68	507	110	12	493	51	92	76	12	72	118	124
RTOR Reduction (vph)	0	0	57	0	4	0	0	3	0	0	26	0
Lane Group Flow (vph)	68	507	53	12	540	0	0	177	0	0	288	0
Confl. Peds. (#/hr)	11						11		10	10		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)	4.0	28.4	28.4	0.9	25.3			19.0			19.0	
Effective Green, g (s)	4.0	28.9	28.9	0.9	25.8			19.5			19.5	
Actuated g/C Ratio	0.07	0.48	0.48	0.01	0.43			0.32			0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5			2.5			2.5	
Lane Grp Cap (vph)	107	814	692	24	714			380			466	
v/s Ratio Prot	c0.04	c0.30		0.01	c0.32							
v/s Ratio Perm			0.04					0.15			c0.20	
v/c Ratio	0.63	0.62	0.07	0.50	0.75			0.46			0.61	
Uniform Delay, d1	27.4	11.6	8.4	29.4	14.5			16.2			17.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	10.3	1.2	0.0	11.4	4.3			0.6			2.0	
Delay (s)	37.7	12.9	8.5	40.8	18.9			16.9			19.3	
Level of Service	D	B	A	D	B			B			B	
Approach Delay (s/veh)		14.6			19.4			16.9			19.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	60.3	Sum of lost time (s)	11.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 7th Signalized Intersection Summary
 7: Molalla Ave & OR 211 (W Main)

03/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	466	101	11	454	47	85	70	11	66	109	114
Future Volume (veh/h)	63	466	101	11	454	47	85	70	11	66	109	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	0.99		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	1709	1709	1709	1709	1709	1709	1695	1695	1695	1709	1709	1709
Adj Flow Rate, veh/h	68	507	110	12	493	51	92	76	12	72	118	124
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	3	3	3
Cap, veh/h	118	851	713	30	675	70	251	180	23	155	183	165
Arrive On Green	0.07	0.50	0.50	0.02	0.44	0.43	0.26	0.27	0.26	0.26	0.27	0.26
Sat Flow, veh/h	1628	1709	1432	1628	1521	157	538	663	86	256	676	609
Grp Volume(v), veh/h	68	507	110	12	0	544	180	0	0	314	0	0
Grp Sat Flow(s),veh/h/ln	1628	1709	1432	1628	0	1678	1286	0	0	1541	0	0
Q Serve(g_s), s	2.1	11.0	2.2	0.4	0.0	13.8	0.0	0.0	0.0	3.6	0.0	0.0
Cycle Q Clear(g_c), s	2.1	11.0	2.2	0.4	0.0	13.8	6.0	0.0	0.0	9.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.09	0.51		0.07	0.23		0.39
Lane Grp Cap(c), veh/h	118	851	713	30	0	745	442	0	0	489	0	0
V/C Ratio(X)	0.58	0.60	0.15	0.40	0.00	0.73	0.41	0.00	0.00	0.64	0.00	0.00
Avail Cap(c_a), veh/h	283	1304	1093	283	0	1281	862	0	0	958	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	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.2	9.3	7.1	25.1	0.0	11.9	15.8	0.0	0.0	17.3	0.0	0.0
Incr Delay (d2), s/veh	3.3	0.5	0.1	6.3	0.0	1.0	0.4	0.0	0.0	1.1	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	0.9	3.2	0.5	0.2	0.0	4.3	1.7	0.0	0.0	3.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.5	9.8	7.1	31.4	0.0	12.9	16.3	0.0	0.0	18.4	0.0	0.0
LnGrp LOS	C	A	A	C		B	B			B		
Approach Vol, veh/h		685			556			180			314	
Approach Delay, s/veh		11.0			13.3			16.3			18.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	29.3		17.5	7.7	26.5		17.5				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	9.0	39.0		30.0	9.0	39.0		30.0				
Max Q Clear Time (g_c+I1), s	2.4	13.0		11.6	4.1	15.8		8.0				
Green Ext Time (p_c), s	0.0	7.3		1.3	0.1	6.7		0.7				
Intersection Summary												
HCM 7th Control Delay, s/veh				13.6								
HCM 7th LOS				B								

Intersection						
Int Delay, s/veh	2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	69	3	5	143	21	33
Future Vol, veh/h	69	3	5	143	21	33
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	8	8	0	0
Mvmt Flow	73	3	5	151	22	35

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	77	0	236
Stage 1	-	-	-	-	75
Stage 2	-	-	-	-	161
Critical Hdwy	-	-	4.18	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.272	-	3.5
Pot Cap-1 Maneuver	-	-	1485	-	756
Stage 1	-	-	-	-	953
Stage 2	-	-	-	-	873
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1483	-	753
Mov Cap-2 Maneuver	-	-	-	-	753
Stage 1	-	-	-	-	952
Stage 2	-	-	-	-	869

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.25	9.36
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	882	-	-	61	-
HCM Lane V/C Ratio	0.064	-	-	0.004	-
HCM Control Delay (s/veh)	9.4	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↵		↵	↵	
Traffic Vol, veh/h	54	30	19	10	17	49	18	147	10	109	209	26
Future Vol, veh/h	54	30	19	10	17	49	18	147	10	109	209	26
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
Heavy Vehicles, %	0	0	0	8	8	8	4	4	4	4	4	4
Mvmt Flow	57	32	20	11	18	52	19	155	11	115	220	27
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay, s/veh	9.4	8.9	9.8	10.5
HCM LOS	A	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	52%	13%	100%	0%
Vol Thru, %	0%	94%	29%	22%	0%	89%
Vol Right, %	0%	6%	18%	64%	0%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	157	103	76	109	235
LT Vol	18	0	54	10	109	0
Through Vol	0	147	30	17	0	209
RT Vol	0	10	19	49	0	26
Lane Flow Rate	19	165	108	80	115	247
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.031	0.247	0.16	0.114	0.183	0.355
Departure Headway (Hd)	5.935	5.386	5.311	5.143	5.743	5.162
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	599	661	670	690	622	693
Service Time	3.713	3.163	3.385	3.223	3.509	2.927
HCM Lane V/C Ratio	0.032	0.25	0.161	0.116	0.185	0.356
HCM Control Delay, s/veh	8.9	9.9	9.4	8.9	9.8	10.8
HCM Lane LOS	A	A	A	A	A	B
HCM 95th-tile Q	0.1	1	0.6	0.4	0.7	1.6

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	T		T			T
Traffic Vol, veh/h	6	2	7	0	1	6
Future Vol, veh/h	6	2	7	0	1	6
Conflicting Peds, #/hr	3	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	75	75	75	75	75	75
Heavy Vehicles, %	8	8	3	3	0	0
Mvmt Flow	8	3	9	0	1	8

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	23	9	0	0	9	0
Stage 1	9	-	-	-	-	-
Stage 2	14	-	-	-	-	-
Critical Hdwy	6.48	6.28	-	-	4.1	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.372	-	-	2.2	-
Pot Cap-1 Maneuver	978	1055	-	-	1624	-
Stage 1	998	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	974	1055	-	-	1624	-
Mov Cap-2 Maneuver	974	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	990	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.66	0	1.03
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	993	257
HCM Lane V/C Ratio	-	-	0.011	0.001
HCM Control Delay (s/veh)	-	-	8.7	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection: 1: OR 213 & OR 211/OR 211 (W Main)

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	T	R	L	TR
Maximum Queue (ft)	67	176	124	199	112	24	170	73	97	131
Average Queue (ft)	21	71	48	88	56	4	64	18	40	49
95th Queue (ft)	48	138	95	162	97	18	137	49	79	99
Link Distance (ft)		943		2586			896			940
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	260		340		225	275		260	205	
Storage Blk Time (%)		0		0						
Queuing Penalty (veh)		0		0						

Intersection: 2: S Ona Way & OR 211 (W Main)

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	69	54
Average Queue (ft)	6	19
95th Queue (ft)	34	45
Link Distance (ft)	1744	970
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Leroy Ave & OR 211 (W Main)

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	59	14	66	10	35	49	82	85
Average Queue (ft)	14	0	13	1	15	17	16	42
95th Queue (ft)	45	7	44	9	40	44	54	76
Link Distance (ft)		1744		796		280		503
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		100		100	
Storage Blk Time (%)							0	0
Queuing Penalty (veh)							0	0

Intersection: 4: OR 211 (W Main) & Ridings Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	97	11	12	72
Average Queue (ft)	11	0	1	31
95th Queue (ft)	52	8	8	57
Link Distance (ft)	796	402	196	361
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Dixon Avenue & OR 211 (W Main)

Movement	EB	SB
Directions Served	L	LTR
Maximum Queue (ft)	12	72
Average Queue (ft)	0	11
95th Queue (ft)	6	45
Link Distance (ft)		261
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: OR 211 (W Main) & Site Access

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	76	6	71
Average Queue (ft)	5	0	19
95th Queue (ft)	40	4	60
Link Distance (ft)	418	1325	461
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Molalla Ave & OR 211 (W Main)

Movement	EB	EB	EB	WB	WB	NB	SB
Directions Served	L	T	R	L	TR	LTR	LTR
Maximum Queue (ft)	77	184	60	34	239	120	114
Average Queue (ft)	24	74	16	4	98	44	46
95th Queue (ft)	57	148	48	20	185	88	90
Link Distance (ft)		1325			451	676	1290
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	150		155	150			
Storage Blk Time (%)		1			2		
Queuing Penalty (veh)		1			0		

Intersection: 8: Site Access & W Heintz Street

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9: Molalla Ave & W Heintz Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	71	78	28	67	58	92
Average Queue (ft)	33	30	2	35	18	42
95th Queue (ft)	59	56	16	59	47	72
Link Distance (ft)	329	989		1290		820
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		100	
Storage Blk Time (%)					0	0
Queuing Penalty (veh)					0	0

Intersection: 10: Dixon Avenue & Site Access

Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 1

Intersection: 1: OR 213 & OR 211/OR 211 (W Main)

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	T	R	L	TR
Maximum Queue (ft)	146	275	174	213	97	29	194	75	246	295
Average Queue (ft)	48	142	82	99	50	6	79	22	104	121
95th Queue (ft)	105	237	141	176	87	23	147	57	191	229
Link Distance (ft)		943		2586			896			940
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	260		340		225	275		260	205	
Storage Blk Time (%)		0		0			0		0	1
Queuing Penalty (veh)		1		1			0		2	4

Intersection: 2: S Ona Way & OR 211 (W Main)

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	153	65
Average Queue (ft)	19	20
95th Queue (ft)	81	50
Link Distance (ft)	1744	970
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Leroy Ave & OR 211 (W Main)

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	L	TR	L	TR
Maximum Queue (ft)	54	4	65	66	79	35	62
Average Queue (ft)	21	0	25	24	40	9	29
95th Queue (ft)	51	6	57	56	67	32	56
Link Distance (ft)		1744			280		503
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	100		100	100		100	
Storage Blk Time (%)			0		0		0
Queuing Penalty (veh)			0		0		0

Intersection: 4: OR 211 (W Main) & Ridings Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	229	17	12	64
Average Queue (ft)	33	1	0	26
95th Queue (ft)	129	11	6	53
Link Distance (ft)	796	402	196	361
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Dixon Avenue & OR 211 (W Main)

Movement	WB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	43	105	31
Average Queue (ft)	11	42	7
95th Queue (ft)	36	80	28
Link Distance (ft)		298	261
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: OR 211 (W Main) & Site Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	95	72
Average Queue (ft)	6	16
95th Queue (ft)	48	51
Link Distance (ft)	418	461
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Molalla Ave & OR 211 (W Main)

Movement	EB	EB	EB	WB	WB	NB	SB
Directions Served	L	T	R	L	TR	LTR	LTR
Maximum Queue (ft)	125	269	214	94	338	127	173
Average Queue (ft)	40	117	32	13	148	58	95
95th Queue (ft)	87	210	100	54	265	105	154
Link Distance (ft)		1325			451	676	1290
Upstream Blk Time (%)					0		
Queuing Penalty (veh)					0		
Storage Bay Dist (ft)	150		155	150			
Storage Blk Time (%)		3			7		
Queuing Penalty (veh)		5			1		

Intersection: 8: Site Access & W Heintz Street

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9: Molalla Ave & W Heintz Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	59	78	37	93	74	86
Average Queue (ft)	31	31	14	45	35	50
95th Queue (ft)	50	58	38	71	56	74
Link Distance (ft)	329	989		1290		820
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		100	
Storage Blk Time (%)				0	0	0
Queuing Penalty (veh)				0	0	0

Intersection: 10: Dixon Avenue & Site Access

Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 13

Intersection: 1: OR 213 & OR 211/OR 211 (W Main)

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	T	R	L	TR
Maximum Queue (ft)	72	173	112	209	163	50	173	66	98	114
Average Queue (ft)	22	71	48	87	57	6	63	20	40	53
95th Queue (ft)	52	134	91	167	114	27	130	51	81	103
Link Distance (ft)		943		2586			896			940
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	260		340		225	275		260	205	
Storage Blk Time (%)	0									
Queuing Penalty (veh)	1									

Intersection: 2: S Ona Way & OR 211 (W Main)

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	43	62
Average Queue (ft)	5	23
95th Queue (ft)	29	51
Link Distance (ft)	1744	970
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Leroy Ave & OR 211 (W Main)

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	60	12	62	22	39	49	67	90
Average Queue (ft)	15	1	11	1	14	20	20	40
95th Queue (ft)	47	8	41	9	40	47	57	74
Link Distance (ft)		1744		796		280		503
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		100		100	
Storage Blk Time (%)	0							
Queuing Penalty (veh)	0							

Intersection: 4: OR 211 (W Main) & Ridings Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	139	99	24	70
Average Queue (ft)	15	3	1	31
95th Queue (ft)	73	67	11	57
Link Distance (ft)	796	402	196	361
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Dixon Avenue & OR 211 (W Main)

Movement	EB	WB	SB
Directions Served	L	TR	LTR
Maximum Queue (ft)	25	5	69
Average Queue (ft)	1	0	14
95th Queue (ft)	11	4	50
Link Distance (ft)		418	261
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: OR 211 (W Main) & Site Access

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (ft)	52	36	64
Average Queue (ft)	16	2	11
95th Queue (ft)	45	24	47
Link Distance (ft)		1325	461
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	150		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Molalla Ave & OR 211 (W Main)

Movement	EB	EB	EB	WB	WB	NB	SB
Directions Served	L	T	R	L	TR	LTR	LTR
Maximum Queue (ft)	87	206	60	28	256	118	109
Average Queue (ft)	24	74	17	4	108	48	49
95th Queue (ft)	61	149	48	21	198	92	86
Link Distance (ft)		1325			451	676	1290
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	150		155	150			
Storage Blk Time (%)		1			2		
Queuing Penalty (veh)		0			0		

Intersection: 8: Site Access & W Heintz Street

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	40	31
Average Queue (ft)	3	6
95th Queue (ft)	20	27
Link Distance (ft)	881	580
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Molalla Ave & W Heintz Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	74	86	28	63	45	90
Average Queue (ft)	31	34	4	34	20	47
95th Queue (ft)	60	62	20	55	46	75
Link Distance (ft)	329	989		1290		820
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		100	
Storage Blk Time (%)						0
Queuing Penalty (veh)						0

Intersection: 10: Dixon Avenue & Site Access

Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 2

Intersection: 1: OR 213 & OR 211/OR 211 (W Main)

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	T	R	L	TR
Maximum Queue (ft)	130	273	184	252	148	20	174	62	254	283
Average Queue (ft)	41	136	87	107	49	4	72	22	103	127
95th Queue (ft)	91	227	152	194	102	18	137	51	182	231
Link Distance (ft)		943		2586			896			940
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	260		340		225	275		260	205	
Storage Blk Time (%)		0		0					0	2
Queuing Penalty (veh)		1		1					1	4

Intersection: 2: S Ona Way & OR 211 (W Main)

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	138	79
Average Queue (ft)	18	20
95th Queue (ft)	85	51
Link Distance (ft)	1744	970
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Leroy Ave & OR 211 (W Main)

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	66	9	67	22	54	88	39	70
Average Queue (ft)	21	0	27	1	21	42	10	29
95th Queue (ft)	50	7	57	13	52	70	34	55
Link Distance (ft)		1744		796		280		503
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		100		100	
Storage Blk Time (%)	0		0	0		0		0
Queuing Penalty (veh)	0		0	0		0		0

Intersection: 4: OR 211 (W Main) & Ridings Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	180	11	6	62
Average Queue (ft)	30	0	1	28
95th Queue (ft)	111	8	9	54
Link Distance (ft)	796	402	196	361
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Dixon Avenue & OR 211 (W Main)

Movement	WB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	46	77	35
Average Queue (ft)	9	37	12
95th Queue (ft)	34	68	37
Link Distance (ft)		298	260
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: OR 211 (W Main) & Site Access

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (ft)	31	19	130
Average Queue (ft)	5	1	48
95th Queue (ft)	22	9	99
Link Distance (ft)		1325	461
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	150		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Molalla Ave & OR 211 (W Main)

Movement	EB	EB	EB	WB	WB	NB	SB
Directions Served	L	T	R	L	TR	LTR	LTR
Maximum Queue (ft)	125	257	180	82	313	137	205
Average Queue (ft)	41	120	34	10	145	61	92
95th Queue (ft)	87	208	96	51	248	111	158
Link Distance (ft)		1325			451	676	1290
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	150		155	150			
Storage Blk Time (%)		3			7		
Queuing Penalty (veh)		5			1		

Intersection: 8: Site Access & W Heintz Street

Movement	NB
Directions Served	LR
Maximum Queue (ft)	40
Average Queue (ft)	27
95th Queue (ft)	45
Link Distance (ft)	580
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: Molalla Ave & W Heintz Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	67	68	44	87	73	95
Average Queue (ft)	35	32	13	47	35	51
95th Queue (ft)	58	60	39	72	56	79
Link Distance (ft)	329	989		1290		820
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		100	
Storage Blk Time (%)				0		0
Queuing Penalty (veh)				0		0

Intersection: 10: Dixon Avenue & Site Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	6
95th Queue (ft)	27
Link Distance (ft)	202
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 13

