Community Development Department
315 Kennel Ave/PO Box 248
Molalla, OR 97038
Phone 503.759.0205
www.cityofmolalla.com

AGENDA
Molalla Planning Commission
6:30 PM, November 2, 2022

The Planning Commission Meeting will begin at 6:30pm. The Planning Commission has adopted Public Participation Rules. Copies of these rules and public comment cards are available at the entry desk. Public comment cards must be turned in prior to the start of the Commission meeting. The City will endeavor to provide a qualified bilingual interpreter, at no cost, if requested at least 48 hours prior to the meeting. To obtain services call the City Recorder at (503) 829-6855.

I. CALL TO ORDER

II. FLAG SALUTE AND ROLL CALL

III. PUBLIC COMMENT – Limited to 3 minutes per person

IV. MINUTES:

October 5, 2022, Planning Commission Meeting

V. QUASI-JUDICIAL HEARING:

SDR02-2022 and CUP04-2022 – Fast food w/drivethrough

VI. REPORTS AND ANNOUNCEMENTS

- Mural Code Discussion

VII. ADJOURNMENT

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Molalla Planning Commission
MINUTES
October 5, 2022

The October 5th, 2022, meeting of the Molalla Planning Commission was called to order by Chair Rae Botsford at 6:32 pm.

COMMISSIONER ATTENDANCE:

Chair Rae Lynn Botsford – Present
Commissioner Rick Deaton – Absent (Excused)
Commissioner Doug Eaglebear – Present
Commissioner Jennifer Satter – Present (Late @ 6:42)
Commissioner Connie Sharp – Present
Commissioner Clint Ancell – Present

STAFF IN ATTENDANCE:

Mac Corthell, Planning Director - Present
Dan Zinder, Associate Planner – Present
Ronda Lee, Support Specialist - Present

AGENDA:

I. CALL TO ORDER

II. FLAG SALUTE AND ROLL CALL

III. PUBLIC COMMENT – Limited to 3 minutes per person

No Public Comment

IV. MINUTES

August 3, 2022, Planning Commission Meeting – Vote: 4-0-0 (Satter not present for vote)

V. QUASI-JUDICIAL HEARING

None.

VI. DISCUSSION ITEM

Jennifer Arnold with Emerio Design, LLC spoke about the housing needs analysis project

VII. REPORTS AND ANNOUNCEMENTS

Brief updates of possible future projects - Corthell

VIII. ADJOURNMENT

Meeting adjourned at 7:13 pm

PLANNING COMMISSION MEETING CAN BE VIEWED IN ITS ENTIRIETY HERE:

XXXXXXX Planning Commission Meeting Video

_____ _____
Chair Rae Lynn Botsford Date

Attested by: _____ _____
MCC Director, Mac Corthell Date

INTRODUCTION

Now is the time set for public hearings to consider a quasi-judicial land use application. The application, SDR02-2022 and CUP04-2022, is for construction of a new 2500 SF fast food establishment with drive thru.

Now we will proceed with the Quasi-Judicial Land Use Public Hearing starting with an introduction to the procedures for the hearing.

I will introduce the applicable substantive criteria upon which each case will be decided. Our Senior Planner, Dan Zinder, will provide a staff report. When the staff report has been presented, I will open the public hearing to public testimony. Members of the public who want to testify are asked to sign in and indicate that they will testify on the sign in sheet, come up to the podium when called, and give their name, address, and city of residence for the record before they testify. We ask for your address so that we can notify you of the City's final decision. If you have any written testimony or other evidence to submit, please give that to staff so it can be entered into the record. When public testimony has been concluded I will close the public hearing and open Planning Commission discussion and deliberation.
After the Commission has deliberated, we will need a motion to approve, modify or deny the application.

Are there any questions among the Commission about the process?

Oregon land use law requires several items be read into the record at the beginning of a Quasi-Judicial public hearing:

Conflicts of Interest/Ex-Parte Contacts/Bias

The Commission is required to disclose any conflicts of interest and ex-parte contacts that we may have with the Land Use Application or applicant — this is whether we have any financial or other personal interest in a proposal and whether we have spoken with anybody or have other information about a proposal gathered outside of this hearing. Also, Commissioners may only participate if they can do so without un-due bias either for or against an application.

Do any Councilors wish to make disclosures?

Are there any challenges from the audience as to conflicts of interest, ex-parte contacts, or bias related to any member of the Commission?

Required Statements **SDR02-2022 and CUP04-2022**

The applicable procedural and substantive criteria upon which SDR02-2022 and CUP04-2022 will be decided are found in Molalla Municipal Code Sections 17-4.2.030, and 17-4.2.050.

Your testimony, arguments, and evidence must be directed toward these criteria or other criteria in the comprehensive plan or development code that you believe apply per ORS 197.763(5)(b).

Failure to raise an issue accompanied by statements or evidence sufficient to afford the decision maker and the parties an opportunity to respond may preclude appeal of a decision on this application based on that issue per ORS 197.763(5)(c).

Failure of the applicant to raise constitutional or other issues relating to proposed conditions of approval with sufficient specificity to allow the local government or its designee to respond to the issue precludes an action for damages in circuit court per ORS 197.796(3)(b).

Public Hearing **SDR02-2022 and CUP04-2022**

I now open the Public Hearing for application # SDR02-2022 and CUP04-2022 at_____ PM.

I call on Senior Planner, Dan Zinder to present the staff report for the first application.

Zinder reviews Staff report.

All persons speaking before the City Council must state their name and address for the record.

1. Is there any written public comment for the record?
   Staff provides written comment to the commission for the record.

2. I invite the Applicant to present their case;
3. I invite those in support of the application to speak;
4. I invite those opposed to the application to speak;
5. I invite those who are neither for nor against the application to speak;
6. I invite public agencies to comment;
7. I invite the Applicant to present any rebuttal to the testimony presented;

I close the Public Hearing for application # SDR02-2022 and CUP04-2022 at _____ PM.

Is there a request to keep the record open?

See page 3 if you have a request to keep the record open. Hearing will be closed, but record will be left open for the submission of additional written evidence and testimony.

If there is no request to keep the record open

Now it is time for Commission deliberation and discussion.

** NOTE: Only questions asked of staff are allowed after the hearing is closed.*

MOTION TO APPROVE*: I move to approve* SDR02-2022 and CUP04-2022*, subject to the conditions of approval as set forth in the staff report, and to authorize the Chair to sign a final decision approving application* SDR02-2022 and CUP04-2022 *and incorporating the findings from the staff report.*

OR **MOTION TO APPROVE WITH MODIFICATIONS***: I move to approve* SDR02-2022 and CUP04-2022*, **as modified to reflect the changes made by the Planning Commission**, subject to the conditions of approval as set forth in the Staff Report and to authorize the Chair to sign a final decision of approval. *Note: The Commission will need to make alternative findings to the ones in the staff report that were found "not satisfied."*

OR MOTION TO DENY: *I move that* SDR02-2022 and CUP04-2022 *be denied consistent with the findings in the staff report, and to incorporate the findings therein. *Note: The Commissioner making the motion to deny needs to state the reasons for denial.*

Keeping the Record Open

The Hearing will be closed, but record will be left open for the submission of additional written evidence and testimony.

[READ THE FOLLOWING ONLY IF YOU HAVE A REQUEST TO LEAVE THE RECORD OPEN FOR A QUASI-JUDICIAL APPLICATION]

Rules Regarding Leaving the Record Open. ORS 197.763(6).

Before the conclusion of the initial evidentiary hearing, any participant may request an opportunity to present additional evidence, arguments or testimony regarding the application. The City shall then keep the record open at least seven (7) days from the date of the initial evidentiary hearing (set the date and time for the closing of the open record period that is at least 7 days in the future). Persons may present and rebut new evidence, arguments or testimony by submitting materials to City Hall. Materials must be received at City Hall before the expiration of the open record period. If new written evidence is submitted, any person may request, prior to the conclusion of the open record period, that the record be left open for an additional seven (7) days to submit additional written evidence, arguments or testimony for the purpose of responding to the new written evidence. At the conclusion of the open record period, unless waived, the applicant has 7 days after the close of the record to provide final legal argument. (ORS 197.763(6)(e).) Once the open record period is closed, the Council will deliberate and decide on the application.

Planning & Land Use

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CITY OF MOLALLA STAFF REPORT

Consolidated Review for SDR02-2022 and CUP04-2022 – New Fast Food Establishment & Drive Thru

Date:	October 26, 2022 for the November 2, 2022 Planning Commission Meeting
File No.:	Consolidated Review for SDR02-2022 and CUP04-2022
Proposal:	Construction of a new 2500 SF fast food establishment with drive thru
Address:	1522 W Main ST (OR-211)
Tax Lot:	Taxlot 1800 of Clackamas County Taxmap 52E07C
Applicant:	John S. Odom JSO Services, LLC PO Box 410394 St Louis, MO 63011
Property Owners:	Dara Dejbakhsm | DND Groups, Inc 27261 Las Ramblas, Suite 100 Mission Viejo, CA 92691
Applicable Standards:	**Applicable Standards**: **Molalla Municipal Code, Title 17, Development Code** **Division II, Zoning Regulations** *Section 17-2.2.030 Allowed Uses* *Section 17-2.2.040 Lot and Development Standards* **Division III, Community Design Standards** *Section 17-3.2.040 Non-Residential Buildings* *Section 17-3.2.060 Drive-Up and Drive-Through Uses and Facilities* *Chapter 17-3.3 Access and Circulation* *Chapter 17-3.4 Landscaping, Fences and Walls, Outdoor Lighting* *Chapter 17-3.5 Parking and Loading* *Chapter 17-3.6 Public Facilities*

Division IV, Application Review Procedures and Approval Standards
Section 17-4.1.040 Type III Procedure (Quasi-Judicial Review – Public Hearing)
Section 17-4.2.050 Approval Standards (Site Design Review)
Section 17-4.4.040 Criteria, Standards, and Conditions of Approval (Conditional Use)

TABLE OF CONTENTS:

EXHIBITS:

I. EXECUTIVE SUMMARY

Proposal:
The Applicant seeks land use approval for the construction of a 2,500 SF fast food establishment ("Dairy Queen") with a drive thru facility. The subject property has a single family detached unit built in 1925 and a garage with access from a driveway to OR 211 totaling 1.67 acres. The applicant proposes vehicle access to the site from a new driveway that will serve the entire lot. An existing residential structure will remain on the east side. Additionally, the Applicant proposes required pedestrian frontage improvements adjacent to the property along OR-211. Per Molalla Municipal Code (MMC) 17-2.2.030 H a Conditional Use Permit is required in conjunction with the Site Design Review because the proposed use includes a drive thru. No change to the existing C-2 General Commercial zoning designation is proposed as part of these applications. Findings of fact are based on applicant's site plans dated June 10, 2021.

Site Description:
The subject site is located on a 1.67 acre parcel of General Commercial (C-2) zoned land on OR 211. The west side parcel is proposed for development while the east side will remain vacant at this time. The subject property is located due south of an existing shopping center (Safeway). The property is generally flat with four significant oak trees through the site.

Surrounding Zoning and Land Uses:
The subject parcel is surrounded by General Commercial (C-2) zoned land to the north, south, and west and Heavy Industrial (M-2) zoned land to the east. Surrounding uses include the retail complex to the north, Chevron gas station to the west, apartment complex nearing completion to the south, and undeveloped industrial land to the east and southeast.

Public Agency Notice & Responses:
Staff circulated notice of the project to the City's Public Works Director, Molalla Fire District, and Oregon Department of Transportation on September 29, 2022. The City has included responses from Public Works, ODOT, and Molalla Fire as Exhibits E, F, and G respectively. Public Works and Molalla Fire comments are integrated into the proposed findings and conditions of this decision. ODOT comments were submitted after the October 19 deadline and are included as a stand alone document though their views from the pre-app process with the Applicant are represented within the findings.

Public Notice & Comments:
Per MMC 17-4.1.040, notice of the public hearing was sent to all property owners within 300 feet of the subject properties and to a group of interested parties on September 19, 2022. Notice was published in the *Molalla Pioneer* on September 28, 2022. Signage containing public notice information was posted on the property on

September 29, 2022. As of October 26, 2022 staff had received no written public comment on the application.

II. Recommendation

Based on the application materials and findings demonstrating present or conditioned compliance with the applicable standards, staff recommends approval of Site Design Review SDR02-2022 and Conditional Use Permit CUP04-2022 subject to the conditions of approval that follow this recommendation. This approval is based on the Applicant's written narrative, site plans, and supplemental application materials. Any modifications to the approved plans other than those required by the conditions of this decision will require a new land use application and approval.

III. Conditions of Approval

1. Building Permits, Engineering Plan Approvals, and Certificate of Occupancy Required:

a. Per Molalla Municipal Code (hereinafter MMC) 17-4.2.070 and the State of Oregon Structural Specialty Code, upon approval of this Site Design Review, the applicant must submit for building permit authorization from Molalla Planning Staff and Engineering Plan Review from Molalla Public Works. Per MMC 17-4.2.070, this site design review has an approval period of 1-year from the date of approval. As a condition of approval, the Applicant/owner shall submit for both Building Permit Authorization for all proposed improvements through the City of Molalla Planning Department and Civil Plan Review through the City of Molalla Public Works Department within the 1-year approval period. Extension requests for the 1-year period are subject to the Code provisions of MMC 17-4.2.070, B.

b. Per MMC 17-4.9.020 and the State of Oregon Structural Specialty Code, upon approval of this Site Design Review (change of use), the applicant must obtain a Certificate of Occupancy from the Clackamas County Building Official. As a condition of approval, the Applicant/owner shall obtain a Certificate of Occupancy through the Clackamas County Building Official for all onsite occupants prior to operation of the new, proposed use/occupancy.

Note: City approval is required for all Certificates of Occupancy.

2. Conditions Requiring Resolution Prior To Receiving Building

Permit Authorization From The Molalla Planning Department:

a. The Applicant shall confirm landscaping area sitewide and for parking areas on site plan(s) submitted with building permits. 5% total site area and 10% parking lot standard shall be met.

b. In accordance with MMC 17-3.2.040 F, 1 the Applicant shall submit plans with building permit authorization showing canopy coverage along at least 75% of the street facing facades where walkways are proposed adjacent to the building. Additional canopies shall comply with applicable building codes and shall be designed to be visually compatible with the architecture of a building. In addition, in accordance with MMC 17-3.2.040 D, 6 and D, 9 the transparency standard shall be met at build permit review to demonstrate compliance with this standard. Alternatively, the applicant can propose an exception to the Planning Commission to meet the standard. In accordance with MMC 17-3.2.040 D, 10 and D, 11 trim detailing, architectural variation, and window display detailing shall also be included and verified at building plan review.

c. All walkways and crosswalks connecting to primary building entrances shall be designed consistent with ADA requirements. In addition, the design, including materials and profile view, shall be submitted for review to comply with the walkway standard. Applicant shall construct a crosswalk or similar pedestrian striping providing pedestrian connection to the adjacent parcel to the east. A second bike rack (staple) shall be added to the bike parking area to comply with the parking standard and confirmed on a revised site plan.

d. The site plan shows 25 parking spaces. Submit a revised site plan that shows 20 spaces with remaining space for landscaping. Alternatively, show 2 additional spaces for EV charging stations for a total of 22 spaces. In addition, the parking spaces adjacent to the trash enclosure may create a conflict with backing movements and shall be reviewed as candidates for removal and/or redesign.

e. The applicant shall submit a lighting/photometrics plan that meets the standards of MMC 17-3.4.050 with building permit authorization submissions.

f. Applicant shall confirm all parking stall and drive aisle length and width dimensions are met on site plans submitted for building permit authorization

g. For commercial and industrial 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 improvements shall be completed and accepted by the Public Works Department prior to issuance of any occupancy.

From the 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. 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. 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.

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.

i. The Applicant shall confirm that the turning radius for the new parking area can accommodate fire apparatus in their engineering plan submittals. If other large vehicles are anticipated to access the site, truck turning radii will also be required.

ii. The proposed development submitted Transportation Impact Analysis (TIA) analyzes Warrants 1 and 2. For projects where the OR-211/Leroy Ave. intersection is impacted; Applicant will be required to submit a TIA for all nine signal warrants for the intersection. Ensure all new projects that are approved or pending TIAs are included in the study including Cascade Place Apartments, 1000 W Main St., Colima Apartments (31514 S Hwy 213) Phase 1, Goodwill, and Molalla Center Market (501 E Main St.) are included.

iii. Applicant shall design and construct a sanitary main extension to the east on OR-211 (W. Main Street) that continues to the eastern property line of the project. Finished construction required prior to occupancy. Applicant shall submit Sanitary Sewer design plans along with Sewer Capacity Analysis form to the City prior to plan submission. City will submit Certificate of Capacity application to Oregon DEQ for review and approval per OAR 340- 052-0015(3)(c). No Public Works permit can be issued without DEQ's approval of the extension of the sewer system. Applicant shall be responsible for

submission of plans and Capacity Analysis form to the City and all associated fees, prior to plan submission.

iv. Extensions for fire protection may be required and all publicly owned water lines on private land shall be within a public waterline easement on formats approved by the Public Works Department. In accordance with MMC 13.04 Water. 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 easements.

v. All utilities to the project shall be served underground services. No overhead crossings of public right of way shall be approved by the city.

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

vii. Applicant will be required to submit a stormwater analysis with their engineering plan submittals. Onsite private storm system shall comply with plumbing code requirements. The detention and flow control facilities shall be reviewed, permitted, and inspected by Molalla Public Works. The onsite storm conveyance system shall be reviewed and inspected by Clackamas County Building under a plumbing permit, in accordance with MMC 13.13 Surface Water Management. Additional stormwater analysis is provided in Staff responses to Section 17-3.6.050.

viii. All driveway approaches shall be designed and constructed consistent with the current version of the Molalla Public Works Design Standards, Molalla Transportation Systems Plan, and ODOT standards.

ix. Plans submitted for review shall meet the requirements described in Section 1 of the Molalla Standard Specifications for Public Works Construction.

x. 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.

xi. 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.

xii. 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.

xiii. All public improvement designs shall meet the requirements of the Molalla Standard Specifications for Public Works Construction as amended by the Public Works Division Manager.

xiv. 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.

xv. 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.

xvi. 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.

3. Conditions To Be Met Prior To Construction

a. 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 (MMC 17-3.3.030 D 20).

b. Applicant shall apply for and receive an approach permit from the Oregon Department of Transportation (ODOT).

c. Applicant will be required to donate sufficient right-of-way to ODOT along variable width improvements and construct frontage improvements 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.

4. Conditions To Be Met Prior To Occupancy:

a. All landscaping, parking, lighting, and other improvements shall be installed and approved by the Planning Official prior to occupancy (MMC 17-3.5.020 B).

b. The Applicant shall record cross access easements and maintenance agreements between the subject parcel and adjacent parcel to the east for utilization of the proposed access to OR-211.

c. Applicant will be required to dedicate a 10-foot-wide public utility easement (PUE) fronting the public right-of-way if one does not exist and provide a copy of the recorded dedication. 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. If an existing PUE exists, applicant shall provide proof of the existing dedication.

d. Applicant shall obtain all applicable State and Federal permitting associated with the food establishment use, as applicable. Failure to obtain applicable permitting may result in the revocation of this permit.

5. Ongoing Conditions:

a. All contractors and subcontractors performing work on this property shall obtain and maintain a valid, current business license with the City of Molalla.

b. Access to public streets shall be limited to the location identified on the application materials or as required by ODOT. All accesses shall be constructed in such a manner as to eliminate turning conflicts. The proposed width for access shall meet ODOT requirements.

c. All primary building entrances shall open to the sidewalk and shall conform to Americans with Disabilities Act (ADA) requirements, as applicable (MMC 17-3.2.040 D). All approaches and driveways shall meet ADA accessibility requirements where they coincide with an accessible route (MMC 17-3.3.030 D 15). Parking shall be provided consistent with ADA requirements (MMC 17-3.5.030 H).

d. No visual obstructions shall be placed in vision clearance areas (MMC 17-3.3.030 G).

e. No proposed fencing shall be made of prohibited materials, as detailed in MMC 17-3.4.

f. All landscaping shall be maintained in good condition, or otherwise replaced by the property owner (MMC 17-3.4.030 G).

g. Fences and walls shall be maintained in good condition, or otherwise replaced by the property owner (MMC 17-3.4.040 F).

h. As an ongoing condition of approval, all outdoor lighting shall be maintained in good condition, or otherwise replaced by the property owner (MMC 17-3.4.050 C).

Exhibit A:

City Staff's Findings of Fact for SDR02-2022

Per MMC 17-4.2.050, an application for Site Design Review shall be approved if the proposal meets all of the following criteria. The Planning Official, in approving the application, may impose reasonable conditions of approval, consistent with the applicable criteria;

A. The application is complete, in accordance with Section 17-4.2.040;

Findings: The City received the Applicant's proposal on February 24, 2022 and deemed it complete in accordance with Section 17-4.2.040 on September 12, 2022.

B. The application complies with all of the applicable provisions of the underlying Zoning District (Division II), including, but not limited to, building and yard setbacks, lot area and dimensions, density and floor area, lot coverage, building height, building orientation, architecture, and other applicable standards;

17-2.2.030 Allowed Uses

Findings: The Applicant proposes new uses of a new fast food establishment with a drive thru. The fast food portion meets the "Commercial Retail Sales and Services" use category and the drive thru use category is a conditional use in the C-2 General Commercial zone. The Applicant submitted a Conditional Use Permit in concurrence with this application. The standard is met.

17-2.2.040 Lot and Development Standards

Findings:

Minimum Lot Area – There is no minimum lot size in commercial zones. The proposed lots are of adequate size to accommodate commercial development. This standard is met.

Minimum Lot Width and Depth – There is no minimum lot width or depth in commercial zones. The proposed lots are of adequate size to accommodate commercial development. This standard is met.

Building and Structure Height – Maximum building height in the C-2 zone is 55ft. The maximum height of the proposed structure is 20 ft. This standard is met.

Maximum Lot Coverage - Maximum foundation plane coverage in the C-2 zone is 100%. The proposed building covers 7% of the subject lot. This standard is met.

Minimum Landscape Area % (includes required parking lot, landscaping, and required screening) This standard is met subject to a condition of approval. Minimum landscaped area in the C-2 zone is 5%. Applicant's submitted application did not confirm landscaping area, however, sheet L2.0 shows an amount of landscaped area that is clearly greater than 5% of the site. As a condition of approval, the Applicant shall confirm landscaping area on site plan(s) submitted with building permits.

Minimum Setbacks - 6

Front Setback Requirement: 0ft – This standard is met.
Garage Setback Requirement: 20ft – No garages are proposed. This standard does not apply.
Alley: 3ft - This property does not abut an alley. This standard does not apply.
Adjacent to R Districts: 10ft – This proposal is not adjacent to any residential districts. This standard does not apply.

Build to Line: 0ft – The site abuts the OR-211 right-of-way. The primary entrance of the proposed restaurant is connected to the public right-of-way via a pedestrian pathway running north/south of the proposed walkway. Additionally, a required Public Utility Easement prohibits building within 10ft of the ROW line. The build-to-line criteria are therefore met under exceptions c and f (MMC 17-3.2.040 B 1).

C. The proposal includes required upgrades, if any, to existing development that does not comply with the applicable zoning district standards, pursuant to Chapter 17-1.4 Nonconforming Situations;

Findings: The proposal is for a new development that will meet current standards. The existing development is not part of the applicable portion of the proposal. The proposal generally meets all of the current zoning district and design standards. Standard is met.

D. The proposal complies with all the Development and Design Standards of Division III, as applicable:

Findings: Applicable Standards under Division III. Community Design Standards for this project include:

Section 17-3.2.040 Non-Residential Buildings
Section 17-3.2.060 Drive-Up and Drive-Through Uses and Facilities
Chapter 17-3.3 Access and Circulation
Chapter 17-3.4 Landscaping, Fences and Walls, Outdoor Lighting
Chapter 17-3.5 Parking and Loading
Chapter 17-3.6 Public Facilities

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.

Findings: This section applies to the proposed commercial development.

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.

1. Buildings subject to this section shall conform to the applicable build-to line standard in Table 17-2.2.040.E, as generally illustrated in Figure 17-3.2-6. The standard is met when at least 50 percent of the abutting street frontage has a building placed no farther from at least one street property line than the build-to line in Table 17-2.2.040.E; except in the Central Commercial C-1 zone, at least 80 percent of the abutting street frontage shall have a building placed no farther from at least one street property line than the required build-to-line. The Planning Official, through Site Design Review, may waive the build to line standard where it finds that one or more of the conditions in subdivisions a through g occurs.

a. A proposed building is adjacent to a single-family dwelling, and an increased setback promotes compatibility with the adjacent dwelling.
b. The standards of the roadway authority preclude development at the build-to line.
c. The applicant proposes extending an adjacent sidewalk or plaza for public use, or some other pedestrian amenity is proposed to be placed between the building and public right-of-way, pursuant to Section 17-3.2.050 and subject to Site Design Review approval.
d. The build-to line may be increased to provide a private open space (e.g., landscaped forecourt), pursuant to Section 17-3.2.050, between a residential use in a mixed-use development (e.g., live-work building with ground floor residence) and a front or street property line.
e. A significant tree or other environmental feature precludes strict adherence to the standard and will be retained and incorporated in the design of the project.
f. A public utility easement or similar restricting legal condition that is outside the applicant's control makes conformance with the build-to line impracticable. In this case, the building shall instead be placed as close to the street as possible given the legal constraint, and pedestrian amenities (e.g., plaza, courtyard, landscaping, outdoor seating area, etc.) shall be provided within the street setback in said location pursuant to Section 17-3.2.050.
g. An existing building that was lawfully created but does not conform to the above standard is proposed to be expanded and compliance with this standard is not practicable.

Findings: The site abuts the OR-211 right-of-way. The primary entrance of the proposed use is connected to the public right-of-way via a pedestrian pathway along the north side of the proposed walkway. Additionally, a required Public Utility Easement prohibits building within 10ft of the ROW line. Build-to-line criteria are therefore met under exceptions c and f.

2. Except as provided in subsections C.5 and 6, all buildings shall have at least one primary entrance (i.e., tenant entrance, lobby entrance, breezeway entrance, or courtyard entrance) facing an abutting street (i.e., within 45 degrees of the street property line); or if the building entrance must be turned more than 45 degrees from the street (i.e., front door is on a side or rear elevation) due to the configuration of the site or similar constraints, a pedestrian walkway must connect the primary entrance to the sidewalk in conformance with Section 17-3.3.040.

Findings: The proposed building has a primary entrance on the northern façade, facing OR-211. This standard is met.

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.

Findings: The Applicant's submitted proposal does not include any parking, trash or utilities between the building or building entrance and public street. Proposed parking is located to the west and south of the site. Trash facilities are sited on the south end of the restaurant. This standard is met.

4. Off-street parking shall be oriented internally to the site to the extent practicable, and shall meet the Access and Circulation requirements of Chapter 17-3.3, the Landscape and Screening requirements of Chapter 17-3.4, and the Parking and Loading requirements of Chapter 17-3.5.

Findings: The Applicant's submitted application shows parking located along the west and south property line. The primary entrance is accessed by both vehicular and pedestrian circulation systems along the access on the northern side of the site. This standard is met. Standards pertaining to further chapters will be evaluated in staff responses to those chapters respectively.

5. Where a development contains multiple buildings and there is insufficient street frontage to meet the above building orientation standards for all buildings on the subject site, a building's primary entrance may orient to plaza, courtyard, or similar pedestrian space containing pedestrian amenities and meeting the requirements under Section 17-3.2.050, subject to Site Design Review approval. When oriented this way, the primary entrance(s), plaza, or courtyard shall be connected to the street by a pedestrian walkway conforming to Section 17-3.3.040.

Findings: The proposal is for a single building. This standard does not apply.

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.

Findings: The proposed development does not include a total floor plate area greater than 35,000 square feet. These standards do not apply.

D. **Primary Entrances and Windows.** The following standards, as generally illustrated in Figures 17-3.2-8 and 17.3.2-9, 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.

1. **All Elevations of Building.** Architectural designs shall address all elevations of a building. Building forms, detailing, materials, textures, and color shall contribute to a unified design with architectural integrity. Materials used on the front façade must turn the building corners and include at least a portion of the side elevations, consistent with the overall composition and design integrity of the building.

Findings: The Applicant's submitted architectural plans show all elevations of the proposed building and show a cohesive design. Materials from the western, street facing, façade turn the corner to side elevations and extend through those elevations. This standard is met.

2. **Pedestrian Entrances.** Ground level entrances oriented to a street shall be at least partly transparent for natural surveillance and to encourage an inviting and successful business environment. This standard may be met by providing a door with a window or windows, a transom window above the door, or sidelights beside the door. Where ATMs or other kiosks are proposed on any street-facing elevation, they shall be visible from the street for security and have a canopy, awning, or other weather protection shelter.

Findings: The Applicant's submitted architectural plans illustrate ground level entrances with transparency through a storefront system. Standard is met.

3. **Corner Entrances.** Buildings on corner lots are encouraged to have corner entrances. Where a corner entrance is not provided, the building plan shall provide an architectural element or detailing (e.g., tower, beveled corner, art, special trim, etc.) that accentuates the corner location.

Findings: The Applicant's proposal is not for a corner lot. This standard does not apply.

4. **Street Level Entrances.** All primary building entrances shall open to the sidewalk and shall conform to Americans with Disabilities Act (ADA) requirements, as applicable. Primary entrances above or below grade may be allowed where ADA accessibility is provided.

Findings: This standard is met subject to a condition of approval. Proposed building entrances open to the proposed pedestrian walkway, are required. As a condition of approval all primary building entrances shall open to the sidewalk and shall conform to Americans with Disabilities Act (ADA) requirements, as applicable.

5. **Windows—General**. Except as approved for parking structures or accessory structures, the front/street-facing elevations of buildings shall provide display windows, windowed doors, and where applicable, transom windows to express a storefront character.

Findings: The public street facing entrance has two storefront window systems and transparent entrances. Standard is met.

6. **Storefront Windows.** Storefront windows shall consist of framed picture or bay windows, which may be recessed. Framing shall consist of trim detailing such as piers or pilasters (sides), lintels or hoods (tops), and kick plates or bulkheads (base)—or similar detailing—consistent with a storefront character. The ground floor, street-facing elevation(s) of all buildings shall comprise at least 60 percent transparent windows, measured as a section extending the width of the street-facing elevation between the building base (or 30 inches above the sidewalk grade, whichever is less) and a plane 72 inches above the sidewalk grade.

Findings: This standard is met subject to a condition of approval. The Applicant submitted a revised elevation (October 24, 2022) that shows glazed storefront windows on the front elevation are between 3 feet and 10 feet, which meets the above grade placement standard that account for 60% of the frontage. Refer to condition of approval 2b.

7. **Defined Upper Story(ies).** Building elevations shall contain detailing that visually defines street level building spaces (storefronts) from upper stories. The distinction between street level and upper floors shall be established, for example, through the use of awnings, canopies, belt course, or similar detailing, materials, or fenestration. Upper floors may have less window area than ground floors, but shall follow the vertical lines of the lower level piers and the horizontal definition of spandrels and any cornices. Upper floor window orientation shall primarily be vertical, or have a width that is no greater than height. Paired or grouped windows that, together, are wider than they are tall, shall be visually divided to express the vertical orientation of individual windows.

Findings: The Applicant's submitted architectural plans are for a one-story building. This standard does not apply.

8. **Buildings Not Adjacent to a Street.** Buildings that are not adjacent to a street or a shopping street, such as those that are setback behind another building and those that are oriented to a civic space (e.g., internal plaza or court), shall meet the 60 percent transparency standard on all elevations abutting civic space(s) and on elevations containing a primary entrance.

Findings: The proposed building is not adjacent to a civic space or behind another building. Standard does not apply.

9. **Side and Rear Elevation Windows.** All side and rear elevations, except for zero lot line or common wall elevations, where windows are not required, shall provide not less than 30 percent transparency.

Findings: The Applicant has proposed storefront entrances on the north (main entrance) and west (parking) non-street facing elevations. The revised elevation (October 24, 2022) meets the 30% standard. Standard is met.

10. **Window Trim.** At a minimum, windows shall contain trim, reveals, recesses, or similar detailing of not less than four inches in width or depth as applicable. The use of decorative detailing and ornamentation around windows (e.g., corbels, medallions, pediments, or similar features) is encouraged.

Findings: This standard is met subject to a condition of approval. Applicant's submitted application does not show adequate trim detailing. The building design needs to include trim detailing consistent with this requirement. See condition of approval 2b.

11. **Projecting Windows, Display Cases.** Windows and display cases shall not break the front plane of the building (e.g., projecting display boxes are discouraged). For durability and aesthetic reasons, display cases, when provided, shall be flush with the building façade (not affixed to the exterior) and integrated into the building design with trim or other detailing. Window flower boxes are allowed, provided they do not encroach into the pedestrian through-zone.

Findings: This standard is met subject to a condition of approval. The Applicant has proposed a display case on the parking and drive thru elevations. If the merchandise displays are included, sufficient detailing is required for review at the building permit phase to determine compliance. See condition of approval 2b.

12. **Window Exceptions.** The Planning Official may approve an exception to the above standards where existing topography makes compliance impractical. Where it is not practicable to use glass, windows for parking garages or similar structures, the building design must incorporate openings or other detailing that resembles window patterns (rhythm and scale).

Findings: The Applicant has not proposed an exception to the window standard. See condition of approval 2b.

E. **Articulation and Detailing.** 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.

1. **Articulation.** All building elevations that orient to a street or civic space shall have breaks in the wall plane (articulation) of not less than one break for every 30 feet of building length or width, as applicable, pursuant to the following standards, which are generally illustrated in Figures 17-3.2-10, 17-3.2-11, and 17-3.2-12.

a. A “break” for the purposes of this subsection is a change in wall plane of not less than 24 inches in depth. Breaks may include, but are not limited to, an offset, recess, window reveal, pilaster, frieze, pediment, cornice, parapet, gable, dormer, eave, coursing, canopy, awning, column, building base, balcony, permanent awning or canopy, marquee, or similar architectural feature.
b. The Planning Official through Site Design Review may approve detailing that does not meet the 24-inch break-in-wall-plane standard where it finds that proposed detailing is more consistent with the architecture of historically significant or historic-contributing buildings existing in the vicinity.
c. Changes in paint color and features that are not designed as permanent architectural elements, such as display cabinets, window boxes, retractable and similar mounted awnings or canopies, and other similar features, do not meet the 24-inch break-in-wall-plane standard.
d. Building elevations that do not orient to a street or civic space need not comply with the 24-inch break-in-wall-plane standard but should complement the overall building design.

Findings: The Applicant’s submitted architectural plans show a parapet, fabric canopy on the entrance side, varying building materials, including wainscoting, colors, and special red handles on the storefront doors that provide a distinct feature. In general, the street façade provides the required depth for breaks. Other facades are not street facing and these standards do not apply to them. Standard is met.

2. **Change in Materials.** Elevations should incorporate changes in material that define a building’s base, middle, and top, as applicable, and create visual interest and relief. Side and rear elevations that do not face a street, public parking area, pedestrian access way, or plaza may utilize changes in texture and/or color of materials, provided that the design is consistent with the overall composition of the building.

Findings: The Applicant’s submitted a revised architectural plan (October 24, 2022) that added wainscoting to the base of the building, which achieves a material change and the use of another color. The predominant material is EIFS, which extends around the entire building and is primarily broken up with storefronts. Other materials should extend around the building, excepting where storefronts are utilized to define the portion of the building along the street facing northern frontage. Standard is met.

3. **Horizontal Lines.** New buildings and exterior remodels shall generally follow the prominent horizontal lines existing on adjacent buildings at similar levels along the street frontage. Examples of such horizontal lines include, but are not limited to: the base below a series of storefront windows, an awning or canopy line, a belt course between building stories, a cornice, or a parapet line. Where existing adjacent buildings do not meet the City’s current building design standards, a new building may establish new horizontal lines.

Findings: The proposal is located in an area with no existing development that provides an architectural vernacular. This standard does not apply.

4. **Ground Floor and Upper Floor Division.** A clear visual division shall be maintained between the ground level floor and upper floors, for example, through the use of a belt course, transom, awning, canopy, or similar division.

Findings: The Applicant's proposal is for a single-story building. This standard does not apply.

5. **Vertical Rhythms.** New construction or front elevation remodels shall reflect a vertical orientation, either through breaks in volume or the use of surface details

Findings: The Applicant's submitted application shows vertical rhythms through change of materials, canopy breaks, and coloration gradient. This standard is met.

F. **Pedestrian Shelters.** 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.

1. **Minimum Pedestrian Shelter Coverage.** Permanent awnings, canopies, recesses, or similar pedestrian shelters shall be provided along at least 75 percent of the ground floor elevation(s) of a building where the building abuts a sidewalk, civic space, or pedestrian access way. Pedestrian shelters used to meet the above standard shall extend at least five feet over the pedestrian area; except that the Planning Official, through Site Design Review, may reduce the above standards where it finds that existing right-of-way dimensions, easements, or building code requirements preclude standard shelters. In addition, the above standards do not apply where a building has a ground floor dwelling, as in a mixed-use development or live-work building, and the dwelling has a covered entrance. The Planning Official shall waive the above standards if the pedestrian shelter would extend into the right-of-way and the roadway authority does not allow encroachments in the right-of-way.

Findings: This standard is met subject to a condition of approval. The Applicant's submitted architectural plans show a proposed pedestrian walkway from the highway abutting the northern frontage of the proposed building. The revised northern façade does have limited canopy coverage.

As a condition of approval, the Applicant shall submit plans with building permit authorization showing canopy coverage along at least 75% of the northern (front) and western (parking lot) facades where walkways are proposed adjacent to the building. Additional canopies shall comply with applicable building codes and shall be designed to be visually compatible with the architecture of the building. Refer to condition 2b.

2. **Pedestrian Shelter Design.** Pedestrian shelters shall comply with applicable building codes, and shall be designed to be visually compatible with the architecture of a building. If mezzanine or transom windows exist, the shelter shall be below such windows where practical. Where applicable, pedestrian shelters shall be designed to accommodate pedestrian signage (e.g., blade signs), while maintaining required vertical clearance.

Findings: See above discussion and conditions of approval.

G. Mechanical Equipment.

1. **Building Walls.** Where mechanical equipment, such as utility vaults, air compressors, generators, antennae, satellite dishes, or similar equipment, is permitted on a building wall that abuts a public right-of-way or civic space, it shall be screened pursuant to Chapter 17-3.4. Standpipes, meters, vaults, and similar equipment need not be screened but shall not be placed on a front elevation when other practical alternatives exist; such equipment shall be placed on a side or rear elevation where practical.

2. **Rooftops.** Except as provided below, rooftop mechanical units shall be set back or screened behind a parapet wall so that they are not visible from any public right-of-way or civic space. Where such placement and screening is not practicable, the Planning Official may approve painting of mechanical units in lieu of screening; such painting may consist of colors that make the equipment visually subordinate to the building and adjacent buildings, if any.

3. **Ground-Mounted Mechanical Equipment.** Ground-mounted equipment, such as generators, air compressors, trash compactors, and similar equipment, shall be limited to side or rear yards and screened with fences or walls constructed of materials similar to those on adjacent buildings. Hedges, trellises, and similar plantings may also be used as screens where there is adequate air circulation and sunlight, and irrigation is provided. The City may require additional setbacks and noise attenuating equipment for compatibility with adjacent uses.

Findings: The Applicant has not indicated mechanical equipment on their site plan. If the Applicant intends to site mechanical equipment on the site a modification will be required.

H. **Civic Space.** Commercial development projects shall provide civic space pursuant to Section 17-3.2.050.

Findings: The Applicant proposes less than 10,000 SF of leasable floor area. These standards do not apply to this application.

I. **Drive-Up and Drive-Through Facilities.** Drive-up and drive-through facilities shall comply with the requirements of Section 17-3.2.060. (Ord. 2017-08 §1)

Findings: This application includes a drive-through facility. See discussion below.

17-3.2.060 Drive-Up and Drive-Through Uses and Facilities

B. **Standards.** Drive-up and drive-through facilities (i.e., driveway queuing areas, customer service windows, teller machines, kiosks, drop-boxes, or similar facilities) shall meet all of the following standards, as generally illustrated in Figure 17-3.2-13:

1. The drive-up or drive-through facility shall orient to and receive access from a driveway that is internal to the development and not a street, as generally illustrated.

Findings: The Applicant's submitted site plan shows a drive aisle that is internal to the site. This standard is met.

2. The drive-up or drive-through portion of the establishment or drive-through window shall not be oriented to a street corner.

Findings: The Applicant's submitted site plan shows a drive-through window of the proposed project is on the east building façade. This criterion is met as the drive-up window is on the façade opposite the unused portion of the property and therefore does not face a street. This standard is met.

3. The entry into a drive-up or drive-through portion of the establishment or drive-through window shall be located a sufficient distance from a street right-of-way so as not to allow for queue into a street right-of-way during any time of the year. Applicant shall provide a section within the Traffic Impact Analysis or supply the City with a traffic engineer's report demonstrating that the drive-up or drive-through will have no impact to the street right-of-way.

4. Drive-up and drive-through queuing areas shall be designed so that vehicles will not obstruct any street, fire lane, walkway, bike lane, or sidewalk.

Findings: This standard is met subject to a condition of approval. Applicant's submitted site plan shows that the entry to the drive-up queue is located internal to the site. There is only one direct vehicle access to OR 211. The Applicant's submitted Traffic Impact Analysis includes analysis of the drive-through location and queue and demonstrates there will be no adverse impacts on the right-of-way.

The Applicant's site plan shows a pedestrian crossing within the west entrance of the drive aisle of the queue lane. The Applicant's narrative does not state the materials or design of the pedestrian walkway. See condition of approval 2c.

5. In the General Commercial C-2 district, a new drive-up or drive-through facility must comply with the access control distance requirements identified in the City's Transportation System Plan in relation to existing drive-up or drive-through facilities.

Findings: The Applicant's proposed project is within the C-2 zoning district. The Applicant's submitted TIA looks at the proposed drive-throughs compliance with transportation related regulations and has found no issues. In addition, the only access is from the highway and is located a safe distance from the gas station to the west. This standard is met.

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.

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.

Findings: The subject site is adjacent to OR-211, which is owned by the Oregon Department of Transportation (ODOT). A right-of-way permit from ODOT is required for work along OR-211. See condition of approval 3, b.

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.

Findings: The Applicant submitted a Traffic Impact Study prepared by a Registered Engineer addressing the appropriate standards as part of the application package. This standard is met.

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.

Findings: The subject property's only street frontage is to OR-211, from which the Applicant proposes a single access. This standard is met.

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.

Findings: The subject property is adjacent to OR-211, which is under ODOT jurisdiction. This standard is met.

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.

Findings: The Applicant has proposed a paved driveway and shall be designed to meet all Molalla Public Works Design Standards. This standard is met.

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.

Findings: Only one access from OR-211 is proposed by the Applicant. No turning movement restrictions are required for this project. This standard is met.

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).

Findings: This standard is met subject to a condition of approval. The Applicant's submitted application shows a new driveway from OR-211 from the east side of the adjacent parcel. As a condition of approval, the Applicant shall record cross access easements and maintenance agreement between the subject parcel and adjacent parcel to the east for utilization of the proposed access to OR-211 prior to occupancy. See condition of approval 4b.

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.

Findings: This standard is met subject to a condition of approval. As a condition of approval, the Applicant shall confirm that the turning radius for the new parking area can accommodate fire apparatus in their engineering plan submittals.

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

Findings: This standard is met subject to a condition of approval. Truck turning movements were not addressed in this development. Based on the proposed fast-food use, Staff anticipates that fire apparatus will be the most substantial vehicle to access the proposed site. See condition of approval 2, e, i.

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, drive-up and drive-through facilities and vehicle storage and service areas, do not obstruct any public right-of-way.

Findings: All proposed off-street parking and drive-through facilities are interior to the site and the submitted TIA shows that no queuing will enter the right-of-way. These standards are met.

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.

Findings: The Applicant's submitted application shows a 36.5' wide approach, which is designed to accommodate trucks and emergency vehicles and is consistent with Molalla Public Works Standards. This standard is met.

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.

Findings: Neither the City Engineer nor the roadway authority recommend any traffic calming features, nor are any proposed. This standard is met.

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.

Findings: The Applicant's proposal does not include construction of approaches along acceleration or deceleration lanes or along tapered portions of the roadway. This standard does not apply.

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.

Findings: The Applicant's submitted site plan shows separation between pedestrian and vehicular circulation areas. Loading areas are likewise separated to reduce conflict. This standard is met.

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.

Findings: The Applicant's proposal includes a new sidewalk and driveway apron within the right-of-way that meets City and ODOT standards for materials and width. This standard is met.

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

Findings: This standard is met subject to a condition of approval. As a condition of approval, all approaches and driveways shall meet ADA accessibility requirements where they coincide with an accessible route.

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.

Findings: With the potential exception of approach modifications to accommodate truck and emergency vehicle movements mentioned above, no changes are required to the proposed configuration and design of the approach. This standard is met.

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.

Findings: The Applicant needs to obtain an approach permit from ODOT for the development. See condition of approval 3, b.

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.
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.

Findings: The Applicants proposed approach does not cross a feature under the jurisdiction of another agency, including a drainage culvert or ditch. These criteria do not apply.

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.

Findings: These standards are met subject to a condition of approval. As a condition of approval, 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.

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

Findings: These standards are met subject to conditions of approval. Applicant will be required to submit a stormwater analysis with their engineering plan submittals. Onsite private storm system shall comply with plumbing code requirements. The detention and flow control facilities shall be reviewed, permitted, and inspected by Molalla Public Works. The onsite storm conveyance system shall be reviewed and inspected by Clackamas County Building under a plumbing permit, in accordance with MMC 13.13 Surface Water

Management. Additional stormwater analysis is provided in Staff responses to Section 17-3.6.050.

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.

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.

Findings: These standards are met subject to a condition of approval. The subject property is adjacent to OR-211, which is under ODOT jurisdiction. The proposed approach location addresses safety and circulation access for the development. As a condition of approval, all driveway approaches shall be designed and constructed consistent with the current version of the Molalla Public Works Design Standards, Molalla Transportation Systems Plan, and ODOT 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.

Findings: This standard is met subject to conditions of approval. As an ongoing condition of approval, no visual obstructions shall be placed in vision clearance areas.

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 (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.

Findings: The Applicant has not submitted any requests for exceptions and adjustment to access and spacing standards and none are requested by City Staff or ODOT. This standard is met.

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.

Findings: This condition is met subject to a condition of approval. The Applicant's submitted application shows that the applicant proposes access from OR-211 and is under the jurisdiction of the Oregon Department of Transportation (ODOT). As a condition of approval, the Applicant shall record joint use access and maintenance agreements with adjacent property to the east prior to occupancy.

17-3.3.040 Pedestrian Access and Circulation

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.

Findings: The Applicant's submitted site plan shows a continuous sidewalk along the OR-211 frontage connecting with existing sidewalks to the west. There is a private walkway connecting to the public sidewalk to the proposed development. The onsite network includes a sidewalk along the north and west sections of the building. There is no existing, internal sidewalk system that the new development can tie into. However, if the other half of the site does develop, a walkway system should be interconnected. See condition of approval 2c.

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.

Findings: These standards are met subject to a condition of approval. Proposed sidewalks form a direct connection between the roadway, new building, and parking. Proposed walkways promote vehicle/pedestrian separation to the extent practicable and are free of hazards.

As a condition of approval, all walkways connecting to primary building entrances shall be designed consistent with 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.

Findings: The Applicant's submitted narrative or site plan does not specify the design of the proposed walkway. It shall be raised from vehicle maneuvering areas and curbed with the exception of drive aisle crossings. See condition of approval 2c.

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 thermo-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.

Response: The Applicant's submitted site plan shows two crosswalks: from the highway and over the drive thru aisle, but does not provide details on design type or materials, such as thermoplastic. See condition of approval 2c.

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.

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.

Findings: The Applicant's submitted site plan shows proposed sidewalks and walkways that are at least 6ft in width, but the submitted narrative and site plan does not specify the materials to meet standards of this code. See condition of approval 2c.

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.

Findings: No multi-use pathways are proposed. This standard does not apply.

Chapter 17-3.4 Landscaping, Fences and Walls, Outdoor Lighting

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.

Findings: The Applicant's submitted landscaping plan shows that all areas of the subject parcel that are not developed with buildings, vehicular areas or pedestrian areas will be landscaped. This standard is met.

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.

Findings: This standard is met subject to a condition of approval. Minimum landscaped area in the C-2 zone is 5%. Applicant's submitted application did not confirm landscaping area, however, sheet L2.0 shows an amount of landscaped area that is clearly greater than 5% of

the site. As a condition of approval, the Applicant shall confirm landscaping area on site plan(s) submitted with building permits. See condition 2a.

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:

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.
2. Plant species that do not require irrigation once established (naturalized) are preferred over species that require irrigation.
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.
4. Shrubs shall be planted from five-gallon containers, minimum, where they are for required screens or buffers, and two-gallon containers minimum elsewhere.
5. Shrubs shall be spaced in order to provide the intended screen or canopy cover within two years of planting.
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.
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.
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.
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.
10. Landscape plans shall avoid conflicts between plants and buildings, streets, walkways, utilities, and other features of the built environment.
11. Evergreen plants shall be used where a sight-obscuring landscape screen is required.

12. Deciduous trees should be used where summer shade and winter sunlight is desirable.
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.
14. Landscape plans should use a combination of plants for seasonal variation in color and yearlong interest.
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.
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.
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.

Findings: Applicant's submitted landscaping plan shows locally adapted plants that meet size specifications. The submitted landscaping plan is compliant with coverage specifications. Standard is met.

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.

Findings: The subject property is not in the C-1 zone. These standards do not apply.

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.

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.

Findings: This standard is met subject to a condition of approval. Applicant's submitted application did not confirm parking lot landscaping area, however, sheet L2.0 shows an amount of landscaped area that is clearly greater than 10% of the proposed lot. As a condition of approval, the Applicant shall confirm parking lot landscaping area on site plan(s) submitted with building permits. See condition 2a.

26 trees are proposed on site with most planted around the perimeter of the parking area, meeting the two required trees for the proposed 15 parking spaces. This standard is met.

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.

Findings: The Applicant's submitted landscape plan shows a landscape island along the west property line that breaks up a contiguous row of parking spaces so that no rows contain more than 10 contiguous spaces. Standard is met.

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.

Findings: The Applicant's submitted landscaping plant shows that parking landscaping areas not planted with trees have proposed shrubs and groundcover that cover at least 50% of the landscaping area. This standard is met.

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.

Findings: The Applicant's submitted site plan states that areas around parking stalls will have wheel stops to protect landscaping areas. This standard is met.

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

Findings: The Applicant's submitted site plan illustrates that all planted trees will be installed with root barriers. This standard is met.

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.

Findings: The Applicant's submitted application includes a trash enclosure that will be screened. The application does not include any outdoor storage areas. This standard does not apply.

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.

Findings: The Applicant's submitted landscaping plan shows that all parking areas are screened by vegetation. This standard is met.

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.

Findings: Staff does not propose additional requirements for screening with this application.

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

Findings: This standard can be met with a condition of approval. As an ongoing condition of approval all landscaping shall be maintained in good condition, or otherwise replaced by the property owner.

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.

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.

Findings: The Applicant does not propose a fence around the perimeter. The proposed trash enclosure does apply to this section.

C. Height.

1. Residential Zones.

Findings: The Applicant's proposal is in a non-residential zone. These standards do not apply.

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.

Findings: The Applicant does not propose any fences or walls within setback areas. These standards do not apply.

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.

Findings: No fences and walls are proposed in vision clearance areas as a part of this application. This standard is met.

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.

Findings: The trash enclosure does not use prohibited materials. This standard is met.

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.

Findings: Staff recommends approval of the proposed trash enclosure fence as part of this site design review.

F. **Maintenance.** Fences and walls shall be maintained in good condition, or otherwise replaced by the property owner. (Ord. 2017-08 §1)

Findings: This standard is met subject to a condition of approval. As an ongoing condition of approval, fences and walls shall be maintained in good condition, or otherwise replaced by the property owner.

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

Findings: The Applicant did not submit a photometrics lighting plan prior to the public hearing. As a condition of approval, the applicant shall submit a lighting/photometrics plan that meets the standards of MMC 17-3.4.050 with building permit authorization submissions. See condition 2e.

2. Where a light standard is placed over a sidewalk or walkway, a minimum vertical clearance of eight feet shall be maintained.

Findings: See discussion above.

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.

Findings: See discussion above.

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.

Findings: See discussion above.

4. Lighting shall be installed where it will not obstruct public ways, driveways, or walkways.

Findings: See discussion above.

5. 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.

Findings: See discussion above.

6. Active building entrances shall have a minimum average illumination of not less than two foot-candles.

Findings: See discussion above.

7. Surfaces of signs shall have an illumination level of not more than two foot-candles.

Findings: The Applicant has not submitted signage with this application. This standard does not apply. Proposed signs will be held to this standard as submitted.

8. 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.

Findings: See discussion above.

9. 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.

Findings: Applicant is expected to submit a lighting plan.

10. Where a light standard is placed within a walkway, an unobstructed pedestrian through zone not less than 48 inches wide shall be maintained.

Findings: See discussion above.

11. Lighting subject to this section shall consist of materials approved for outdoor use and shall be installed according to the manufacturer's specifications.

Findings: See discussion above.

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.
E. Maintenance. For public health and safety, outdoor lighting shall be maintained in good condition, or otherwise replaced by the property owner. (Ord. 2017-08 §1)

Findings: These standards are met subject to a condition of approval. As an ongoing condition of approval, all outdoor lighting shall be maintained in good condition, or otherwise replaced by the property owner.

Chapter 17-3.5 Parking and Loading

Section 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.

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.

Findings: These standards are met subject to a condition of approval. As a condition of approval, all landscaping, parking, lighting, and other improvements shall be installed by the Applicant and approved by the Planning Official prior to occupancy.

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.

Findings: Twenty five (25) parking spaces are proposed, which exceeds the minimum required amount of 13 spaces. Standard is met.

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.

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.

Findings: Staff finds that the proposed parking spaces are provided for customers and employees of the site and that the proposed parking lot is on site and closer than 800 ft from primary pedestrian entrances. These standards are met.

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. (Ord. 2017-08 §1)

Findings: There is no proposed parking within the right-of-way. All parking is onsite. This standard is met.

Section 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.

Findings: Staff finds that the Applicant is providing parking for 2,500 SF of restaurant space. Minimum parking allowances for the site are 13 vehicular stalls. The Applicant's proposal includes 25 vehicular stalls. These standards are met.

B. **Carpool and Vanpool Parking Requirements.**

2. 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.
3. 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.
4. 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.
5. Required carpool/vanpool spaces shall be clearly marked "Reserved—Carpool/Vanpool Only."

Findings: The submitted proposal is for a commercial use with fewer than 50 parking spaces. No carpool or vanpool spaces have been proposed. This standard does not apply.

C. **Exceptions and Reductions to Off-Street Parking.**

Findings: The Applicant has not requested any off-street parking exceptions. However, the proposed parking lot exceeds maximum parking standard. See condition of approval 2d.

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.

Findings: Staff finds that the proposal does not have available on street parking along the highway. The standard allows for a maximum number of parking stalls that is 1.5x minimum requirements. Maximum parking standards for the proposed development equate to 20 vehicular stalls. The Applicant proposes 25 vehicular stalls, which far exceeds the maximum standard. See condition of approval 2d.

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.

Findings: The Applicant has not requested any shared parking arrangements. This standard does not apply.

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, sidewalks, landscapes, or the public right-of-way. Parking areas shall also provide for surface water management, pursuant to Section 17-3.6.050.

Findings: This standard is met subject to a condition of approval. Two proposed stalls are at a 90 degree angle to the drive aisle and 23 proposed stalls are from approximately a 60 degree angle to the drive aisle. MMC Table 17-3.5.030 F requires that 90 degree angled spaces, as proposed, have at least:

18’ stall depth.

8.5’ stall curb width

23’ drive aisle (1 way).

MMC Table 17-3.5.030 F requires that 90 degree angled spaces, as proposed, have at least:

20’ stall depth.

10’ stall curb width

17’ drive aisle (1 way).

The Applicant’s submitted site plan does not show the dimensions for curb width nor drive

aisle width. Applicant shall confirm all parking stall and drive aisle width dimensions are met on site plans submitted for building permit authorization (condition 2f).

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.

Findings: The Applicant has not requested any modifications to parking area dimensions. Subject to confirmation of dimensions required and Staff finds that no adjustments are necessary to meet compliance with this code. This standard does not apply.

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.

Findings: This standard is met subject to a condition of approval. As a condition of approval, parking shall be provided consistent with ADA requirements.

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.

Findings: No electric charging stations are proposed. This standard does not apply.

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.

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.

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

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

Findings: The Applicant's submitted site plan shows 1 staple rack. The rack is provided onsite, by the rear entrance of the proposed building. With 20 on-site vehicle spaces allowed, minimum parking for 4 bicycles is required. The proposed bicycle parking area does not impede pedestrian traffic nor does it impede vision. Bicycle parking should be in close proximity to the primary retail entrance, which is at the front elevation. See condition of approval 2d.

17-3.5.040 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.

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.

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.

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.

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. (Ord. 2017-08 §1)

Findings: The Applicant does not propose any loading areas. Standard does not apply.

Chapter 17-3.6 Public Facilities

17-3.6.020 Transportation Standards

Findings: Transportation standards are met subject to conditions of approval.

1. The proposal development will require a traffic impact analysis update. The proposed development submitted Transportation Impact Analysis (TIA) analyzes Warrants 1 and 2. For projects where the OR-211/Leroy Ave. intersection is impacted; Applicant will be required to submit a TIA for all nine signal warrants for the intersection. Ensure all new projects that are approved or pending TIAs are included in the study including Cascade Place Apartments, 1000 W Main St., Colima Apartments (31514 S Hwy 213) Phase 1, Goodwill, and Molalla Center Market (501 E Main St.) are included.

2. 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. Current right-of-way width varies from 60 to 64 feet and approximate pavement width is 45 feet. Arterial streets on state facilities (w/TL, w/buffered BL, w/o PK) require 68 feet of right-of-way and 52 feet of pavement. Applicant is required to obtain a State Highway Approach Road Permit; donate right of way to ODOT to implement OR 211 cross section in the city's TSP, and construct frontage improvements consistent with the TSP. If required during design review, additional striping and pavement tapers may be necessary to allow for a roadway transition outside of the project limits.

3. Right-of-way Dedications/Donations: On ODOT rights of way, applicant will be required to donate sufficient right-of-way to ODOT along variable width improvements and construct frontage improvements 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 construction.

4. Access to public streets shall be limited to the location identified on the application materials or as required by ODOT. All accesses shall be constructed in such a manner as to eliminate turning conflicts. The proposed width for access shall meet ODOT Standards.

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

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

7. Transportation SDC's – In accordance with MMC 13.14 this design review does increase the impacts to the public improvement facility and is therefore not exempt from transportation SDC charges. SDC's shall be calculated in accordance with the SDC methodology.

17-3.6.030 Public Use Areas

Findings: No public use areas are proposed with this application nor are any required. These standards do not apply.

17-3.6.040 Sanitary Sewer and Water Service Improvements

Findings: Sanitary Sewer and Water Service Improvement Standards are met subject to conditions of approval.

Sanitary:

A 8-inch sanitary main exists on OR-211 (W Main Street) just west of the property. Sanitary main is approximately 9.5 feet deep near proposed development and will serve

this Lot and future development to the east by gravity system.

Applicant shall design and construct a sanitary main extension to the east on OR-211 (W. Main Street) that continues to the eastern property line of the project. Finished construction required prior to occupancy. Applicant shall submit Sanitary Sewer design plans along with Sewer Capacity Analysis form to the City prior to plan submission. City will submit Certificate of Capacity application to Oregon DEQ for review and approval per OAR 340- 052-0015(3)(c). No Public Works permit can be issued without DEQ's approval of the extension of the sewer system.

4. Sanitary SDC's – In accordance with MMC 13.14 this design review does increase the impacts to the public improvement facility and is therefore not exempt from sanitary SDC charges. SDC's shall be calculated in accordance with the SDC methodology.

Water:

A 12-inch water main exists on OR-211 (W Main Street) and will serve this development. Extensions for fire protection may be required and all publicly owned water lines on private land shall be within a public waterline easement on formats approved by the Public Works Department. In accordance with MMC 13.04 Water. 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 easements.

Water SDC's – In accordance with MMC 13.14 this design review does increase the impacts to the public improvement facility and is therefore not exempt from water SDC charges. SDC's shall be calculated in accordance with the SDC methodology.

17-3.6.050 Storm Drainage and Surface Water Management Facilities

Findings: Sanitary Sewer and Water Service Improvement Standards are met subject to conditions of approval.

Applicant proposes to collect and detain all stormwater onsite and discharge to ODOT facilities. Connection to ODOT facilities shall comply with all ODOT requirements. Onsite private storm system shall comply with plumbing code requirements. The detention and flow control facilities shall be reviewed, permitted, and inspected by Public Works. The onsite storm conveyance system shall be reviewed and inspected by Clackamas County Building under a plumbing permit. Connection to the storm improvements on OR-211 shall be reviewed and permitted by ODOT.

Stormwater SDC's – In accordance with MMC 13.14 this design review does increase the impacts to the public improvement facility and is therefore not exempt from stormwater SDC charges. SDC's shall be calculated in accordance with the SDC methodology.

17-3.6.060 Utilities

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

17-3.6.070 Easements

Findings: Required easement recordings include:

- Dedication of a 10 ft public utility easement is required along OR-211 frontage.
- Cross access easements between the subject parcels and parcels to the east and west

17-3.6.80 Construction Plan Approval

Findings: Construction Plan Approval standards are met subject to conditions of approval.

For commercial and industrial 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 improvements shall be completed and accepted by the Public Works Department prior to issuance of any occupancy.

From the 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. 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. 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.

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.

City of Molalla Construction plan approval requirements include:

A. 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.

B. Plans submitted for review shall meet the requirements described in Section 1 of the Molalla Standard Specifications for Public Works Construction.

C. 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.

D. 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.

E. All public improvement designs shall meet the requirements of the Molalla Standard Specifications for Public Works Construction as amended by the Public Works Director.

F. 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.

E. For non-residential uses, all adverse impacts to adjacent properties, such as light, glare, noise, odor, vibration, smoke, dust, or visual impact, are avoided; or where impacts cannot be avoided, they are minimized; and

Findings: The Applicant's submitted application shows landscaping abutting parking areas that limits headlight glare onto adjacent properties. Staff does not anticipate additional adverse impacts to adjacent properties pending the required lighting plan submission meeting standards of MMC 17-3.4.050. Standard is met.

F. The proposal meets all existing conditions of approval for the site or use, as required by prior land use decision(s), as applicable. Note: Compliance with other City codes and requirements, though not applicable land use standards, may be required prior to issuance of building permits. (Ord. 2017-08 §1)

Findings: Staff is not aware of any prior applicable land use decisions that have not been met. This standard is met.

Exhibit B:

Findings of Fact for CUP01-2022

17-4.4.040 Criteria, Standards, and Conditions of Approval

Findings: The Applicant's submitted application is for a new fast food establishment with a drive thru facility, which met the criteria for a retail service per MMC 17-2.2.030 Allowed Uses. A drive thru requires a conditional use permit. The Applicant's conditional use permit may be granted approval in conjunction with the site design review. Applicable criteria for inclusion and staff responses are as follows:

The Planning Commission shall approve, approve with conditions, or deny an application for a conditional use, including requests to enlarge or alter a conditional use, based on findings of fact with respect to all of the criteria and standards in subsections A and B.

B. **Use Criteria.**

1. The site size, dimensions, location, topography, and access are adequate for the needs of the proposed use, considering the proposed building mass, parking, traffic, noise, vibration, exhaust/emissions, light, glare, erosion, odor, dust, visibility, safety, and aesthetic considerations;

Findings: The Applicant's proposed design met all applicable zoning and design criteria subject to the conditions found in Exhibit A of this staff report. Staff finds the site suitable for the proposed development.

2. The negative impacts of the proposed use, if any, on adjacent properties and on the public can be mitigated through application of other code standards, or other reasonable conditions of approval;

Findings: The Applicant has proposed vegetative screening between vehicle maneuvering areas and parking areas and adjacent properties to limit impacts of glare. The Applicant submitted a Traffic Impact Analysis showing that the proposed development would not cause substantial stress to existing roadways and intersections. Staff does not anticipate additional impacts from this use but recommends "as necessary" review after one year of issuance of this conditional use permit to address concerns that may arise within the community.

3. All required public facilities, including water, sanitary sewer, and streets, have adequate capacity or are to be improved to serve the proposal, consistent with City standards; and

Findings: The Applicant's proposed public improvements met all applicable criteria for utilities and streets subject to the conditions found in Exhibit A of this staff report.

4. A conditional use permit shall not allow a use that is prohibited or not expressly allowed under Division II; nor shall a conditional use permit grant a variance without a variance application being reviewed with the conditional use application.

Findings: The Applicant's proposed drive thru is a conditional use under MMC Chapter 17, Division II within the General Commercial, C-2 zone.

C. **Conditions of Approval.** The City may impose conditions that are found necessary to ensure that the use is compatible with other uses in the vicinity, and that the negative impact of the proposed use on the surrounding uses and public facilities is minimized. These conditions include, but are not limited to, one or more of the following:

Findings: The subject property is surrounded by general commercial (C-2) and heavy industrial (M-2) zoned land and Staff does not anticipate that the proposed use will create adverse effects on existing land uses that would require additional mitigation to conditions required through the site design review process (Exhibit A) and mitigation measures proposed by the Applicant.

Exhibit C:

Consolidated Application Package For SDR02-2022 and CUP04-2022

City of Molalla
Planning Department
117 N Molalla Avenue
PO Box 248

Phone: (503) 759-0219
communityplanner@cityofmolalla.com

March 25, 2022

John S. Odom
JSO Services, LLC
PO Box 410394
St Louis, MO 63011

CC: DND Groups, Inc % Dara Dejbakhsh

SUBJECT: Incomplete Letter for SDR02-2022; Dairy Queen, 1522 W Main St, Molalla

Dear Mr. Odom:

The City of Molalla received your submitted application for a new Dairy Queen drive thru facility located at 1522 W Main ST on February 24, 2022. The Planning Department finds that this application is **incomplete.** In the attached Exhibit 1 – MMC 17-4.2.040 Application Submission Requirements and Staff Responses - City Staff identifies outstanding issues from the site design review submission requirements.

According to ORS 227.178.3.a, you now have 180 days from the date of submittal to make the application complete by providing all of the information outlined above. If the applicant does not respond by Tuesday, August 23, 2022 in accordance with ORS 227.178.4 the application will be considered void. *Failure to demonstrate compliance with approval criteria upon resubmission will result in a staff recommendation for application denial to the Planning Commission.*

Please contact me at (503) 759-0226, or by email at dzinder@cityofmolalla.com if you have any questions or comments.

Sincerely,

Dan Zinder
Associate Planner

Exhibit 1: MMC 17-4.2.040 Application Submission Requirements and Staff Responses

*MMC 17-4.040.*A.2 Public Facility Analysis

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. The study shall address, at a minimum, the transportation system, including required improvements for vehicles and pedestrians; the drainage system; the parks system; water system; and sewer system. For each system and type of impact, the study shall propose improvements necessary to meet City requirements.

> **Staff Comments:** A TIS was submitted to address traffic impacts. However, there is no information regarding public facility impacts, in particular sanitary sewer capacity. Molalla's consent decree with DEQ requires sewerage capacity confirmation for all new development. Please address engineering measures to correct deficiencies based on the proposed use and utility plan.

*MMC 17-4.2.040.*B.1 Site Analysis Map

(a) The applicant's entire property and the surrounding property to a distance sufficient to determine the location of the development in the city, and the relationship between the proposed development site and adjacent property and development. The property boundaries, dimensions, and gross area shall be identified

> **Staff Comments:** The Vicinity Map does not include landmarks to distinguish the site and provide adequate context. Specifically, identify the Molalla Market Center drive and its dimensions. Adjacent properties should include property owner identification in addition to Map & Tax Lot.

(d) The location and width of all public and private streets, drives, sidewalks, pathways, rights-of-way, and easements on the site and adjoining the site;

> **Staff Comments:** Show existing drive network and identify dimensions.

*MMC 17-4.2.040.*B.2 Proposed Site Plan

The site plan shall contain all the following information:

(d) The location and dimensions of all proposed public and private streets, drives, rights-of-way, and easements;

Staff Comments: Include at least one plan sheet that shows the access to Molalla Market Center across the street in relation to the proposed access. The City and ODOT want to ensure there is no misalignment of access points that would create traffic safety issues.

(e) The location and dimensions of all existing and proposed structures, utilities, pavement, and other improvements on the site. Setback dimensions for all existing and proposed buildings shall be provided on the site plan;

Staff Comments: Site plan needs to clearly illustrate setback dimensions.

(g) The location and dimensions of all parking and vehicle circulation areas (show striping for parking stalls and wheel stops);

Staff Comments: Off street parking is indicated but there are no wheel stops indicated per space. In addition, the type or material is not indicated. A required bike rack could not be located per the Code standard: 2 bike spaces per primary use or 1 per 5 vehicle spaces, whichever is greater.

(j) Location, type, and height of outdoor lighting;

Staff Comments: Outdoor lighting is not indicated on site plan. Generally, the applicant did not provide a lighting plan or narrative responses showing compliance with MMC 17-3.4.050.

(o) Locations, sizes, and types of signs.

Staff Comments: A monument sign is not indicated on the site plan. Sign specs are typically resolved after review but sign location is required.

MMC 17-4.040.B.3 Architectural Drawings

Architectural drawings shall include, as applicable: b. Building materials, colors, and type.

Staff Comments: The elevations do not provide any materials information or type.

*MMC 17-4.2.040.*B.8 Traffic Impact Analysis

Staff Comments: The submitted Transportation Impact Analysis analyzes Warrants 1 and 2. For projects where the OR-211/Leroy Ave intersection is impacted, Staff is requiring analysis for all nine signal warrants for that intersection. Ensure all new projects with approved or pending TIAs are included in the study including Cascade Place Apartments, 1000 W Main ST, Colima Apartments (31514 S HWY 213) Phase 1, 1000 W Main ST, and Molalla Center Market (501 E Main) are included.

MMC 17-4.2.040.B.7 Narrative

Staff Comments: Generally, the submitted narrative is quite sparse and does not address the applicable criteria identified in the pre-application process in an itemized fashion, as required.

The submitted narrative does not address the drive thru criteria (**17-3.2.060 Drive-Up and Drive-Through Uses and Facilities)** nor does it provide adequate information that addresses vehicular access standards (**17-3.3.030 Vehicular Access and Circulation).** Additionally, the adjoining lot will require access from W Main St. Please address how the proposed development plans to share access with future development. ***MMC 17-4.2.040.*B.9 Other information determined by the Planning Official.**

Staff Comments:

This application can be processed as a property line adjustment, separate from the site design review process.

General Comments Not Pertaining To Completeness:

Molalla Planning Staff uses the completeness process to identify issues that jump out during this initial review period to offer the opportunity to correct them during the revision process for completeness. These items are listed below:

- Applicant has not spoken to build-to-line requirements of Molalla Municipal Code section 17-3.2.040 B and it is not clear from submitted materials that the proposal meets one of the exceptions. At least, a narrative argument is necessary for this and potentially design changes to meet these standards.
- Trash enclosure detail should have adequate information to ascertain compliance with height, material, and other applicable design standards.
-

***MMC 17-4.040.*A.2 Public Facility Analysis**

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. The study shall address, at a minimum, the transportation system, including required improvements for vehicles and pedestrians; the drainage system; the parks system; water system; and sewer system. For each system and type of impact, the study shall propose improvements necessary to meet City requirements.

Staff Comments: A TIS was submitted to address traffic impacts. However, there is no information regarding public facility impacts, in particular sanitary sewer capacity. Molalla's consent decree with DEQ requires sewerage capacity confirmation for all new development. Please address engineering measures to correct deficiencies based on the proposed use and utility plan.

Applicant Response: Sheet C-2.0 shows the extension of the public sewer system. In addition we have included the Sewer Capacity Analysis Request form to this submission.

***MMC 17-4.2.040.*B.1 Site Analysis Map**

(a) The applicant's entire property and the surrounding property to a distance sufficient to determine the location of the development in the city, and the relationship between the proposed development site and adjacent property and development. The property boundaries, dimensions, and gross area shall be identified

Staff Comments: The Vicinity Map does not include landmarks to distinguish the site and provide adequate context. Specifically, identify the Molalla Market Center drive and its dimensions. Adjacent properties should include property owner identification in addition to Map & Tax Lot.

Applicant Response: The vicinity map on the civil cover page has been updated to adequately show the project site location. Sheet C-1.0 shows the adjacent property owners info.

(d) The location and width of all public and private streets, drives, sidewalks, pathways, rights-of-way, and easements on the site and adjoining the site;

Staff Comments: Show existing drive network and identify dimensions.

Applicant Response: These items have been shown on the updated civil drawings.

***MMC 17-4.2.040.*B.2 Proposed Site Plan**

The site plan shall contain all the following information: Page 3

(d) The location and dimensions of all proposed public and private streets, drives, rights-of-way, and easements;

Staff Comments: Include at least one plan sheet that shows the access to Molalla Market Center across the street in relation to the proposed access. The City and ODOT want to ensure there is no misalignment of access points that would create traffic safety issues.

(e) The location and dimensions of all existing and proposed structures, utilities, pavement, and other improvements on the site. Setback dimensions for all existing and proposed buildings shall be provided on the site plan;

Applicant Response: See sheet C-2.0.

Staff Comments: Site plan needs to clearly illustrate setback dimensions.

Applicant Response: See the updated civil drawings.

(g) The location and dimensions of all parking and vehicle circulation areas (show striping for parking stalls and wheel stops);

Staff Comments: Off street parking is indicated but there are no wheel stops indicated per space. In addition, the type or material is not indicated. A required bike rack could not be located per the Code standard: 2 bike spaces per primary use or 1 per 5 vehicle spaces, whichever is greater.

Applicant Response: Wheel stops have been added to the site plan. Parking dimensions have been added to the C-2.0 sheet.

(j) Location, type, and height of outdoor lighting;

Staff Comments: Outdoor lighting is not indicated on site plan. Generally, the applicant did not provide a lighting plan or narrative responses showing compliance with MMC 17-3.4.050.

Applicant Response: A photometric site plan is forthcoming.

(o) Locations, sizes, and types of signs.

Staff Comments: A monument sign is not indicated on the site plan. Sign specs are typically resolved after review but sign location is required.

Applicant Response: See note number 8 on sheet C-2.0 for monument sign location.

MMC 17-4.040.B.3 Architectural Drawings

Architectural drawings shall include, as applicable: b. Building materials, colors, and type.

Staff Comments: The elevations do not provide any materials information or type.

Applicant Response: See sheet A3.2 for material schedule.

***MMC 17-4.2.040.*B.8 Traffic Impact Analysis**

Staff Comments: The submitted Transportation Impact Analysis analyzes Warrants 1 and 2. For projects where the OR-211/Leroy Ave intersection is impacted, Staff is requiring analysis for all nine signal warrants for that intersection. Ensure all new projects with approved or pending TIAs are included in the study including Cascade Place Apartments, 1000 W Main ST, Colima Apartments (31514 S HWY 213) Phase 1, 1000 W Main ST, and Molalla Center Market (501 E Main) are included.

Applicant Response: A supplementary letter has been included by Jennifer Danziger w/ Lancaster Mobley to address the above comments.

MMC 17-4.2.040.B.7 **Narrative**

Staff Comments: Generally, the submitted narrative is quite sparse and does not address the applicable criteria identified in the pre-application process in an itemized fashion, as required.

The submitted narrative does not address the drive thru criteria (**17-3.2.060 Drive-Up and Drive-Through Uses and Facilities)** nor does it provide adequate information that addresses vehicular access standards (**17-3.3.030 Vehicular Access and Circulation).** Additionally, the adjoining lot will require access from W Main St. Please address how the proposed development plans to share access with future development. ***MMC 17-4.2.040.*****B.9**

Applicant Response: See the updated project narrative with the above sections included.

Other information determined by the Planning Official.

Staff Comments:

This application can be processed as a property line adjustment, separate from the site design review process.

General Comments Not Pertaining To Completeness:

Molalla Planning Staff uses the completeness process to identify issues that jump out during this initial review period to offer the opportunity to correct them during the revision process for completeness. These items are listed below:

● Applicant has not spoken to build-to-line requirements of Molalla Municipal Code section 17-3.2.040 B and it is not clear from submitted materials that the proposal meets one of the exceptions. At least, a narrative argument is necessary for this and potentially design changes to meet these standards.

Applicant Response: We are unable to meet the build-to-line requirements of the Molalla code. The code allows the Planning Official to approve adjustments to the standards as part of the Site Design Review approval process. The proposed use of the building is a drive thru restaurant; vehicles must circulate all four sides of the building to have a functioning drive thru queue lane / stacking and exiting of the site. Moving the building closer to the right of way (omitting the drive isle in the front of the building) would not allow for proper vehicular travel movements through the site. We would ask that planning staff recognize the need to proper site vehicular circulation and make an exception for this project to Section 17-3.2.040 B.

● Trash enclosure detail should have adequate information to ascertain compliance with height, material, and other applicable design standards.

Applicant Response: Included in this resubmittal is a plan / elevation for the proposed trash enclosure.

Planning & Community Development
117 N. Molalla Avenue
Molalla, OR. 97038
(503) 759-0219
Fax: (503) 829-3676

FOR OFFICE USE ONLY:	
Planning File No. : _____	*City Approval:* _____
Date Received: _____ Fee: _____	*Title* _____
Land Use Type: II	*Date:* _____
Received by: _____	*Fee Paid:* _____

APPLICATION FOR LAND USE ACTION

Type of Land Use Action Requested: (check all that apply)

- ☐ Annexation
- ☐ Plan Amendment (Proposed Zone_____)
- ☐ Planned Unit Development
- ☑ Site Design Review
- ☐ Variance (list standards to be varied in description
- ☐ Conditional Use
- ☐ Partition (# of lots _____)
- ☐ Subdivision (# of lots _____)
- ☐ Other: _____

Owner/Applicant:

Applicant: John S. Odom — Phone: 1.417.343.2602

Applicant Address: P.O. Box 410394 — Email: john@johnsodom.com

Owner: DARA DEJBAKHSH — Phone: 949.233.3877

Owner Address: 27261 LAS RAMBLAS — Email: DARA@PNDGROUPS.com

Contact for additional info: SUITE 100 MISSION VIEJO, CA 92691

Property Information:

Address: 1522 W. Main Street

Assessors Map/Taxlot #: 52E07D01800

Current Use of Site: Vacant Land — Zoning Designation: _____

Intended Use: Commercial - New Dairy Queen Restaurant

Proposed Action:

Proposing a new Dairy Queen on an existing vacant parcel.

Proposed Use: New Dairy Queen Restaurant

Proposed No. of Phases (one each year): 1

Authorizing Signatures:

I hereby certify that the information on this application and attachments are correct and that the property affected by this application is in the exclusive ownership or control of the applicant, or that the applicant has the consent of all partners in ownership of the affected property. An authorization letter from the property owner has been attached in the event that the owner's signature has not been provided below.

Property Owner(s):

Dara Dejbakhsh — Print or Type

Signature

Dennis Ulrich — Print or Type

Signature

Applicant(s) or Authorized Agent:

John S. Odom — Print or Type

Signature

Print or Type

Signature

The following materials must be submitted with your application or it will not be accepted at the counter. Once taken at the counter, the City has up to 30 days to review the materials submitted to determine if we have everything we need to complete the review. Applicant can verify submittal includes specific materials necessary for the application per checklist.

- ■ **3 Copies of Application Form*** completely filled out and signed by the property owner (or person with authority to make decisions on the property.
- ■ **Copy of Deed** to verify ownership, easements, etc.
- ■ **At least 3 folded** sets of plans*
- ■ **At least 3 copies** of narrative addressing application criteria*
- ■ **Fee** (along with calculations utilized to determine fee if applicable)

***Please Note** that the required numbers of copies identified on the checklist are required for completeness; however, upon initial submittal applicants are encouraged to submit only 3 copies for completeness review. Prior to completeness, the required number of copies identified on the checklist and one full electronic copy will be required to be submitted.

DAIRY QUEEN MOLALLA, OR PROJECT NARRATIVE

Submitted to:	City of Molalla OR Planning Department 117 N. Molalla Ave Molalla, Oregon 97038 1-503-829-6855
Applicants/Property Owners:	DND Groups, Inc. C/O Dara Dejbakhsh 23101 Lake Center Drive, Suite 160 Lake Forest, California 92630
Applicant's Representative:	JSO Services, LLC John Odom 99 Meadowbrook Country Club Estates Saint Louis, Missouri 63011 john@johnsodom.com / 1-417-343-2602
Applicant's Engineer:	
Assessor's Map No.:	52E07D01800
Site Size:	1.67-acres
Existing Land Use:	Unimproved

The applicant requests a formal site plan review / approval to construct an approximately 2,500 square foot dine-in/drive-thru Dairy Queen restaurant with associated site and parking lot improvements.

The subject property is an interior site fronting West Main Street. The site measures 254.25' x 287.20', it is 1.67-acres. The lot is generally flat sloping back to front. Under this proposal, the owner intends to develop the Western half of the lot; the remaining portion of the lot will be used for circulation and storm water management, the existing residential structure will remain. At this time, no plans for a future development on the East side of the lot have been discussed.

At this time, we intend to only develop the Dairy Queen side of the parcel. The lot will be split prior to permit, an access easement will be provided to the Dairy Queen lot across the adjacent vacant lot. No future plans have been developed at this time for the remaining parcel. The future development will have full access to the new curb cut along West Main Street.

The preliminary site plan shows an approximately 2,500 square foot building that is approximately 38-feet-wide and 72.5-feet-deep and approximately 20-feet-tall. The proposed site plan calls for 25 total parking spaces. Employees will likely park at the rear of the site and will access the service door at the rear of the building. Egress and ingress to the site is via a new curb cut along West Main Street

The operating characteristics of the proposed use include both drive-thru and dine-in food service with hours of operation between 10 a.m. and 10 p.m. on weekdays, and 10 a.m. and 11 p.m. on weekends.

Noise generation will be minimal for the proposed use, and will likely include noise associated with conversation, vehicle operation, and vehicle traffic.

All on-site lighting will be directed downward and contained on-site. The standard can be verified at the time of a building permit or prior to the issuance of an occupancy permit.

Odor will be minimal for the proposed use and will likely include cooking and food aromas and some vehicle exhaust from on-site vehicle traffic.

There is no activity that will occur on site that would create vibration or dust. The pedestrian walkways, vehicle travel aisles, and parking spaces are proposed to be hard surfaced.

The use will not impact the privacy of surrounding commercial area since most activity will occur in the building. Staff will be responsible for regular monitoring to ensure the site is maintained, safe, and free of items that are prohibited or potentially harmful.

Landscape and irrigation will be provided on the site per the enclosed landscape plan.

Refuse containers and disposal areas will be screened from view by placement of a sight-obscuring enclosure

There are no known negative impacts of the proposed use on adjacent properties or the public.

Per Molalla Zoning Code, section 17-3.2.060 B, the proposed site configuration meets the standards of the zoning code. The building is accessed from an internal / shared driveway, provides adequate queuing to prevent the backup of traffic into the right of way. The drive thru window does not face the right of way / street. We have provided a bypass lane around the entire site so that vehicles may exit around the drive thru queue lane.

We have included an traffic impact analysis and a supplementary report that discusses the proposed new curb cut along N. Main Street.

THIS SPACE RESERVED FOR RECORDER'S USE

Clackamas County Official Records
Sherry Hall, County Clerk

2021-039572

04/16/2021 02:25:08 PM

D-D Cnt=1 Stn=75 TIFFANY
$15.00 $16.00 $10.00 $62.00

$103.00

After recording return to:
Raad Inc.
27261 Las Rambles Ste 100
Mission Viejo, CA 92691

Until a change is requested all tax statements shall be sent to the following address:
Raad Inc.
27261 Las Rambles Ste 100
Mission Viejo, CA 92691

File No.: 7072-3597895 (DJC)
Date: October 16, 2020

3597895-SS

FIRST AMERICAN

STATUTORY WARRANTY DEED

John V. Hekala, Successor Trustee of the Victor and Virginia Hekala Trust, Grantor, conveys and warrants to **Raad Inc. a California corporation** , Grantee, the following described real property free of liens and encumbrances, except as specifically set forth herein:

See Legal Description attached hereto as Exhibit A and by this reference incorporated herein.

Subject to:

1. Covenants, conditions, restrictions and/or easements, if any, affecting title, which may appear in the public record, including those shown on any recorded plat or survey.

The true consideration for this conveyance is **$625,000.00**. (Here comply with requirements of ORS 93.030)

THIS SPACE RESERVED FOR RECORDER'S USE

After recording return to:
Raad Inc.
27261 Las Rambles Ste 100
Mission Viejo, CA 92691

Until a change is requested all tax statements shall be sent to the following address:
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27261 Las Rambles Ste 100
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3597895-55

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BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.

Dated this _____ day of 4-13, 2021.

The Victor and Virginia Hekala Trust

John V. Hekala

John V. Hekala, Successor Trustee

J. V. Hekala

STATE OF Oregon)
)ss.
County of Clackamas)

This instrument was acknowledged before me on this 13 day of April, 2021 by John V. Hekala as Successor Trustee of The Victor and Virginia Hekala Trust, on behalf of the Trust.

djc

D Chase

OFFICIAL STAMP
DEBORAH JO CHASE
NOTARY PUBLIC - OREGON
COMMISSION NO. 1002350
MY COMMISSION EXPIRES JULY 22, 2024

Notary Public for Oregon
My commission expires: 7/22/24

EXHIBIT A

LEGAL DESCRIPTION: Real property in the County of Clackamas, State of Oregon, described as follows:

PART OF THE B.B. JACKSON AND WIFE DONATION LAND CLAIM NO. 41 IN SECTION 7, TOWNSHIP 5 SOUTH, RANGE 2 EAST, OF THE WILLAMETTE MERIDIAN, COUNTY OF CLACKAMAS AND STATE OF OREGON, DESCRIBED AS:

BEGINNING AT A POINT ON THE NORTH LINE OF SAID DONATION LAND CLAIM 287.25 FEET EAST OF THE POINT OF INTERSECTION OF THE NORTH LINE OF SAID DONATION LAND CLAIM WITH THE OLD TERRITORIAL ROAD, WHICH POINT OF INTERSECTION IS THE NORTHWEST CORNER OF A TRACT OF LAND SET APART BY DECREE OF THE CIRCUIT COURT OF CLACKAMAS COUNTY, OREGON TO LINDA E. SPOOR AS RECORDED IN BOOK 24, PAGE 364, RECORDS OF SAID COURT; THENCE CONTINUE EAST ON THE NORTH LINE OF SAID DONATION LAND CLAIM 257.25 FEET MORE OR LESS TO A POINT 33 RODS EAST OF THE NORTHWEST CORNER OF SAID SPOOR TRACT; THENCE SOUTHERLY PARALLEL WITH THE WEST LINE OF SAID SPOOR TRACT 48 RODS AND 8 FEET; THENCE WESTERLY PARALLEL WITH THE NORTH LINE OF SAID DONATION LAND CLAIM 257.25 FEET MORE OR LESS; THENCE NORTHERLY PARALLEL WITH THE WEST LINE OF SAID SPOOR TRACT AND ALONG THE EAST LINE OF A TRACT OF LAND CONVEYED TO JAMES ALLEN KENNEDY, BY DEED RECORDED JUNE 22, 1944 IN BOOK 327, PAGE 172 DEED RECORDS OF CLACKAMAS COUNTY, OREGON, 48 RODS AND 8 FEET TO THE PLACE OF BEGINNING.

EXCEPTING THAT PORTION LYING WITHIN THE BOUNDARIES OF CLACKAMAS COUNTY PARTITION PLAT NO. 2000-007 & CLACKAMAS COUNTY PARTITION PLAT NO. 2013-053.

FURTHER EXCEPTING THAT PORTION OF LAND CONVEYED TO THE STATE OF OREGON, BY AND THROUGH ITS DEPARTMENT OF TRANSPORTATION, BY DEED RECORDED JULY 26, 2001 AS FEE NO. 2001 058800 AND RE-RECORDED NOVEMBER 23, 2020 AS FEE NO. 2020 099076.

NOTE: This Legal Description was created prior to January 01, 2008.

MOLALLA DAIRY QUEEN

TENTATIVE CIVIL IMPROVEMENT PLANS

1522 W MAIN STREET

MOLALLA, OR, 97038

VICINITY MAP

SURVEY NOTES

NOTES:

VERTICAL DATUM:

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

HORIZONTAL DATUM:

OREGON NORTH STATE PLAN COORDINATE SYSTEM NAD 83 (2011) BASED ON GPS OBSERVATIONS. DISTANCES SHOWN HEREON ARE GROUND DISTANCES, INTERNATIONAL FEET, SCALED ABOUT CONTROL POINT NO 1. TO GRID DISTANCES MULTIPLY BY THE COMBINED FACTOR OF 0.9998825507.

SURVEY MONUMENT PROTECTION:

PROTECT AND PRESERVE, IN PLACE, ALL SURVEY MONUMENTS AND BENCHMARKS. DO NOT DISTURB, MOVE, OR RELOCATE MONUMENTS OR BENCHMARKS WITHOUT THE PRIOR REVIEW AND APPROVAL BY THE AGENCY HAVING JURISDICTION OVER THE MONUMENT OR BENCHMARK. THE CONTRACTOR SHALL CONTRACT WITH A LICENSED SURVEYOR FOR MONUMENTS REQUIRING DISTURBANCE OR REMOVAL, AND THE SURVEYOR SHALL RESET THE MONUMENTS OR PROVIDE PERMANENT WITNESS MONUMENTS AND FILE THE REQUIRED DOCUMENTATION WITH THE AUTHORITY HAVING JURISDICTION, PURSUANT TO ALL APPLICABLE BUSINESS AND PROFESSIONAL CODES.

UTILITY PURVEYORS

ELECTRICITY:	PORTLAND GENERAL ELECTRIC CO. 21847 OR-213 MOLALLA, OR 97038 (503) 829-3978
TV/TELEPHONE INTERNET:	MOLALLA COMMUINICATION 211 ROBBINS ST MOLALLA, OR 97038 (503) 829-1100
SEWER/WATER	CITY OF MOLALLA UTILITY DEPARTMENT 117 N. MOLALLA AVENUE MOLALLA, OR 97038 (503) 829-6855 X220
NATURAL GAS:	NORTHWEST NATURAL GAS PORTLAND, OR 97228-6017

SHEET INDEX

PROJECT INFORMATION

CLIENT:	MEHDI RAFATY 1117 N. SHERBOURNE DR. WEST HOLLYWOOD, CA, 90069
ARCHITECT:	JSO SERVICES, LLC 99 MEADOWBROOK COUNTRY CLUB ESTATES SAINT LOUIS, MO, 63011
SURVEYOR:	S&F LAND SERVICES 521 NORTHWEST HARRIMAN STREET, BEND, OR, 97703
APN:	52E07D01800
EOR:	ASHLEY & VANCE ENGINEERING 33 NW FRANKLIN AVE BEND, OR, 97703
SITE AREA:	1.67 AC
AREA DISTURBED:	0.86 AC

*NOTE: THE ABOVE QUANTITIES ARE FOR PLANNING AND PERMITTING PURPOSES ONLY. SHRINKAGE; CONSOLIDATION AND SUBSIDENCE FACTORS; LOSSES DUE TO CLEARING AND DEMOLITION OPERATIONS; AND TRENCHING FOR UTILITIES AND FOUNDATIONS ARE NOT INCLUDED. ESTIMATED EARTHWORK QUANTITIES ARE BASED ON THE APPROXIMATE DIFFERENCE BETWEEN EXISTING GRADES AND PROPOSED FINISHED GRADES OR PAVEMENT SUBGRADES, AS INDICATED ON THE PLANS, AND SHOULD VARY ACCORDING TO THESE FACTORS AND LOSSES. THE CONTRACTOR SHALL PERFORM AN EARTHWORK ESTIMATE FOR THE PURPOSE OF PREPARING A LUMP SUM BID PRICE FOR EARTHWORK. THE BID PRICE SHALL INCLUDE COSTS FOR ANY NECESSARY IMPORT AND PLACEMENT OF EARTH MATERIALS OR THE EXPORT AND PROPER DISPOSAL OF EXCESS EARTH MATERIALS.

STANDARD ABBREVIATIONS

AC	ASPHALTIC CONCRETE	IE	INVERT ELEVATION
BLDG	BUILDING	INV	INVERT
BCR	BEGIN CURB RETURN	LA	LANDSCAPE AREA
BVC	BEGIN VERTICAL CURVE	NG	NATURAL GRADE
BW	BOTTOM OF WALL	PA	PLANTER AREA
CB	CATCH BASIN	PCC	PORTLAND CEMENT CONCRETE
C/L	CENTERLINE	P/L	PROPERTY LINE
CMU	CONCRETE MASONRY UNIT	POC	POINT OF CONNECTION
CONC	CONCRETE	PS	PARKING STRIPE
DW	DRIVEWAY	PVC	POLYVINYL CHLORIDE
ECR	END CURB RETURN	RW	RIGHT OF WAY
EG	EXISTING GRADE	SD	STORM DRAIN
EP	EDGE OF PAVEMENT	SG	SUB-GRADE ELEVATION
EVC	END VERTICAL CURVE	SS	SANITARY SEWER
FF	FINISHED FLOOR	TC	TOP OF CURB, CONCRETE
FG	FINISHED GRADE	TF	TOP OF FOOTING
FH	FIRE HYDRANT	TG	TOP OF GRATE
FL	FLOW LINE	TW	TOP OF WALL
FS	FINISHED SURFACE	VC	VERTICAL CURVE
GB	GRADE BREAK		

Plan Prepared By:

Ashley & Vance ENGINEERING, INC.

33 NW Franklin Ave, Suite 110
Bend, OR 97703
(541) 647-1445
www.ashleyvance.com

CIVIL • STRUCTURAL

Engineer of Record:

REGISTERED PROFESSIONAL ENGINEER
77361
OREGON
JAMES M. LORD
PLAN REVIEW SET
NOT FOR CONSTRUCTION
EXPIRES: 12/31/22

MOLALLA DAIRY QUEEN

1522 W MAIN STREET
MOLALLA, OR, 97038

Revisions:	
1	.
2	.
3	.
4	.
5	.

Project Engineer: MFH	Ext: 200
Project Manager: JML	
Date: 06.10.2021	Scale: PER PLAN
AV Job No: 21540	Sheet Size: 24" x 36"

TITLE SHEET

C-0.0

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GENERAL NOTES:

ALL UTILITIES SHOWN ARE BASED ON THE BEST KNOWLEDGE AVAILABLE.

DEMOLITION NOTES

1. SINGLE FAMILY RESIDENCE AND BUILDINGS TO BE REMOVED
2. EXISTING TREE TO BE REMOVED
3. EXISTING WATER MAIN TO REMAIN
4. EXISTING SEWER MANHOLE TO REMAIN
5. EXISTING DITCH INLET TO BE REMOVED
6. EXISTING COMMUNICATIONS LINE TO BE REMOVED
7. EXISTING COMMUNICATIONS BOX TO REMAIN
8. EXISTING ROAD SIGN TO BE REMOVED
9. EXISTING MAILBOX TO BE REMOVED
10. EXISTING SIDEWALK TO REMAIN
11. EXISTING RESIDENTIAL DRIVEWAY TO BE REMOVED
12. EXISTING TRANSFORMER TO BE REMOVED

EXISTING CONDITIONS AND DEMOLITON LEGEND

- EXISTING WATER LINE
- EXISTING SANITARY SEWER
- EXISTING FENCE
- ADJACENT PROPERTY LINE
- PROJECT PROPERTY LINE
- MAJOR CONTOUR (5' INTERVAL)
- MINOR CONTOUR (1' INTERVAL)
- EXISTING DECIDUOUS TREE TO BE REMOVED (TOTAL 2)
- EXISTING DECIDUOUS TREE TO REMAIN

HORIZONTAL SCALE: 1" = 20'

20 0 20 40

Plan Prepared By:

Ashley&Vance ENGINEERING, INC.

33 NW Franklin Ave, Suite 110
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www.ashleyvance.com

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77361PE
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PLAN REVIEW SET NOT FOR CONSTRUCTION
EXPIRES: 12/31/22

MOLALLA DAIRY QUEEN
1522 W MAIN STREET
MOLALLA, OR, 97038

Revisions:

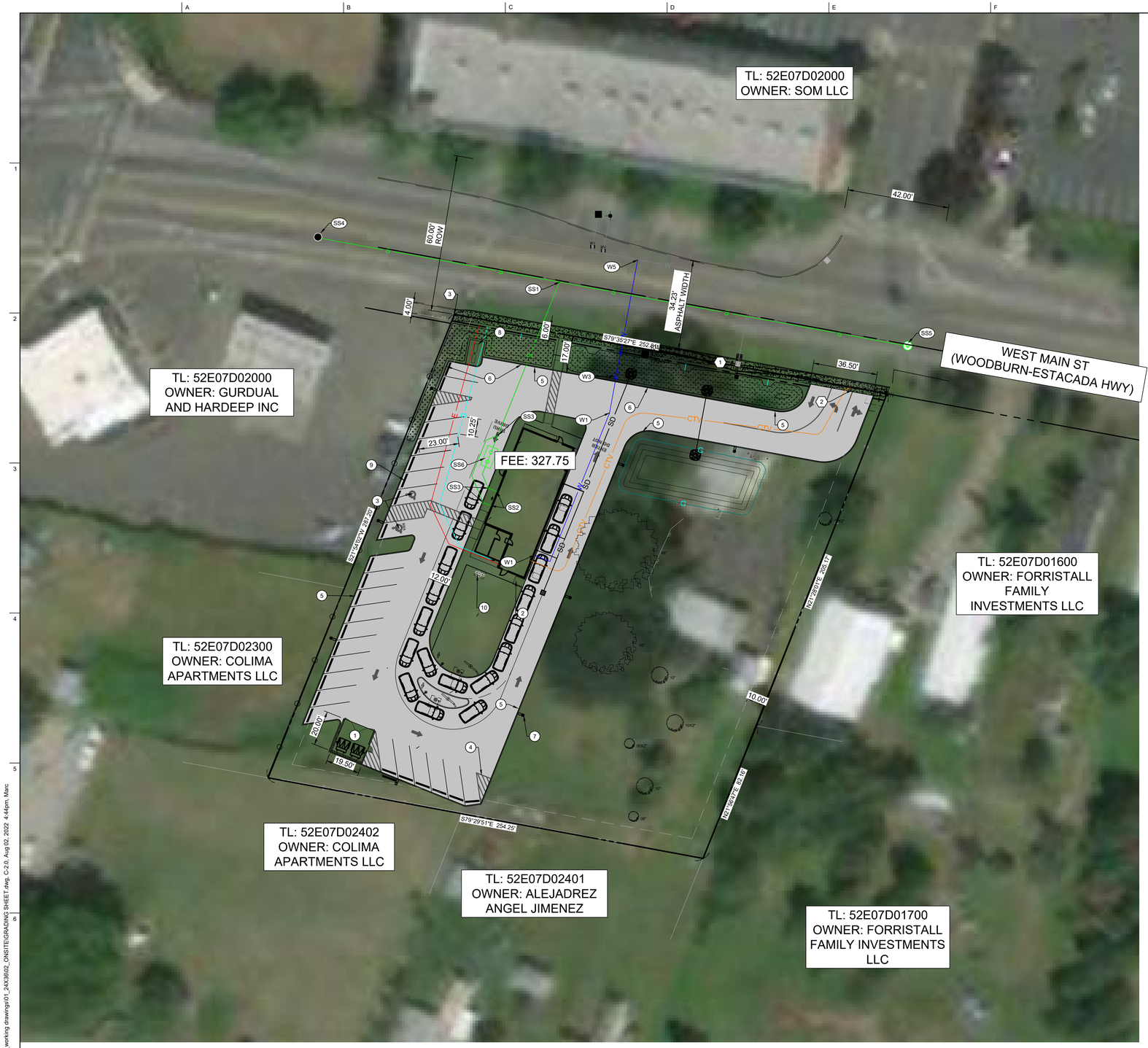
1	.
2	.
3	.
4	.
5	.

Project Engineer: MFH	Ext: 200
Project Manager: JML	
Date: 06.10.2021	Scale: PER PLAN
AV Job No: 21540	Sheet Size: 24" x 36"

EXISTING CONDTIONS AND DEMOLITION PLAN

C-1.0

S:\All Jobs\2021 all jobs\21540 - molalla dairy queen - odot\02_working drawings\01_24X36\02_ONSITE\DEMOLITION SHEET.dwg, C-1.0, Aug 02, 2022 4:44pm, Marc



GENERAL NOTES:

ALL UTILITIES SHOWN ARE WITH THE BEST KNOWLEDGE POSSIBLE.

GROSS DEVELOPMENT AREA: 32,100 SF

RIGHT OF WAY CONSTRUCTION NOTES:

1. INSTALL 6' CONCRETE SIDEWALK PER CITY OF MOLALLA STD. DWG R-1075
2. INSTALL 36.5' COMMERCIAL DRIVEWAY APPROACH PER CITY OF MOLALLA STD. DWG. R-1095
3. TIE PROPOSED SIDEWALK INTO EXISTING SIDEWALK
4. NEW CURB PER ODOT STD. DWG. RD366

SITE CONSTRUCTION NOTES:

1. INSTALL TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS FOR DETAILS.
2. INSTALL ADA RAMP.
3. INSTALL ADA PARKING STALLS.
4. INSTALL PARKING LOT PAVEMENT STRIPING (TYP.).
5. INSTALL 6" CONCRETE CURB PER CITY OF MOLALLA STD. DWG R-1075
6. INSTALL 1' CURB CUT
7. INSTALL LIGHT POLE (TYP). SEE ARCHITECTURAL PLANS FOR DETAIL.
8. INSTALL MONUMENT SIGN.
9. INSTALL CONCRETE WHEEL STOPS (TYP.)
10. INSTALL BIKE RACK

WATER CONSTRUCTION NOTES:

- W1 INSTALL ±192 LF OF WATER SERVICE.
- W2 INSTALL 2" COMMERCIAL METER SERVICE PER CITY OF MOLALLA STD. DWG. W-3035
- W3 INSTALL 2" BACK FLOW PREVENTOR.
- W4 WATER SERVICE POINT OF CONNECTION AT BUILDING. SEE PLUMBING PLANS FOR DETAILS.
- W5 INSTALL 2 - 12"X12"X2" TAPPING SADDLES PER CITY OF MOLALLA STD. DWG. W-3025

SANITARY SEWER CONSTRUCTION NOTES:

- SS1 INSTALL ± 185 LF OF SANITARY SEWER SERVICE PER CITY OF MOLALLA STD. DWG. S-2175.
- SS2 SEWER POINT OF CONNECTION AT BUILDING. SEE PLUMBING PLANS FOR DETAILS.
- SS3 INSTALL SANITARY SEWER CLEANOUT.
- SS4 INSTALL ± 421 LF OF 8" SANITARY SEWER MAIN. TIE INTO EXISTING MANHOLE
- SS5 INSTALL SANITARY SEWER MANHOLE PER CITY OF MOLALLA STD. DWG. S-2005
- SS6 INSTALL GREASE INTERCEPTOR

FRANCHISE UTILITY CONSTRUCTION NOTES:

- P1 INSTALL 197 ± LF OF PORTLAND GENERAL ELECTRIC CONDUIT. CONNECTIONS TO BE CONFIRMED

NW NATURAL GAS CONSTRUCTION NOTES:

- G1 INSTALL ± 186 LF OF GAS LINE. CONNECTIONS TO BE CONFIRMED

SITE AND UTILITY LEGEND

- PROPERTY LINE
- PROPOSED ACCESSIBLE PATH
- G — PROPOSED GAS LINE
- W — PROPOSED WATER LINE
- E — PROPOSED POWER CONDUIT
- T — T — PROPOSED COMMUNICATIONS LINE
- S — PROPOSED SEWER LINE
- SWALE
- PAVEMENT
- CONCRETE

DIGALERT
DIAL TOLL FREE
811 OR
(1-800-422-4133)
AT LEAST TWO DAYS
BEFORE YOU DIG
UNDERGROUND SERVICE ALERT

HORIZONTAL SCALE: 1" = 30'
30 0 30 60

Ashley&Vance ENGINEERING, INC.
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Bend, OR 97703
(541) 647-1445
www.ashleyvance.com
CIVIL • STRUCTURAL
Plan Prepared By:

Engineer of Record:

REGISTERED PROFESSIONAL ENGINEER 77342 OREGON JAMES M. LORD EXPIRES: 12/31/22 — PLANS NOT APPROVED FOR CONSTRUCTION — REVIEW SET

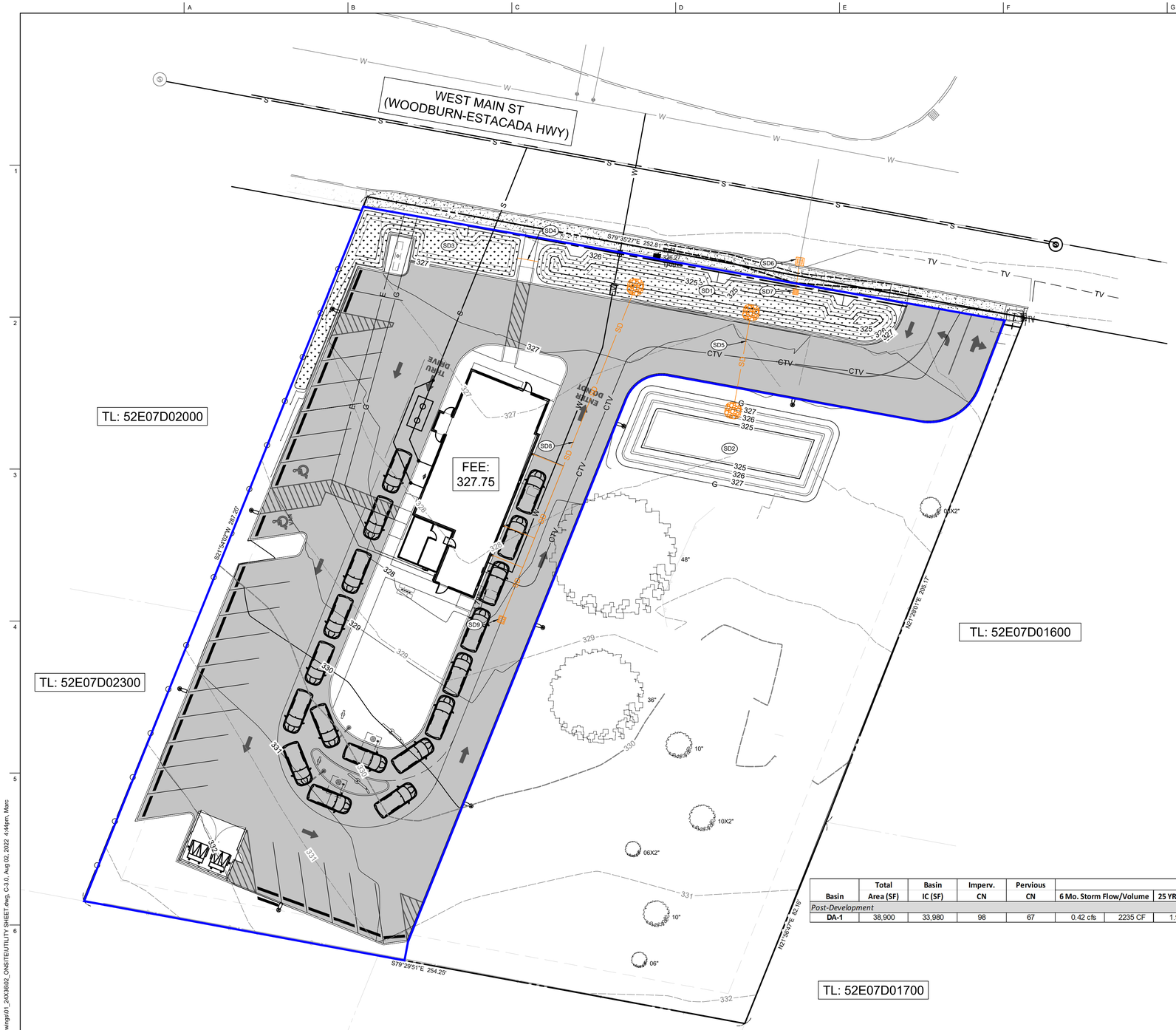
MOLALLA DAIRY QUEEN
1522 W MAIN STREET
MOLALLA, OR, 97038

Revisions:	
1	.
2	.
3	.
4	.
5	.

Project Engineer: MFH	Ext: 200
Project Manager: JML	
Date: 06.10.2021	Scale: PER PLAN
AV Job No: 21540	Sheet Size: 24" x 36"

TENTAIVE SITE AND UTILITY PLAN

C-2.0



GENERAL NOTES:

ALL EXISTING UTILITIES SHOWN ARE BASED ON THE BEST KNOWLEDGE AVAILABLE. CONTRACTOR TO POTHOLE ALL POINTS OF CONNECTION AND VERIFY ALL CLEARANCES. MATERIAL DEPTH AND LOCATION SHALL BE IDENTIFIED BY CONTRACTOR. IF THERE ARE ANY DIFFERENCES FROM PLAN WITH ANY OF THESE ITEMS, ENGINEER OF WORK SHALL BE NOTIFIED IMMEDIATELY.

TENTATIVE GRADING NARRATIVE:

- NO RETAINING WALLS OR SLOPES EXCEEDING 3:1 ARE PROPOSED
- ALL STROMWATER RUNOFF WILL BE COLLECTED AND INFLATED IN STORMWATER SWALES
- SITE IS RELATIVELY FLAT, FALLING SOUTH TO NORTH AT APPROXIMATELY 2%.
- NO SIGNIFICANT GRADING IS PROPOSED. FINISH GRADES WILL FOLLOW EXISTING GRADES.

STORM CONSTRUCTION NOTES:

(SD1) PROPOSED 1993 SF INFILTRATION SWALE.

(SD2) PROPOSED 3092 SF INFILTRATION SWALE

(SD3) PROPOSED 2599 SF INFILTRATION SWALE

(SD4) INSTALL ± 8 OF STORM PIPE

(SD5) INSTALL ± 32 LF OF STORM PIPE

(SD6) NEW CATCH BASIN PER ODOT RD366 (REPLACE EXISTING DITCH INLET)

(SD7) OVERFLOW INLET TO ODOT SYSTEM

(SD8) INSTALL ± 132 LF OF STORM PIPE. CONNECT ROOF DOWNSPOUTS TO STORMLINE.

(SD9) INSTALL CATCH BASIN

GRADING AND DRAINAGE LEGEND

- PROPERTY LINE
- 330 — EXISTING MAJOR CONTOUR (5' INTERVAL)
- 331 — EXISTING MINOR CONTOUR (1' INTERVAL)
- 330 — PROPOSED MAJOR CONTOUR (5' INTERVAL)
- 329 — PROPOSED MINOR CONTOUR (1' INTERVAL)
- PROPOSED CATCH BASIN
- 8" SD — PROPOSED STORM DRAIN (SIZE PER PLAN)
- PROPOSED DRAINAGE BASIN
- ROCK OUTFALL

Basin	Total Area (SF)	Basin IC (SF)	Imperv. CN	Pervious CN	Storm Event: 6 Mo. Storm Flow/Volume	25 YR Storm Flow/Volume	100 YR Storm Flow/Volume	Swale Volume: 6 Mo. Peak	25 YR Peak	100 YR Peak	Swale Information: Designation	Area (sf)	Volume (cf)
Post-Development													
DA-1	38,900	33,980	98	67	0.42 cfs / 2235 CF	1.90 cfs / 10802 CF	2.22 cfs / 12650 CF	2235 CF	7782 CF	9587 CF	Swale 1	7052.96	7725.51

HORIZONTAL SCALE: 1" = 20'

20 0 20 40

Plan Prepared By:
Ashley&Vance ENGINEERING, INC.
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CIVIL • STRUCTURAL

Engineer of Record:

REGISTERED PROFESSIONAL ENGINEER 77342 OREGON JAMES M. LORD
PLANS UNDER REVIEW SET NOT FOR CONSTRUCTION
EXPIRES: 12/31/22

MOLALLA DAIRY QUEEN
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AV Job No: 21540		Sheet Size: 24" x 36"	

TENTATIVE GRADING AND DRAINAGE PLAN

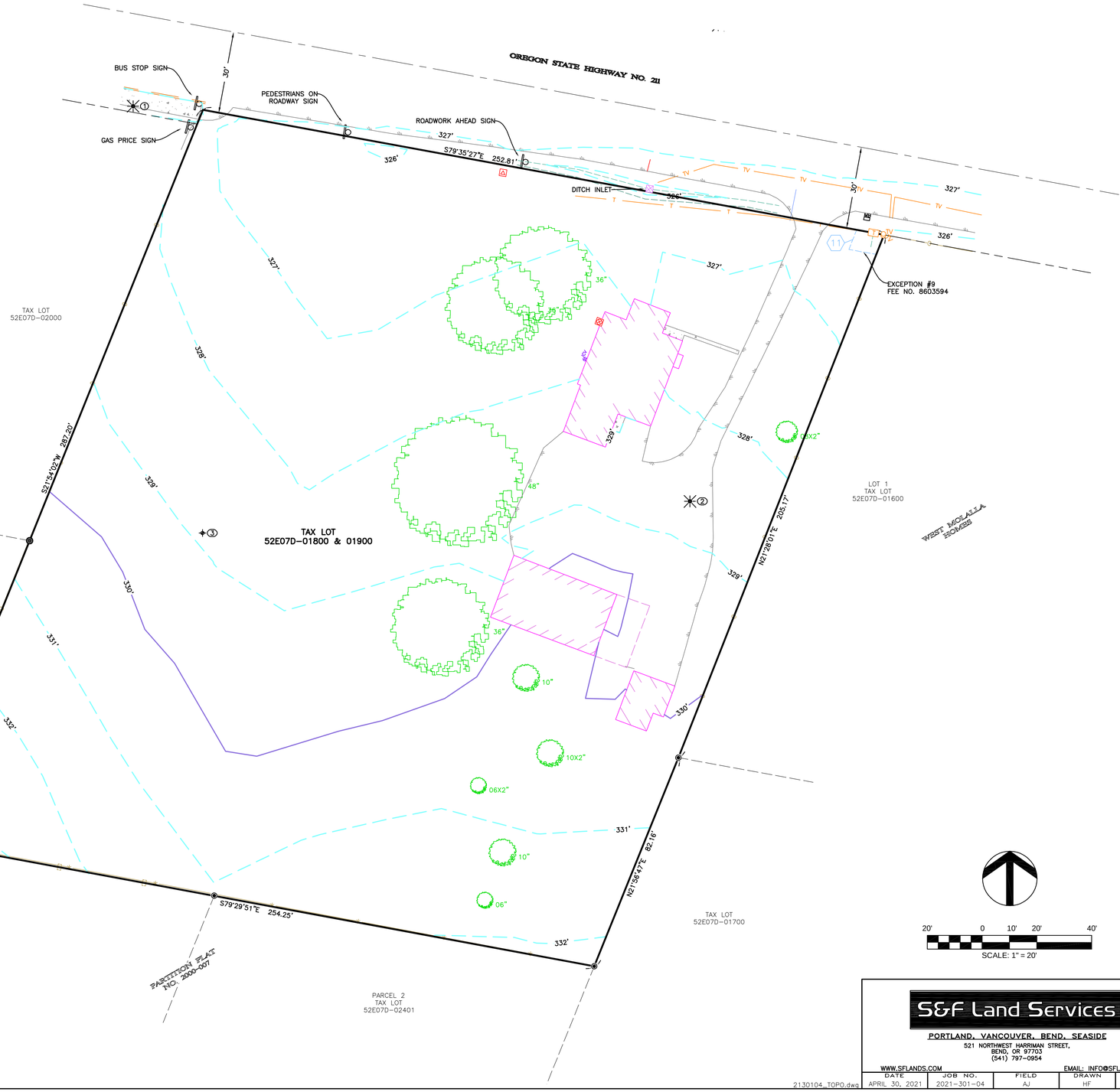
C-3.0

TOPOGRAPHIC SURVEY

FOR ASHLEY & VANCE ENGINEERING
LOCATED IN THE SOUTHEAST QUARTER OF SECTION 7,
TOWNSHIP 5 SOUTH, RANGE 2 EAST OF THE WILLAMETTE
MERIDIAN, CITY OF MOLALLA, CLACKAMAS COUNTY, OREGON

LEGEND:

- BUILDING
- BUILDING OVERHANG
- FLOW LINE CURB
- STANDARD CURB
- EDGE OF PAVEMENT
- EDGE OF CONCRETE
- COMMUNICATIONS – CABLE T
- ELECTRIC
- TELEPHONE
- FENCE – MISC***
- FENCE – WOOD
- FENCE – CHAINLINK
- RIGHT OF WAY
- BOUNDARY LINE
- EASEMENT
- BUILDING HATCH
- CONCRETE HATCH
- MAJOR CONTOUR
- MINOR CONTOUR
- POWER METER
- POWER TRANSFORMER
- STORM DITCH INLET/SLANTED
- TELEPHONE RISER
- IRRIGATION CONTROL VALVE
- CATV RISER
- SIGN
- MAILBOX
- TREE – DECIDUOUS



VICINITY MAP
(NOT TO SCALE)
OREGON STATE HIGHWAY NO. 211, MOLALLA, OR

20' 0 10' 20' 40'
SCALE: 1" = 20'

VERTICAL DATUM:

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

HORIZONTAL DATUM (BASIS OF BEARINGS):

OREGON NORTH STATE PLANE COORDINATE SYSTEM NAD 83 (2011)
BASED ON GPS OBSERVATIONS.
DISTANCES SHOWN HEREON ARE GROUND DISTANCES, INTERNATIONAL FEET,
SCALED ABOUT CONTROL POINT NO 1. TO CONVERT TO GRID DISTANCES
MULTIPLY BY THE COMBINED FACTOR OF 0.9998825507.

NOTES:

1. THE LOCATION OF EXISTING UNDERGROUND UTILITY FACILITIES SHOWN HEREON ARE BASED ON LOCATE MARKS REQUESTED FOR THIS SURVEY PER ONE CALL PUBLIC LOCATE TICKET 2109521. THE SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE DELINEATION OF SUCH UNDERGROUND UTILITIES BY THE RESPECTIVE UTILITY OWNERS, NOR FOR THE EXISTENCE OF BURIED OBJECTS WHICH ARE NOT SHOWN ON THE PLAN. ALL UTILITY LOCATIONS SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
2. FIELD WORK WAS COMPLETED ON APRIL 19, 2021.

TITLE REPORT SPECIAL EXCEPTIONS:

THE FOLLOWING EXCEPTIONS AFFECT THE SUBJECT PROPERTY IN A SURVEYABLE MANNER AS PER FIRST AMERICAN TITLE, 3RD REVISED PRELIMINARY TITLE REPORT, ORDER NO.: 7072-3597895, DATED APRIL 16, 2021.

9) EASEMENT, INCLUDING TERMS AND PROVISIONS CONTAINED THEREIN:
RECORDING INFORMATION: SEPTEMBER 12, 1986 AS FEE NO. 86035494
IN FAVOR OF: MOLALLA TELEPHONE COMPANY, AN OREGON CORPORATION
FOR: UNDERGROUND TELEPHONE AND COMMUNICATION FACILITIES
AFFECTS SUBJECT PROPERTY AS SHOWN HEREON.

10. EASEMENT, INCLUDING TERMS AND PROVISIONS CONTAINED THEREIN:
RECORDING INFORMATION: OCTOBER 20, 2000 AS FEE NO. 2000 068653
IN FAVOR OF: PORTLAND GENERAL ELECTRIC COMPANY, AN OREGON CORPORATION
FOR: ELECTRIC POWER LINE
BLANKET IN NATURE, AFFECTS SUBJECT PROPERTY.

S&F Land Services
PORTLAND, VANCOUVER, BEND, SEASIDE
521 NORTHWEST HARRIMAN STREET,
BEND, OR 97703
(541) 797-0954
WWW.SFLANDS.COM EMAIL: INFO@SFLANDS.COM

DATE	JOB NO.	FIELD	DRAWN	CHECKED
APRIL 30, 2021	2021-301-04	AJ	HF	ANH

SURVEY FOR:
ASHLEY & VANCE ENGINEERING

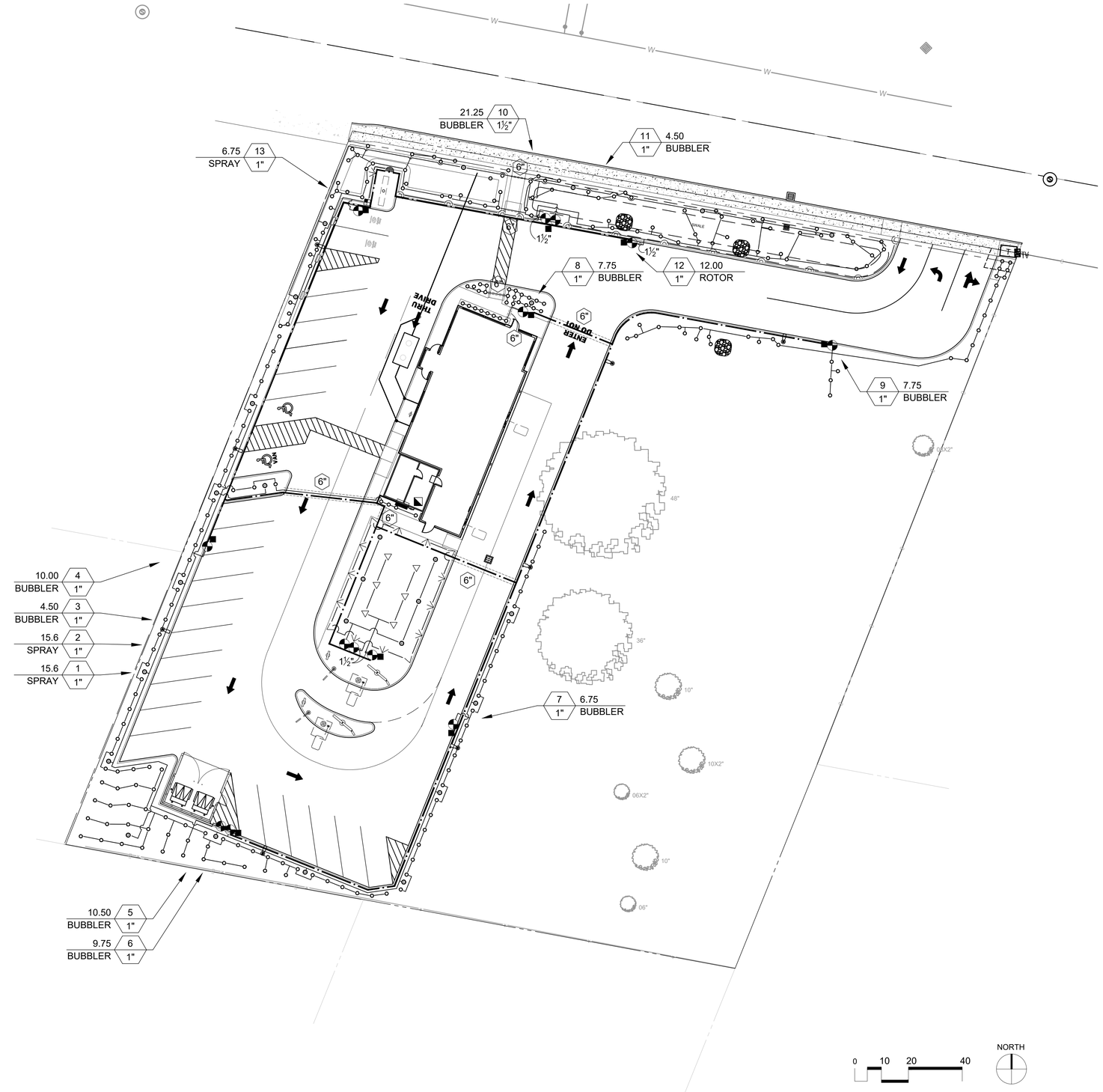
TOWNSHIP 5 SOUTH
RANGE 2 EAST
WILLAMETTE MERIDIAN
SECTION 7
CITY OF MOLALLA, CLACKAMAS COUNTY, OREGON

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JANUARY 21, 2009
ANDREW N. HUSTON
61407PLS
RENEWS: 6/30/2021

2130104_TOPO.dwg

P:\2021-301-04 Molalla DQ\Survey\Drawings\2130104_TOPO.dwg Plotted: Apr 29, 2021 – 4:03pm By: andrew.huston



IRRIGATION LEGEND:

- FEBCO LF825YA-1.5" REDUCED PRESSURE BACKFLOW" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER. LOCATE PER PLAN AND AS REQUIRED. INSTALL IN SINGLE SWING BACKFLOW PREVENTER ENCLOSURE BY LEMEUR, MODEL BF-99.
- CONTROLLER: RAINBIRD EXP 16 LX WITH RAIN/FREEZE SENSOR AND SHUT OFF. SUBMIT MANUFACTURER'S CUT SHEETS FOR REVIEW. IF NOT FEASIBLE TO ACCESS THE AREA TO OR EXPAND THE EXISTING CONTROLLER.
- GATE VALVE, SIZE SAME AS LINE SIZE, NIBCO, CLASS 125,T-113. SEE SPEC.S
- RAINBIRD PEB SERIES PRESSURE REGULATING REMOTE CONTROL VALVE (SIZE PER PLAN)
- RAINBIRD 44LCR QUICK COUPLING VALVE
- MAIN LINE: 1120-SCHEDULE 40 PVC WITH SCHEDULE 80 SOLVENT-WELD FITTINGS: ALL MAIN LINE 2" UNLESS NOTED ON PLAN. INSTALL TRACER WIRE ON MAIN LINE PER DISTRICTS STANDARDS
- LATERAL LINE: 1120 SCHEDULE 40 PVC WITH SCHEDULE 80 SOLVENT-WELD FITTINGS: ALL LATERAL LINE 1" UNLESS NOTED ON PLAN. INSTALL TRACER WIRE ON LATERAL LINE PER DISTRICTS STANDARDS
- STATION NUMBER, GPM, VALVE SIZE
- IRRIGATION SLEEVE: SCHEDULE 40 PVC, SLEEVE SIZE (6")
- RAINBIRD 1401 BUBBLER - ONE PER BERRY ON GRADE
- RAINBIRD 1401 BUBBLER - THREE PER TREE ON GRADE
- RAINBIRD 1800 SAM-PRS WITH 10 FT MPR NOZZLE
- RAINBIRD 1800 SAM-PRS WITH 12 FT MPR NOZZLE
- RAINBIRD 1800 SAM-PRS WITH 15 MPR NOZZLE
- RAINBIRD 1800 SAM-PRS WITH 15 SST MPR NOZZLE,
- RAINBIRD 3504 PC-SAM, WITH #1 NOZZLE, ARC AND RADIUS AS REQUIRED

NOTE:
RAINBIRD 1812 12" POP UP IN ALL PLANTING AREAS
RAINBIRD 1806 6" POP UP IN ALL TURF AREAS

PIPE SIZING SCHEDULE 40 PVC:

1"	0-13 GPM
1½"	13-32 GPM
2"	32-51 GPM
2½"	51-72 GPM
3"	72-111 GPM

NO. DATE: ISSUED FOR:

VALLIER DESIGN ASSOCIATES INC.
LANDSCAPE ARCHITECTURE PLANNING DESIGN
50 SE SCOTT STREET, #8, UNIT C
BEND, OREGON 97702
TELEPHONE 541 639.9889

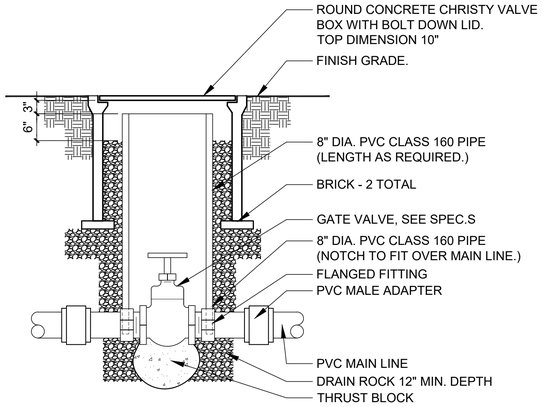
REGISTERED 746 MARCIA D. VALLIER OREGON 04/18/11 LANDSCAPE ARCHITECT

SHEET TITLE
IRRIGATION PLAN

PROJECT
MOLALLA DAIRY QUEEN
1522 W. MAIN STREET
MOLLALLA, OR 97038

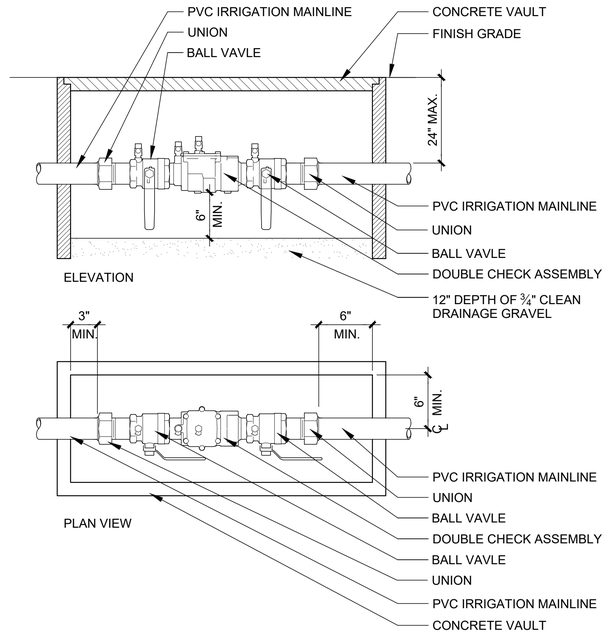
DATE
OCTOBER 2021

SHEET
L1.0



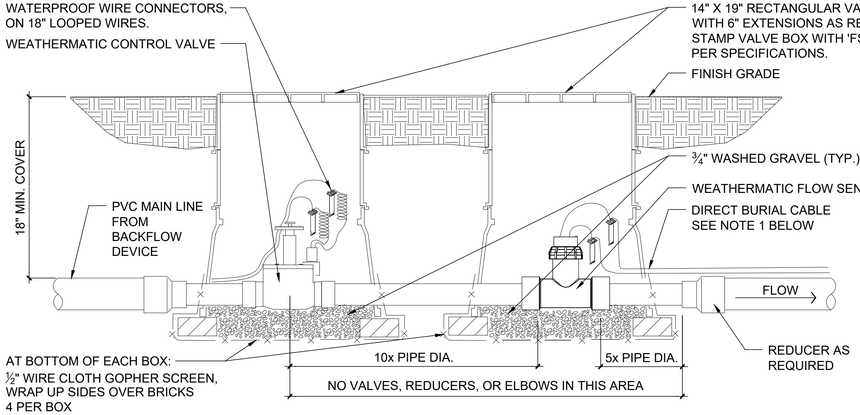
2 GATE VALVE

NOT TO SCALE



1 DOUBLE CHECK VALVE ASSEMBLY

NOT TO SCALE



NOTES:

1. DIRECT BURY 1 PAIR, TWISTED SHIELDED CABLE-MINIMUM CONDUCTOR SIZE 20 AWG. DO NOT EXCEED 2,000 FEET IN LAYING DISTANCE FROM FLOW SENSOR TO IRRIGATION CONTROLLER.
2. SIZE FLOW SENSOR BASED ON REQUIRED GPM NEEDED FOR PROJECT.
3. MINIMUM DISTANCES BETWEEN ANY FITTING OR VALVE AND FLOW SENSOR ARE NOTED ABOVE.

3 MASTER VALVE AND FLOW METER

NOT TO SCALE

IRRIGATION NOTES:

1. CONTACT LANDSCAPE ARCHITECT AND COORDINATE ALL REVIEWS PRIOR TO COMMENCEMENT OF WORK.
2. DUE TO THE SCALE OF THE DRAWINGS IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC. INVESTIGATE THE FINISHED CONDITIONS AFFECTING ALL OF IRRIGATION WORK AND PLAN THE WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC,. AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. INSTALL WORK IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEM, PLANTING, AND ARCHITECTURAL FEATURES.
3. EXERCISE EXTREME CARE IN EXCAVATION AND WORKING NEAR EXISTING UTILITIES. VERIFY THE LOCATION AND CONDITION OF ALL UTILITIES. REPAIR ANY DAMAGE TO EXISTING UTILITIES OR ADJACENT PROPERTIES CAUSED BY OR DURING THE PERFORMANCE OF WORK AT NO ADDITIONAL COST TO THE CITY. FIELD ADJUST SPRINKLER LOCATIONS SO AS TO AVOID CONFLICTS WITH UTILITIES.
4. THE FINAL LOCATION AND EXACT POSITIONING OF THE AUTOMATIC CONTROLLER AND VALVES SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
5. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT WIND CONDITIONS, OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA'S DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN. BRING SUCH OBSTRUCTIONS OR DIFFERENCES TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY AND COSTS FOR ALL NECESSARY REVISIONS.
6. THE IRRIGATION SYSTEM DESIGN IS BASED UPON 55 PSI THE MINIMUM WORKING WATER PRESSURE AT 30 GPM THE MAXIMUM GALLONS PER MINUTE. VERIFY THE MINIMUM WORKING WATER PRESSURE AT THE MAXIMUM GALLONS PER MINUTE PRIOR TO BEGINNING CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE MINIMUM WORKING WATER PRESSURE AND THE ACTUAL WORKING WATER PRESSURE AT THE MAXIMUM GALLONS PER MINUTE READING TAKEN AT THE IRRIGATION POINT OF CONNECTION, TO LANDSCAPE ARCHITECT, FOR APPROVAL PRIOR TO PROCEEDING WITH THE IRRIGATION INSTALLATION.
7. PLACE VALVE BOXES 12" FROM AND PARALLEL TO STRUCTURES OR HARDSCAPE. SPACE GROUPED VALVES EQUALLY. ONE VALVE PER BOX. INSTALL IN SHRUB AREAS EXCLUSIVELY. IF NOT POSSIBLE INSTALL IN HARDSCAPE SQUARE WITH SURROUNDING IMPROVEMENTS. USE EQUAL SIZE CHRISTY CONCRETE BOX IF INSTALLED IN HARDSCAPE. SEE SPECS.
8. CONTRACTOR IS RESPONSIBLE FOR COMPLETE COVERAGE. MOVE OR ADD BUBBLERS AND SPRAY HEADS TO INSURE COVERAGE. WHEN ADDING BUBBLERS OR SPRAY HEADS, VERIFY HYDRAULIC REQUIREMENTS. ARNOLD IRRIGATION DISTRICT WATER TO ADJACENT PROPERTY AND IRRIGATION TO EXISTING PLANTING TO REMAIN OPERATIONAL AT ALL TIMES. REPLACE ANY DAMAGED PLANT MATERIAL DUE TO LACK OF IRRIGATION OR DAMAGE FROM CONSTRUCTION.
9. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, CONTACT THE OWNER FOR APPROVAL TO BEGINNING WORK. DO NOT TRENCH WITHIN THE DRIP LINE OF TREES UNLESS APPROVED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES, AND TREE ROOTS. HAND DIG TRENCHES WHERE TWO INCH AND LARGER ROOTS OCCUR. CLOSE TRENCHES ADJACENT TO TREE WITHIN TWENTY-FOUR HOURS: AND WHEN THIS IS NOT POSSIBLE, KEEP THE SIDE OF THE TRENCH SHADED WITH BURLAP OR CANVASS.
10. SEE IRRIGATION SPECIFICATIONS FOR WATER CALCULATIONS AND IRRIGATION SCHEDULE.
11. DURING THE MAINTENANCE PERIOD, IT IS THE RESPONSIBILITY OF THE LANDSCAPE MAINTENANCE CONTRACTOR AND/OR OWNER TO PROGRAM THE IRRIGATION CONTROLLERS TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. THIS INCLUDES INPUTTING DATA TO THE PROGRAM FOR SPECIFIC SITE CONDITIONS INCLUDING; SOIL TYPE, PLANT MATERIALS, WATER REQUIREMENTS, MOUNDS AND SLOPES, SUN, SHADE AND WIND EXPOSURES, ETC.
12. THE IRRIGATION CONTRACTOR SHALL SCHEDULE A MEETING WHICH INCLUDES REPRESENTATIVES OF THE IRRIGATION CONTROLLER MANUFACTURER, THE MAINTENANCE CONTRACTOR, THE OWNER AND THE IRRIGATION CONTRACTOR AT THE SITE FOR INSTRUCTION ON THE PROPER PROGRAMMING AND OPERATION OF THE IRRIGATION CONTROLLER.
13. INSTALL BLACK PLASTIC VALVE BOXES WITH BLACK BOLT DOWN, NON-HINGED COVER MARKED "IRRIGATION". BOX BODY SHALL HAVE KNOCK OUTS. ACCEPTABLE VALVE BOX MANUFACTURER'S INCLUDE CARSON-BROOKS, NDS PRO SERIES, OR APPROVED EQUAL.
14. INSTALL A KBI CV-SERIES, OR APPROVED EQUAL SPRING LOADED CHECK VALVE IN BUBBLER ASSEMBLIES WHERE LOW OUTLET DRAINAGE WILL CAUSE EROSION AND/OR EXCESS WATER.
15. THE CONTRACTOR SHALL LABEL CONTROL LINE WIRE AT EACH REMOTE CONTROL VALVE WITH A 2 ¼" x 2 ¾" POLYURETHANE I.D. TAG, INDICATING IDENTIFICATION NUMBER OF VALVE (CONTROLLER AND STATION NUMBER). ATTACH LABEL TO CONTROL WIRE. THE CONTRACTOR SHALL PERMANENTLY STAMP ALL VALVE BOX LIDS WITH APPROPRIATE IDENTIFICATION AS NOTED IN CONSTRUCTION DETAILS.
16. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FILL AND REPAIR ALL DEPRESSIONS AND REPLACE ALL NECESSARY PLANTINGS DUE TO THE SETTLEMENT OF IRRIGATION FOR ONE YEAR (OR AS AGREED) FOLLOWING COMPLETION AND ACCEPTANCE OF THE JOB. THE CONTRACTOR SHALL ALSO GUARANTEE ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FURNISHED BY HIM TO BE FREE OF ALL DEFECTS OF WORKMANSHIP AND MATERIALS, AND SHALL AGREE TO REPLACE AT HIS EXPENSE, AT ANY TIME WITHIN ONE YEAR (OR AS AGREED) AFTER INSTALLATION IS ACCEPTED, ANY AND ALL DEFECTIVE PARTS THAT MAY BE FOUND.

NO. DATE: ISSUED FOR:

VALLIER DESIGN ASSOCIATES INC.
LANDSCAPE ARCHITECTURE PLANNING DESIGN
50 SE SCOTT STREET, #B, UNIT C
BEND, OREGON 97702
TELEPHONE 541.639.9889

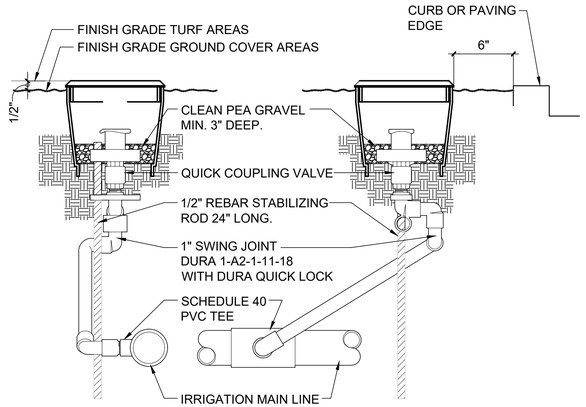
REGISTERED
745
MARCIA D. VALLIER
OREGON
04/18/11
LANDSCAPE ARCHITECT

SHEET TITLE
IRRIGATION DETAILS

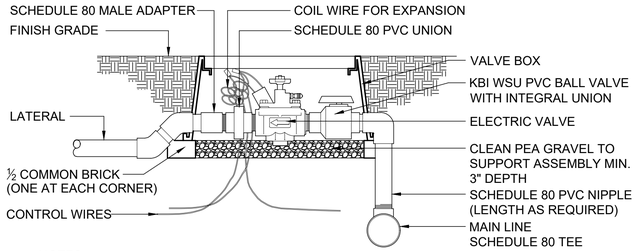
PROJECT
MOLALLA DAIRY QUEEN
1522 W. MAIN STREET
MOLLALLA, OR 97038

DATE
OCTOBER 2021

SHEET
L1.1

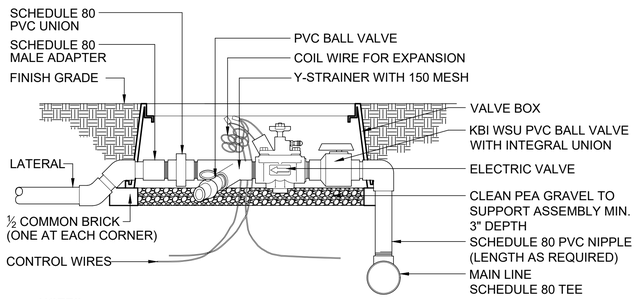


8 QUICK COUPLING VALVE
NOT TO SCALE



NOTES:
1. BUNDLE AND TAPE WIRE EVERY 10 FEET
2. PROVIDE 24" EXPANSION LOOP AT EACH WIRE CONNECTION
3. ELBOWS - SCH. 80 PVC. NIPPLES - THREADED SCH. 80 PVC
4. WIRE SPLICE KIT (PEN-TIT, 3M #DBY OR APPROVED EQUAL)
5. VALVE BOX (CARSON #1419-12B OR APPROVED EQUAL)
6. PROVIDE ONE EXTRA CONTROL WIRE TO EACH VALVE

9 REMOTE CONTROL VALVE - SPRAY/ROTOR
NOT TO SCALE



NOTES:
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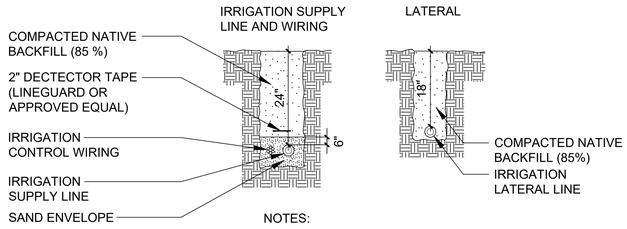
3. ELBOWS - SCH. 80 PVC. NIPPLES - THREADED SCH. 80 PVC
4. WIRE SPLICE KIT (PEN-TIT, 3M #DBY OR APPROVED EQUAL)
5. VALVE BOX (CARSON #1419-12B OR APPROVED EQUAL)
   SIZE VALVE BOX TO ALLOW FOR EASE OF REPAIR AND/OR REMOVAL OF VALVE AND Y-STAINER.
6. PROVIDE ONE EXTRA CONTROL WIRE TO EACH VALVE

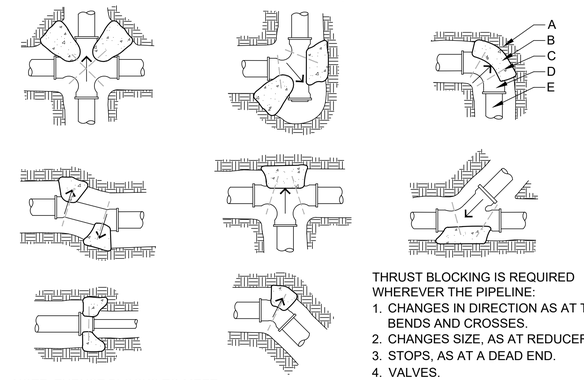
10 REMOTE CONTROL VALVE - BUBBLER
NOT TO SCALE



NOTES:
1. BUNDLE AND TAPE WIRE EVERY TEN FEET. LEAVE SLACK AT ALL CHANGES OF DIRECTION.
2. LATERAL LINES IN SEPARATE TRENCH FROM MAIN LINE AND WIRES.
3. PARALLEL LINES MINIMUM 6" APART.
4. TRENCH WIDTH TO ALLOW PROPER SNAKING OF PIPES.
5. INSTALL MIN. 2" SAND BEDDING BENEATH AND MIN. 6" SAND BACKFILL OVER IRRIGATION MAIN LINES.
6. INSTALL TRACER WIRE ON ALL MAIN LINES INCLUDING ARNOLD IRRIGATION DISTRICT LINE.

5 TRENCHING
NOT TO SCALE

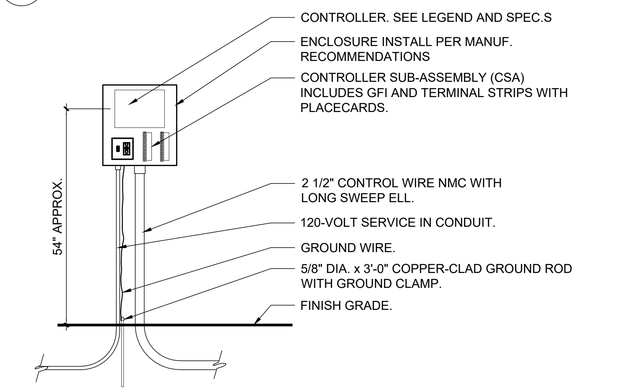
TYPICAL PARTS
A - UNDISTURBED SOIL
B - CONCRETE THRUST BLOCK
C - REBAR TO SECURE CONCRETE AND FITTING (TYP.)
D - FITTING (TYP.)
E - PIPE (TYP.)



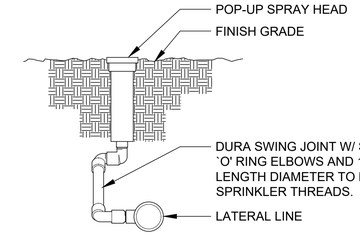
NOTE: THRUST BLOCKS TO MEET NFPA24 SECTION 10.8.2 OF THE 2010 EDITION.

THRUST BLOCKING IS REQUIRED WHEREVER THE PIPELINE:
1. CHANGES IN DIRECTION AS AT TEES, BENDS AND CROSSES.
2. CHANGES SIZE, AS AT REDUCERS.
3. STOPS, AS AT A DEAD END.
4. VALVES.
5. SIZE THRUST BLOCK PER CHART. USE REBAR TO TIE TOGETHER.
6. ALSO SEE DIABLO WATER DISTRICT STANDARD DRAWINGS FOR THRUST BLOCKS DWG 2 AND 3

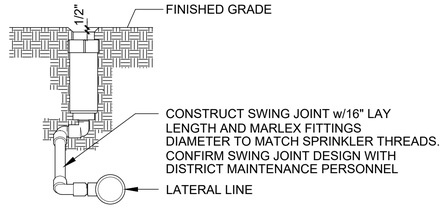
6 THRUST BLOCKING
NOT TO SCALE



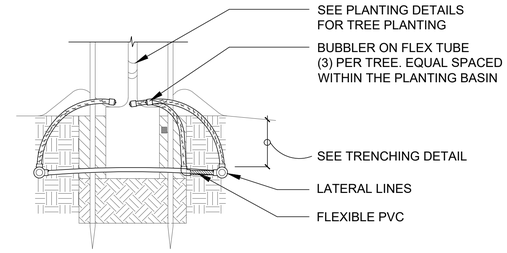
7 CONTROLLER - WALL MOUNT
NOT TO SCALE



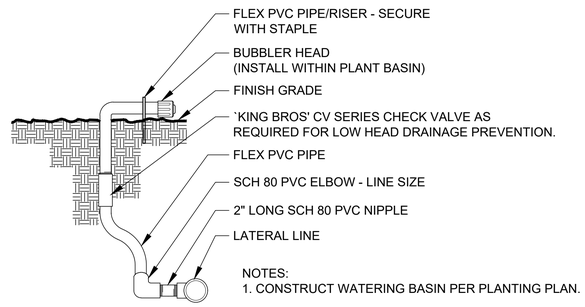
1 POP-UP SPRAY HEAD
NOT TO SCALE



2 ROTOR
NOT TO SCALE



3 BUBBLER ON TREE
NOT TO SCALE



NOTES:
1. CONSTRUCT WATERING BASIN PER PLANTING PLAN.

4 SHRUB BUBBLER
NOT TO SCALE

ISSUED FOR:
NO. DATE:

VALLIER DESIGN ASSOCIATES INC.
LANDSCAPE ARCHITECTURE PLANNING DESIGN
50 SE SCOTT STREET, #B, UNIT C
BEND, OREGON 97702
TELEPHONE 541.639.9889

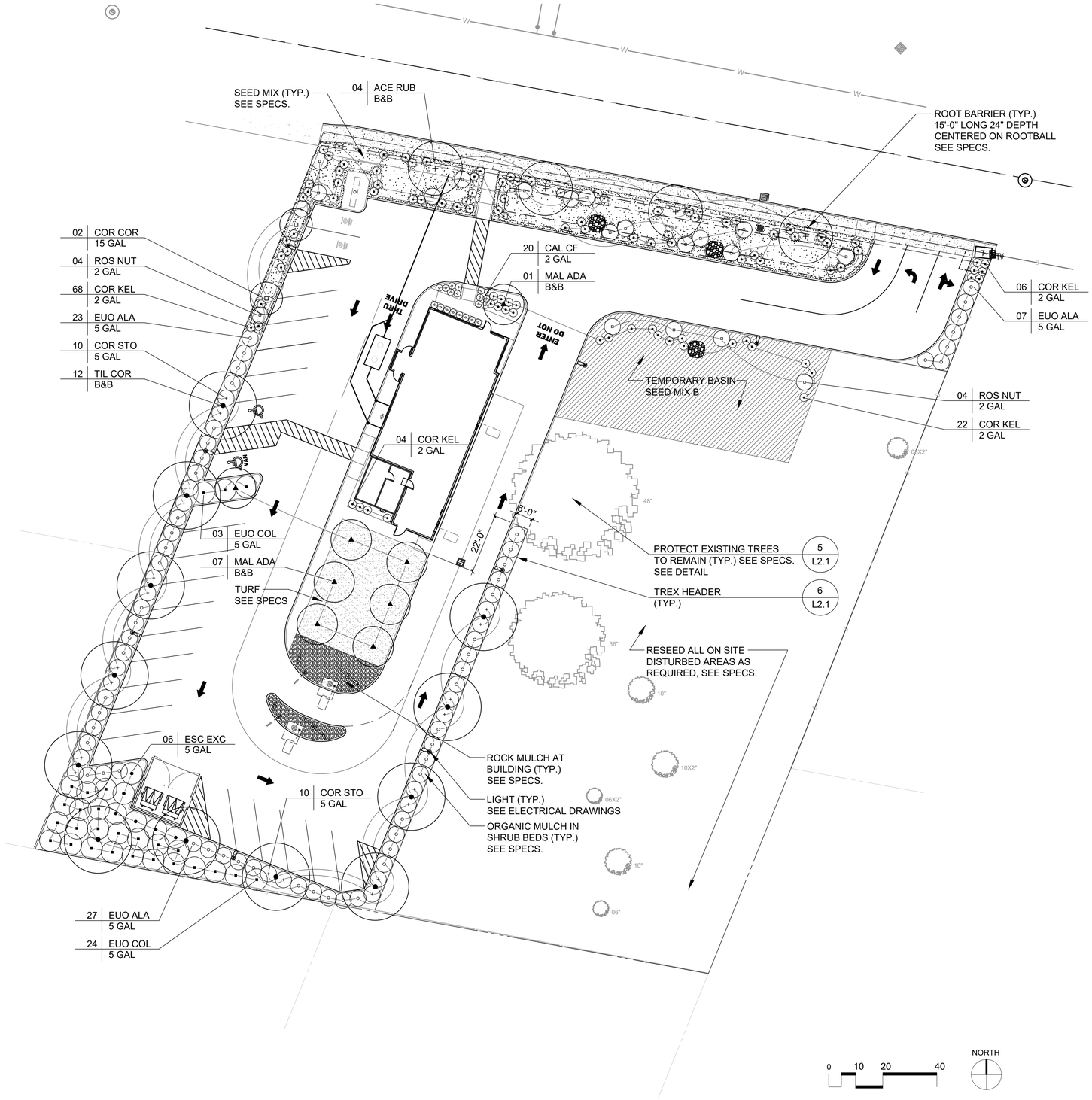
REGISTERED
745
MARCIA D. VALLIER
OREGON
04/18/11
LANDSCAPE ARCHITECT

SHEET TITLE
IRRIGATION DETAILS

PROJECT
MOLALLA DAIRY QUEEN
1522 W. MAIN STREET
MOLLALLA, OR 97038

DATE
OCTOBER 2021

SHEET
L1.2



PLANTING NOTES

1. ALL WORK SHALL BE PERFORMED BY PERSONS FAMILIAR WITH PLANTING WORK AND UNDER THE SUPERVISION OF A QUALIFIED PLANTING FOREMAN.
2. PLANT MATERIAL LOCATIONS SHOWN ARE DIAGRAMMATIC AND MAY BE SUBJECT TO CHANGE IN THE FIELD BY THE LANDSCAPE ARCHITECT BEFORE THE MAINTENANCE PERIOD BEGINS DUE TO UNFORESEEN CONFLICTS.
3. PLANT COUNT AND LEGEND IS FOR THE CONVENIENCE OF THE CONTRACTOR. IN THE CASE OF DISCREPANCIES, THE PLAN SHALL GOVERN.
4. PLANT MATERIAL LOCATIONS ARE TO BE ADJUSTED IN THE FIELD AS NECESSARY TO SCREEN UTILITIES BUT NOT TO BLOCK WINDOWS, PEDESTRIAN AND TRAFFIC SIGHT LINES, NOR IMPEDE ACCESS.
5. CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND BRING CONFLICTS WITH PLANT MATERIAL LOCATIONS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR A DECISION BEFORE PROCEEDING WITH THE WORK.
6. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO MAKE SUBSTITUTIONS, ADDITIONS AND DELETIONS IN THE PLANTING SCHEME AS NECESSARY WHILE WORK IS IN PROGRESS. SUCH CHANGES ARE TO BE ACCOMPANIED BY EQUITABLE ADJUSTMENTS IN THE CONTRACT PRICE IF/WHEN NECESSARY.
7. ALL PLANTING LOCATED ADJACENT TO SIGNS SHALL BE FIELD ADJUSTED SO AS NOT TO INTERFERE WITH VISIBILITY OF THE SIGNS.
8. THE DESIGN INTENT OF THE PLANTING PLAN IS TO ESTABLISH AN ATTRACTIVE LANDSCAPE APPEARANCE USING LOW-MAINTENANCE AND DROUGHT TOLERANT PLANT MATERIAL. FUTURE PLANT GROWTH, HOWEVER, WILL NECESSITATE SOME TRIMMING, SHAPING, AND ON-GOING ASSESSMENT TO ENSURE A HEALTHY AND ATTRACTIVE LANDSCAPE.
9. ALL PLANTING AREAS TO HAVE POSITIVE DRAINAGE TO EXISTING DRAINAGE SYSTEM. SEE CIVIL DRAWINGS. (S.A.D.)
10. PROTECT EXISTING IMPROVEMENTS, TREES AND LANDSCAPE TO REMAIN. REPAIR AND/OR REPLACE DAMAGE ELEMENTS WITH EQUAL OR BETTER MATERIALS.
11. STRIP AND STOCKPILE TOPSOIL FOR REUSE. S.C.D. NOXIOUS WEED CONDITIONS MAY REQUIRE THAT TOP SOIL REQUIRES SEE NOTE 12.
12. WEED CONTROL: THE REMOVAL OF NOXIOUS WEEDS INCLUDING Himalayan Blackberry (Rubus Discolor), Reed Canary Grass (Phalaris arundinacea), Teasel (Dipsacus fullonum), Canada Thistle (Cirsium arvense), and others as required through the maintenance period, or until healthy stand of desirable vegetation is established.

PLANT LIST

ABBREV.	QTY.	SCIENTIFIC NAME/COMMON NAME	SIZE	REMARKS
TREES				
ACE RUB	04	Acer rubrum 'Autumn Blaze' / Autumn Blaze Red Maple	B&B	2" Caliper
COR COR	02	Corylus cormuta / Hazelnut	B&B	1 ½" Caliper
MAL ADA	08	Malus x 'Adirondack' / Adirondack Crabapple	B&B	1 ½" Caliper
TIL COR	12	Tilia cordata 'Greenspire' / Greenspire Little Leaf Linden	B&B	2" Caliper
ORNAMENTAL SHRUBS, PERENNIALS, GRASSES AND VINES				
CAL CF	26	Calamagrostis x acutiflora 'Karl Foerster' / Foerster Feather Reed Grass	2 GAL	30" o.c.
COR KEL	100	Cornus sericea 'Kelseyi' / Kelsey's Dwarf Red-Osier Dogwood	2 GAL	3'-0' o.c.
COR STO	20	Cornus stolonifera 'Baaileyi' / Redtwig Dogwood	5 GAL	3'-0" o.c.
ESC EXC	06	Escallonia x exonieusis 'Fradsii' / Pink Princess Escallonia	5 GAL	8'-0" o.c.
EUO ALA	57	Euonymus alatus 'Compacta' / Winged Euonymus	5 GAL	5'-0" o.c.
EUO COL	27	Euonymus fortunei 'Coloratus' / Purpleleaf Wintercreeper	2 GAL	8'-0" o.c.
ROS NUT	08	Rosa nutkana / Nootka Rose	2 GAL	5'-0" o.c.

A.S. area shown
o.c. on center

TURF - SOD, SEE SPECS.

SEED MIX A, SEE SPECS.
DRY AREA SEED MIX

Scientific Name,	Common Name,	% Mixture
Elymus glaucus,	Blue Wildrye,	60
Hardeum brachyantherum	Meadow Barley	30
Bromus carinatus	Native California Brome	10

Pro Time 400 Native Grass Mix. Application rate 30lbs/acre (minimum)

SEED MIX B, SEED SPECS.
WET/MOIST AREA SEED MIX

Scientific Name,	Common Name,	% Mixture
Elymus glaucus,	Blue Wildrye,	47
Hardeum brachyantherum	Meadow Barley	40
Deschampsia caespitosa	Tufted Hairgrass	10
Glyceria occidentalis	Western Mannagrass	2
Beckmannia syziachne	American Sloughgrass	1

Pro Time 840 Native Grass Mix. Application rate 87lbs/acre (minimum)

ISSUED FOR:

NO. DATE:

VALLIER DESIGN ASSOCIATES INC.
LANDSCAPE ARCHITECTURE PLANNING DESIGN
50 SE SCOTT STREET, #B, UNIT C
BEND, OREGON 97702
TELEPHONE 541 639 9889

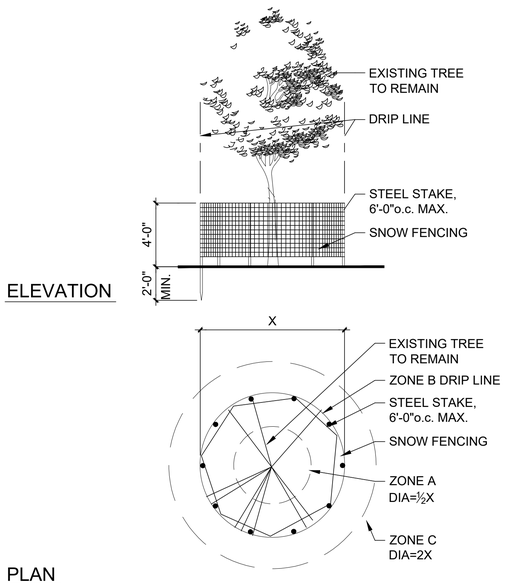
REGISTERED
746
MARCIA D. VALLIER
OREGON
04/18/11
LANDSCAPE ARCHITECT

SHEET TITLE
PLANTING PLAN

PROJECT
MOLALLA DAIRY QUEEN
1522 W. MAIN STREET
MOLLALLA, OR 97038

DATE
OCTOBER 2021

SHEET
L2.0



FENCING / ROOT PROTECTION
PROVIDE AND MAINTAIN HIGH VISIBILITY FENCING AT DRIPLINE
APPROVAL REQUIRED FOR USE/ACCESS WITHIN ZONE B.
PERMISSION FOR USE/ACCESS REQUIRES SURFACE PROTECTION FOR ALL UNFENCED, UNPAVED SURFACES WITHIN ZONE B.

SURFACE PROTECTION MEASURES
1. MULCH LAYER 6"-8" DEPTH
2. ¾" PLYWOOD OR
3. STEEL PLATES

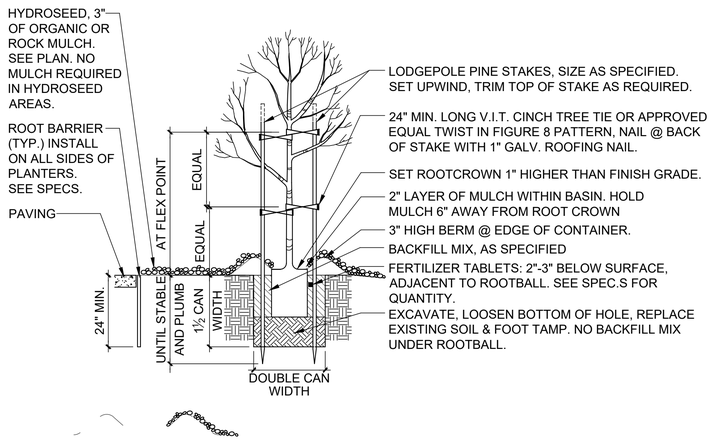
TRENCHING / EXCAVATION

ZONE A (CRITICAL ROOT ZONE)
NO DISTURBANCE ALLOWED WITHOUT SITE-SPECIFIC INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE.

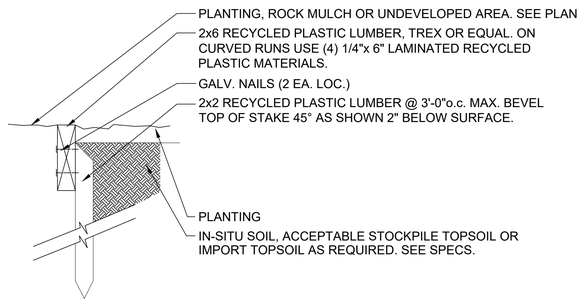
ZONE B (DRIPLINE)
OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO APPROVAL. SURFACE PROTECTION MEASURES REQUIRED. TRENCHING ALLOWED AS FOLLOWS:
- EXCAVATION BY HAND OR WITH HAND-DRIVEN TRENCHER MAY BE REQUIRED
- LIMIT TRENCH WIDTH. DO NOT DISTURB ZONE A
- MAINTAIN ⅔ OR MORE OR ZONE B IN UNDISTURBED CONDITION
TUNNELING MAY BE REQUIRED FOR TRENCHING DEEPER THAN 3'-0"

ZONE C (FEEDER ROOT ZONE)
OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO APPROVAL. SURFACE PROTECTION MEASURES MAY BE REQUIRED TRENCHING WITH HEAVY EQUIPMENT ALLOWED AS FOLLOWS:
- MINIMIZE TRENCH WIDTH
- MAINTAIN ⅔ OR MORE OF ZONE C IN UNDISTURBED CONDITION

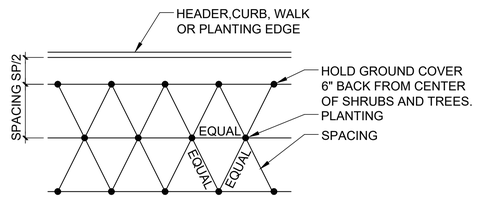
5 PROTECTIVE FENCING - FOR USE AT ALL TREES TO REMAIN
NOT TO SCALE



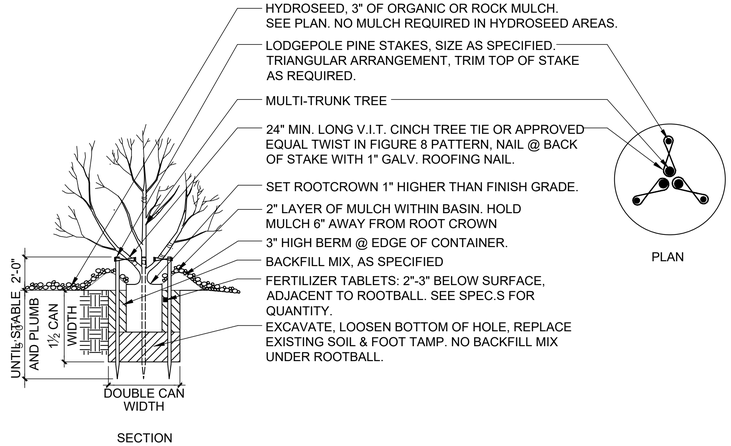
1 TREE PLANTING AND STAKING
NOT TO SCALE



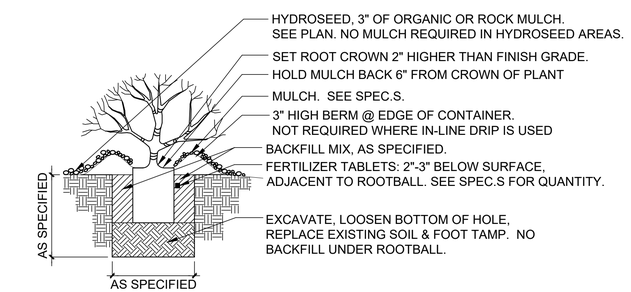
6 RECYCLED PLASTIC HEADER
SCALE: 1" = 1'-0"



4 GROUND COVER SPACING
NOT TO SCALE



2 MULTI-TRUNK TREE PLANTING AND STAKING
NOT TO SCALE



3 SHRUB AND GROUND COVER PLANTING
NOT TO SCALE

ISSUED FOR:
NO. DATE:

VALLIER DESIGN ASSOCIATES INC.
LANDSCAPE ARCHITECTURE PLANNING DESIGN
50 SE SCOTT STREET, #9, UNIT C
BEND, OREGON 97702
TELEPHONE 541.639.9889

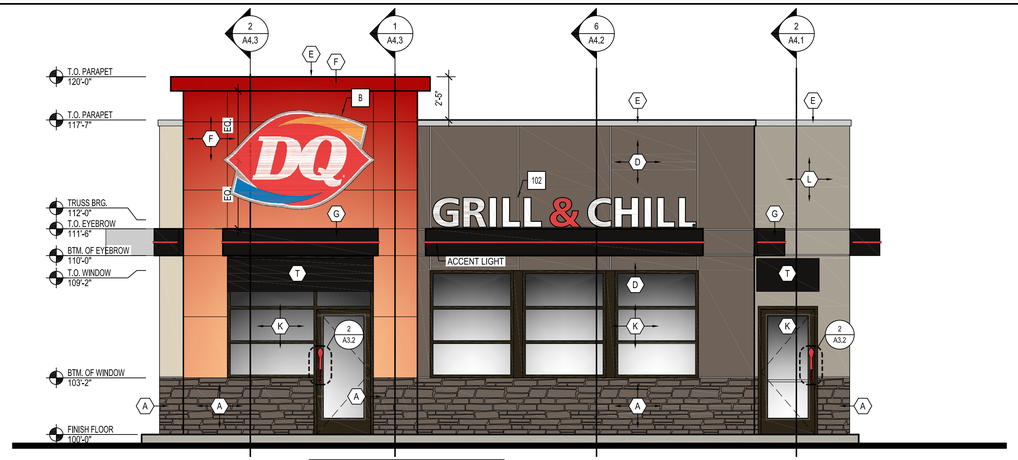
REGISTERED
745
MARCIA D. VALLIER
OREGON
04/18/11
LANDSCAPE ARCHITECT

SHEET TITLE
PLANTING DETAILS

PROJECT
MOLALLA DAIRY QUEEN
1522 W. MAIN STREET
MOLLALLA, OR 97038

DATE
OCTOBER 2021

SHEET
L2.1

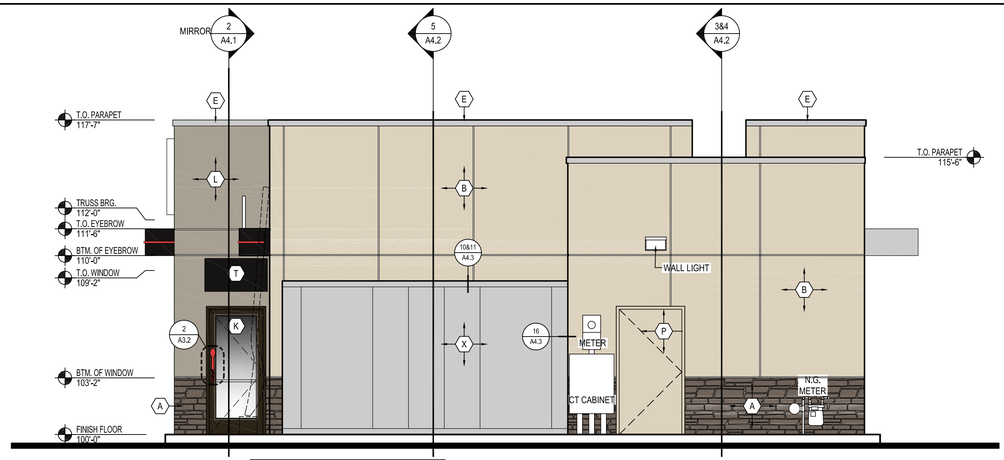


NOTE: THE DQ RED SPOON HANDLES HAVE SPECIAL INSTALLATION REQUIREMENTS. ALUM. STOREFRONT MFG. MUST COORD. LOCK & HANDLE, LOCATION & HEIGHTS

TOTAL AREA BETWEEN 30" A.F.F. AND 72" A.F.F. = 135 SQ FT
AREA OF GLAZING = 82 SQ FT = 61%

1 FRONT ELEVATION

A3.1 SCALE: 1/4" = 1'-0"

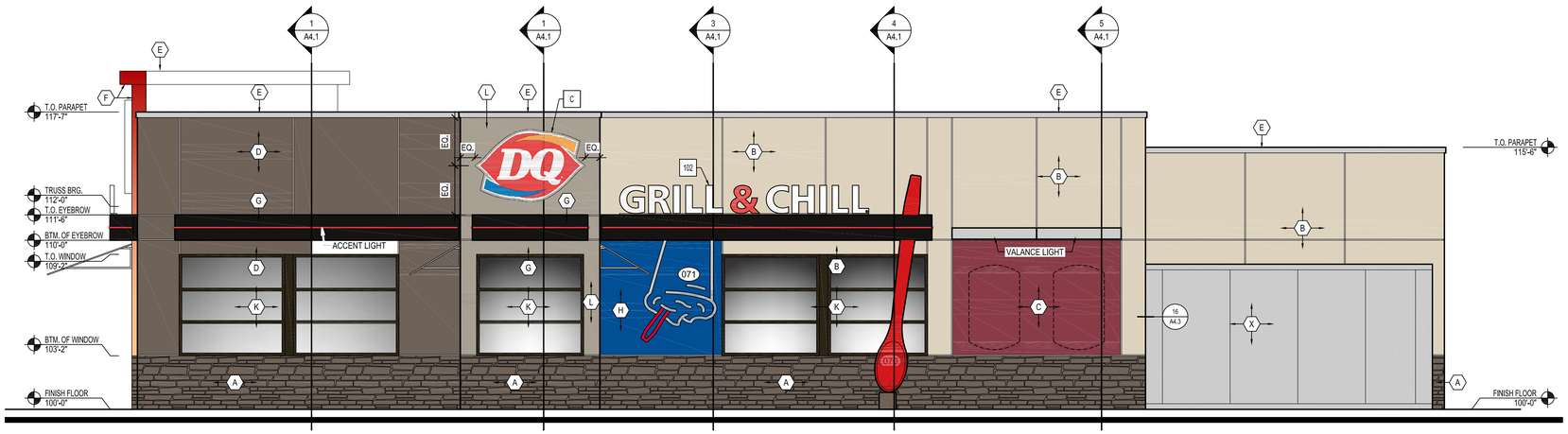


NOTE: THE DQ RED SPOON HANDLES HAVE SPECIAL INSTALLATION REQUIREMENTS. ALUM. STOREFRONT MFG. MUST COORD. LOCK & HANDLE, LOCATION & HEIGHTS

TOTAL AREA BETWEEN 30" A.F.F. AND 72" A.F.F. = 135 SQ FT
AREA OF GLAZING = 12 SQ FT = 9%

2 REAR ELEVATION

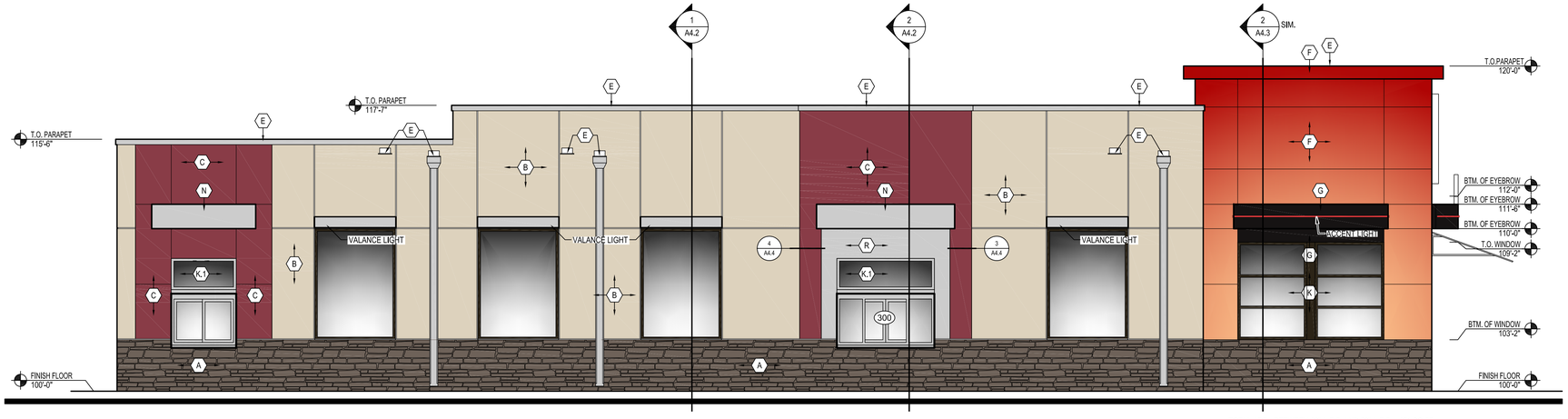
A3.1 SCALE: 1/4" = 1'-0"



TOTAL AREA BETWEEN 30" A.F.F. AND 72" A.F.F. = 271 SQ FT
AREA OF GLAZING = 89 SQ FT = 33%

3 ENTRANCE ELEVATION

A3.1 SCALE: 1/4" = 1'-0"



TOTAL AREA BETWEEN 30" A.F.F. AND 72" A.F.F. = 271 SQ FT
AREA OF GLAZING = 115 SQ FT = 44%

4 DRIVE-THRU ELEVATION

A3.1 SCALE: 1/4" = 1'-0"

NEW BUILDING FOR:

DQ GRILL & CHILL

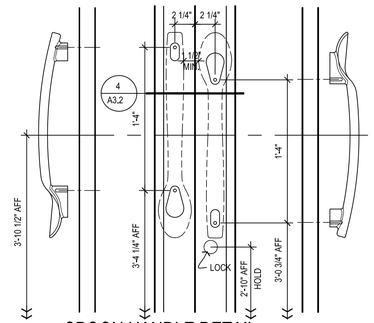
1522 MAIN STREET
MOLALLA, OREGON 97038

OREGON ARCHITECT
LICENSE NUMBER ARI-13205

ISSUE DATE: 08/23/22
REVISION DATE:
08/23/22 ORIGINAL ISSUE
1
2

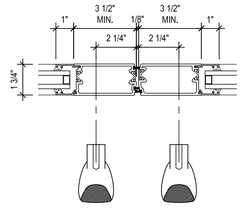
EXTERIOR ELEVATIONS

SHEET NUMBER:
A3.1



3 A3.2 SPOON HANDLE DETAIL

SCALE: 1 1/2" = 1'-0"



4 A3.2 SPOON HANDLE DETAIL

SCALE: 3" = 1'-0"

EXTERIOR ELEVATION KEYNOTES:

(B) EIFS: (LIGHT)
MFGR: STO CORPORATION
COLOR: NA19-0021 (MATCHES BENJAMIN MOORE, TEMPORAL SPIRIT 965)
FINISH: 310 STO (FINE SAND)
NOTE: PROVIDE HIGH IMPACT EIFS FROM GRADE TO 3'-0" A.F.F.

(C) EIFS: (RED)
MFGR: STO CORPORATION
COLOR: NA19-0022 (MATCHES BENJAMIN MOORE, CALIENTE AF-290)
FINISH: 130D STOLIT 1.0D (FINE SAND)
NOTE: PROVIDE HIGH IMPACT EIFS FROM GRADE TO 3'-0" A.F.F.

(D) EIFS: (DARK)
MFGR: STO CORPORATION
COLOR: NA19-0023 (MATCHES BENJAMIN MOORE, DEEP CREEK 1477)
FINISH: 130D STOLIT 1.0D (FINE SAND)
NOTE: PROVIDE HIGH IMPACT EIFS FROM GRADE TO 3'-0" A.F.F.

(E) COPING & SCUPPERS:
MFGR: FIRESTONE UNA-CLAD
MATL: 24 GA. STEEL
COLOR: SILVER METALLIC
FINISH: KYNAR 500
VENDOR: ARCHITECTURAL METALS, SEE NATIONAL VENDORS LIST

(F) METAL PANEL:
MFGR: ALPOLIC
STYLE: 4MM
COLOR: DQS (DQ DARK RED)
NOTE: MUST BE INSTALLED HORIZONTALLY. REFERENCE ARROWS ON BACK OF PANEL MUST BE ALIGNED IN THE SAME DIRECTION.
VENDOR: ARCHITECTURAL METALS, SEE NATIONAL VENDORS LIST

(G) METAL EYEBROW, OUTRIGGERS, & FLASHINGS:
MFGR: FIRESTONE UNA-CLAD
MATL: .040 ALUMINUM
COLOR: EXTRA DARK BRONZE
FINISH: KYNAR 500
VENDOR: ARCHITECTURAL METALS, SEE NATIONAL VENDORS LIST

(H) EIFS: (BLUE)
MFGR: STO CORPORATION
COLOR: NA19-0024 (MATCHES BENJAMIN MOORE, BIG COUNTRY BLUE #2066-30)
FINISH: 130D STOLIT 1.0 (FINE SAND)
NOTE: PROVIDE HIGH IMPACT EIFS FROM GRADE TO 3'-0" A.F.F.

(K) STOREFRONT:
MFGR: YKK AP AMERICA INC.
STYLE: 2"x4 1/2"
FINISH: DARK BRONZE
GLAZING: CLEAR, 1" INSULATED, LOW E

(L) EIFS: (MEDIUM)
MFGR: STO CORPORATION
COLOR: NA20-0019 (MATCHES BENJAMIN MOORE, WILLOW CREEK #1468)
FINISH: 310 STO (FINE SAND)
NOTE: PROVIDE HIGH IMPACT EIFS FROM GRADE TO 3'-0" A.F.F.

(N) METAL EYEBROW, OUTRIGGERS, & FLASHINGS:
MFGR: FIRESTONE UNA-CLAD
MATL: .040 ALUMINUM
COLOR: CLEAR ANODIZED
FINISH: SATIN
VENDOR: ARCHITECTURAL METALS, SEE NATIONAL VENDORS LIST

(P) PAINT:
MFGR: BENJAMIN MOORE
COLOR: TEMPORAL SPIRIT 965
PRODUCT: AURA EXTERIOR PAINT, EGG SHELL LOW LUSTRE #634
PRIMER: FIRST COAT - AURA EXTERIOR PAINT

(Q.1) TRASH ENCLOSURE PAINT:
MFGR: BENJAMIN MOORE
COLOR: DEEP CREEK 1477
PRODUCT: AURA EXTERIOR PAINT, EGG SHELL LOW LUSTRE #634
PRIMER: FIRST COAT - AURA EXTERIOR PAINT

(R) METAL PANEL:
MFGR: ALPOLIC
STYLE: 3MM
COLOR: TBX SILVER
NOTE: MUST BE INSTALLED HORIZONTALLY. REFERENCE ARROWS ON BACK OF PANEL MUST BE ALIGNED IN THE SAME DIRECTION.
VENDOR: ARCHITECTURAL METALS, SEE NATIONAL VENDORS LIST

(T) AWNING:
MFGR: SUNBRELLA
COLOR: CHARCOAL TWEED 6007-000
VENDOR: SIGN SOURCE

(X) WALKIN COOLER/FREEZER:
MFGR: KOLPAK
COLOR: FACTORY FINISH
VENDOR: WASSERSTROM
NOTE: SEE EQUIPMENT SCHEDULE FOR DETAILS

OPENING SCHEDULE

NATIONAL ACCOUNT DOOR AND FRAME SUPPLIER (PLAM, WOOD AND H.M.) COOK & BOARDMAN, SEE NATIONAL VENDORS LIST

OPNG. NO.	OPENING LOCATION	FRAME				DOOR			FIRE RATING	HARDWARE GROUP	NOTES:
		SIZE	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH			
100A	VESTIBULE (EXT.)	3'-4" x 7'-2" x 4 1/2"	F-1	ALUM	DK BRZ	B	ALUM.	DK BRZ	-	E3	SEE 3/3.2 & 4/A3.2 FOR DOOR HANDLE INSTALLATION
100B	VESTIBULE (EXT.)	3'-4" x 7'-2" x 4 1/2"	F-1	ALUM	DK BRZ	B	ALUM.	DK BRZ	-	E3	SEE 3/3.2 & 4/A3.2 FOR DOOR HANDLE INSTALLATION
100C	VESTIBULE (INT.)	6'-4" x 7'-2" x 4 1/2"	F-4	ALUM	DK BRZ	B	ALUM.	DK BRZ	-	E2	MOUNT BOTTOM OF DOOR FRAME LEVEL W/ TOP OF FLOOR TILE
100D	VESTIBULE WINDOW	6'-4" x 6'-0" x 4 1/2"	F-9	ALUM	DK BRZ	-	-	-	-	-	-
101A	DINING ROOM	12-2" x 6'-0" x 4 1/2"	F-7	ALUM	DK BRZ	-	-	-	-	-	-
101B	DINING ROOM	13'-0" x 6'-0" x 4 1/2"	F-7	ALUM	DK BRZ	-	-	-	-	-	-
101C	DINING ROOM	15'-0" x 6'-0" x 4 1/2"	F-6	ALUM	DK BRZ	-	-	-	-	-	-
101D	TO PATIO	8'-2" x 9'-2" x 4 1/2"	F-8	ALUM	DK BRZ	B	ALUM.	DK BRZ	-	E3	SEE 3/3.2 & 4/A3.2 FOR DOOR HANDLE INSTALLATION
101E	DINING ROOM	9'-0" x 6'-0" x 4 1/2"	F-7	ALUM	DK BRZ	-	-	-	-	-	-
102	RESTROOM	3'-4" x7'-2" x5 3/4"	F-1	HM	PNT	A	PC	-	-	R1	UNDERCUT BY 1". - PLAM: FORMICA PLATINUM 902-58
103	RESTROOM	3'-4" x7'-2" x5 3/4"	F-1	HM	PNT	A	PC	-	-	R1	UNDERCUT BY 1". - PLAM: FORMICA PLATINUM 902-58
105	DRIVE-THRU	6'-0" x 5'-4" x 4 1/2"	F-6	ALUM	CLR	-	-	-	-	-	-
109	OFFICE	3'-4" x7'-2" x5 3/4"	F-1	HM	PNT	A	PC	-	-	O2	UNDERCUT BY 1". - PLAM: FORMICA PLATINUM 902-58
110	SERVICE	3'-10" x 7'-2" x 5 3/4"	F-1	HM	PNT	A	HM	-	-	S1	-

NOTES:
1. PARTICLE CORE DOORS: SIZE AS PER PLAN AND SCHEDULE. ALL EDGES/SURFACES TO BE COVERED WITH PLASTIC LAMINATE.
2. HOLLOW METAL DOOR(S): SIZE AS PER PLAN AND SCHEDULE. (HOT ROLLED LEVEL 2 MODEL 2) STEEL TO BE 18 Ga., INTERIOR TO BE FOAM INSULATION, WITH INTEGRAL REINFORCEMENT FOR CLOSURE AND PANIC HARDWARE.
3. GLAZING (TYPICAL AT ALL): CLEAR, 1" INSULATED, LOW E

ALUM = ALUMINUM
HM = HOLLOW METAL
PC = PARTICLE CORE
DK BRZ = ANODIZED ALUMINUM STATUTORY DARK BRONZE FINISH
CLR = ANODIZED ALUMINUM CLEAR FINISH
PNT = SEE INTERIOR ELEVATIONS AND FINISH SCHEDULE FOR COLOR

HARDWARE GROUPS

NATIONAL ACCOUNT DOOR AND FRAME SUPPLIER (PLAM, WOOD AND H.M.) COOK & BOARDMAN, SEE NATIONAL VENDORS LIST
NOTE: THIS IS A PROTOTYPICAL SCHEDULE, ALL GROUPS MAY NOT BE USED.

GROUP #E1: TYPICAL EXTERIOR VESTIBULE DOORS
- CLOSER: HAGER MFG., MODEL #5200 SPR CSH CLOSER.
- HINGES: HAGER MFG., MDL #BB1199 32DB WITH NON-REMOVABLE PINS, 4.5"x4.5"x0.160" THk., (4) HINGES PER LEAF.
- KEYED CYLINDERS: HAGER MFG., MDL# 3902 MORTISE CYLINDER, PROVIDE (2) KEYS PER DOOR, ALL CYLINDERS KEYED ALIKE. (MOUNTED AT 34" AFF, COORDINATE W/ SPOON HANDLE)
- SPOON HANDLE (PROVIDED & INSTALLED BY ALUM, STOREFRONT CONTRACTOR, AVAILABLE FROM HJC, SEE ADQ NATIONAL VENDORS LIST)
- PUSH BAR: HAGER MFG., 130S
- SWEEP: HAGER MFG., MDL #801SB, MIL ALUM FINISH, SIZED TO FIT DOOR WIDTH.
- THRESHOLD: HAGER MFG., MDL #412 S, MIL ALUM FINISH, SIZED TO FIT DOOR OPENING WIDTH.
- WEATHERSTRIPPING:

1. HARDWARE (EQUAL OR BETTER) PART OF DOOR MANUFACTURERS PACKAGE
2. THE G.C. TO PROVIDE DOOR SIGNAGE STATING "THIS DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS" (SINGLE LINE HORIZONTAL SIGN PREFERRED)
3. THE DQ RED SPOON HANDLES HAVE SPECIAL INSTALLATION REQUIREMENTS. ALUMINUM STOREFRONT MANUFACTURER MUST COORDINATE LOCK & HANDLE HEIGHTS.

GROUP #E2: TYPICAL INTERIOR VESTIBULE DOORS
- CLOSER: HAGER MFG. MODEL #5200 SPR CSH CLOSER.
- HINGE(S): HAGER MFG., MDL #BB1199 32DB WITH NON-REMOVABLE HINGE PINS, 4.5" X 4.5" X 0,180" Thk., (4) HINGES PER LEAF.
- PUSH/PULL: HAGER MFG., MDL#159D LH COMBO 32DB, & MDL#159D RH COMBO 32DB.
- FLOOR STOP: HAGER 241F 26D DOME LOW STOP. (1) PER LEAF

1. HARDWARE PART OF DOOR MANUFACTURERS PACKAGE

GROUP #E3: TYPICAL EXTERIOR PATIO/EGRESS DOOR
- CLOSER: HAGER MFG. MODEL #5200 SPR CSH CLOSER.
- DEAD BOLT: ADAMS RITE MS1850S
- HINGE(S): HAGER MFG., MDL #BB1199 32DB WITH NON-REMOVABLE HINGE PINS, 4.5" X 4.5" X 0.180" Thk., (4) HINGES PER LEAF.
- KEYED CYLINDERS: HAGER MFG., MDL# 3902 MORTISE CYLINDER, PROVIDE (2) KEYS PER DOOR, ALL CYLINDERS KEYED ALIKE. (MOUNTED AT 34" AFF, COORDINATE W/ SPOON HANDLE)
- SPOON HANDLE (PROVIDED & INSTALLED BY ALUM. STOREFRONT CONTRACTOR, AVAILABLE FROM HJC, SEE ADQ NATIONAL VENDORS LIST)
- PUSH BAR: HAGER MFG., 130
- SWEEP: HAGER MFG., MDL #801SB, MIL ALUM FINISH, SIZED TO FIT DOOR WIDTH.
- THRESHOLD: HAGER MFG., MDL #412S, MIL ALUM FINISH, SIZED TO FIT DOOR OPENING WIDTH.
- WEATHERSTRIPPING:

1. HARDWARE (EQUAL OR BETTER) PART OF DOOR MANUFACTURERS PACKAGE
2. THE G.C. TO PROVIDE DOOR SIGNAGE STATING "THIS DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS" (SINGLE LINE HORIZONTAL SIGN PREFERRED)
3. THE DQ RED SPOON HANDLES HAVE SPECIAL INSTALLATION REQUIREMENTS. ALUMINUM STOREFRONT MANUFACTURER MUST COORDINATE LOCK & HANDLE HEIGHTS.

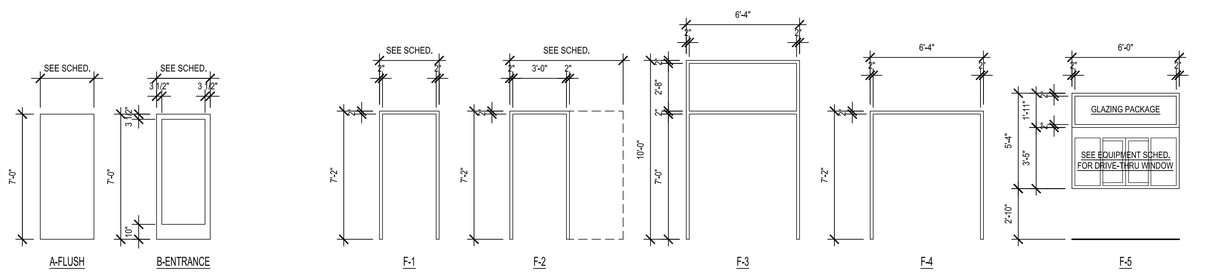
GROUP #O1: TYPICAL OFFICE POCKET DOOR
- H.M. POCKET DOOR FRAME: KARPEN STEEL CUFK0003
- BACK TO BACK PULL: HAGER 14J 10" 32D
- TRACK SYSTEM: HAGER 9878-72
- MORTISE LOCK: HAGER 3835S US26D CYLINDER X THUMBTURN
- DOOR STOP: HAGER 249F US2C #011616

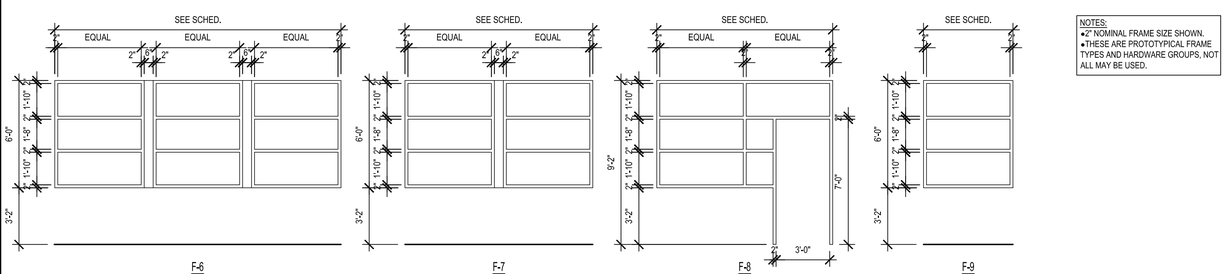
GROUP #O2: TYPICAL OFFICE DOOR
- CLOSER: HAGER MFG, MODEL #5200 CLOSER
- HINGE(S): HAGER MFG., MDL #ECBB 1100 US26D, 4.5" X 4.5" X 0,134" Thk., (3) HINGES PER LEAF
- KICK PLATE: HAGER MFG., MDL#190S 18 Ga. 34"W X 10"H X 0,05" Thk. (MOUNTING HOLES PREDRILLED AT FACTORY, INSTALLED ON PUSH SIDE OF DOOR)
- STOP, DOOR: HAGER MFG., MDL #232W 32D, BRUSHED CHROME, 2 1/2" DIA, WALL MOUNT
- LOCKSET: 3553 US26D-WITHNELL (KEYED)

GROUP #S1: TYPICAL REAR SERVICE DOOR
- CLOSER: HAGER MFG. MODEL #5200 SPR CSH CLOSER.
- EXIT DEVICE: HAGER MFG., MDL #4701 RIM US28, SPRAYED ALUMINUM FINISH.
- HINGE(S): HAGER MFG., MDL #ECBB 1100 US26D WITH NON-REMOVABLE HINGE PINS, 4.5" X 4.5" X 0.134" Thk., (4) HINGES PER LEAF.
- KICK PLATE: HAGER MFG., MDL #ARMOR PLATE, 40"W X 20"H X 0.05" Thk.
- PROTECTOR, TRIM; HAGER., MFG., MDL #HD2250
- PULL: HAGER MFG., MDL#4J32D, (EXTERIOR SIDE OF DOOR).
- SWEEP: HAGER MFG., MDL #801S V, MIL ALUM FINISH, SIZED TO FIT DOOR WIDTH.
- THRESHOLD: HAGER MFG., MDL #412S, MIL ALUM FINISH, SIZED TO FIT DOOR OPENING WIDTH.
- VIEWER: HAGER MFG., 1756 US26D, 200 DEGREE VIEW (FACTORY INSTALLED).
- WEATHERSTRIPPING: HAGER MFG., MDL #891S V, MIL ALUM FINISH, SIZED TO FIT DOOR.
- EXIT ALARM: EAX BATTERY POWERED DOOR MOUNTED WEATHERIZED EXIT ALARM, EAX-500W

GROUP #R1: TYPICAL SINGLE OCCUPANT RESTROOM DOOR
- CLOSER: HAGER MFG. MODEL #5200 CLOSER
- HINGES: HAGER MFG., MDL #ECBB 1100 US26D, 4.5" x4.5" x0,134" Thk., (3) HINGES PER LEAF.
- KICK PLATE: HAGER MFG., MDL#190S 18 Ga. 34"W X 10"H X 0,05" Thk. (MOUNTING HOLES PREDRILLED AT FACTORY, INSTALLED ON PUSH SIDE OF DOOR)
- STOP DOOR: HAGER MFG., MDL #232W 32D, BRUSHED CHROME, 2 1/2" DIA, WALL MOUNT.
- INDICATOR LOCK: SCHLAGE B571626
- (2) 4x16 PUSH PLATE
- PULL HANDLE: HAGER 3E320
- FOOT OPERATED DOOR PULL: HAGER MFG., 190F

GROUP #R2: TYPICAL RESTROOM DOOR
- CLOSER: HAGER MFG. MODEL #5200 CLOSER
- HINGES: HAGER MFG., MDL #ECBB 1100 US26D, 4.5" x4.5" x0.134" Thk., (3) HINGES PER LEAF.
- KICK PLATE: HAGER MFG., MDL#190S 18 Ga. 34"W X 10"H X 0,05" Thk. (MOUNTING HOLES PREDRILLED AT FACTORY, INSTALLED ON PUSH SIDE OF DOOR)
- STOP DOOR: HAGER MFG., MDL #232W 32D, BRUSHED CHROME, 2 1/2" DIA, WALL MOUNT.
- 4x16 PUSH PLATE
- PULL HANDLE: HAGER 3E320
- FOOT OPERATED DOOR PULL: HAGER MFG., 190F





NOTES:
•2" NOMINAL FRAME SIZE SHOWN.
•THESE ARE PROTOTYPICAL FRAME TYPES AND HARDWARE GROUPS, NOT ALL MAY BE USED.

4 A3.2 DOOR & FRAME TYPES

SCALE: 1/4" = 1'-0"

NOTE: THIS IS A PROTOTYPICAL ELEVATIONS, ALL FRAMES MAY NOT BE USED.

NEW BUILDING FOR:

DQ GRILL & CHILL®

1522 MAIN STREET
MOLALLA, OREGON 97038

AMERICAN DAIRY QUEEN
MINNEAPOLIS, MN U.S.A.

OREGON ARCHITECT
LICENSE NUMBER ARI-13205

SPECIAL NOTICES

ISSUE DATE: 08/23/22

REVISION DATE:

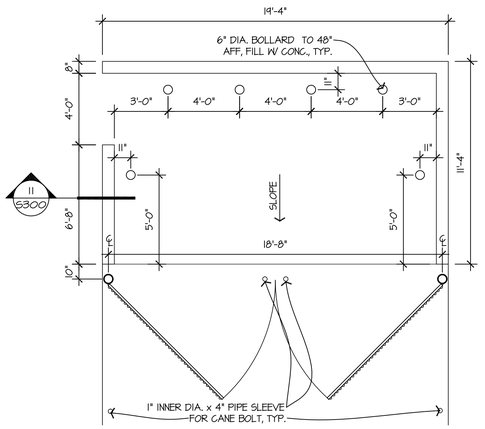
08/23/22 ORIGINAL ISSUE

1 2

ELEVATIONS, DOOR & FRAME TYPES

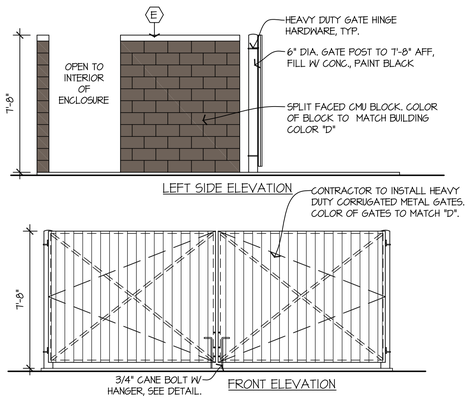
SHEET NUMBER:

A3.2



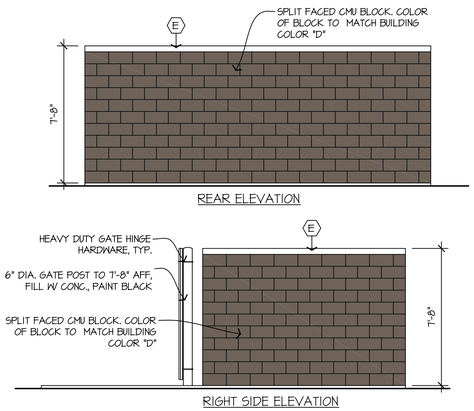
2 TRASH ENCLOSURE PLAN

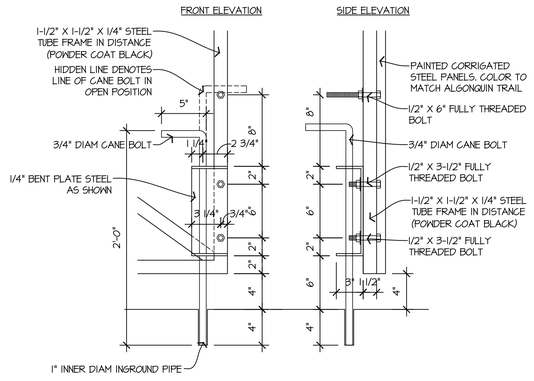
A1.1 SCALE: 1/4" = 1'-0"



3 TRASH ENCLOSURE ELEVATIONS

A1.1 SCALE: 1/4" = 1'-0"





4 CAIN BOLT & HANGER DETAIL

A1.1 SCALE: 1-1/2" = 1'-0"

NEW BUILDING FOR:

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MOLALLA, OREGON 97038

AMERICAN DAIRY QUEEN
MINNEAPOLIS, MN U.S.A.

OREGON ARCHITECT
LICENSE NUMBER ARI-13205

ISSUE DATE: 08/23/22

REVISION DATE:

08/23/22	ORIGINAL ISSUE
1	
2	

ARCHITECTURAL SITE PLAN

SHEET NUMBER:

A1.1

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Molalla Dairy Queen

Transportation Impact Study

Molalla, Oregon

Date:
October 11, 2021

Prepared for:
DND Groups, Inc.

Prepared by:
Jennifer Danziger, PE

RENEWS: 12-31-21

List of Figures

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Executive Summary

1. The proposed project intends to develop the 1.67-acre site, Tax Lots 52E07D 01800 and 01900, with a 2,322-square-foot Dairy Queen with drive-through window. The project intends to take access via a single, two-way driveway along OR 211 at approximately the same location as the existing residential driveway and opposite the driveway serving the shopping center on the north side of the highway. The existing zoning is classified as Central Commercial (C-2) which is consistent with the proposed development.
2. The operating hours of a Dairy Queen are typically 10:30 AM to 10:00 PM, Sunday through Thursday and 10:30 AM to 11:00 PM, Friday and Saturday. Therefore, trip generation is generally lower than quick-service restaurants which also serve breakfast. However, the project was analyzed with morning operations to address any future change in operations.
3. The trip generation calculations show that the proposed project is estimated to have a total trip generation of 93 morning peak hour trips, 76 evening peak hour trips, and 1,094 daily trips. The primary trip generation is estimated at 47 morning peak hour trips, 38 evening peak hour trips, and 548 daily trips. Detailed calculations are attached to this memo.
4. No significant trends or crash patterns were identified at any of the study intersections.
5. The available sight lines exceed the 415-foot intersection sight distance recommendation.
6. All study intersections are projected to operate at an acceptable v/c ratio less than 0.90 per ODOT standards upon buildout of the proposed development through year 2023, with the exception of the OR 211 at Leroy Avenue. The proposed project is not anticipated to directly contribute to the substandard condition. The Cascade Center project identified a need for a future signal, but the approved development does not yet meet the ODOT warrant criteria. Traffic flow on the highway meets the ODOT standard.
7. 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.

Project Description

Introduction

The property located at 1522 W Main Street in Molalla, Oregon has been proposed for development with a 2,322-square-foot (SF) Dairy Queen. The existing single-family home on the site will be removed.

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 Molalla's city engineer and ODOT's development coordinator, this report conducts safety and capacity/level of service analyses at the following three (3) intersections and the site access driveway:

1. OR 211 & OR 213
2. OR 211 & Site Access Driveway
3. OR 211 & Leroy Avenue
4. OR 211 & Molalla Avenue

All supporting data and calculations are included in the appendix to this report.

Location Description

The proposed project intends to develop the 1.67-acre site, Tax Lots 52E07D 01800 and 01900, with a 2,322-SF Dairy Queen with drive-through window. The project intends to take access via a single, two-way driveway along OR 211 at approximately the same location as the existing residential driveway and opposite the driveway serving the shopping center on the north side of the highway. The existing zoning is classified as Central Commercial (C-2) which is consistent with the proposed development.

Figure 1 displays a vicinity map of the project site, with the project site outlined in red. A site plan depicting the proposed project is provided in the appendix.

Figure 1: Project Location (image from Google Earth)

Vicinity Streets

The study area includes five 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	Jurisdiction	Functional Classification	Travel Lanes	Speed	Curbs & Sidewalks	On-Street Parking	Bicycle Facilities
OR 211	ODOT	Arterial & District Hwy	2-3	35 mph	Partial both sides	East of Kennel Avenue	Partial both sides
OR 213	ODOT	Arterial & District Hwy	2-3	35 mph	Partial both sides	None	Partial both sides
Leroy Avenue	City of Molalla	Major Collector	2	25 mph	Continuous	None	None
Molalla Avenue	City of Molalla	Arterial	2	25 mph	Continuous	Both Sides	None

Notes: Functional Classification based on the Molalla Transportation System Plan (TSP) Update

Study Intersections

Through coordination with the City of Molalla and ODOT, four (4) study intersections were identified for evaluation. The existing characteristics of these intersections are summarized in Table 2.

Table 2: Vicinity Intersection Descriptions

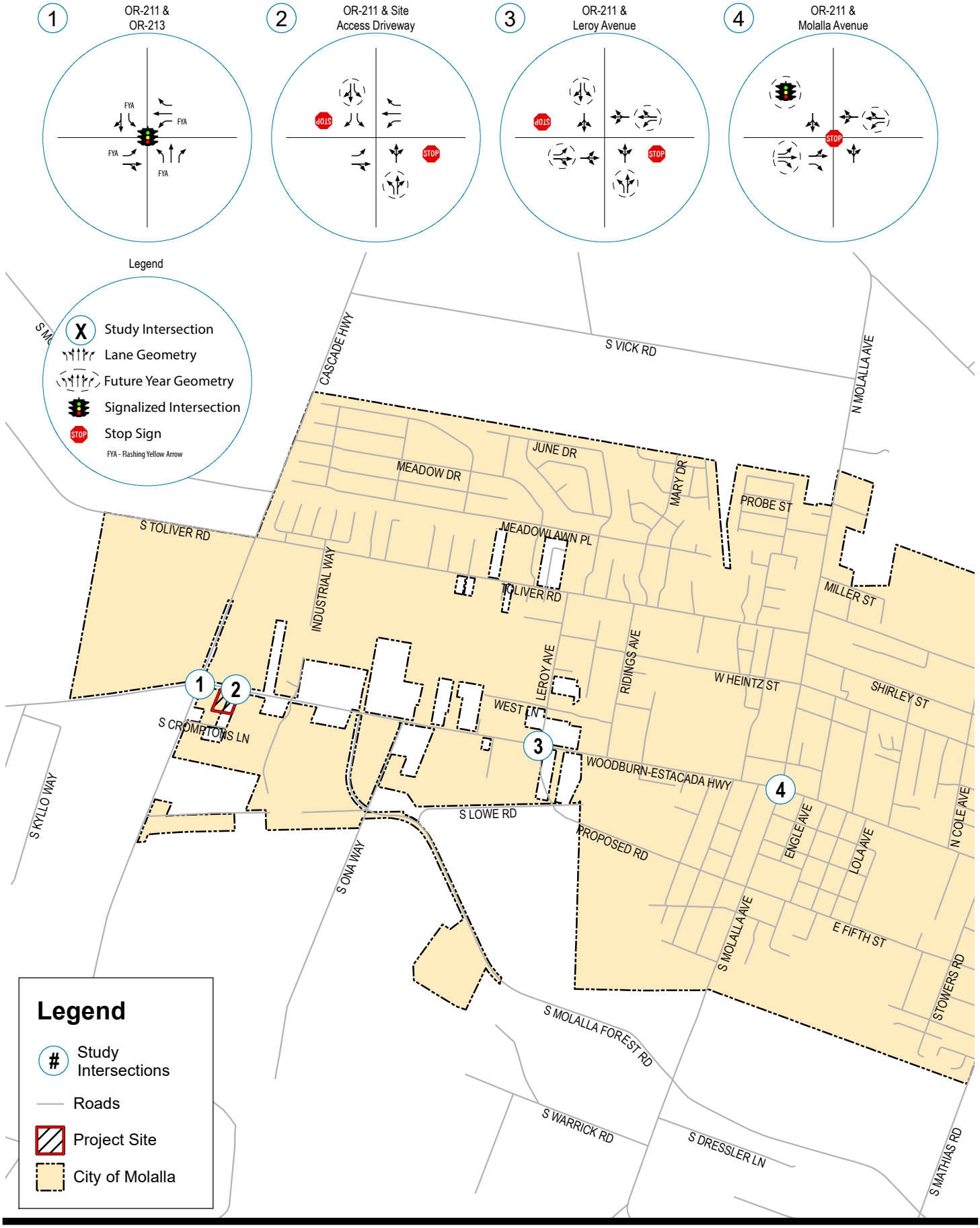
Intersection		Geometry	Traffic Control	Phasing/Stopped Approaches
1	OR 211 & OR 213	4-Leg	Signalized	Protected/Permitted Left Turn for All Approaches
2	OR 211 & Site Access Drive	4-Leg	Stop Controlled	NB/SB Stop Controlled
3	OR 211 & Leroy Avenue	4-Leg	Stop Controlled	NB/SB Stop Controlled
4	OR 211 & Molalla Avenue	4-Leg	Stop Controlled	All-Way Stop Controlled Future Signal

A vicinity map showing the project site, vicinity streets, and intersection configurations is shown in Figure 2.

Transit

South Clackamas Transit District has three routes that serve the City of Molalla. Two of the routes have a bus stop on the north side of OR 211 (W Main Street) at the Safeway Shopping Center just over 1/2-mile walking/biking distance from the project site:

- 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, Saturday, and has no service on Sunday. Headways are roughly one hour.
- The Molalla to Canby route loops Clackamas County with two stops in Molalla. The bus runs from 6:30 AM to 6:15 PM, Monday through Friday, and has no weekend service.



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Vicinity Map

NOT TO SCALE

Figure 2
Molalla Dairy Queen TIS
10/11/2021

Site Trips

Trip Generation

To estimate the number of trips that will be generated by the existing and proposed uses, trip rates from the *Trip Generation Manual*[1] were used. Specifically, data from the following land use code 934, Fast Food Restaurant with a Drive-Through Window, was used to estimate site trip generation based on 1,000 SF of the gross floor area. According to the manual:

> *This category includes fast-food restaurants with drive-through windows. This type of restaurant is characterized by a large drive-through clientele, long hours of service (some are open for breakfast, all are open for lunch and dinner, some are open late at night or 24 hours a day) and high turnover rates for eat-in customers. These limited-service eating establishments do not provide table service. Non-drive-through patrons generally order at a cash register and pay before they eat.*
>
> *Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.*

The operating hours of a Dairy Queen are typically 10:30 AM to 10:00 PM, Sunday through Thursday and 10:30 AM to 11:00 PM, Friday and Saturday. Therefore, trip generation is generally lower than quick-service restaurants which also serve breakfast. However, the project was analyzed with morning operations to address any future change in operations.

The proposed development is expected to attract pass-by and diverted trips to the site. Pass-by trips are trips that leave the adjacent roadway to patronize a land use and then continue in their original direction of travel. Like pass-by trips, diverted trips are trips that divert from a nearby roadway not adjacent to the site to patronize a land use before continuing to their original destination. Pass-by/diverted trip generation was determined by referencing data from land use code 934 of the *Trip Generation Handbook*[2].

As shown in Table 3, the trip generation calculations show that the proposed project is estimated to have a total trip generation of 93 morning peak hour trips, 76 evening peak hour trips, and 1,094 daily trips. The primary trip generation is estimated at 47 morning peak hour trips, 38 evening peak hour trips, and 548 daily trips. Detailed calculations are attached to this memo.

[1] Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th Edition, 2017.
[2] Institute of Transportation Engineers (ITE), *Trip Generation Handbook*, 3rd Edition, 2014.

Table 3: Trip Generation

ITE Code	Intensity	Morning Peak Hour			Evening Peak Hour			Daily Trips
		In	Out	Total	In	Out	Total	
934 – Fast Food with Drive-Through Window	2.322 KSF	47	46	93	40	36	76	1,094
Pass-By Trips (49%/50%/50%)*		*23*	*23*	*46*	*19*	*19*	*38*	*546*
Primary Site Trips		24	23	47	21	17	38	548

** The average weekday pass-by trip rate is assumed to be the average of the morning and evening rates.*

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 was assumed for primary trips:

- Approximately 65 percent of trips will travel to/from the east along Highway 211
    - Approximately 10 percent will travel to/from the north on Leroy Avenue
    - Approximately 10 percent will disperse on roadways between Leroy and Molalla Avenues
    - Approximately 10 percent will travel to/from the north on Molalla Avenue
    - Approximately 10 percent will travel to/from the south on Molalla Avenue
    - Approximately 25 percent will travel to/from the east on Highway 211
- Approximately 35 percent of trips will travel to/from the east along Highway 211
    - Approximately 10 percent of trips will travel to/from the west along Highway 211
    - Approximately 20 percent of trips will travel to/from the north along Highway 213
    - Approximately 5 percent of trips will travel to/from the south along Highway 213

The following trip distribution was assumed for pass-by/diverted trips:

- Approximately 30 percent of trips will pass by eastbound from Highway 211
- Approximately 30 percent of trips will pass by westbound from Highway 211
- Approximately 20 percent of trips will divert from northbound Highway 213
- Approximately 20 percent of trips will divert from southbound Highway 213

Trip Assignment

The trip distribution and assignment for the total site trips generated during the morning and evening peak hours are shown in Figure 3.

OR 211 at Leroy Avenue

A future traffic signal is planned for installation at the intersection of OR 211 at Leroy Avenue. The Cascade Center project will construct the south leg of the intersection, but signalizing the intersection is not a requirement of Cascade Center.

The need for a traffic signal at this intersection is driven primarily by traffic volumes entering the intersection. Traffic signal warrants require minimum thresholds to be met for both the major street (OR 211) *and* the minor street (Leroy Avenue). Through traffic on OR 211 is high enough to meet the thresholds, but neither the northbound traffic from the new approach to constructed with Cascade Center or the southbound approach of Leroy Avenue will not meet the thresholds. This is due primarily to ODOT requirements that dictate the right-turning trips should generally not be included in the analysis.

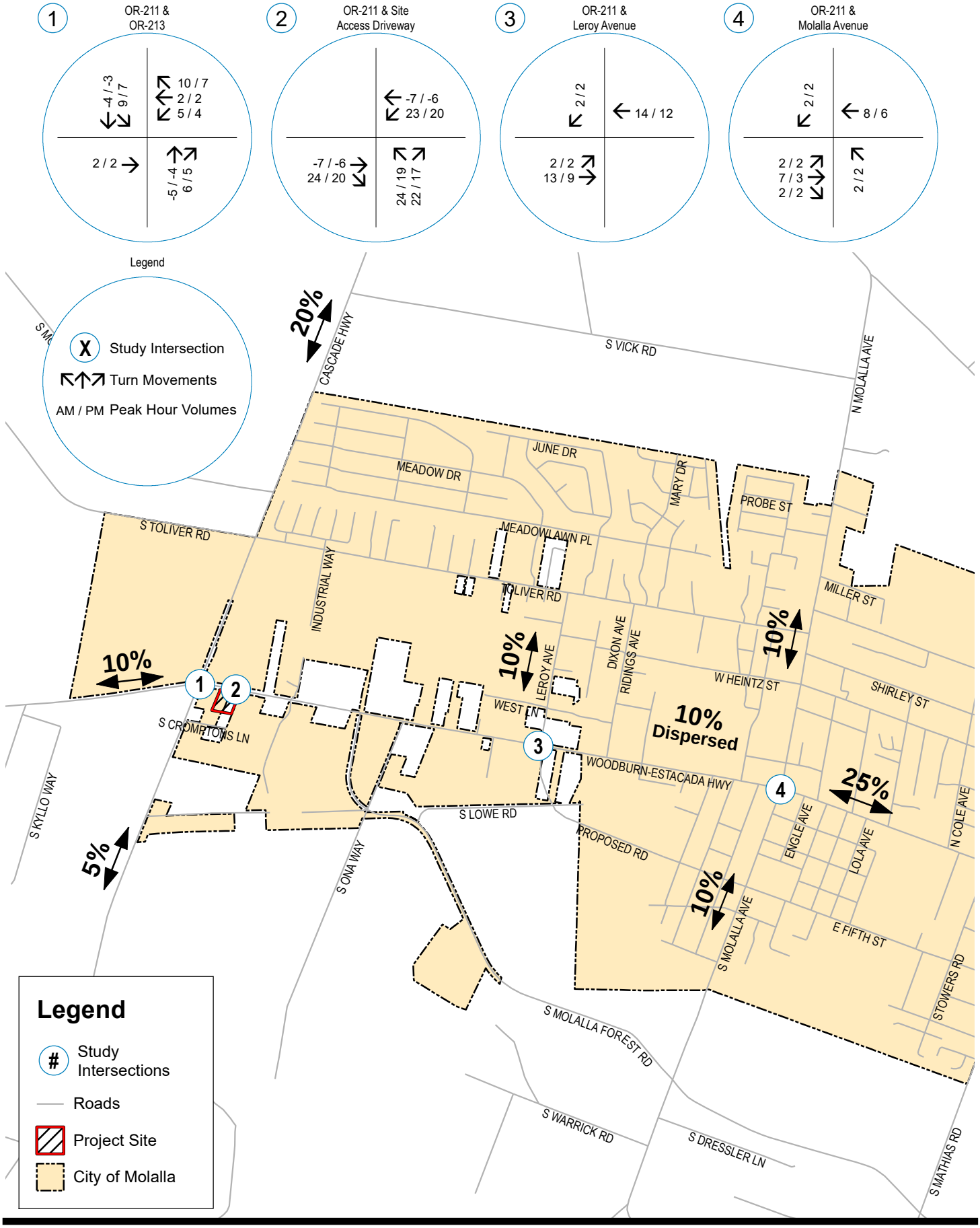
Site-generated traffic expected to travel east-west through the Leroy Avenue/OR 211 intersection without turning. However, even if a vehicle is traveling between the site and the planned Cascade Center, it would not be a new trip on the south leg since trips to/from Cascade Center have already been included in the calculations for the signal. Only new development south of OR 211 with access to the south approach could increase the trip generation on the south leg and trigger the signal.

Table 4 shows the northbound traffic on Leroy Avenue with all in-process trips accounted for (including Cascade Center) and the proposed development.

Table 4: Leroy Avenue Traffic Volumes

Description	Northbound PM Peak Hour Volume
Threshold to Meet Signal Warrants	95
2023 Background Conditions	77
Proposed Development	0
Trip Remaining	18

As shown in Table 4, the volumes on Leroy Avenue will not be sufficient to meet traffic signal warrants with the proposed development in place. It is also important to note that the proposed development is not expected to add trips to Leroy Avenue either.



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TRAFFIC VOLUMES
Trip Distribution & Assignment
AM & PM Peak Hour

NOT TO SCALE

Figure 3
Molalla Dairy Queen TIS
10/11/2021

Traffic Volumes

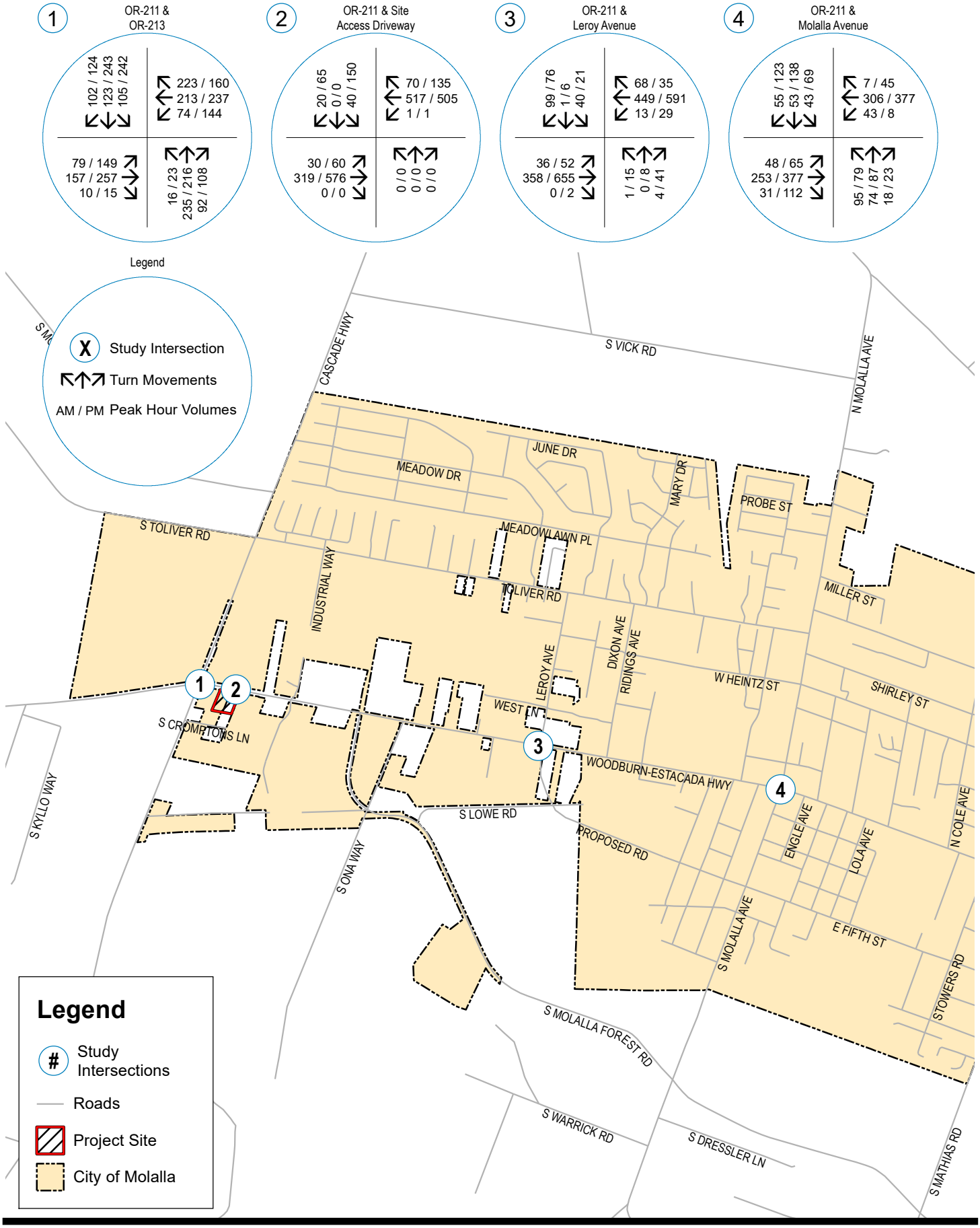
Existing Conditions

Due to the ongoing COVID-19 viral pandemic, traffic volumes have been depressed relative to normal conditions since mid-March 2020. Under these conditions, traditional traffic count data collection methods are not recommended. Therefore, the following methodology was used to adjust historical traffic counts at the study intersections to estimate year 2021 traffic conditions without the influence of COVID-19:

- New turning movement counts were collected on Tuesday, September 21, 2021, at the study area intersections. Note, one leg of the intersection of OR 211 at Molalla Avenue was closed due to construction; therefore, no new counts were collected.
- Historical turning movement counts from Tuesday, October 15, 2019, were obtained at the intersection of OR 211 at OR 213 for both morning and evening peak hours and from Tuesday, October 9, 2018, at the intersection of OR 211 at Molalla Avenue.
- A growth rate for the study area traffic was derived using ODOT's 2039 Future Volume Table, in accordance with ODOT's *Analysis Procedures Manual*. Averaging data corresponding to mileposts 16.08 and 16.12 of ODOT highway number 160 (OR 213) and mileposts 11.26 and 12.14 of ODOT highway number 161 (OR 211) resulted in a linear growth factor of 2.26 percent per year. This factor was applied to all historical turning movements to account for growth of two or three years.
- Traffic volumes on the highways will also be seasonally adjusted to reflect the 30th highest hour of traffic, per procedures described in ODOT's *Analysis Procedures Manual*. Using the ODOT's Seasonal Trend Table[3], seasonal adjustment factors of 1.0266 and 1.0286 were calculated based on the Commuter seasonal trend, for the October 2019 and September 2021 counts, respectively. The adjustment factors were applied to through volumes on OR 211 at its intersection with the site access/Safeway driveway, and to all turning movement volumes at the intersection of OR 213 & OR 211.
- The seasonally adjusted and growth adjusted 2019 counts were compared to the seasonally adjusted 2021 counts to establish a COVID-19 adjustment factor. A total adjustment of 1.255 and 1.208 was applied to all intersection turning movements for the morning and evening peak hours, respectively. For the morning peak hour at the intersection of OR 211 at Molalla Avenue, total adjustment factor of 1.149 was applied to the 2018 volumes to estimate 2021 volumes.

Figure 4 shows the year 2021 existing traffic volumes at the study intersections during the morning and evening peak hours.

[3] ODOT Seasonal Trend Table (Updated 7/20/2021)



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TRAFFIC VOLUMES
Existing Conditions
AM & PM Peak Hour

NOT TO SCALE

Figure 4
Molalla Dairy Queen TIS
10/11/2021

Background Conditions

To provide analysis of the impact of the proposed development on the nearby transportation facilities, an estimate of future traffic volumes is required. Two components were included in the background traffic estimates: 1) general growth and 2) growth associated with planned developments. Although buildout is targeted to be completed in 2022, an analysis year of 2023 was evaluated to provide a conservative estimate of traffic conditions.

For the general background growth, the annual growth rate of 2.26 percent per year was applied to the adjusted year 2021 existing traffic volumes. This growth rate was derived from ODOT's 2039 Future Volume Table, as described above.

In addition to the general growth, three nearby developments that are approved but not yet constructed at the time of the traffic counts were included as in-process traffic:

1. Hezzie Lane Subdivision
2. Cascade Center
3. Colima Apartments

Trips from the Cascade Center and Colima Apartments were taken directly from the Transportation Impact Studies prepared for those projects. The Hezzie Lane Subdivision was not required to prepare a TIS. For this project, the trip generation was calculated using the ITE manual. The trip assignments for these developments were added to the general growth to estimate the year 2023 background volumes shown in Figure 5 for the study intersections during the morning and evening peak hours.

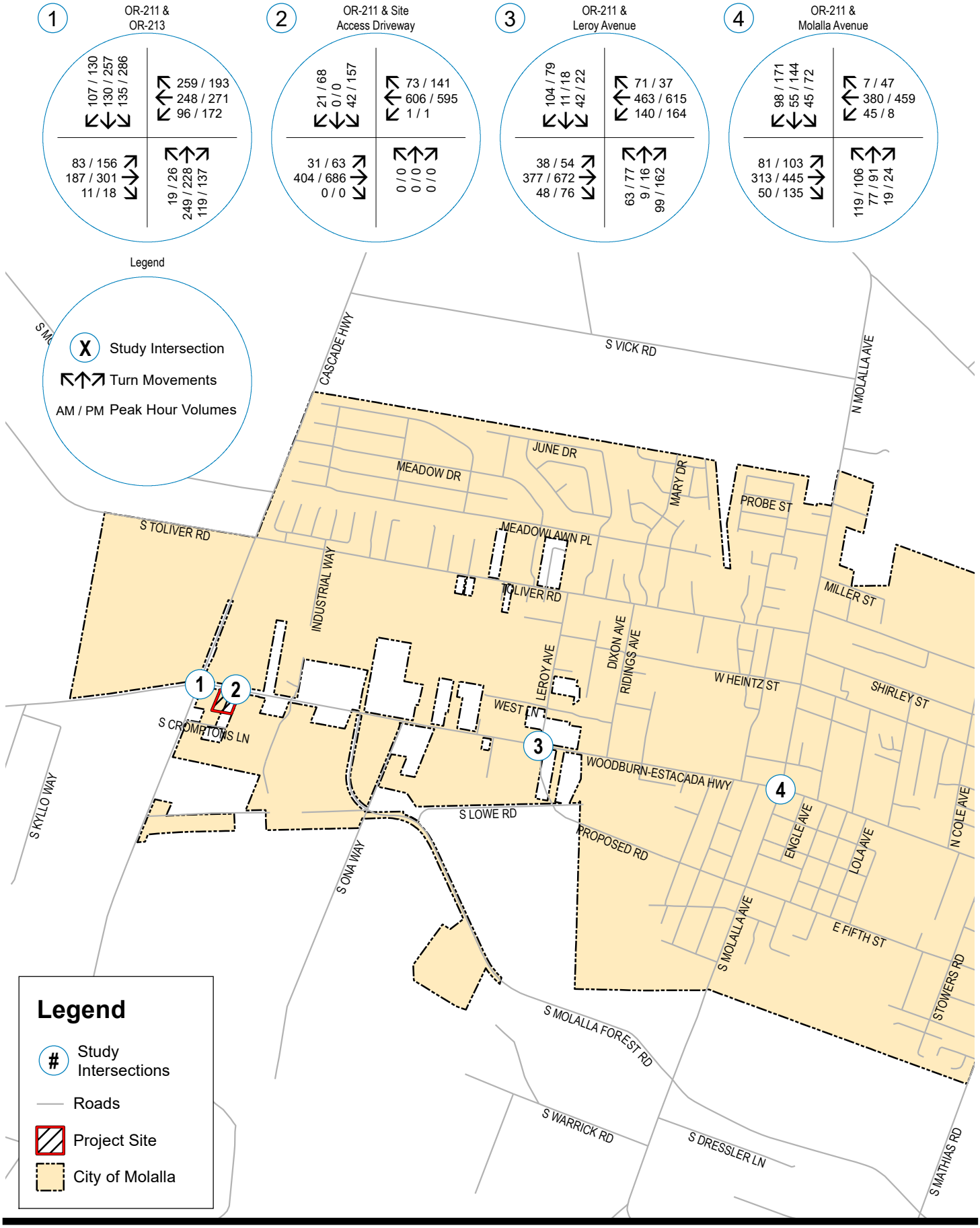
Based on the Cascade Center TIA (conducted by Kittelson & Associates, August 2019), left-turn lanes were identified to be constructed at the intersection of OR 211 & Leroy Avenue for both the eastbound and westbound approaches. Therefore, this geometry change was assumed under the Year 2023 Background conditions.

Buildout Conditions

Peak hour trips calculated to be generated by the proposed development, as described earlier within the *Site Trips* section, were added to the year 2023 background volumes to obtain the expected Year 2023 buildout conditions. Figure 6 shows the resulting year 2023 buildout traffic volumes at the study intersections during the morning and evening peak hours.

Planned Improvements

A traffic signal will be constructed at the intersection of OR 211 at Molalla as mitigation of the Cascade Center project. According to the City website, the construction of the signal started in September 2021 and is anticipated to be completed in approximately four (4) months. The signal is assumed to be in place for the 2023 background and buildout conditions.



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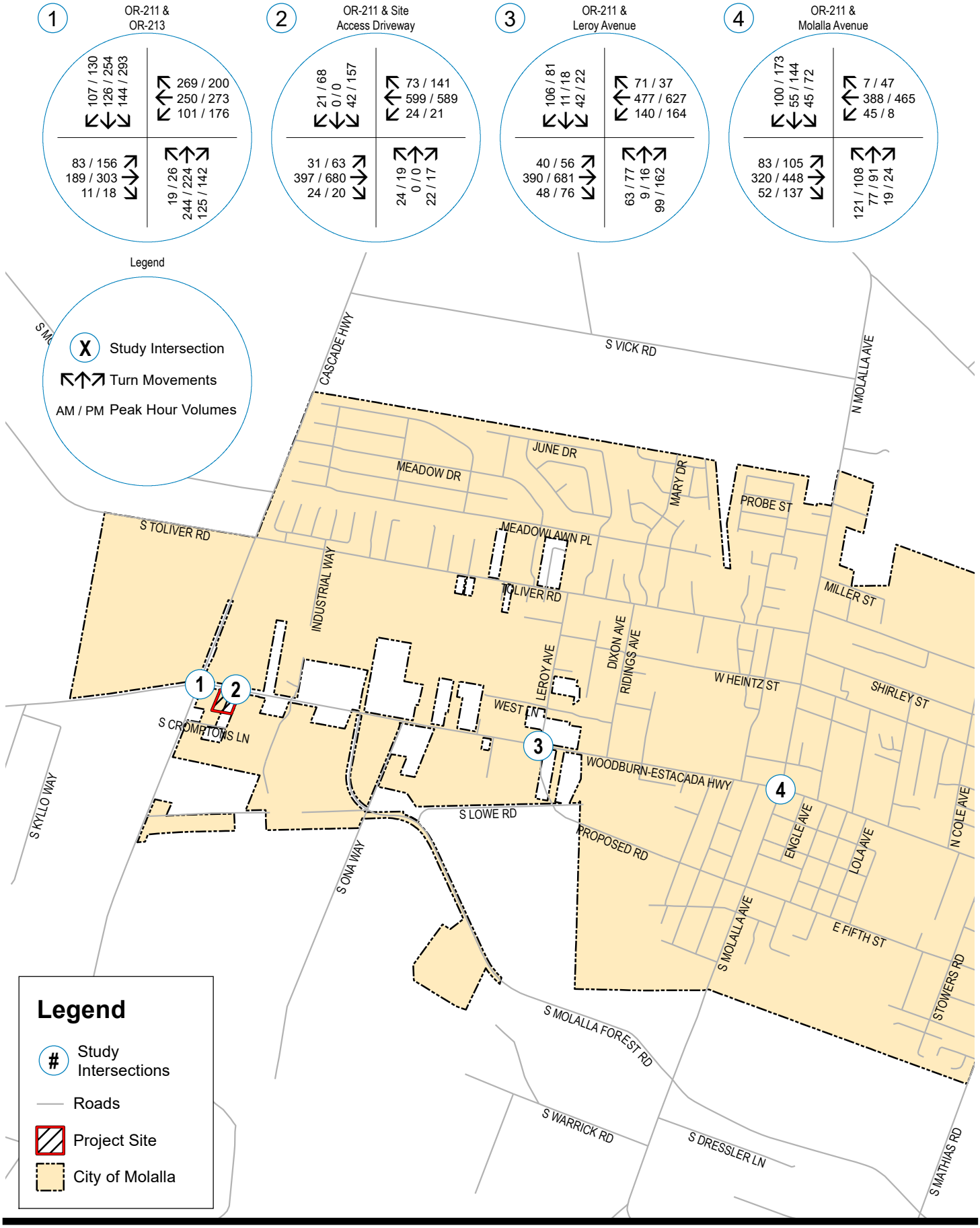
TRAFFIC VOLUMES
Background Conditions
AM & PM Peak Hour

NOT TO SCALE

Figure 5
Molalla Dairy Queen TIS
10/11/2021



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TRAFFIC VOLUMES
Buildout Conditions
AM & PM Peak Hour

NOT TO SCALE

Figure 6
Molalla Dairy Queen TIS
10/11/2021

Safety Analysis

Crash History Review

Using data obtained from ODOT's Crash Data System, a review of approximately five years of the most recent available crash history (January 2015 through December 2019) was performed at the study intersections. The crash data was evaluated based on the number of crashes, the type of collisions, and the severity of the collisions. Crash severity is based on injuries sustained by people involved in the crash, and includes five categories:

- *PDO* – Property Damage Only
- *Injury C* – Possible Injury
- *Injury B* – Suspected Minor Injury
- *Injury A* – Suspected Serious Injury
- *Fatality*

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 represents approximately 10 percent of the average daily traffic (ADT) at the intersection.

Table 5 provides a summary of crash types while Table 6 summarizes crash severities and rates for each of the study intersections. Detailed crash data is provided in the appendix to this report.

The study intersections adhere to the crash analysis methodologies within ODOT's Analysis Procedures Manual (APM). According to *Exhibit 4-1: Intersection Crash Rates per MEV by Land Type and Traffic Control* of the APM, intersections which experience crash rates in excess of their respective 90th percentile crash rates should be "flagged for further analysis". Crash rates in excess of 90th percentile crashes per million entering vehicles (CMEV) may be indicative of design deficiencies and therefore require a need for further investigation and possible mitigation.

For intersections in urban settings, the following 90th percentile rates are applicable to the study intersections:

- Unsignalized, three-legged intersection: 0.293 CMEV
- Unsignalized, four-legged intersection: 0.408 CMEV
- Signalized, four-legged intersection: 0.860 CMEV

Table 5: Crash Type Summary

Intersection		Crash Type								Total Crashes
		Turn	Rear End	Angle	Side swipe	Fixed Object	Parked Vehicle	Ped	Bike	
1	OR 211 at OR 213	10	7	3	2	0	0	0	0	22
2	OR 211 at Site Access*	5	1	0	0	1	0	0	0	7
3	OR 211 at Leroy Avenue	2	5	0	1	0	0	0	0	8
4	OR 211 at Molalla Avenue	3	5	4	1	1	2	1	0	17

** Crashes at the site access intersection were all associated with the shopping center driveway on the north side of the highway.*

Table 6: Crash Severity and Rate Summary

Intersection		Severity					Total Crashes	Est. ADT	Crash Rate	90th % Rate
		PDO	C	B	A	Fatal				
1	OR 211 at OR 213	15	5	2	0	0	22	19,180	0.629	0.860
2	OR 211 at Site Access*	2	3	1	1	0	7	14,920	0.257	0.860
3	OR 211 at Leroy Avenue*	1	3	4	0	0	8	15,310	0.286	0.293
4	OR 211 at Molalla Avenue	12	5	0	0	0	17	15,030	0.620	0.408

** These intersections are both treated as 3 legs for the crash rate analysis.*

Crash Severity

One reported crash was classified as *Injury A* near the proposed site access. The crash involved a motorcycle collision with a fixed object. The driver had a suspended license, and the errors were noted as "passing on the wrong side" and "driving too fast for conditions." No other vehicles were part of the collision.

ODOT 90th Percentile Crash Rates

Intersection crash rates were calculated; none have a rate above the respective ODOT 90th percentile crash rates.

Sight Distance Evaluation

A sight distance analysis was conducted at the site access driveway. To evaluate the sight distance available at these intersections, intersection sight distance was measured and recommended in accordance with the current AASHTO manual[4]. 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 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. OR 211 has a posted speed limit of 35 mph in both directions.

A field investigation was conducted on Monday afternoon, September 28th, 2021, to measure sight distance for this location. Figure 7 and Figure 8 display sight distance viewpoints from the future site access driveway for the eastbound and westbound approaches, respectively. Sight distance was measured to exceed 415 feet east and

[4] American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 7th Edition, 2018.

west of the site access (without the temporary construction signage). Sufficient sight distance will be maintained by the proposed development by keeping clear sight distance triangles for this approach including structures and planted foliage.

Figure 7: Site Access Looking East- 21' From Edge of Travel Lane

Figure 8: Site Access Looking West - 21' From Edge of Travel Lane

Warrant Analysis

Traffic Signal Warrants

Due to the proximity of the site access/shopping center access to the signalized intersection of OR 211 at OR 213, a signal is not considered an appropriate traffic control; therefore, signal warrants were not assessed at the site access.

A signal has been identified as needed at the intersection of OR 211 at Leroy Avenue but approved development does not yet meet the ODOT warrant criteria. The proposed development will add traffic to the highway but is not anticipated to add any new traffic not already accounted for with the Cascade Center.

A signal was identified as mitigation for the intersection of OR 211 at Molalla Avenue. Construction of this signal is planned and assumed to be completed by the year 2023.

Left-turn Lane Warrants

The proposed site access will utilize the existing center refuge lane; therefore, left-turn lane warrants were not assessed.

Operational Analysis

An operational analysis was conducted for each of the study intersections per the signalized and unsignalized intersection analysis methodologies in the *Highway Capacity Manual* (HCM)[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. The analysis was performed using the Synchro which applies the HCM6 methodologies.

Performance Targets

Since the study intersections are under ODOT jurisdiction, the applicable performance targets for these facilities are established under the Oregon Highway Plan (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 with speed limits between 35 and 45 mph, the target maximum allowable v/c ratio is 0.90.[6]

Delay & Capacity Analysis

Results of the analysis are shown in Table 7. Detailed reports are provided in the appendix.

As shown, all study intersections are projected to operate within ODOT standards under all analysis scenarios, with the exception of the following intersections:

4. OR 211 at Leroy Avenue (v/c > 0.90 – Background and Buildout Conditions AM & PM Peak Hours)

   The substandard operations at this intersection are directly precipitated by the Cascade Center development. The proposed project is not anticipated to directly contribute to the substandard condition. The Cascade Center project identified a need for a future signal, but the approved development does not yet meet the ODOT warrant criteria. Traffic flow on the highway meets the ODOT standard.

   Traffic simulations were also conducted using the Synchro/SimTraffic software (version 10.3.122.0) as an alternative estimate delays at the intersection. The simulations can account for the effects of upstream traffic signals and vehicle platoons. The simulation results forecast more moderate delays of 25 to 50 seconds during the morning peak hour and 60 to 90 seconds during the evening peak hour for the northbound and southbound approaches.

5. OR 211 at Molalla Avenue (v/c > 0.90 – Existing Condition PM Peak Hour)

   The substandard operations at this intersection are an existing condition. A traffic signal will be constructed at the intersection and was assumed to be in place for the background and buildout conditions.

[5] Transportation Research Board, *Highway Capacity Manual 6th Edition*, 2016.
[6] Oregon Department of Transportation, 1999 Oregon Highway Plan, Including amendments November 1999 through May 2015, 1999.

Table 7: Capacity Analysis Summary

Intersection & Scenario	Morning Peak Hour			Evening Peak Hour		
	LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
1. OR 211 at OR 213						
2021 Existing Condition	B	18	0.51	C	21	0.68
2023 Background Condition	C	20	0.57	C	24	0.74
2023 Buildout Condition	C	21	0.58	C	26	0.75
2. OR 211 at Site Access Driveway						
2021 Existing Condition	C	16	0.13	D	35	0.60
2023 Background Condition	C	18	0.16	F	56	0.76
2023 Buildout Condition	C	20	0.17	F	79	0.86
3. OR 211 at Leroy Avenue						
2021 Existing Condition	D	32	0.57	F	57	0.65
2023 Background Condition	F	>300	*1.71*	F	>300	*>2.0*
2023 Buildout Condition	F	>300	*1.87*	F	>300	*>2.0*
4. OR 211 at Molalla Avenue						
2021 Existing Condition	C	21	0.58	F	96	*1.06*
2023 Background Condition	B	13	0.62	B	19	0.77
2023 Buildout Condition	B	13	0.63	B	20	0.77

BOLDED results indicate operation above acceptable jurisdictional standards.

Queueing Analysis

In accordance with the ODOT Analysis Procedures Manual (APM), an analysis of projected queuing was conducted for the study intersections. To determine the expected queuing which may form at critical study intersection turning movements, the analysis was conducted using the Synchro/SimTraffic software (version 10.3.122.0), with the reported values representing 95th percentile queue lengths. The 95th percentile queue is a statistical measurement which indicates there is a 5 percent chance that the queue may exceed this length during the analysis period; however, given this is a probability, the 95th percentile queue length may theoretically never be met or observed in the field.

The projected 95th percentile queue lengths reported in the simulation for the 2023 background and buildout conditions are presented in Table 8 for the morning and evening peak hours. Reported queue lengths were rounded up to the nearest 25 feet, equivalent to an average vehicle length. Five trial runs of the simulation were conducted. Detailed queuing analysis worksheets are included in the appendix to this report.

Table 8: 95th Percentile Queueing Analysis Summary

Intersection/Movement	Available Storage (ft)	2023 Background Queue (ft)		2023 Buildout Queue (ft)	
		AM	PM	AM	PM
1. OR 213 at OR 211					
NB Left-Turn Lane	250	25	50	50	50
NB Right-Turn Lane	260	50	100	50	75
SB Left-Turn Lane	310	125	250	150	250
EB Left-Turn Lane	260	75	150	75	150
WB Left-Turn Lane	235	100	175	100	175
WB Right-Turn Lane	230	150	125	150	125
2. OR 211 at Site Access Driveway					
NB Approach	100	<25	<25	50	50
SB Approach	100	50	250	50	300
EB Left-Turn Lane	90	50	50	50	50
WB Left-Turn Lane	235	<25	<25	50	50
3. OR 211 at Leroy Avenue					
NB Approach	200	75	200	75	200
SB Approach	430	175	150	200	200
EB Left-Turn Lane	100	50	50	50	50
WB Left-Turn Lane	100	75	100	75	100
4. OR 211 at Molalla Avenue					
NB Approach	285	150	175	125	225
SB Approach	265	125	250	125	250
EB Left	Unknown	75	175	100	200
WB Left	Unknown	75	75	100	75

BOLDED text indicates queue extends beyond available lane storage.

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.

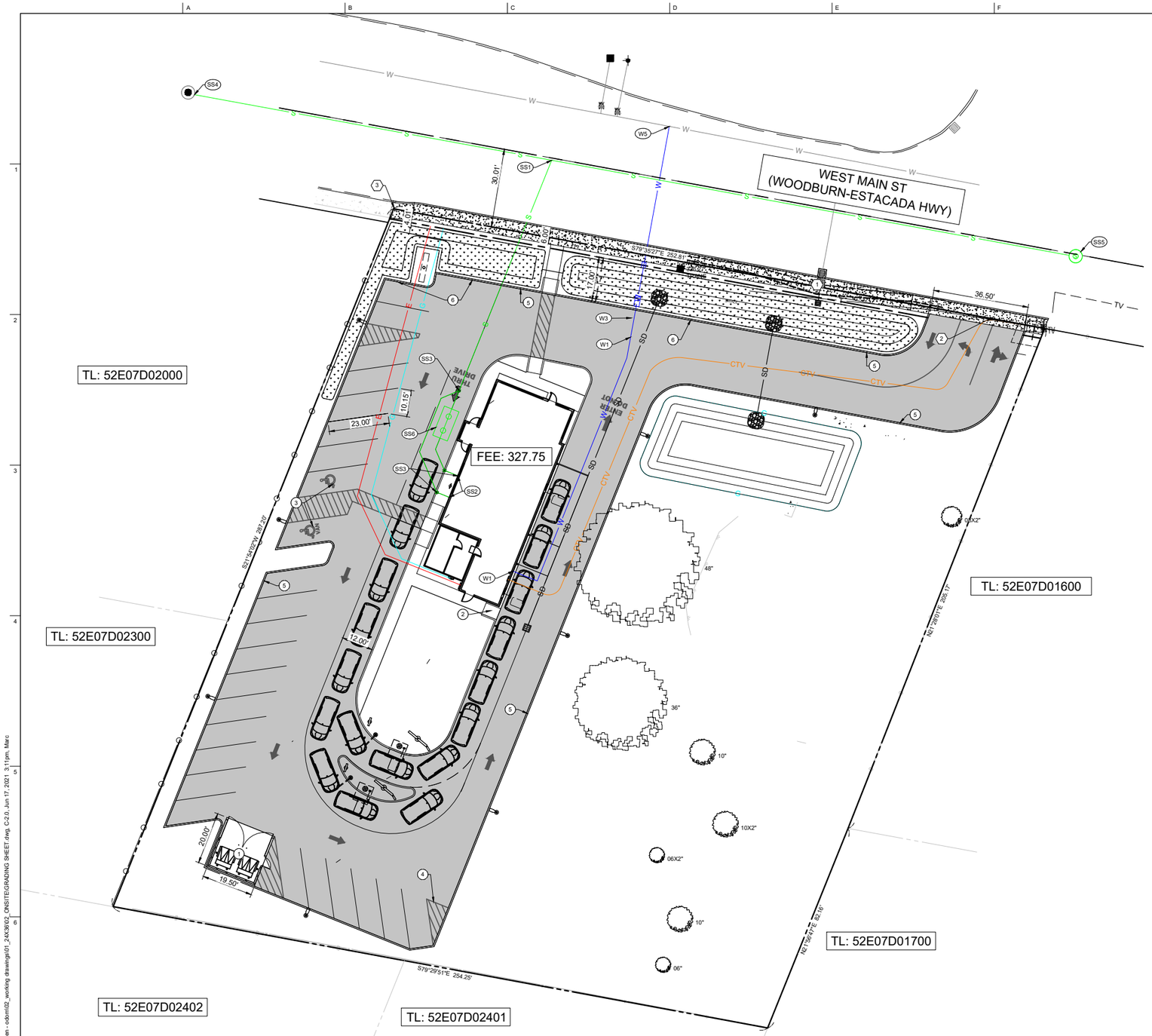
Conclusions

Key findings of this study include:

- No significant trends or crash patterns were identified at any of the study intersections.
- The available sight lines exceed the 415-foot intersection sight distance recommendation.
- All study intersections are projected to operate at an acceptable v/c ratio less than 0.90 per ODOT standards upon buildout of the proposed development through year 2023, with the exception of the OR 211 at Leroy Avenue. The proposed project is not anticipated to directly contribute to the substandard condition. The Cascade Center project identified a need for a future signal, but the approved development does not yet meet the ODOT warrant criteria. Traffic flow on the highway meets the ODOT standard.
- 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.

Appendix

- Site Plan
- Trip Generation
- Traffic Counts
- Crash History
- Operations Analysis
- Queuing Analysis



GENERAL NOTES:

ALL UTILITIES SHOWN ARE WITH THE BEST KNOWLEDGE POSSIBLE.

RIGHT OF WAY CONSTRUCTION NOTES:

1. INSTALL 6' CONCRETE SIDEWALK PER CITY OF MOLALLA STD. DWG R-1075
2. INSTALL 36.5' COMMERCIAL DRIVEWAY APPROACH PER CITY OF MOLALLA STD. DWG. R-1095
3. TIE PROPOSED SIDEWALK INTO EXISTING SIDEWALK
4. NEW CURB PER ODOT STD. DWG. RD366

SITE CONSTRUCTION NOTES:

1. INSTALL TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS FOR DETAILS.
2. INSTALL ADA RAMP.
3. INSTALL ADA PARKING STALLS.
4. INSTALL PARKING LOT PAVEMENT STRIPING (TYP.).
5. INSTALL 6" CONCRETE CURB PER CITY OF MOLALLA STD. DWG R-1075
6. INSTALL 1' CURB CUT

WATER CONSTRUCTION NOTES:

- W1 INSTALL ±192 LF OF WATER SERVICE.
- W2 INSTALL 2" COMMERCIAL METER SERVICE PER CITY OF MOLALLA STD. DWG. W-3035
- W3 INSTALL 2" BACK FLOW PREVENTOR.
- W4 WATER SERVICE POINT OF CONNECTION AT BUILDING. SEE PLUMBING PLANS FOR DETAILS.
- W5 INSTALL 2 - 12"X12"X2" TAPPING SADDLES PER CITY OF MOLALLA STD. DWG. W-3025

SANITARY SEWER CONSTRUCTION NOTES:

- SS1 INSTALL ± 185 LF OF SANITARY SEWER SERVICE PER CITY OF MOLALLA STD. DWG. S-2175.
- SS2 SEWER POINT OF CONNECTION AT BUILDING. SEE PLUMBING PLANS FOR DETAILS.
- SS3 INSTALL SANITARY SEWER CLEANOUT.
- SS4 INSTALL ± 421 LF OF 8" SANITARY SEWER MAIN. TIE INTO EXISTING MANHOLE
- SS5 INSTALL SANITARY SEWER MANHOLE PER CITY OF MOLALLA STD. DWG. S-2005
- SS6 INSTALL GREASE INTERCEPTOR

FRANCHISE UTILITY CONSTRUCTION NOTES:

- P1 INSTALL 197 ± LF OF PORTLAND GENERAL ELECTRIC CONDUIT. CONNECTIONS TO BE CONFIRMED

NW NATURAL GAS CONSTRUCTION NOTES:

- P1 INSTALL ± 186 LF OF GAS LINE. CONNECTIONS TO BE CONFIRMED

SITE AND UTILITY LEGEND

- PROPERTY LINE
- PROPOSED ACCESSIBLE PATH
- G PROPOSED GAS LINE
- W PROPOSED WATER LINE
- E PROPOSED POWER CONDUIT
- T T PROPOSED COMMUNICATIONS LINE
- S PROPOSED SEWER LINE
- SWALE
- PAVEMENT
- CONCRETE

DIGALERT
DIAL TOLL FREE **811** OR (1-800-422-4133) AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT

HORIZONTAL SCALE: 1" = 20'
20 0 20 40

Plan Prepared By:
Ashley&Vance ENGINEERING, INC.
CIVIL • STRUCTURAL
33 NW Franklin Ave. Suite 110
Bend, OR 97703
(541) 647-1445
www.ashleyvance.com

Engineer of Record:

REGISTERED PROFESSIONAL ENGINEER
77537
OREGON
JAMES M. LORD
EXPIRES: 12/31/22
PLAN REVIEW SET NOT FOR CONSTRUCTION

MOLALLA DAIRY QUEEN
1522 W MAIN STREET
MOLALLA, OR, 97038

Revisions:	
1	.
2	.
3	.
4	.
5	.

Project Engineer: MFH	Ext: 200
Project Manager: JML	
Date: 06.10.2021	Scale: PER PLAN
AV Job No: 21540	Sheet Size: 24" x 36"

TENTAIVE SITE AND UTILITY PLAN

C-2.0

TRIP GENERATION CALCULATIONS

Land Use: Fast-Food Restaurant with a Drive-Thru Window
Land Use Code: 934
Setting/Location: General Urban/Suburban
Variable: 1,000 Sq. Ft. GFA
Variable Value: 2.322

AM PEAK HOUR

Trip Rate: 40.19

	Enter	Exit	Total
Directional Distribution	51%	49%	
Trip Ends	**47**	**46**	**93**

PM PEAK HOUR

Trip Rate: 32.67

	Enter	Exit	Total
Directional Distribution	52%	48%	
Trip Ends	**40**	**36**	**76**

WEEKDAY

Trip Rate: 470.95

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**547**	**547**	**1,094**

SATURDAY

Trip Rate: 616.12

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**715**	**715**	**1,430**

Source: TRIP GENERATION MANUAL, Tenth Edition

Pass-by Rates:	49%	AM Peak Hour
	50%	PM Peak Hour

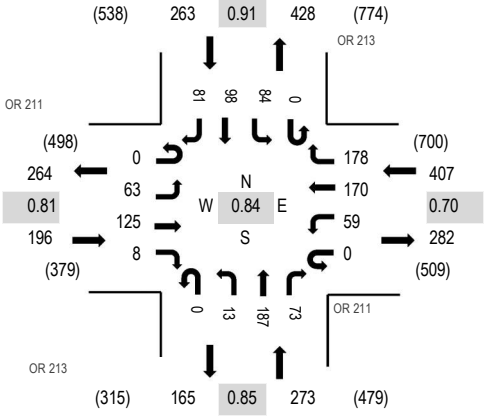
Source: TRIP GENERATION HANDBOOK, Third Edition

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

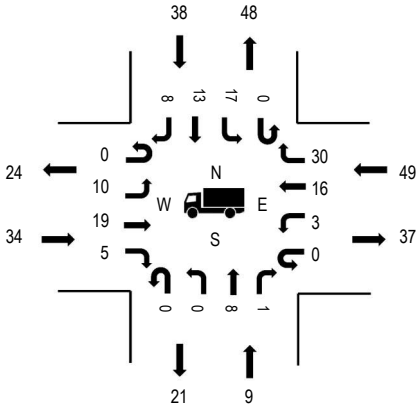
Location: 1 OR 213 & OR 211 AM
Date: Tuesday, September 21, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:20 AM - 07:35 AM

Peak Hour

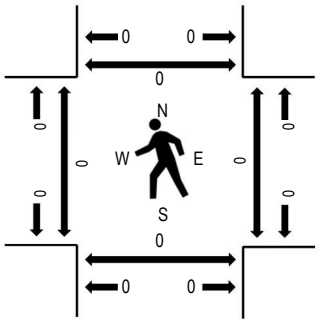
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	17.3%	0.81
WB	12.0%	0.70
NB	3.3%	0.85
SB	14.4%	0.91
All	11.4%	0.84

Traffic Counts - Motorized Vehicles

Interval Start Time	OR 211 Eastbound				OR 211 Westbound				OR 213 Northbound				OR 213 Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
7:00 AM	0	5	14	2	0	4	15	14	0	1	14	4	0	6	1	2	82	1,139
7:05 AM	0	5	11	0	0	1	17	11	0	2	14	8	0	10	5	7	91	1,138
7:10 AM	0	5	9	0	0	4	15	24	0	2	15	15	0	9	9	9	116	1,127
7:15 AM	0	6	8	0	0	0	13	15	0	0	20	5	0	2	6	7	82	1,080
7:20 AM	0	6	10	1	0	7	15	27	0	4	15	4	0	5	5	4	103	1,081
7:25 AM	0	8	19	2	0	6	19	23	0	0	19	7	0	5	12	5	125	1,047
7:30 AM	0	4	12	0	0	12	13	23	0	1	17	9	0	5	9	7	112	1,015
7:35 AM	0	5	7	0	0	7	11	6	0	0	9	2	0	10	14	10	81	975
7:40 AM	0	8	11	0	0	3	15	16	0	0	20	9	0	10	9	7	108	961
7:45 AM	0	4	8	0	0	10	12	2	0	2	18	3	0	4	9	6	78	944
7:50 AM	0	0	9	1	0	2	12	6	0	1	16	3	0	6	11	10	77	940
7:55 AM	0	7	7	2	0	3	13	11	0	0	10	4	0	12	8	7	84	962
8:00 AM	0	7	7	1	0	2	6	11	0	1	17	5	0	3	16	5	81	957
8:05 AM	0	11	8	0	0	4	8	13	0	0	13	3	0	4	5	11	80	
8:10 AM	0	7	14	0	0	3	5	7	0	1	9	2	0	5	8	8	69	
8:15 AM	0	8	5	1	0	4	13	12	0	2	9	9	0	7	8	5	83	
8:20 AM	0	1	5	0	0	4	9	15	0	0	10	5	0	7	9	4	69	
8:25 AM	0	8	5	0	0	2	13	16	0	4	7	4	0	13	16	5	93	
8:30 AM	0	6	3	0	0	1	9	6	0	0	14	4	0	11	8	10	72	
8:35 AM	0	5	10	0	0	3	7	12	0	3	9	4	0	4	5	5	67	
8:40 AM	0	7	6	0	0	2	24	13	0	1	9	5	0	5	7	12	91	
8:45 AM	0	5	5	0	0	2	11	7	0	1	17	5	0	5	9	7	74	
8:50 AM	0	10	9	0	0	10	15	10	0	3	9	3	0	5	10	15	99	
8:55 AM	0	8	21	0	0	2	7	5	0	0	13	5	0	6	8	4	79	
Count Total	0	146	223	10	0	98	297	305	0	29	323	127	0	159	207	172	2,096	
Peak Hour	0	63	125	8	0	59	170	178	0	13	187	73	0	84	98	81	1,139	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

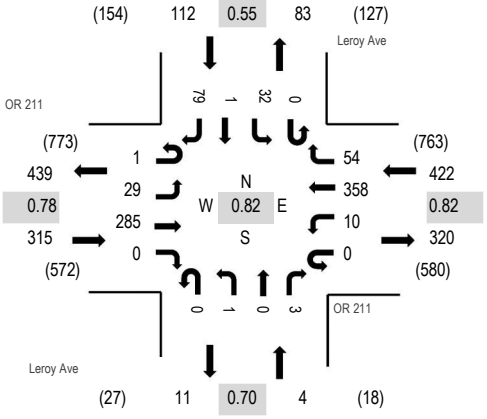
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	3	2	2	0	7	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	1	0	4	2	7	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	1	1	4	3	9	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	1	6	0	7	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	6	1	6	3	16	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	8	1	6	4	19	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	1	0	3	4	8	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	3	0	2	5	10	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	3	1	4	1	9	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	3	1	4	4	12	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	1	1	4	3	9	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	4	0	4	9	17	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	3	0	2	5	10	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	3	1	4	4	12	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	3	2	1	4	10	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	1	1	2	6	10	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	1	1	5	6	13	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	1	1	5	2	9	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	0	0	2	4	6	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	3	0	2	6	11	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	2	2	4	3	11	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	0	4	4	3	11	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	1	2	7	2	12	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	4	1	2	5	12	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	56	24	89	88	257	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	34	9	49	38	130	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

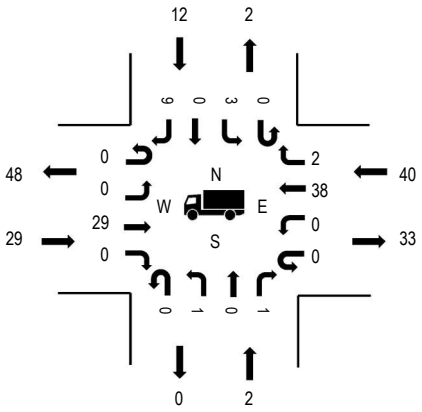
Location: 2 Leroy Ave & OR 211 AM
Date: Tuesday, September 21, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:20 AM - 07:35 AM

Peak Hour

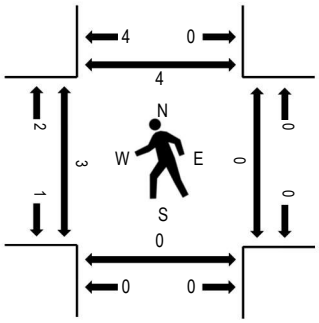
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	9.2%	0.78
WB	9.5%	0.82
NB	50.0%	0.70
SB	10.7%	0.55
All	9.7%	0.82

Traffic Counts - Motorized Vehicles

Interval Start Time	OR 211 Eastbound				OR 211 Westbound				Leroy Ave Northbound				Leroy Ave Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
7:00 AM	0	2	20	0	0	3	32	3	0	0	0	0	0	1	1	2	64	853
7:05 AM	1	4	28	0	0	0	33	4	0	0	0	0	0	2	0	3	75	850
7:10 AM	0	7	26	0	0	1	29	9	0	0	0	0	0	3	0	7	82	832
7:15 AM	0	2	33	0	0	0	22	5	0	0	0	0	0	3	0	14	79	802
7:20 AM	0	1	21	0	0	0	25	9	0	0	0	0	0	3	0	14	73	776
7:25 AM	0	5	26	0	0	0	47	10	0	0	0	0	0	3	0	14	105	753
7:30 AM	0	1	33	0	0	1	31	1	0	0	0	2	0	5	0	7	81	702
7:35 AM	0	1	26	0	0	1	33	4	0	1	0	0	0	3	0	4	73	669
7:40 AM	0	2	5	0	0	2	35	3	0	0	0	0	0	1	0	4	52	648
7:45 AM	0	1	27	0	0	0	27	2	0	0	0	1	0	5	0	3	66	658
7:50 AM	0	1	24	0	0	0	23	3	0	0	0	0	0	3	0	4	58	645
7:55 AM	0	2	16	0	0	2	21	1	0	0	0	0	0	0	0	3	45	640
8:00 AM	0	0	23	0	0	2	28	5	0	0	0	0	0	1	1	1	61	654
8:05 AM	0	2	21	0	0	0	30	0	0	0	0	0	0	0	0	4	57	
8:10 AM	0	0	13	0	0	2	31	1	0	0	0	2	0	2	0	1	52	
8:15 AM	0	0	25	0	0	0	25	0	0	0	0	1	0	0	0	2	53	
8:20 AM	0	2	18	0	0	0	23	2	0	0	0	1	0	0	0	4	50	
8:25 AM	0	2	23	1	0	4	17	2	0	2	0	0	0	0	0	3	54	
8:30 AM	0	2	18	0	0	0	19	3	0	0	1	1	0	0	1	3	48	
8:35 AM	0	3	17	0	0	0	26	3	0	0	0	1	0	1	0	1	52	
8:40 AM	0	1	20	0	0	1	31	2	0	0	0	1	0	2	0	4	62	
8:45 AM	0	0	11	0	0	1	33	6	0	0	1	0	0	0	0	1	53	
8:50 AM	0	0	27	0	0	1	15	2	0	0	1	0	0	3	0	4	53	
8:55 AM	0	1	27	0	0	1	23	2	0	1	0	1	0	0	1	2	59	
Count Total	1	42	528	1	0	22	659	82	0	4	3	11	0	41	4	109	1,507	
Peak Hour	1	29	285	0	0	10	358	54	0	1	0	3	0	32	1	79	853	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

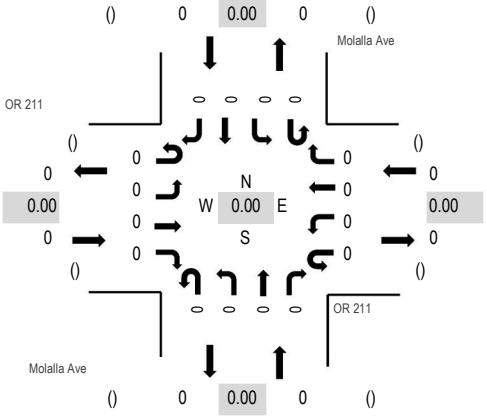
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	3	1	4	7:00 AM	0	0	0	0	0	7:00 AM	2	0	0	0	2
7:05 AM	3	0	4	0	7	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	1	0	1	0	2	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	2	0	4	4	10	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	4	4
7:20 AM	1	0	4	1	6	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	8	0	3	2	13	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	3	1	1	2	7	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	3	1	3	0	7	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	1	0	5	0	6	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	3	0	4	1	8	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	3	0	5	1	9	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	1	0	3	0	4	7:55 AM	0	0	0	0	0	7:55 AM	1	0	0	0	1
8:00 AM	7	0	6	0	13	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	3	0	2	0	5	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	2	0	2	0	4	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	5	0	1	0	6	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	3	0	4	2	9	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	3	0	1	0	4	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	2	0	5	0	7	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	3	0	4	0	7	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	4	0	5	3	12	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	1	1
8:45 AM	2	0	4	0	6	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	4	1	2	0	7	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	2	0	2	0	4	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	3	3
Count Total	69	3	78	17	167	Count Total	0	0	0	0	0	Count Total	3	0	0	8	11
Peak Hour	29	2	40	12	83	Peak Hour	0	0	0	0	0	Peak Hour	3	0	0	4	7

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

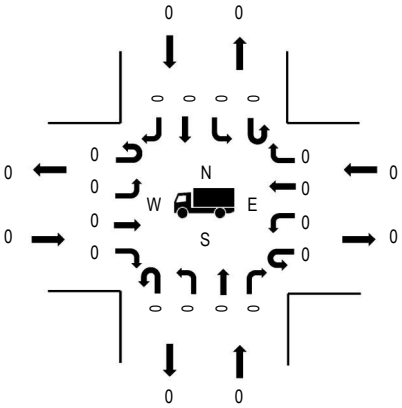
Location: 3 Molalla Ave & OR 211 AM
Date: Tuesday, September 21, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:00 AM - 07:15 AM

Peak Hour

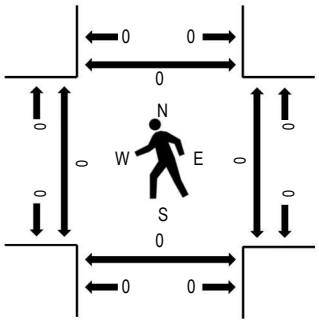
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	0.0%	0.00
NB	0.0%	0.00
SB	0.0%	0.00
All	0.0%	0.00

Traffic Counts - Motorized Vehicles

Interval Start Time	OR 211 Eastbound				OR 211 Westbound				Molalla Ave Northbound				Molalla Ave Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

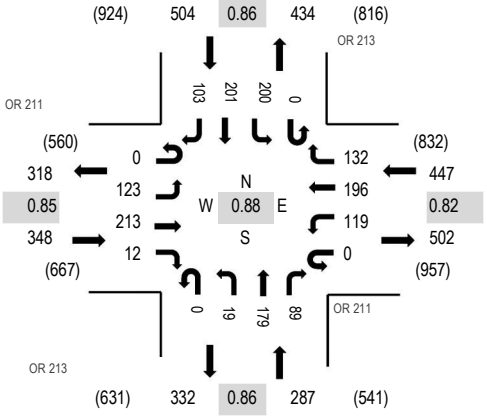
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0	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	0	0	0	0	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	0	0	0	0	0	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
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	0	0	0	0	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	0	0	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	0	0	0	0
8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	0	0	0	0	0	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

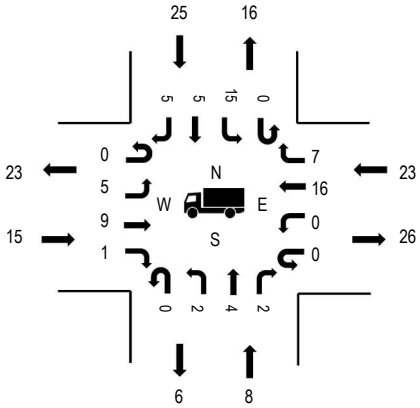
Location: 1 OR 213 & OR 211 PM
Date: Tuesday, September 21, 2021
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:10 PM - 05:25 PM

Peak Hour

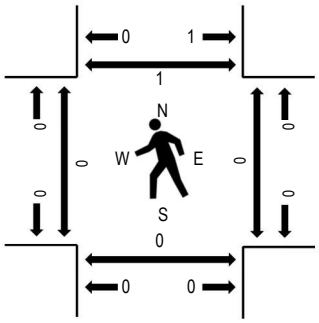
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.3%	0.85
WB	5.1%	0.82
NB	2.8%	0.86
SB	5.0%	0.86
All	4.5%	0.88

Traffic Counts - Motorized Vehicles

Interval Start Time	OR 211 Eastbound				OR 211 Westbound				OR 213 Northbound				OR 213 Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	7	22	1	0	5	20	15	0	1	13	6	0	13	17	9	129	1,450
4:05 PM	0	12	18	0	0	12	12	8	0	0	17	11	0	12	12	3	117	1,455
4:10 PM	0	10	14	2	0	6	14	6	0	1	10	5	0	16	18	4	106	1,457
4:15 PM	0	4	11	1	0	8	21	12	0	0	22	8	0	11	17	10	125	1,512
4:20 PM	0	9	23	2	0	10	13	11	0	0	18	5	0	11	21	5	128	1,534
4:25 PM	0	9	20	1	0	5	12	12	0	0	6	4	0	15	10	9	103	1,550
4:30 PM	0	8	17	1	0	8	21	12	0	1	17	7	0	13	21	5	131	1,586
4:35 PM	0	9	21	0	0	14	9	17	0	0	13	2	0	17	10	12	124	1,559
4:40 PM	0	8	12	1	0	5	18	9	0	4	12	10	0	9	16	7	111	1,532
4:45 PM	0	10	21	1	0	2	13	11	0	0	11	5	0	19	17	6	116	1,544
4:50 PM	0	14	12	1	0	9	16	8	0	2	21	13	0	11	14	9	130	1,535
4:55 PM	0	6	20	3	0	9	14	8	0	0	17	8	0	17	17	11	130	1,524
5:00 PM	0	16	16	0	0	8	23	11	0	2	12	8	0	16	12	10	134	1,514
5:05 PM	0	8	15	1	0	5	10	10	0	3	18	6	0	14	22	7	119	
5:10 PM	0	19	20	1	0	25	16	12	0	1	9	12	0	14	22	10	161	
5:15 PM	0	7	24	3	0	11	30	11	0	2	11	5	0	21	15	7	147	
5:20 PM	0	10	22	0	0	12	8	11	0	3	19	9	0	30	14	6	144	
5:25 PM	0	8	13	0	0	11	18	12	0	1	19	4	0	19	21	13	139	
5:30 PM	0	10	15	1	0	9	8	6	0	1	12	10	0	16	13	3	104	
5:35 PM	0	6	16	1	0	13	9	10	0	1	9	2	0	13	11	6	97	
5:40 PM	0	10	16	1	0	11	16	11	0	2	10	9	0	10	21	6	123	
5:45 PM	0	8	12	0	0	4	9	13	0	3	13	8	0	13	20	4	107	
5:50 PM	0	10	21	1	0	9	19	3	0	2	16	13	0	13	11	1	119	
5:55 PM	0	7	18	0	0	8	8	17	0	0	10	6	0	19	17	10	120	
Count Total	0	225	419	23	0	219	357	256	0	30	335	176	0	362	389	173	2,964	
Peak Hour	0	123	213	12	0	119	196	132	0	19	179	89	0	200	201	103	1,586	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

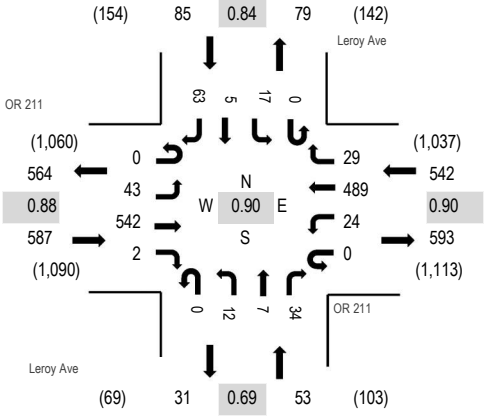
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	4	3	4	1	12	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	2	0	1	2	5	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	2	1	1	3	7	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	1	2	5	3	11	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	1	0	2	2	5	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	3	0	3	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	4	1	1	1	7	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	3	1	2	5	11	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	2	3	1	6	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	2	0	1	2	5	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	1	1
4:50 PM	1	1	1	3	6	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	1	0	0	1	2	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	1	3	4	2	10	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	5	5	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	1	0	3	0	4	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	0	4	3	8	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	1	0	4	1	6	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	1	1	0	2	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	2	0	2	5:35 PM	0	0	0	0	0	5:35 PM	0	0	1	0	1
5:40 PM	1	0	0	0	1	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	4	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	2	1	1	1	5	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	29	16	43	41	129	Count Total	0	0	0	0	0	Count Total	0	0	1	1	2
Peak Hour	15	8	23	25	71	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	1	1

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

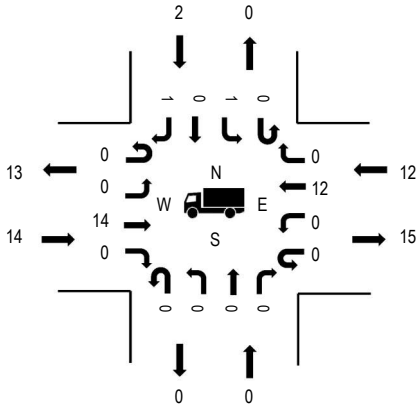
Location: 2 Leroy Ave & OR 211 PM
Date: Tuesday, September 21, 2021
Peak Hour: 04:55 PM - 05:55 PM
Peak 15-Minutes: 05:10 PM - 05:25 PM

Peak Hour

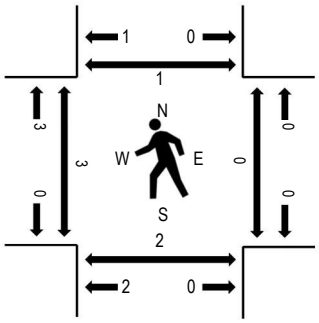
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	2.4%	0.88
WB	2.2%	0.90
NB	0.0%	0.69
SB	2.4%	0.84
All	2.2%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	OR 211 Eastbound				OR 211 Westbound				Leroy Ave Northbound				Leroy Ave Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	2	38	1	0	1	39	2	0	1	0	6	0	1	0	5	96	1,129
4:05 PM	0	4	43	0	0	2	38	2	0	1	0	4	0	2	1	3	100	1,145
4:10 PM	0	2	37	0	0	5	38	4	0	1	0	2	0	1	0	3	93	1,128
4:15 PM	0	4	34	0	1	2	44	1	0	0	0	4	0	2	0	6	98	1,164
4:20 PM	0	0	36	1	0	1	28	1	0	1	0	4	0	0	0	4	76	1,172
4:25 PM	0	4	39	0	0	4	32	2	0	0	0	0	0	0	0	4	85	1,213
4:30 PM	0	2	35	0	0	2	39	3	0	0	0	3	0	1	0	2	87	1,240
4:35 PM	0	0	45	1	0	1	42	2	0	3	0	2	0	0	0	8	104	1,246
4:40 PM	0	3	40	0	0	3	36	2	0	0	0	5	0	0	1	4	94	1,235
4:45 PM	0	6	34	1	0	3	30	5	0	1	0	1	0	0	0	4	85	1,251
4:50 PM	0	2	37	1	0	3	33	5	0	2	1	3	0	2	1	5	95	1,262
4:55 PM	0	3	45	0	0	1	43	5	0	1	0	8	0	5	0	5	116	1,267
5:00 PM	0	4	51	0	0	0	42	1	0	3	0	2	0	0	3	6	112	1,255
5:05 PM	0	3	38	1	0	3	28	1	0	0	1	3	0	0	0	5	83	
5:10 PM	0	1	54	0	0	0	53	5	0	2	0	3	0	2	0	9	129	
5:15 PM	0	4	45	0	0	4	41	4	0	0	1	2	0	1	0	4	106	
5:20 PM	0	8	56	0	0	1	43	0	0	0	0	2	0	1	0	6	117	
5:25 PM	0	5	46	0	0	1	44	3	0	1	1	2	0	2	0	7	112	
5:30 PM	0	5	44	0	0	2	31	2	0	0	2	3	0	1	0	3	93	
5:35 PM	0	4	33	0	0	4	43	2	0	1	0	2	0	0	0	4	93	
5:40 PM	0	2	50	0	0	3	38	3	0	2	0	1	0	2	1	8	110	
5:45 PM	0	0	38	0	0	4	41	0	0	0	1	4	0	2	1	5	96	
5:50 PM	0	4	42	1	0	1	42	3	0	2	1	2	0	1	0	1	100	
5:55 PM	0	1	50	0	0	2	35	2	0	0	1	4	0	4	1	4	104	
Count Total	0	73	1,010	7	1	53	923	60	0	22	9	72	0	30	9	115	2,384	
Peak Hour	0	43	542	2	0	24	489	29	0	12	7	34	0	17	5	63	1,267	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

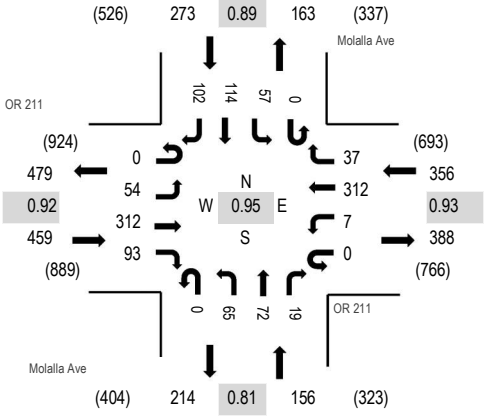
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1	0	3	0	4	4:00 PM	0	0	1	0	1	4:00 PM	0	0	0	0	0
4:05 PM	2	0	0	0	2	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	2	0	3	0	5	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	2	0	1	2	5	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	2	0	2	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	2	2
4:25 PM	1	0	4	0	5	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	0	2	0	2	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	5	0	2	0	7	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	3	3
4:40 PM	3	0	2	0	5	4:40 PM	0	0	0	0	0	4:40 PM	2	0	0	1	3
4:45 PM	2	0	2	1	5	4:45 PM	0	0	0	0	0	4:45 PM	0	2	0	0	2
4:50 PM	2	0	2	0	4	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	1	0	1	1	3	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	3	0	4	0	7	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	1	1
5:05 PM	1	0	0	0	1	5:05 PM	0	0	0	0	0	5:05 PM	2	2	0	0	4
5:10 PM	2	0	2	0	4	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	0	1	1	3	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	2	0	0	0	2	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	2	0	2	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	1	0	1	0	2	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	1	0	1	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	1	0	0	0	1	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	2	0	0	0	2	5:50 PM	0	0	0	0	0	5:50 PM	1	0	0	0	1
5:55 PM	2	0	2	0	4	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	36	0	37	5	78	Count Total	0	0	1	0	1	Count Total	5	4	0	7	16
Peak Hour	14	0	12	2	28	Peak Hour	0	0	0	0	0	Peak Hour	3	2	0	1	6

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

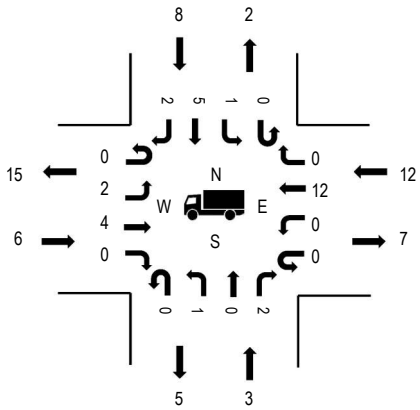
Location: 3 Molalla Ave & OR 211 PM
Date: Tuesday, September 21, 2021
Peak Hour: 04:50 PM - 05:50 PM
Peak 15-Minutes: 05:10 PM - 05:25 PM

Peak Hour

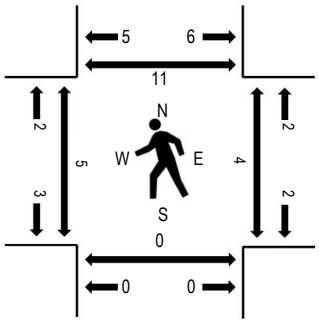
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.3%	0.92
WB	3.4%	0.93
NB	1.9%	0.81
SB	2.9%	0.89
All	2.3%	0.95

Traffic Counts - Motorized Vehicles

Interval Start Time	OR 211 Eastbound				OR 211 Westbound				Molalla Ave Northbound				Molalla Ave Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	1	29	2	0	4	16	2	0	8	4	4	0	6	8	10	94	1,220
4:05 PM	0	5	26	8	0	3	28	1	0	8	8	4	0	4	4	6	105	1,226
4:10 PM	0	8	22	5	0	1	26	4	0	7	8	1	0	4	9	12	107	1,217
4:15 PM	0	8	30	3	0	4	19	3	0	4	4	2	0	3	8	10	98	1,222
4:20 PM	0	3	24	13	0	2	24	2	0	3	8	1	0	7	7	9	103	1,237
4:25 PM	0	6	20	5	0	1	29	2	0	6	9	1	0	7	9	12	107	1,237
4:30 PM	0	6	27	8	0	0	22	3	0	7	7	1	0	6	6	11	104	1,225
4:35 PM	0	8	20	9	0	1	23	3	0	2	4	1	0	5	8	5	89	1,223
4:40 PM	0	2	29	7	0	0	24	5	0	6	5	0	0	6	13	7	104	1,238
4:45 PM	0	4	23	6	0	2	22	3	0	12	4	1	0	7	10	4	98	1,231
4:50 PM	0	3	26	12	0	0	29	3	0	4	6	2	0	3	9	6	103	1,244
4:55 PM	0	2	27	10	0	1	31	1	0	6	8	3	0	5	6	8	108	1,231
5:00 PM	0	4	30	7	0	0	17	7	0	6	8	0	0	3	10	8	100	1,211
5:05 PM	0	4	20	7	0	0	26	3	0	6	3	1	0	5	11	10	96	
5:10 PM	0	10	21	7	0	1	29	0	0	11	6	2	0	5	14	6	112	
5:15 PM	0	6	26	10	0	0	29	5	0	5	4	2	0	5	10	11	113	
5:20 PM	0	5	33	8	0	1	27	4	0	4	4	0	0	3	8	6	103	
5:25 PM	0	4	31	4	0	1	21	3	0	5	6	0	0	5	3	12	95	
5:30 PM	0	7	23	11	0	2	18	1	0	1	11	3	0	5	11	9	102	
5:35 PM	0	2	21	7	0	0	31	4	0	7	4	3	0	5	12	8	104	
5:40 PM	0	4	21	7	0	1	24	3	0	4	6	2	0	3	11	11	97	
5:45 PM	0	3	33	3	0	0	30	3	0	6	6	1	0	10	9	7	111	
5:50 PM	0	5	21	4	0	4	22	3	0	6	10	0	0	4	7	4	90	
5:55 PM	0	6	26	1	0	2	22	5	0	5	5	1	0	5	6	4	88	
Count Total	0	116	609	164	0	31	589	73	0	139	148	36	0	121	209	196	2,431	
Peak Hour	0	54	312	93	0	7	312	37	0	65	72	19	0	57	114	102	1,244	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1	0	0	2	3	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	2	1	1	0	4	4:05 PM	0	0	0	0	0	4:05 PM	0	0	1	1	2
4:10 PM	2	0	3	0	5	4:10 PM	0	0	0	0	0	4:10 PM	3	0	0	0	3
4:15 PM	3	0	1	1	5	4:15 PM	0	0	0	0	0	4:15 PM	0	0	1	0	1
4:20 PM	2	1	4	0	7	4:20 PM	0	0	0	0	0	4:20 PM	0	0	1	1	2
4:25 PM	1	0	2	0	3	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	2	0	0	2	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	3	1	1	0	5	4:35 PM	0	0	0	0	0	4:35 PM	1	0	0	1	2
4:40 PM	0	0	2	0	2	4:40 PM	0	0	0	0	0	4:40 PM	3	0	0	0	3
4:45 PM	1	0	0	0	1	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	1	1	1	1	4	4:50 PM	0	0	0	0	0	4:50 PM	0	0	2	1	3
4:55 PM	1	0	3	1	5	4:55 PM	0	0	0	0	0	4:55 PM	1	0	1	0	2
5:00 PM	0	1	0	1	2	5:00 PM	0	0	0	0	0	5:00 PM	1	0	1	0	2
5:05 PM	1	0	1	0	2	5:05 PM	0	0	0	0	0	5:05 PM	1	0	0	0	1
5:10 PM	0	0	2	1	3	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	1	3	0	5	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	1	0	1	0	2	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	3	3
5:25 PM	1	0	0	2	3	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	3	3
5:30 PM	0	0	1	1	2	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	2	2
5:35 PM	0	0	0	1	1	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	2	2
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	1	0	0	0	1
5:50 PM	1	0	0	0	1	5:50 PM	0	0	0	0	0	5:50 PM	1	0	0	0	1
5:55 PM	1	1	1	0	3	5:55 PM	0	0	0	0	0	5:55 PM	1	0	2	2	5
Count Total	23	9	27	11	70	Count Total	0	0	0	0	0	Count Total	14	0	9	16	39
Peak Hour	6	3	12	8	29	Peak Hour	0	0	0	0	0	Peak Hour	5	0	4	11	20

All Traffic Data Services Inc.

(303) 216-2439
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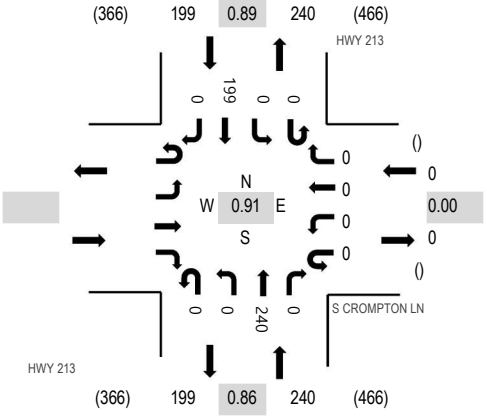
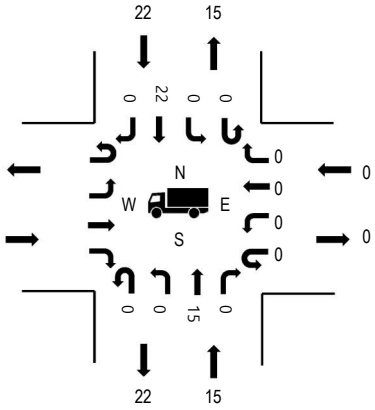
Location: HWY 213 & S CROMPTON LN AM
Date: Tuesday, October 15, 2019
Peak Hour: 07:05 AM - 08:05 AM
Peak 15-Minutes: 07:05 AM - 07:20 AM

Peak Hour

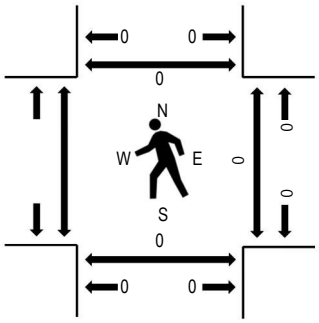
All Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB		
WB	0.0%	0.00
NB	6.3%	0.86
SB	11.1%	0.89
All	8.4%	0.91

Traffic Counts - All Vehicles

Interval Start Time	S CROMPTON LN Eastbound				S CROMPTON LN Westbound				HWY 213 Northbound				HWY 213 Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
7:00 AM					0	0	0	0	0	0	18	0	0	0	10	0	28	433
7:05 AM					0	0	0	0	0	0	21	0	0	0	15	0	36	439
7:10 AM					0	0	0	0	0	0	27	0	0	0	19	0	46	431
7:15 AM					0	0	0	0	0	0	23	0	0	0	16	0	39	415
7:20 AM					0	0	0	0	0	0	16	0	0	0	12	0	28	416
7:25 AM					0	0	0	0	0	0	20	0	0	0	18	0	38	435
7:30 AM					0	0	0	0	0	0	23	0	0	0	22	0	45	420
7:35 AM					0	0	0	0	0	0	19	0	0	0	14	0	33	396
7:40 AM					0	0	0	0	0	0	20	0	0	0	20	0	40	402
7:45 AM					0	0	0	0	0	0	17	0	0	0	18	0	35	396
7:50 AM					0	0	0	0	0	0	24	0	0	0	13	0	37	399
7:55 AM					0	0	0	0	0	0	17	0	0	0	11	0	28	387
8:00 AM					0	0	0	0	0	0	13	0	0	0	21	0	34	399
8:05 AM					0	0	0	0	0	0	16	0	0	0	12	0	28	
8:10 AM					0	0	0	0	0	0	17	0	0	0	13	0	30	
8:15 AM					0	0	0	0	0	0	20	0	0	0	20	0	40	
8:20 AM					0	0	0	0	0	0	30	0	0	0	17	0	47	
8:25 AM					0	0	0	0	0	0	11	0	0	0	12	0	23	
8:30 AM					0	0	0	0	0	0	10	0	0	0	11	0	21	
8:35 AM					0	0	0	0	0	0	22	0	0	0	17	0	39	
8:40 AM					0	0	0	0	0	0	25	0	0	0	9	0	34	
8:45 AM					0	0	0	0	0	0	24	0	0	0	14	0	38	
8:50 AM					0	0	0	0	0	0	16	0	0	0	9	0	25	
8:55 AM					0	0	0	0	0	0	17	0	0	0	23	0	40	
Count Total					0	0	0	0	0	0	466	0	0	0	366	0	832	
Peak Hour					0	0	0	0	0	0	240	0	0	0	199	0	439	

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	1	2	7:00 AM		0	0	0	0	7:00 AM		0	0	0	0
7:05 AM		2	0	2	4	7:05 AM		0	0	0	0	7:05 AM		0	0	0	0
7:10 AM		1	0	1	2	7:10 AM		0	0	0	0	7:10 AM		0	0	0	0
7:15 AM		0	0	2	2	7:15 AM		0	0	0	0	7:15 AM		0	0	0	0
7:20 AM		4	0	1	5	7:20 AM		0	0	0	0	7:20 AM		0	0	0	0
7:25 AM		1	0	0	1	7:25 AM		0	0	0	0	7:25 AM		0	0	0	0
7:30 AM		1	0	1	2	7:30 AM		0	0	0	0	7:30 AM		0	0	0	0
7:35 AM		1	0	3	4	7:35 AM		0	0	0	0	7:35 AM		0	0	0	0
7:40 AM		2	0	1	3	7:40 AM		0	0	0	0	7:40 AM		0	0	0	0
7:45 AM		0	0	5	5	7:45 AM		0	0	0	0	7:45 AM		0	0	0	0
7:50 AM		0	0	2	2	7:50 AM		0	0	0	0	7:50 AM		0	0	0	0
7:55 AM		2	0	2	4	7:55 AM		0	0	0	0	7:55 AM		0	0	0	0
8:00 AM		1	0	2	3	8:00 AM		0	0	0	0	8:00 AM		0	0	0	0
8:05 AM		0	0	1	1	8:05 AM		0	0	0	0	8:05 AM		0	0	0	0
8:10 AM		1	0	1	2	8:10 AM		0	0	0	0	8:10 AM		0	0	0	0
8:15 AM		1	0	4	5	8:15 AM		0	0	0	0	8:15 AM		0	0	0	0
8:20 AM		3	0	0	3	8:20 AM		0	0	0	0	8:20 AM		0	0	0	0
8:25 AM		0	0	1	1	8:25 AM		0	0	0	0	8:25 AM		0	0	0	0
8:30 AM		0	0	3	3	8:30 AM		0	0	0	0	8:30 AM		0	0	0	0
8:35 AM		6	0	3	9	8:35 AM		0	0	0	0	8:35 AM		0	0	0	0
8:40 AM		5	0	0	5	8:40 AM		0	0	0	0	8:40 AM		0	0	0	0
8:45 AM		1	0	1	2	8:45 AM		0	0	0	0	8:45 AM		0	0	0	0
8:50 AM		3	0	1	4	8:50 AM		0	0	0	0	8:50 AM		0	0	0	0
8:55 AM		1	0	6	7	8:55 AM		0	0	0	0	8:55 AM		0	0	0	0
Count Total		37	0	44	81	Count Total		0	0	0	0	Count Total		0	0	0	0
Peak Hour		15	0	22	37	Peak Hour		0	0	0	0	Peak Hour		0	0	0	0

All Traffic Data Services Inc.

(303) 216-2439
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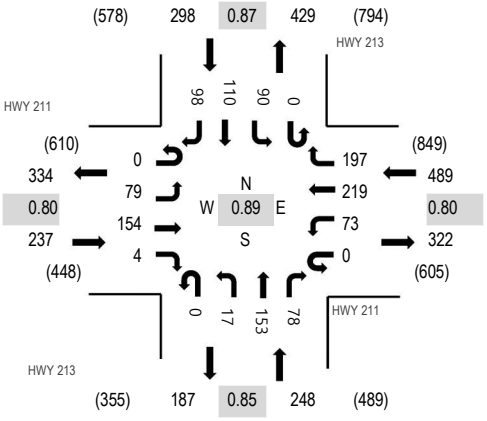
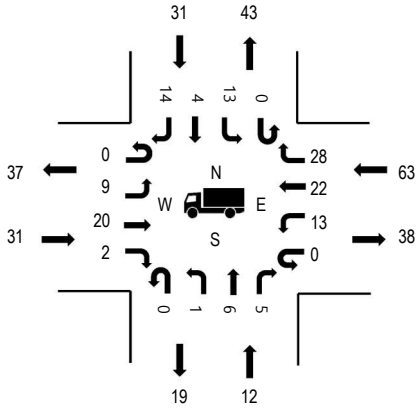
Location: HWY 213 & HWY 211 AM
Date: Tuesday, October 15, 2019
Peak Hour: 07:05 AM - 07:40 AM
Peak 15-Minutes: 07:25 AM - 07:40 AM

Peak Hour

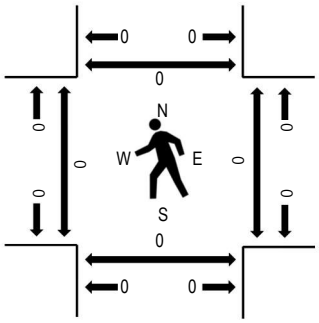
All Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	13.1%	0.80
WB	12.9%	0.80
NB	4.8%	0.85
SB	10.4%	0.87
All	10.8%	0.89

Traffic Counts - All Vehicles

Interval Start Time	HWY 211 Eastbound				HWY 211 Westbound				HWY 213 Northbound				HWY 213 Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
7:00 AM	0	5	7	0	0	9	8	18	0	1	15	7	0	5	5	3	83	1,269
7:05 AM	0	7	15	0	0	6	18	17	0	2	14	5	0	7	15	11	117	1,272
7:10 AM	0	8	14	0	0	5	17	17	0	0	18	9	0	5	8	4	105	1,230
7:15 AM	0	8	18	0	0	3	24	24	0	1	8	5	0	7	7	8	113	1,215
7:20 AM	0	12	14	0	0	9	17	24	0	3	15	7	0	4	9	4	118	1,190
7:25 AM	0	4	10	0	0	8	20	26	0	3	11	5	0	11	15	5	118	1,167
7:30 AM	0	7	12	1	0	7	23	14	0	1	19	4	0	10	1	11	110	1,131
7:35 AM	0	4	17	0	0	8	29	17	0	4	10	9	0	9	12	11	130	1,104
7:40 AM	0	6	9	1	0	11	20	9	0	0	19	8	0	12	9	11	115	1,076
7:45 AM	0	6	14	0	0	1	12	18	0	1	7	8	0	6	9	10	92	1,074
7:50 AM	0	6	10	0	0	5	14	11	0	2	9	9	0	7	7	9	89	1,076
7:55 AM	0	6	11	1	0	7	15	6	0	0	9	1	0	6	9	8	79	1,077
8:00 AM	0	5	10	1	0	3	10	14	0	0	14	8	0	6	9	6	86	1,095
8:05 AM	0	4	10	0	0	6	11	15	0	1	11	6	0	4	6	1	75	
8:10 AM	0	3	7	0	0	5	13	9	0	0	9	7	0	13	13	11	90	
8:15 AM	0	2	8	0	0	5	7	8	0	1	22	10	0	5	14	6	88	
8:20 AM	0	8	14	2	0	3	13	11	0	0	13	5	0	11	5	10	95	
8:25 AM	0	5	6	0	0	6	15	13	0	2	14	5	0	7	5	4	82	
8:30 AM	0	6	8	1	0	4	18	6	0	4	9	4	0	6	8	9	83	
8:35 AM	0	11	13	1	0	3	17	16	0	0	10	2	0	4	9	16	102	
8:40 AM	0	2	13	1	0	4	23	12	0	4	20	7	0	8	6	13	113	
8:45 AM	0	6	15	0	0	1	17	9	0	1	13	4	0	10	8	10	94	
8:50 AM	0	3	12	3	0	4	14	7	0	1	14	8	0	6	9	9	90	
8:55 AM	0	16	18	1	0	9	10	11	0	1	9	1	0	7	12	2	97	
Count Total	0	150	285	13	0	132	385	332	0	33	312	144	0	176	210	192	2,364	
Peak Hour	0	79	154	4	0	73	219	197	0	17	153	78	0	90	110	98	1,272	

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	1	4	9	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	1	1	7	1	10	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	3	0	2	2	7	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	2	1	7	2	12	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	1	2	5	5	13	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	5	1	4	2	12	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	3	1	6	4	14	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	4	3	5	2	14	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	2	1	8	4	15	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	4	0	5	2	11	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	2	0	9	3	14	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	2	0	3	2	7	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	2	2	2	2	8	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	0	2	3	1	6	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	0	1	4	3	8	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	3	5	1	2	11	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	9	1	3	4	17	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	3	0	4	2	9	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	3	4	8	3	18	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	4	0	4	1	9	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	3	6	2	5	16	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	5	2	2	4	13	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	4	2	2	3	11	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	5	0	4	0	9	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	73	36	101	63	273	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	31	12	63	31	137	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

All Traffic Data Services Inc.

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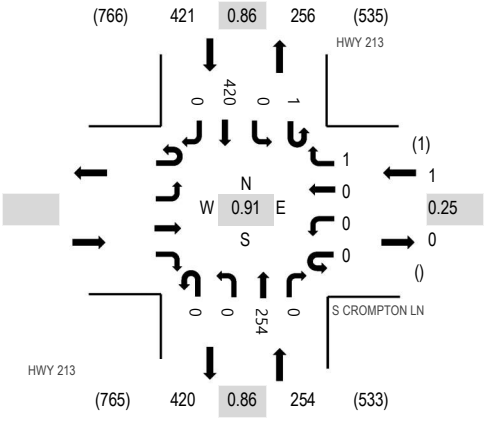
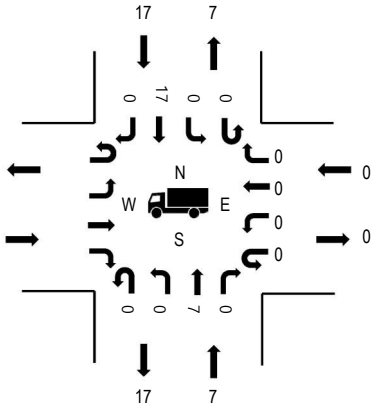
Location: HWY 213 & S CROMPTON LN PM
Date: Tuesday, October 15, 2019
Peak Hour: 04:40 PM - 05:40 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour

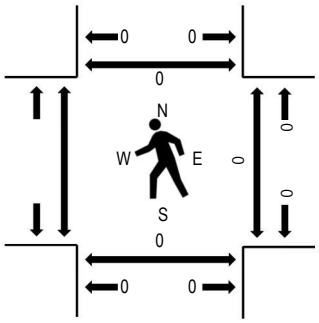
All Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB		
WB	0.0%	0.25
NB	2.8%	0.86
SB	4.0%	0.86
All	3.6%	0.91

Traffic Counts - All Vehicles

Interval Start Time	Eastbound				S CROMPTON LN Westbound				HWY 213 Northbound				HWY 213 Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM					0	0	0	0	0	0	31	0	0	0	36	0	67	635
4:05 PM					0	0	0	0	0	0	18	0	0	0	33	0	51	636
4:10 PM					0	0	0	0	0	0	23	0	0	0	31	0	54	639
4:15 PM					0	0	0	0	0	0	36	0	0	0	25	0	61	649
4:20 PM					0	0	0	0	0	0	19	0	0	0	23	0	42	631
4:25 PM					0	0	0	0	0	0	18	0	0	0	31	0	49	650
4:30 PM					0	0	0	0	0	0	19	0	0	0	28	0	47	658
4:35 PM					0	0	0	0	0	0	11	0	0	0	25	0	36	659
4:40 PM					0	0	0	0	0	0	31	0	0	0	34	0	65	676
4:45 PM					0	0	0	0	0	0	16	0	0	0	45	0	61	676
4:50 PM					0	0	0	0	0	0	22	0	0	0	24	0	46	651
4:55 PM					0	0	0	0	0	0	24	0	0	0	32	0	56	663
5:00 PM					0	0	0	0	0	0	27	0	0	0	41	0	68	665
5:05 PM					0	0	0	0	0	0	17	0	0	0	37	0	54	
5:10 PM					0	0	0	0	0	0	18	0	0	0	46	0	64	
5:15 PM					0	0	0	0	0	0	14	0	1	0	28	0	43	
5:20 PM					0	0	0	1	0	0	23	0	0	0	37	0	61	
5:25 PM					0	0	0	0	0	0	20	0	0	0	37	0	57	
5:30 PM					0	0	0	0	0	0	15	0	0	0	33	0	48	
5:35 PM					0	0	0	0	0	0	27	0	0	0	26	0	53	
5:40 PM					0	0	0	0	0	0	24	0	0	0	41	0	65	
5:45 PM					0	0	0	0	0	0	20	0	0	0	16	0	36	
5:50 PM					0	0	0	0	0	0	28	0	0	0	30	0	58	
5:55 PM					0	0	0	0	0	0	32	0	0	0	26	0	58	
Count Total					0	0	0	1	0	0	533	0	1	0	765	0	1,300	
Peak Hour					0	0	0	1	0	0	254	0	1	0	420	0	676	

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	3	5	4:00 PM		0	0	0	0	4:00 PM		0	0	0	0
4:05 PM		0	0	2	2	4:05 PM		0	0	0	0	4:05 PM		0	0	0	0
4:10 PM		2	0	0	2	4:10 PM		0	0	0	0	4:10 PM		0	0	0	0
4:15 PM		5	0	0	5	4:15 PM		0	0	0	0	4:15 PM		0	0	0	0
4:20 PM		2	0	0	2	4:20 PM		0	0	0	0	4:20 PM		0	0	0	0
4:25 PM		1	0	4	5	4:25 PM		0	0	0	0	4:25 PM		0	0	0	0
4:30 PM		1	0	0	1	4:30 PM		0	0	0	0	4:30 PM		0	0	0	0
4:35 PM		0	0	0	0	4:35 PM		0	0	0	0	4:35 PM		0	0	0	0
4:40 PM		3	0	0	3	4:40 PM		0	0	0	0	4:40 PM		0	0	0	0
4:45 PM		1	0	3	4	4:45 PM		0	0	0	0	4:45 PM		0	0	0	0
4:50 PM		0	0	0	0	4:50 PM		0	0	0	0	4:50 PM		0	0	0	0
4:55 PM		0	0	2	2	4:55 PM		0	0	0	0	4:55 PM		0	0	0	0
5:00 PM		0	0	3	3	5:00 PM		0	0	0	0	5:00 PM		0	0	0	0
5:05 PM		0	0	1	1	5:05 PM		0	0	0	0	5:05 PM		0	0	0	0
5:10 PM		1	0	1	2	5:10 PM		0	0	0	0	5:10 PM		0	0	0	0
5:15 PM		0	0	1	1	5:15 PM		0	0	0	0	5:15 PM		0	0	0	0
5:20 PM		0	0	2	2	5:20 PM		0	0	0	0	5:20 PM		0	0	0	0
5:25 PM		2	0	0	2	5:25 PM		0	0	0	0	5:25 PM		0	0	0	0
5:30 PM		0	0	3	3	5:30 PM		0	0	0	0	5:30 PM		0	0	0	0
5:35 PM		0	0	1	1	5:35 PM		0	0	0	0	5:35 PM		0	0	0	0
5:40 PM		0	0	4	4	5:40 PM		0	0	0	0	5:40 PM		0	0	0	0
5:45 PM		2	0	1	3	5:45 PM		0	0	0	0	5:45 PM		0	0	0	0
5:50 PM		1	0	0	1	5:50 PM		0	0	0	0	5:50 PM		0	0	0	0
5:55 PM		0	0	0	0	5:55 PM		0	0	0	0	5:55 PM		0	0	0	0
Count Total		23	0	31	54	Count Total		0	0	0	0	Count Total		0	0	0	0
Peak Hour		7	0	17	24	Peak Hour		0	0	0	0	Peak Hour		0	0	0	0

All Traffic Data Services Inc.
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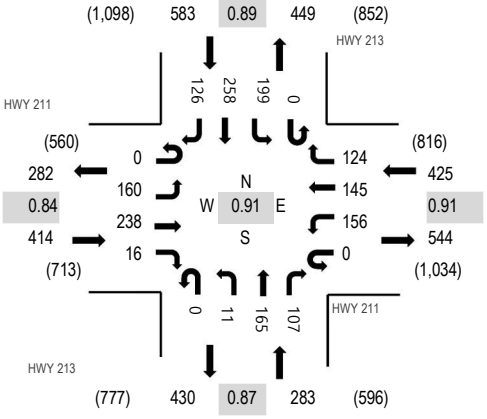
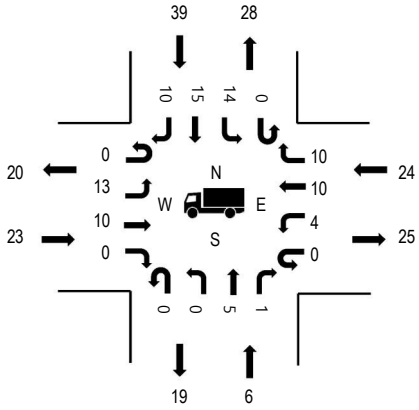
Location: HWY 213 & HWY 211 PM
Date: Tuesday, October 15, 2019
Peak Hour: 04:40 PM - 05:40 PM
Peak 15-Minutes: 04:50 PM - 05:05 PM

Peak Hour

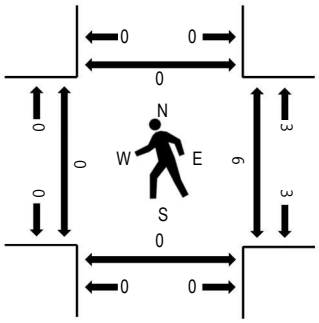
All Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	5.6%	0.84
WB	5.6%	0.91
NB	2.1%	0.87
SB	6.7%	0.89
All	5.4%	0.91

Traffic Counts - All Vehicles

Interval Start Time	HWY 211 Eastbound				HWY 211 Westbound				HWY 213 Northbound				HWY 213 Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	0	0	0	19	8	11	0	0	17	10	0	20	11	7	103	1,584
4:05 PM	0	0	9	1	0	9	12	15	0	2	10	10	0	19	17	7	111	1,623
4:10 PM	0	10	25	1	0	16	16	8	0	1	13	11	0	14	7	5	127	1,680
4:15 PM	0	21	49	2	0	9	14	6	0	8	18	10	0	18	17	12	184	1,687
4:20 PM	0	13	21	2	0	14	19	4	0	2	15	8	0	11	12	5	126	1,643
4:25 PM	0	3	10	2	0	7	15	6	0	0	13	5	0	24	23	13	121	1,651
4:30 PM	0	9	15	2	0	8	12	14	0	1	13	5	0	22	14	15	130	1,659
4:35 PM	0	0	1	0	0	13	9	11	0	3	18	7	0	15	22	11	110	1,670
4:40 PM	0	0	4	0	0	17	15	4	0	0	14	6	0	18	26	17	121	1,705
4:45 PM	0	10	23	0	0	13	17	11	0	0	10	11	0	11	12	9	127	1,680
4:50 PM	0	26	36	2	0	13	11	6	0	4	15	14	0	19	15	12	173	1,680
4:55 PM	0	11	17	2	0	10	14	13	0	1	14	10	0	18	32	9	151	1,670
5:00 PM	0	15	15	4	0	20	20	9	0	1	10	7	0	16	16	9	142	1,639
5:05 PM	0	15	22	2	0	10	5	17	0	0	19	11	0	22	32	13	168	
5:10 PM	0	11	23	1	0	9	10	15	0	0	10	3	0	17	22	13	134	
5:15 PM	0	13	25	1	0	14	9	11	0	3	15	10	0	14	18	7	140	
5:20 PM	0	10	27	1	0	16	10	10	0	1	12	7	0	11	18	11	134	
5:25 PM	0	21	12	1	0	11	11	12	0	0	11	6	0	16	21	7	129	
5:30 PM	0	9	24	2	0	8	13	7	0	0	21	7	0	18	22	10	141	
5:35 PM	0	19	10	0	0	15	10	9	0	1	14	15	0	19	24	9	145	
5:40 PM	0	11	9	0	0	11	11	11	0	1	13	6	0	14	7	2	96	
5:45 PM	0	15	14	3	0	5	8	11	0	2	12	8	0	16	24	9	127	
5:50 PM	0	10	20	0	0	9	16	14	0	0	30	12	0	15	20	17	163	
5:55 PM	0	7	13	1	0	10	6	4	0	3	17	9	0	15	29	6	120	
Count Total	0	259	424	30	0	286	291	239	0	34	354	208	0	402	461	235	3,223	
Peak Hour	0	160	238	16	0	156	145	124	0	11	165	107	0	199	258	126	1,705	

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	3	2	2	7	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	1	2	4	4	11	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	3	0	3	0	6	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	2	5	4	3	14	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	6	2	2	0	10	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	2	0	2	2	6	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	3	2	2	3	10	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	2	0	0	2	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	1	4	4	9	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	3	2	3	2	10	4:45 PM	0	0	0	0	0	4:45 PM	0	0	2	0	2
4:50 PM	4	0	0	7	11	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	3	2	5	4:55 PM	0	0	0	0	0	4:55 PM	0	0	2	0	2
5:00 PM	3	0	5	1	9	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	3	0	1	1	5	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	2	1	1	5	9	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	1	1	2	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	5	0	2	3	10	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	1	2	2	4	9	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	1	6	7	5:30 PM	0	0	0	0	0	5:30 PM	0	0	1	0	1
5:35 PM	2	0	1	3	6	5:35 PM	0	0	0	0	0	5:35 PM	0	0	1	0	1
5:40 PM	3	1	2	2	8	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	2	1	0	3	6	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	1	1	2	2	6	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	1	1	6	8	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	46	26	48	66	186	Count Total	0	0	0	0	0	Count Total	0	0	6	0	6
Peak Hour	23	6	24	39	92	Peak Hour	0	0	0	0	0	Peak Hour	0	0	6	0	6

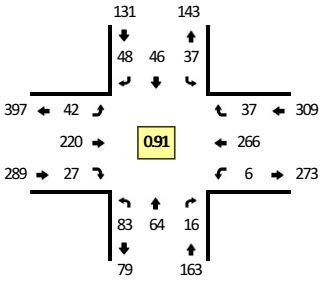
Type of peak hour being reported: Intersection Peak

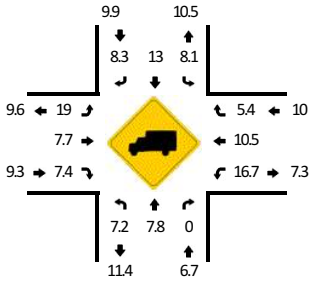
Method for determining peak hour: Total Entering Volume

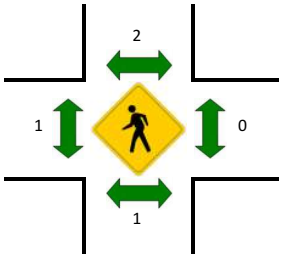
LOCATION: Molalla Ave -- OR-211
CITY/STATE: Molalla, OR

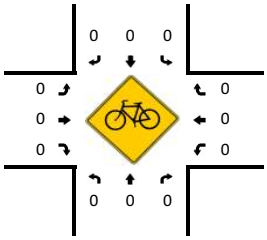
QC JOB #: 14815607
DATE: Tue, Oct 9 2018

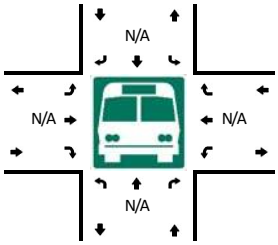
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:00 AM -- 7:15 AM

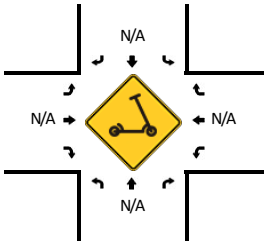












5-Min Count Period Beginning At	Molalla Ave (Northbound)				Molalla Ave (Southbound)				OR-211 (Eastbound)				OR-211 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	11	8	2	0	2	2	5	0	5	19	0	0	1	21	0	0	76	
7:05 AM	6	9	3	0	3	2	5	0	4	21	1	0	0	28	9	0	91	
7:10 AM	6	9	4	0	2	3	3	0	9	18	1	0	0	18	4	0	77	
7:15 AM	9	9	1	0	0	6	4	0	5	14	2	0	0	21	5	0	76	
7:20 AM	12	6	0	0	1	4	4	0	1	17	2	0	2	29	2	0	80	
7:25 AM	6	4	0	0	2	4	8	0	1	15	2	0	2	24	0	0	68	
7:30 AM	4	3	2	0	0	5	4	0	2	17	3	0	0	17	2	0	59	
7:35 AM	7	2	0	0	0	5	2	0	2	22	5	0	0	22	4	0	71	
7:40 AM	8	3	2	0	7	2	5	0	3	20	3	0	0	19	3	0	75	
7:45 AM	5	2	1	0	11	6	4	0	4	18	3	0	0	26	2	0	82	
7:50 AM	5	3	1	0	5	2	3	0	2	21	1	0	1	18	3	0	65	
7:55 AM	4	6	0	0	4	5	1	0	4	18	4	0	0	23	3	0	72	892
8:00 AM	10	4	1	0	5	1	4	0	3	19	0	0	0	23	6	0	76	892
8:05 AM	3	3	2	0	0	9	5	0	2	12	1	0	2	19	4	0	62	863
8:10 AM	7	1	4	0	3	2	1	0	1	20	5	0	1	17	8	0	70	856
8:15 AM	3	6	1	0	4	4	9	0	3	9	2	0	1	23	3	0	68	848
8:20 AM	4	6	1	0	1	3	3	0	4	23	0	0	0	13	4	0	62	830
8:25 AM	7	8	2	0	3	2	2	0	2	13	6	0	1	16	2	0	64	826
8:30 AM	5	5	0	0	2	4	1	0	4	15	3	0	0	13	4	0	56	823
8:35 AM	7	2	0	0	4	3	5	0	1	16	1	0	2	26	6	0	73	825
8:40 AM	8	8	1	0	1	3	2	0	2	16	3	0	1	22	3	0	70	820
8:45 AM	3	5	3	0	3	7	9	0	5	8	4	0	0	16	6	0	69	807
8:50 AM	8	4	3	0	7	4	2	0	2	14	3	0	0	13	5	0	65	807
8:55 AM	6	3	2	0	5	1	5	0	3	20	5	0	3	16	5	0	74	809

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	92	104	36	0	28	28	52	0	72	232	8	0	4	268	52	0	976
Heavy Trucks	4	4	0		0	0	12		16	36	0		4	28	4		108
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 10/6/2021 5:18 AM

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

160: CASCADE HWY SOUTH

Highway 160 ALL ROAD TYPES, MP 16.06 to 16.22 01/01/2015 to 12/31/2019, Both Add and Non-Add mileage

1 - 6 of 22 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	D R A L	M J U C	S I N H	W C O R	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# / COMPNT / MLG / MILEPNT	FC / TYP	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
05435	N	N	N	N	N	12/17/2015	CLACKAMAS	1	16		STRGHT		N	N	RAIN	S-STRGHT	01	NONE 0	STRGHT										07
CITY						TH		MN	0		UN	(NONE)	NONE	N	WET	REAR		PRVTE	N -S									000	00
N						2P	MOLALLA UA	16.07			03			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	25	M	OR-Y		043,042	000		07
N						45 9 3.97	-122 36 22.18			016000100S00		(02)							OR<25										
																	02	NONE 0	STRGHT									006	00
																		PRVTE	N -S										
																		PSNGR CAR		01	DRVR	INJC	45	M	OTH-Y		000	000		00
																									N-RES				
01855	N	N	N	N		05/31/2018	CLACKAMAS	1	16		ALLEY		N	N	CLR	ANGL-OTH	01	NONE 0	TURN-R										02,08
NONE						TH		MN	0		UN	(NONE)	L-TURN REF	N	DRY	TURN		PRVTE	W -S									018	00
N						6P	MOLALLA UA	16.08			03			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	85	M	OR-Y		028,001	000		02,08
N						45 9 3.49	-122 36 22.44			016000100S00		(02)							OR<25										
																	02	NONE 0	STRGHT									000	00
																		PRVTE	N -S										
																		PSNGR CAR		01	DRVR	INJC	45	F	OR-Y		000	000		00
																									OR<25				
03455	N	N	N	N		10/05/2019	CLACKAMAS	1	16		STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT										29
NONE						SA		MN	0		UN	(NONE)	TRF SIGNAL	N	DRY	REAR		N/A	N -S									000	00
N						7P	MOLALLA UA	16.08			03			N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						45 9 2.49	-122 36 22.95			016000100S00		(02)							UNK										
																	02	NONE 9	STOP									011	00
																		N/A	N -S										
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK				
02284	N	N	N	N		06/29/2018	CLACKAMAS	1	16		INTER	CROSS	N	N	UNK	S-1STOP	01	NONE 9	STRGHT										29
NONE						FR		MN	0		UN		TRF SIGNAL	N	UNK	REAR		N/A	UN-UN									000	00
N						5P	MOLALLA UA	16.10			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						45 9 2.54	-122 36 22.92			016000100S00									UNK										
																	02	NONE 9	STOP									011	00
																		N/A	UN-UN										
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK				
03062	N	N	N	N		07/27/2017	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 9	STRGHT										29
NONE						TH		MN	0		N		TRF SIGNAL	N	DRY	REAR		N/A	N -S									000	00
N						12P	MOLALLA UA	16.10			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			016000100S00									UNK										
																	02	NONE 9	STOP									011	00
																		N/A	N -S										
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK				
04230	N	N	N	N	N	11/26/2019	CLACKAMAS	1	16		INTER	CROSS	N	N	RAIN	S-STRGHT	01	NONE 9	STRGHT										29
CITY						TU		MN	0		S		TRF SIGNAL	N	WET	REAR		N/A	S -N									000	00
N						5A	MOLALLA UA	16.10			06	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						45 9 2.56	-122 36 22.95			016000100S00									UNK										
																	02	NONE 9	STRGHT									000	00
																		N/A	S -N										
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK				

Driveway Crash - north of intersection turning from west side

SER# / INVEST / RD DPT / UNLOC?	S P E D	D R A L	M J U G	S I N H	W C O R	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# / COMPNT / MLG / MILEPNT	FC	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A GE	S EX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
03184	N	N	N	N	N	07/15/2016	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
CITY						FR		MN 0			W		TRF SIGNAL	N	DRY	REAR		RENTL	W -E									000	00
N						3P	MOLALLA UA	16.10			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	51	M	OR-Y		043	000		07
N						45 9 2.53	-122 36 22.92			016000100S00															OR>25					
																	02	NONE 0	STOP									011		00
																		PRVTE	W -E										
																		PSNGR CAR		01	DRVR	INJC	17	F	OR-Y		000	000		00
																									OR<25				
04148	N	N	N	N	N	09/09/2016	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	ANGL-STP	01	NONE 9	TURN-L										08,32
CITY						FR		MN 0			W		TRF SIGNAL	N	DRY	TURN		N/A	S -W									000	00
N						6P	MOLALLA UA	16.10			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			016000100S00															UNK					
																	02	NONE 9	STOP									011		00
																		N/A	W -E										
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK				
03155	N	N	N	N	N	09/07/2018	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT										27,02,08
STATE						FR		MN 0			CN		TRF SIGNAL	N	DRY	TURN		PRVTE	N -S									000	00
N						6A	MOLALLA UA	16.10			01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	48	F	OR-Y		000	000		00
N						45 9 2.54	-122 36 22.93			016000100S00															OR<25					
																	02	NONE 0	TURN-L									000		00
																		PRVTE	S -W										
																		PSNGR CAR		01	DRVR	INJC	29	M	NONE		028,004	038		27,02,08
																									OR<25				
02137	N	N	N	N	N	06/01/2017	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT										02,13
CITY						TH		MN 0			CN		TRF SIGNAL	N	DRY	TURN		N/A	S -N									000	00
N						3P	MOLALLA UA	16.10			02	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						45 9 2.53	-122 36 22.92			016000100S00															UNK					
																	02	NONE 9	TURN-R									016		00
																		N/A	E -N										
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK				
03645	N	N	N	N		10/10/2018	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	TURN-L										02
CITY						WE		MN 0			CN		TRF SIGNAL	N	DRY	TURN		PRVTE	W -N									000	00
N						2P	MOLALLA UA	16.10			02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	67	F	OR-Y		028	000		02
N						45 9 2.53	-122 36 22.92			016000100S00															OR<25					
																	02	NONE 0	STRGHT									000		00
																		PRVTE	E -W										
																		PSNGR CAR		01	DRVR	INJB	33	F	OR-Y		000	000		00
																									OR<25				
05191	N	N	N	N	N	12/06/2015	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										04
CITY						SU		MN 0			CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	W -E									000	00
N						10A	MOLALLA UA	16.10			03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	39	F	OR-Y		020	000		04
N						45 9 2.53	-122 36 22.92			016000100S00															OR<25					
																	02	NONE 0	STRGHT									000		00
																		PRVTE	N -S										
																		PSNGR CAR		01	DRVR	NONE	62	F	OR-Y		000	000		00
																									OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D R G S	M J U V	S I N L	C N H K	W O R	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# FC / COMPNT / MLG TYP / MILEPNT	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A GE	S EX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
01405	N	N	N	N	N	N	N	03/27/2016	CLACKAMAS	1 16		INTER	CROSS	N	N	CLD	O-1 L-TURN	01	NONE 0	STRGHT										02
CITY				SU						MN 0		CN		TRF SIGNAL	N	WET	TURN		PRVTE	W -E								000		00
N				8P					MOLALLA UA	16.10		03	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	INJC	20	F	OR-Y		000	000		00
N				45 9 2.53					-122 36 22.92		016000100S00															OR<25					
																		02	NONE 0	TURN-L										
																			PRVTE	E -S								000		00
																			PSNGR CAR		01	DRVR	INJC	54	F	OR-Y		028,004	000		02
																										OR<25				
																		02	NONE 0	TURN-L										
																			PRVTE	E -S								000		00
																			PSNGR CAR		02	PSNG	INJC	22	F			000	000		00
04052	N	N	N	N	N	N	N	08/30/2016	CLACKAMAS	1 16		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										04
CITY				TU						MN 0		CN		L-GRN-SIG	N	DRY	TURN		PRVTE	N -S								000		00
N				6P					MOLALLA UA	16.10		03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	64	M	OR-Y		020	000		04
N				45 9 2.53					-122 36 22.92		016000100S00															OR<25					
																		02	NONE 0	TURN-L										
																			PRVTE	W -N								000		00
																			PSNGR CAR		01	DRVR	NONE	61	M	OR-Y		000	000		00
																										OR<25				
																		02	NONE 0	TURN-L										
																			PRVTE	W -N								000		00
																			PSNGR CAR		02	PSNG	INJB	61	F			000	000		00
02329	N	N	N	N				05/23/2016	CLACKAMAS	1 16		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT										04
NONE				MO						MN 0		CN		TRF SIGNAL	N	DRY	ANGL		N/A	N -S								000		00
N				4A					MOLALLA UA	16.10		03	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N				45 9 2.53					-122 36 22.92		016000100S00															UNK					
																		02	NONE 9	STRGHT										
																			N/A	E -W								000		00
																			PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																										UNK				
01211	N	N	N	N	N	N	N	04/13/2019	CLACKAMAS	1 16		INTER	CROSS	N	N	CLD	ANGL-OTH	01	NONE 9	STRGHT										04
CITY				SA						MN 0		CN		TRF SIGNAL	N	WET	ANGL		N/A	W -E								000		00
N				9A					MOLALLA UA	16.10		03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N				45 9 2.55					-122 36 22.94		016000100S00															UNK					
																		02	NONE 9	STRGHT										
																			N/A	N -S								000		00
																			PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																										UNK				
05284	N	N	N	N				11/14/2016	CLACKAMAS	1 16		INTER	CROSS	N	N	RAIN	O-1 L-TURN	01	NONE 0	STRGHT										02
CITY				MO						MN 0		CN		TRF SIGNAL	N	WET	TURN		PRVTE	S -N								000		00
N				11A					MOLALLA UA	16.10		04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	20	F	OR-Y		000	000		00
N				45 9 2.53					-122 36 22.92		016000100S00															OR<25					
																		02	NONE 0	TURN-L										
																			PRVTE	N -E								000		00
																			PSNGR CAR		01	DRVR	NONE	28	M	OR-Y		028,004	000		02
																										OR<25				

SER# / INVEST / RD DPT / UNLOC?	S P E D	D R A L	M J U G	S I N H	W C O R	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# / COMPNT / MLG / MILEPNT	FC / TYP	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02130	N	N	N	N	N	06/19/2018	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 9	TURN-L										02,08
CITY						TU		MN 0			CN		TRF SIGNAL	N	DRY	TURN		N/A	E -S									000		00
N						12P	MOLALLA UA	16.10			04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						45 9 2.54	-122 36 22.93			016000100S00															UNK					
																	02	NONE 9	STRGHT											
																		N/A	W -E									000		00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK					
03098	N	N	N	N	N	09/06/2019	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 9	TURN-R										02
CITY						FR		MN 0			CN		TRF SIGNAL	N	DRY	TURN		N/A	S -E									016		00
N						9A	MOLALLA UA	16.10			04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						45 9 2.55	-122 36 22.94			016000100S00															UNK					
																	02	NONE 9	TURN-L											
																		N/A	N -E									000		00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK					
04838	N	N	N	N	N	10/19/2016	CLACKAMAS	1	16		ALLEY		N	N	RAIN	O-1 L-TURN	01	NONE 0	STRGHT										02,08
CITY						WE		MN 0			UN	(NONE)	UNKNOWN	N	WET	TURN		PRVTE	S -N									000		00
N						6P	MOLALLA UA	16.13			04			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	52	M	OR-Y		028,004	000		00
N						45 9 1.09	-122 36 23.65			016000100S00		(02)													OR<25					
																	02	NONE 0	TURN-L											
																		PRVTE	N -E									019		00
																		PSNGR CAR		01	DRVR	NONE	52	M	OR-Y		028,004	000		02,08
																									OR<25					
04754	N	N	N	N		10/14/2016	CLACKAMAS	1	16		ALLEY		N	N	RAIN	ANGL-OTH	01	NONE 9	TURN-R										02
CITY						FR		MN 0			UN	(NONE)	UNKNOWN	N	WET	TURN		N/A	E -N									018		00
N						5A	MOLALLA UA	16.13			04			N	DARK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						45 9 1.09	-122 36 23.65			016000100S00		(02)													UNK					
																	02	NONE 9	STRGHT											
																		N/A	S -N									000		00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK					
02156	N	N	N	N		06/27/2019	CLACKAMAS	1	16		TRANS		N	N	CLR	S-STRGHT	01	NONE 9	STRGHT										02
NONE						TH		MN 0			UN	(NONE)	NONE	N	DRY	SS-O		N/A	S -N									052		00
N						2P	MOLALLA UA	16.16			05			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						45 8 59.66	-122 36 24.4			016000100S00		(03)													UNK					
																	02	NONE 9	STRGHT											
																		N/A	S -N									000		00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK					

Driveway Crash - south of intersection turning to east side (Gas Station)

Driveway Crash - south of intersection turning from east side (Gas Station)

SER# / INVEST / RD DPT / UNLOC?	S P E D	D R A C	M J U S	S W I C	O DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# / COMPNT / MLG / MILEPNT	FC	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
04638	N	N	N	N	11/04/2017	CLACKAMAS	1	16		STRGHT		Y	N	UNK	S-1STOP	01	NONE 9	STRGHT											10
NONE					SA		MN 0			UN	(NONE)	UNKNOWN	N	UNK	SS-O		N/A	W -E										000		00
N					12P	MOLALLA UA	11.28			03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N					45 9 2.27	-122 36 25.08			016100100S00															UNK				
																02	NONE 9	STOP										
																	N/A	W -E									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK				
02749	N	N	N	N	08/07/2018	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	ANGL-STP	01	NONE 9	TURN-L											29
NONE					TU		MN 0			E		TRF SIGNAL	N	DRY	TURN		N/A	N -E									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															UNK				
																02	NONE 9	STOP										
																	N/A	W -E									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK				
04140	N	N	N	N	08/28/2016	CLACKAMAS	1	16		ALLEY		N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT											02
CITY					SU		MN 0			UN	(NONE)	NONE	N	DRY	TURN		N/A	W -E									000		00
N					10P	MOLALLA UA	11.34			04			N	DARK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N					45 9 2.37	-122 36 20.64			016100100S00		(02)													UNK				
																02	NONE 9	TURN-L										
																	N/A	S -W									018		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK				
04136	N	N	N	N	10/07/2015	CLACKAMAS	1	16		STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											29
NONE					WE		MN 0			UN	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	E -W									000		00
N					12P	MOLALLA UA	11.37			04			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	67	M	OR-Y		026	000		29
N					45 9 2.11	-122 36 18.38			016100100S00		(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	E -W									011		00
																	PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		000	000		00
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	E -W									011		00
																	PSNGR CAR		02	PSNG	NO<5	01	F			000	000		00

Driveway Crash - east of intersection turning from south side (Gas Station)

161: WOODBURN-ESTACADA

Highway 161 ALL ROAD TYPES, MP 11.36 to 11.41 01/01/2015 to 12/31/2019, Both Add and Non-Add mileage

1 - 6 of 8 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D R G S	M J N V	S I H L	C N	W O R K	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# / COMPNT / MLG / MILEPNT	FC / TYP / PNT	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
04136	N	N	N	N				10/07/2015	CLACKAMAS	1 16			STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											29
NONE								WE		MN 0			UN	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	E -W									000		00
N								12P	MOLALLA UA	11.37			04			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	67	M	OR-Y		026	000		29
N								45 9 2.11	-122 36 18.38			016100100S00		(02)													OR<25					
																			02	NONE 0	STOP											
																				PRVTE	E -W									011		00
																				PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		000	000		00
																											OR<25					
																			02	NONE 0	STOP											
																				PRVTE	E -W									011		00
																				PSNGR CAR		02	PSNG	NO<5	01	F			000	000		00
00920	N	N	N	N	N	N		02/26/2016	CLACKAMAS	1 16			ALLEY		N	N	RAIN	ANGL-OTH	01	NONE 0	STRGHT											02
CITY								FR		MN 0			UN	(NONE)	STOP SIGN	N	WET	TURN		PRVTE	E -W									000		00
N								2P	MOLALLA UA	11.40			04			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	31	M	OR-Y		000	000		00
N								45 9 1.85	-122 36 16.12			016100100S00		(02)													OR<25					
																			02	NONE 0	TURN-L											
																				PRVTE	N -E									018		00
																				PSNGR CAR		01	DRVR	INJC	27	M	OR-Y		028	000		02
																											OR<25					
01737	N	N	N	N	N	N		04/16/2016	CLACKAMAS	1 16			ALLEY		N	N	CLR	ANGL-OTH	01	NONE 0	TURN-L											02
STATE								SA		MN 0			UN	(NONE)	UNKNOWN	N	DRY	TURN		PRVTE	N -E									018		00
N								12P	MOLALLA UA	11.40			04			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	35	M	OR-Y		028	000		02
N								45 9 1.85	-122 36 16.12			016100100S00		(02)													OR<25					
																			02	NONE 0	STRGHT											
																				PRVTE	E -W									000		00
																				MTRCYCLE		01	DRVR	INJB	50	M	OR-Y		000	000		00
																											OR<25					
03181	N	N	N	N	N	N		09/09/2018	CLACKAMAS	1 16			ALLEY		N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											02
CITY								SU		MN 0			UN	(NONE)	UNKNOWN	N	DRY	TURN		PRVTE	E -W									000		00
N								7P	MOLALLA UA	11.40			04			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	29	F	OR-Y		000	000		00
N								45 9 1.86	-122 36 16.11			016100100S00		(02)													OR<25					
																			02	NONE 0	TURN-L											
																				PRVTE	N -E									018		00
																				PSNGR CAR		01	DRVR	NONE	43	F	SUSP		028	000		02
																											OR<25					
02759	Y	Y	N	N	N	N		06/19/2016	CLACKAMAS	1 16			ALLEY		N	Y	CLR	FIX OBJ	01	NONE 0	STRGHT										079	06,01
CITY								SU		MN 0			UN	(NONE)	UNKNOWN	N	DRY	FIX		PRVTE	W -E									007	079	00
Y								12P	MOLALLA UA	11.41			01			N	DAY	INJ		MTRCYCLE		01	DRVR	INJA	61	M	SUSP		031,047	000		06,01
N								45 9 1.78	-122 36 15.52			016100100S00		(02)													N-RES					
00692	N	N	N	N				02/21/2017	CLACKAMAS	1 16			ALLEY		N	N	RAIN	ANGL-OTH	01	NONE 0	STRGHT											02
NONE								TU		MN 0			UN	(NONE)	UNKNOWN	N	WET	TURN		PRVTE	E -W									000		00
N								12P	MOLALLA UA	11.41			04			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	21	M	OR-Y		000	000		00
N								45 9 1.78	-122 36 15.52			016100100S00		(02)													OR<25					
																			02	NONE 0	TURN-L											
																				PRVTE	N -E									018		00
																				PSNGR CAR		01	DRVR	NONE	00	F	UNK		028	000		02
																											OR<25					

Already included in intersection crashes for OR 211 & OR 213

Driveway Crash - SB left & WB through

Driveway Crash - SB left & WB through

Driveway Crash - SB left & WB through

Single Vehicle - Fixed

SER# / INVEST / RD DPT / UNLOC?	S P E D	D R A L	M J U G	S I N H	C O R K	W DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# FC / COMPNT / MLG TYP / MILEPNT	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
01795	N	N	N	N		05/08/2017	CLACKAMAS	1 16		ALLEY		N	N	CLR	S-1TURN	01	NONE 9	STRGHT										29
NONE						MO		MN 0		UN	(NONE)	UNKNOWN	N	DRY	REAR		N/A	E -W									000		00
N						3P	MOLALLA UA	11.41		04			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						45 9 1.78	-122 36 15.52		016100100S00		(02)													UNK				
																02	NONE 9	TURN-R										
																	N/A	E -N									019	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
02249	N	N	N	N		06/08/2017	CLACKAMAS	1 16		ALLEY		N	N	RAIN	ANGL-OTH	01	NONE 9	TURN-L										02
NO RPT						TH		MN 0		UN	(NONE)	UNKNOWN	N	WET	TURN		N/A	N -E									018	00
N						1P	MOLALLA UA	11.41		04			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N						45 9 1.78	-122 36 15.52		016100100S00		(02)													UNK				
																02	NONE 9	STRGHT										
																	N/A	E -W									000	00
																	SEMI TOW		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				

Driveway Crash - WB right & WB through

Driveway Crash - SB left & WB through

CITY OF MOLALLA, CLACKAMAS COUNTY

MAIN ST and LEROY AVE, City of Molalla, Clackamas County, 01/01/2015 to 12/31/2019

1 - 4 of 8 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	S I H L	C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / TYPE / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
01201	N	N	N					04/10/2018	17	LEROY AVE	INTER	3-LEG	N	N	CLR	ANGL-STP	01	NONE 0	TURN-R											02
NO RPT								TU	0	MAIN ST	NE		STOP SIGN	N	DRY	TURN		PRVTE	W -S									018		00
N								1P			06	0		Y	DAY	INJ		PSNGR CAR		01	DRVR	NONE	29	F	OR-Y		028	000		02
N								45 8 55.83	-122 35 21.2																OR<25					
																	02	NONE 0	STOP											
																		PRVTE	N -S									011		00
																		PSNGR CAR		01	DRVR	INJC	40	F	OR-Y		000	000		00
																									OR<25					
00871	N	N	N		N	N		03/09/2018	16	LEROY AVE	INTER	3-LEG	N	N	RAIN	ANGL-OTH	01	NONE 0	STRGHT												02
COUNTY								FR		MAIN ST	E		STOP SIGN	N	WET	TURN		PRVTE	E -W									000		00
N								7A			06	0		N	DAWN	INJ		PSNGR CAR		01	DRVR	INJB	33	F	OR-Y		000	000		00
N								45 8 55.79	-122 35 21.09	016100100S00															OR<25					
																	02	NONE 1	TURN-L											
																		PRVTE	N -E									015		00
																		SEMI TOW		01	DRVR	NONE	62	M	OR-Y		028	000		02
																									OR<25					
00645	Y	N	N		N	N		02/19/2015	16	LEROY AVE	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013		01,07,29
CITY								TH		MAIN ST	W		NONE	N	DRY	REAR		PRVTE	W -E									000		00
N								6P			06	0		N	DARK	INJ		PSNGR CAR		01	DRVR	INJC	18	M	OR-Y		047,043,026	038		01,07,29
N								45 8 55.77	-122 35 21.09	016100100S00															OR<25					
																	02	NONE 0	STOP											
																		PRVTE	W -E									011 013		00
																		PSNGR CAR		01	DRVR	INJC	40	F	OR-Y		000	000		00
																									OR>25					
																	03	NONE 0	STOP											
																		PRVTE	W -E									022		00
																		PSNGR CAR		01	DRVR	INJC	32	F	OR-Y		000	000		00
																									OR<25					
																	03	NONE 0	STOP											
																		PRVTE	W -E									022		00
																		PSNGR CAR		02	PSNG	NO<5	01	F			000	000		00
02552	N	N	N		N	N		06/07/2016	16	LEROY AVE	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT												07,29
CITY								TU		MAIN ST	W		NONE	N	DRY	REAR		PRVTE	W -E									000		00
N								9A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	29	F	OR-Y		043,026	000		07,29
N								45 8 55.77	-122 35 21.09	016100100S00															OR<25					
																	02	NONE 0	STOP											
																		PRVTE	W -E									012		00
																		PSNGR CAR		01	DRVR	INJB	32	F	OR-Y		000	000		00
																									OR<25					

CITY OF MOLALLA, CLACKAMAS COUNTY

MAIN ST and LEROY AVE, City of Molalla, Clackamas County, 01/01/2015 to 12/31/2019

5 - 6 of 8 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	S I H L	C O R K	W DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00682	N	N	N		N	N	02/23/2018	16	LEROY AVE	INTER	3-LEG	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										013	29
CITY							FR		MAIN ST	W		UNKNOWN	N	DRY	REAR		PRVTE	W -E									000		00
N							12P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	71	F	OR-Y		026	000		29
N							45 8 55.8	-122 35 21.1	016100100S00															OR<25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		01	DRVR	INJB	24	F	OR-Y		000	000		00
																								OR>25					
																02	NONE 0	STOP											
																	PRVTE	W -E									011	013	00
																	PSNGR CAR		02	PSNG	INJB	02	F			000	000		00
																03	NONE 0	STOP											
																	PRVTE	W -E									022	013	00
																	PSNGR CAR		01	DRVR	INJC	43	M	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STOP											
																	PRVTE	W -E									022	013	00
																	PSNGR CAR		02	PSNG	INJC	49	M			000	000		00
																03	NONE 0	STOP											
																	PRVTE	W -E									022	013	00
																	PSNGR CAR		03	PSNG	INJC	49	M			000	000		00
																04	NONE 0	STOP											
																	PRVTE	W -E									022		00
																	PSNGR CAR		01	DRVR	INJC	36	M	OR-Y		000	000		00
																								OR<25					
01711	N	N	N				05/04/2017	16	LEROY AVE	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										004	29
NONE							TH		MAIN ST	CN		UNKNOWN	N	DRY	REAR		PRVTE	E -W									000		00
N							10A			01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	28	M	OR-Y		026	000		29
N							45 8 55.77	-122 35 21.09	016100100S00															UNK					
																02	NONE 0	STOP											
																	PRVTE	E -W									011	004	00
																	PSNGR CAR		01	DRVR	INJC	62	F	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STOP											
																	PRVTE	E -W									011	004	00
																	PSNGR CAR		02	PSNG	INJC	42	F			000	000		00
02419	N	N	N		N	N	06/21/2017	16	MAIN ST	STRGHT		N	N	CLR	O-STRGHT	01	NONE 0	STRGHT											05
CITY							WE		LEROY AVE	E	(NONE)	NONE	N	DRY	SS-M		PRVTE	W -E									000		00
Y							12P			04			N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	30	M	OR-Y		080	000		05
N							45 8 55.68	-122 35 20.3	016100100S00		(02)													OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D R U G S	M J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0 PRVTE PSNGR CAR	STRGHT E -W									000 000		00 00
00848	N	N	N	N	N		03/11/2019 16:00	16	MAIN ST LEROY AVE	STRGHT E	(NONE)	N NONE	N	CLD DRY	S-STRGHT REAR	01	NONE 9 N/A	STRGHT UN-UN										000		07,29 00
CITY							MO																					
N							6P			00			N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 8 55.55	-122 35 18.73	016100100S00		(02)													UNK					
																02	NONE 9 N/A PSNGR CAR	STRGHT UN-UN	01	DRVR	NONE	00	Unk	UNK UNK		000	000		00 00

CITY OF MOLALLA, CLACKAMAS COUNTY

MAIN ST and MOLALLA AVE, City of Molalla, Clackamas County, 01/01/2015 to 12/31/2019

1 - 5 of 18 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A C	D R J G	M U I N	S C H V	W O R L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / TYPE / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02314	N	N	N	N	N	N	07/02/2018	16	MAIN ST	INTER	CROSS	N	Y	CLD	FIX OBJ	01	NONE 9	TURN-R										054	08
CITY							MO		MOLALLA AVE	S		STOP SIGN	N	DRY	FIX		N/A	W -S									000		00
N							6A			05	0		N	DAY	PDO		SEMI TOW		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 8 51.1	-122 34 37.54	016100100S00															UNK					
02211	N	N	N				07/01/2019	16	MAIN ST	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
CITY							MO		MOLALLA AVE	SW		STOP SIGN	N	DRY	REAR		PRVTE	SW-NE									000		00
N							6P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	40	M	OR-Y		026	000		29
N							45 8 51.1	-122 34 37.54	016100100S00															OR<25					
																02	NONE 0	STOP											
																	PRVTE	SW-NE									011		00
																	PSNGR CAR		01	DRVR	INJC	50	F	OR-Y		000	000		00
																								OR<25					
02613	N	N	N				06/09/2016	16	MAIN ST	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
NONE							TH		MOLALLA AVE	NW		STOP SIGN	N	DRY	REAR		N/A	NW-SE									000		00
N							9A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 8 51.09	-122 34 37.54	016100100S00															UNK					
																02	NONE 9	STOP											
																	N/A	NW-SE									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
00825	N	N	N				03/06/2018	16	MAIN ST	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
NONE							TU		MOLALLA AVE	NW		STOP SIGN	N	DRY	REAR		N/A	NW-SE									000		00
N							7A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 8 51.09	-122 34 37.54	016100100S00															UNK					
																02	NONE 9	STOP											
																	N/A	NW-SE									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
01792	N	N	N				06/01/2019	16	MAIN ST	INTER	CROSS	N	N	CLR	PED	01	NONE 0	TURN-L											02,19
CITY							SA		MOLALLA AVE	NW		TRF SIGNAL	N	DRY	PED		PRVTE	SW-NW									000		00
N							12P			05	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	22	M	OR-Y		029	000		02
N							45 8 51.1	-122 34 37.54	016100100S00															OR<25					
																		-											
																		STRGHT		01	PED	INJC	67	F		I XWLK	000	035		19
																		SW NE											

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

CITY OF MOLALLA, CLACKAMAS COUNTY

MAIN ST and MOLALLA AVE, City of Molalla, Clackamas County, 01/01/2015 to 12/31/2019

6 - 9 of 18 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	S H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / INJ / SVRTY	A G E	S E X	LICNS / RES / LOC	PED / ERROR	ACT EVENT	CAUSE
02518	N	N	N				06/04/2016	16	MAIN ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT								02
NONE							SA		MOLALLA AVE	CN		STOP SIGN	N	DRY	ANGL		N/A	NE-SW							015	00
N							10A			01	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000	00
N							45 8 51.09	-122 34 37.54	016100100S00															UNK			
																02	NONE 9	STRGHT								
																	N/A	SE-NW							015	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000	00
																								UNK			
04906	N	Y	N				10/23/2016	16	MAIN ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT								03
NO RPT							SU		MOLALLA AVE	CN		STOP SIGN	N	DRY	ANGL		N/A	S -N							000	00
N							9P			04	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000	00
N							45 8 51.09	-122 34 37.54	016100100S00															UNK			
																02	NONE 9	STRGHT								
																	N/A	W -E							000	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000	00
																								UNK			
00743	N	N	N				03/02/2019	16	MAIN ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT								02
NONE							SA		MOLALLA AVE	CN		STOP SIGN	N	DRY	TURN		PRVTE	NW-SE							015	00
N							9A			04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	70	M	OR-Y	028	000	02
N							45 8 51.1	-122 34 37.54	016100100S00															OR<25			
																02	NONE 0	TURN-L								
																	PRVTE	SW-NW							015	00
																	PSNGR CAR		01	DRVR	INJC	43	F	OR-Y	000	000	00
																								OR<25			
02830	N	N	N				08/17/2019	16	MAIN ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT								03
CITY							SA		MOLALLA AVE	CN		STOP SIGN	N	DRY	ANGL		PRVTE	E -W							000	00
N							1P			01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	34	M	OR-Y	021	000	03
N							45 8 51.09	-122 34 37.54	016100100S00															OR<25			
																02	NONE 0	STRGHT								
																	PRVTE	S -N							015	00
																	PSNGR CAR		01	DRVR	INJC	31	M	OR-Y	000	000	00
																								OR<25			
																02	NONE 0	STRGHT								
																	PRVTE	S -N							015	00
																	PSNGR CAR		02	PSNG	INJC	30	F		000	000	00
00188	N	N	N				01/17/2019	16	MAIN ST	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 9	STRGHT								02,08
NO RPT							TH		MOLALLA AVE	CN		STOP SIGN	N	DRY	TURN		N/A	SE-NW							000	00
N							2P			02	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000	00
N							45 8 51.1	-122 34 37.55	016100100S00															UNK			

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	S I H V	W C O R L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT EVENT	CAUSE
																02	NONE 9 N/A PSNGR CAR	TURN-L NW-NE	01	DRVR	NONE	00	Unk	UNK UNK		000	000	00 00
02642	N	N	N				08/02/2019	16	MAIN ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT										02
NONE							FR		MOLALLA AVE	CN		STOP SIGN	N	DRY	ANGL		N/A	N -S									015	00
N N							9A 45 8 51.11	-122 34 37.59	016100100S00	03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000	00
																02	NONE 9 N/A PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	015 000	00 00
03780	N	N	N				10/28/2019	16	MAIN ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT										02
NONE							MO		MOLALLA AVE	CN		STOP SIGN	N	DRY	TURN		N/A	NW-SE									015	00
N N							9A 45 8 51.1	-122 34 37.56	016100100S00	04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000	00
																02	NONE 9 N/A PSNGR CAR	TURN-L SW-NW	01	DRVR	NONE	00	Unk	UNK UNK		000	015 000	00 00
03156	N	N	N				08/03/2017	16	MAIN ST	ALLEY		N	Y	CLR	FIX OBJ	01	NONE 9	TURN-R										091,074	10
NONE							TH		MOLALLA AVE	SE	(NONE)	UNKNOWN	N	DRY	FIX		N/A	NE-NW									018	00
Y N							11A 45 8 50.76	-122 34 35.87	016100100S00	08	(02)		N	DAY	PDO		SEMI TOW		01	DRVR	NONE	00	Unk	UNK UNK		000	000	00
01273	N	N	N				04/05/2017	17	MOLALLA AVE	STRGHT		N	Y	CLR	PRKD MV	01	NONE 9	STRGHT											10
NONE							WE	100	MAIN ST	NE	(NONE)	UNKNOWN	N	DRY	SS-O		N/A	NE-SW									000	00
Y N							4P 45 8 52.1	-122 34 37.32		08	(02)		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000	00
																02	NONE 9 N/A PSNGR CAR	PRKD-P NE-SW									008	00
02309	N	N	N				06/12/2017	16	MAIN ST	STRGHT		N	N	CLR	S-OTHER	01	NONE 9	STRGHT											02
CITY							MO		MOLALLA AVE	SE	(NONE)	UNKNOWN	N	DRY	PARK		N/A	E -W									000	00
N N							7P 45 8 50.94	-122 34 36.7	016100100S00	04	(02)		N	DAY	PDO		SEMI TOW		01	DRVR	NONE	00	Unk	UNK UNK		000	000	00
																02	NONE 9 N/A PSNGR CAR	PARKNG E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	008 000	00 00

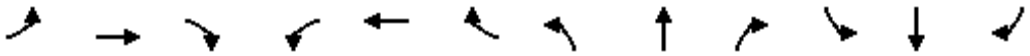
Driveway Crash - east of intersection turning from north side

CITY OF MOLALLA, CLACKAMAS COUNTY

MAIN ST and MOLALLA AVE, City of Molalla, Clackamas County, 01/01/2015 to 12/31/2019

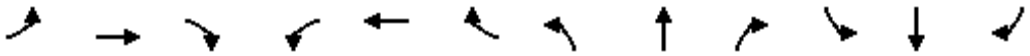
16 - 18 of 18 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	I H L	S C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
04811	N	N	N		N	N		12/27/2018	16	MAIN ST	STRGHT		N	N	CLD	PRKD MV	01	NONE 9	STRGHT										17,29
CITY								TH		MOLALLA AVE	SE	(NONE)	NONE	N	WET	REAR		N/A	NW-SE									000	00
N								11A			01			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N								45 8 50.76	-122 34 35.88	016100100S00		(02)													UNK				
																	02	NONE 9	PRKD-P										
																		N/A	NW-SE									008	00
																		PSNGR CAR											
00997	N	N	N		N	N		02/19/2016	17	MOLALLA AVE	STRGHT		N	Y	RAIN	PRKD MV	01	NONE 9	PARKNG										10
CITY								FR	200	MAIN ST	SW	(NONE)	NONE	N	WET	PARK		N/A	SW-NE									008	00
Y								7P			08			N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N								45 8 49.24	-122 34 38.45			(02)													UNK				
																	02	NONE 9	PRKD-P										
																		N/A	SW-NE									008	00
																		PSNGR CAR											
03936	N	N	N					11/07/2019	16	MAIN ST	STRGHT		Y	N	CLR	S-1STOP	01	NONE	STRGHT										27
NONE								TH		MOLALLA AVE	W	(NONE)	TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000	00
N								4P			06			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	56	M	OR-Y	016,026		038	27
N								45 8 51.26	-122 34 38.95	016100100S00		(02)													OR<25				
																	02	NONE	STOP										
																		PRVTE	W -E									011	00
																		PSNGR CAR		01	DRVR	INJC	21	F	OR-Y	000		000	00
																									OR<25				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	157	10	74	213	223	16	235	92	105	123	102
Future Volume (vph)	79	157	10	74	213	223	16	235	92	105	123	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	
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)	1421	1482		1484	1562	1328	1614	1699	1444	1458	1431	
Flt Permitted	0.43	1.00		0.60	1.00	1.00	0.59	1.00	1.00	0.36	1.00	
Satd. Flow (perm)	650	1482		937	1562	1328	1010	1699	1444	558	1431	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	94	187	12	88	254	265	19	280	110	125	146	121
RTOR Reduction (vph)	0	2	0	0	0	192	0	0	78	0	24	0
Lane Group Flow (vph)	94	197	0	88	254	73	19	280	32	125	243	0
Heavy Vehicles (%)	17%	17%	17%	12%	12%	12%	3%	3%	3%	14%	14%	14%
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)	26.7	20.3		24.1	19.0	19.0	21.7	19.9	19.9	32.0	25.2	
Effective Green, g (s)	28.7	21.3		26.1	20.0	20.0	23.7	20.9	20.9	33.0	26.2	
Actuated g/C Ratio	0.40	0.29		0.36	0.28	0.28	0.33	0.29	0.29	0.46	0.36	
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	436		383	431	366	353	490	416	355	517	
v/s Ratio Prot	c0.03	0.13		0.02	c0.16		0.00	c0.16		c0.04	0.17	
v/s Ratio Perm	0.08			0.06		0.06	0.02		0.02	0.12		
v/c Ratio	0.28	0.45		0.23	0.59	0.20	0.05	0.57	0.08	0.35	0.47	
Uniform Delay, d1	14.4	20.8		15.7	22.6	20.1	16.6	21.9	18.7	12.4	17.8	
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	0.5		0.2	1.7	0.2	0.0	1.3	0.1	0.4	0.5	
Delay (s)	14.7	21.3		16.0	24.4	20.3	16.6	23.3	18.8	12.9	18.3	
Level of Service	B	C		B	C	C	B	C	B	B	B	
Approach Delay (s)		19.2			21.4			21.7			16.5	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	72.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	157	10	74	213	223	16	235	92	105	123	102
Future Volume (veh/h)	79	157	10	74	213	223	16	235	92	105	123	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	1518	1518	1518	1586	1586	1586	1709	1709	1709	1559	1559	1559
Adj Flow Rate, veh/h	94	187	12	88	254	265	19	280	110	125	146	121
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	17	17	17	12	12	12	3	3	3	14	14	14
Cap, veh/h	382	439	28	471	490	415	334	399	338	347	231	192
Arrive On Green	0.08	0.31	0.29	0.08	0.31	0.31	0.04	0.23	0.23	0.10	0.29	0.28
Sat Flow, veh/h	1446	1411	91	1511	1586	1344	1628	1709	1448	1485	788	653
Grp Volume(v), veh/h	94	0	199	88	254	265	19	280	110	125	0	267
Grp Sat Flow(s),veh/h/ln	1446	0	1502	1511	1586	1344	1628	1709	1448	1485	0	1441
Q Serve(g_s), s	2.5	0.0	6.2	2.2	7.7	9.9	0.5	8.8	3.7	3.4	0.0	9.4
Cycle Q Clear(g_c), s	2.5	0.0	6.2	2.2	7.7	9.9	0.5	8.8	3.7	3.4	0.0	9.4
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	382	0	467	471	490	415	334	399	338	347	0	423
V/C Ratio(X)	0.25	0.00	0.43	0.19	0.52	0.64	0.06	0.70	0.33	0.36	0.00	0.63
Avail Cap(c_a), veh/h	533	0	1207	554	1193	1011	464	1110	941	477	0	1035
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	12.1	0.0	16.0	11.9	16.6	17.4	15.9	20.6	18.6	14.2	0.0	18.1
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.1	0.6	1.2	0.1	1.7	0.4	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	0.7	0.0	2.0	0.6	2.5	2.8	0.2	3.3	1.1	1.0	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	0.0	16.5	12.0	17.3	18.6	16.0	22.2	19.0	14.6	0.0	19.3
LnGrp LOS	B	A	B	B	B	B	B	C	B	B	A	B
Approach Vol, veh/h		293			607			409			392	
Approach Delay, s/veh		15.2			17.1			21.1			17.8	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	22.2	6.3	21.2	8.9	22.1	9.9	17.7
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	7.0	46.0	6.0	41.0	10.0	43.0	10.0	37.0
Max Q Clear Time (g_c+I1), s	4.2	8.2	2.5	11.4	4.5	11.9	5.4	10.8
Green Ext Time (p_c), s	0.1	2.3	0.0	1.1	0.1	5.1	0.1	1.9

Intersection Summary	
HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

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	30	319	0	1	517	70	0	0	0	40	0	20
Future Vol, veh/h	30	319	0	1	517	70	0	0	0	40	0	20
Conflicting Peds, #/hr	0	0	0	0	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	90	-	-	100	-	200	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	9	9	9	12	12	12	2	2	2	2	2	2
Mvmt Flow	36	380	0	1	615	83	0	0	0	48	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	698	0	0	380	0	0	1123	1152	380	1069	1069	615
Stage 1	-	-	-	-	-	-	452	452	-	617	617	-
Stage 2	-	-	-	-	-	-	671	700	-	452	452	-
Critical Hdwy	4.19	-	-	4.22	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.281	-	-	2.308	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	867	-	-	1126	-	-	183	198	667	199	221	491
Stage 1	-	-	-	-	-	-	587	570	-	477	481	-
Stage 2	-	-	-	-	-	-	446	441	-	587	570	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	867	-	-	1126	-	-	169	189	667	193	211	491
Mov Cap-2 Maneuver	-	-	-	-	-	-	283	295	-	376	388	-
Stage 1	-	-	-	-	-	-	562	546	-	457	481	-
Stage 2	-	-	-	-	-	-	424	441	-	563	546	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	0	14.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	867	-	-	1126	-	-	376	491
HCM Lane V/C Ratio	-	0.041	-	-	0.001	-	-	0.127	0.048
HCM Control Delay (s)	0	9.3	-	-	8.2	-	-	16	12.7
HCM Lane LOS	A	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.4	0.2

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	36	358	0	13	449	68	1	0	4	40	1	99
Future Vol, veh/h	36	358	0	13	449	68	1	0	4	40	1	99
Conflicting Peds, #/hr	4	0	0	0	0	4	3	0	0	0	0	3
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	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	9	9	9	9	9	9	5	5	5	11	11	11
Mvmt Flow	44	437	0	16	548	83	1	0	5	49	1	121

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	635	0	0	437	0	0	1211	1192	437	1154	1151	597
Stage 1	-	-	-	-	-	-	525	525	-	626	626	-
Stage 2	-	-	-	-	-	-	686	667	-	528	525	-
Critical Hdwy	4.19	-	-	4.19	-	-	7.15	6.55	6.25	7.21	6.61	6.31
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.21	5.61	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.21	5.61	-
Follow-up Hdwy	2.281	-	-	2.281	-	-	3.545	4.045	3.345	3.599	4.099	3.399
Pot Cap-1 Maneuver	915	-	-	1086	-	-	157	185	613	167	190	487
Stage 1	-	-	-	-	-	-	530	524	-	457	463	-
Stage 2	-	-	-	-	-	-	433	452	-	518	515	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	912	-	-	1086	-	-	109	169	613	154	173	484
Mov Cap-2 Maneuver	-	-	-	-	-	-	109	169	-	154	173	-
Stage 1	-	-	-	-	-	-	496	490	-	426	450	-
Stage 2	-	-	-	-	-	-	316	440	-	481	482	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.2	16.5	32.1
HCM LOS			C	D

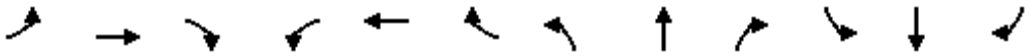
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	318	912	-	-	1086	-	-	298
HCM Lane V/C Ratio	0.019	0.048	-	-	0.015	-	-	0.573
HCM Control Delay (s)	16.5	9.1	0	-	8.4	0	-	32.1
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	3.3

Intersection	
Intersection Delay, s/veh	18.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	253	31	43	306	7	95	74	18	43	53	55
Future Vol, veh/h	48	253	31	43	306	7	95	74	18	43	53	55
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	9	9	9	10	10	10	7	7	7	10	10	10
Mvmt Flow	53	278	34	47	336	8	104	81	20	47	58	60
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	18.9	21.6	14.3	13.1
HCM LOS	C	C	B	B

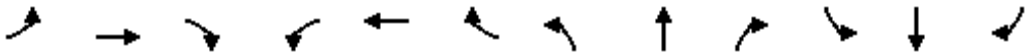
Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	51%	16%	0%	12%	28%
Vol Thru, %	40%	84%	0%	86%	35%
Vol Right, %	10%	0%	100%	2%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	187	301	31	356	151
LT Vol	95	48	0	43	43
Through Vol	74	253	0	306	53
RT Vol	18	0	31	7	55
Lane Flow Rate	205	331	34	391	166
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.392	0.619	0.056	0.68	0.316
Departure Headway (Hd)	6.869	6.735	5.939	6.257	6.847
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	524	536	602	575	524
Service Time	4.924	4.482	3.686	4.305	4.906
HCM Lane V/C Ratio	0.391	0.618	0.056	0.68	0.317
HCM Control Delay	14.3	19.9	9	21.6	13.1
HCM Lane LOS	B	C	A	C	B
HCM 95th-tile Q	1.8	4.2	0.2	5.2	1.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	257	15	144	237	160	23	216	108	242	243	124
Future Volume (vph)	149	257	15	144	237	160	23	216	108	242	243	124
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	0.98	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	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)	1599	1669		1583	1667	1387	1614	1699	1444	1583	1582	
Flt Permitted	0.35	1.00		0.40	1.00	1.00	0.47	1.00	1.00	0.40	1.00	
Satd. Flow (perm)	595	1669		660	1667	1387	803	1699	1444	664	1582	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	169	292	17	164	269	182	26	245	123	275	276	141
RTOR Reduction (vph)	0	2	0	0	0	138	0	0	89	0	15	0
Lane Group Flow (vph)	169	307	0	164	269	44	26	245	34	275	402	0
Confl. Peds. (#/hr)						1						
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	3%	3%	3%	5%	5%	5%
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)	30.2	20.7		26.0	18.6	18.6	23.4	21.5	21.5	37.2	30.3	
Effective Green, g (s)	32.2	21.7		28.0	19.6	19.6	25.4	22.5	22.5	38.2	31.3	
Actuated g/C Ratio	0.40	0.27		0.35	0.24	0.24	0.32	0.28	0.28	0.48	0.39	
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)	369	451		326	406	338	283	476	404	449	616	
v/s Ratio Prot	c0.06	c0.18		0.05	0.16		0.00	0.14		c0.09	c0.25	
v/s Ratio Perm	0.12			0.12		0.03	0.03		0.02	0.20		
v/c Ratio	0.46	0.68		0.50	0.66	0.13	0.09	0.51	0.09	0.61	0.65	
Uniform Delay, d1	16.7	26.2		19.3	27.4	23.7	19.1	24.3	21.3	14.1	20.1	
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	0.7	3.8		0.9	3.6	0.1	0.1	0.7	0.1	2.1	2.2	
Delay (s)	17.3	30.0		20.2	31.0	23.8	19.2	25.0	21.4	16.2	22.3	
Level of Service	B	C		C	C	C	B	C	C	B	C	
Approach Delay (s)		25.5			26.0			23.5			19.9	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	257	15	144	237	160	23	216	108	242	243	124
Future Volume (veh/h)	149	257	15	144	237	160	23	216	108	242	243	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	1695	1695	1695	1682	1682	1682	1709	1709	1709	1682	1682	1682
Adj Flow Rate, veh/h	169	292	17	164	269	182	26	245	123	275	276	141
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	5	5	5	3	3	3	5	5	5
Cap, veh/h	414	429	25	400	449	380	268	352	299	451	346	177
Arrive On Green	0.12	0.27	0.26	0.11	0.27	0.27	0.04	0.21	0.21	0.17	0.33	0.31
Sat Flow, veh/h	1615	1586	92	1602	1682	1423	1628	1709	1448	1602	1049	536
Grp Volume(v), veh/h	169	0	309	164	269	182	26	245	123	275	0	417
Grp Sat Flow(s),veh/h/ln	1615	0	1679	1602	1682	1423	1628	1709	1448	1602	0	1585
Q Serve(g_s), s	4.7	0.0	10.8	4.7	9.2	7.1	0.8	8.7	4.8	8.1	0.0	15.7
Cycle Q Clear(g_c), s	4.7	0.0	10.8	4.7	9.2	7.1	0.8	8.7	4.8	8.1	0.0	15.7
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	414	0	454	400	449	380	268	352	299	451	0	523
V/C Ratio(X)	0.41	0.00	0.68	0.41	0.60	0.48	0.10	0.70	0.41	0.61	0.00	0.80
Avail Cap(c_a), veh/h	498	0	1202	416	1127	954	370	989	838	451	0	1014
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	14.8	0.0	21.4	15.1	21.0	20.2	19.2	24.1	22.6	15.3	0.0	20.2
Incr Delay (d2), s/veh	0.5	0.0	1.3	0.5	1.0	0.7	0.1	1.8	0.7	2.1	0.0	2.1
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	1.6	0.0	4.1	1.5	3.4	2.2	0.3	3.4	1.6	2.8	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.2	0.0	22.8	15.6	22.0	20.9	19.3	26.0	23.3	17.4	0.0	22.3
LnGrp LOS	B	A	C	B	C	C	B	C	C	B	A	C
Approach Vol, veh/h		478			615			394			692	
Approach Delay, s/veh		20.1			20.0			24.7			20.4	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	21.8	6.9	25.6	11.6	21.5	15.0	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	7.0	46.0	6.0	41.0	10.0	43.0	10.0	37.0
Max Q Clear Time (g_c+I1), s	6.7	12.8	2.8	17.7	6.7	11.2	10.1	10.7
Green Ext Time (p_c), s	0.0	3.7	0.0	1.8	0.2	4.5	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	576	0	1	505	135	0	0	0	150	0	65
Future Vol, veh/h	60	576	0	1	505	135	0	0	0	150	0	65
Conflicting Peds, #/hr	0	0	0	0	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	90	-	-	100	-	200	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	68	655	0	1	574	153	0	0	0	170	0	74

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	727	0	0	655	0	0	1481	1520	655	1367	1367	574
Stage 1	-	-	-	-	-	-	791	791	-	576	576	-
Stage 2	-	-	-	-	-	-	690	729	-	791	791	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	872	-	-	927	-	-	103	119	466	~ 124	147	518
Stage 1	-	-	-	-	-	-	383	401	-	503	502	-
Stage 2	-	-	-	-	-	-	435	428	-	383	401	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	872	-	-	927	-	-	83	110	466	~ 117	135	518
Mov Cap-2 Maneuver	-	-	-	-	-	-	187	217	-	286	306	-
Stage 1	-	-	-	-	-	-	353	370	-	464	501	-
Stage 2	-	-	-	-	-	-	373	428	-	353	370	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	0	28.1
HCM LOS			A	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	872	-	-	927	-	-	286	518
HCM Lane V/C Ratio	-	0.078	-	-	0.001	-	-	0.596	0.143
HCM Control Delay (s)	0	9.5	-	-	8.9	-	-	34.6	13.1
HCM Lane LOS	A	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	-	0.3	-	-	0	-	-	3.6	0.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	52	655	2	29	591	35	15	8	41	21	6	76
Future Vol, veh/h	52	655	2	29	591	35	15	8	41	21	6	76
Conflicting Peds, #/hr	1	0	2	2	0	1	3	0	0	0	0	3
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	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	58	728	2	32	657	39	17	9	46	23	7	84

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	697	0	0	732	0	0	1636	1608	731	1615	1590	681
Stage 1	-	-	-	-	-	-	847	847	-	742	742	-
Stage 2	-	-	-	-	-	-	789	761	-	873	848	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	899	-	-	873	-	-	81	105	422	83	108	450
Stage 1	-	-	-	-	-	-	357	378	-	408	422	-
Stage 2	-	-	-	-	-	-	384	414	-	345	378	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	898	-	-	871	-	-	54	88	421	60	90	448
Mov Cap-2 Maneuver	-	-	-	-	-	-	54	88	-	60	90	-
Stage 1	-	-	-	-	-	-	317	336	-	363	396	-
Stage 2	-	-	-	-	-	-	287	389	-	267	336	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.4	56.7	57.1
HCM LOS			F	F

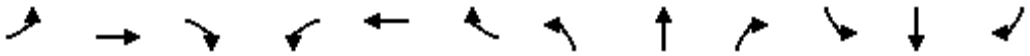
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	137	898	-	-	871	-	-	176
HCM Lane V/C Ratio	0.519	0.064	-	-	0.037	-	-	0.65
HCM Control Delay (s)	56.7	9.3	0	-	9.3	0	-	57.1
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	2.5	0.2	-	-	0.1	-	-	3.8

Intersection	
Intersection Delay, s/veh	58.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	377	112	8	377	45	79	87	23	69	138	123
Future Vol, veh/h	65	377	112	8	377	45	79	87	23	69	138	123
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, %	1	1	1	3	3	3	2	2	2	3	3	3
Mvmt Flow	68	397	118	8	397	47	83	92	24	73	145	129
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	0

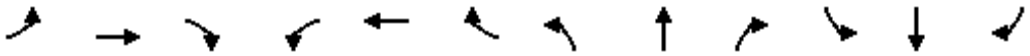
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	78.8	67.6	21.3	35.6
HCM LOS	F	F	C	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	42%	15%	0%	2%	21%
Vol Thru, %	46%	85%	0%	88%	42%
Vol Right, %	12%	0%	100%	10%	37%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	189	442	112	430	330
LT Vol	79	65	0	8	69
Through Vol	87	377	0	377	138
RT Vol	23	0	112	45	123
Lane Flow Rate	199	465	118	453	347
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.497	1.081	0.248	0.984	0.782
Departure Headway (Hd)	9.374	8.364	7.563	8.126	8.41
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	388	437	477	448	434
Service Time	7.374	6.064	5.263	6.126	6.41
HCM Lane V/C Ratio	0.513	1.064	0.247	1.011	0.8
HCM Control Delay	21.3	95.6	12.7	67.6	35.6
HCM Lane LOS	C	F	B	F	E
HCM 95th-tile Q	2.7	15.6	1	12.4	6.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	187	11	96	248	259	19	249	119	135	130	107
Future Volume (vph)	83	187	11	96	248	259	19	249	119	135	130	107
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	
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)	1421	1483		1484	1562	1328	1614	1699	1444	1458	1431	
Flt Permitted	0.35	1.00		0.52	1.00	1.00	0.59	1.00	1.00	0.34	1.00	
Satd. Flow (perm)	528	1483		812	1562	1328	997	1699	1444	529	1431	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	99	223	13	114	295	308	23	296	142	161	155	127
RTOR Reduction (vph)	0	2	0	0	0	226	0	0	100	0	23	0
Lane Group Flow (vph)	99	234	0	114	295	82	23	296	42	161	259	0
Heavy Vehicles (%)	17%	17%	17%	12%	12%	12%	3%	3%	3%	14%	14%	14%
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)	28.3	21.6		25.5	20.2	20.2	24.2	22.3	22.3	37.6	30.7	
Effective Green, g (s)	30.3	22.6		27.5	21.2	21.2	26.2	23.3	23.3	38.6	31.7	
Actuated g/C Ratio	0.38	0.28		0.35	0.27	0.27	0.33	0.29	0.29	0.49	0.40	
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)	287	421		334	416	354	351	497	423	388	570	
v/s Ratio Prot	c0.03	0.16		0.03	c0.19		0.00	c0.17		c0.06	0.18	
v/s Ratio Perm	0.10			0.09		0.06	0.02		0.03	0.14		
v/c Ratio	0.34	0.56		0.34	0.71	0.23	0.07	0.60	0.10	0.41	0.45	
Uniform Delay, d1	16.9	24.2		18.5	26.4	22.8	18.1	24.1	20.5	12.8	17.6	
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	0.5	1.3		0.4	5.1	0.2	0.1	1.6	0.1	0.5	0.4	
Delay (s)	17.4	25.5		18.9	31.4	23.0	18.2	25.7	20.5	13.3	18.0	
Level of Service	B	C		B	C	C	B	C	C	B	B	
Approach Delay (s)		23.1			25.8			23.7			16.3	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	79.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	187	11	96	248	259	19	249	119	135	130	107
Future Volume (veh/h)	83	187	11	96	248	259	19	249	119	135	130	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	1518	1518	1518	1586	1586	1586	1709	1709	1709	1559	1559	1559
Adj Flow Rate, veh/h	99	223	13	114	295	308	23	296	142	161	155	127
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	17	17	17	12	12	12	3	3	3	14	14	14
Cap, veh/h	348	462	27	444	526	446	330	404	343	346	247	203
Arrive On Green	0.08	0.33	0.31	0.08	0.33	0.33	0.04	0.24	0.24	0.12	0.31	0.30
Sat Flow, veh/h	1446	1420	83	1511	1586	1344	1628	1709	1448	1485	793	649
Grp Volume(v), veh/h	99	0	236	114	295	308	23	296	142	161	0	282
Grp Sat Flow(s),veh/h/ln	1446	0	1503	1511	1586	1344	1628	1709	1448	1485	0	1442
Q Serve(g_s), s	3.0	0.0	8.5	3.2	10.3	13.4	0.7	10.8	5.6	5.1	0.0	11.3
Cycle Q Clear(g_c), s	3.0	0.0	8.5	3.2	10.3	13.4	0.7	10.8	5.6	5.1	0.0	11.3
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	348	0	489	444	526	446	330	404	343	346	0	450
V/C Ratio(X)	0.28	0.00	0.48	0.26	0.56	0.69	0.07	0.73	0.41	0.47	0.00	0.63
Avail Cap(c_a), veh/h	471	0	1048	497	1035	877	433	963	816	415	0	898
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	13.7	0.0	18.2	13.3	18.5	19.5	18.2	23.8	21.8	15.9	0.0	20.0
Incr Delay (d2), s/veh	0.3	0.0	0.5	0.2	0.7	1.4	0.1	1.9	0.6	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	0.9	0.0	2.8	1.0	3.5	3.9	0.2	4.2	1.8	1.6	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	0.0	18.8	13.5	19.2	21.0	18.2	25.7	22.4	16.6	0.0	21.1
LnGrp LOS	B	A	B	B	B	C	B	C	C	B	A	C
Approach Vol, veh/h		335			717			461			443	
Approach Delay, s/veh		17.4			19.1			24.3			19.5	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	25.9	6.7	25.0	9.3	26.3	11.9	19.9
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	7.0	46.0	6.0	41.0	10.0	43.0	10.0	37.0
Max Q Clear Time (g_c+I1), s	5.2	10.5	2.7	13.3	5.0	15.4	7.1	12.8
Green Ext Time (p_c), s	0.1	2.8	0.0	1.2	0.1	5.9	0.1	2.2

Intersection Summary	
HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

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	31	404	0	1	606	73	0	0	0	42	0	21
Future Vol, veh/h	31	404	0	1	606	73	0	0	0	42	0	21
Conflicting Peds, #/hr	0	0	0	0	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	90	-	-	100	-	200	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	9	9	9	12	12	12	2	2	2	2	2	2
Mvmt Flow	37	481	0	1	721	87	0	0	0	50	0	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	808	0	0	481	0	0	1334	1365	481	1278	1278	721
Stage 1	-	-	-	-	-	-	555	555	-	723	723	-
Stage 2	-	-	-	-	-	-	779	810	-	555	555	-
Critical Hdwy	4.19	-	-	4.22	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.281	-	-	2.308	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	787	-	-	1031	-	-	131	147	585	143	166	427
Stage 1	-	-	-	-	-	-	516	513	-	417	431	-
Stage 2	-	-	-	-	-	-	389	393	-	516	513	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	787	-	-	1031	-	-	119	140	585	138	158	427
Mov Cap-2 Maneuver	-	-	-	-	-	-	231	250	-	319	338	-
Stage 1	-	-	-	-	-	-	492	489	-	397	431	-
Stage 2	-	-	-	-	-	-	366	393	-	492	489	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	0	16.9
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	-	787	-	-	1031	-	-	319	427
HCM Lane V/C Ratio	-	-	0.047	-	-	0.001	-	-	0.157	0.059
HCM Control Delay (s)	0	0	9.8	-	-	8.5	-	-	18.4	14
HCM Lane LOS	A	A	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.1	-	-	0	-	-	0.5	0.2

Intersection	
Int Delay, s/veh	60.2

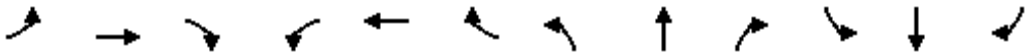
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	377	48	140	463	71	63	9	99	42	11	104
Future Vol, veh/h	38	377	48	140	463	71	63	9	99	42	11	104
Conflicting Peds, #/hr	4	0	0	0	0	4	3	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	9	9	9	9	9	9	5	5	5	11	11	11
Mvmt Flow	46	460	59	171	565	87	77	11	121	51	13	127

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	656	0	0	519	0	0	1606	1580	490	1603	1566	616
Stage 1	-	-	-	-	-	-	582	582	-	955	955	-
Stage 2	-	-	-	-	-	-	1024	998	-	648	611	-
Critical Hdwy	4.19	-	-	4.19	-	-	7.15	6.55	6.25	7.21	6.61	6.31
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.21	5.61	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.21	5.61	-
Follow-up Hdwy	2.281	-	-	2.281	-	-	3.545	4.045	3.345	3.599	4.099	3.399
Pot Cap-1 Maneuver	899	-	-	1012	-	-	83	107	572	81	106	474
Stage 1	-	-	-	-	-	-	494	494	-	299	325	-
Stage 2	-	-	-	-	-	-	280	318	-	444	470	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	896	-	-	1012	-	-	~ 45	84	572	~ 48	83	471
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 45	84	-	~ 48	83	-
Stage 1	-	-	-	-	-	-	469	469	-	283	269	-
Stage 2	-	-	-	-	-	-	161	263	-	325	446	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	1.9	210.5	$ 321.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	45	385	896	-	-	1012	-	-	128
HCM Lane V/C Ratio	1.707	0.342	0.052	-	-	0.169	-	-	1.496
HCM Control Delay (s)	$ 538.7	19.1	9.2	-	-	9.3	-	-	$ 321.8
HCM Lane LOS	F	C	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	7.7	1.5	0.2	-	-	0.6	-	-	13.3

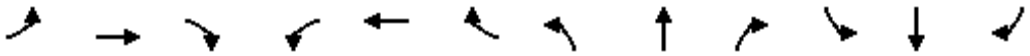
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	313	50	45	380	7	119	77	19	45	55	98
Future Volume (vph)	81	313	50	45	380	7	119	77	19	45	55	98
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	
Lane Util. Factor	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	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.99			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.99	
Satd. Flow (prot)	1525	1568		1511	1586			1572			1452	
Flt Permitted	0.31	1.00		0.43	1.00			0.71			0.90	
Satd. Flow (perm)	494	1568		684	1586			1151			1319	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	89	344	55	49	418	8	131	85	21	49	60	108
RTOR Reduction (vph)	0	7	0	0	1	0	0	4	0	0	41	0
Lane Group Flow (vph)	89	392	0	49	425	0	0	233	0	0	176	0
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	9%	9%	9%	10%	10%	10%	7%	7%	7%	10%	10%	10%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	29.3	23.8		25.1	21.7			18.7			18.7	
Effective Green, g (s)	31.3	24.8		27.1	22.7			19.7			19.7	
Actuated g/C Ratio	0.51	0.41		0.44	0.37			0.32			0.32	
Clearance Time (s)	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	
Lane Grp Cap (vph)	363	638		364	591			372			426	
v/s Ratio Prot	c0.03	0.25		0.01	c0.27							
v/s Ratio Perm	0.10			0.05				c0.20			0.13	
v/c Ratio	0.25	0.62		0.13	0.72			0.63			0.41	
Uniform Delay, d1	8.5	14.3		9.8	16.4			17.5			16.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.3	1.5		0.1	3.9			2.8			0.5	
Delay (s)	8.8	15.8		10.0	20.3			20.3			16.6	
Level of Service	A	B		A	C			C			B	
Approach Delay (s)		14.5			19.2			20.3			16.6	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	60.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

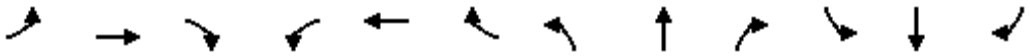
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	313	50	45	380	7	119	77	19	45	55	98
Future Volume (veh/h)	81	313	50	45	380	7	119	77	19	45	55	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	1627	1627	1627	1614	1614	1614	1654	1654	1654	1614	1614	1614
Adj Flow Rate, veh/h	89	344	55	49	418	8	131	85	21	49	60	108
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	9	9	9	10	10	10	7	7	7	10	10	10
Cap, veh/h	475	562	90	481	604	12	289	147	30	152	127	180
Arrive On Green	0.11	0.41	0.40	0.08	0.38	0.36	0.22	0.24	0.22	0.22	0.24	0.22
Sat Flow, veh/h	1550	1368	219	1537	1578	30	683	604	125	226	522	741
Grp Volume(v), veh/h	89	0	399	49	0	426	237	0	0	217	0	0
Grp Sat Flow(s),veh/h/ln	1550	0	1587	1537	0	1608	1412	0	0	1490	0	0
Q Serve(g_s), s	1.4	0.0	9.0	0.8	0.0	10.1	1.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.4	0.0	9.0	0.8	0.0	10.1	6.9	0.0	0.0	5.9	0.0	0.0
Prop In Lane	1.00		0.14	1.00		0.02	0.55		0.09	0.23		0.50
Lane Grp Cap(c), veh/h	475	0	652	481	0	615	435	0	0	426	0	0
V/C Ratio(X)	0.19	0.00	0.61	0.10	0.00	0.69	0.55	0.00	0.00	0.51	0.00	0.00
Avail Cap(c_a), veh/h	609	0	1289	658	0	1306	1044	0	0	1061	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	7.4	0.0	10.6	7.4	0.0	11.8	15.9	0.0	0.0	15.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.7	0.1	0.0	1.0	0.8	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	2.6	0.2	0.0	3.0	2.1	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.6	0.0	11.3	7.5	0.0	12.9	16.7	0.0	0.0	16.3	0.0	0.0
LnGrp LOS	A	A	B	A	A	B	B	A	A	B	A	A
Approach Vol, veh/h		488			475			237			217	
Approach Delay, s/veh		10.6			12.3			16.7			16.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	22.7		15.1	9.1	21.4		15.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	36.0		31.0	8.0	36.0		31.0				
Max Q Clear Time (g_c+I1), s	2.8	11.0		7.9	3.4	12.1		8.9				
Green Ext Time (p_c), s	0.0	4.0		0.9	0.1	4.3		1.0				

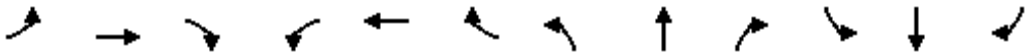
Intersection Summary			
HCM 6th Ctrl Delay		13.1	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	301	18	172	271	193	26	228	137	286	257	130
Future Volume (vph)	156	301	18	172	271	193	26	228	137	286	257	130
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	0.98	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	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)	1599	1669		1583	1667	1387	1614	1699	1444	1583	1583	
Flt Permitted	0.32	1.00		0.23	1.00	1.00	0.51	1.00	1.00	0.32	1.00	
Satd. Flow (perm)	537	1669		377	1667	1387	862	1699	1444	532	1583	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	177	342	20	195	308	219	30	259	156	325	292	148
RTOR Reduction (vph)	0	2	0	0	0	164	0	0	120	0	15	0
Lane Group Flow (vph)	177	360	0	195	308	55	30	259	36	325	425	0
Confl. Peds. (#/hr)						1						
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	3%	3%	3%	5%	5%	5%
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)	34.0	23.1		34.2	23.2	23.2	24.0	21.4	21.4	46.7	39.1	
Effective Green, g (s)	36.0	24.1		36.2	24.2	24.2	26.0	22.4	22.4	47.7	40.1	
Actuated g/C Ratio	0.38	0.25		0.38	0.25	0.25	0.27	0.23	0.23	0.50	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)	333	419		293	421	350	262	397	337	498	662	
v/s Ratio Prot	0.07	c0.22		c0.08	0.18		0.00	0.15		c0.14	0.27	
v/s Ratio Perm	0.13			0.17		0.04	0.03		0.03	c0.18		
v/c Ratio	0.53	0.86		0.67	0.73	0.16	0.11	0.65	0.11	0.65	0.64	
Uniform Delay, d1	21.7	34.2		22.5	32.8	27.9	25.9	33.2	28.8	16.4	22.2	
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	1.3	15.7		5.1	6.1	0.2	0.1	3.4	0.1	2.7	1.9	
Delay (s)	23.0	49.9		27.5	38.9	28.0	26.1	36.6	29.0	19.1	24.0	
Level of Service	C	D		C	D	C	C	D	C	B	C	
Approach Delay (s)		41.1			32.5			33.2			21.9	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	95.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	301	18	172	271	193	26	228	137	286	257	130
Future Volume (veh/h)	156	301	18	172	271	193	26	228	137	286	257	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	1695	1695	1695	1682	1682	1682	1709	1709	1709	1682	1682	1682
Adj Flow Rate, veh/h	177	342	20	195	308	219	30	259	156	325	292	148
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	5	5	5	3	3	3	5	5	5
Cap, veh/h	386	450	26	369	491	416	258	342	290	459	372	189
Arrive On Green	0.11	0.28	0.27	0.12	0.29	0.29	0.04	0.20	0.20	0.20	0.35	0.34
Sat Flow, veh/h	1615	1586	93	1602	1682	1423	1628	1709	1448	1602	1052	533
Grp Volume(v), veh/h	177	0	362	195	308	219	30	259	156	325	0	440
Grp Sat Flow(s),veh/h/ln	1615	0	1679	1602	1682	1423	1628	1709	1448	1602	0	1586
Q Serve(g_s), s	6.0	0.0	15.9	6.6	12.8	10.4	1.1	11.5	7.8	11.9	0.0	20.0
Cycle Q Clear(g_c), s	6.0	0.0	15.9	6.6	12.8	10.4	1.1	11.5	7.8	11.9	0.0	20.0
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	386	0	476	369	491	416	258	342	290	459	0	561
V/C Ratio(X)	0.46	0.00	0.76	0.53	0.63	0.53	0.12	0.76	0.54	0.71	0.00	0.78
Avail Cap(c_a), veh/h	465	0	813	434	814	689	310	552	468	661	0	906
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	17.6	0.0	26.4	18.2	24.7	23.8	23.9	30.4	28.9	18.6	0.0	23.4
Incr Delay (d2), s/veh	0.6	0.0	1.9	0.9	1.0	0.8	0.1	2.6	1.2	1.5	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	6.3	2.3	4.9	3.4	0.4	4.8	2.7	4.2	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	28.3	19.1	25.7	24.6	24.0	32.9	30.0	20.1	0.0	25.3
LnGrp LOS	B	A	C	B	C	C	C	C	C	C	A	C
Approach Vol, veh/h		539			722			445			765	
Approach Delay, s/veh		25.0			23.6			31.3			23.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	26.8	7.4	32.5	13.1	27.5	19.8	20.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	12.0	38.0	5.0	45.0	12.0	38.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	8.6	17.9	3.1	22.0	8.0	14.8	13.9	13.5
Green Ext Time (p_c), s	0.2	3.8	0.0	1.9	0.2	4.9	1.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	686	0	1	595	141	0	0	0	157	0	68
Future Vol, veh/h	63	686	0	1	595	141	0	0	0	157	0	68
Conflicting Peds, #/hr	0	0	0	0	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	90	-	-	100	-	200	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	72	780	0	1	676	160	0	0	0	178	0	77

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	836	0	0	780	0	0	1721	1762	780	1602	1602	676
Stage 1	-	-	-	-	-	-	924	924	-	678	678	-
Stage 2	-	-	-	-	-	-	797	838	-	924	924	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	793	-	-	833	-	-	70	84	395	~ 85	106	453
Stage 1	-	-	-	-	-	-	323	348	-	442	452	-
Stage 2	-	-	-	-	-	-	380	382	-	323	348	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	793	-	-	833	-	-	54	76	395	~ 79	96	453
Mov Cap-2 Maneuver	-	-	-	-	-	-	146	178	-	236	260	-
Stage 1	-	-	-	-	-	-	294	316	-	402	452	-
Stage 2	-	-	-	-	-	-	315	382	-	294	316	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	0	43.4
HCM LOS			A	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	793	-	-	833	-	-	236	453
HCM Lane V/C Ratio	-	0.09	-	-	0.001	-	-	0.756	0.171
HCM Control Delay (s)	0	10	-	-	9.3	-	-	55.9	14.6
HCM Lane LOS	A	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	-	0.3	-	-	0	-	-	5.3	0.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	157.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	54	672	76	164	615	37	77	16	162	22	18	79
Future Vol, veh/h	54	672	76	164	615	37	77	16	162	22	18	79
Conflicting Peds, #/hr	1	0	2	2	0	1	3	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	747	84	182	683	41	86	18	180	24	20	88

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	725	0	0	833	0	0	2036	2000	791	2077	2022	708
Stage 1	-	-	-	-	-	-	911	911	-	1069	1069	-
Stage 2	-	-	-	-	-	-	1125	1089	-	1008	953	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	878	-	-	800	-	-	~ 42	60	390	39	58	435
Stage 1	-	-	-	-	-	-	328	353	-	268	298	-
Stage 2	-	-	-	-	-	-	249	291	-	290	338	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	877	-	-	798	-	-	~ 17	43	389	~ 11	42	433
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 17	43	-	~ 11	42	-
Stage 1	-	-	-	-	-	-	305	328	-	250	230	-
Stage 2	-	-	-	-	-	-	140	224	-	137	314	-

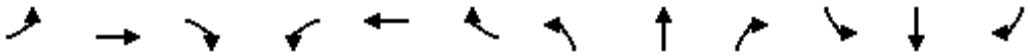
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	2.2	$ 737.8	$ 1033.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	17	226	877	-	-	798	-	-	46
HCM Lane V/C Ratio	5.033	0.875	0.068	-	-	0.228	-	-	2.874
HCM Control Delay (s)	$ 2265.6	76.9	9.4	-	-	10.8	-	-	$ 1033.3
HCM Lane LOS	F	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	11.4	7	0.2	-	-	0.9	-	-	14.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	445	135	8	459	47	106	91	24	72	144	171
Future Volume (vph)	103	445	135	8	459	47	106	91	24	72	144	171
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	
Lane Util. Factor	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	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.99			0.99			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1644	1672		1614	1669			1643			1559	
Flt Permitted	0.22	1.00		0.28	1.00			0.58			0.90	
Satd. Flow (perm)	381	1672		473	1669			983			1421	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	468	142	8	483	49	112	96	25	76	152	180
RTOR Reduction (vph)	0	11	0	0	4	0	0	5	0	0	31	0
Lane Group Flow (vph)	108	599	0	8	528	0	0	228	0	0	377	0
Confl. Peds. (#/hr)	11					11	5		4	4		5
Confl. Bikes (#/hr)									2			3
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	39.1	33.5		29.7	28.8			22.9			22.9	
Effective Green, g (s)	40.4	34.5		31.7	29.8			23.9			23.9	
Actuated g/C Ratio	0.56	0.48		0.44	0.41			0.33			0.33	
Clearance Time (s)	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	
Lane Grp Cap (vph)	328	797		237	687			324			469	
v/s Ratio Prot	c0.03	c0.36		0.00	0.32							
v/s Ratio Perm	0.15			0.01				0.23			c0.27	
v/c Ratio	0.33	0.75		0.03	0.77			0.70			0.80	
Uniform Delay, d1	10.1	15.4		12.3	18.3			21.1			22.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.4	3.8		0.0	4.9			6.3			9.3	
Delay (s)	10.5	19.2		12.3	23.2			27.4			31.4	
Level of Service	B	B		B	C			C			C	
Approach Delay (s)		17.9			23.1			27.4			31.4	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	72.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



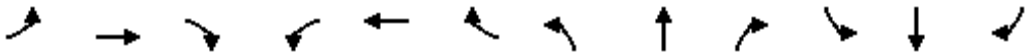
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	445	135	8	459	47	106	91	24	72	144	171
Future Volume (veh/h)	103	445	135	8	459	47	106	91	24	72	144	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1736	1736	1736	1709	1709	1709	1723	1723	1723	1709	1709	1709
Adj Flow Rate, veh/h	108	468	142	8	483	49	112	96	25	76	152	180
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	3	3	3
Cap, veh/h	374	595	181	282	610	62	213	165	36	133	204	215
Arrive On Green	0.09	0.47	0.46	0.03	0.40	0.39	0.31	0.32	0.31	0.31	0.32	0.31
Sat Flow, veh/h	1654	1275	387	1628	1524	155	410	514	111	210	637	668
Grp Volume(v), veh/h	108	0	610	8	0	532	233	0	0	408	0	0
Grp Sat Flow(s),veh/h/ln	1654	0	1661	1628	0	1679	1034	0	0	1515	0	0
Q Serve(g_s), s	2.2	0.0	20.2	0.2	0.0	18.2	0.0	0.0	0.0	2.9	0.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	20.2	0.2	0.0	18.2	13.7	0.0	0.0	16.5	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.09	0.48		0.11	0.19		0.44
Lane Grp Cap(c), veh/h	374	0	776	282	0	672	398	0	0	529	0	0
V/C Ratio(X)	0.29	0.00	0.79	0.03	0.00	0.79	0.59	0.00	0.00	0.77	0.00	0.00
Avail Cap(c_a), veh/h	446	0	994	462	0	1004	578	0	0	733	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	11.4	0.0	14.7	12.7	0.0	17.2	19.3	0.0	0.0	20.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	2.9	0.0	0.0	2.1	1.0	0.0	0.0	2.9	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	0.7	0.0	7.2	0.1	0.0	6.6	3.1	0.0	0.0	5.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.7	0.0	17.6	12.7	0.0	19.3	20.3	0.0	0.0	23.7	0.0	0.0
LnGrp LOS	B	A	B	B	A	B	C	A	A	C	A	A
Approach Vol, veh/h		718			540			233			408	
Approach Delay, s/veh		16.7			19.2			20.3			23.7	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	34.4		24.9	10.2	30.1		24.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	38.0		29.0	8.0	38.0		29.0				
Max Q Clear Time (g_c+I1), s	2.2	22.2		18.5	4.2	20.2		15.7				
Green Ext Time (p_c), s	0.0	5.6		1.4	0.1	5.0		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			19.4									
HCM 6th LOS			B									

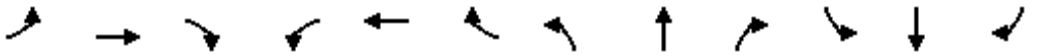
HCM Signalized Intersection Capacity Analysis
1: OR 213 & OR 211

10/11/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	189	11	101	250	269	19	244	125	144	126	107
Future Volume (vph)	83	189	11	101	250	269	19	244	125	144	126	107
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	
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)	1421	1483		1484	1562	1328	1614	1699	1444	1458	1430	
Flt Permitted	0.35	1.00		0.52	1.00	1.00	0.59	1.00	1.00	0.35	1.00	
Satd. Flow (perm)	522	1483		808	1562	1328	1001	1699	1444	537	1430	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	99	225	13	120	298	320	23	290	149	171	150	127
RTOR Reduction (vph)	0	2	0	0	0	235	0	0	106	0	23	0
Lane Group Flow (vph)	99	236	0	120	298	85	23	290	43	171	254	0
Heavy Vehicles (%)	17%	17%	17%	12%	12%	12%	3%	3%	3%	14%	14%	14%
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)	28.3	21.6		25.5	20.2	20.2	24.0	22.1	22.1	37.5	30.6	
Effective Green, g (s)	30.3	22.6		27.5	21.2	21.2	26.0	23.1	23.1	38.5	31.6	
Actuated g/C Ratio	0.38	0.28		0.35	0.27	0.27	0.33	0.29	0.29	0.48	0.40	
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)	286	422		333	417	354	350	494	420	392	569	
v/s Ratio Prot	c0.03	0.16		0.03	c0.19		0.00	c0.17		c0.06	0.18	
v/s Ratio Perm	0.10			0.10		0.06	0.02		0.03	0.15		
v/c Ratio	0.35	0.56		0.36	0.71	0.24	0.07	0.59	0.10	0.44	0.45	
Uniform Delay, d1	16.9	24.2		18.5	26.4	22.8	18.2	24.1	20.6	12.8	17.5	
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	0.5	1.3		0.5	5.4	0.3	0.1	1.5	0.1	0.6	0.4	
Delay (s)	17.4	25.4		19.0	31.7	23.1	18.3	25.6	20.7	13.4	17.9	
Level of Service	B	C		B	C	C	B	C	C	B	B	
Approach Delay (s)		23.1			25.9			23.6			16.2	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	79.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	189	11	101	250	269	19	244	125	144	126	107
Future Volume (veh/h)	83	189	11	101	250	269	19	244	125	144	126	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	1518	1518	1518	1586	1586	1586	1709	1709	1709	1559	1559	1559
Adj Flow Rate, veh/h	99	225	13	120	298	320	23	290	149	171	150	127
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	17	17	17	12	12	12	3	3	3	14	14	14
Cap, veh/h	347	467	27	448	536	454	332	396	336	349	244	207
Arrive On Green	0.08	0.33	0.31	0.09	0.34	0.34	0.04	0.23	0.23	0.12	0.31	0.30
Sat Flow, veh/h	1446	1421	82	1511	1586	1344	1628	1709	1448	1485	780	660
Grp Volume(v), veh/h	99	0	238	120	298	320	23	290	149	171	0	277
Grp Sat Flow(s),veh/h/ln	1446	0	1503	1511	1586	1344	1628	1709	1448	1485	0	1440
Q Serve(g_s), s	3.0	0.0	8.7	3.5	10.6	14.3	0.7	10.9	6.1	5.6	0.0	11.4
Cycle Q Clear(g_c), s	3.0	0.0	8.7	3.5	10.6	14.3	0.7	10.9	6.1	5.6	0.0	11.4
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	347	0	494	448	536	454	332	396	336	349	0	451
V/C Ratio(X)	0.29	0.00	0.48	0.27	0.56	0.70	0.07	0.73	0.44	0.49	0.00	0.61
Avail Cap(c_a), veh/h	465	0	1021	492	1009	855	432	939	795	405	0	874
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	13.9	0.0	18.5	13.5	18.7	19.9	18.8	24.6	22.7	16.4	0.0	20.4
Incr Delay (d2), s/veh	0.3	0.0	0.5	0.2	0.7	1.5	0.1	2.0	0.7	0.8	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	2.9	1.1	3.6	4.2	0.3	4.3	2.0	1.8	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.3	0.0	19.1	13.7	19.4	21.4	18.9	26.5	23.4	17.2	0.0	21.4
LnGrp LOS	B	A	B	B	B	C	B	C	C	B	A	C
Approach Vol, veh/h		337			738			462			448	
Approach Delay, s/veh		17.7			19.3			25.1			19.8	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	26.7	6.8	25.7	9.4	27.4	12.4	20.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	46.0	6.0	41.0	10.0	43.0	10.0	37.0
Max Q Clear Time (g_c+I1), s	5.5	10.7	2.7	13.4	5.0	16.3	7.6	12.9
Green Ext Time (p_c), s	0.0	2.8	0.0	1.2	0.1	6.0	0.1	2.2

Intersection Summary	
HCM 6th Ctrl Delay	20.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	397	24	24	599	73	24	0	22	42	0	21
Future Vol, veh/h	31	397	24	24	599	73	24	0	22	42	0	21
Conflicting Peds, #/hr	0	0	0	0	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	90	-	-	100	-	200	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	9	9	9	12	12	12	2	2	2	2	2	2
Mvmt Flow	37	473	29	29	713	87	29	0	26	50	0	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	800	0	0	502	0	0	1389	1420	488	1346	1347	713
Stage 1	-	-	-	-	-	-	562	562	-	771	771	-
Stage 2	-	-	-	-	-	-	827	858	-	575	576	-
Critical Hdwy	4.19	-	-	4.22	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.281	-	-	2.308	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	793	-	-	1013	-	-	120	136	580	128	151	432
Stage 1	-	-	-	-	-	-	512	510	-	393	410	-
Stage 2	-	-	-	-	-	-	366	374	-	503	502	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	793	-	-	1013	-	-	107	126	580	115	140	432
Mov Cap-2 Maneuver	-	-	-	-	-	-	214	232	-	289	310	-
Stage 1	-	-	-	-	-	-	488	486	-	375	398	-
Stage 2	-	-	-	-	-	-	335	363	-	458	478	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.3	18.2	17.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	214	580	793	-	-	1013	-	-	289	432
HCM Lane V/C Ratio	0.134	0.045	0.047	-	-	0.028	-	-	0.173	0.058
HCM Control Delay (s)	24.4	11.5	9.8	-	-	8.7	-	-	20	13.8
HCM Lane LOS	C	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.5	0.1	0.1	-	-	0.1	-	-	0.6	0.2

Intersection	
Int Delay, s/veh	68.9

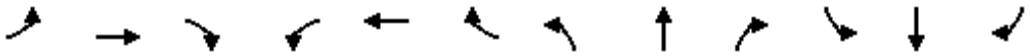
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	390	48	140	477	71	63	9	99	42	11	106
Future Vol, veh/h	40	390	48	140	477	71	63	9	99	42	11	106
Conflicting Peds, #/hr	4	0	0	0	0	4	3	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	9	9	9	9	9	9	5	5	5	11	11	11
Mvmt Flow	49	476	59	171	582	87	77	11	121	51	13	129

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	673	0	0	535	0	0	1646	1619	506	1642	1605	633
Stage 1	-	-	-	-	-	-	604	604	-	972	972	-
Stage 2	-	-	-	-	-	-	1042	1015	-	670	633	-
Critical Hdwy	4.19	-	-	4.19	-	-	7.15	6.55	6.25	7.21	6.61	6.31
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.21	5.61	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.21	5.61	-
Follow-up Hdwy	2.281	-	-	2.281	-	-	3.545	4.045	3.345	3.599	4.099	3.399
Pot Cap-1 Maneuver	886	-	-	998	-	-	78	102	560	76	100	464
Stage 1	-	-	-	-	-	-	480	483	-	292	319	-
Stage 2	-	-	-	-	-	-	274	312	-	432	460	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	883	-	-	998	-	-	~ 41	80	560	~ 44	78	461
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 41	80	-	~ 44	78	-
Stage 1	-	-	-	-	-	-	454	456	-	275	263	-
Stage 2	-	-	-	-	-	-	155	258	-	312	435	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	1.9	242.8	$ 376.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	41	373	883	-	-	998	-	-	120
HCM Lane V/C Ratio	1.874	0.353	0.055	-	-	0.171	-	-	1.616
HCM Control Delay (s)	$ 625.1	19.8	9.3	-	-	9.3	-	-	$ 376.1
HCM Lane LOS	F	C	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	8.1	1.6	0.2	-	-	0.6	-	-	14.3

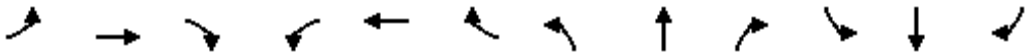
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	320	52	45	388	7	121	77	19	45	55	100
Future Volume (vph)	83	320	52	45	388	7	121	77	19	45	55	100
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	
Lane Util. Factor	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	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.99			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.99	
Satd. Flow (prot)	1525	1567		1511	1586			1571			1451	
Flt Permitted	0.30	1.00		0.42	1.00			0.71			0.90	
Satd. Flow (perm)	482	1567		664	1586			1143			1318	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	91	352	57	49	426	8	133	85	21	49	60	110
RTOR Reduction (vph)	0	7	0	0	1	0	0	4	0	0	43	0
Lane Group Flow (vph)	91	402	0	49	433	0	0	235	0	0	176	0
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	9%	9%	9%	10%	10%	10%	7%	7%	7%	10%	10%	10%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	29.6	24.1		25.4	22.0			19.0			19.0	
Effective Green, g (s)	31.6	25.1		27.4	23.0			20.0			20.0	
Actuated g/C Ratio	0.51	0.41		0.45	0.37			0.33			0.33	
Clearance Time (s)	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	
Lane Grp Cap (vph)	357	639		356	593			371			428	
v/s Ratio Prot	c0.03	0.26		0.01	c0.27							
v/s Ratio Perm	0.10			0.05				c0.21			0.13	
v/c Ratio	0.25	0.63		0.14	0.73			0.63			0.41	
Uniform Delay, d1	8.7	14.5		10.0	16.6			17.6			16.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.3	1.7		0.1	4.4			3.1			0.5	
Delay (s)	9.0	16.2		10.1	20.9			20.7			16.6	
Level of Service	A	B		B	C			C			B	
Approach Delay (s)		14.9			19.8			20.7			16.6	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	61.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

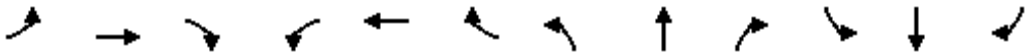
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	320	52	45	388	7	121	77	19	45	55	100
Future Volume (veh/h)	83	320	52	45	388	7	121	77	19	45	55	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	1627	1627	1627	1614	1614	1614	1654	1654	1654	1614	1614	1614
Adj Flow Rate, veh/h	91	352	57	49	426	8	133	85	21	49	60	110
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	9	9	9	10	10	10	7	7	7	10	10	10
Cap, veh/h	471	566	92	475	609	11	287	144	30	150	126	183
Arrive On Green	0.11	0.41	0.40	0.08	0.39	0.36	0.22	0.24	0.22	0.22	0.24	0.22
Sat Flow, veh/h	1550	1366	221	1537	1578	30	683	592	123	224	518	750
Grp Volume(v), veh/h	91	0	409	49	0	434	239	0	0	219	0	0
Grp Sat Flow(s),veh/h/ln	1550	0	1587	1537	0	1608	1398	0	0	1493	0	0
Q Serve(g_s), s	1.5	0.0	9.4	0.8	0.0	10.5	1.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.5	0.0	9.4	0.8	0.0	10.5	7.2	0.0	0.0	6.0	0.0	0.0
Prop In Lane	1.00		0.14	1.00		0.02	0.56		0.09	0.22		0.50
Lane Grp Cap(c), veh/h	471	0	658	475	0	621	432	0	0	427	0	0
V/C Ratio(X)	0.19	0.00	0.62	0.10	0.00	0.70	0.55	0.00	0.00	0.51	0.00	0.00
Avail Cap(c_a), veh/h	600	0	1268	647	0	1285	1024	0	0	1045	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	7.5	0.0	10.7	7.5	0.0	12.0	16.2	0.0	0.0	15.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.7	0.1	0.0	1.1	0.8	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	2.7	0.2	0.0	3.2	2.2	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	0.0	11.4	7.6	0.0	13.0	17.0	0.0	0.0	16.6	0.0	0.0
LnGrp LOS	A	A	B	A	A	B	B	A	A	B	A	A
Approach Vol, veh/h		500			483			239			219	
Approach Delay, s/veh		10.7			12.5			17.0			16.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	23.2		15.3	9.1	21.9		15.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	36.0		31.0	8.0	36.0		31.0				
Max Q Clear Time (g_c+I1), s	2.8	11.4		8.0	3.5	12.5		9.2				
Green Ext Time (p_c), s	0.0	4.1		0.9	0.1	4.3		1.0				

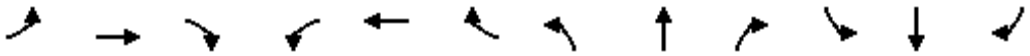
Intersection Summary			
HCM 6th Ctrl Delay		13.3	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	303	18	176	273	200	26	224	142	293	254	130
Future Volume (vph)	156	303	18	176	273	200	26	224	142	293	254	130
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	0.98	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	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)	1599	1669		1583	1667	1387	1614	1699	1444	1583	1582	
Flt Permitted	0.32	1.00		0.23	1.00	1.00	0.51	1.00	1.00	0.32	1.00	
Satd. Flow (perm)	534	1669		375	1667	1387	865	1699	1444	533	1582	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	177	344	20	200	310	227	30	255	161	333	289	148
RTOR Reduction (vph)	0	2	0	0	0	169	0	0	124	0	15	0
Lane Group Flow (vph)	177	362	0	200	310	58	30	255	37	333	422	0
Confl. Peds. (#/hr)						1						
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	3%	3%	3%	5%	5%	5%
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)	34.2	23.3		34.4	23.4	23.4	23.7	21.1	21.1	46.8	39.2	
Effective Green, g (s)	36.2	24.3		36.4	24.4	24.4	25.7	22.1	22.1	47.8	40.2	
Actuated g/C Ratio	0.38	0.25		0.38	0.25	0.25	0.27	0.23	0.23	0.50	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)	333	422		292	423	352	259	390	332	502	661	
v/s Ratio Prot	0.07	c0.22		c0.09	0.19		0.00	0.15		c0.15	0.27	
v/s Ratio Perm	0.13			0.17		0.04	0.03		0.03	c0.18		
v/c Ratio	0.53	0.86		0.68	0.73	0.16	0.12	0.65	0.11	0.66	0.64	
Uniform Delay, d1	21.7	34.2		22.6	32.9	27.9	26.3	33.5	29.2	16.5	22.2	
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	1.3	15.5		6.0	6.1	0.2	0.1	3.5	0.1	3.0	1.8	
Delay (s)	23.0	49.7		28.6	39.0	28.1	26.4	37.0	29.3	19.5	24.0	
Level of Service	C	D		C	D	C	C	D	C	B	C	
Approach Delay (s)		41.0			32.8			33.5			22.0	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	96.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	303	18	176	273	200	26	224	142	293	254	130
Future Volume (veh/h)	156	303	18	176	273	200	26	224	142	293	254	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	1695	1695	1695	1682	1682	1682	1709	1709	1709	1682	1682	1682
Adj Flow Rate, veh/h	177	344	20	200	310	227	30	255	161	333	289	148
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	5	5	5	3	3	3	5	5	5
Cap, veh/h	384	450	26	369	495	419	261	337	286	463	372	191
Arrive On Green	0.11	0.28	0.27	0.12	0.29	0.29	0.04	0.20	0.20	0.20	0.36	0.34
Sat Flow, veh/h	1615	1587	92	1602	1682	1423	1628	1709	1448	1602	1048	537
Grp Volume(v), veh/h	177	0	364	200	310	227	30	255	161	333	0	437
Grp Sat Flow(s),veh/h/ln	1615	0	1679	1602	1682	1423	1628	1709	1448	1602	0	1585
Q Serve(g_s), s	6.1	0.0	16.2	6.9	13.0	10.9	1.2	11.5	8.2	12.4	0.0	20.1
Cycle Q Clear(g_c), s	6.1	0.0	16.2	6.9	13.0	10.9	1.2	11.5	8.2	12.4	0.0	20.1
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	384	0	476	369	495	419	261	337	286	463	0	563
V/C Ratio(X)	0.46	0.00	0.76	0.54	0.63	0.54	0.12	0.76	0.56	0.72	0.00	0.78
Avail Cap(c_a), veh/h	460	0	801	428	803	679	311	544	461	651	0	892
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	17.9	0.0	26.8	18.5	24.9	24.2	24.4	30.9	29.6	18.9	0.0	23.6
Incr Delay (d2), s/veh	0.6	0.0	1.9	0.9	1.0	0.8	0.1	2.6	1.3	1.8	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	6.5	2.5	5.0	3.6	0.4	4.8	2.8	4.4	0.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	0.0	28.7	19.4	25.9	25.0	24.5	33.5	30.9	20.6	0.0	25.3
LnGrp LOS	B	A	C	B	C	C	C	C	C	C	A	C
Approach Vol, veh/h		541			737			446			770	
Approach Delay, s/veh		25.4			23.9			32.0			23.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	27.2	7.5	33.0	13.1	28.1	20.4	20.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	12.0	38.0	5.0	45.0	12.0	38.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	8.9	18.2	3.2	22.1	8.1	15.0	14.4	13.5
Green Ext Time (p_c), s	0.2	3.8	0.0	1.9	0.2	5.0	1.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	680	20	21	589	141	19	0	17	157	0	68
Future Vol, veh/h	63	680	20	21	589	141	19	0	17	157	0	68
Conflicting Peds, #/hr	0	0	0	0	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	90	-	-	100	-	200	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	72	773	23	24	669	160	22	0	19	178	0	77

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	829	0	0	796	0	0	1765	1806	785	1655	1657	669
Stage 1	-	-	-	-	-	-	929	929	-	717	717	-
Stage 2	-	-	-	-	-	-	836	877	-	938	940	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	798	-	-	821	-	-	65	79	393	~ 78	98	458
Stage 1	-	-	-	-	-	-	321	346	-	421	434	-
Stage 2	-	-	-	-	-	-	362	366	-	317	342	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	798	-	-	821	-	-	49	70	393	~ 68	87	458
Mov Cap-2 Maneuver	-	-	-	-	-	-	136	168	-	207	238	-
Stage 1	-	-	-	-	-	-	292	315	-	383	421	-
Stage 2	-	-	-	-	-	-	292	355	-	274	311	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.3	26.1	59.5
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	136	393	798	-	-	821	-	-	207	458
HCM Lane V/C Ratio	0.159	0.049	0.09	-	-	0.029	-	-	0.862	0.169
HCM Control Delay (s)	36.4	14.6	10	-	-	9.5	-	-	79.1	14.4
HCM Lane LOS	E	B	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	0.5	0.2	0.3	-	-	0.1	-	-	6.6	0.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	171.9

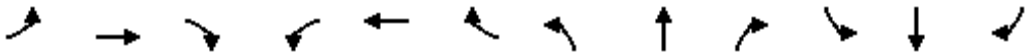
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	681	76	164	627	37	77	16	162	22	18	81
Future Vol, veh/h	56	681	76	164	627	37	77	16	162	22	18	81
Conflicting Peds, #/hr	1	0	2	2	0	1	3	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	62	757	84	182	697	41	86	18	180	24	20	90

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	739	0	0	843	0	0	2065	2028	801	2105	2050	722
Stage 1	-	-	-	-	-	-	925	925	-	1083	1083	-
Stage 2	-	-	-	-	-	-	1140	1103	-	1022	967	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	867	-	-	793	-	-	~ 40	57	384	38	56	427
Stage 1	-	-	-	-	-	-	323	348	-	263	293	-
Stage 2	-	-	-	-	-	-	244	287	-	285	333	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	866	-	-	791	-	-	~ 15	41	383	~ 11	40	425
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 15	41	-	~ 11	40	-
Stage 1	-	-	-	-	-	-	299	322	-	244	225	-
Stage 2	-	-	-	-	-	-	135	221	-	132	308	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	2.2	$ 850.2	$ 1054.5
HCM LOS			F	F

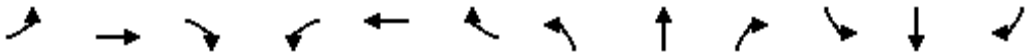
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	15	219	866	-	-	791	-	-	46
HCM Lane V/C Ratio	5.704	0.903	0.072	-	-	0.23	-	-	2.923
HCM Control Delay (s)	$ 2620.9	84.2	9.5	-	-	10.9	-	-	$ 1054.5
HCM Lane LOS	F	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	11.6	7.4	0.2	-	-	0.9	-	-	14.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	448	137	8	465	47	108	91	24	72	144	173
Future Volume (vph)	105	448	137	8	465	47	108	91	24	72	144	173
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	
Lane Util. Factor	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	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.99			0.99			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1646	1672		1614	1669			1643			1558	
Flt Permitted	0.22	1.00		0.27	1.00			0.58			0.90	
Satd. Flow (perm)	375	1672		465	1669			971			1419	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	472	144	8	489	49	114	96	25	76	152	182
RTOR Reduction (vph)	0	11	0	0	4	0	0	5	0	0	32	0
Lane Group Flow (vph)	111	605	0	8	534	0	0	230	0	0	378	0
Confl. Peds. (#/hr)	11					11	5		4	4		5
Confl. Bikes (#/hr)									2			3
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	39.4	33.8		30.0	29.1			23.0			23.0	
Effective Green, g (s)	40.7	34.8		32.0	30.1			24.0			24.0	
Actuated g/C Ratio	0.56	0.48		0.44	0.41			0.33			0.33	
Clearance Time (s)	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	
Lane Grp Cap (vph)	325	800		234	691			320			468	
v/s Ratio Prot	c0.03	c0.36		0.00	0.32							
v/s Ratio Perm	0.16			0.01				0.24			c0.27	
v/c Ratio	0.34	0.76		0.03	0.77			0.72			0.81	
Uniform Delay, d1	10.2	15.5		12.3	18.4			21.4			22.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.5	3.9		0.0	5.2			7.1			9.6	
Delay (s)	10.6	19.4		12.3	23.5			28.5			31.8	
Level of Service	B	B		B	C			C			C	
Approach Delay (s)		18.0			23.3			28.5			31.8	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	448	137	8	465	47	108	91	24	72	144	173
Future Volume (veh/h)	105	448	137	8	465	47	108	91	24	72	144	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1736	1736	1736	1709	1709	1709	1723	1723	1723	1709	1709	1709
Adj Flow Rate, veh/h	111	472	144	8	489	49	114	96	25	76	152	182
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	3	3	3
Cap, veh/h	369	597	182	278	614	62	212	161	35	132	204	216
Arrive On Green	0.09	0.47	0.46	0.03	0.40	0.39	0.31	0.32	0.31	0.31	0.32	0.31
Sat Flow, veh/h	1654	1273	388	1628	1526	153	408	501	108	209	632	671
Grp Volume(v), veh/h	111	0	616	8	0	538	235	0	0	410	0	0
Grp Sat Flow(s),veh/h/ln	1654	0	1661	1628	0	1679	1017	0	0	1511	0	0
Q Serve(g_s), s	2.3	0.0	20.7	0.2	0.0	18.7	0.0	0.0	0.0	2.5	0.0	0.0
Cycle Q Clear(g_c), s	2.3	0.0	20.7	0.2	0.0	18.7	14.4	0.0	0.0	16.9	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.09	0.49		0.11	0.19		0.44
Lane Grp Cap(c), veh/h	369	0	779	278	0	675	393	0	0	529	0	0
V/C Ratio(X)	0.30	0.00	0.79	0.03	0.00	0.80	0.60	0.00	0.00	0.78	0.00	0.00
Avail Cap(c_a), veh/h	439	0	980	455	0	990	562	0	0	722	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	11.6	0.0	14.9	12.8	0.0	17.4	19.6	0.0	0.0	21.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	3.2	0.0	0.0	2.4	1.1	0.0	0.0	3.1	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	0.7	0.0	7.4	0.1	0.0	6.9	3.2	0.0	0.0	6.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	18.1	12.9	0.0	19.8	20.7	0.0	0.0	24.3	0.0	0.0
LnGrp LOS	B	A	B	B	A	B	C	A	A	C	A	A
Approach Vol, veh/h		727			546			235			410	
Approach Delay, s/veh		17.1			19.7			20.7			24.3	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	35.0		25.3	10.2	30.6		25.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	38.0		29.0	8.0	38.0		29.0				
Max Q Clear Time (g_c+I1), s	2.2	22.7		18.9	4.3	20.7		16.4				
Green Ext Time (p_c), s	0.0	5.5		1.4	0.1	4.9		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		19.8	
HCM 6th LOS		B	

1: OR 213 & OR 211 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.7	0.6	0.4	0.0	0.0	0.0	3.5	0.7	3.5	3.6	0.7	0.6
Total Del/Veh (s)	17.1	19.3	11.8	16.1	19.0	9.7	13.7	22.9	6.8	19.5	16.0	9.3

1: OR 213 & OR 211 Performance by movement

Movement	All
Denied Del/Veh (s)	1.0
Total Del/Veh (s)	16.1

2: Site Access/Safeway Center & OR 211 Performance by movement

Movement	EBL	EBT	WBL	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.2	0.0		0.1	0.2	0.1	0.1	0.1
Total Del/Veh (s)	5.9	1.6		6.2	5.7	12.9	7.8	4.8

3: OR 211 & Leroy Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.0	0.4	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2
Total Del/Veh (s)	9.9	6.1	5.1	9.7	5.9	5.2	20.0	18.2	8.9	30.6	27.6	19.2

3: OR 211 & Leroy Avenue Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	9.1

4: S Molalla Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.6	0.6	0.6	0.3	0.3	0.4	0.2	0.3	0.2
Total Del/Veh (s)	16.4	15.9	15.0	11.8	17.6	10.9	14.8	13.6	9.6	13.4	13.4	7.9

4: S Molalla Avenue Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	15.2

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	28.0

Intersection: 1: OR 213 & OR 211

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)	110	212	114	236	169	33	209	54	166	215
Average Queue (ft)	34	88	47	105	73	7	89	15	62	77
95th Queue (ft)	79	178	98	190	133	24	172	40	121	154
Link Distance (ft)		942		457			896			954
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	260		340		225	275		260	205	
Storage Blk Time (%)				0			0		0	0
Queuing Penalty (veh)				1			0		0	1

Intersection: 2: Site Access/Safeway Center & OR 211

Movement	EB	WB	SB	SB
Directions Served	L	L	L	TR
Maximum Queue (ft)	47	5	69	36
Average Queue (ft)	11	0	22	12
95th Queue (ft)	36	4	49	30
Link Distance (ft)			294	294
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	90	100		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: OR 211 & Leroy Avenue

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	L	TR	LTR
Maximum Queue (ft)	55	36	104	16	87	98	205
Average Queue (ft)	15	3	36	1	37	44	73
95th Queue (ft)	49	26	80	8	72	80	165
Link Distance (ft)		3863		3093	280	280	516
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	200		200				
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 4: S Molalla Avenue

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	102	283	105	324	163	165
Average Queue (ft)	40	117	30	127	74	69
95th Queue (ft)	77	211	73	242	136	122
Link Distance (ft)		3093		457	688	319
Upstream Blk Time (%)				0		
Queuing Penalty (veh)				0		
Storage Bay Dist (ft)	150		150			
Storage Blk Time (%)	0	3		6		
Queuing Penalty (veh)	0	3		3		

Network Summary

Network wide Queuing Penalty: 8

1: OR 213 & OR 211 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0

1: OR 213 & OR 211 Performance by movement

Movement	All
Denied Entry Before	0

2: Site Access/Safeway Center & OR 211 Performance by movement

Movement	EBL	EBT	WBL	WBT	WBR	SBL	SBR	All
Denied Entry Before	0	0	0	0	0	0	0	0

3: OR 211 & Leroy Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0

3: OR 211 & Leroy Avenue Performance by movement

Movement	All
Denied Entry Before	0

4: S Molalla Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0

4: S Molalla Avenue Performance by movement

Movement	All
Denied Entry Before	0

Total Network Performance

Denied Entry Before	0

Intersection: 1: OR 213 & OR 211

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)	208	306	202	286	160	43	271	117	301	344
Average Queue (ft)	70	157	89	136	61	11	117	32	133	141
95th Queue (ft)	154	274	162	235	114	34	217	81	236	269
Link Distance (ft)		942		457			896			954
Upstream Blk Time (%)				0						
Queuing Penalty (veh)				0						
Storage Bay Dist (ft)	260		340		225	275		260	205	
Storage Blk Time (%)		2		1			1		2	3
Queuing Penalty (veh)		3		3			1		8	8

Intersection: 2: Site Access/Safeway Center & OR 211

Movement	EB	WB	WB	WB	SB	SB
Directions Served	L	L	T	R	L	TR
Maximum Queue (ft)	72	17	6	13	245	116
Average Queue (ft)	23	1	0	1	112	34
95th Queue (ft)	55	8	4	7	244	126
Link Distance (ft)			3863		294	294
Upstream Blk Time (%)					4	2
Queuing Penalty (veh)					0	0
Storage Bay Dist (ft)	90	100		200		
Storage Blk Time (%)	0					
Queuing Penalty (veh)	0					

Intersection: 3: OR 211 & Leroy Avenue

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	L	TR	LTR
Maximum Queue (ft)	58	41	108	24	225	231	178
Average Queue (ft)	22	2	48	1	82	90	72
95th Queue (ft)	50	17	86	13	191	184	153
Link Distance (ft)		3863		3093	280	280	516
Upstream Blk Time (%)					1	1	
Queuing Penalty (veh)					0	0	
Storage Bay Dist (ft)	200		200				
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 4: S Molalla Avenue

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	249	426	161	432	219	257
Average Queue (ft)	67	197	10	235	92	135
95th Queue (ft)	175	344	70	387	172	232
Link Distance (ft)		3093		457	688	319
Upstream Blk Time (%)				0		0
Queuing Penalty (veh)				0		0
Storage Bay Dist (ft)	150		150			
Storage Blk Time (%)	0	14		26		
Queuing Penalty (veh)	0	14		2		

Network Summary

Network wide Queuing Penalty: 40

1: OR 213 & OR 211 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.6	0.5	0.4	0.0	0.0	0.0	3.5	0.8	3.5	3.6	0.7	0.6
Total Del/Veh (s)	16.7	19.5	12.8	17.1	18.4	9.5	17.5	23.2	6.9	20.0	15.4	9.2

1: OR 213 & OR 211 Performance by movement

Movement	All
Denied Del/Veh (s)	1.0
Total Del/Veh (s)	16.2

2: Site Access/Safeway Center & OR 211 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.3	0.1	0.3	0.1	0.1	0.1	0.1	0.1
Total Del/Veh (s)	6.3	1.8	1.7	9.4	6.3	6.2	15.3	6.4	14.3	7.7	5.3

3: OR 211 & Leroy Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.0	0.4	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3
Total Del/Veh (s)	10.3	6.1	4.8	9.4	6.2	6.1	22.8	15.9	8.3	36.5	37.3	29.1

3: OR 211 & Leroy Avenue Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	10.0

4: S Molalla Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.5	0.6	0.7	0.2	0.2	0.3	0.2	0.3	0.3
Total Del/Veh (s)	18.0	16.0	13.9	12.7	18.7	17.6	14.4	14.1	9.0	12.5	12.4	8.2

4: S Molalla Avenue Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	15.5

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	29.1

Intersection: 1: OR 213 & OR 211

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)	109	228	138	245	182	50	218	69	197	211
Average Queue (ft)	35	92	55	116	76	11	92	18	69	73
95th Queue (ft)	78	176	104	208	136	32	174	50	138	155
Link Distance (ft)		942		457			896			954
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	260		340		225	275		260	205	
Storage Blk Time (%)		0		0	0		0		0	0
Queuing Penalty (veh)		0		2	0		0		0	0

Intersection: 2: Site Access/Safeway Center & OR 211

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	L	TR	L	TR
Maximum Queue (ft)	68	15	49	44	44	57	37
Average Queue (ft)	13	1	9	15	15	21	10
95th Queue (ft)	43	9	33	38	38	46	29
Link Distance (ft)		457		215	215	294	294
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	90		100				
Storage Blk Time (%)	0						
Queuing Penalty (veh)	0						

Intersection: 3: OR 211 & Leroy Avenue

Movement	EB	WB	WB	NB	NB	SB
Directions Served	L	L	TR	L	TR	LTR
Maximum Queue (ft)	63	76	25	95	76	285
Average Queue (ft)	16	33	1	39	42	83
95th Queue (ft)	47	68	12	76	71	203
Link Distance (ft)			3093	280	280	516
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	200	200				
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Molalla Avenue

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	158	267	141	273	146	143
Average Queue (ft)	42	116	29	139	71	68
95th Queue (ft)	99	210	81	248	124	119
Link Distance (ft)		3093		457	688	319
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	150		150			
Storage Blk Time (%)		3		7		
Queuing Penalty (veh)		2		3		

Network Summary

Network wide Queuing Penalty: 8

1: OR 213 & OR 211 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0

1: OR 213 & OR 211 Performance by movement

Movement	All
Denied Entry Before	0

2: Site Access/Safeway Center & OR 211 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0

3: OR 211 & Leroy Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0

3: OR 211 & Leroy Avenue Performance by movement

Movement	All
Denied Entry Before	0

4: S Molalla Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0

4: S Molalla Avenue Performance by movement

Movement	All
Denied Entry Before	0

Total Network Performance

Denied Entry Before	0

Intersection: 1: OR 213 & OR 211

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)	192	324	186	268	205	46	276	100	267	461
Average Queue (ft)	62	170	91	142	65	13	123	32	137	168
95th Queue (ft)	132	282	159	235	119	33	233	76	238	396
Link Distance (ft)		942		457			896			954
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	260		340		225	275		260	205	
Storage Blk Time (%)		2		2	0		1		4	3
Queuing Penalty (veh)		3		7	0		1		15	10

Intersection: 2: Site Access/Safeway Center & OR 211

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	L	R	L	TR	L	TR
Maximum Queue (ft)	61	45	9	48	39	277	205
Average Queue (ft)	24	11	0	14	11	139	51
95th Queue (ft)	54	35	5	41	33	285	199
Link Distance (ft)				215	215	294	294
Upstream Blk Time (%)						10	5
Queuing Penalty (veh)						0	0
Storage Bay Dist (ft)	90	100	200				
Storage Blk Time (%)	0						
Queuing Penalty (veh)	0						

Intersection: 3: OR 211 & Leroy Avenue

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	L	TR	LTR
Maximum Queue (ft)	58	32	122	24	211	238	232
Average Queue (ft)	21	1	50	1	78	94	88
95th Queue (ft)	50	15	90	13	171	204	202
Link Distance (ft)		3863		3093	280	280	516
Upstream Blk Time (%)					1	2	
Queuing Penalty (veh)					0	0	
Storage Bay Dist (ft)	200		200				
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 4: S Molalla Avenue

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	250	415	74	412	261	309
Average Queue (ft)	78	214	10	228	100	140
95th Queue (ft)	202	357	60	373	220	246
Link Distance (ft)		3093		457	688	319
Upstream Blk Time (%)				1		1
Queuing Penalty (veh)				0		0
Storage Bay Dist (ft)	150		150			
Storage Blk Time (%)		18		25		
Queuing Penalty (veh)		19		2		

Network Summary

Network wide Queuing Penalty: 57

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Memorandum

To: **Dan Zinder, City of Molalla**

Copy: **John Odom, JSO Services, LLC**

From: **Jennifer Danziger, PE**

Date: **August 3, 2022**

Subject: **Response to Incompleteness Comments on Traffic Impact Analysis**

Introduction

This memorandum addresses the following incompleteness comment related to Molalla Municipal Code (MMC) MMC 17-4.2.040.B.8,Traffic Impact Analysis:

> *The submitted Transportation Impact Analysis analyzes Warrants 1 and 2. For projects where the OR-211/Leroy Ave intersection is impacted, Staff is requiring analysis for all nine signal warrants for that intersection. Ensure all new projects with approved or pending TIAs are included in the study including Cascade Place Apartments, 1000 W Main ST, Colima Apartments (31514 S HWY 213) Phase 1, 1000 W Main ST, and Molalla Center Market (501 E Main) are included.*

An updated traffic signal warrant analysis that complies with the request is presented below. Note, several additional projects have been approved since the date of the incompleteness letter. These projects have also been included in the analysis.

Signal Warrant at Leroy Avenue

The Manual on Uniform Traffic Control Devices (MUTCD)[1] provides guidance on when to consider the installation of a traffic signal. At the right location, a traffic signal can provide for orderly movement of traffic, serve pedestrians trying to cross a busy street, and reduce the frequency of certain types of crashes (especially right-angle collisions). However, signals can add delay and congestion to the system, increase diversions to local streets, and increase the frequency of certain types of crashes (especially rear-end collisions). Therefore, the MUTCD recommends an engineering study of conditions and provides a series of factors, or warrants, which can be used to aid in deciding when a traffic signal should be considered.

The ODOT Traffic Signal Policy and Guidelines require that one or more of the MUTCD traffic signal warrants shall be met to consider installation of a traffic signal on a state highway.

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[1] Federal Highway Administration, Manual on Uniform Traffic Control Devices for Streets and Highways, 2009 Edition with Revisions 1 and 2 dated May 2012.

A traffic signal at the intersection of W Main Street (OR 211) and Leroy Avenue has been under consideration since the first approvals of Cascade Center. The 2019 study included a detailed warrant evaluation based on the volume criteria in the that demonstrated that thresholds for installation of a traffic signal were not met. The warrants were assessed again with the Cascade Place Multifamily study and the thresholds were not met.

The recently approved gas station and convenience store located at 710 W Main Street collected a 16-hour traffic and pedestrian volume count in August 2021 to provide an updated assessment of the traffic signal warrants at this intersection. This assessment was used as the basis for evaluating the signal warrants with the proposed Dairy Queen.

Traffic Volume Estimates

Year 2023 buildout volumes from the 2021 traffic count were estimated by 1) seasonally adjusting the highway through traffic, 2) applying a uniform pandemic adjustment factor of 1.05, 3) growing the existing volumes by a rate of 2.26 percent per year for two years, 4) adding the traffic from seven approved developments (Cascade Center, Cascade Place Multifamily, Molalla Retail Center at 31330 Highway 213, 1000 W Main Street Apartments, Colima Apartments Phases 1 & 2, Retail at 500 E Main Street, and Molalla Petroleum at 710 W Main Street), and 5) adding traffic from the proposed Dairy Queen development. Although some traffic was measured on the northbound approach of Leroy Avenue due to construction and the opening of the first building on the site. These volumes were excluded from the count since the construction traffic is temporary and the building traffic is included in the approved development traffic estimates.

A detailed breakdown of the traffic generated by the Cascade Center and Cascade Place developments was not available from either study. To estimate the site traffic for those developments, a background condition was first estimated by seasonally adjusting the 16-hour volumes from the 2018 traffic counts and growing them by 2.5 percent per year for four years. The background demand was then subtracted from the buildout volumes used to assess signal warrants in the 2019 study for Cascade Place Multifamily. This process yielded an estimate of the combined approved project volumes for the left-turn and through movements on Leroy Avenue and all movements on W Main Street. Although some traffic to/from the multifamily housing is anticipated to use the east shared access to be constructed with the Molalla Petroleum development, no diversions were assumed for the warrant analysis.

For all other developments, the 16-hour traffic volumes were derived from the time-of-day profiles available in the ITE *Trip Generation Manual* and the estimates of daily traffic volumes that were provided in the transportation studies. This approach was also used for the proposed Dairy Queen. Note, the volumes during the peak hours for these projects may vary slightly from the peak trip generation since the time-of-day profiles are based on a different data set from ITE.

The distribution for the proposed Dairy Queen assumes 65 percent the site traffic will travel through the W Main Street (OR-211)/Leroy Avenue intersection. Approximately 55 percent is assumed to travel east-west on the highway and approximately 10 percent is assumed to travel to/from the north on Leroy Avenue. The eastbound traffic turning left from W Main Street (OR-211) to Leroy is included in the eastbound traffic volumes. The southbound traffic turning right from Leroy Avenue to W Main Street (OR-211) is not included in the signal warrant volumes based on ODOT guidance for evaluating warrants, which recommends discounting or excluding right-turn volumes, as described below under *Warrant Assumptions*.

Warrant Assumptions

The City of Molalla has an estimated population of 10,228 according to the US Census Bureau[2], which exceeds the minimum requirement for an intersection that lies within the built-up area of an isolated community having a population of less than 10,000. Furthermore, development directly surrounding the city that would also be considered in this analysis. Therefore, the 70% warrant for high-speed roadways (40 mph minimum) is not applicable at this intersection in any of the analyses.

W Main Street (OR 211) has a posted speed limit of 35 mph. Therefore, the 70% warrant for high-speed roadways (40 mph minimum) is not applicable at this intersection in any of the analyses.

At the intersection with Leroy Avenue, W Main Street (OR 211) has exclusive left-turn lanes. Although ODOT guidance in the APM suggests that this configuration could be counted as a two-lane roadway, the left-turn movement only accounts for 6 to 7 percent of the total volume; therefore, the warrants were evaluated assuming the highway was a one-lane roadway. However, the volumes on the approaches were conservatively assumed to include all highway movements.

Leroy Avenue includes a left-turn and a through-right lane on both approaches. ODOT guidance in the APM suggests that this configuration could be counted as a two-lane roadway. The guidance also requires that right turns be excluded from the calculation if they are below 85 percent of the available lane capacity, which is the case for Leroy Avenue. Therefore, the warrants were evaluated assuming Leroy Avenue was a one-lane roadway. However, the evaluations performed for Cascade Place Multifamily included both the left-turn and through volumes in the calculation. For consistency, the same assumption was made for this analysis.

Warrant Assessment

Chapter 4C of the MUTCD, 2009 provides the guidance for determining whether a signal should be installed at an intersection. It includes nine warrants: three based on traffic volumes, two based on pedestrian volumes, and four other that consider crash history, proximity to a rail crossing, and network factors. Table 1 presents a summary of the warrant analysis.

Table 1: Warrant Summary for W Main Street/Leroy Avenue

Warrant		Criteria	Findings
1	Eight-Hour Vehicular Volume	Condition A, Minimum Vehicular Volume: 500 vehicles on major street and 150 vehicles on minor street for eight hours	Major street volumes exceed the threshold, but all minor street volumes are well below the threshold. *Warrant not met.*
		Condition B, Interruption of Continuous Traffic: 750 vehicles on major street and 75 vehicles on minor street for eight hours	Major street volumes exceed the threshold, but minor street volumes only exceed the threshold for two hours of the day. *Warrant not met.*
2	Four-Hour Vehicular Volume	Variable traffic volume thresholds based on a curve with minimum minor street volume of 80 vehicles for four hours	All plotted volumes fall below the curve. *Warrant not met.*

[2] US Department of Commerce, US Census Bureau Quick Facts, Molalla City https://www.census.gov/quickfacts/fact/table/molallacityoregon/PST045221

Table 1: Warrant Summary for W Main Street/Leroy Avenue

Warrant		Criteria	Findings
3	Peak Hour	Variable traffic volume thresholds based on a curve with minimum minor street volume of 100 vehicles for one hour	All plotted volumes fall below the curve. *Warrant not met.*
4	Pedestrian Volume	Variable volume thresholds based on a curve with minimum volume of 107 pedestrian crossings for four hours	Even with significant growth in pedestrian activity, crossing will fall well below the curve. *Warrant not met.*
		Variable volume thresholds based on a curve with minimum volume of 133 pedestrian crossings for one hour	Even with significant growth in pedestrian activity, crossings will fall well below the curve. *Warrant not met.*
5	School Crossing	Adequate gaps in traffic and a minimum volume of 20 school children crossing in one hour	Proposed development will not change the school children crossings warrant not met with other approved developments. *Warrant not met*.
6	Coordinated Signal System	Progressive movement in a coordinated signal system to maintain proper platooning of vehicles.	Existing signals on W Main Street are uncoordinated. *Warrant not relevant*.
7	Crash Experience	Five or more reported crashes have occurred within a 12-month period that might not have occurred with a signal	Only 8 crashes reported in a 5-year analysis period with fewer than 3 crashes reported in any year. *Warrant not met.*
8	Roadway Network	Intersection must include two major routes	Leroy Avenue is not a major route. *Warrant not relevant.*
9	Intersection Near a Grade Crossing	A railroad crossing must be located within 140 feet of the stop line for any approach.	There are no railroads located within at least a mile of this intersection. *Warrant not relevant.*

As demonstrated in Table 1, the warrants for a traffic signal are not met at the intersection of W Main Street (OR 211) and Leroy Avenue.

Conclusion

Although the proposed Dairy Queen will add traffic to the W Main Street (OR-211)/Leroy Avenue intersection, signal warrants will not be met because the project will not add traffic to critical side street movements.

TRAFFIC SIGNAL WARRANTS - BASED ON 2009 MUTCD

INTERSECTION INFORMATION

City:	Molalla		Condition:	2023 Buildout Conditions with Dairy Queen NB/SB Lefts & Throughs	
Population:	10,228				
Intersection Location: (Rural/Urban)	Urban				
Major Street Name: Number of Moving	OR-211		Minor Street Name: Number of Moving	Leroy Avenue	
Lanes for Each	1		Lanes for Each	1	
Speed:	35 mph		Speed:	25 mph	
Street Width:	24 ft		Street Width:	40 ft	
Direction:	EB	WB	Direction:	NB	SB
Hour Beginning:			Hour Beginning:		
12:00 AM			12:00 AM		
1:00 AM			1:00 AM		
2:00 AM			2:00 AM		
3:00 AM			3:00 AM		
4:00 AM			4:00 AM		
5:00 AM	137	298	5:00 AM	8	2
6:00 AM	307	447	6:00 AM	8	9
7:00 AM	494	680	7:00 AM	80	41
8:00 AM	425	554	8:00 AM	32	24
9:00 AM	435	523	9:00 AM	36	19
10:00 AM	487	623	10:00 AM	45	17
11:00 AM	512	737	11:00 AM	63	26
12:00 PM	603	789	12:00 PM	73	31
1:00 PM	597	732	1:00 PM	67	20
2:00 PM	656	847	2:00 PM	68	42
3:00 PM	725	888	3:00 PM	68	45
4:00 PM	806	947	4:00 PM	74	36
5:00 PM	756	795	5:00 PM	79	35
6:00 PM	624	583	6:00 PM	68	32
7:00 PM	406	380	7:00 PM	50	24
8:00 PM	324	349	8:00 PM	38	8
9:00 PM			9:00 PM		
10:00 PM			10:00 PM		
11:00 PM			11:00 PM		
24-hour Total	8,294	10,172	24-hour Total	857	411

Warrants Evaluted:

Warrant 1, 8-Hour Vehicular Volume - Evaluated for Conditions A & B
Warrant 2 , 4-Hour Vehicular Volume - Evaluated
Warrant 3, Peak Hour - Evaluated for Conditions A-2, A-3 (A-1 needs to be evaluated separately), and Condition B
Warrant 4, Pedestrian Volume - Not Analyzed
Warrant 5, School Crossing - Not Analyzed
Warrant 6, Coordinated Signal System - Not Analyzed
Warrant 7, Accident Experience - Not Analyzed
Warrant 8, Roadway Network - Not Analyzed
Warrant 9, Intersection Near a Grade Crossing - Not Analyzed

WARRANT 1, 8-HOUR VEHICULAR VOLUME

	MAJOR			MINOR						
	EB	WB	Total	NB	SB	Max	A	B	A or B	80% A&B
4:00 PM	806	947	1,753	74	36	74	N	N	N	N
3:00 PM	725	888	1,613	68	45	68	N	N	N	N
5:00 PM	756	795	1,551	79	35	79	N	Y	Y	N
2:00 PM	656	847	1,503	68	42	68	N	N	N	N
12:00 PM	603	789	1,392	73	31	73	N	N	N	N
1:00 PM	597	732	1,329	67	20	67	N	N	N	N
11:00 AM	512	737	1,249	63	26	63	N	N	N	N
6:00 PM	624	583	1,207	68	32	68	N	N	N	N
7:00 AM	494	680	1,174	80	41	80	N	Y	Y	N
10:00 AM	487	623	1,110	45	17	45	N	N	N	N
8:00 AM	425	554	979	32	24	32	N	N	N	N
9:00 AM	435	523	958	36	19	36	N	N	N	N

Warrant Requirements:

Major Street Lanes: 1
Minor Street Lanes: 1

CONDITION A - Minimum Vehicular Volume

Minimum Volume on Combined Major Street Approaches: 500
Minimum Volume on Higher Minor Street Approach: 150

CONDITION B - Interruption of Continuous Traffic

Minimum Volume on Combined Major Street Approaches: 750
Minimum Volume on Higher Minor Street Approach: 75

IS CONDITION A OF SIGNAL WARRANT 1 MET? NO
IS CONDITION B OF SIGNAL WARRANT 1 MET? NO
IS COMBINATION OF A OR B MET? NO
IS 80% OF CONDITION A AND CONDITION B MET? NO

Note: Signal Warrant 1 is met if either Condition A or Condition B is met.

WARRANT 2, FOUR HOUR VEHICULAR VOLUME

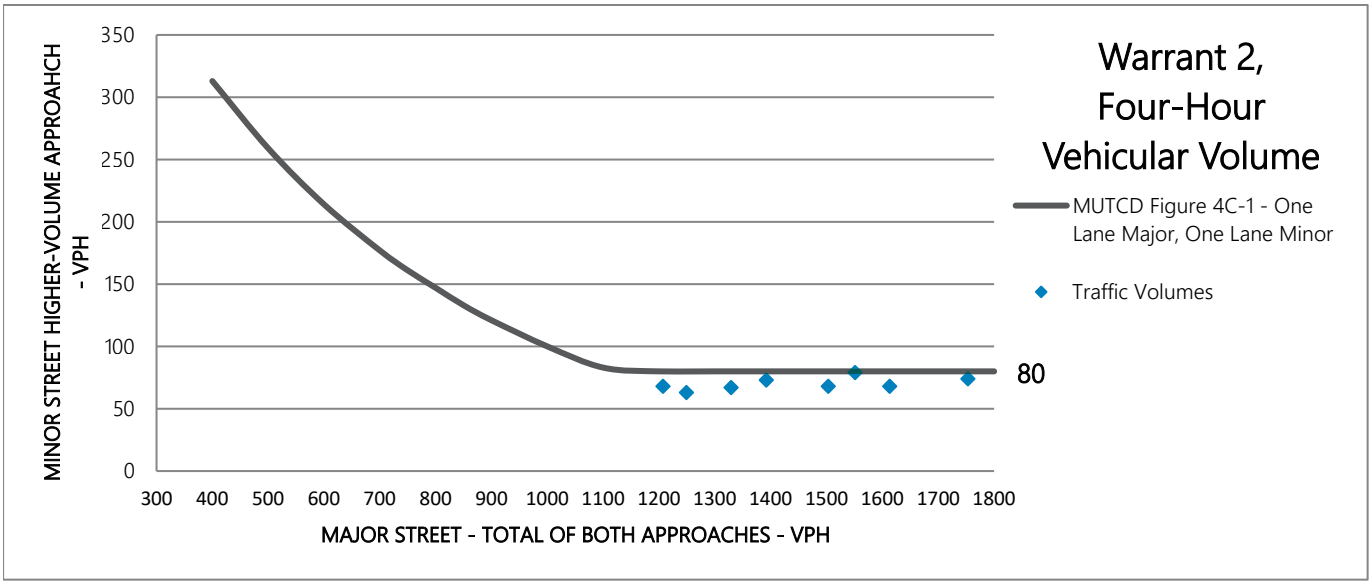
	MAJOR			MINOR			Calculated	
	EB	WB	Total	NB	SB	Max	Threshold	
4:00 PM	806	947	1,753	74	36	74	80	N
3:00 PM	725	888	1,613	68	45	68	80	N
5:00 PM	756	795	1,551	79	35	79	80	N
2:00 PM	656	847	1,503	68	42	68	80	N
12:00 PM	603	789	1,392	73	31	73	80	N
1:00 PM	597	732	1,329	67	20	67	80	N
11:00 AM	512	737	1,249	63	26	63	80	N
6:00 PM	624	583	1,207	68	32	68	80	N

Warrant Requirements:

Major Street Lanes: 1

Minor Street Lanes: 1

IS SIGNAL WARRANT 2 MET? NO



WARRANT 3, PEAK HOUR VEHICULAR VOLUME

	MAJOR			MINOR			Calculated		
	EB	WB	Total	NB	SB	Max	Threshold (B	A-2&3	B
4:00 PM	806	947	1,753	74	36	74	100	N	N
3:00 PM	725	888	1,613	68	45	68	100	N	N
5:00 PM	756	795	1,551	79	35	79	100	N	N
2:00 PM	656	847	1,503	68	42	68	100	N	N

Warrant Requirements:
Major Street Lanes: 1
Minor Street Lanes: 1

CONDITION A-1 - Stopped Delay
Cannot be evaluated based on volumes alone. Condition met if traffic on one minor-street approach (one direction only) controlled by STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach.

CONDITION A-2 - Minor Street Volume
Minimum Volume on Higher Minor Street Approach: 100

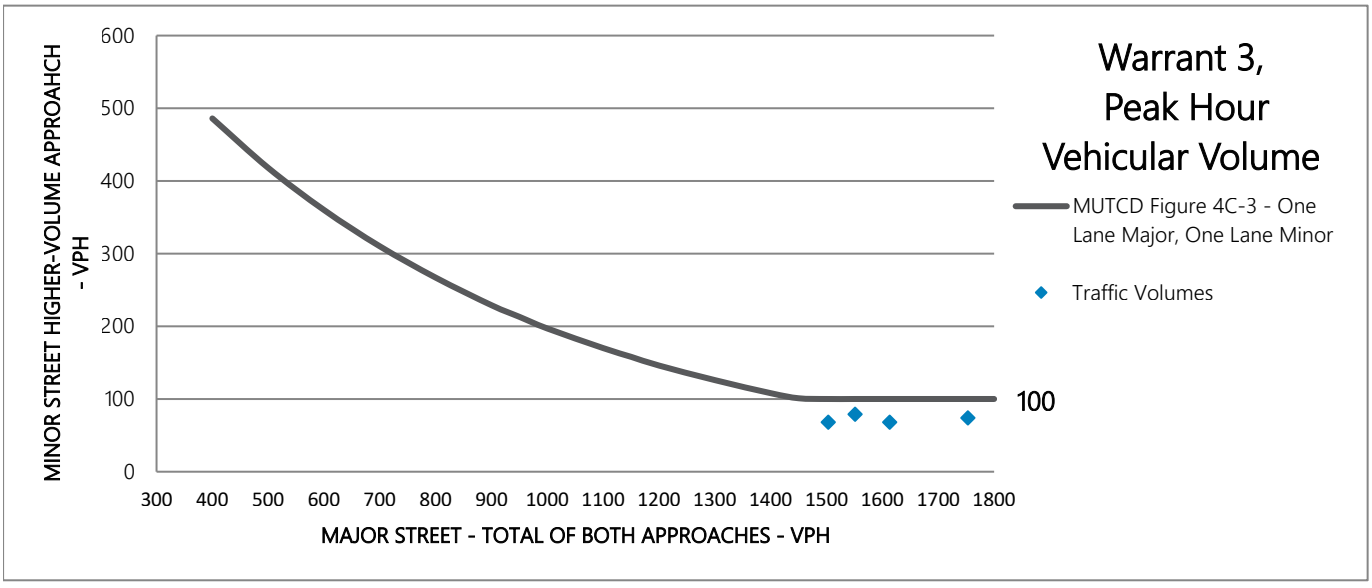
CONDITION A-3 - Total Approach Volume
Minimum Volume of Total Approaches: 800

CONDITION B - Plot of Minor Street Volume (high vol approach) vs. Major Street Volume (Both approaches)

ARE CONDITIONS A-2 AND A-3 OF SIGNAL WARRANT 3 MET? NO
Note: All 3 subsections of Condition A must be met to warrant signal.

IS CONDITION B OF SIGNAL WARRANT 3 MET? NO

Note: Signal Warrant 3 is met if either Condition A or Condition B is met.



SIGNAL WARRANTS VOLUME ESTIMATES

	EXISTING 2021 (SEASONALLY ADJUSTED)							GROWTH 2023 & PANDEMIC (+5%)						
Hour Beginning	Hourly Totals	Hourly Totals						Hourly Totals	Hourly Totals					
		EB	WB	NBL	NBLT	SBL	SBLT		EB	WB	NBL	NBLT	SBL	SBLT
5:00 AM	356	100	252	0	0	2	2	391	110	277			2	2
6:00 AM	637	244	379	0	0	7	7	700	268	416			8	8
7:00 AM	885	357	470	1	2	27	28	969	392	516			30	31
8:00 AM	799	315	437	4	8	16	19	865	346	480			18	21
9:00 AM	789	334	399	14	15	12	15	834	367	438			13	16
10:00 AM	877	379	466	4	7	9	12	950	416	511			10	13
11:00 AM	977	379	526	16	21	15	20	1031	416	577			16	22
12:00 PM	1048	445	546	11	11	17	18	1126	488	599			19	20
1:00 PM	1005	451	511	10	13	8	12	1078	495	561			9	13
2:00 PM	1199	504	617	6	12	27	33	1296	553	677			30	36
3:00 PM	1303	565	654	5	13	30	36	1411	620	718			33	40
4:00 PM	1361	626	648	15	24	22	26	1451	687	711			24	29
5:00 PM	1195	574	547	10	19	21	24	1279	630	600			23	26
6:00 PM	907	472	381	2	9	19	24	983	518	418			21	26
7:00 PM	583	296	231	9	14	14	19	615	325	254			15	21
8:00 PM	490	236	229	6	9	3	7	521	259	251			3	8

Hourly Totals	Cascade Center & Cascade Place				Molalla Retail		Colima 1&2		1000 W Main		500 E Main		710 W Main					
	Hourly Totals				Hourly Totals		Hourly Totals		Hourly Totals		Hourly Totals		Hourly Totals					
	EB	WB	NBLT	SBLT	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	NBL	NBLT	SBL	SBLT
5:00 AM	*12*	*9*	*8*	*0*	2	2	1	0	1	0	7	7	4	3	0	0	0	0
6:00 AM	12	9	8	0	4	4	3	1	4	1	11	11	5	5	0	0	1	1
7:00 AM	64	137	78	10	5	6	5	1	8	1	14	14	6	5	2	2	1	1
8:00 AM	35	39	28	4	6	6	4	1	7	2	15	15	12	11	3	4	2	3
9:00 AM	39	60	34	5	4	5	2	1	4	1	13	13	6	5	2	2	1	1
10:00 AM	44	87	43	6	5	5	2	1	3	2	12	12	5	5	2	2	1	1
11:00 AM	63	126	61	9	9	11	2	2	2	2	14	14	6	5	2	2	1	1
12:00 PM	73	151	71	11	14	13	2	2	3	2	16	16	7	6	2	2	1	1
1:00 PM	68	139	65	10	10	9	2	2	2	2	14	14	6	5	2	2	1	1
2:00 PM	71	138	66	11	8	7	2	3	2	2	14	14	6	6	2	2	1	1
3:00 PM	71	135	66	11	7	7	2	3	2	3	16	16	7	6	2	2	1	1
4:00 PM	80	194	72	11	7	7	3	5	3	5	15	15	11	10	2	2	1	1
5:00 PM	85	149	77	11	8	8	3	5	3	7	16	16	11	10	2	2	1	1
6:00 PM	73	128	66	10	9	9	3	4	3	7	13	12	5	5	2	2	1	1
7:00 PM	56	97	50	8	7	7	2	4	3	5	9	9	4	4	0	0	1	1
8:00 PM	43	73	38	5	6	6	2	3	2	4	8	8	4	4	0	0	0	0

Hourly Totals	BACKGROUND 2023							Dairy Queen				BUILDOUT 2023						
	Hourly Totals	Hourly Totals						Hourly Totals				Hourly Totals	Hourly Totals					
		EB	WB	NBL	NBLT	SBL	SBLT	EB	WB	NBLT	SBLT		EB	WB	NBL	NBLT	SBL	SBLT
5:00 AM	455	137	298	8	8	2	2	1	1	0	0	457	138	299	8	8	2	2
6:00 AM	788	307	447	8	8	9	9	3	4	0	0	795	310	451	8	8	9	9
7:00 AM	1417	494	680	80	80	41	42	6	6	0	0	1429	500	686	80	80	41	42
8:00 AM	1094	425	554	31	32	24	28	6	6	0	0	1106	431	560	31	32	24	28
9:00 AM	1071	435	523	36	36	19	22	6	6	0	0	1083	441	529	36	36	19	22
10:00 AM	1237	487	623	45	45	17	20	7	7	0	0	1251	494	630	45	45	17	20
11:00 AM	1433	512	737	63	63	26	32	14	16	0	0	1463	526	753	63	63	26	32
12:00 PM	1601	603	789	73	73	31	32	21	21	0	0	1643	624	810	73	73	31	32
1:00 PM	1507	597	732	67	67	20	24	16	14	0	0	1537	613	746	67	67	20	24
2:00 PM	1729	656	847	68	68	42	48	11	10	0	0	1750	667	857	68	68	42	48
3:00 PM	1846	725	888	68	68	45	52	10	10	0	0	1866	735	898	68	68	45	52
4:00 PM	1978	806	947	74	74	36	41	10	10	0	0	1998	816	957	74	74	36	41
5:00 PM	1782	756	795	79	79	35	38	12	12	0	0	1806	768	807	79	79	35	38
6:00 PM	1412	624	583	68	68	32	37	13	13	0	0	1438	637	596	68	68	32	37
7:00 PM	940	406	380	50	50	24	30	12	11	0	0	963	418	391	50	50	24	30
8:00 PM	770	324	349	38	38	8	13	10	10	0	0	790	334	359	38	38	8	13

City of Molalla

Community Development Department

315 Kennel Ave | PO Box 248 | Molalla, OR 97038

P: (503) 759-0205 E: communityplanner@cityofmolalla.com

Sewer Capacity Analysis Request Form

The City of Molalla is in the process of upgrading its wastewater treatment plant. Until the upgrade is operational (expected in 2024-2025) any proposal requiring DEQ approval of sewer plans under Oregon Administrative Rule 340-52 will be required to obtain a certificate of capacity from the City prior to submitting their land use or permit application.

Sewer Capacity Analysis Process Overview

Step 1. Submit this form and the base fee to Molalla Planning.

Upon submittal, City Staff will review the form for all required information and may contact you or your Engineer if additional information is required. Base fee = $150 application review/processing + $3,500 capacity analysis.

Step 2. Engineering Review Performed.

The City Engineer uses this form to analyze sewer system capacity.

Step 3. If the City Engineer Determines Sufficient Capacity **Does** Exist.

The City Engineer will complete a certificate of capacity for the applicant to submit to DEQ with their sewer system plans during Civil Review. The certificate will be retained by City Staff until your land use application is submitted. If the costs of review exceed the $3,500 analysis fee, the overage will be invoiced to the applicant and is due with Site Design Review submittal. GO – you may proceed to step 4.

Step 3. If the City Engineer Determines Sufficient Capacity **Does Not** Exist.

The City will refund the $3,500 analysis fee to the applicant and the proposal will not be approvable until after the upgrade to the wastewater treatment plant is operational. STOP – your proposal cannot be approved.

*Note – In some circumstances the applicant may be able to submit a modified proposal with less impact to the wastewater system.

Step 4. Completion.

The certificate will be attached to your land use application submittal package. Upon approval of your land use, city staff will relinquish the Certificate of Capacity to you for submission to DEQ.

Important Information for Applicants

A. Your certificate of capacity may become void if: 1) You have not applied for your land use/permitting approval (as applicable) within 90-days of the date the certificate of capacity is approved, or 2) Your land use/permitting application is denied, or 3) your land use or permitting approval expires.

B. Additional information may be sought by the City of Molalla as needed to complete the capacity analysis. It is the applicant's responsibility to provide any information necessary to complete the analysis.

Application Submissions Must Include:

1. One (1) Hard Copy of this Form
2. Application Fee – $3,650 Deposit

Process questions may be directed to the Planning Department:

Phone: (503) 759-0205

Email: communityplanner@cityofmolalla.com

Applicant Information

Name John S. Odom **Phone** 1.417.343.2602

Mailing Address P.O. Box 410394

City St Louis **State** MO **Zip** 63141 **Email** john@johnsodom.com

Owner Information

Name(s) MEHDI RAFATY **Phone**

Mailing Address 1117 N. SHERBOURNE DR.

City WEST HOLLYWOOD **State** CA **Zip** 90069 **Email** mehdi@tagfront.com

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Property Information

Site Address 1522 W MAIN STREET **Zoning District** **Overlay**

Tax Account Number(s) **T** **R** **S** **Tax Lot #** 52E07D 01800

Property Dimensions 253' x 205' x 255 x 287' **Property Acreage** 0.81 ACRES

Information for Capacity Analysis

Description of Proposed Use 1 Commercial Restaurant approx 2500 SF

Description of Existing Use Undeveloped

Water Meter Size Proposed 2" Water Meter

Water Meter Size Existing -

Number of Equivalent Dwelling Units Proposed 4.16

Number of Equivalent Dwelling Units Existing 0

By signing below, I affirm that the information provided in this application is true and accurate. I further acknowledge that failure to provide true and accurate information may void my application and any findings or decisions flowing from my application.

Applicant Signature **Date** 08/23/22

Owner Signature(s) **Date**

Exhibit D:

Public Works Comments

Community Development Department
315 Kennel Ave/PO Box 248
Molalla, OR 97038
Phone 503.759.0205
www.cityofmolalla.com

October 13, 2022

TO: Mac Corthell, Planning Director
Dan Zinder, Assistant Planner
Ronda Lee, Planning Specialist

FROM: Sam Miller, Sr Engineer Tech.

RE: 1522 W Main Street (SDR02-2022 & CUP04-2022) Dairy Queen

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.

CONDITIONS

1. Specific Requirements To This Site:
   A. Transportation – in accordance with MMC 17-3.6.020 Transportation Standards:

      1. The proposal development will require a traffic impact analysis update. The proposed development submitted Transportation Impact Analysis (TIA) analyzes Warrants 1 and 2. For projects where the OR-211/Leroy Ave. intersection is impacted; Applicant will be required to submit a TIA for all nine signal warrants for the intersection. Ensure all new projects that are approved or pending TIAs are included in the study including Cascade Place Apartments, 1000 W Main St., Colima Apartments (31514 S Hwy 213) Phase 1, Goodwill, and Molalla Center Market (501 E Main St.) are included.

      2. 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. Current right-of-way width varies from 60 to 64 feet and approximate pavement width is 45 feet. Arterial streets on state facilities (w/TL, w/buffered BL, w/o PK) require 68 feet of right-of-way and 52 feet of pavement. Applicant is required to obtain a State Highway Approach Road Permit; donate right of way to ODOT to implement OR 211 cross section in the city's TSP, and construct frontage improvements consistent with the TSP. If required during design review, additional striping and pavement tapers may be necessary to allow for a roadway transition outside of the project limits.

3. Right-of-way Dedications/Donations: On ODOT rights of way, applicant will be required to donate sufficient right-of-way along variable width improvements and construct frontage improvements 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.

4. Access to public streets shall be limited to the location identified on the application materials or as required by ODOT. All accesses shall be constructed in such a manner as to eliminate turning conflicts. The proposed width for access shall meet ODOT Standards.

5. 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.

6. 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)

7. Transportation SDC's – In accordance with MMC 13.14 this design review does increase the impacts to the public improvement facility and is therefore not exempt from transportation SDC charges. SDC's shall be calculated in accordance with the SDC methodology.

B. <u>Storm - in Accordance with MMC 17-3.6.050 Storm Drainage and Surface Water Management:</u>

1. Applicant proposes to collect and detain all stormwater onsite and discharge to ODOT facilities. Connection to ODOT facilities shall comply with all ODOT requirements. Onsite private storm system shall comply with plumbing code requirements. The detention and flow control facilities shall be reviewed, permitted, and inspected by Public Works. The onsite storm conveyance system shall be reviewed and inspected by Clackamas County Building under a plumbing permit. Connection to the storm improvements on OR-211 shall be reviewed and permitted by ODOT.

2. ODOT Streets: Storm improvements shall meet ODOT requirements.

3. Stormwater SDC's – In accordance with MMC 13.14 this design review does increase the impacts to the public improvement facility and is therefore not exempt from stormwater SDC charges. SDC's shall be calculated in accordance with the SDC methodology.

C. <u>Sanitary- in accordance with MMC 17-3.6.040 Sanitary Sewer Service Improvements:</u>

1. A 8-inch sanitary main exists on OR-211 (W Main Street) just west of the property. Sanitary main is approximately 9.5 feet deep near proposed development and will serve

this Lot and future development to the east by gravity system.

2. Sanitary main shall extend to the east on OR-211 (W. Main Street) and continue east to the limits of the project.

3. Applicant shall be required to submit Sanitary Sewer design plans along with City's Sewer Capacity Analysis form to the City prior to plan submission. City will submit Certificate of Capacity application to Oregon DEQ for review and approval per OAR 340-052-0015(3)(c). No Public Works permit can be issued without DEQ's approval of the extension of the sewer system.

4. Sanitary SDC's – In accordance with MMC 13.14 this design review does increase the impacts to the public improvement facility and is therefore not exempt from sanitary SDC charges. SDC's shall be calculated in accordance with the SDC methodology.

D. Water- in accordance with MMC 17-3.6.040 Water Service Improvements:

1. A 12-inch water main exists on Hwy 211 (W Main Street) and will serve this development. Extensions for fire protection may be required and all public water lines shall be within a public waterline easement on formats approved by the Public Works Department. In accordance with MMC 13.04 Water.

2. 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 easements.

3. Water SDC's – In accordance with MMC 13.14 this design review does increase the impacts to the public improvement facility and is therefore not exempt from water SDC charges. SDC's shall be calculated in accordance with the SDC methodology.

E. Parks:

1. Parks SDC's – In accordance with SMC 13.70.110 this commercial design review is exempt from parks SDC charges.

F. Franchise Utility Services:

1. All utilities to the project shall be served underground services. No overhead crossings of public right of way shall be approved by the city.

DESIGN REQUIREMENTS & POLICIES

1. General Requirements:
   A. For commercial and industrial 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 improvements shall be completed and accepted by the Public Works Department prior to issuance of any occupancy.

B. From the 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.

C. 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.

D. 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.

E. 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.

F. 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.

G. Plans submitted for review shall meet the requirements described in Section 1 of the Molalla Standard Specifications for Public Works Construction.

H. 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.

I. Sanitary sewer designs require review by Oregon Department of Environmental Quality. Applicant shall be responsible for submission of plans and Capacity Analysis form to the City and all associated fees, prior to plan submission.

J. 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.

K. All public improvement designs shall meet the requirements of the Molalla Standard Specifications for Public Works Construction as amended by the Public Works Division Manager.

L. 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.

M. 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.

N. 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 E:

Oregon Department of Transportation (ODOT) Comments

Oregon
Kate Brown, Governor

Department of Transportation
Region 1 Headquarters
123 NW Flanders Street
Portland, Oregon 97209
(503) 731.8200
FAX (503) 731.8259

February 28th, 2021 ODOT #11969

ODOT Response

Project Name: Dairy Queen	**Applicant:** John Odom
Jurisdiction: City of Molalla	**Jurisdiction Case #:** PRE01-2021
Site Address: 1522 West Main Street, Molalla, OR 97038	**State Highway:** OR 211

The site of this proposed land use action is adjacent to West Main St (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. **Please direct the applicant to the District Contact indicated below to determine permit requirements and obtain application information.**

COMMENTS/FINDINGS

The applicant proposes to construct a Dairy Queen drive through restaurant on the property located at 1522 West Main St in Molalla. The proposed site plan has an access to the highway. A State Highway Approach Road permit is required for access to OR 211 per OAR 731.51. To minimize conflicting vehicle turning movements onto the highway, the access should be lined up with the shopping center access on the north side of the highway.

ODOT recommends that cross over access easements be established with the property to the west and the site plan to be modified to facilitate a shared access when the property redevelops. Shared access will improve highway safety by reducing potential conflicts between vehicles and between vehicles and pedestrians and bicyclists at closely spaced driveways and will implement ODOT Access Management Program goals.

ODOT recommends that the City require sidewalk improvements and right of way donation consistent with the OR 211 cross section in the Transportation System Plan.

All alterations within the State highway right of way are subject to the ODOT Highway Design Manual (HDM) standards. Alterations along the State highway but outside of ODOT right-of-way may also be subject to ODOT review pending its potential impact to safe operation of the highway. If proposed alterations deviate from ODOT standards a Design Exception Request must be prepared by a licensed engineer for review by ODOT Technical Services. Preparation of a Design Exception request does not guarantee its ultimate approval. Until more detailed plans have been reviewed, ODOT cannot make a determination whether design elements will require a Design Exception.

Note: Design Exception Requests may take up to 3 months to process.

All ODOT permits and approvals must reach 100% plans before the District Contact will sign-off on a local jurisdiction Building Permit, or other necessary requirement prior to construction. The City should not issue the Occupancy Permit until all improvements in the State highway have been completed and accepted by ODOT.

ODOT RECOMMENDED LOCAL CONDITIONS OF APPROVAL

Frontage Improvements and Right of Way

☒ Curb, sidewalk, and bike lane shall be constructed as necessary to be consistent with local, ODOT and ADA standards.

☒ Right of way donated to ODOT as necessary to accommodate the planned cross section on OR 211 shall be provided. The deed must be to the State of Oregon, Oregon Department of Transportation. The ODOT District contact will assist in coordinating the transfer. ODOT should provide verification to the local jurisdiction that this requirement has been fulfilled. The property owner must be the signatory for the deed and will be responsible for a certified environmental assessment of the site prior to transfer of property to the Department.

Note: It may take up to **3 months** to transfer ownership of property to ODOT.

Access to the State Highway

☒ A State Highway Approach Road Permit from ODOT for access to the state highway for the proposed use is required. Truck turning templates shall be provided as needed to ensure vehicles can enter and exit the approach safely. Site access to the state highway is regulated by OAR 734.51. For application information go to http://www.oregon.gov/ODOT/HWY/ACCESSMGT/Pages/Application-Forms.aspx.

Note: It may take **2 to 3 months** to process a State Highway Approach Road Permit.

☒ The applicant shall record a cross-over access easement to the adjacent properties with state highway frontage with the County Assessor to facilitate future shared access. Shared access will improve highway safety by reducing potential conflicts between vehicles and between vehicles and pedestrians and bicyclists at closely spaced driveways and will implement ODOT Access Management Program goals.

Note: It may take **6 months to a year** to process a Grant of Access.

Permits and Agreements to Work in State Right of Way

☒ An ODOT Miscellaneous Permit must be obtained for all work in the highway right of way. When the total value of improvements within the ODOT right of way is estimated to be $100,000 or more, an agreement with ODOT is required to address the transfer of ownership of the improvement to ODOT. An Intergovernmental Agreement (IGA) is required for agreements involving local governments and a Cooperative Improvement Agreement (CIA) is required for private sector agreements. The agreement 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 up to **6 months** to process.

☒ Illumination within the ODOT right of way must be in accordance with AASHTO illumination standards 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.

☒ An ODOT Miscellaneous Permit is required for connection to state highway drainage facilities. Connection will only be considered if the site's drainage naturally enters ODOT right of way. The applicant must provide ODOT District with a preliminary drainage plan showing impacts to the highway right of way.

A drainage study prepared by an Oregon Registered Professional Engineer is usually required by ODOT if:

1. Total peak runoff entering the highway right of way is greater than 1.77 cubic feet per second; or
2. The improvements create an increase of the impervious surface area greater than 10,758 square feet.

Please send a copy of the Land Use Notice to:

ODOT Region 1 Planning
Development Review
123 NW Flanders St
Portland, OR 97209

ODOT_R1_DevRev@odot.state.or.us

Development Review Planner: Marah Danielson	503.731.8258, marah.b.danielson@odot.state.or.us
Traffic Contact: Avi Tayar, P.E.	503.731.8221 Abraham.tayar@odot.state.or.us
District Contact: Loretta Kieffer	503.667.7441 Loretta.L.KIEFFER@odot.state.or.us

Exhibit F:

Molalla Fire District Comments

Molalla Rural Fire Protection District #73

P.O. Box 655 • Molalla, OR 97038
320 N Molalla Ave. Molalla, OR 97038

Telephone: 503-829-2200
Fax: 503-829-5794

Comments for DQ for site plan submitted 10-17-2022

Below are preliminary comments for 1522 W Main St. Molalla Fire reserves the right to comment on future submitted plans or changes in the plans that have already been submitted.

1) As a general rule, if this is less than 12,000 square feet, sprinklers should not be required. Hydrants will need to be extended on to the property unless the applicant can prove compliance with hydrant spacing on the South side of HWY 211.
2) Double check turning radius for apparatus. 28/48 in general. However, for narrowed access roads radius is 44/56
3) I will eventually need to see details of use grease storage as well as cut sheets for the type 1 hood system.
4) Please show Knox box location. The Knox box will need to be mounted mor more than 80 inches from ground plane +/- 2 inches.
5) How much CO2? If 100 pounds or more, and stored indoors, see sections 5307 to 5307.3.2 of the Oregon Fire Code for ventilation/gas detection requirements.
   Also provide filling location(s).

The above comments are based solely on the site plan provided. Molalla Fire reserves the right to review and comment on the plans that are to be submitted for full review or revisions to plans that have already been reviewed.

Review of submitted plans is not an approval of omissions, oversights or authorization of non-compliance with any regulations of this agency or of the regulations of any other agency. Comments on these plans should not be considered a precedent setting, as we will review each project on a case-by-case basis.

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

Staff Report: Mural Code

Planning Commission Discussion

Subject: Mural Code Discussion

Staff Recommendation: Review and Provide Comment

Date of Meeting to Be Presented: November 2, 2022

Background:

7/7/21 PC discussed mural code and why one might be advisable. PC asked staff to gather more information on mural processes in the general area and return to PC at a later date.

8/4/21 PC discussed Mural Codes from other cities, potential prohibitions, and structure of code.

9/2021 – 8/2022 Beautification and Culture Committee discussed and reviewed several mural codes, then worked together over a period of 3 meetings to develop and submit a proposed mural code for further review by staff and planning commission.

11/2/22 PC review proposed mural code and identify any potential areas of concern for the PC.

Attachments:

1 – Sample Mural Ordinance from B&C Committee with Staff Comments Included

1 Chapter Art Murals

1.1 Purpose

The purpose of this title, and the policy of the City of Molalla, is to permit and encourage art murals under certain terms and conditions. Art murals comprise a unique medium of expression that serves the public interest. Art murals have purposes distinct from signs and confer different benefits. Such purposes and benefits include: improved aesthetics; avenues for original artistic expression; public access to original works of art; community participation in the creation of original works of art; community building through the presence of, and identification with, original works of art; and a reduction in the incidence of graffiti and other crime. Art murals can increase community identity and foster a sense of place and enclosure if they are located at heights and scales visible to pedestrians and are retained for a period specified section 1.4

1.2 Definitions

Words used in this title have their normal dictionary meaning unless they are listed in this chapter or unless this title specifically refers to another title. Words listed in this chapter have the specific meaning stated or referenced unless the context clearly indicates another meaning.

"Applicant" means the party that is primarily responsible for the design and installation of an art mural.

"Original art mural" means a hand-painted image on the exterior wall of a building that may comprise up to 40% of the surface area of a building wall.

"Public art mural" means a hand-painted, hand-tiled, or digitally printed image on the exterior wall of a building where the wall or surface is either on City-owned property or has a public art easement and is viewable from another property or right-of-way.

"Mural easement" means an easement granted to the City of Molalla by a property owner for purposes of installing and maintaining a public art mural on the surface of a structure or building.

"Compensation" means the exchange of something of value. It includes, without limitation, money, securities, real property interest, barter of goods or services, promise of future payment, or forbearance of debt. "Compensation" does not include goodwill, or an exchange of value, that a building owner (or leaseholder with a right to possession of the wall upon which the mural is to be placed) provides to an artist, muralist, or other entity, where the compensation is only for the creation and/or maintenance of the mural on behalf of the building owner or leaseholder, and where the building owner or leaseholder fully controls the content of the art mural.

"Owner" means the entity(ies) that own(s) the real property that contains the building or structure upon which a public art mural is installed. In the case where a public art mural

Commented [MC1]: This code seems to consider Public and Original murals separately, but only has a regulatory section for public murals - 1.6.

Is there a difference between original and public art murals, or is an original art mural one class of public murals?

is installed in the right-of-way, the owner means the entity(ies) with jurisdiction over that right-of-way.

"Right-of-way" means an area that allows for the passage of people or goods. Right-of- way includes passageways such as freeways, pedestrian connections, alleys, and all streets. A right-of-way may be dedicated or deeded to the public for public use and under the control of a public agency, or it may be privately owned.

1.3 Prohibition of Compensation

No compensation will be given or received for the display of art murals or for the right to place the mural on another's property. The applicant shall certify in the permit application that no compensation will be given or received for the display of the mural or the right to place the mural on the property.

1.4 Mural Maintenance

Public art murals shall be maintained by the property owner for 5 years and per the terms outlined in the public art easement.

1.5 Violations and Enforcement

It is unlawful to violate any provision of this title; any administrative rules adopted by the City of Molalla pursuant to this title; or any representations made, or conditions or criteria agreed to, in an art mural permit application. This applies to any applicant for an art mural permit, the proprietor of a use or development on which a permitted art mural is located, or the owner of the land on which the permitted art mural is located.

1.5.1 Notice of Violations

The City Manager, or designee, must give written notice of any violation to the property owner. Failure of the property owner to receive the notice of the violation does not invalidate any enforcement actions taken by the City.

1.5.2 Responsibility for Enforcement

The regulations of this title, and the conditions of art mural permit approvals, shall be enforced by the City Manager, or designee.

1.6 Public Art Murals

1.6.1 Allowed Locations

Public art murals are only allowed on buildings or structures as described below:

a. Downtown Zones

Public art murals are allowed in areas zoned Downtown Mixed Use or Open Space.

b. Commercial Zones

Public art murals are allowed in areas zoned General Commercial or Community Shopping Commercial.

c. Industrial Zones

Public art murals are allowed in areas zoned Manufacturing or Business Industrial.

d. Community Service Uses

Public art murals are allowed on uses that have received approval as a community service use.

1.6.2 Prohibited Locations

Murals which would result in a property becoming out of compliance with the provisions of Title 33, Planning and Zoning, or land use conditions of approval for the development on which the mural is to be located.

Commented [MC2]: Staff will update reference sections to ensure they match the City's development code.

1.6.3 Public Ownership

The mural must be on the surface of a building or structure that is on property owned by the City of Molalla or for the purpose of maintenance or removal.

Commented [MC3]: So the city is only allowing murals on public buildings and those that grant mural easements?

1.6.4 Duration and Alteration

The public art mural shall remain in place, without alteration, for a minimum period as specified in section 1.4. "Alterations" includes any change to a permitted mural, including, but not limited to, any change to the image(s), materials, colors, or size of the permitted mural. "Alteration" does not include naturally occurring changes to the mural caused by exposure to the elements or the passage of time. Minor changes to the permitted mural that result from the maintenance or repair of the mural shall not constitute "alteration." Such minor changes may include slight and unintended deviations from the original image, colors, or materials that occur when the permitted mural is repaired due to the passage of time or as a result of vandalism.

Public art murals may be removed within period specified in section 1.4 of the date of registration, per the terms of the public art easement and under any of the following circumstances:

a. The property on which the mural is located is sold.

b. The structure or property is substantially remodeled or altered in a way that precludes continuance of the mural.

c. The property undergoes a change of use authorized by the Planning Department.

1.6.5 Physical Standards

a. An original art mural may comprise up to 40% of the surface area of a building wall. The area allowed for an original art mural is considered in conjunction with the size regulations for other wall signs, as allowed by the sign districts in Chapter 14.16, so that the combination of the wall sign and original art mural shall not exceed 40% of the wall face.

Commented [MC4]: Is an original art mural different from a public art mural?

Is so, this conflates the two because its in 1.6 public art murals.

If not, why have the two definitions?

b. An original art mural may wrap around the corner of a building, but the area of the mural on each wall shall be calculated separately.

c. The area of an original art mural includes the area within a rectangular-shaped perimeter enclosing the limits of any lettering, writing, representation, emblem, symbol, figure, drawing, character, or large-scale pattern. If the mural consists of more than one section without a painted background, each section area will be calculated and all areas will be totaled. If the mural consists of more than one section with a painted image background, the area is calculated within a perimeter enclosing the entire limits of the mural. To simplify area calculation, the smallest dimension of any rectangular-shaped perimeter enclosing a section of the mural shall measure 2 feet.

d. No compensation may be given or received for placement of an original art mural. Prior to issuance of a sign permit for an original art mural, the building owner shall provide an affidavit that no compensation was or will be received for placement of the original art mural.

e. Where compensation is involved, nothing in the mural code shall prohibit an original art mural from being permitted as a wall sign, as allowed per the sign district in which the property is located.

1.6.5.1 Dimensions

A public art mural may wrap around a wall edge or corner and/or may extend above the wall height.

1.6.5.2 Materials

Public art mural materials may include the following: paint, painted wood or plastic surfaces affixed to a building or structure, mosaics of ceramic tile and/or glass, vinyl or pellon, or similar materials. The City Manager, or designee, may consider other materials in their review of a proposed public art mural.

1.6.5.3 Placement

No new public art mural shall obstruct the functioning of any building opening, including, but not limited to, windows, doors, and vents.

1.6.6 Lighting

No new or existing public art mural may consist of, or contain, electrical or mechanical components or changing images; i.e., moving structural elements, flashing or sequential lights, lighting elements, or other automated methods that result in movement, the appearance of movement, or change of mural image or message. Static illumination, which is turned off and back on not more than once every 24 hours, is permitted.

Lighting may be required for safety or crime deterrent purposes with consideration to impacts to surrounding on properties, as determined by the City Manager, or.

1.6.7 Structural Permit

Public art murals that are affixed to a building, or contain elements that extend above or around a wall, shall require structural permit approval as deemed necessary by the City Manager, or designee.

1.7 Application

An applicant shall initiate a proposal to place a public art mural by filing an application with the City. The application shall be made on forms provided by the City, include the application fee for review of a public art mural, and include any accompanying materials deemed necessary by the City for review of the public art mural proposal (such as proposed designs, site photos, and building or structure elevation drawings).

Any fees shall be in accordance with the City's fee schedule.

1.7.1 Administrative Review

a. Upon submission of a complete application for a public art mural, the City Manager, or designee, shall review the proposal for conformance with the standards in section 1.6

b. Upon finding that the proposed public art mural conforms with the standards in section 1.6 the City Manager, or designee, shall inform the applicant in writing that the proposed public art mural meets the standards in section 1.6**Error! Reference source not found.**. The City Manager, or designee, shall then provide the applicant with the materials necessary to complete the application requirements.

c. Prior to the City Manager, or designee, review, the applicant shall provide documentation that they comply with the application requirements.

1.7.1.1 Public Notice

A public notice is intended as a courtesy and to provide the community a chance to review the application proposal.

a. The City Manager, or designee, shall post a notice to the community (e.g. newspaper, online websites).

b. The notice shall be posted at least 14 calendar days prior to the review of the proposed mural.

c. The notice shall include instructions for submitting comments; the name and contact information for the applicant and owner; contact information for the City Manager, or designee.

1.7.1.2 Posted Notice

A notice shall be posted at the site of the proposed public art mural and shall conform to the following standards.

a. The notice shall be posted at least 14 calendar days prior to the review the proposed mural. The City Manager, or designee, shall provide the applicant with materials to be posted. The applicant shall be responsible for ensuring that the notice is posted and remains posted. If the notice is damaged or removed, the applicant shall replace the notice as soon as practicable.

b. The notice shall be durable and waterproof.

c. The notice shall be clearly visible from the public right-of-way and be at least 11 x 17 in. The City Manager, or designee, may require more than one sign to be posted, depending on specific site characteristics.

d. The notice shall include the name and contact information for the applicant and owner; contact information for the City Manager, or designee; and a legibly-sized color representation of the proposed public art mural.

1.7.2 Application Review Process

1.7.2.1 Authority

The City Manager, or designee, shall have the authority to determine if an application for an original art mural meets all of the applicable requirements and to issue a final approval, approval with conditions, or denial of the original art mural application.

The City Manager, or designee, and shall meet within 30 business days of the submitted mural application being deemed complete.

1.7.2.2 Review Criteria

a. Scale: Appropriateness of scale to the wall upon which the mural will be painted/attached and to the surrounding physical features.

b. Context: Architectural, geographical, sociocultural, and/or historical relevance to the site.

c. Community Support: General support/advocacy from the building owner/user, surrounding neighborhood, adjacent businesses, and/or arts community.

d. Feasibility: Demonstrated ability to complete the proposed mural on time and within budget. e.

Media: Appropriate media proposed to ensure the mural's longevity and durability.

f. Structural and Surface Stability: Commitment to repair the mural surface as necessary before painting and a plan for mitigating graffiti through design and/or graffiti coating.

g. Signed Easement Form from Building Owner: Commitment to keep the mural in place as approved for a minimum period as specified in section 1.4 and to maintain the mural during that time.

h. Public Accessibility, Safety and Lighting: Compliance with City codes for safety, accessibility, and lighting.

1.7.2.3 Notice of Decision

The City Manager, or designee, shall issue the notice of decision in writing. The decision shall include the following information:

a. A brief summary of the proposal.

b. A description of the subject property reasonably sufficient to inform the reader of its location, including street address, if available, map and tax lot number, and zoning designation.

c. A statement of the facts that the review authority relied upon to determine whether the application satisfied, or failed to satisfy, each applicable approval criterion.

d. The decision to approve or deny the application and, if approved, any conditions of approval necessary to ensure compliance with the applicable criteria. If the application is denied, written reasons for the denial will be provide to the applicant.

e. The date upon which the decision rendered shall become final, unless appealed. The decision shall state the date and time by which an appeal must be filed. The statement shall reference the requirements for filing an appeal of the decision.

f. A statement that the complete public art mural application file is available for review, including findings, conclusions, and any conditions of approval. The decision shall list when and where the case file is available and the name and telephone number of the City representative to contact about reviewing the case file.

1.7.2.4 Appeals

A decision on the approval, approval with conditions, or denial of the public art mural application may be appealed by filing a written request to the City Manager within 14 calendar days of the date on the notice of decision. If the 15th day falls upon a weekend or legal holiday, the end of the appeal period shall be extended to the end of the next business day.