HEARING EXAMINER MEETING
THURSDAY, DECEMBER 5, 2024 – 6:00 PM
501 DELTA AVE, MARYSVILLE, WA 98270

PA24-006 Crossroads Chevron

AGENDA

The public hearing is a *hybrid* meeting which you are welcome to attend in-person or via Zoom. Anyone wishing to provide verbal public comment must pre-register by contacting the Project Manager listed in the item by *4PM the day prior to the meeting*. Those providing verbal public comment will need to provide their name, address, e-mail and phone number.

Join Zoom Meeting:
https://us06web.zoom.us/j/82587021221?pwd=JdUykwPXTX6kC0kMCDBvjuAJ1qikZs.1
Meeting ID: 825 8702 1221
Passcode: 533039
Phone: 253.215.8782

Call to Order

Public Hearings *PA24-006 Crossroads Chevron*

PA24-006
E001 - Land Use Application - PA24-006.pdf
E033 - Site Plan - PA24-006.pdf
E002 - Land Use Application - PA24-006.pdf
E003 - Project Narrative - PA24-006.pdf
E004 - Title Report-Legal Description - PA24-006.pdf
E005 - Environmental Checklist - PA24-006.pdf
E006 - Critical Areas Report - PA24-006.pdf
E007 - Traffic Impact Analysis - PA24-006.pdf
E008 - Geotechnical Report - PA24-006.pdf
E009 - Drainage Report - PA24-006.pdf
E010 - Landscape Plan - PA24-006.pdf
E011 - Site Plan - PA24-006.pdf
E012 - Preliminary Civil Plans - PA24-006.pdf
E013 - Letter of Completeness - PA24-006.pdf
E014 - Notice of Application - PA24-006.pdf
E015 - Request for Review - PA24-006.pdf

E016 - Affidavit of Publication - PA24-006.pdf
E017 - Technical Review Comments - PA24-006.pdf
E018 - Response Letter - PA24-006.pdf
E019 - Environmental Checklist - PA24-006.pdf
E020 - Response Letter - PA24-006.pdf
E021 - Traffic Impact Analysis - PA24-006.pdf
E022 - Variance Request - PA24-006.pdf
E023 - Site Plan - PA24-006.pdf
E024 - Building Elevations - PA24-006.pdf
E025 - Technical Review Comments 2 - PA24-006.pdf
E026 - Response Letter - PA24-006.pdf
E027 - Site Plan - PA24-006.pdf
E028 - Landscape Plan - PA24-006.pdf
E029 - Drainage Report - PA24-006.pdf
E030 - Technical Review Comments 3 - PA24-006.pdf
E031 - Variance Approval - PA24-006.pdf
E032 - Response Letter - PA24-006.pdf

PA24-006 - Crossroads Chevron (2)
E033 - Site Plan - PA24-006.pdf
E034 - Drainage Report - PA24-006.pdf
E035 - Site Plan - PA24-006.pdf
E036 - Snohomish County Traffic Offer - PA24-006.pdf
E037 - Concurrency Recommendation - PA24-006.pdf
E038 - Concurrency Acceptance - PA24-006.pdf
E039 - SEPA MDNS - PA24-006.pdf
E040 - Notice of SEPA MDNS - PA24-006.pdf
E041 - Response Letter - PA24-006.pdf
E042 - Notice of Public Hearing - PA24-006.pdf
E043 - Technical Review Comments 4 - PA24-006.pdf
E044 - Correspondence - PA24-006.pdf
E045 - Affidavit of Publication - PA24-006.pdf
E046 - Site Plan - PA24-006.pdf
E047 - Preliminary Site Plan - PA24-006.pdf
E048 - Affidavit of Publication - PA24-006.pdf
E049 - Correspondence - PA24-006.pdf
E050 - Staff Recommendation - PA24-006.pdf

Special Accommodations: **The City of Marysville strives to provide accessible meetings for people with disabilities. Please contact the City Clerk's office at (360) 363-8000 or 1-800-833-6384 (Voice Relay), 1-800-833-6388 (TDD Relay) two business days prior to the meeting date if any special accommodations are needed for this meeting.**

Agenda Bill

HEARING EXAMINER AGENDA ITEM REPORT

DATE:	December 5, 2024
SUBMITTED BY:	Marisa Nishmura, Community Development
ITEM TYPE:	Discussion Item
AGENDA SECTION:	**Public Hearings**
SUBJECT:	PA24-006
SUGGESTED ACTION:	
SUMMARY:	

ATTACHMENTS:

E001 - Land Use Application - PA24-006.pdf
E033 - Site Plan - PA24-006.pdf
E002 - Land Use Application - PA24-006.pdf
E003 - Project Narrative - PA24-006.pdf
E004 - Title Report-Legal Description - PA24-006.pdf
E005 - Environmental Checklist - PA24-006.pdf
E006 - Critical Areas Report - PA24-006.pdf
E007 - Traffic Impact Analysis - PA24-006.pdf
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E018 - Response Letter - PA24-006.pdf
E019 - Environmental Checklist - PA24-006.pdf
E020 - Response Letter - PA24-006.pdf
E021 - Traffic Impact Analysis - PA24-006.pdf
E022 - Variance Request - PA24-006.pdf
E023 - Site Plan - PA24-006.pdf
E024 - Building Elevations - PA24-006.pdf

E025 - Technical Review Comments 2 - PA24-006.pdf
E026 - Response Letter - PA24-006.pdf
E027 - Site Plan - PA24-006.pdf
E028 - Landscape Plan - PA24-006.pdf
E029 - Drainage Report - PA24-006.pdf
E030 - Technical Review Comments 3 - PA24-006.pdf
E031 - Variance Approval - PA24-006.pdf
E032 - Response Letter - PA24-006.pdf

EST. 1891
MARYSVILLE
COMMUNITY DEVELOPMENT

MASTER LAND USE PERMIT APPLICATION

Community Development Department ◆ 501 Delta Avenue ◆ Marysville, WA 98270
Office Hours: Mon - Fri 8:00 AM - 4:30 PM ◆ Phone: (360) 363-8000

SITE INFORMATION

SITE ADDRESS: 1008 67th Ave NE, Marysville, 98270	**APN(S):** 30051500101800
PROPOSED PROJECT NAME: Marysville Service Station	**SECTION, TOWNSHIP, & RANGE:** SE ¼ of the NE ¼ of Section 15, T.30N., R.5E., W.M.
LAND USE (ZONING) DESIGNATION: NB	**SHORELINE ENVIRONMENT:** N/A
WATER SUPPLY **Current:** Select **Proposed:** Marysville	**SEWER SUPPLY** **Current:** Select **Proposed:** Marysville

PRESENT USE OF PROPERTY:
Vacant unimproved

PRE-APPLICATION CONFERENCE HELD? ☒ **Yes, the City file # is** 23004 ☐ **No**

	PROPERTY OWNER	APPLICANT	PROJECT CONTACT
NAME	SHRI Ganesh LLC	Meydenbauer Group	John Hansen
ADDRESS	20924 55th Ave W	12025 Willows Road	12025 Willows Road
CITY, STATE, ZIP	Lynnwood, WA 98036-7683	Redmond, WA 98052	Redmond, WA 98052
PHONE	425-791-0344	425-609-4440	425-443-6280
E-MAIL	goutam.j@hotmail.com	manager@meydenbauergroup.com	john@meydenbauergroup.com

PROJECT INFORMATION

TYPE OF APPLICATION (Check all that apply):
***Permit type has supplemental checklist that must be submitted with Master Land Use Permit Application*

- ☐ Annexation Request
- ☐ Binding Site Plan (Preliminary)**
- ☐ Boundary Line Adjustment**
- ☐ Comprehensive Plan Amendment**
- ☐ Conditional Use Permit**
- ☐ Critical Area Review
- ☐ Final Plat Review**
  - ☐ BSP
  - ☐ Short Plat
  - ☐ Major Subdivision
- ☐ Grading Permit
- ☐ Major Subdivision (Preliminary)**
- ☐ Modification**
  - ☐ Minor
  - ☐ Major
- ☐ Planned Residential Dev. (PRD)**
- ☒ Site Plan Review**
  - ☒ Commercial
  - ☐ Multifamily
- ☐ Short Plat (Preliminary)
- ☒ SEPA Environmental Review**
- ☐ Rezone
- ☐ Shoreline**
  - ☐ SDP Exemption
  - ☐ Substantial Dev. Permit
  - ☐ Conditional Use Permit
  - ☐ Variance
- ☐ Variance**
- ☐ Wireless Communication Facility**
- ☐ Other

LIST ANY OTHER PERMITS NEEDED (State/Federal):

DETAILED PROJECT DESCRIPTION:

Build a new 4,000 sf convenience store and Chevron branded service station with canopy and six (6) pumps on 45,738 sf site.

I certify that I am the owner or owners authorized agent If acting as an authorized agent, I further certify that I am authorized to act as the Owners agent regarding the property at the above-referenced address for the purpose of filing applications for decision, permits, or review under the Unified Development Code and other applicable Marysville Municipal Codes and I have full power and authority to perform on behalf of the Owner all acts required to enable the City to process and review such applications.

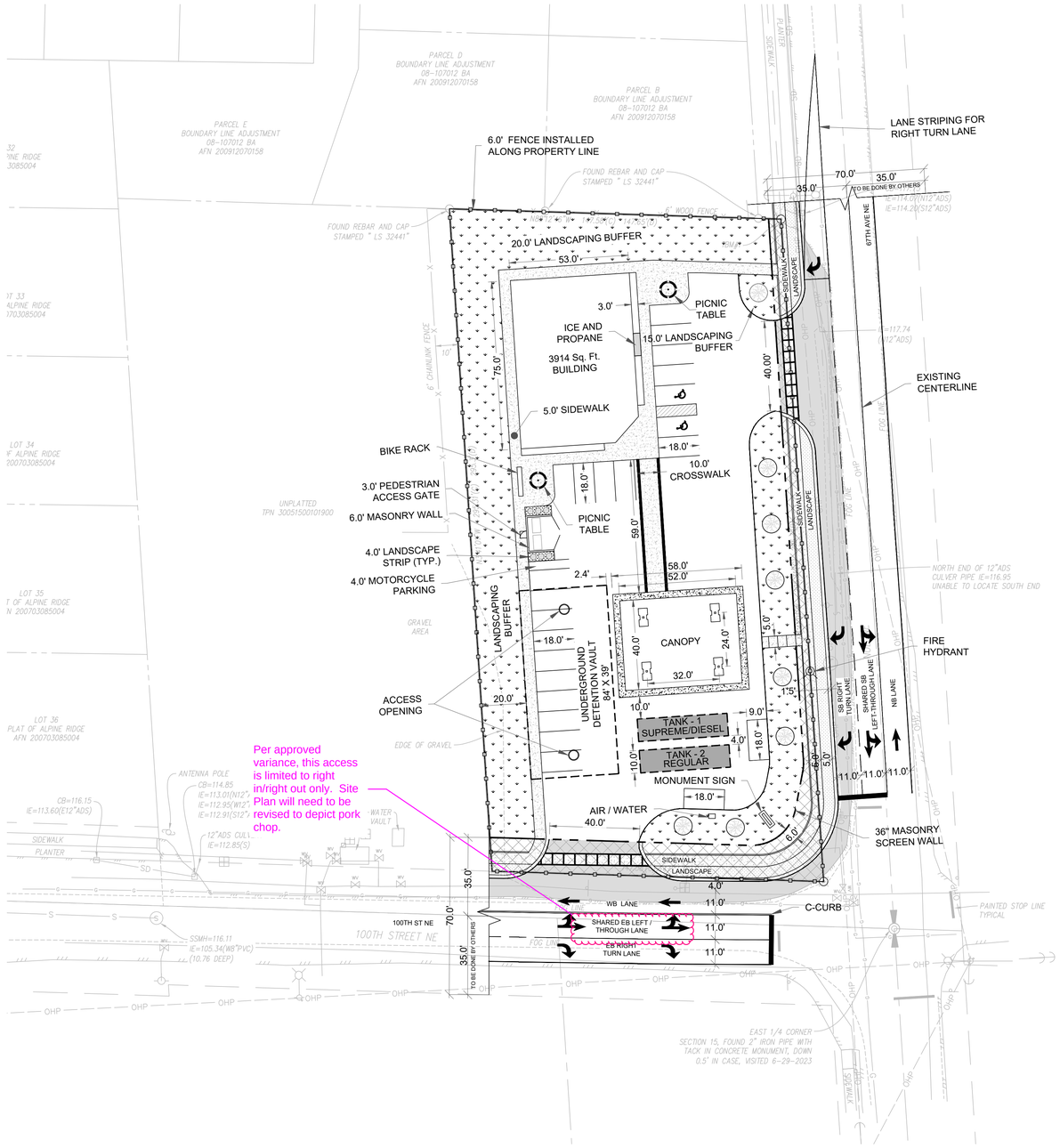
I certify that the information on this application is true and correct and that the applicable requirements of the City of Marysville will be met. I grant permission for City employees, agents of the City and/or other agency officials to enter the subject property, if necessary, for the purpose of site inspection.

John Hansen
Digitally signed by John Hansen
Date: 2024.02.26 15:04:54 -08'00'

Owner/Owner's Authorized Agent **Date**

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

- BIKE LANE EDGE
- CURB
- LANSCAPE
- SIDEWALK
- ASPHALT WIDENING
- PROPOSED ROW
- UNDERGROUND DETENTION VAULT / FUEL TANK
- PLOT BOUNDARY

AREA CALCULATIONS

1. TOTAL AREA = 39434.00 SF
2. IMPERVIOUS AREA= 27324.00 SF
3. PERVIOUS AREA = 12110.00 SF

N

1"=30'-0" Scale: 30 0 30 60 Feet

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

NO.	DATE	DESCRIPTION	BY

REVISION

NOT FOR CONSTRUCTION

SITE PLAN

GEOMETRICS ENGINEERING, P.S. INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO.	DSN. BY:
PA-24-006	TI
DATE:	
10/14/2024	
SCALE:	
1" = 30'	
DRAWING NO.	
05 OF 20	

COPYRIGHT © 2022. THIS DRAWING IS AN INSTRUMENT OF SERVICE AND PROPERTY OF MEYDENBAUER GROUP, INC. ANY USE OR REPRODUCTION WITHOUT THE EXPRESSED WRITTEN CONSENT OF THIS CORPORATION IS PROHIBITED. ALL RIGHTS SERVED.

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

February 26, 2024

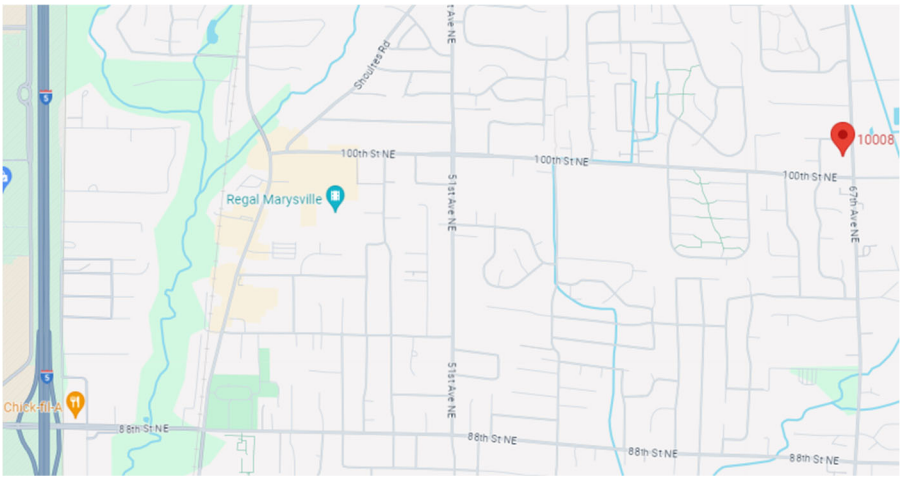
Critical Areas Application - Crossroad Chevron

NA. There are no critical areas on site.

February 26, 2024

RE: CROSSROADS CHEVRON SERVICE STATION PROJECT NARRATIVE

Figure 1: Vicinity Map



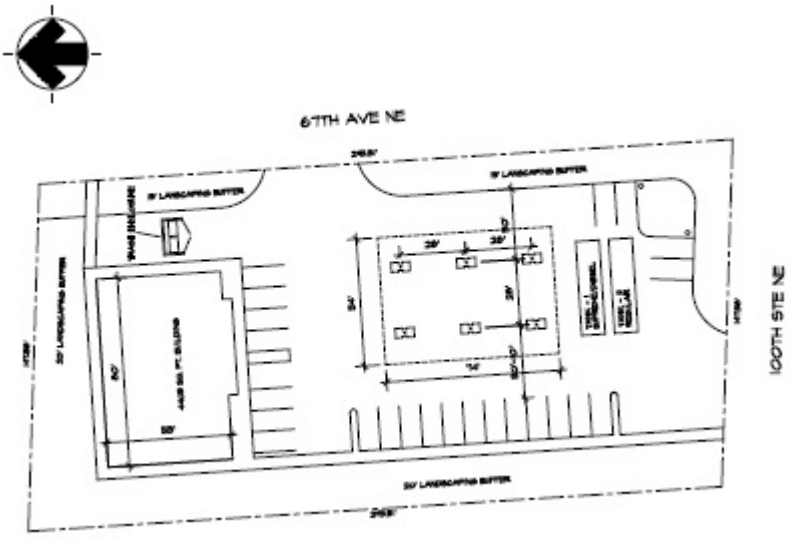
Project address: 10008 67th Ave NE, Marysville 98270 APN: 30051500101800

Owner: SHRI Ganesh LLC (Gautam Jain)

Proposing to build a new 4,000 sf convenience store and Chevron branded service station with canopy and six (6) pumps on the 45,738 sf site.

Figure 2: Photo of Site

Figure 3: Site Plan



Expect construction to be continuous and last about 12 months from issuance of the building permit.

End
JPH

SUBDIVISION

Issued By:

CHICAGO TITLE INSURANCE COMPANY

Guarantee/Certificate Number:

500148937

CHICAGO TITLE INSURANCE COMPANY

a corporation, herein called the Company

GUARANTEES

TBD and TBD

herein called the Assured, against actual loss not exceeding the liability amount stated in Schedule A which the Assured shall sustain by reason of any incorrectness in the assurances set forth in Schedule A.

LIABILITY EXCLUSIONS AND LIMITATIONS

1. No guarantee is given nor liability assumed with respect to the identity of any party named or referred to in Schedule A or with respect to the validity, legal effect or priority of any matter shown therein.
2. The Company's liability hereunder shall be limited to the amount of actual loss sustained by the Assured because of reliance upon the assurance herein set forth, but in no event shall the Company's liability exceed the liability amount set forth in Schedule A.

Please note carefully the liability exclusions and limitations and the specific assurances afforded by this guarantee. If you wish additional liability, or assurances other than as contained herein, please contact the Company for further information as to the availability and cost.

Chicago Title Insurance Company

By:

Michael J. Nolan, President

Chicago Title Company of Washington
3002 Colby Ave., Suite 200
Everett, WA 98201

Countersigned By:

Brent Aune
Authorized Officer or Agent

Attest:

Marjorie Nemzura, Secretary

ISSUING OFFICE:
Title Officer: Builder Unit Chicago Title Company of Washington 3002 Colby Ave., Suite 200 Everett, WA 98201 Fax: (866)827-8844 Main Phone: (425)259-8223 Email: evebuilder@ctt.com

SCHEDULE A

Liability	Premium	Tax
$1,000.00	$350.00	$34.65

Effective Date: January 26, 2024 at 08:00 AM

The assurances referred to on the face page are:

That, according to those public records which, under the recording laws, impart constructive notice of matter relative to the following described property:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

Title to said real property is vested in:

SHRI Ganesh LLC, a Washington Limited Liability Company

subject to the matters shown below under Exceptions, which Exceptions are not necessarily shown in the order of their priority.

END OF SCHEDULE A

EXHIBIT "A"

Legal Description

For APN/Parcel ID(s): 300515-001-018-00

Beginning at a point 20 feet North and 30 feet West of the Southeast corner of the Southeast quarter of the Northeast quarter, Section 15, Township 30 North, Range 5 East of the Willamette Meridian;
thence West 147.65 feet;
thence North 295.3 feet;
thence East 147.65 feet;
thence South 295.3 feet to the Point of Beginning.

Except that portion, if any, lying within public roads

Situate in the County of Snohomish, State of Washington.

SCHEDULE B

GENERAL EXCEPTIONS

A. Rights or claims of parties in possession, or claiming possession, not shown by the Public Records.

B. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land.

C. Easements, prescriptive rights, rights-of-way, liens or encumbrances, or claims thereof, not shown by the Public Records.

D. Any lien, or right to a lien, for contributions to employee benefit funds, or for state workers' compensation, or for services, labor, or material heretofore or hereafter furnished, all as imposed by law, and not shown by the Public Records.

E. Taxes or special assessments which are not yet payable or which are not shown as existing liens by the Public Records.

F. Any lien for service, installation, connection, maintenance, tap, capacity, or construction or similar charges for sewer, water, electricity, natural gas or other utilities, or for garbage collection and disposal not shown by the Public Records.

G. Unpatented mining claims, and all rights relating thereto.

H. Reservations and exceptions in United States Patents or in Acts authorizing the issuance thereof.

I. Indian tribal codes or regulations, Indian treaty or aboriginal rights, including easements or equitable servitudes.

J. Water rights, claims or title to water.

SCHEDULE B
(continued)

SPECIAL EXCEPTIONS

1. No search has been made as to property taxes and assessments. Property taxes and assessments will be searched upon request.

2. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of Marysville
Purpose:	Ingress and egress
Recording Date:	March 8, 1963
Recording No.:	1596956
Affects:	West 10 feet of Said premises

3. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, encroachments, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Survey:

   Recording No: 202302015010

4. Any unrecorded leaseholds, right of vendors and holders of security interests on personal property installed upon the Land and rights of tenants to remove trade fixtures at the expiration of the terms.

5. The Company's liability for this report is limited to $1,000.00. This report is based on the company's property records, and no liability is assumed for items misindexed or not indexed in the public records, or for matters which would be disclosed by an inquiry of the parties in possession or by an accurate survey or inspection of the premises. This report and the legal description given herein are based upon information supplied by the applicant as to the location and identification of the premises in question, and no liability is assumed for discrepancies resulting therefrom. This report does not represent either a commitment to insure title, an examination of, or opinion as to the sufficiency or effect of the matter shown, or an opinion as to the marketability of title to the subject premises.

END OF SCHEDULE B

202304140291
DEEDS (EXCEPT QCDS)
Rec: $205.50
4/14/2023 1:56 PM 1 of 3
SNOHOMISH COUNTY, WA
Electronically Recorded

When recorded return to:
SHRI Ganesh LLC, a Washington Limited Liability Company
20924 55th Ave W
Lynnwood, WA 98036

Thank you for your payment.
E200539 $13,656.00
MELINDA S. 04/14/2023

Filed for record at the request of:

CHICAGO TITLE
COMPANY OF WASHINGTON

3002 Colby Ave., Suite 200
Everett, WA 98201

Escrow No.: 500139593

STATUTORY WARRANTY DEED

THE GRANTOR(S) Schoolhouse Development, L.L.C., A Washington Limited Liability Company

for and in consideration of Ten And No/100 Dollars ($10.00) , and other valuable consideration and as part of an IRC section 1031 Exchange
in hand paid, conveys and warrants to SHRI Ganesh LLC, a Washington Limited Liability Company

the following described real estate, situated in the County of Snohomish, State of Washington:

Beginning at a point 20 feet North and 30 feet West of the Southeast corner of the Southeast quarter of the Northeast quarter, Section 15, Township 30 North, Range 5 East of the Willamette Meridian;
thence West 147.65 feet;
thence North 295.3 feet;
thence East 147.65 feet;
thence South 295.3 feet to the Point of Beginning.

500139593
INSURED BY
CHICAGO TITLE

Situate in the County of Snohomish, State of Washington.

Abbreviated Legal: (Required if full legal not inserted above.)

Tax Parcel Number(s): 300515-001-018-00

Subject to:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

STATUTORY WARRANTY DEED
(continued)

Dated:

Schoolhouse Development, L.L.C., A Washington Limited Liability Company

BY: _____ Manager
Henry Otter
Manager

BY: _____ Manager
Jeanne Pattison
Manager

State of Washington
County of Snohomish

This record was acknowledged before me on 4/11/2023 by
Henry Otter + Jeanne Pattison
as Managers of
Schoolhouse Development LLC

_____
(Signature of notary public)
Notary Public in and for the State of WA
My commission expires: 9-4-26

NOTARY PUBLIC
STATE OF WASHINGTON
SHARON E. SCHOONOVER
License Number 173976
My Commission Expires 09-04-2026

EXHIBIT "A"
Exceptions

1. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of Marysville
Purpose:	Ingress and egress
Recording Date:	March 8, 1963
Recording No.:	1596956
Affects:	West 10 feet of Said premises

2. Any unrecorded leaseholds, right of vendors and holders of security interests on personal property installed upon the Land and rights of tenants to remove trade fixtures at the expiration of the terms.

Starter Search

Snohomish, Washington
Searched: APN: 300515-001-018-00
Order: 500148937
Company: CHICAGO TITLE | EVERETT - (FNFSTR) | RU | CRN: 00021-00093

Searched By: CTEVNAXML01
Searched On: 2/15/2024 04:27 PM

Search Filters

From Date: N/A
Thru Date: N/A

Document Type: N/A
Document Category: N/A
Starter Source: N/A

Result Filters

0 of 0 records printed

#		Category	Type	Date	Property ID #	Address	Map Ref	Blk/Bldg	Lot/Unit	Insured Name

THERE WERE NO RECORDS AVAILABLE TO PRINT FOR THIS SEARCH.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE IT IS DUE TO THE QUALITY OF THE DOCUMENT.

B-3160

EASEMENT

NO SALES TAX REQUIRED

MAR 8 - 1963

VERNE SIVERS, Snohomish County Treasurer
BY _____ Deputy

1596956

THE GRANTORS, CHARLES E. MOUNT and EVELYN M. MOUNT, husband and wife, for and in consideration of $1.00, in hand paid, do hereby grant to the CITY OF MARYSVILLE, a municipal corporation of the third class, an easement and right-of-way 10 feet in width, for ingress and egress over and across the following described property of the grantors, situated in the County of Snohomish, State of Washington:

The west 10 feet of the east 177.65 feet of the north 295.3 feet of the south 315.3 feet of the northeast ¼ of Section 15, Township 30, N.R. 5 E.W.M.

The easement hereby granted shall be binding upon the heirs, assigns and successors in interest of the grantors.

IN WITNESS WHEREOF the grantors have hereunto set their hand this 9th day of February, 1963.

Charles E. Mount

Evelyn M. Mount

Filed for record MAR 8 1963 at 33 min past PM
Request LAND TITLE CO. OF WASH.
Stanley Dubuque, Snohomish County Auditor

STATE OF WASHINGTON)
) ss.
COUNTY OF SNOHOMISH)

MAR 8 1963

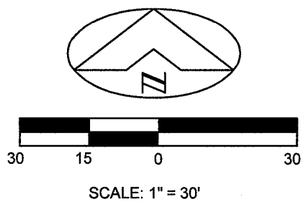
On this day personally appeared before me Charles E. Mount and Evelyn M. Mount, to me known to be the individuals described in and who executed the within and foregoing instrument, and acknowledged that they signed the same as their free and voluntary act and deed for the uses and purposes therein mentioned.

Given under my hand and official seal this 9th day of February, 1963.

Walter W. Duncan
Notary Public in and for the State of Washington, residing at Marysville.

VOL 807 PAGE 168

202302015010
SURVEY
Rec: $287.50
2/1/2023 9:33 AM 1 of 1
SNOHOMISH COUNTY, WA



SCALE: 1" = 30'

LEGAL DESCRIPTION

PER QUIT CLAIM DEED AUDITORS FILE NO. 200509090648:

BEGINNING AT A POINT 20 FEET NORTH AND 30 FEET WEST OF THE SOUTHEAST CORNER OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4, SECTION 15, TOWNSHIP 30 NORTH, RANGE 5 EAST, WM, THENCE WEST 147.65 FEET, THENCE NORTH 295.3 FEET, THENCE EAST 147.65 FEET, THENCE SOUTH 295.3 FEET TO THE POINT OF THE BEGINNING, SITUATE IN SNOHOMISH COUNTY, STATE OF WASHINGTON.

BASIS OF BEARING

P - PLAT OF ALPINE RIDGE, AFN 200703085004

SURVEY REFERENCES

P- PLAT OF ALPINE RIDGE AF# 200703085004
R- RECORD OF SURVEY AFN 201101135005

SURVEY NOTES

EQUIPMENT: 3" OR LESS TOTAL STATION AND/OR GNSS NETWORK ROVER

METHOD: FIELD TRAVERSE AND/OR WASHINGTON STATE REFERENCE NETWORK GNSS

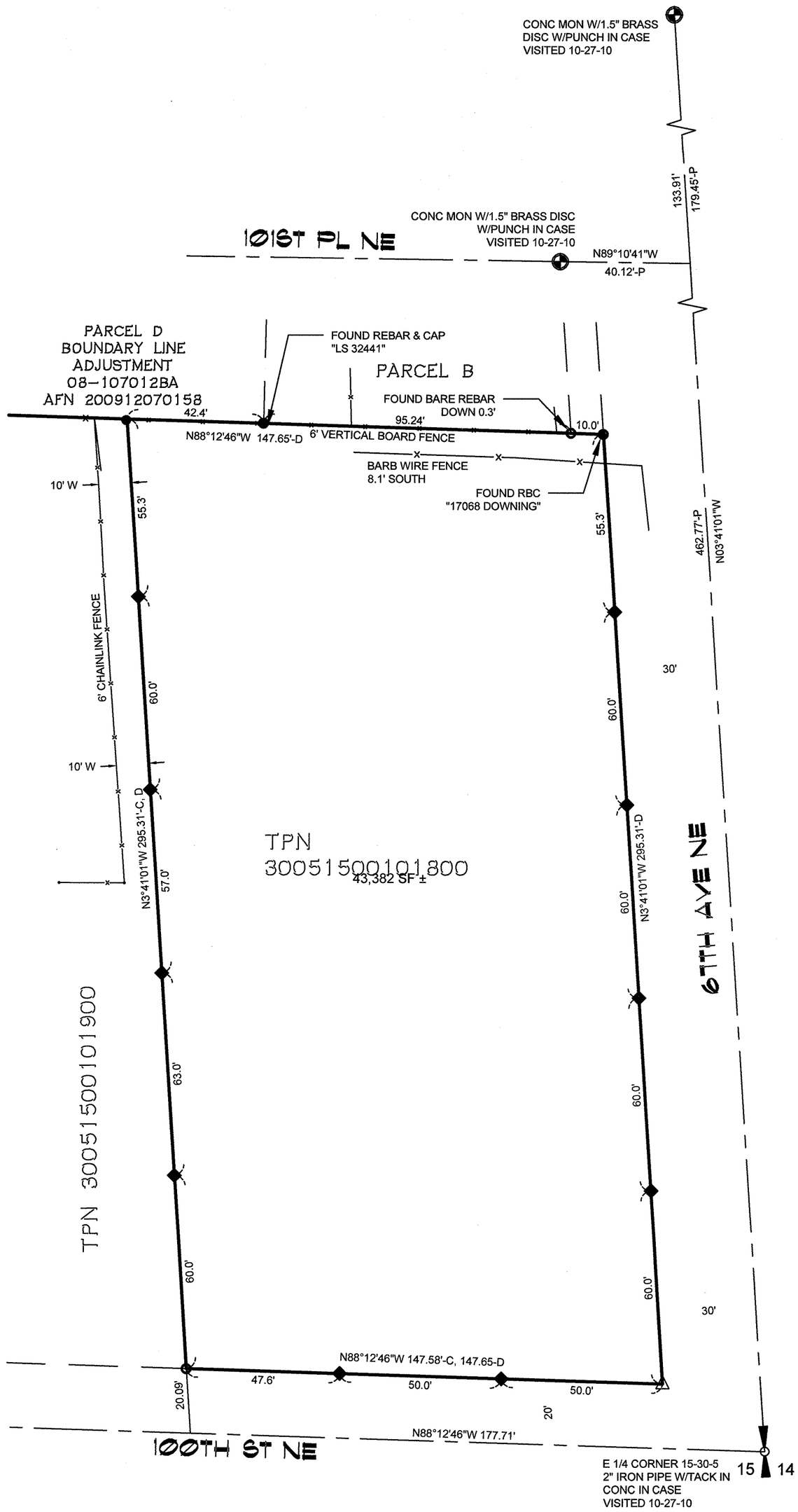
THE FIELD TRAVERSES USED IN THIS SURVEY MEET OR EXCEED THOSE STANDARDS CONTAINED IN WAC 332-130-090. THE SET AND LOCATED BOUNDARY MONUMENT POSITIONS MEET OR EXCEED THOSE STANDARDS CONTAINED IN WAC 332-130-085.

THE INFORMATION SHOWN ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON THE INDICATED DATE AND CAN ONLY BE CONSIDERED AS THE GENERAL EXISTING CONDITION AT THAT TIME.

NO EASEMENTS, RESTRICTIONS OR RESERVATION OF RECORD WHICH WOULD BE DISCLOSED BY A TITLE REPORT ARE SHOWN.

LEGEND

- FOUND MONUMENT AS NOTED
- SET 24" X 1/2" REBAR WITH CAP STAMPED "LS 32441" IN JANUARY OF 2023
- SET MAG NAIL AND WASHER STAMPED "LS 32441" IN JANUARY OF 2023
- FOUND SURVEY MARKER AS NOTED
- C CALCULATED
- M MEASURED
- D DEED



AF# 202302015010

AUDITOR'S CERTIFICATE

FILED FOR RECORD BY MATTHEW J. SCHNEIDERS THIS 1st DAY OF Feb 2023 A.D., AT 33 MINUTES PAST 9 O'CLOCK A M.

AND RECORDED IN VOLUME ~ OF SURVEYS ON PAGE -,

RECORDS OF SNOHOMISH COUNTY, WASHINGTON.

Garth Fell
AUDITOR, SNOHOMISH COUNTY

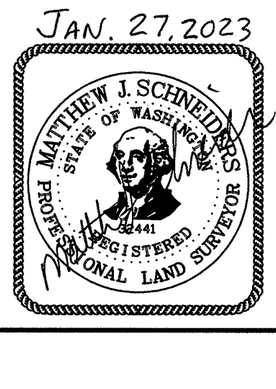
AA
DEPUTY COUNTY AUDITOR

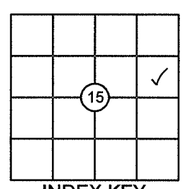
LAND SURVEYOR'S CERTIFICATE

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF SHRI GANESH LLC IN JANUARY, 2023.

Matthew J. Schneider 1-27-23
MATTHEW J. SCHNEIDERS REGISTRATION #53114 DATE

JAN. 27, 2023





INDEX KEY
T30N-R05E

HARMSEN
2822 COLBY AVE.
SUITE 300
EVERETT, WA 98201
(360) 794-7811
(206) 343-5903

RECORD OF SURVEY
FOR
SHRI GANESH LLC

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, W.M.

SNOHOMISH COUNTY, WASHINGTON

PREP: 01-13-2023
CBS
MJS
1 OF 1
22-457

202302015010
SURVEY
Rec: $287.50
2/1/2023 9:33 AM 1 of 1
SNOHOMISH COUNTY, WA

ILC202302015010.001

SEPA[1] Environmental Checklist

Purpose of checklist

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization, or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. **You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown.** You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to **all parts of your proposal**, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for lead agencies

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B, plus the Supplemental Sheet for Nonproject Actions (Part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in "Part B: Environmental Elements" that do not contribute meaningfully to the analysis of the proposal.

[1] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/Checklist-guidance

A.Background

Find help answering background questions[2]

1. **Name of proposed project, if applicable:**

   Crossroads Chevron

2. **Name of applicant:**

   Meydenbauer Group

3. **Address and phone number of applicant and contact person:**

   John Hansen, Meydenbauer Group, 12025 Willows Road, Redmond, WA 98052 425-443-6280

4. **Date checklist prepared:**

   2024.02.19

5. **Agency requesting checklist:**

   City of Marysville

6. **Proposed timing of schedule (including phasing, if applicable):**

   Build service station: 12 months from building permit issuance to occupancy permit issuance.

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

   None.

8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

   No slopes, no wetland, no trees, and no reports.

9. **Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

   None.

10. **List any government approvals or permits that will be needed for your proposal, if known.**

    Commercial building, clear and grade, & utility extension.

11. **Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)**

[2] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-A-Background

New 4,000 sf convenience store and Chevron branded service station with canopy and six (6) pumps on 45,738 sf site.

12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

    10008 67th Ave NE, Marysville 98270

    Snohomish County APN: 30051500101800

    SE ¼ of the NE ¼ of Section 15, T.30N., R.5E., W.M.

B.Environmental Elements

1. Earth

Find help answering earth questions[3]

a. General description of the site:

Flat site nestled in a predominantly residential zone.

Circle or highlight one: Flat, rolling, hilly, steep slopes, mountainous, other:

b. What is the steepest slope on the site (approximate percent slope)?

3%.

[3] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-earth

c. **What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them, and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.**

Twelve to 18 inches of topsoil or previously placed gravel fill overlying native, loose, silty sand to sandy silt (weathered till). At approximately 2 to 3 feet below ground surface (BGS), the soils is unweathered and consisted of dense to very dense/hard to very hard, gravelly, silty sand to sandy silt. The unweathered till extends deeper beyond 7 feet BGS.

d. **Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

No surface indication or history of unstable soil was encountered.

e. **Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.**

The purpose is to build a single-family residential home.

Area of lot = 45,738 sf

Area of Impervious = 30,100 sf

Cut = 1,175 cubic yards

Fill = 225 cubic yards

f. **Could erosion occur because of clearing, construction, or use? If so, generally describe.**

Some erosion could occur. However, there is a Stormwater protection plan (SWPPP) backed up by on site inspectors as part of the permit application and implementation.

g. **About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

Site is 45,738 sf total. Impervious surface is 30,100 sf total. Impervious is 65.8 %.

h. **Proposed measures to reduce or control erosion, or other impacts to the earth, if any.**

There is a Stormwater protection plan (SWPPP) backed up by on site inspectors as part of the permit application and implementation

.

2. Air

Find help answering air questions[4]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Site work machinery runs on diesel. The burning of diesel pollutes. Quantities unknown.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

NA

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Site work machinery equipped with DPFs (diesel particulate filters) and urea acid sprayed into the exhaust.

3. Water

Find help answering water questions[5]

a. Surface:

Find help answering surface water questions[6]

1. **Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

   Allen Creek is in the wider vicinity.

2. **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

   No.

3. **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

   NA

4. **Will the proposal require surface water withdrawals or diversions? Give a general description, purpose, and approximate quantities if known.**

[4] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-Air
[5] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water
[6] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Surface-water

No.

5. **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

   No.

6. **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

   No.

b. Ground:

Find help answering ground water questions[7]

1. **Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give a general description, purpose, and approximate quantities if known.**

   No.

2. **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

   None.

c. Water Runoff (including stormwater):

1. **Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

   The source of runoff is the building roof, landscaping buffer zone, canopy roof, fueling area & parking/pavement area. The runoff is collected through grated openings in the underground vault & catch basin. It is disposed to the nearest existing catch basin through underground 18" diameter RCP pipe.

2. **Could waste materials enter ground or surface waters? If so, generally describe.**

   Surface runoff could pick up surface materials. All or most of any water borne surface materials will be filtered out by the drainage vault and biofiltration system for enhanced water quality. The water volume managed will be 0.04 cfs for 100-year storm.

[7] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Groundwater

3. **Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.**

   No. Stormwater management proposed is designed to maintain or reduce the current historical water flow rates to final destinations.

d. **Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:**

   Detention vaults and biofiltration.

4. Plants

Find help answering plants questions

a. **Check the types of vegetation found on the site:**

☐ **deciduous tree: alder, maple, aspen, other**

☐ **evergreen tree: fir, cedar, pine, other**

☐ **shrubs**

☒ **grass**

☐ **pasture**

☐ **crop or grain**

☐ **orchards, vineyards, or other permanent crops.**

☐ **wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other**

☐ **water plants: water lily, eelgrass, milfoil, other**

☐ **other types of vegetation**

b. **What kind and amount of vegetation will be removed or altered?**

Site is was cleared prior to current ownership with grass ground covering. There will be a landscape and irrigation plan as part of the permit application deck reviewed and approved by the City.

c. **List threatened and endangered species known to be on or near the site.**

There are no threatened or endangered plant species to be known on or near the site.

d. **Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.**

12,511 sf of proposed planting -

Trees:

Paperbark Maple
Vine Maple
Blue Ice Cypress
Shore Pine

Shrubs:
Midwinter Fire Dogwood
White Spring Heather
Shore Juniper
Blue Star Juniper
Oregon Grape
Eulalia Grass
Burkwood Osmanthus
Mount Vernon Laurel
Evergreen Huckleberry
Groundcover:
Kinnikinnick
Creeping Juniper
Variegated Lilly Turf

e. List all noxious weeds and invasive species known to be on or near the site.

None.

5. Animals

Find help answering animal questions[8]

a. List any birds and other animals that have been observed on or near the site or are known to be on or near the site.

Examples include:

- **Birds: hawk, heron, eagle, songbirds, other:**
- **Mammals: deer, bear, elk, beaver, other:**
- **Fish: bass, salmon, trout, herring, shellfish, other:**

None.

b. List any threatened and endangered species known to be on or near the site.

None.

c. Is the site part of a migration route? If so, explain.

NA

d. Proposed measures to preserve or enhance wildlife, if any.

None.

e. List any invasive animal species known to be on or near the site.

None.

[8] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-5-Animals

6. Energy and natural resources

Find help answering energy and natural resource questions[9]

a. **What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

   Cooling will be electric. Heating will be gas. This is a convenience store so no manufacturing.

b. **Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

   No

c. **What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.**

   The building is going to meet the 2021 WA State Energy Code Commercial Provisions. Features like energy efficient lighting and continuous insulation will be utilized.

7. Environmental health

Health Find help with answering environmental health questions[10]

a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur because of this proposal? If so, describe.**

   None during construction. Once occupancy permit received and fuel tanks filled there will be the well understood, and well provided for, hazards associated with large concentrated fuel volumes.

   1. **Describe any known or possible contamination at the site from present or past uses.**

      None known of.

   2. **Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.**

      None known of.

   3. **Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**

[9] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-6-Energy-natural-resou
[10] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-7-Environmental-health

None during development and construction. There will be large fuel volumes stored underground and dispensed through consumer pumps once in operation.

4. **Describe special emergency services that might be required.**

   The customary emergency services: Marysville Fire District.

5. **Proposed measures to reduce or control environmental health hazards, if any.**

   All the standard required mitigation associated with a modern service station.

b. Noise

1. **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

   During construction there will be site work equipment in the first few months of construction: backhoe, dozer, and trucks. After that there will be the noises associated with vertical construction: hammering and similar.

2. **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site)?**

   Short term (12 months) during construction:

   Monday through Friday: 7:00 a.m. to 11:00 p.m.

   Saturdays: 8:00 a.m. to 11:00 p.m.

   Sundays: no construction.

   Long term the service station will be open 24 hrs per day with the associated noise of operation.

3. **Proposed measures to reduce or control noise impacts, if any:**

   Site work machinery is equipped with mufflers and diesel particulate filters (DPFs) that have a muffling function as well.

8. Land and shoreline use

Find help answering land and shoreline use questions[11]

a. **What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.**

   Current use: unimproved vacant. Adjacent properties are a mix of single family homes and unimproved vacant.

b. **Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses because of the proposal, if any? If resource lands have**

[11] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-8-Land-shoreline-use

not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

Not known.

1. **Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?**

   Local farm equipment will have much less distance to travel for fuel reducing the net fuel consumption associated with these activities.

c. Describe any structures on the site.

None.

d. Will any structures be demolished? If so, what?

None.

e. What is the current zoning classification of the site?

NB (Neighborhood Business) and R7200

f. What is the current comprehensive plan designation of the site?

Residential

g. If applicable, what is the current shoreline master program designation of the site?

NA

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

None reside. One (1) to three (3) adults working 24/7.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any.

NA

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.

City land use designated this site for neighborhood business like a service station.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

NA

9. Housing

Find help answering housing questions[12]

a. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

   None.

b. **Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

   None.

c. **Proposed measures to reduce or control housing impacts, if any:**

   This proposal does not displace any housing as City set aside this site for neighborhood business.

10. Aesthetics

Find help answering aesthetics questions[13]

a. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

   20' from finished floor. Exterior will be colored and textured concrete panels and planks.

b. **What views in the immediate vicinity would be altered or obstructed?**

   Housing on 65th Dr NE will have their views east over the valley obstructed.

c. **Proposed measures to reduce or control aesthetic impacts, if any:**

   The façade will be broken up with windows and multiple material choices in order avoid a monolithic aesthetic.

11. Light and glare

Find help answering light and glare questions[14]

a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**

   Service stations by their nature have significant bright lighting. The lighting will be prevalent at night. The lighting will be specifically designed and engineered to be shielded and focus down as well as away from residential neighborhoods.

b. **Could light or glare from the finished project be a safety hazard or interfere with views?**

   Yes.

[12] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-9-Housing
[13] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-10-Aesthetics
[14] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-11-Light-glare

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

Licensed lighting professionals work product is part of the permit application deck and approval process.

12. Recreation

Find help answering recreation questions

a. What designated and informal recreational opportunities are in the immediate vicinity?

Unknown.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No. Many recreational activities require fuel such as boating. The proposed use will allow local recreational users to obtain fuel without excessive travel.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

No mitigation as the service station supports local recreational activites by providing fuel and food.

13. Historic and cultural preservation

Find help answering historic and cultural preservation questions[15]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

None.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

None.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

None.

[15] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-13-Historic-cultural-p

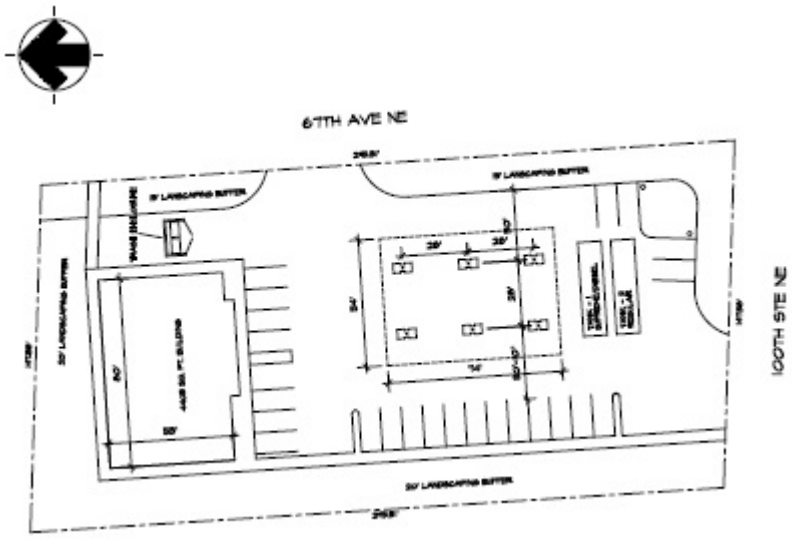
d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

None.

14. Transportation

Find help with answering transportation questions[16]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.



b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

No public transit nearby.

c. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

Appropriate traffic mitigation fees or road improvements in lieu of traffic mitigation fees will be provided by the project.

d. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

e. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of

[16] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-14-Transportation

the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

The project is anticipated to generate approximately 795 new average daily trips with 55 trips occurring during the PM peak-hour (one hour between 4:00 PM and 6:00 PM). These trips are based on the rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual. It is anticipated that the vast majority of trips generated by the site will be passenger vehicles.

f. Will the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

g. Proposed measures to reduce or control transportation impacts, if any:

Appropriate traffic mitigation fees or road improvements in lieu of traffic mitigation fees will be provided by the project.

15. Public services

Find help answering public service questions[17]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

Yes. The addition of a significant neighborhood business will result in increased demand on the immediately local police and fire services. However, by re-directing local fuel and convenience store needs then there is a consequent relief on the similar services currently provided in the Soper Hill neighborhood.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None. New property owners will be paying property tax and significant sales tax to compensate for increased need of public services. In addition, as written above this proposal results in the redirection of services currently provided and not necessarily a net addition to required services.

16. Utilities

Find help answering utilities questions[18]

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:

Developer bringing in electricity, water, sewer, and natural gas. Refuse service will serve site one it is in operation.

[17] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-15-public-services
[18] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-16-utilities

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Electricity, provider PUD

Gas, provider PUD.

Water, provider City of Marysville

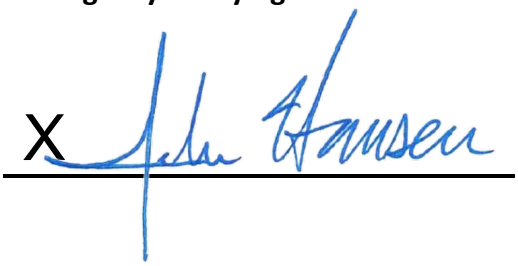
Sewer, provider City of Marysville

Refuse collection, provider City of Marysville

C.Signature

Find help about who should sign[19]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

X 

Type name of signee: John Hansen

Position and agency/organization: President, Meydenbauer Group

Date submitted: 2024.02.19

D.Supplemental sheet for nonproject actions

Find help for the nonproject actions worksheet[20]

Do not use this section for project actions.

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

From SEPA website:

[19] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-C-Signature

[20] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-d-non-project-actions

https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-D-Non-project-actions

Non-Project Actions -

"Non-project actions are governmental actions involving decisions about policies, plans, or programs containing standards for controlling use or modifying the environment, or will govern a series of connected actions."

This SEPA Checklist is for the private development of a service station and is not a governmental action. The below does not apply to this project.

1. **How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?**

    - **Proposed measures to avoid or reduce such increases are:**

2. **How would the proposal be likely to affect plants, animals, fish, or marine life?**

    - **Proposed measures to protect or conserve plants, animals, fish, or marine life are:**

3. **How would the proposal be likely to deplete energy or natural resources?**

    - **Proposed measures to protect or conserve energy and natural resources are:**

4. **How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection, such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?**

    - **Proposed measures to protect such resources or to avoid or reduce impacts are:**

5. **How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?**

    - **Proposed measures to avoid or reduce shoreline and land use impacts are:**

6. **How would the proposal be likely to increase demands on transportation or public services and utilities?**

    - **Proposed measures to reduce or respond to such demand(s) are:**

7. **Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.**

February 26, 2024

Critical Areas Report- Crossroad Chevron

NA. There are no critical areas on site.

TRAFFIC IMPACT ANALYSIS

67TH AVENUE FUEL STATION

JURISDICTION: CITY OF MARYSVILLE, WA
LOCATION: 100TH STREET NE, WEST OF 67TH AVENUE NE

Prepared for:
Meydenbauer Group
1205 Willows Road NE
Redmond, Washington 98052

Prepared by:
Kimley»Horn

March 2024
090223182
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TRAFFIC IMPACT ANALYSIS

FOR

67TH AVENUE FUEL STATION

Prepared for:
Meydenbauer Group
12025 Willows Road NE
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1. DEVELOPMENT IDENTIFICATION

Kimley-Horn and Associates, Inc. (Kimley-Horn) has been retained to provide a traffic impact analysis for the 67th Avenue Fuel Station (Development). This report is intended to provide the City of Marysville (City) and Snohomish County (County) with the necessary traffic generation, trip distribution, and mitigation fee determination to facilitate their reviews of the Development. The Development is located on the west side of 67th Avenue NE, north of 100th Street NE. A site vicinity map is included in **Figure 1**. The Development is proposed to consist of 12 pump stations and a convenience Store. The site is currently listed as undeveloped per the *Snohomish County Online Property Information (SCOPI)* web map. The site will primarily access the City street network via two proposed accesses, one connected to 100th Street NE and one connected to 67th Avenue NE.

Brad Lincoln, responsible for this report and traffic analysis, is a licensed professional engineer (Civil) in the State of Washington and member of the Washington State section of the Institute of Transportation Engineers (ITE).

Figure 1: Site Vicinity Map

2. METHODOLOGY

Congestion at intersections and along arterials is generally measured in terms of level of service (LOS). In accordance with *Highway Capacity Manual (HCM), 6th Edition* by the Transportation Research Board, road facilities and intersections are rated between LOS A and LOS F, with LOS A being free flow and LOS F being forced flow or over-capacity conditions. The LOS at signalized, roundabout, and all-way stop-controlled intersections is based on the average delay of all approaches. The LOS for two-way stop-controlled intersections is based on average delays for the critical stopped approach. Geometric characteristics and conflicting traffic movements are taken into consideration when determining LOS values. A summary of the intersection LOS criteria is included in **Table 1**.

Table 1: Level of Service Criteria

Level of Service[1]	Expected Delay	Intersection Control Delay (Seconds per Vehicle)	
		Unsignalized Intersections	Signalized Intersections
A	Little/No Delay	≤10	≤10
B	Short Delays	>10 and ≤15	>10 and ≤20
C	Average Delays	>15 and ≤25	>20 and ≤35
D	Long Delays	>25 and ≤35	>35 and ≤55
E	Very Long Delays	>35 and ≤50	>55 and ≤80
F	Extreme Delays[2]	>50	>80

The LOS at two-way stop-controlled intersections is based on the average delay for the stopped approach with the highest delay. The LOS at all-way stop-controlled intersections and signalized intersections is based on the average delay for all vehicles. The LOS analysis for unsignalized and signalized intersections has been performed utilizing the *Synchro 11* software. The City identifies acceptable level of service for intersections as LOS D for the intersections analyzed as part of this report.

The trip generation calculations for the Development are based on average trip generation rates published in the ITE *Trip Generation Manual, 11th Edition (2021)*. The opening year has been estimated for the year 2026, which accounts for a two-year construction window.

[1] **Source:** *Highway Capacity Manual, 6th Edition.*
LOS A: Free-flow traffic conditions, with minimal delay to stopped vehicles (no vehicle is delayed longer than one cycle at signalized intersection).
LOS B: Generally stable traffic flow conditions.
LOS C: Occasional back-ups may develop but delay to vehicles is short term and still tolerable.
LOS D: During short periods of the peak hour, delays to approaching vehicles may be substantial but are tolerable during times of less demand (i.e., vehicles delayed one cycle or less at signal).
LOS E: Intersections operate at or near capacity, with long queues developing on all approaches and long delays.
LOS F: Jammed conditions on all approaches with excessively long delays and vehicles unable to move at times.
[2] When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection.

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3. TRIP GENERATION

The Development is proposed to consist of 12 pump stations and a convenience store, and the site is currently undeveloped. The trip generation calculations have been performed using data published by the ITE *Trip Generation Manual, 11st Edition* (*2021*). The average trip generation rates for ITE Land Use Codes (LUC) 945, Convenience Store/Gas Station, have been used for the trip generation calculations.

Pass-by reductions have been applied to the trip generation calculations. These reductions account for trips currently on the roadway that will visit the Development and are not considered new trips generated by the Development. A pass-by reduction of 75% has been applied to the gas station based on data published by ITE. The trip generation after pass-by reductions for the Development have been summarized in **Table 2**.

Table 2: Trip Generation Summary

Land Use	Size	Average Daily Trips (ADTs)	PM Peak-Hour Trips		
			In	Out	Total
Convenience Store/Gas Station ITE LUC 945	12 Pumps	3,181	111	110	221
Pass-By Trips		2,386	83	83	166
Net New Trips		795	28	27	55

The Development is anticipated to generate approximately 795 new ADTs with 55 new PM peak-hour trips. The trip generation calculations are provided in **Appendix A**.

4. TRIP DISTRIBUTION

The trip distribution for the Development is based on comparison of 87th Avenue NE North and 136th Street Industrial distributions established by the City since the site is in the middle of the two areas. The trip distributions for the Development during the opening and horizon years are:

- 30% to and from the north along 83rd Avenue NE
- 28% to and from the east
  - 20% to and from the south along SR-9
  - 5% to and from the east along SR-92
  - 3% to and from the north along SR-9
- 22% to and from the south along 83rd Avenue NE
- 20% to and from the west along 44th Street NE

Detailed trip distributions for the PM peak-hour during existing conditions are shown in **Figure 2**. The established trip distributions are provided in **Appendix B**.

N
NOT TO SCALE

152ND STREET NE
84
51ST AVENUE NE
67TH AVENUE NE
67TH AVENUE NE AT
108TH STREET NE
82
4
4
4
4
67TH AVENUE NE AT
132ND STREET NE
83
3
1
3
1
67TH AVENUE NE AT
152ND STREET NE
84
2
1
1
2
SR-9 AT
84TH STREET NE
98
1
1
1
1
1
5%
1
39
1
LOCAL
10%
3
80
3
132ND STREET NE
83
15%
4
119
4
82
108TH STREET NE
30%
8
238
8
10%
3
80
3
LOCAL
SHOULTES ROAD
SITE
100TH STREET NE
1
39
2
5%
100TH STREET NE
LOCAL
4
119
4
15%
11
319
11
40%
9
88TH STREET NE
3
80
3
10%
INGRAHAM BOULEVARD
LOCAL
3
80
3
10%
84TH STREET NE
98
5
159
5
20%
XX% Trip Distribution %
X Key Intersection
Development Site
Inbound Trip Path
Outbound Trip Path
AWDT
Outbound Trips
Inbound Trips

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FIGURE 2 - PM PEAK-HOUR TRIP DISTRIBUTION
67TH AVENUE GAS STATION - MARYSVILLE, W

5. INTERSECTION ANALYSIS

The level of service analysis has been performed for the PM peak-hour (4:00pm – 6:00pm), which is when volumes on roadways are typically highest and when intersection operations are typically at their worst levels of service.

The following intersections have been analyzed for the weekday PM peak-hour:

1. 67th Avenue NE at 88th Street NE
2. 100th Street NE at South Access Driveway
3. 67th Avenue NE at 100th Street NE
4. 67th Avenue NE at East Access Driveway
5. 67th Avenue NE at 108th Street NE

The intersections have been analyzed for the 2023 existing, 2026 opening year baseline and future, and 2032 horizon year baseline and future for PM peak-hour conditions.

5.1. Turning Movements

5.1.1. Snohomish County Intersections

The interlocal agreement between the City and County requires detailed development trip turning movement data at County key intersections impacted with three or more directional trips on an approach or departure. The trips generated by the Development will impact four key intersections during the PM Peak-hour. The PM peak-hour key intersection impacts are shown in tabular form in **Table 3**.

Table 3: Key Intersection Volumes –PM Peak Hour

Intersection	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
#82: 67th Avenue NE at 108th St NE	0	0	4	0	0	0	4	4	0	0	4	0
#83: 67th Avenue NE at 132nd Street NE	0	0	1	0	0	0	1	3	0	0	3	0
#84: 67th Avenue NE at 152nd Street NE	0	0	1	0	0	0	1	2	0	0	2	0
#98: SR-9 at 84th Street NE	1	1	1	0	1	0	1	0	0	0	0	1

The key intersection impacts are also shown in graphical form in **Figure 2** for the PM peak-hour.

5.1.2. Volume Development

The existing PM peak-hour turning movements at the study intersections were collected by the independent count firm Traffic Data Gathering (TDG) in November 2023. The 2023 existing turning movements at the study intersections are shown in **Figure 3**. The count data is included in **Appendix B**.

The future analysis has been performed for an opening year of 2026, which represents when the Development is expected to be constructed. The 2026 opening year baseline turning movements have been calculated by applying a 3% annually compounding growth rate applied to the 2023 existing turning movements. The 2026 opening year baseline turning movements at the study intersections are shown in **Figure 4**. The 2026 opening year future with development turning movements at the study intersections have been calculated by adding the trips generated by the Development to the 2026 opening year baseline turning movements. The 2026 opening year future with development turning movements are shown in **Figure 5**. The pipeline data is included with the existing count data in **Appendix B**.

The study intersections have also been analyzed for the 2032 horizon year conditions (baseline and with development). The horizon year analysis accounts for the typical six-year concurrency period after the expected opening year. The 2032 horizon year baseline turning movements have been calculated using the same 3% annually compounding growth rate. The 2032 horizon year baseline turning movements at the study intersections are shown in **Figure 6**. The 2032 horizon year future with development turning movements at the study intersections have been calculated by adding the trips generated by the Development to the 2032 horizon year baseline turning movements. The 2032 horizon year future with development turning movements are shown in **Figure 7**. The turning movement calculations are included in **Appendix C**.

N
NOT TO SCALE

152ND STREET NE
51ST AVENUE NE
67TH AVENUE NE
132ND STREET NE
108TH STREET NE
SHOULTES ROAD
100TH STREET NE
88TH STREET NE
84TH STREET NE
INGRAHAM BOULEVARD
SITE

67TH AVENUE NE AT 88TH STREET NE

1

75 ← 377 ← 139 ←	↖ 127 ← 188 ↖ 23
82 ↗ 287 → 175 ↘	142 ↗ 370 → 44 ↗

S SITE ACCESS AT 100TH STREET NE

2

← 216	
245 →	

67TH AVENUE NE AT 100TH STREET NE

3

42 ← 353 ← 12 ←	↖ 9 ← 9 ↖ 16
57 ↗ 7 → 181 ↘	165 ↗ 342 → 20 ↗

E SITE ACCESS AT 67TH AVENUE NE

4

← 398	
	396 →

67TH AVENUE NE AT 108TH STREET NE

5

41 ← 300 ← 140 ←	↖ 129 ← 156 ↖ 38
27 ↗ 94 → 60 ↘	72 ↗ 291 → 33 ↗

X Study Intersection

Development Site

PM → Turning Movement Volumes

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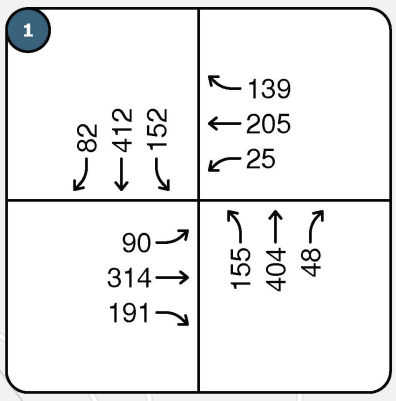
FIGURE 3 - 2023 EXISTING PM VOLUMES

67TH AVENUE GAS STATION - MARYSVILLE, W

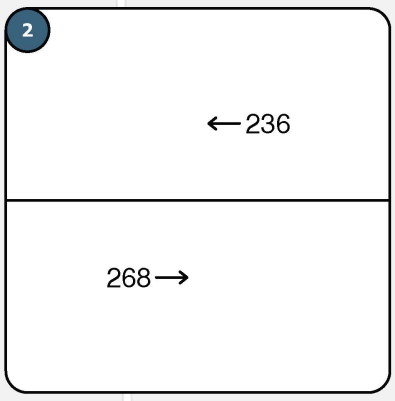
N
NOT TO SCALE

152ND STREET NE
51ST AVENUE NE
67TH AVENUE NE
132ND STREET NE
108TH STREET NE
SHOULTES ROAD
SITE
100TH STREET NE
100TH STREET NE
88TH STREET NE
84TH STREET NE
INGRAHAM BOULEVARD
51ST AVENUE NE
67TH AVENUE NE
51ST AVENUE NE

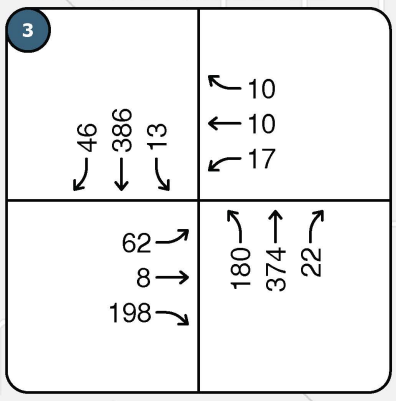
67TH AVENUE NE AT 88TH STREET NE



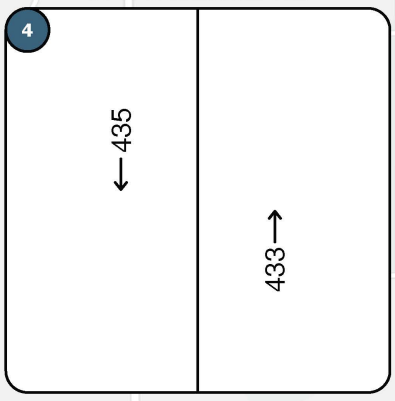
S SITE ACCESS AT 100TH STREET NE



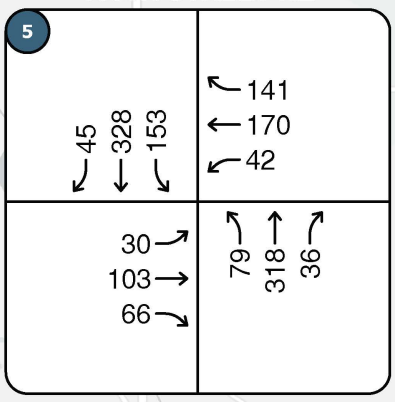
67TH AVENUE NE AT 100TH STREET NE



E SITE ACCESS AT 67TH AVENUE NE



67TH AVENUE NE AT 108TH STREET NE



Study Intersection
Development Site
PM → Turning Movement Volumes

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FIGURE 4 - 2026 OPENING YEAR - BASELINE PM VOLUMES
67TH AVENUE GAS STATION - MARYSVILLE, W

NOT TO SCALE

152ND STREET NE

51ST AVENUE NE

67TH AVENUE NE

132ND STREET NE

108TH STREET NE

SHOULTES ROAD

SITE

100TH STREET NE

88TH STREET NE

84TH STREET NE

INGRAHAM BOULEVARD

9

67TH AVENUE NE AT 88TH STREET NE

1

↖85 ←417 ←155	↖142 ←205 ↖25
93→ 314→ 191↘	↖155 409→ 48↗

S SITE ACCESS AT 100TH STREET NE

2

↖8 ↙21	↖31 ←236
26↗ 251→	

67TH AVENUE NE AT 100TH STREET NE

3

↖46 ←393 ↖13	↖10 ←10 ↖17
62↗ 8→ 202↘	↖211 354→ 22↗

E SITE ACCESS AT 67TH AVENUE NE

4

↖37 ←406	
45↗ 36↘	↖17 396→

67TH AVENUE NE AT 108TH STREET NE

5

↖45 ↙332 ↙153	↖141 ←170 ↖42
30↗ 103→ 70↘	↖83 ↑322 ↗36

X Study Intersection

Development Site

PM→ Turning Movement Volumes

Kimley»Horn

FIGURE 5 - 2026 OPENING YEAR - FUTURE WITH DEVELOPMENT PM VOLUMES

67TH AVENUE GAS STATION - MARYSVILLE, W

NOT TO SCALE

152ND STREET NE

51ST AVENUE NE

67TH AVENUE NE

132ND STREET NE

108TH STREET NE

100TH STREET NE

88TH STREET NE

84TH STREET NE

SHOULTES ROAD

INGRAHAM BOULEVARD

SITE

67TH AVENUE NE AT 88TH STREET NE

1

98 ← 492 ← 181 ←

166 ↖
245 ←
30 ↖

107 ↗
374 →
228 ↘

185 ↑ 483 ↑ 57 ↗

S SITE ACCESS AT 100TH STREET NE

2

282 ←

320 →

67TH AVENUE NE AT 100TH STREET NE

3

55 ↙ 461 ← 16 ↙

12 ↖
12 ←
21 ↖

74 ↗
9 →
236 ↘

215 ↑ 446 ↑ 26 ↗

E SITE ACCESS AT 67TH AVENUE NE

4

519 ←

517 →

67TH AVENUE NE AT 108TH STREET NE

5

53 ↙ 391 ↓ 183 ↘

168 ↖
204 ←
50 ↖

35 ↗
123 →
78 ↘

94 ↑ 380 ↑ 43 ↗

9

x Study Intersection

Development Site

PM → Turning Movement Volumes

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FIGURE 6 - 2032 HORIZON YEAR - BASELINE PM VOLUMES

67TH AVENUE GAS STATION - MARYSVILLE, W

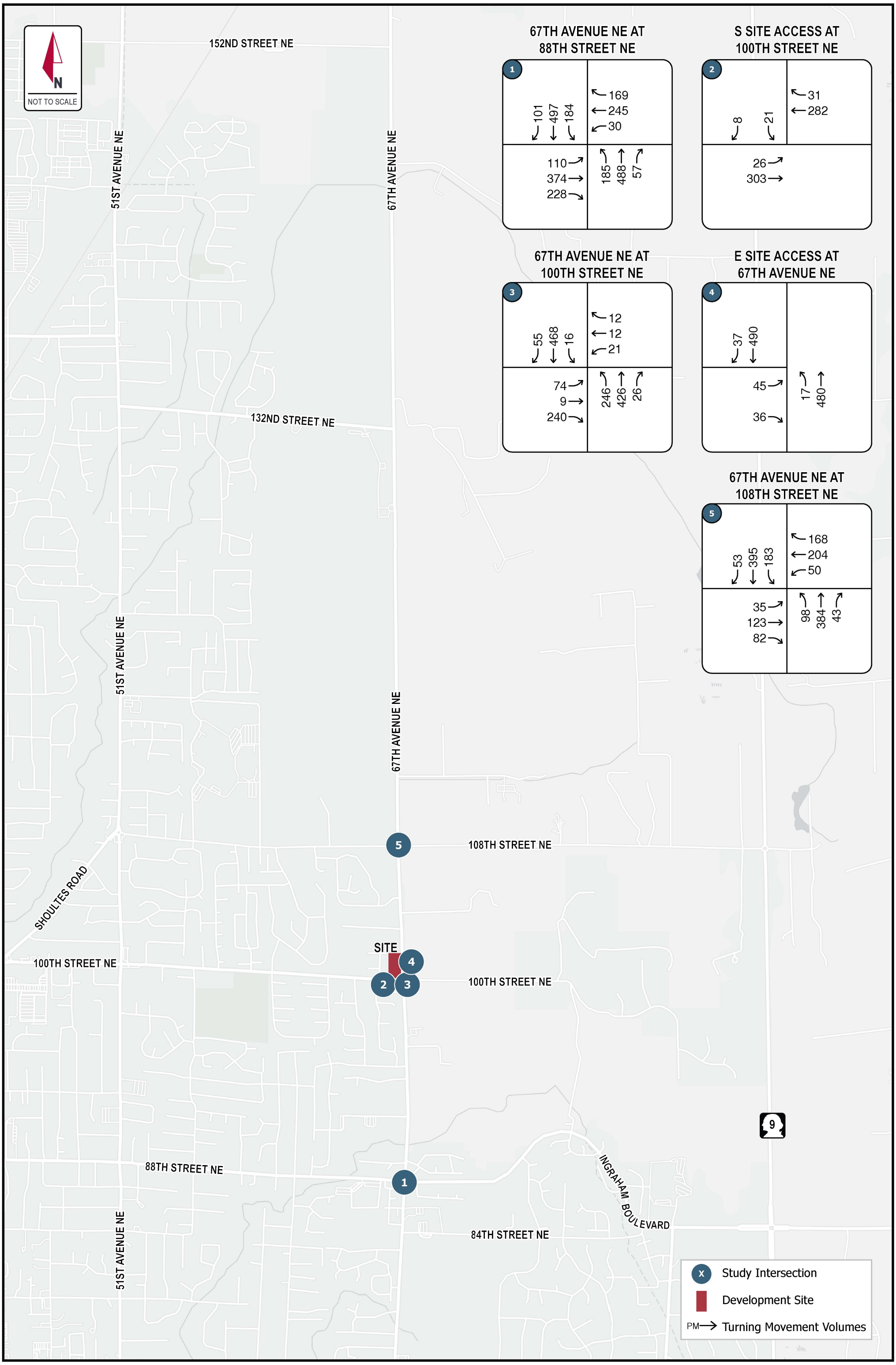

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FIGURE 7 - 2032 HORIZON YEAR - FUTURE PM VOLUMES

67TH AVENUE GAS STATION - MARYSVILLE, W

5.2. Level of Service Calculations

Level of service was analyzed for current and future operations using *Synchro, Version 11* traffic simulation software. The existing conditions was analyzed using the 2023 collected traffic count data, existing intersection control, channelization, peak-hour factors, and heavy vehicle factors from the 2023 turning movement counts. The level of service summary for the existing conditions is included in **Table 4**.

Table 4. Level of Service Summary – 2023 Existing

Intersection	Approach	LOS	Delay (sec)
1. 67th Avenue NE at 88th Street NE	Signalized	C	20.5
3. 67th Avenue NE at 100th Street NE	All-Way Stop Control	C	16.2
5. 67th Avenue NE at 108th Street NE	All-Way Stop Control	C	23.4

The level of service summary for the 2026 opening-year is included in **Table 5**.

Table 5: Level of Service Summary – 2026 Opening-Year

Intersection	Approach	2026 Baseline		2026 Future w Dev.	
		LOS	Delay (sec)	LOS	Delay (sec)
1. 67th Avenue NE at 88th Street NE	Signalized	C	22.0	C	22.2
2. S Site Access at 100th Street NE	Two-Way Stop Control	-	-	B	12.6
3. 67th Avenue NE at 100th Street NE	All-Way Stop Control	C	19.7	C	19.6
4. E Site Access at 67th Avenue NE	Two-Way Stop Control	-	-	C	17.4
5. 67th Avenue NE at 108th Street NE	All-Way Stop Control	D	33.9	E	35.7

The level of service summary for the 2032 horizon-year is included in **Table 6** for the PM peak-hour.

Table 6: Level of Service Summary – 2032 Horizon-Year

Intersection	Approach	2032 Baseline		2032 Future w Dev.	
		LOS	Delay (sec)	LOS	Delay (sec)
1. 67th Avenue NE at 88th Street NE	Signalized	C	28.0	C	28.3
2. S Site Access at 100th Street NE	Two-Way Stop Control	-	-	B	13.7
3. 67th Avenue NE at 100th Street NE	All-Way Stop Control	E	41.6	E	40.9
4. E Site Access at 67th Avenue NE	Two-Way Stop Control	-	-	C	21.7
5. 67th Avenue NE at 108th Street NE	All-Way Stop Control	F	81.6	F	84.3

The analysis shows that the study intersections currently operate at LOS C during the PM peak-hour during 2023 existing conditions. The study intersections are anticipated to operate at LOS D or better for most 2026 opening-year baseline and future with development conditions except the intersection of 67th Avenue NE at 108th Street NE, which operates at LOS E. Most study intersections are anticipated to operate at LOS C or better for 2032 horizon-year baseline and future conditions except the intersection of 67th Avenue NE at 100th Street NE which operates at LOS E, and 67th Avenue NE at 108th Street NE, which operates at LOS F. The intersection LOS calculations are provided in the **Appendix D**.

5.3. Improvement Analysis

The analysis shows that the intersection of 67th Avenue NE at 100th Street NE will operate below LOS D under the 2032 horizon year conditions, even without the Development, and 67th Avenue NE at 108th Street NE will operate below LOS D under the opening conditions with the Development. There are not planned improvements for the intersection of 67th Avenue NE at 100th Street NE, but the Marysville Transportation Element, published in 2015, identifies the intersection of 67th Avenue NE at 108th Street NE as a long-range intersection project to add turn lane(s) and a traffic signal when warranted. Additional coordination will be required with City staff to determine appropriate and proportionate fees or improvements to address these impacts.

6. COLLISION ANALYSIS

Collision data was obtained from Washington State Department of Transportation (WSDOT) for the time period between January 1, 2018, through December 31, 2022. The number of collisions and types of collisions at the study intersections are summarized in **Table 7**.

Table 7: Collision Type Summary

Intersection		Collision Type						Total
		Angle	Left-Turn	Rear-End	SS Opposite	SS Same	Fixed Object/ Other	
1.	67th Avenue NE at 88th Street NE	9	9	4	1	3	2	28
3.	67th Avenue NE at 100th Street NE	3	0	3	1	0	2	9
5.	67th Avenue NE at 108th Street NE	9	3	1	0	0	3	16
TOTAL		21	12	8	2	3	7	53

The collision data shows a total of 53 collisions at the three study intersections. The intersection of 67th Avenue NE at 88th Street NE had 28 of 53 of the total crashes for the study area, 9 of which were angle crashes, and 9 left-turn crashes. There were no fatalities reported during the five-year period at the study intersections.

The collision rates at the study intersections have also been evaluated. The collisions per million entering vehicles (MEV) is the standard rate for intersections. The daily trips at the study intersection have been estimated using a rate of ten daily trips to one PM peak-hour trip. The collision rates at the study intersections are summarized in **Table 8**.

Table 8: Collision Rate Summary

Intersection	Total Collisions	Collisions per Year		Collision Rate (per MEV)[3]		
		Years	Rate	ADT	Years	Rate
1. 67th Avenue NE at 88th Street NE	28	5	5.6	20,290	5	0.76
2. 67th Avenue NE at 100th Street NE	9	5	0.2	12,130	5	0.41
3. 67th Avenue NE at 108th Street NE	16	5	0.6	13,810	5	0.63

A collision rate of more than 1.0 per million entering vehicles (MEV) is generally used to determine when a more detailed safety analysis is required. The collision rates show that none of the study intersections in the vicinity of the Development have a rate more than 1.0 collisions per MEV at each intersection. Additional analysis of the collision history should therefore not be required. The collision data is provided in **Appendix E**.

7. Site Access

The Development is proposed to two access points. One driveway on the south side of the Development with direct access to 100th Street NE and one driveway on the east side of the Development with direct access to 67th Avenue NE. The access locations appear to have adequate sight distance, based on preliminary evaluations.

8. Transportation Impact Fees

The City has interlocal agreements with the County and WSDOT for transportation impact fees. These transportation impact fees are based on the area wide traffic mitigation fee or actual impacts to improvement projects.

8.1. City of Marysville

The City traffic mitigation fees have been calculated using the commercial rates of $2,220 per PM peak-hour trip. The Development will generate 55 new PM peak-hour trips. The City traffic mitigation fees for the Development should therefore be $122,100.00.

8.2. Snohomish County

The City and County have an interlocal agreement that provides for the payment of traffic mitigation for impacts to County roadways by City developments. Traffic mitigation fees are based on predetermined area impacts or impacts to actual improvement projects. There are not any County projects listed in the Transportation Needs Report that are anticipated to be impacted by three directional PM peak-hour trips generated by the Development. County traffic mitigation fees should therefore not be required for the Development.

[3] The collision rate is based on Million Entering Vehicles.

8.3. Washington State Department of Transportation

The WSDOT mitigation fees are based on impacts to improvement projects identified in the Exhibit C List included in the interlocal agreement between the County and WSDOT. There are not any WSDOT intersections on the Exhibit C List that will be impacted by three directional PM peak-hour trips generated by the Development. WSDOT transportation impact fees should therefore not be required for the Development.

9. CONCLUSIONS

The Development is proposed to consist of 12 pump stations and a convenience store. The site is currently listed as unoccupied. The Development is anticipated to generate approximately 795 new ADTs with approximately 55 new PM peak-hour trips. The City traffic mitigation fees for the Development should therefore be $122,100.00. Additional discussions with City staff will be required to determine if additional fees or improvements are required for impacts to the intersections of 67th Avenue NE at 100th Street NE and 108th Street NE. Neither County nor WSDOT traffic mitigation fees should be required for the Development.

APPENDIX A

TRIP GENERATION CALCULATIONS

67th Ave Gas Station
KH #090223182

Trip Generation for: **Weekday**
(a.k.a.): **Average Weekday Daily Trips (AWDT)**

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Convenience Store/Gas Station (2-4k GFA)	12 units	945	265.12	50%	50%	3181	0%	0	3181	75%	2386	0%	0	795	1193	1193	0	0	398	397
Total						3181		0	3181		2386		0	795	1193	1193	0	0	398	397

67th Ave Gas Station
KH #090223182

Trip Generation for: **Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 4 and 6 PM**
(a.k.a.): **Weekday PM Peak Hour**

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Convenience Store/Gas Station (2-4k GFA)	12 units	945	18.42	50%	50%	221	0%	0	221	75%	166	0%	0	55	83	83	0	0	28	27
Total						221		0	221		166		0	55	83	83	0	0	28	27

APPENDIX B

DISTRIBUTION DATA

136TH ST INDUSTRIAL - EXISTING

City of Marysville

November 2017

- Marysville City Limits
- Other City Limits
- Urban Growth Boundary
- Tulalip Reservation
- Parks and open space
- Interstate Highway
- State Highway
- Arterial
- Schools

N

0 2,000 4,000 6,000 Feet

produced by City of Marysville GIS

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136TH ST INDUSTRIAL - HORIZON

N

City of Marysville

City Limits
City of Marysville Urban Growth Area
Tulalip Reservation
Park
City Park

Fire Station
Police Station
School
Street
Burlington Norther RR
Trails

Marysville Street Classification
Interstate
State Highway
Principal Arterial
Minor Arterial
Collector Arterial
Future Arterial

0 1,250 2,500 5,000 7,500 10,000 Feet

Map Plotted: May, 2018

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87TH AVE NORTH - EXISTING

City of Marysville

November 2017

- Marysville City Limits
- Other City Limits
- Urban Growth Boundary
- Tulalip Reservation
- Parks and open space
- Interstate Highway
- State Highway
- Arterial
- Schools

N

0 2,000 4,000 6,000 Feet

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87TH AVE NORTH - HORIZON

N

City of Marysville

City Limits
City of Marysville Urban Growth Area
Tulalip Reservation
Park
City Park

Fire Station
Police Station
School
Street
Burlington Norther RR
Trails

Marysville Street Classification
Interstate
State Highway
Principal Arterial
Minor Arterial
Collector Arterial
Future Arterial

0 1,250 2,500 5,000 7,500 10,000 Feet

Map Plotted: May, 2018

CITY OF Marysville WASHINGTON

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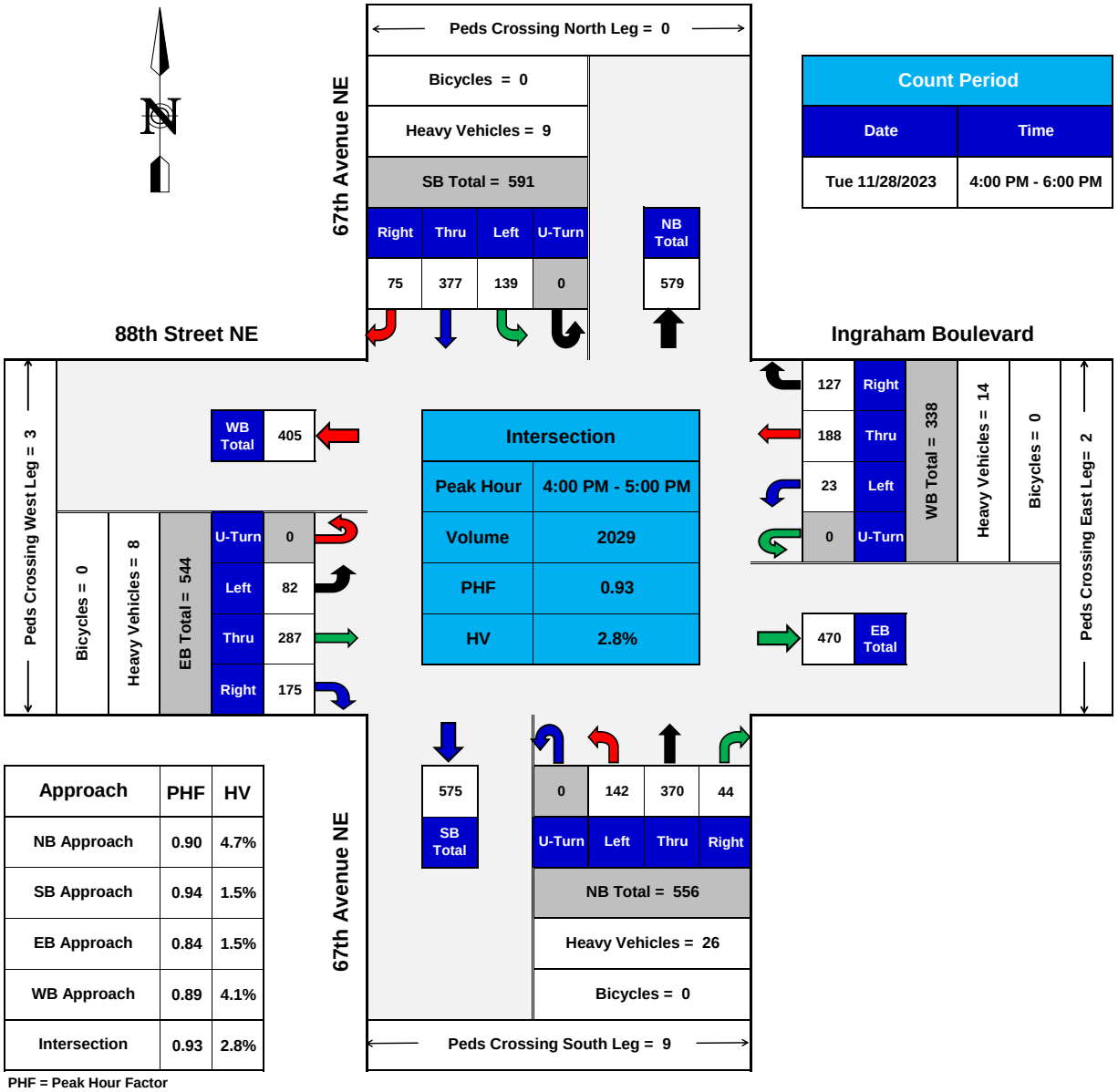
APPENDIX C

COUNT DATA

67th Avenue NE @ 88th Street NE

Marysville, WA



Count Period	
Date	Time
Tue 11/28/2023	4:00 PM - 6:00 PM

Approach	PHF	HV
NB Approach	0.90	4.7%
SB Approach	0.94	1.5%
EB Approach	0.84	1.5%
WB Approach	0.89	4.1%
Intersection	0.93	2.8%

PHF = Peak Hour Factor
HV = Heavy Vehicles

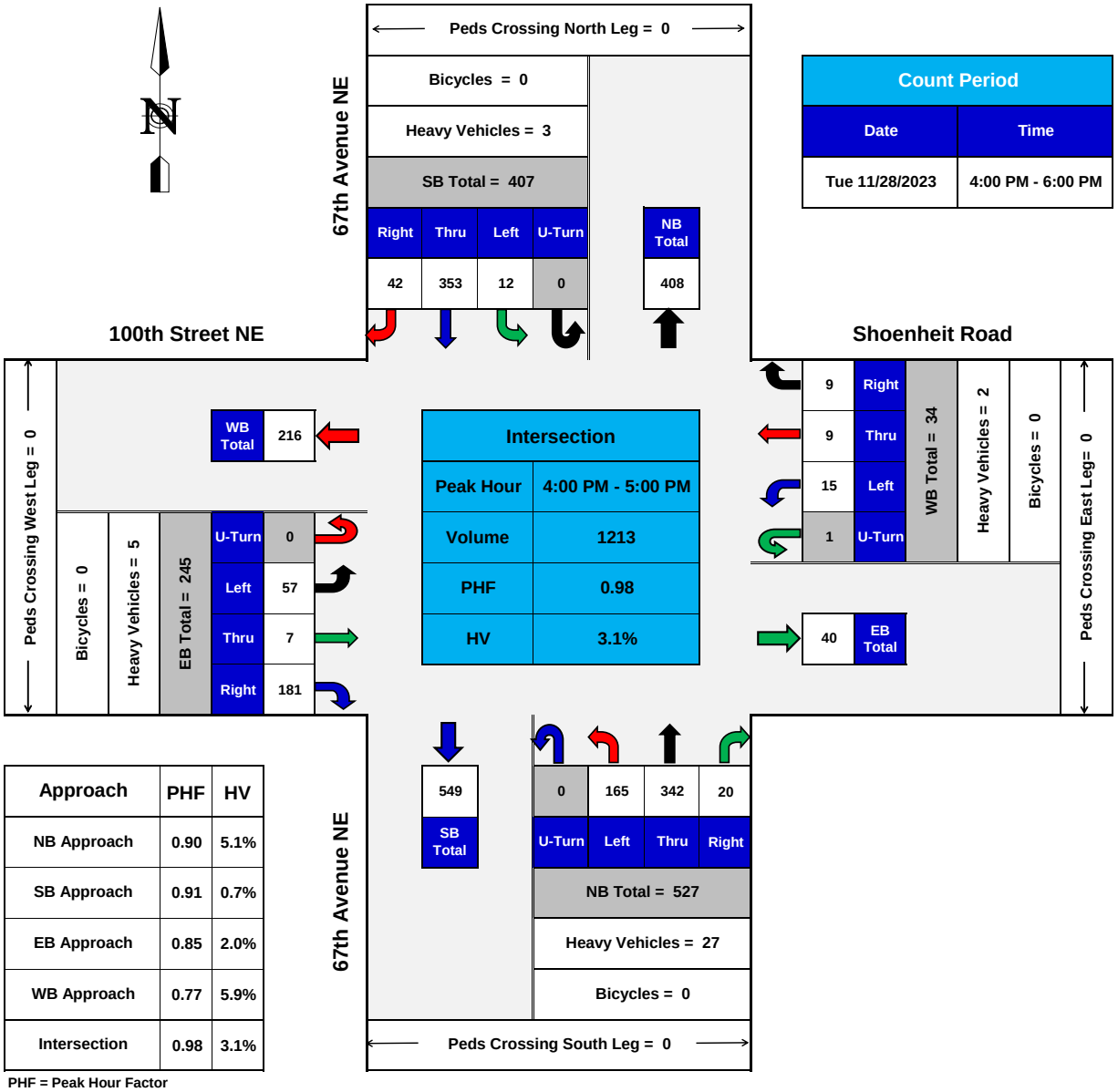
TURNING MOVEMENTS DIAGRAM

PEAK HOUR SUMMARY

TRAFFIC DATA GATHERING

67th Avenue NE @ 100th Street NE

Marysville, WA



Approach	PHF	HV
NB Approach	0.90	5.1%
SB Approach	0.91	0.7%
EB Approach	0.85	2.0%
WB Approach	0.77	5.9%
Intersection	0.98	3.1%

PHF = Peak Hour Factor
HV = Heavy Vehicles

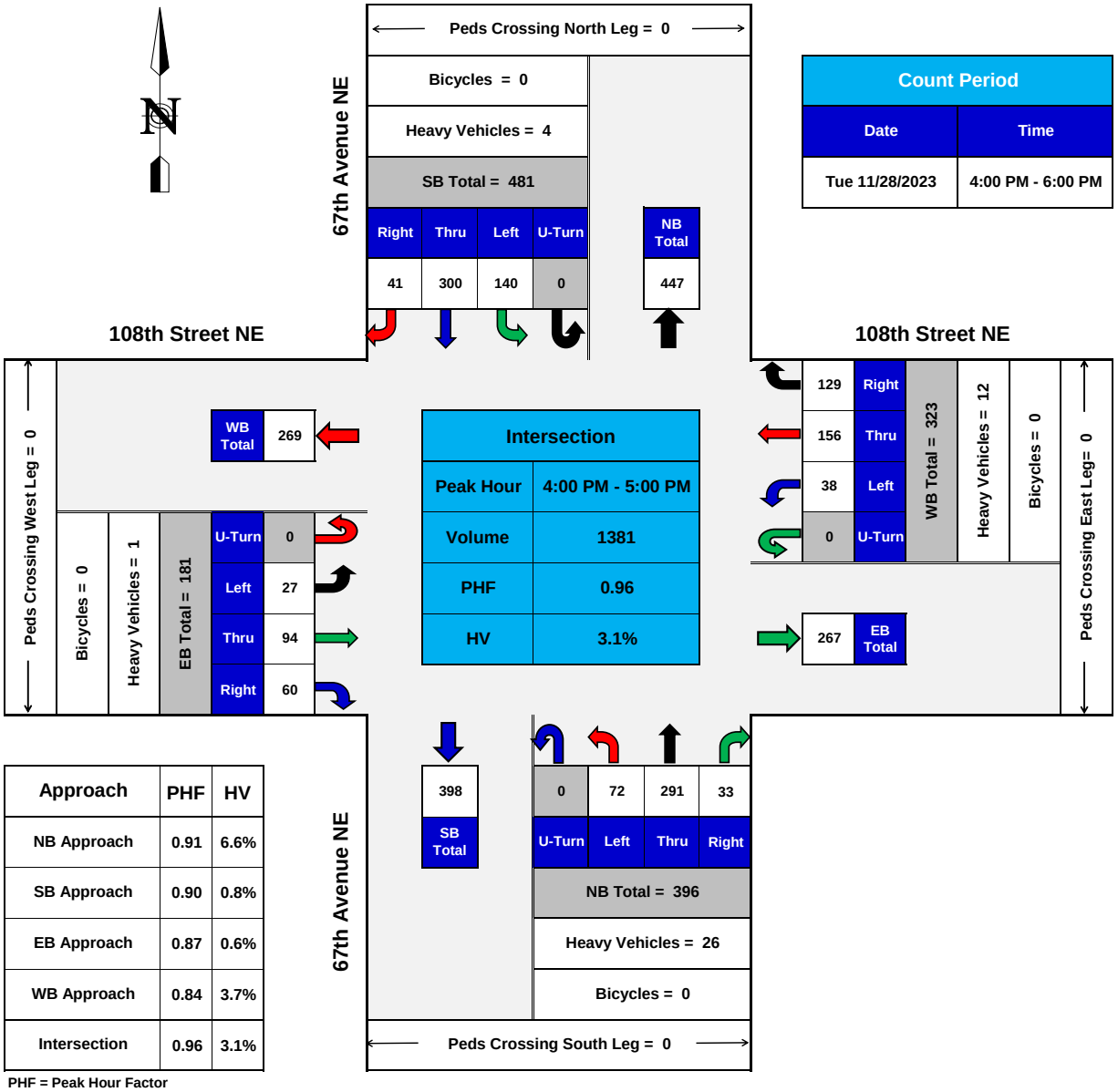
TURNING MOVEMENTS DIAGRAM

PEAK HOUR SUMMARY

TRAFFIC DATA GATHERING

67th Avenue NE @ 108th Street NE

Marysville, WA



Count Period	
Date	Time
Tue 11/28/2023	4:00 PM - 6:00 PM

Approach	PHF	HV
NB Approach	0.91	6.6%
SB Approach	0.90	0.8%
EB Approach	0.87	0.6%
WB Approach	0.84	3.7%
Intersection	0.96	3.1%

PHF = Peak Hour Factor
HV = Heavy Vehicles

TURNING MOVEMENTS DIAGRAM

PEAK HOUR SUMMARY

TRAFFIC DATA GATHERING

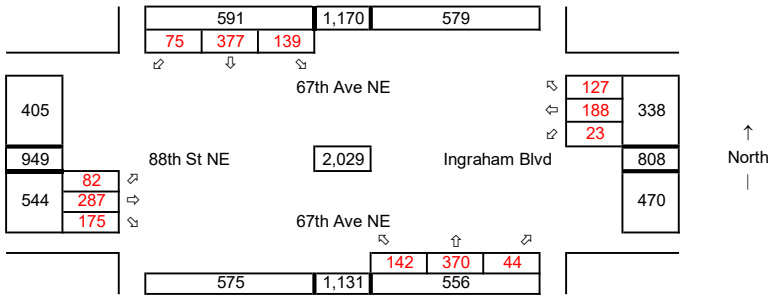
APPENDIX D

TURNING MOVEMENT CALCULATIONS

Synchro ID: 1
Existing
Average Weekday
PM Peak-Hour

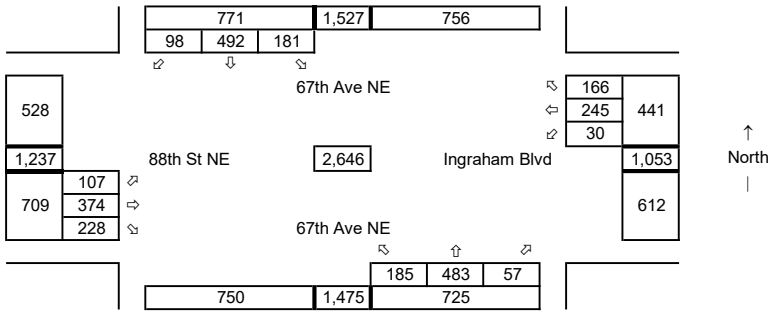
Year: **11/28/2023**

Data Source: **TDG**

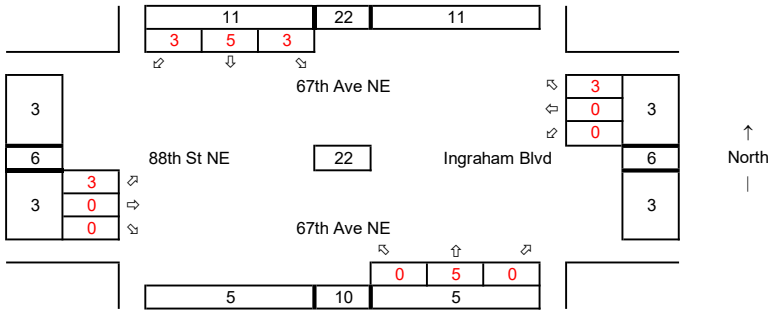


Future without Development
Average Weekday
PM Peak-Hour

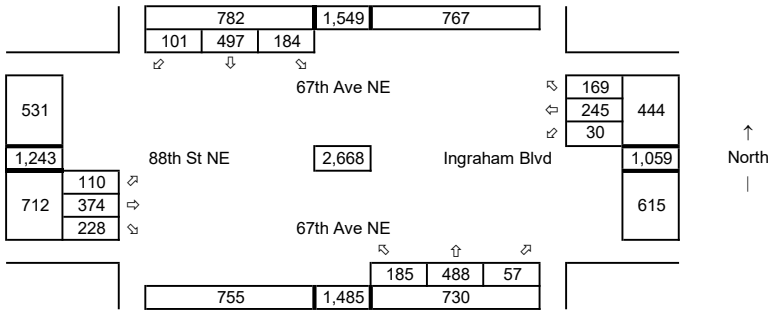
Year: 2032
Growth Rate = 3.0%
Years of Growth = 9
Total Growth = 1.3048



Total Development Trips
Average Weekday
PM Peak-Hour



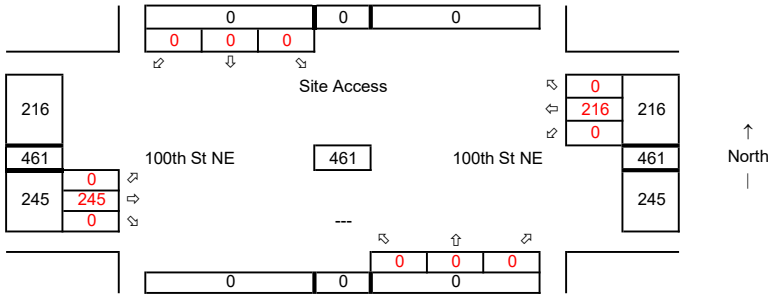
Future with Development
Average Weekday
PM Peak-Hour



Synchro ID: 2
Existing
Average Weekday
PM Peak-Hour

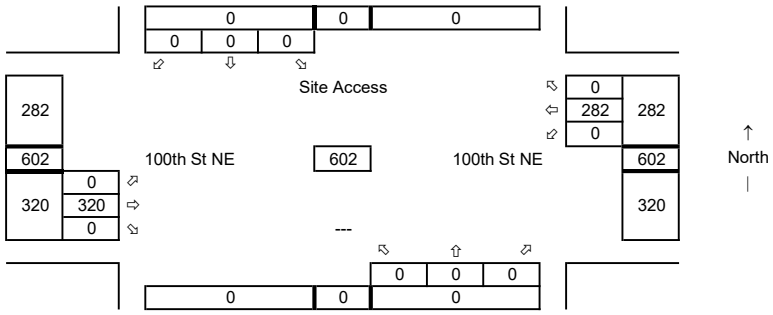
Year: **11/28/2023**

Data Source: **TDG**

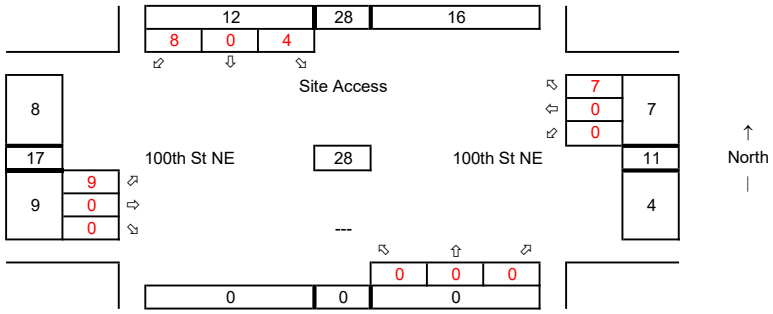


Future without Development
Average Weekday
PM Peak-Hour

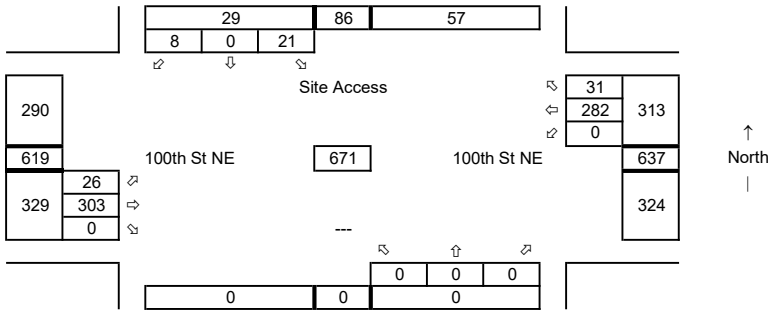
Year: 2032
Growth Rate = 3.0%
Years of Growth = 9
Total Growth = 1.3048



Total Development Trips
Average Weekday
PM Peak-Hour



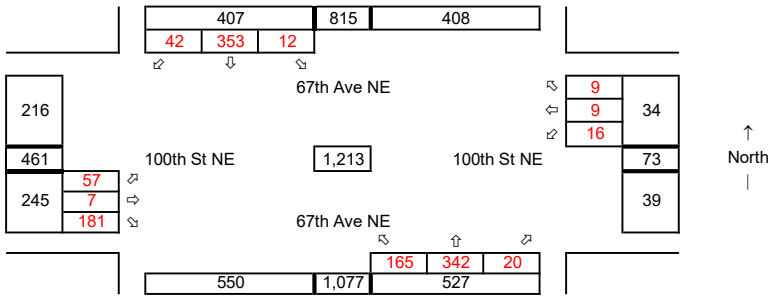
Future with Development
Average Weekday
PM Peak-Hour



Synchro ID: 3
Existing
Average Weekday
PM Peak-Hour

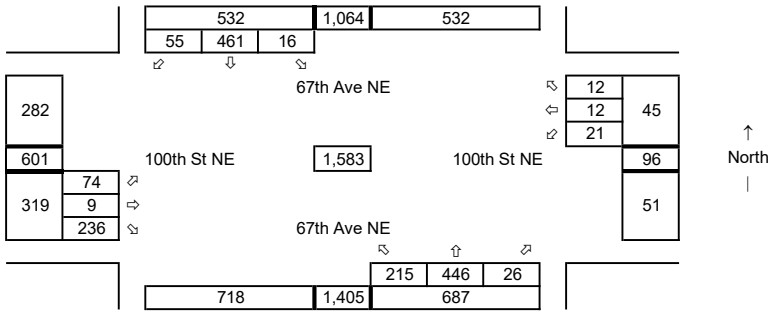
Year: **11/28/2023**

Data Source: **TDG**

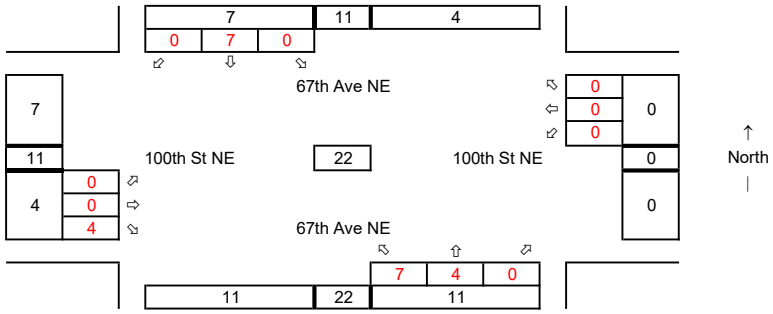


Future without Development
Average Weekday
PM Peak-Hour

Year: 2032
Growth Rate = 3.0%
Years of Growth = 9
Total Growth = 1.3048



Total Development Trips
Average Weekday
PM Peak-Hour

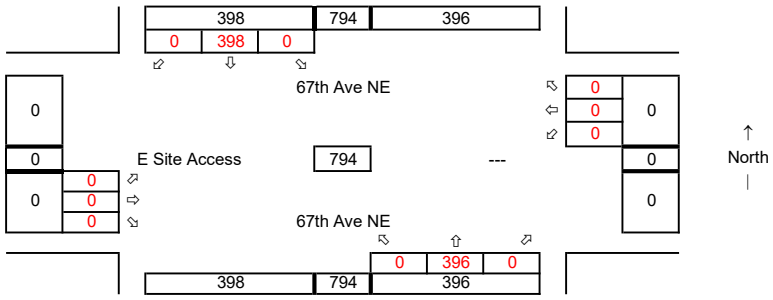


Future with Development
Average Weekday
PM Peak-Hour

Synchro ID: 4
Existing
Average Weekday
PM Peak-Hour

Year: **11/28/2023**

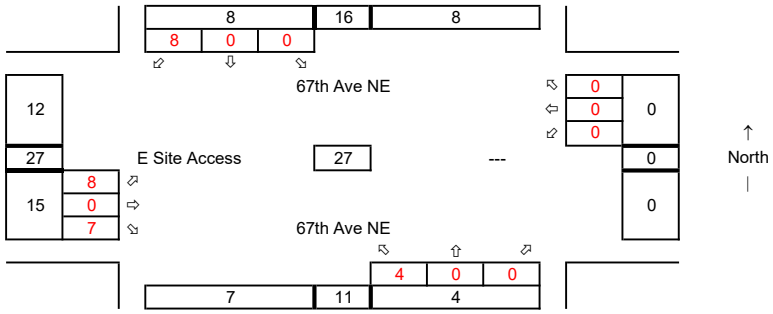
Data Source: **TDG**



Future without Development
Average Weekday
PM Peak-Hour

Year: 2032
Growth Rate = 3.0%
Years of Growth = 9
Total Growth = 1.3048

Total Development Trips
Average Weekday
PM Peak-Hour

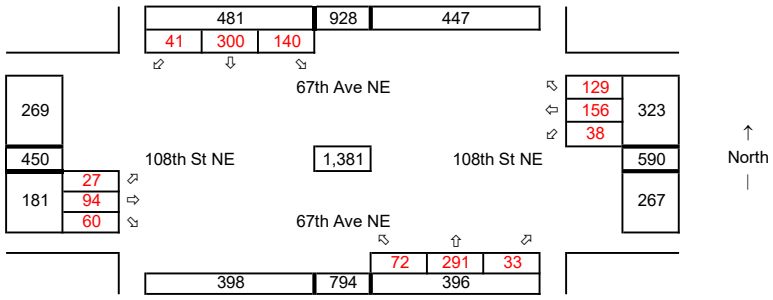


Future with Development
Average Weekday
PM Peak-Hour

Synchro ID: 5
Existing
Average Weekday
PM Peak-Hour

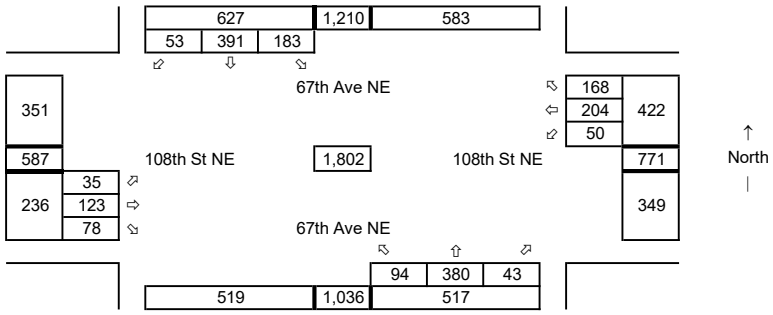
Year: **11/28/2023**

Data Source: **TDG**

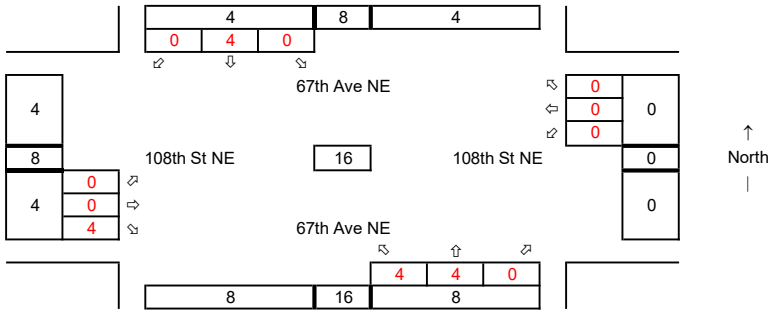


Future without Development
Average Weekday
PM Peak-Hour

Year: 2032
Growth Rate = 3.0%
Years of Growth = 9
Total Growth = 1.3048



Total Development Trips
Average Weekday
PM Peak-Hour

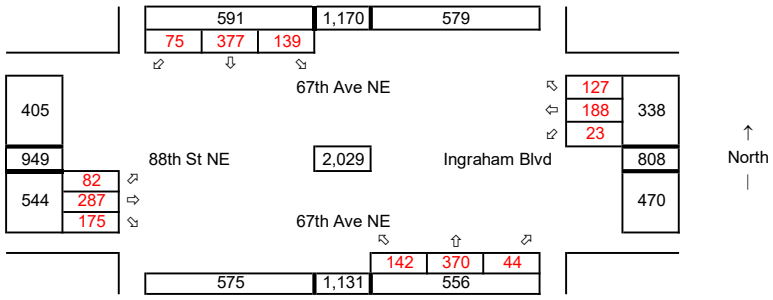


Future with Development
Average Weekday
PM Peak-Hour

Synchro ID: 1
Existing
Average Weekday
PM Peak-Hour

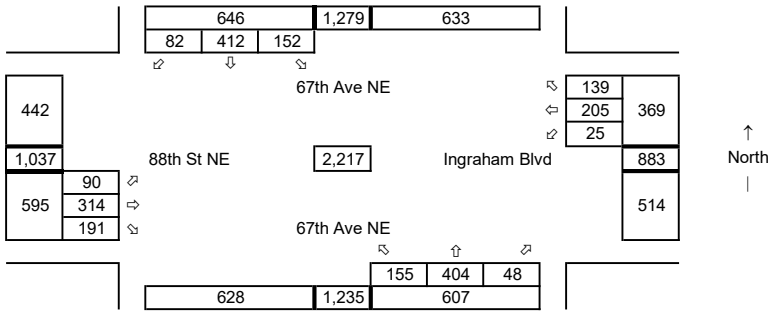
Year: **11/28/2023**

Data Source: **TDG**

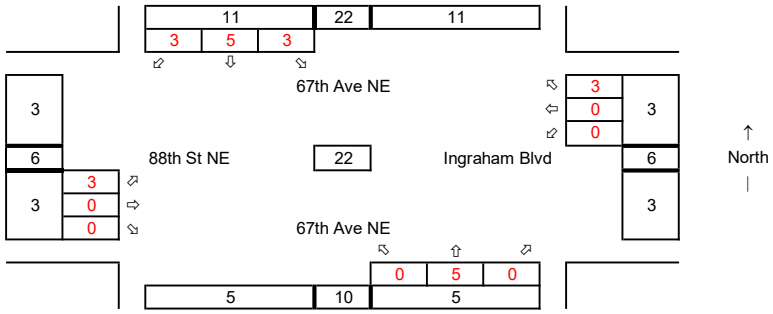


Future without Development
Average Weekday
PM Peak-Hour

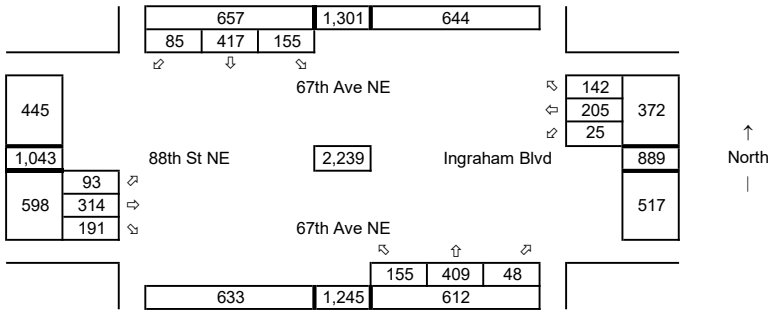
Year: 2026
Growth Rate = 3.0%
Years of Growth = 3
Total Growth = 1.0927



Total Development Trips
Average Weekday
PM Peak-Hour



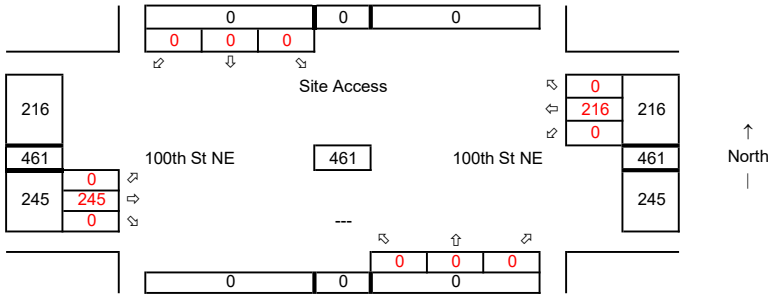
Future with Development
Average Weekday
PM Peak-Hour



Synchro ID: 2
Existing
Average Weekday
PM Peak-Hour

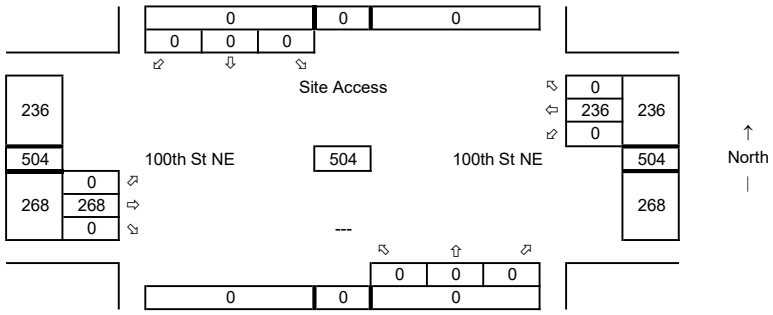
Year: **11/28/2023**

Data Source: **TDG**

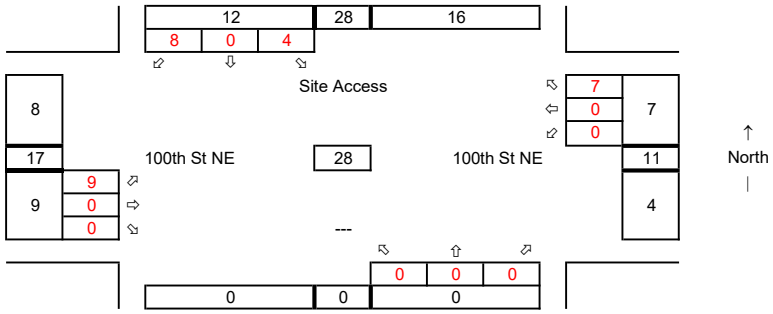


Future without Development
Average Weekday
PM Peak-Hour

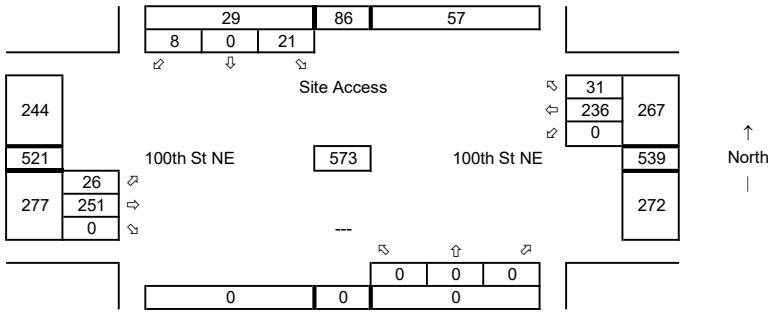
Year: 2026
Growth Rate = 3.0%
Years of Growth = 3
Total Growth = 1.0927



Total Development Trips
Average Weekday
PM Peak-Hour



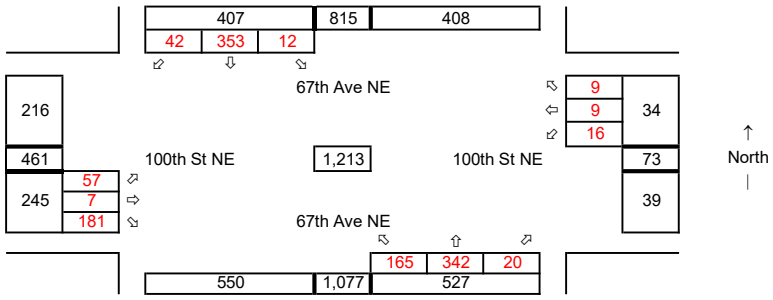
Future with Development
Average Weekday
PM Peak-Hour



Synchro ID: 3
Existing
Average Weekday
PM Peak-Hour

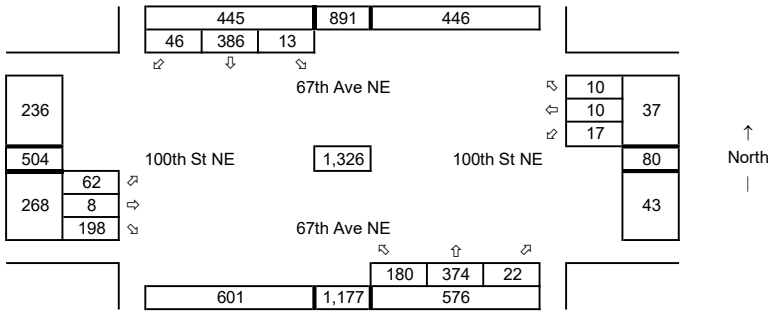
Year: **11/28/2023**

Data Source: **TDG**

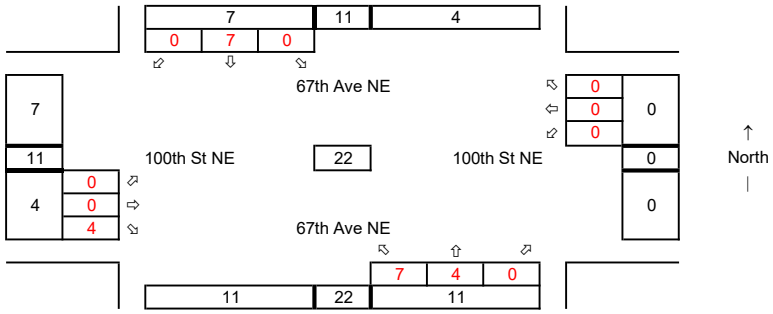


Future without Development
Average Weekday
PM Peak-Hour

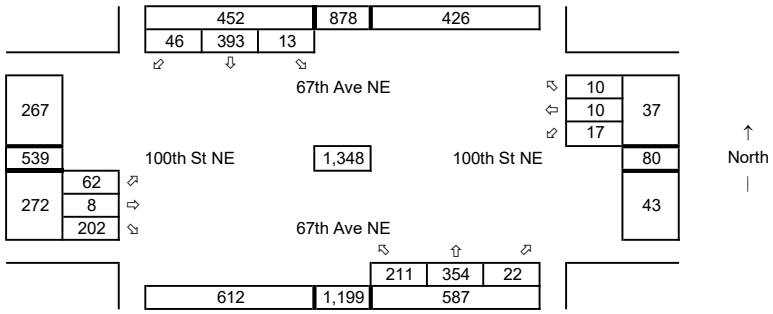
Year: 2026
Growth Rate = 3.0%
Years of Growth = 3
Total Growth = 1.0927



Total Development Trips
Average Weekday
PM Peak-Hour



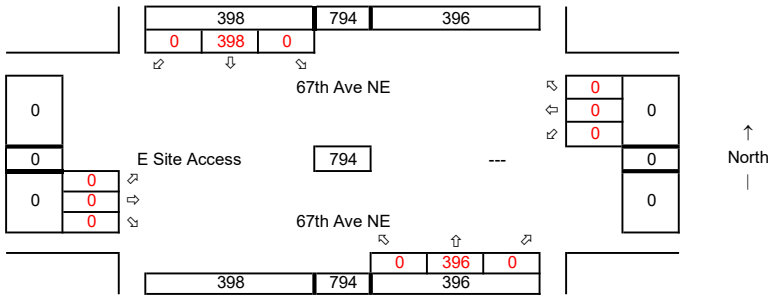
Future with Development
Average Weekday
PM Peak-Hour



Synchro ID: 4
Existing
Average Weekday
PM Peak-Hour

Year: **11/28/2023**

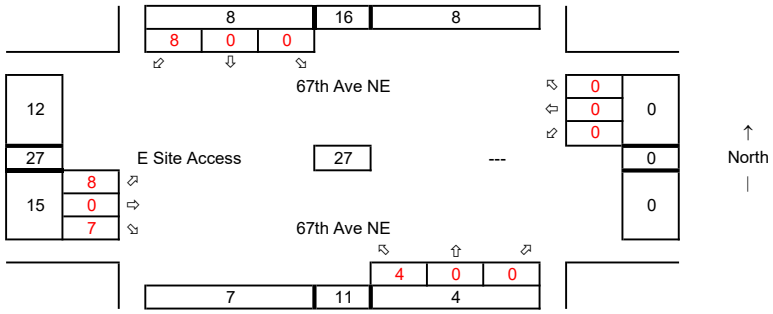
Data Source: **TDG**



Future without Development
Average Weekday
PM Peak-Hour

Year: 2026
Growth Rate = 3.0%
Years of Growth = 3
Total Growth = 1.0927

Total Development Trips
Average Weekday
PM Peak-Hour

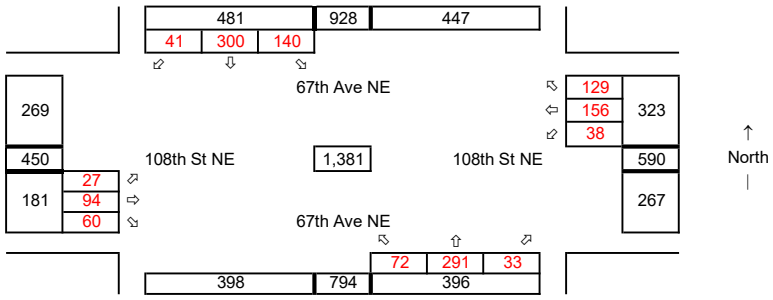


Future with Development
Average Weekday
PM Peak-Hour

Synchro ID: 5
Existing
Average Weekday
PM Peak-Hour

Year: **11/28/2023**

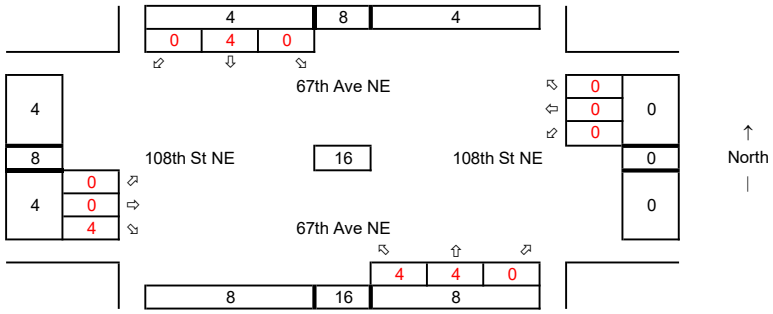
Data Source: **TDG**



Future without Development
Average Weekday
PM Peak-Hour

Year: 2026
Growth Rate = 3.0%
Years of Growth = 3
Total Growth = 1.0927

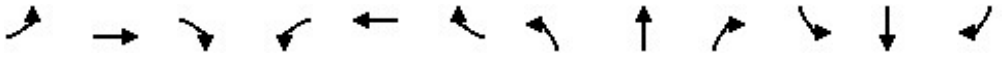
Total Development Trips
Average Weekday
PM Peak-Hour



Future with Development
Average Weekday
PM Peak-Hour

APPENDIX E

LEVEL OF SERVICE CALCULATIONS

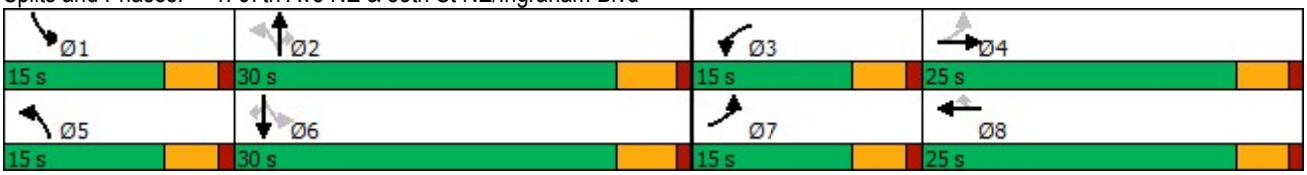


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	287	175	23	188	127	142	370	44	139	377	75
Future Volume (vph)	82	287	175	23	188	127	142	370	44	139	377	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	360		1000	175		230	130		230
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99		0.99			1.00		0.99	1.00		0.99
Frt		0.943				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3263	0	1752	1845	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.454			0.950			0.307			0.332		
Satd. Flow (perm)	837	3263	0	1740	1845	1568	566	1845	1546	612	1845	1545
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		142				141			135			135
Link Speed (mph)		20			35			35			20	
Link Distance (ft)		3597			3125			2176			3823	
Travel Time (s)		122.6			60.9			42.4			130.3	
Confl. Peds. (#/hr)			9	9			3		2	2		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	497	0	25	202	137	153	398	47	149	405	81
Turn Type	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4					8	2		2	6		6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Minimum Split (s)	9.5	32.5		9.5	33.5	33.5	9.5	34.0	34.0	9.5	33.0	33.0
Total Split (s)	15.0	25.0		15.0	25.0	25.0	15.0	30.0	30.0	15.0	30.0	30.0
Total Split (%)	17.6%	29.4%		17.6%	29.4%	29.4%	17.6%	35.3%	35.3%	17.6%	35.3%	35.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	5.0	5.0	4.5	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	21.0	18.2		6.5	13.0	13.0	26.9	20.2	20.2	26.4	20.0	20.0
Actuated g/C Ratio	0.34	0.29		0.10	0.21	0.21	0.43	0.32	0.32	0.42	0.32	0.32
v/c Ratio	0.22	0.47		0.14	0.52	0.31	0.37	0.66	0.08	0.37	0.69	0.14
Control Delay	16.9	16.7		34.7	31.5	7.2	13.2	27.6	0.2	13.2	28.6	1.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	16.7		34.7	31.5	7.2	13.2	27.6	0.2	13.2	28.6	1.6
LOS	B	B		C	C	A	B	C	A	B	C	A
Approach Delay		16.7			22.6			21.7			21.5	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	24	54		10	78	0	32	142	0	31	148	0
Queue Length 95th (ft)	57	129		36	155	41	76	284	0	75	#292	10
Internal Link Dist (ft)		3517			3045			2096			3743	
Turn Bay Length (ft)	230			360		1000	175		230	130		230

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	491	1393		347	714	693	493	873	802	502	871	800
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.36		0.07	0.28	0.20	0.31	0.46	0.06	0.30	0.46	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 62.2			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 64.0%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: 67th Ave NE & 88th St NE/Ingraham Blvd

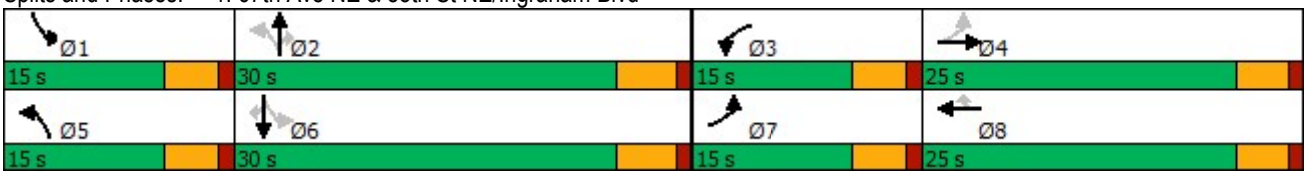


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	314	191	25	205	139	155	404	48	152	412	82
Future Volume (vph)	90	314	191	25	205	139	155	404	48	152	412	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	360		1000	175		230	130		230
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99		0.99			1.00		0.99	1.00		0.99
Frt		0.943				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3263	0	1752	1845	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.418			0.950			0.269			0.290		
Satd. Flow (perm)	771	3263	0	1741	1845	1568	496	1845	1546	535	1845	1545
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		141				149			135			135
Link Speed (mph)		20			35			35			20	
Link Distance (ft)		3597			3125			2176			3823	
Travel Time (s)		122.6			60.9			42.4			130.3	
Confl. Peds. (#/hr)			9	9			3		2	2		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	543	0	27	220	149	167	434	52	163	443	88
Turn Type	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4					8	2		2	6		6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Minimum Split (s)	9.5	32.5		9.5	33.5	33.5	9.5	34.0	34.0	9.5	33.0	33.0
Total Split (s)	15.0	25.0		15.0	25.0	25.0	15.0	30.0	30.0	15.0	30.0	30.0
Total Split (%)	17.6%	29.4%		17.6%	29.4%	29.4%	17.6%	35.3%	35.3%	17.6%	35.3%	35.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	5.0	5.0	4.5	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	22.4	19.4		6.6	14.1	14.1	29.1	22.2	22.2	28.6	21.9	21.9
Actuated g/C Ratio	0.34	0.30		0.10	0.21	0.21	0.44	0.34	0.34	0.44	0.33	0.33
v/c Ratio	0.25	0.51		0.15	0.56	0.33	0.43	0.70	0.09	0.42	0.72	0.15
Control Delay	17.5	17.9		36.2	32.8	7.4	14.6	29.8	0.3	14.5	31.0	2.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	17.9		36.2	32.8	7.4	14.6	29.8	0.3	14.5	31.0	2.1
LOS	B	B		D	C	A	B	C	A	B	C	A
Approach Delay		17.9			23.5			23.6			23.5	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	30	69		12	94	0	37	165	0	36	172	0
Queue Length 95th (ft)	62	145		39	169	45	87	#358	0	85	#371	13
Internal Link Dist (ft)		3517			3045			2096			3743	
Turn Bay Length (ft)	230			360		1000	175		230	130		230

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	464	1350		325	669	663	461	819	761	470	816	758
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.40		0.08	0.33	0.22	0.36	0.53	0.07	0.35	0.54	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 65.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 22.0		Intersection LOS: C	
Intersection Capacity Utilization 67.3%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: 67th Ave NE & 88th St NE/Ingraham Blvd



Intersection	
Intersection Delay, s/veh	19.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Future Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	202	17	10	10	184	382	22	13	394	47
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	14.8	11.1	19.2	23.9
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	23%	46%	3%
Vol Thru, %	0%	94%	3%	27%	87%
Vol Right, %	0%	6%	74%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	396	268	37	445
LT Vol	180	0	62	17	13
Through Vol	0	374	8	10	386
RT Vol	0	22	198	10	46
Lane Flow Rate	184	404	273	38	454
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.344	0.695	0.472	0.078	0.739
Departure Headway (Hd)	6.739	6.19	6.216	7.463	5.86
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	531	582	574	483	613
Service Time	4.522	3.973	4.306	5.463	3.939
HCM Lane V/C Ratio	0.347	0.694	0.476	0.079	0.741
HCM Control Delay	13.1	22	14.8	11.1	23.9
HCM Lane LOS	B	C	B	B	C
HCM 95th-tile Q	1.5	5.5	2.5	0.3	6.4

Intersection	
Intersection Delay, s/veh	33.9
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	103	66	42	170	141	79	318	36	153	328	45
Future Vol, veh/h	30	103	66	42	170	141	79	318	36	153	328	45
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	31	107	69	44	177	147	82	331	38	159	342	47
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	19.7	34.9	36.2	36.8
HCM LOS	C	D	E	E

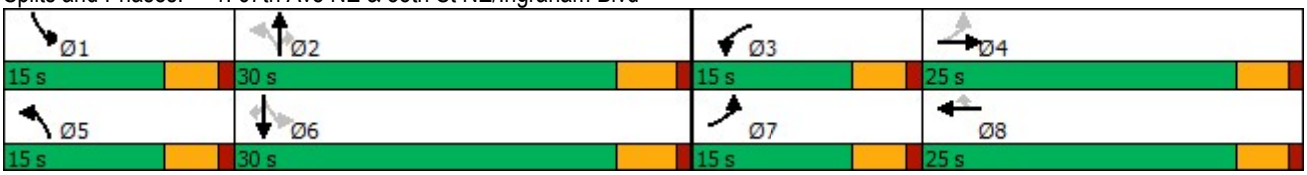
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	15%	12%	100%	0%
Vol Thru, %	0%	90%	52%	48%	0%	88%
Vol Right, %	0%	10%	33%	40%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	354	199	353	153	373
LT Vol	79	0	30	42	153	0
Through Vol	0	318	103	170	0	328
RT Vol	0	36	66	141	0	45
Lane Flow Rate	82	369	207	368	159	389
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.201	0.838	0.491	0.794	0.383	0.869
Departure Headway (Hd)	8.779	8.185	8.527	7.77	8.662	8.056
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	407	443	421	463	414	447
Service Time	6.558	5.965	6.625	5.846	6.445	5.838
HCM Lane V/C Ratio	0.201	0.833	0.492	0.795	0.384	0.87
HCM Control Delay	13.8	41.2	19.7	34.9	16.8	45
HCM Lane LOS	B	E	C	D	C	E
HCM 95th-tile Q	0.7	8.1	2.6	7.2	1.8	8.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	374	228	30	245	166	185	483	57	181	492	98
Future Volume (vph)	107	374	228	30	245	166	185	483	57	181	492	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	360		1000	175		230	130		230
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99		0.99			1.00		0.99	1.00		0.99
Frt		0.943				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3263	0	1752	1845	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.329			0.950			0.160			0.178		
Satd. Flow (perm)	607	3263	0	1743	1845	1568	295	1845	1546	328	1845	1545
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		142				178			135			135
Link Speed (mph)		20			35			35			20	
Link Distance (ft)		3597			3125			2176			3823	
Travel Time (s)		122.6			60.9			42.4			130.3	
Confl. Peds. (#/hr)			9	9			3		2	2		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	647	0	32	263	178	199	519	61	195	529	105
Turn Type	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4					8	2		2	6		6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Minimum Split (s)	9.5	32.5		9.5	33.5	33.5	9.5	34.0	34.0	9.5	33.0	33.0
Total Split (s)	15.0	25.0		15.0	25.0	25.0	15.0	30.0	30.0	15.0	30.0	30.0
Total Split (%)	17.6%	29.4%		17.6%	29.4%	29.4%	17.6%	35.3%	35.3%	17.6%	35.3%	35.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	5.0	5.0	4.5	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	24.8	21.3		6.2	15.6	15.6	34.3	25.0	25.0	33.9	24.7	24.7
Actuated g/C Ratio	0.34	0.29		0.08	0.21	0.21	0.47	0.34	0.34	0.46	0.34	0.34
v/c Ratio	0.35	0.62		0.22	0.67	0.38	0.64	0.83	0.10	0.62	0.85	0.17
Control Delay	19.2	21.1		38.6	37.6	7.1	23.5	39.0	0.3	21.5	41.3	3.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.2	21.1		38.6	37.6	7.1	23.5	39.0	0.3	21.5	41.3	3.3
LOS	B	C		D	D	A	C	D	A	C	D	A
Approach Delay		20.8			26.2			32.0			31.8	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	36	94		15	119	0	50	231	0	49	239	0
Queue Length 95th (ft)	71	184		43	203	49	#131	#468	0	108	#480	23
Internal Link Dist (ft)		3517			3045			2096			3743	
Turn Bay Length (ft)	230			360		1000	175		230	130		230

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	374	1160		257	529	577	359	648	631	370	645	628
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.56		0.12	0.50	0.31	0.55	0.80	0.10	0.53	0.82	0.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 73.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 28.0		Intersection LOS: C	
Intersection Capacity Utilization 75.1%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: 67th Ave NE & 88th St NE/Ingraham Blvd



Intersection	
Intersection Delay, s/veh	41.6
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Future Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	241	21	12	12	219	455	27	16	470	56
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	20.9	12.7	39.1	59.6
HCM LOS	C	B	E	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	23%	47%	3%
Vol Thru, %	0%	94%	3%	27%	87%
Vol Right, %	0%	6%	74%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	472	319	45	532
LT Vol	215	0	74	21	16
Through Vol	0	446	9	12	461
RT Vol	0	26	236	12	55
Lane Flow Rate	219	482	326	46	543
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.455	0.926	0.626	0.11	0.982
Departure Headway (Hd)	7.472	6.92	6.92	8.661	6.512
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	480	520	521	416	554
Service Time	5.241	4.689	4.979	6.661	4.571
HCM Lane V/C Ratio	0.456	0.927	0.626	0.111	0.98
HCM Control Delay	16.4	49.5	20.9	12.7	59.6
HCM Lane LOS	C	E	C	B	F
HCM 95th-tile Q	2.3	11.2	4.3	0.4	13.6

Intersection	
Intersection Delay, s/veh	81.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	123	78	50	204	168	94	380	43	183	391	53
Future Vol, veh/h	35	123	78	50	204	168	94	380	43	183	391	53
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	36	128	81	52	213	175	98	396	45	191	407	55
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	30	85.1	88.8	92.6
HCM LOS	D	F	F	F

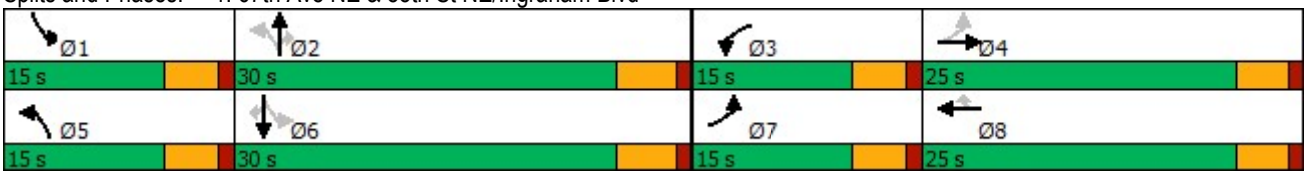
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	15%	12%	100%	0%
Vol Thru, %	0%	90%	52%	48%	0%	88%
Vol Right, %	0%	10%	33%	40%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	423	236	422	183	444
LT Vol	94	0	35	50	183	0
Through Vol	0	380	123	204	0	391
RT Vol	0	43	78	168	0	53
Lane Flow Rate	98	441	246	440	191	462
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.259	1.095	0.647	1.035	0.503	1.145
Departure Headway (Hd)	10.019	9.419	10.171	8.998	10	9.387
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	360	388	356	409	362	389
Service Time	7.719	7.119	8.171	6.998	7.7	7.087
HCM Lane V/C Ratio	0.272	1.137	0.691	1.076	0.528	1.188
HCM Control Delay	16.2	104.9	30	85.1	22.4	121.5
HCM Lane LOS	C	F	D	F	C	F
HCM 95th-tile Q	1	15	4.3	13.4	2.7	16.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	314	191	25	205	142	155	409	48	155	417	85
Future Volume (vph)	93	314	191	25	205	142	155	409	48	155	417	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	360		1000	175		230	130		230
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99		0.99			1.00		0.99	1.00		0.99
Frt		0.943				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3263	0	1752	1845	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.415			0.950			0.263			0.282		
Satd. Flow (perm)	766	3263	0	1741	1845	1568	485	1845	1546	520	1845	1545
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		141				153			135			135
Link Speed (mph)		20			35			35			20	
Link Distance (ft)		3597			3125			2176			3823	
Travel Time (s)		122.6			60.9			42.4			130.3	
Confl. Peds. (#/hr)			9	9			3		2	2		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	100	543	0	27	220	153	167	440	52	167	448	91
Turn Type	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4					8	2		2	6		6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Minimum Split (s)	9.5	32.5		9.5	33.5	33.5	9.5	34.0	34.0	9.5	33.0	33.0
Total Split (s)	15.0	25.0		15.0	25.0	25.0	15.0	30.0	30.0	15.0	30.0	30.0
Total Split (%)	17.6%	29.4%		17.6%	29.4%	29.4%	17.6%	35.3%	35.3%	17.6%	35.3%	35.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	5.0	5.0	4.5	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	22.5	19.5		6.6	14.1	14.1	29.2	22.3	22.3	28.8	22.1	22.1
Actuated g/C Ratio	0.34	0.30		0.10	0.21	0.21	0.44	0.34	0.34	0.44	0.34	0.34
v/c Ratio	0.26	0.51		0.16	0.56	0.34	0.43	0.71	0.08	0.43	0.72	0.15
Control Delay	17.6	17.9		36.3	33.0	7.4	14.8	30.3	0.3	14.8	31.3	2.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	17.9		36.3	33.0	7.4	14.8	30.3	0.3	14.8	31.3	2.3
LOS	B	B		D	C	A	B	C	A	B	C	A
Approach Delay		17.8			23.4			24.0			23.7	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	31	69		12	94	0	37	169	0	37	175	0
Queue Length 95th (ft)	63	145		39	170	45	87	#369	0	87	#379	15
Internal Link Dist (ft)		3517			3045			2096			3743	
Turn Bay Length (ft)	230			360		1000	175		230	130		230

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	462	1350		323	665	663	457	814	757	465	812	755
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.40		0.08	0.33	0.23	0.37	0.54	0.07	0.36	0.55	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 65.8			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 22.2		Intersection LOS: C	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: 67th Ave NE & 88th St NE/Ingraham Blvd



Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		Y	
Traffic Vol, veh/h	26	251	236	31	21	8
Future Vol, veh/h	26	251	236	31	21	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	273	257	34	23	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	291	0	-	0	603	274
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	329	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1271	-	-	-	462	765
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	729	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1271	-	-	-	450	765
Mov Cap-2 Maneuver	-	-	-	-	450	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	729	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1271	-	-	-	508
HCM Lane V/C Ratio	0.022	-	-	-	0.062
HCM Control Delay (s)	7.9	-	-	-	12.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	19.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	202	17	10	10	211	354	22	13	393	46
Future Vol, veh/h	62	8	202	17	10	10	211	354	22	13	393	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	206	17	10	10	215	361	22	13	401	47
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	15	11.2	18.2	24.9
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	23%	46%	3%
Vol Thru, %	0%	94%	3%	27%	87%
Vol Right, %	0%	6%	74%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	211	376	272	37	452
LT Vol	211	0	62	17	13
Through Vol	0	354	8	10	393
RT Vol	0	22	202	10	46
Lane Flow Rate	215	384	278	38	461
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.405	0.663	0.481	0.079	0.753
Departure Headway (Hd)	6.771	6.22	6.233	7.509	5.879
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	528	576	575	480	609
Service Time	4.56	4.009	4.325	5.509	3.963
HCM Lane V/C Ratio	0.407	0.667	0.483	0.079	0.757
HCM Control Delay	14.2	20.5	15	11.2	24.9
HCM Lane LOS	B	C	B	B	C
HCM 95th-tile Q	1.9	4.9	2.6	0.3	6.7

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	36	17	396	406	37
Future Vol, veh/h	45	36	17	396	406	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	39	18	430	441	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	927	461	481	0	-	0
Stage 1	461	-	-	-	-	-
Stage 2	466	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	298	600	1082	-	-	-
Stage 1	635	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	291	600	1082	-	-	-
Mov Cap-2 Maneuver	291	-	-	-	-	-
Stage 1	621	-	-	-	-	-
Stage 2	632	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.4	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1082	-	377	-	-
HCM Lane V/C Ratio	0.017	-	0.234	-	-
HCM Control Delay (s)	8.4	-	17.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Intersection	
Intersection Delay, s/veh	35.7
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	103	70	42	170	141	83	322	36	153	332	45
Future Vol, veh/h	30	103	70	42	170	141	83	322	36	153	332	45
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	31	107	73	44	177	147	86	335	38	159	346	47
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	20.4	36.1	38.1	39.2
HCM LOS	C	E	E	E

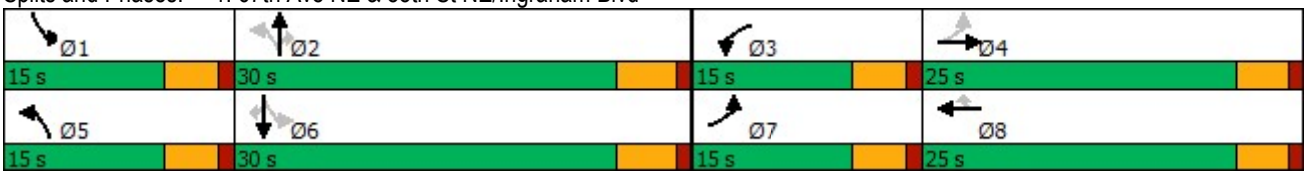
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	15%	12%	100%	0%
Vol Thru, %	0%	90%	51%	48%	0%	88%
Vol Right, %	0%	10%	34%	40%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	358	203	353	153	377
LT Vol	83	0	30	42	153	0
Through Vol	0	322	103	170	0	332
RT Vol	0	36	70	141	0	45
Lane Flow Rate	86	373	211	368	159	393
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.212	0.854	0.511	0.802	0.387	0.887
Departure Headway (Hd)	8.842	8.249	8.697	7.85	8.734	8.128
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	404	436	417	460	410	444
Service Time	6.639	6.046	6.697	5.946	6.532	5.925
HCM Lane V/C Ratio	0.213	0.856	0.506	0.8	0.388	0.885
HCM Control Delay	14	43.7	20.4	36.1	17	48.2
HCM Lane LOS	B	E	C	E	C	E
HCM 95th-tile Q	0.8	8.5	2.8	7.3	1.8	9.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	374	228	30	245	169	185	488	57	184	497	101
Future Volume (vph)	110	374	228	30	245	169	185	488	57	184	497	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	360		1000	175		230	130		230
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99		0.99			1.00		0.99	1.00		0.99
Frt		0.943				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3263	0	1752	1845	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.329			0.950			0.159			0.170		
Satd. Flow (perm)	607	3263	0	1743	1845	1568	293	1845	1546	313	1845	1545
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		142				182			135			135
Link Speed (mph)		20			35			35			20	
Link Distance (ft)		3597			3125			2176			3823	
Travel Time (s)		122.6			60.9			42.4			130.3	
Confl. Peds. (#/hr)			9	9			3		2	2		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	647	0	32	263	182	199	525	61	198	534	109
Turn Type	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4					8	2		2	6		6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Minimum Split (s)	9.5	32.5		9.5	33.5	33.5	9.5	34.0	34.0	9.5	33.0	33.0
Total Split (s)	15.0	25.0		15.0	25.0	25.0	15.0	30.0	30.0	15.0	30.0	30.0
Total Split (%)	17.6%	29.4%		17.6%	29.4%	29.4%	17.6%	35.3%	35.3%	17.6%	35.3%	35.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	5.0	5.0	4.5	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	25.0	21.4		6.2	15.6	15.6	34.6	25.2	25.2	34.3	25.1	25.1
Actuated g/C Ratio	0.34	0.29		0.08	0.21	0.21	0.47	0.34	0.34	0.46	0.34	0.34
v/c Ratio	0.36	0.62		0.22	0.68	0.38	0.64	0.84	0.10	0.63	0.85	0.18
Control Delay	19.4	21.2		38.7	37.8	7.1	23.8	39.6	0.3	22.7	41.5	3.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	21.2		38.7	37.8	7.1	23.8	39.6	0.3	22.7	41.5	3.6
LOS	B	C		D	D	A	C	D	A	C	D	A
Approach Delay		20.9			26.2			32.6			32.1	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	38	94		15	119	0	50	236	0	50	244	0
Queue Length 95th (ft)	72	184		43	203	49	#132	#475	0	#117	#486	25
Internal Link Dist (ft)		3517			3045			2096			3743	
Turn Bay Length (ft)	230			360		1000	175		230	130		230

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	373	1156		255	525	576	357	641	626	363	640	624
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.56		0.13	0.50	0.32	0.56	0.82	0.10	0.55	0.83	0.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 74			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 28.3		Intersection LOS: C	
Intersection Capacity Utilization 75.4%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: 67th Ave NE & 88th St NE/Ingraham Blvd



Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		Y	
Traffic Vol, veh/h	26	303	282	31	21	8
Future Vol, veh/h	26	303	282	31	21	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	329	307	34	23	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	341	0	-	0	709	324
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	385	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1218	-	-	-	401	717
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	688	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1218	-	-	-	390	717
Mov Cap-2 Maneuver	-	-	-	-	390	-
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	688	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1218	-	-	-	446
HCM Lane V/C Ratio	0.023	-	-	-	0.071
HCM Control Delay (s)	8	-	-	-	13.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	40.9
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	240	21	12	12	246	426	26	16	468	55
Future Vol, veh/h	74	9	240	21	12	12	246	426	26	16	468	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	245	21	12	12	251	435	27	16	478	56
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	21.3	12.8	34.7	63
HCM LOS	C	B	D	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	23%	47%	3%
Vol Thru, %	0%	94%	3%	27%	87%
Vol Right, %	0%	6%	74%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	246	452	323	45	539
LT Vol	246	0	74	21	16
Through Vol	0	426	9	12	468
RT Vol	0	26	240	12	55
Lane Flow Rate	251	461	330	46	550
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.524	0.891	0.634	0.111	0.996
Departure Headway (Hd)	7.512	6.958	6.925	8.687	6.522
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	479	521	521	415	556
Service Time	5.281	4.726	4.983	6.687	4.58
HCM Lane V/C Ratio	0.524	0.885	0.633	0.111	0.989
HCM Control Delay	18.3	43.7	21.3	12.8	63
HCM Lane LOS	C	E	C	B	F
HCM 95th-tile Q	3	10.1	4.4	0.4	14.2

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	36	17	480	490	37
Future Vol, veh/h	45	36	17	480	490	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	39	18	522	533	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1111	553	573	0	-	0
Stage 1	553	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	231	533	1000	-	-	-
Stage 1	576	-	-	-	-	-
Stage 2	573	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	225	533	1000	-	-	-
Mov Cap-2 Maneuver	225	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	573	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.7	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1000	-	303	-	-
HCM Lane V/C Ratio	0.018	-	0.291	-	-
HCM Control Delay (s)	8.7	-	21.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.2	-	-

Intersection	
Intersection Delay, s/veh	84.3
Intersection LOS	F

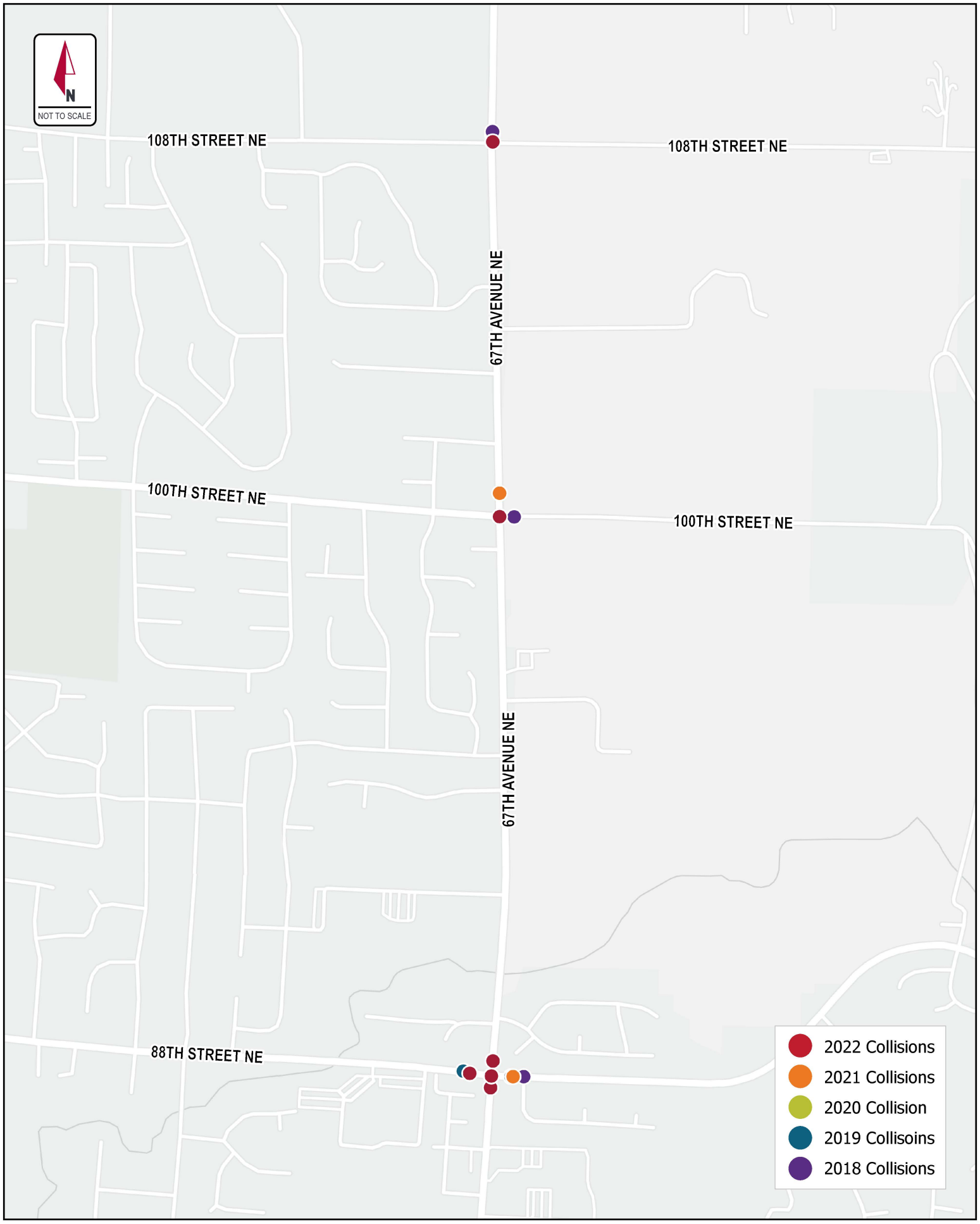
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	123	82	50	204	168	98	384	43	183	395	53
Future Vol, veh/h	35	123	82	50	204	168	98	384	43	183	395	53
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	36	128	85	52	213	175	102	400	45	191	411	55
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	30.3	86.7	92.2	96.7
HCM LOS	D	F	F	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	15%	12%	100%	0%
Vol Thru, %	0%	90%	51%	48%	0%	88%
Vol Right, %	0%	10%	34%	40%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	98	427	240	422	183	448
LT Vol	98	0	35	50	183	0
Through Vol	0	384	123	204	0	395
RT Vol	0	43	82	168	0	53
Lane Flow Rate	102	445	250	440	191	467
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.271	1.109	0.65	1.04	0.505	1.16
Departure Headway (Hd)	10.051	9.451	10.223	9.043	10.037	9.424
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	359	387	355	404	362	387
Service Time	7.751	7.151	8.223	7.043	7.737	7.124
HCM Lane V/C Ratio	0.284	1.15	0.704	1.089	0.528	1.207
HCM Control Delay	16.4	109.6	30.3	86.7	22.5	127
HCM Lane LOS	C	F	D	F	C	F
HCM 95th-tile Q	1.1	15.4	4.3	13.5	2.7	17.3

APPENDIX F

COLLISION DATA



Kimley»Horn

COLLISION DATA (2018-2022)

67TH AVENUE GAS STATION - MARYSVILLE, WA

REPORT	DATE	TIME	INTERSECTION	SEVERITY	# VEHICLES	ROAD CONDITION	LIGHT CONDITION	MANNER OF COLLISION	VEHICLE 1 MANEUVER	VEHICLE 2 MANEUVER
E873823	12/15/2018	23:27	67th Ave NE at 100th St NE	No Apparent Injury	1	Dry	Dark-Street Lights On	Roadway Ditch	Going Straight Ahead	
E955322	8/26/2019	22:44	67th Ave NE at 100th St NE	Suspected Minor Injury	1	Dry	Dark-Street Lights On	Fence	Going Straight Ahead	
EA37152	6/1/2020	20:05	67th Ave NE at 100th St NE	No Apparent Injury	2	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EA81056	11/9/2020	9:33	67th Ave NE at 100th St NE	No Apparent Injury	2	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EA31943	5/3/2020	14:21	67th Ave NE at 100th St NE	Possible Injury	2	Wet	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign
EB38605	6/13/2021	09:30	67th Ave NE at 100th St NE	No Apparent Injury	2	Wet	Daylight	From same direction - both going straight - one stopped - rear-end	Slowing	Stopped at Signal or Stop Sign
EB95973	12/1/2021	17:15	67th Ave NE at 100th St NE	No Apparent Injury	2	Wet	Dark-No Street Lights	From opposite direction - both going straight - sideswipe	Going Straight Ahead	Going Straight Ahead
EC21398	2/18/2022	2:36	67th Ave NE at 100th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	Entering at angle	Making Left Turn	Starting in Traffic Lane
EC62147	7/5/2022	23:11	67th Ave NE at 100th St NE	No Apparent Injury	2	Other	Dark - Unknown Lightin	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign
E877518	12/29/2018	17:25	67th Ave NE at 108th St NE	No Apparent Injury	2	Wet	Dark-Street Lights On	Entering at angle	Starting in Traffic Lane	Starting in Traffic Lane
E873396	12/17/2018	17:19	67th Ave NE at 108th St NE	No Apparent Injury	2	Wet	Dark-No Street Lights	Entering at angle	Going Straight Ahead	Going Straight Ahead
E812822	6/23/2018	0:37	67th Ave NE at 108th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	Entering at angle	Making Left Turn	Going Straight Ahead
E862440	11/19/2018	7:51	67th Ave NE at 108th St NE	No Apparent Injury	2	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
E845036	9/29/2018	11:42	67th Ave NE at 108th St NE	No Apparent Injury	1	Dry	Daylight	Breakage of any part of the vehicle resulting in injury or in further property damage	Going Straight Ahead	
E841980	9/24/2018	5:50	67th Ave NE at 108th St NE	No Apparent Injury	1	Dry	Dark-No Street Lights	Roadway Ditch	Making Right Turn	
E932060	6/19/2019	20:27	67th Ave NE at 108th St NE	Possible Injury	2	Dry	Dusk	Entering at angle	Making Left Turn	Going Straight Ahead
E905406	3/26/2019	18:57	67th Ave NE at 108th St NE	Possible Injury	2	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign
EA45125	7/5/2020	18:10	67th Ave NE at 108th St NE	Suspected Minor Injury	1	Dry	Daylight	Vehicle Strikes Pedalcyclist	Going Straight Ahead	
EA74048	10/21/2020	8:49	67th Ave NE at 108th St NE	Possible Injury	2	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EA32905	5/9/2020	16:36	67th Ave NE at 108th St NE	No Apparent Injury	2	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EA89867	12/10/2020	16:52	67th Ave NE at 108th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn
EB70502	9/22/2021	06:45	67th Ave NE at 108th St NE	No Apparent Injury	2	Dry	Daylight	From opposite direction - one left turn - one straight	Starting in Traffic Lane	Making Left Turn
EA97564	1/10/2021	17:37	67th Ave NE at 108th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	Entering at angle	Going Straight Ahead	Going Straight Ahead
ED25065	12/29/2022	18:12	67th Ave NE at 108th St NE	No Apparent Injury	2	Wet	Dark-No Street Lights	Entering at angle	Making Left Turn	Stopped at Signal or Stop Sign
EC17277	2/4/2022	7:05	67th Ave NE at 108th St NE	No Apparent Injury	2	Wet	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead
E871346	12/12/2018	7:18	67th Ave NE at 88th St NE	No Apparent Injury	3	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead
E794697	5/4/2018	14:38	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	Entering at angle	Merging (Entering Traffic)	Going Straight Ahead
E958331	9/9/2019	16:04	67th Ave NE at 88th St NE	No Apparent Injury	1	Wet	Daylight	Metal Sign Post	Making Left Turn	
E949846	8/13/2019	23:19	67th Ave NE at 88th St NE	No Apparent Injury	1	Dry	Dark-Street Lights On	Utility Box	Going Straight Ahead	
E921630	5/18/2019	21:36	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead
E905805	3/27/2019	18:35	67th Ave NE at 88th St NE	Suspected Minor Injury	2	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
E941347	7/18/2019	19:49	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Going Straight Ahead
E992622	12/11/2019	16:51	67th Ave NE at 88th St NE	No Apparent Injury	2	Wet	Dark-Street Lights On	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead
E995608	12/20/2019	10:20	67th Ave NE at 88th St NE	Possible Injury	2	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EA19507	2/28/2020	22:08	67th Ave NE at 88th St NE	No Apparent Injury	2	Wet	Dark-Street Lights On	Entering at angle	Going Straight Ahead	Making Right Turn
EA35476	5/22/2020	16:20	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	From same direction - both going straight - one stopped - sideswipe	Going Straight Ahead	Stopped at Signal or Stop Sign
EA88826	12/12/2020	18:20	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	From opposite direction - both going straight - sideswipe	Going Straight Ahead	Going Straight Ahead
EB87867	11/10/2021	06:38	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Dawn	Entering at angle	Going Straight Ahead	Making Right Turn
EB72211	9/26/2021	18:35	67th Ave NE at 88th St NE	Possible Injury	2	Wet	Dark-Street Lights On	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn
EB78793	10/17/2021	09:24	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EC06169	12/29/2021	07:47	67th Ave NE at 88th St NE	No Apparent Injury	2	Ice	Daylight	From same direction - all others	Stopped at Signal or Stop Sign	Going Straight Ahead
EB17029	3/4/2021	11:52	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Starting in Traffic Lane	Stopped at Signal or Stop Sign
EA98054	1/13/2021	13:12	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EC07507	12/26/2021	05:50	67th Ave NE at 88th St NE	No Apparent Injury	2	Snow/Slush	Dark - Unknown Lightin	From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Going Straight Ahead
EC82545	9/10/2022	13:26	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign
EC69432	7/28/2022	19:20	67th Ave NE at 88th St NE	Possible Injury	2	Dry	Daylight	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn
EC56864	6/18/2022	11:37	67th Ave NE at 88th St NE	Possible Injury	2	Wet	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead
EC35802	3/27/2022	20:15	67th Ave NE at 88th St NE	Possible Injury	2	Dry	Dark-Street Lights On	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn
EC57764	6/19/2022	19:26	67th Ave NE at 88th St NE	Suspected Serious Injury	3	Dry	Daylight	From same direction - all others	Going Straight Ahead	Going Straight Ahead
ED14961	12/15/2022	15:12	67th Ave NE at 88th St NE	Possible Injury	2	Dry	Daylight	Entering at angle	Making Left Turn	Stopped for Traffic
EC91802	10/10/2022	6:14	67th Ave NE at 88th St NE	Possible Injury	2	Dry	Dark-Street Lights On	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead
EC98319	10/29/2022	18:40	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	Entering at angle	Going Straight Ahead	Going Straight Ahead
EC59893	6/28/2022	17:40	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn

January 4, 2023
Project No. 22-1021

SHRI Ganesh, LLC
20924 55th Avenue West
Lynnwood, WA 98036

Attn: Mr. Goutam Jain

Re: Subsurface Conditions Report
Proposed Gas Station
10008 67th Avenue NE
Marysville, WA 98270
(Parcel No. 30051500101800)

Dear Mr. Jain:

As requested, GeoTest Services, Inc. [GeoTest] is pleased to submit this report summarizing the results of our subsurface conditions evaluation for the parcel at the above referenced address. The purpose of this report is to provide a subsurface conditions report for use in the potential development of this property.

GeoTest understands that the subject property is currently in feasibility, in which the feasibility period will end on or around January 9, 2023. If the purchase is completed, GeoTest understands that the buyer/Client is planning on constructing a one-story "C"-store with a fueling island and canopy. A specific development plan was not available as of the writing of this report. It should be noted that our current involvement for this project is only to provide basic information based on the results of our subsurface explorations and laboratory testing. Engineering and design services, a geohazard assessment, or detailed recommendations regarding foundations or infiltration, are outside of the scope of work of this report and were not requested by the Client.

SITE CONDITIONS

This section discusses the general surface and subsurface conditions observed at the project site at the time of our field investigation. Interpretations of the site conditions are based on the results of our review or available information, site reconnaissance, subsurface explorations, laboratory testing, and our experience in the project vicinity.

Surface Conditions

The rectangular-shaped, approximately 1-acre subject property is located at the northwest corner of 67th Avenue NE and 100th Street NE in Marysville, WA. The property is covered with tall grass and generally slopes at a gentle rate from north to south with less than 10 feet of vertical

relief. It appears that some trees were previously situated on the property, but have since been removed. Residential properties border the property to the north. The property to the west is vacant and owned by the City of Marysville.

Subsurface Conditions

Subsurface conditions were explored by advancing four test pits (TP-1 through TP-4) on December 28, 2022. The explorations were advanced to depths ranging from 6.5 to 7 feet below ground surface (BGS) with a tracked excavator subcontracted to GeoTest. Approximate locations of the test pit explorations have been plotted on the *Site and Exploration Plan* (Figure 2).

The explorations encountered approximately 12 to 18 inches of topsoil or previously placed gravel fill overlying native, loose, silty sand to sandy silt (weathered till). At approximately 2 to 3 feet below ground surface (BGS), the soils became unweathered and consisted of dense to very dense/hard to very hard, gravelly, silty sand to sandy silt. The unweathered till was encountered to the maximum explored depth of the test pits (approximately 6.5 to 7 feet BGS). All test pits were excavated until the native soils were very difficult to penetrate with the excavator.

General Geologic Conditions

Geologic information for the project site was obtained from the *Geologic map of the Marysville quadrangle, Snohomish County, Washington* (Minard, 1985), published by the United States Geological Survey. According to this publication, geology within the vicinity of the project site consist of Till (map unit Qvt). Till (referred to locally as Vashon till or hardpan) is a nonsorted mixture of clay, silt, sand, pebbles, cobbles, and boulders (diamicton) with some lenses of stratified soils. This unit is typically dense to very dense or very stiff to hard due to the overriding ice from glacial advance and retreat, in which glaciers in the region were upwards to a mile thick.

The soils encountered in our explorations appear to be consistent with published geologic information.

Groundwater

At the time of our site visit on December 27, 2022, perched groundwater seepage was encountered in all of the test pits an an approximate depth of 1 to 3 feet BGS. The groundwater conditions reported on the exploration logs are for the specific locations and dates indicated, and therefore may not be indicative of other locations and/or times. Groundwater levels are variable and groundwater conditions will fluctuate depending on local subsurface conditions, precipitation, and changes in on-site and off-site use.

SUMMARY

Based on the results of our subsurface investigation and laboratory testing, GeoTest makes the following comments. It should be noted that these findings and comments were presented in our Preliminary Findings letter dated December 30, 2022, with updated commentary provided as necessary.

GeoTest makes the following preliminary findings based on our explorations.

- Native, weathered Till soils were generally encountered within 12 to 18 inches of existing grade. These soils became unweathered and dense to very dense with depth. The native Till soils are typically suitable for building support.
- Design recommendations for shallow conventional foundations commonly require foundations to be supported by firm and unyielding native site soils or properly compacted structural placed over firm and unyielding native soils. Lightly loaded, shallow conventional foundations, supported by the native site soils at depths at least to 18 inches below existing grade would generally be considered suitable for a typical 1-story gas station building or retail store. If larger or more heavily loaded buildings are proposed for the property, further explorations may be needed to formulate foundation design recommendations.
- Additional explorations may be required due to the depth of planned underground storage tanks. If deep underground tanks are planned, we would need to provide recommendations regarding temporary excavations and the effects of buoyancy. GeoTest can provide additional explorations, consultation and/or recommendations, based on the proposed future property development plan, upon request.
- The native till soils encountered in our explorations contain a high percentage of fines. Perched groundwater seepage was also encountered in all of the explorations. The very dense/very hard, unweathered Till is classified as a hydraulic restriction layer per the *Stormwater Management Manual for Western Washington*. Therefore, it appears that these soils are not suitable for the conventional infiltration of stormwater. Approaches other than infiltration should be considered to address stormwater management on this project. Laboratory test results are attached to the end of this report.

LIMITATIONS

The analyses and conclusions provided in this report are based on conditions encountered at the time of the subsurface exploration performed by GeoTest Services, Inc., information from previous studies, and our experience and judgment. Our work has been performed in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in this area. GeoTest Services, Inc. has prepared this subsurface conditions report for the exclusive use of SHRI Ganesh, LLC, and their representatives for preliminary evaluation of the property located at 10007 67th Avenue NE in Marysville, WA. No warranty, expressed or implied, is made.

It should be understood that this report does not constitute a geotechnical engineering report and that additional studies should be expected as part of the design process. The intent of this report is to provide basic information regarding the type of soil (Till) that exists on this property. The soils, in our opinion, are suitable for the support of foundations.

We must presume that the subsurface conditions encountered are representative for the proposed site for the purposes of formulating our conclusions. However, the Client should be aware that subsurface conditions may vary with time and between exploratory locations, and unanticipated conditions may be encountered. If construction reveals differing conditions or the design is modified, GeoTest should retained to reevaluate our conclusions and provide written confirmation or modification, as needed.

We appreciate the opportunity to be of service to you on this project. if any questions should arise regarding this report, please contact the undersigned.

Respectfully,
GeoTest Services Inc.

1/4/23

Gerry D. Bautista, Jr., P.E.
Project Geotechnical Engineer

Attachments:

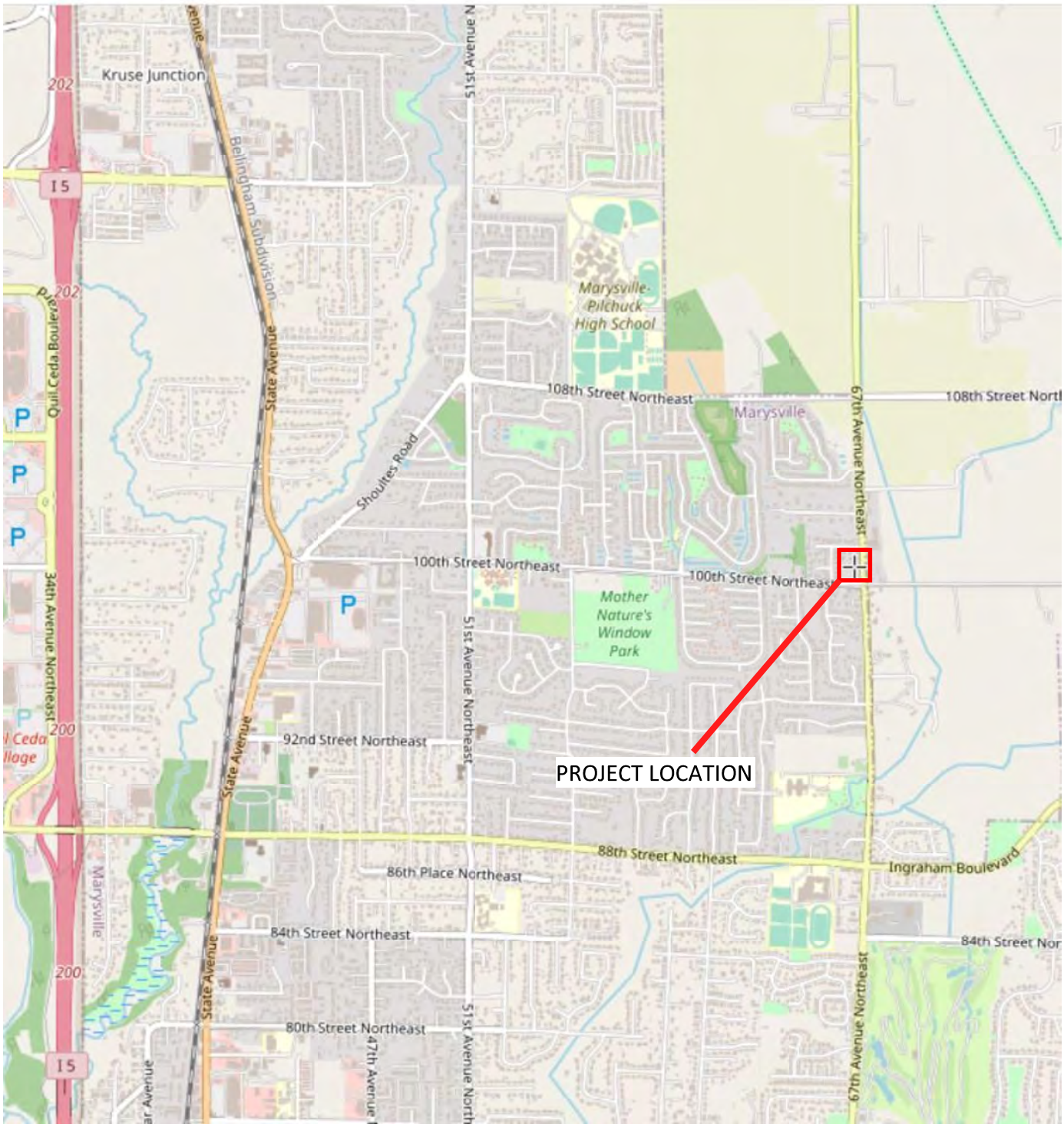
	Figure 1	Vicinity Map
	Figure 2	Site and Exploration Plan
	Figure 3	Soil Classification System and Key
	Figures 4 – 5	Test Pit Logs
	(1 page)	Northwest Agricultural Consultants Laboratory Results
	(4 pages)	Report Limitations and Guidelines for its Use

REFERENCES

Gariepy, D., Graul, C., Heye, A., Howie, D., Labib, F., & Song, K. (n.d.), *2019 Stormwater Management Manual for Western Washington* (2019 SMMWW) (pp. 1-1108) (United States, Washington State Department of Ecology).

Minard, J.P., 1985, *Geologic map of the Marysville quadrangle, Snohomish County, Washington. U*.S. Geological Survey, Miscellaneous Field Studies Map MF-1743, scale 1:24,000.

Snohomish County PDS Map Portal, Snohomish County, WA. Retrieved December 2022 from https://snohomishcountywa.gov/3752/PDS-Map-Portal



N

2000 feet

MAP SOURCE: ACME Mapper 2.2

GEOTEST

Date: 12-29-22	By: GDB	Scale: As Shown	Project 22-1021

VICINITY MAP
PROPOSED GAS STATION
10008 67TH AVENUE NE
MARYSVILLE, WASHINGTON

Figure 1

GEOTEST	Date: 12-15-22	By: CM	Scale: As Shown

SITE AND EXPLORATION PLAN
PROPOSED GAS STATION
10008 67TH AVE NE
MARYSVILLE, WASHINGTON

Project
22-1021

Figure
2

Soil Classification System

MAJOR DIVISIONS			GRAPHIC SYMBOL	USCS LETTER SYMBOL	TYPICAL DESCRIPTIONS[1][2]
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well-graded gravel; gravel/sand mixture(s); little or no fines
				GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GM	Silty gravel; gravel/sand/silt mixture(s)
				GC	Clayey gravel; gravel/sand/clay mixture(s)
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well-graded sand; gravelly sand; little or no fines
				SP	Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES (Appreciable amount of fines)		SM	Silty sand; sand/silt mixture(s)
				SC	Clayey sand; sand/clay mixture(s)
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)			ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity
				CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay
				OL	Organic silt; organic, silty clay of low plasticity
	SILT AND CLAY (Liquid limit greater than 50)			MH	Inorganic silt; micaceous or diatomaceous fine sand
				CH	Inorganic clay of high plasticity; fat clay
				OH	Organic clay of medium to high plasticity; organic silt
	HIGHLY ORGANIC SOIL			PT	Peat; humus; swamp soil with high organic content

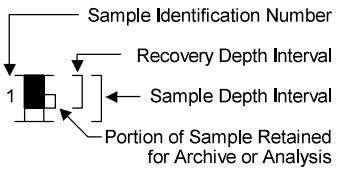
OTHER MATERIALS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
PAVEMENT		AC or PC	Asphalt concrete pavement or Portland cement pavement
ROCK		RK	Rock (See Rock Classification)
WOOD		WD	Wood, lumber, wood chips
DEBRIS		DB	Construction debris, garbage

Notes:
1. Soil descriptions are based on the general approach presented in the *Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*, as outlined in ASTM D 2488. Where laboratory index testing has been conducted, soil classifications are based on the *Standard Test Method for Classification of Soils for Engineering Purposes*, as outlined in ASTM D 2487.
2. Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows:

Primary Constituent: > 50% - "GRAVEL," "SAND," "SILT," "CLAY," etc.
Secondary Constituents: > 30% and ≤ 50% - "very gravelly," "very sandy," "very silty," etc.
> 12% and ≤ 30% - "gravelly," "sandy," "silty," etc.
Additional Constituents: > 5% and ≤ 12% - "slightly gravelly," "slightly sandy," "slightly silty," etc.
≤ 5% - "trace gravel," "trace sand," "trace silt," etc., or not noted.

Drilling and Sampling Key

SAMPLE NUMBER & INTERVAL



SAMPLER TYPE

Code	Description
a	3.25-inch O.D., 2.42-inch I.D. Split Spoon
b	2.00-inch O.D., 1.50-inch I.D. Split Spoon
c	Shelby Tube
d	Grab Sample
e	Other - See text if applicable
1	300-lb Hammer, 30-inch Drop
2	140-lb Hammer, 30-inch Drop
3	Pushed
4	Other - See text if applicable

Groundwater

▽ ATD — Approximate water elevation at time of drilling (ATD) or on date noted. Groundwater levels can fluctuate due to precipitation, seasonal conditions, and other factors.

Field and Lab Test Data

Code	Description
PP = 1.0	Pocket Penetrometer, tsf
TV = 0.5	Torvane, tsf
PID = 100	Photoionization Detector VOC screening, ppm
W = 10	Moisture Content, %
D = 120	Dry Density, pcf
-200 = 60	Material smaller than No. 200 sieve, %
GS	Grain Size - See separate figure for data
AL	Atterberg Limits - See separate figure for data
GT	Other Geotechnical Testing
CA	Chemical Analysis

GEOTEST

Proposed Gas Station
10008 67th Avenue NE
Marysville, Washington

Soil Classification System and Key

Figure 3

TP-1

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	Excavation Method: Tracked Excavator Ground Elevation (ft): 128 Excavated By: Cascade Excavation (Logged: CM)	
0	1	d	W = 19 GS		GM	Loose, dark brown, wet, silty, sandy GRAVEL (angular crushed) (FILL)	▽ Perched groundwater seepage encountered at 1.0 ft.
	2	d			SM	- scattered organics (roots and weeds) at surface	
2					SM	Medium-dense, orange-brown, moist to wet, gravelly, silty SAND (Weathered Till)	
4	3	d	W = 11 GS			Very dense, tan, moist, slightly gravelly, silty SAND, local oxidation (Till)	
					ML		
6	4	d				Very hard, gray-tan, slightly moist, slightly gravelly, sandy SILT (Till)	
8							
10							
12							

Test Pit Completed 12/28/22
Total Depth of Test Pit = 6.5 ft.

TP-2

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	Excavation Method: Tracked Excavator Ground Elevation (ft): 125 Excavated By: Cascade Excavation (Logged: CM)	
0	5	d	W = 25 GS		SM	Loose, brown to dark brown, moist, gravelly, silty SAND, numerous roots and grass (Topsoil/FILL)	▽ Perched groundwater seepage encountered at 1.5 ft.
2	6	d			ML	Stiff, brown to gray, moist to wet, slightly gravelly, sandy SILT, occasional rootlets (Weathered Till)	
					ML	- mottling present	
4	7	d				Very stiff to hard, tan-gray, moist, slightly gravelly, sandy SILT (Till)	
6	8	d				- becomes very hard, tan	
8							
10							
12							

Test Pit Completed 12/28/22
Total Depth of Test Pit = 7.0 ft.

Notes: Approximate elevations obtained from Snohomish County PDS Map Portal.
All test pits excavated until refusal conditions encountered.

GEOTEST

Proposed Gas Station 10008 67th Avenue NE Marysville, WA	Log of Test Pits	Figure 4

TP-3

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	Excavation Method: Tracked Excavator Ground Elevation (ft): 122 Excavated By: Cascade Excavation (Logged: CM)	
0					SM	Loose, dark brown, moist, slightly gravelly, silty SAND, numerous roots and organics (Topsoil/FILL)	▽ Perched groundwater seepage encountered at 1.3 ft.
	9	d			ML	Stiff, brown-gray, moist to wet, slightly gravelly, sandy SILT (Weathered Till)	
2	10	d			ML	Hard, tan, moist, slightly gravelly, sandy SILT (Till)	
4	11	d				- becomes very hard	
6	12	d	W = 16 GS			- trace cobbles	
8							
10							
12							

Test Pit Completed 12/28/22
Total Depth of Test Pit = 7.0 ft.

TP-4

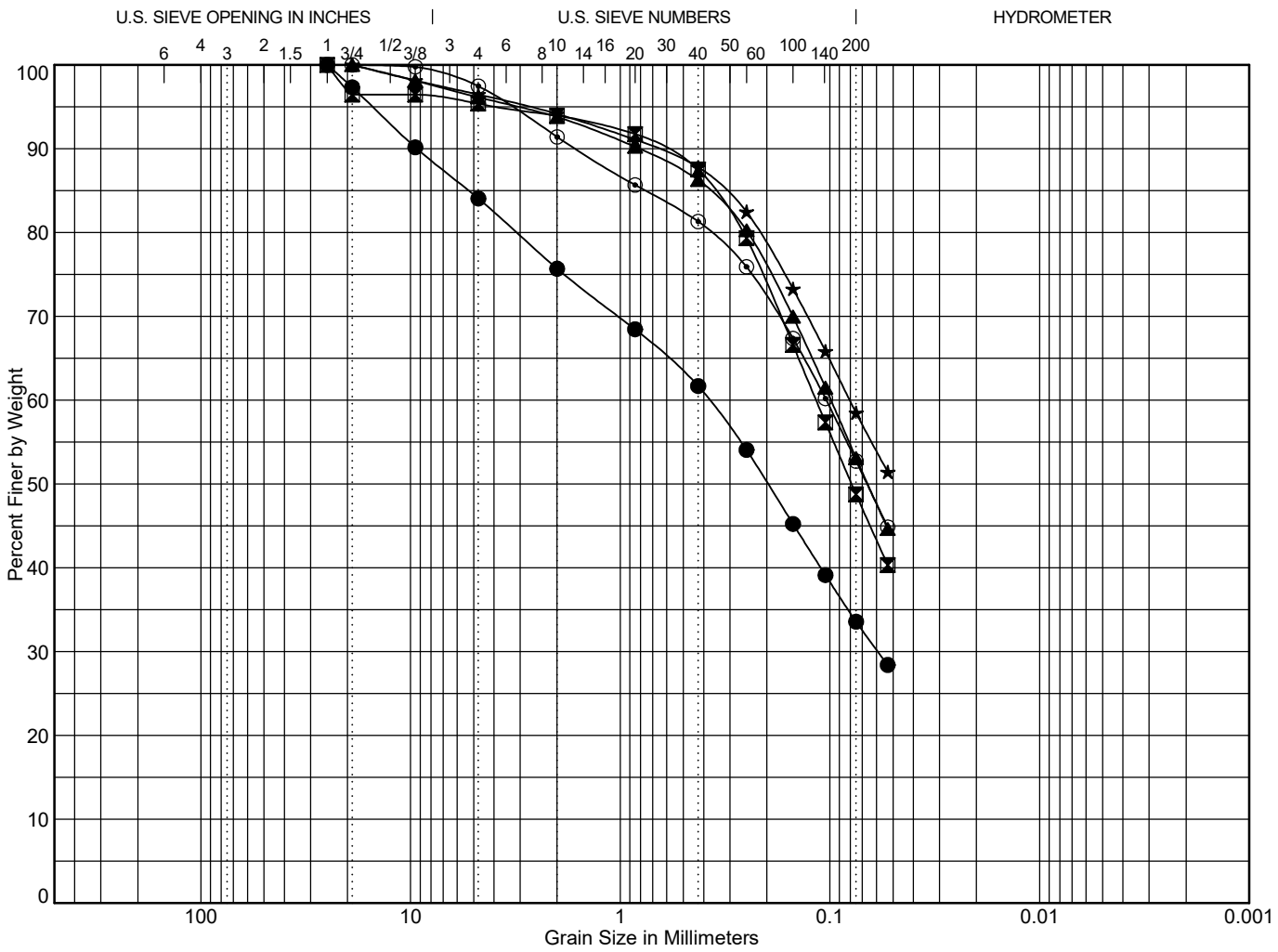
SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	Excavation Method: Tracked Excavator Ground Elevation (ft): 121 Excavated By: Cascade Excavation (Logged: CM)	
0	13	d			SM	Loose, dark gray, moist, slightly gravelly, silty SAND, numerous roots and grass (Topsoil/FILL)	
					ML	Stiff, orange-brown, moist to wet, slightly gravelly, sandy SILT (Weathered Till)	▽ Perched groundwater seepage encountered at 3.0 ft.
2	14	d	W = 30 GS		SM	- caving observed from 2' to 3' BGS due to water	
4	15	d				Hard, tan, moist, slightly gravelly, sandy SILT (Till)	
6	16	d				- become very hard, trace cobbles	
8							
10							
12							

Test Pit Completed 12/28/22
Total Depth of Test Pit = 7.0 ft.

Notes: Approximate elevations obtained from Snohomish County PDS Map Portal.
All test pits excavated until refusal conditions encountered.

GEOTEST

Proposed Gas Station 10008 67th Avenue NE Marysville, WA	Log of Test Pits	Figure 5



Cobbles	Gravel		Sand			Silt or Clay
	coarse	fine	coarse	medium	fine	

Point		Depth	Classification	LL	PL	PI	C_c	C_u
●	TP-1	1.5	Gravelly, silty SAND (SM)					
⊠	TP-1	4.0	Slightly gravelly, silty SAND (SM)					
▲	TP-2	2.0	Slightly gravelly, sandy SILT (ML)					
★	TP-3	6.0	Slightly gravelly, sandy SILT (ML)					
⊙	TP-4	2.0	Slightly gravelly, sandy SILT (ML)					

Point		Depth	D_{90}	D_{60}	D_{50}	D_{30}	D_{10}	%Coarse Gravel	% Fine Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Fines
●	TP-1	1.5	9.324	0.378	0.198	0.059	0.015*	2.7	13.3	8.4	14.0	28.1	33.6
⊠	TP-1	4.0	0.638	0.116	0.079	0.035*	0.015*	3.6	1.1	1.5	6.4	38.8	48.8
▲	TP-2	2.0	0.816	0.099	0.066	0.029*	0.013*	0.0	3.9	2.4	7.5	33.2	53.1
★	TP-3	6.0	0.676	0.08	0.049*	0.018*	0.007*	0.0	3.5	2.3	6.4	29.3	58.5
⊙	TP-4	2.0	1.622	0.104	0.067	0.028*	0.011*	0.0	2.5	6.1	10.1	28.6	52.7

*Extrapolated from data

$C_c = D_{30}^2/(D_{60} * D_{10})$

$C_u = D_{60}/D_{10}$

To be well graded: $1 < C_c < 3$ and $C_u > 4$ for GW or $C_u > 6$ for SW

GEOTEST

Proposed Gas Station
10008 67th Avenue NE
Marysville, WA

Grain Size Test Data

Figure 6

Northwest Agricultural Consultants

2545 W Falls Avenue
Kennewick, WA 99336
509.783.7450
www.nwag.com
lab@nwag.com

PAP-Accredited
NAPT

GeoTest Services Inc.
741 Marine Drive
Bellingham, WA 98225

Report: 62037-1-1
Date: December 30, 2022
Project No: 22-1021
Project Name: Proposed Gas Station

Sample ID	pH	Organic Matter	Cation Exchange Capacity
TP2 @ 1.0’	5.3	7.90%	15.9 meq/100g
TP4 @ 0.5’	5.4	6.05%	12.2 meq/100g
Method	**SM 4500-H^+ B**	**ASTM D2974**	**EPA 9081**

REPORT LIMITATIONS AND GUIDELINES FOR ITS USE[1]

Subsurface issues may cause construction delays, cost overruns, claims, and disputes. While you cannot eliminate all such risks, you can manage them. The following information is provided to help:

Geotechnical Services are Performed for Specific Purposes, Persons, and Projects

At GeoTest our geotechnical engineers and geologists structure their services to meet specific needs of our clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of an owner, a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared solely for the client. No one except you should rely on your geotechnical engineer who prepared it. And no one – not even you – should apply the report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report is Based on a Unique Set of Project-Specific Factors

GeoTest's geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the clients goals, objectives, and risk management preferences; the general nature of the structure involved its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless GeoTest, who conducted the study specifically states otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

1Information in this document is based upon material developed by ASFE, Professional Firms Practicing in the Geosciences(asfe.org)

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed, for example, from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed construction,
- alterations in drainage designs; or
- composition of the design team; the passage of time; man-made alterations and construction whether on or adjacent to the site; or by natural alterations and events, such as floods, earthquakes or groundwater fluctuations; or project ownership.

Always inform GeoTest's geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.

Subsurface Conditions Can Change

This geotechnical or geologic report is based on conditions that existed at the time the study was performed. Do not rely on the findings and conclusions of this report, whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. Always contact GeoTest before applying the report to determine if it is still relevant. A minor amount of additional testing or analysis will help determine if the report remains applicable.

Most Geotechnical and Geologic Findings are Professional Opinions

Our site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoTest's engineers and geologists review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ – sometimes significantly – from those indicated in your report. Retaining GeoTest who developed this report to provide construction observation is the most effective method of managing the risks associated with anticipated or unanticipated conditions.

1Information in this document is based upon material developed by ASFE, Professional Firms Practicing in the Geosciences(asfe.org)

A Report's Recommendations are Not Final

Do not over-rely on the construction recommendations included in this report. Those recommendations are not final, because geotechnical engineers or geologists develop them principally from judgment and opinion. GeoTest's geotechnical engineers or geologists can finalize their recommendations only by observing actual subsurface conditions revealed during construction. GeoTest cannot assume responsibility or liability for the report's recommendations if our firm does not perform the construction observation.

A Geotechnical Engineering or Geologic Report may be Subject to Misinterpretation

Misinterpretation of this report by other design team members can result in costly problems. Lower that risk by having GeoTest confer with appropriate members of the design team after submitting the report. Also, we suggest retaining GeoTest to review pertinent elements of the design teams plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having GeoTest participate in pre-bid and preconstruction conferences, and by providing construction observation.

Do not Redraw the Exploration Logs

Our geotechnical engineers and geologists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors of omissions, the logs included in this report should never be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable; but recognizes that separating logs from the report can elevate risk.

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, but preface it with a clearly written letter of transmittal. In that letter, consider advising the contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with GeoTest and/or to conduct additional study to obtain the specific types of information they need or prefer. A pre-bid conference can also be valuable. Be sure contractors have sufficient time to perform additional study. Only then might you be in a position to give contractors the best information available, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

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In addition, it is recommended that a contingency for unanticipated conditions be included in your project budget and schedule.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering or geology is far less exact than other engineering disciplines. This lack of understanding can create unrealistic expectations that can lead to disappointments, claims, and disputes. To help reduce risk, GeoTest includes an explanatory limitations section in our reports. Read these provisions closely. Ask questions and we encourage our clients or their representative to contact our office if you are unclear as to how these provisions apply to your project.

Environmental Concerns Are Not Covered in this Geotechnical or Geologic Report

The equipment, techniques, and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated containments, etc. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk management guidance. Do not rely on environmental report prepared for some one else.

Obtain Professional Assistance to Deal with Biological Pollutants

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts biological pollutants from growing on indoor surfaces. Biological pollutants includes but is not limited to molds, fungi, spores, bacteria and viruses. To be effective, all such strategies should be devised for the express purpose of prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional biological pollutant prevention consultant. Because just a small amount of water or moisture can lead to the development of severe biological infestations, a number of prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of this study, the geotechnical engineer or geologist in charge of this project is not a biological pollutant prevention consultant; none of the services preformed in connection with this geotechnical engineering or geological study were designed or conducted for the purpose of preventing biological infestations.

1Information in this document is based upon material developed by ASFE, Professional Firms Practicing in the Geosciences(asfe.org)

Drainage Report

Crossroads Shevron

City of Marysville, Snohomish County, Washington

Prepared For:

Meydenbauer Group

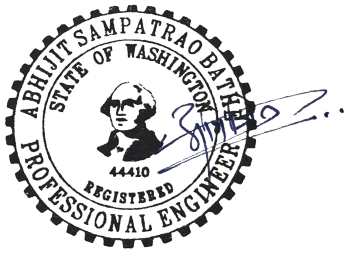
Prepared by:

Geometrics Engineering PS, Inc.

5930 Preston View Blvd., Suite B

Dallas, TX 75240

February 28, 2024



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1. INTRODUCTION

This Stormwater Site Plan (hereby referred to as Plan) is prepared as part of the permit support for Crossroads Chevron in the city of Marysville. The Plan is developed in accordance with the Washington State (WA) Department of Ecology's (DOE) 2012 Stormwater Management Manual for Western Washington (SWMMWW) as amended in 2019. A Stormwater Site Plan for the site at 10008 67th Ave NE, has been prepared under a separate cover.

This Stormwater Site Plan describes the existing stormwater facilities, proposed permanent stormwater control plan and construction stormwater pollution plan.

2. PROJECT OVERVIEW

The project site is located at 10008 67th Ave NE in the City of Marysville, Washington-98270. Refer *Figure 1* provided below. The project site has an area of approximately 1 acre. The site is covered with tall grass and generally slopes at a gentle rate from north to south with less than 10 feet of vertical relief. It appears that some trees were previously situated on the site but have since been removed. Residential properties border the site to the north. The property to the west is vacant and owned by the City of Marysville. The Washington parcel ID number is 30051500101800.

Proposed development of the site will include a service station, convenience store and customer parking.

The project has been designed to meet the requirements of the 2019 Stormwater Management Manual for Western Washington (SMMWW).

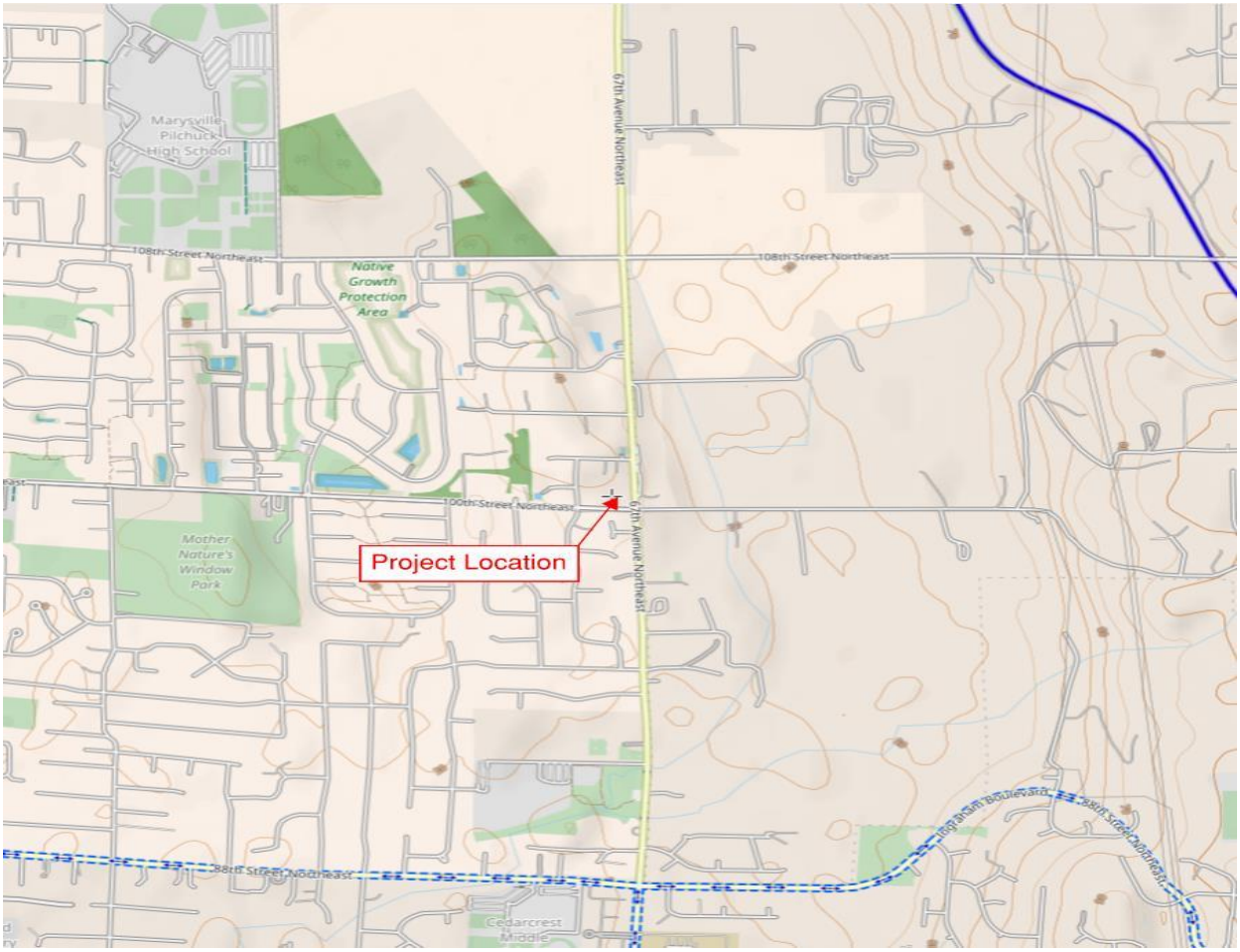


Figure 1- Vicinity Map

3. EXISTING CONDITIONS

3.1 Topography

The horizontal datum for the site is based on Washington State Plane National Geodetic Vertical Datum (NGVD 29). A topographic survey was prepared for this site by OCRA Land Surveying in July 2023.

The ground surface at the site has a high point at approximately elevation 128-feet, as shown on Figure 2. The ground surface slopes down rapidly at approximately 4-percent to the south. In other areas, the slope generally varies between 2 and 4-percent.

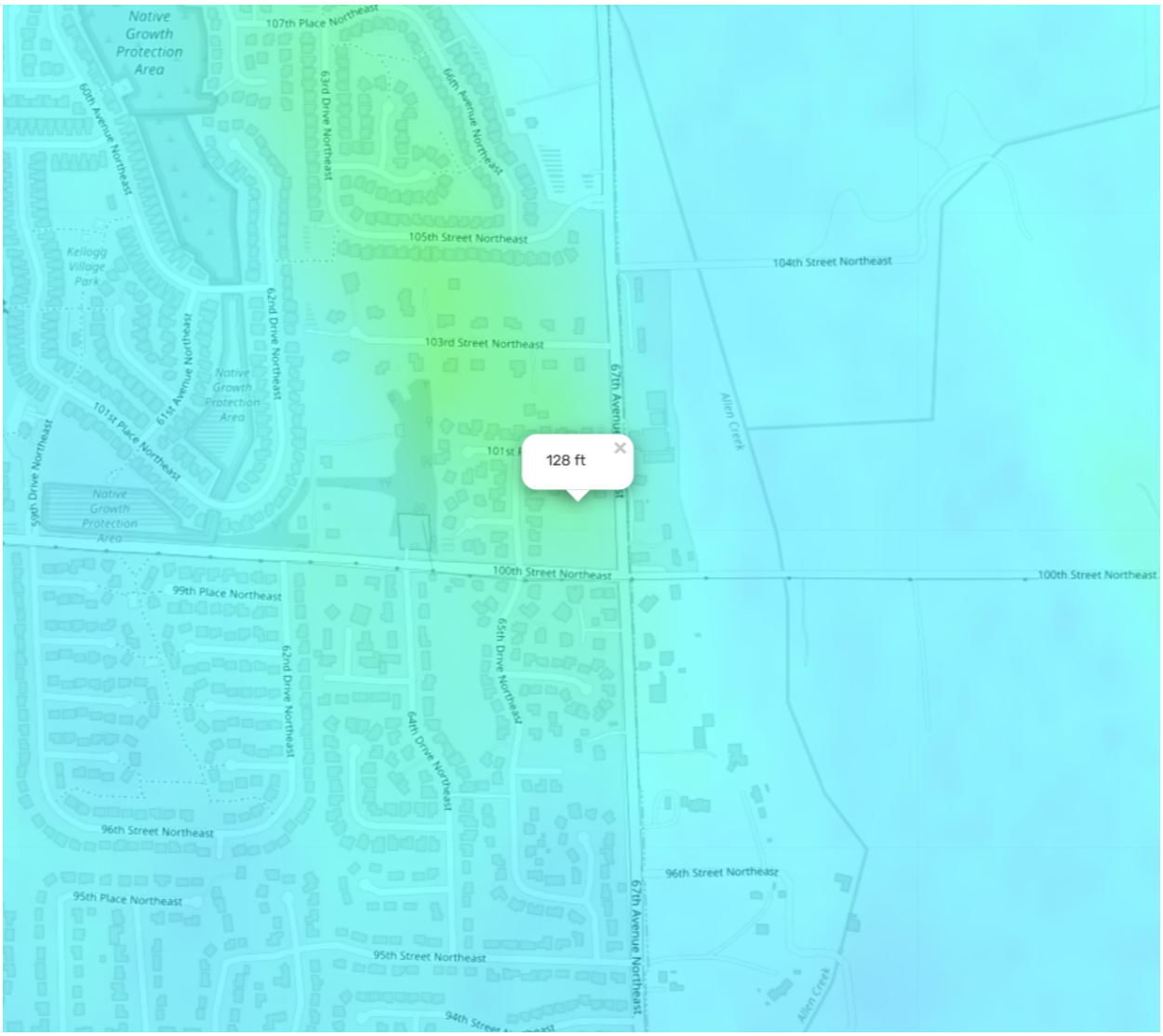


Figure 2 - Topographic Map

3.1.1 Geology and Soils

As documented in Geotechnical Report, Geologic information for the project site was obtained from the *Geologic map of Marysville quadrangle, Snohomish County, Washington* (Minard, 1985), published by the United States Geological Survey. According to this publication, geology within the vicinity of the project site consists of till (map unit Qvt). Till (referred to locally as Vashon till or hardpan) is a unsorted mixture of clay, silt, sand, pebbles, cobbles and boulders (diamicton) with some lenses of stratified soils. This unit is typically dense to very dense or very stiff to hard due to the overriding ice from glacial advance and retreat, in which glaciers in the region were upwards to a mile thick.

The soils encountered in explorations appear to be consistent with published geologic information.

3.1.2 Groundwater

At the time of the site geotechnical explorations on December 27, 2022, perched groundwater seepage was encountered in all the test pits on an approximate depth of 1 to 3 feet below ground surface. Refer **Appendix A** for Geotechnical Report.

3.1.3 Ground Cover and Critical Areas

The proposed site is covered with relatively dense grasses and sparse trees and blackberries in the undeveloped areas. The site will be occupied by one convenience store with associated driveways and parking areas.

The City of Marysville Critical Areas Map indicated that there are no critical areas located onsite. The nearest area to the site is Allen Creek that is classified as a Type F stream with a 150-foot buffer, located approximately 600 feet to the east of the proposed site as shown in *Figure-3*

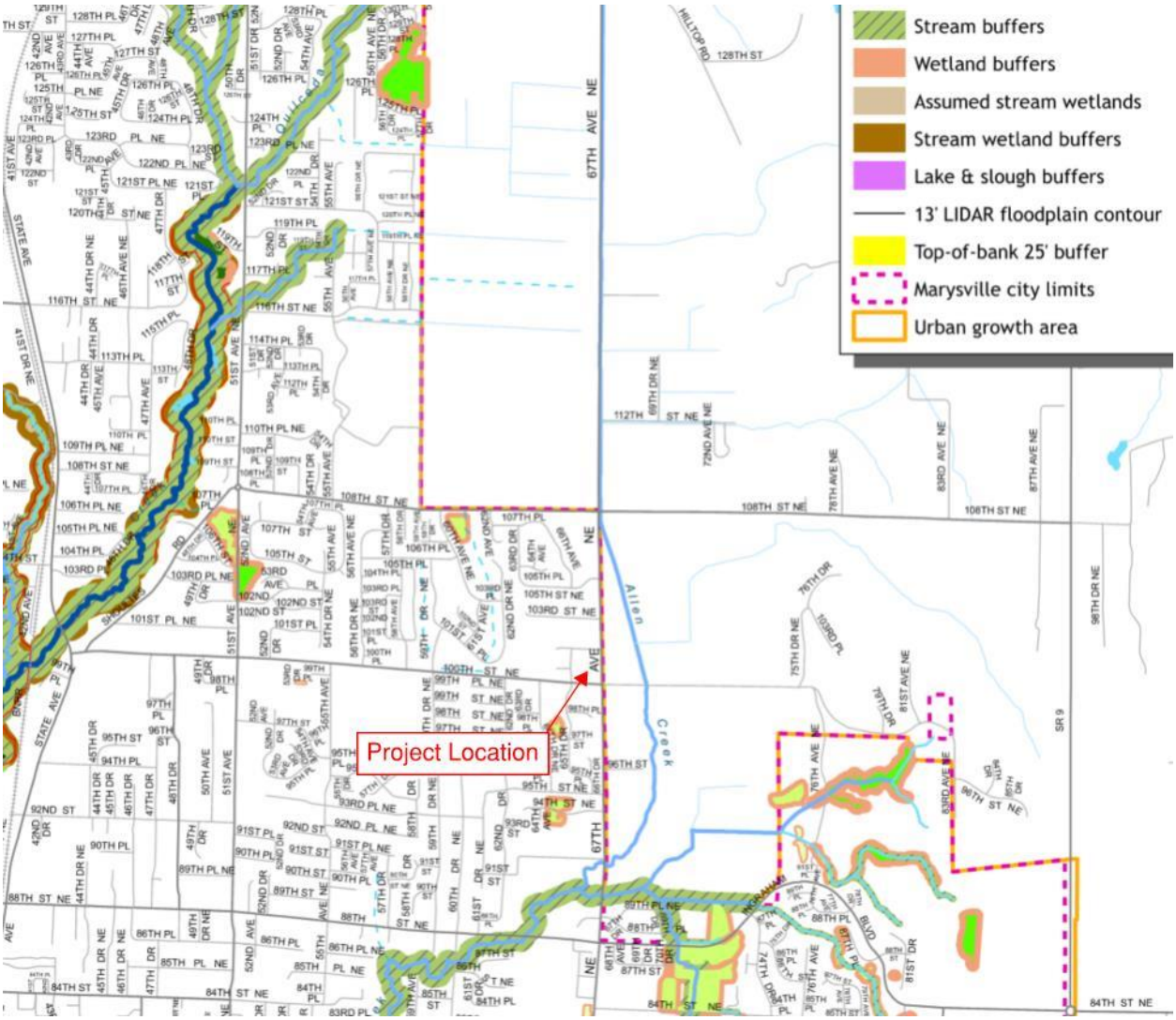


Figure 3 – Critical Area Map

3.1.4 Drainage and Existing Stormwater Facilities

An existing/formal stormwater conveyance system does not exist on the site, within the project limits. Runoff from the project area follows one of three routes, it is infiltrated, flows south to 100th Street NE where it is either conveyed west along the roadway, or from the north-east side of project site to 67th Avenue NE continues over the roadway. Flow along 100th Street NE eventually reaches the existing catch basin located in the Storm Drain along Bay Street and is discharged through a 12-inch diameter pipeline. *Table 3-1* shows the predeveloped area on the site.

	Description	Area (ft^2)	Total (ft^2)
Impervious	-	-	-
Pervious	Till Forest	43,331	43,331
		Total	43,331

Table 3-1 Predeveloped Area

3.2 Proposed Conditions

The project includes installing a 95' x 35' underground detention vault with a convenience store associated with driveways, customer parking areas and service station. Refer **Appendix B** for WWHM report of underground detention vault. *Table 3-2* shows the post developed areas on the proposed site.

	Description	Area (ft^2)	Total (ft^2)
Impervious	Roof Areas	8,399	30,083
	Parking lots & Driveways	21,684	
Pervious	Landscaping	13,248	13,248
		Total	43,331

Table 3-2 Developed Areas

4. PROJECT STANDARDS

The City Municipal Code Chapter 14.15.015 states that the following guidance documents would be used for determining applicable stormwater requirements and sizing stormwater facilities:

- Washington State (WA) Department of Ecology (DOE) 2019 Stormwater Management Manual for Western Washington (SWMMWW)
- City's Engineering Design and development standards (EDDS)
- 10-year & 25-year storms will accommodate in pipes and in Storm sewer system
- 50-year storm must be handled in a culvert
- 100-year storm must manage the detention basin

5. OFF-SITE ANALYSIS

As required by the SWMMWW, an off-site analysis was completed for the project and is described in this section.

5.1 Study Area

The study area for the offsite analysis encompasses the project site. Runoff patterns are discussed in Section 3.1.4.

5.2 Field Inspection

On July 06, 2023, ORCA Land Surveying & Geometrics conducted a site visit and off-site analysis for the project. During the field inspection, the existing project site was observed and the proposed discharge point via the existing flow pattern into Storm Drain on 100th Street NE was identified.

The field investigation confirmed information gathered through conversations and from drainage maps and figures, verifying the stormwater route.

5.3 Downstream Analysis

During the field inspection, it did not appear that there were erosion issues present at the existing 12-inch diameter concrete pipe. Most of the Stormwater flows to the south of the project. Also, there was no flooding issue on the project site.

5.4 Condition Assessment

Stormwater runoff generated from building roof will flow through the downspout dispersion system then it will sheet flow through the landscaping buffer to the birdcage manhole and then to the detention vault. Also, the stormwater generated from the canopy roof will go directly to the north-western inlet or south-western inlet of the detention vault. The runoff generated from the parking lot will flow to the north-western inlet of the detention vault.

The runoff generated from the fueling area will go directly to the southeastern oil & water separator & then through 18" sanitary sewer pipe, and then conveyed south to the existing sanitary sewer. The runoff from the detention vault first goes to the oil & water separator, then it flows to the water quality unit, and then conveyed south to the storm drain (SD) located on the 100th Street NE (southern) side of the project site.

The project would discharge stormwater into an underground detention vault at the southwestern corner of the project site. This would tie into an existing catch basin located on the southwestern side of 100th Street NE.

6. STORMWATER MINIMUM REQUIREMENTS

The transmission main component of the project would be the driveways, customer parking lots, underground detention vault, service station associated with a building. Per Chapter 3.3 of the SWMMWW, this qualifies as an underground utility project and is subjected to all the Minimum Requirements. These requirements were determined in accordance with the SWMMWW. Minimum Requirements Flowchart for New Development Projects is shown in *Figure 4*.

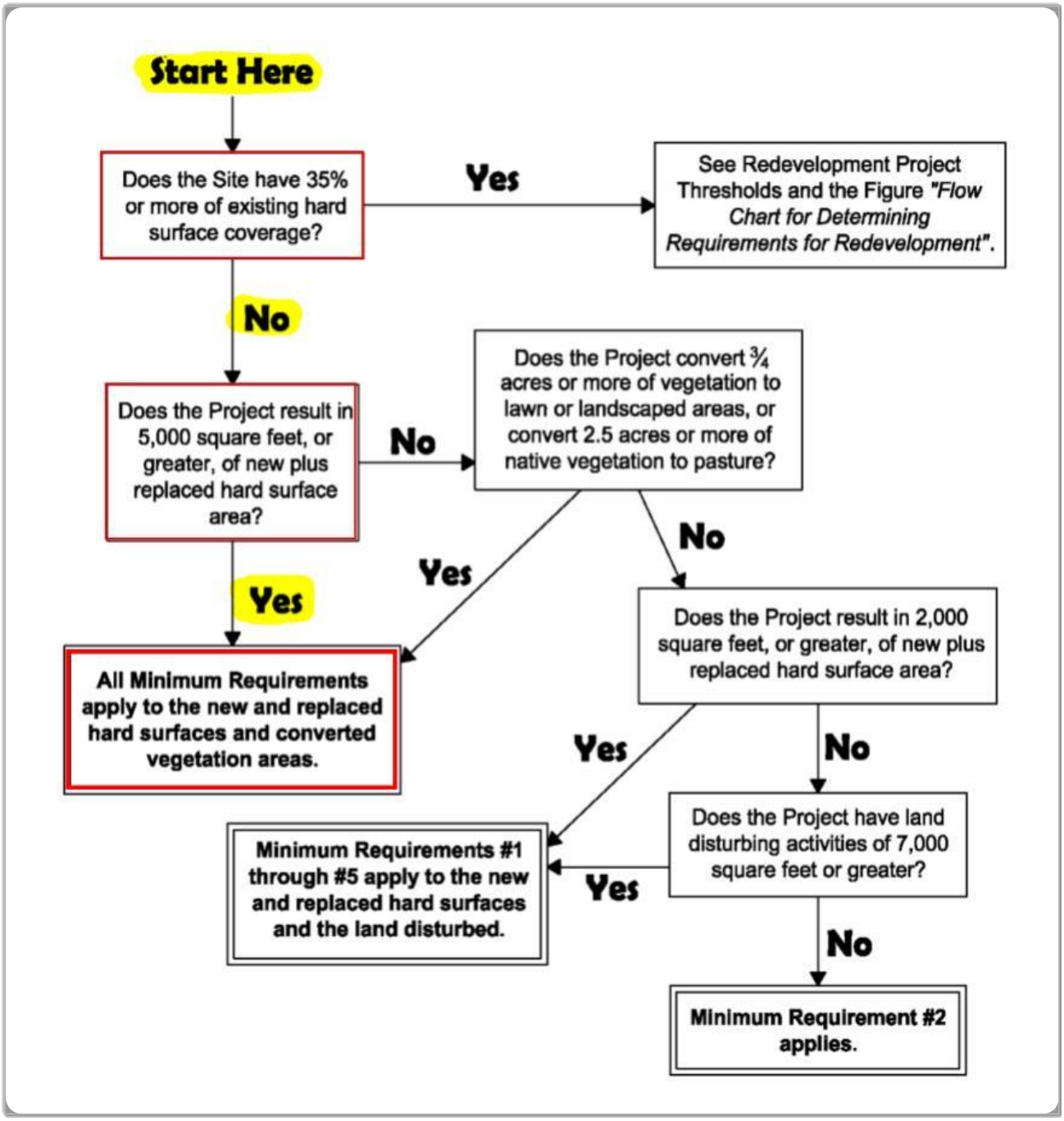


Figure 4 – Minimum Requirements Flowchart for New Development Projects

6.1 Minimum Requirement # 1: Preparation of Stormwater Site Plans

This document has been prepared as part of the Stormwater Site Plan to satisfy Minimum Requirement #1.

6.2 Minimum Requirement # 2: Construction Stormwater Pollution Prevention Plan (SWPPP)

A SWPPP addressing each of the 13 elements described in Volume I, Section 3.4.2 of the SWMMWW would be prepared by the Contractor prior to beginning earthwork activities.

6.3 Minimum Requirement # 3: Source Control of Pollution

Water pollution source control of pollutants, both during construction and for the developed site, would be implemented per Volume IV of the SWMMWW, including but not limited to:

- Preventive Maintenance
- Good Housekeeping
- Employee Training and Inspections
- Record keeping
- Best Management Practices (BMPs) for Maintenance of Stormwater Drainage and Treatment Systems
- BMPs for Dust Control at Disturbed Land Areas and Unpaved Roadways and Parking Lots
- BMPs for Landscaping and Lawn/ Vegetation Management

6.4 Minimum Requirement # 4: Preservation of Natural Drainage Systems and Outfalls

There are no existing drainage patterns at the project site. Runoff generated on the project site that is captured by the underground detention vault proposed then it flows to conveyance ditch then it would be discharged to the Sewer pipe. Additional runoff generated by new or replaced surfaces that is not captured by the ditch has a 100-year peak discharge less than 0.2 cubic feet per second (cfs) and would sheet flow out of the project site boundary and disperse through natural vegetation.

6.5 Minimum Requirement # 5: On-site Stormwater Management

Per the SWMMWW Volume I, Section 3.4.5, for projects discharging to flow control exempt waters the following BMPs must be implemented where feasible:

- BMP T5.10B: Downspout Dispersion Systems
- BMP T5.12: Sheet Flow Dispersion.
- BMP T11.11: Coalescing Plate (CP) Separator
- BMP D.3: Detention Vaults

BMP T5.10B is applicable at the project site as there are two proposed roof areas. BMP T5.12 would be applied in the landscaping buffer area. BMP T11.11 Coalescing Plate (CP) Separator is used in water quality units. BMP D.3: Detention Vaults is used for storage of stormwater. A summary of proposed BMPs for meeting Minimum Requirement #5 is presented in *Table 6-1*.

Table 6-1 Minimum Requirement #5 Best Management Practices		
Location	**Tributary Area (ft^2)**	**Proposed BMP**
All landscaped areas	13,248	BMP T5.12 – Sheet Flow Dispersion
Areas collected by proposed conveyance system	43,342	BMP D.3: Detention Vaults
Areas collected for water quality treatment	25,634	BMP T11.11 Coalescing Plate (CP) Separator

Table 6-1 Minimum Requirements #5 Best Management Practices

These requirements are illustrated in the Flow Chart for Determining Low Impact Development (LID) MR#5 Requirements from the SWMMWW, provided in *Figure 5*. For Stormwater Pipe Sizing, Hazen William equation is used, as provided in **Appendix C**. An 18" Reinforced concrete pipe (RCP) will be used for Stormwater runoff.

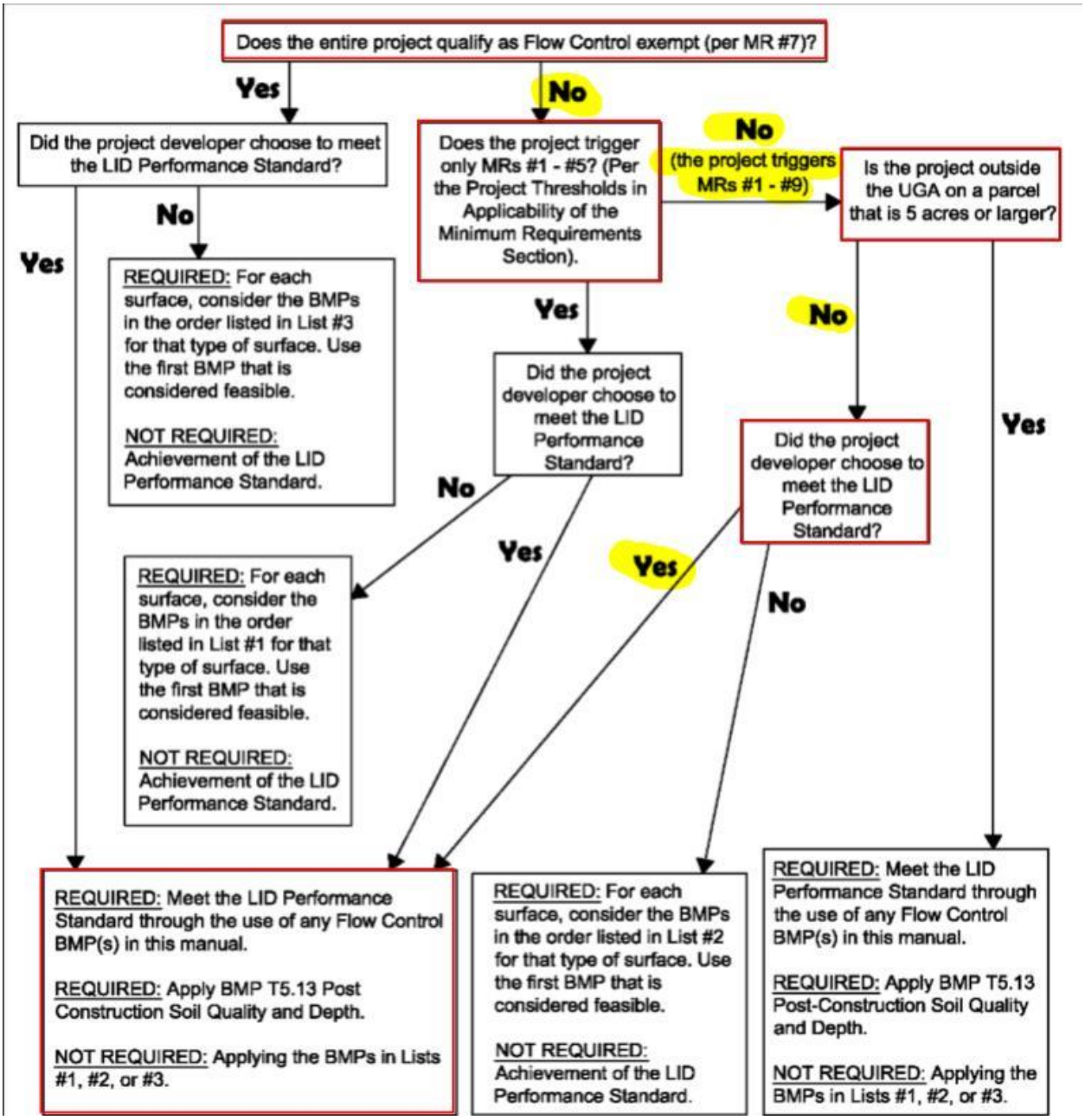


Figure 5 – Flow Chart for Determining Low Impact Development (LID)
MR#5 Requirements

6.6 Minimum Requirement # 6: Runoff Treatment

Minimum Requirement #6 applies to all new hard surfaces on the project site. The step-by-step process for selecting treatment facilities is provided below:

6.6.1 Step-by-Step Selection Process for Treatment Facilities:

Step 1: Determine the Receiving Waters and Pollutants of Concern Based on Off-Site Analysis

Runoff generated by the project site is tributary to the Storm drainpipes. It is not anticipated that the proposed driveway or parking lots located within the project site drainage basin would generate pollutants which could contribute to the identified water quality problems in the sewers.

Step 2: Determine if an Oil Control Facility/Device is Required

As the project site is a commercial site & will have a service station there. Therefore, oil control facilities will be required on this project. We are using BMP T11.11 Coalescing Plate (CP) Separator for this project.

Step 3: Determine if Infiltration for Pollutant Removal is Practicable

As from the Geotechnical report, the project site soil is not suitable for the conventional infiltration of stormwater.

Step 4: Determine if Control of Phosphorous is Required

The receiving water, Allen Creek, is not a Phosphorous sensitive water per the DOE 303 (d) list. Based on this review, Phosphorus control is not required at the project site.

Step 5: Determine if Enhanced Treatment is Required

As the water entering the detention facility contains pollutants from the customer parking lot area as well as from the fueling area. So, we need enhanced treatment for the project site.

Step 6: Select a Basic Treatment Facility

Basic water quality treatment facilities are required at the project site. A Coalescing Plate (CP) Separator would be used to treat stormwater.

6.7 Minimum Requirement #7: Flow Control

Minimum Requirement #7 applies to all new hard surfaces on the project site. Furthermore, there were no signs of erosion or conveyance capacity issues identified downstream during the downstream analysis which would require stormwater detention facilities.

6.8 Minimum Requirement #8: Wetlands Protection

The project area does not discharge to wetland areas; therefore, Minimum Requirement #8 is not applicable.

6.9 Minimum Requirement #9: Operation and Maintenance

The city would be responsible for maintenance and operation of the proposed facilities. Operation and maintenance would be carried forth consistent with the provisions in Volume V of the SWMMWW as described in Section 9 of this report.

7. PERMANENT STORMWATER CONTROL PLAN

7.1 Flow Control and water Quality Design

Within the project site, there is one (Threshold Discharge Area) TDA which discharges to the Storm drainpipes. This TDA has two separate discharge points. One is through the proposed stormwater conveyance system on the southwest corner of the project i.e. on the 100th Street NE, and the second is via sheet flow through a landscaping area at the perimeter of the project site which leads to the Storm pipes.

7.1.1 Water Quality Treatment

The TDA has more than 5,000 square feet of (Pollution generating hard surface) PGHS surfaces, and therefore the construction of stormwater water quality treatment facilities is required per Volume I, Section 3.3 of the SWMMWW. Per the Minimum Requirements for New development Flowchart provided in Figure 4, Water quality treatment is only required for new PGHS. Treatment would be provided via a Coalescing Plate (CP) Separator located 4 feet deep to the proposed driveway. This facility was sized based on guidance provided in the SWMMWW.

7.1.2 Flow Control

As the project site discharges to a Storm drainpipe as well as Sewer pipe, per SMWWMM Chapter 3.3 flow control facilities are required at the project site. The capacity of the downstream conveyance system and lack of observed erosion issues are discussed further in Section 5 of this document.

7.2 Stormwater Conveyance Analysis

A conveyance system composed of stormwater pipes was designed to route runoff generated by the proposed project area to the existing conveyance system that discharges to the Storm pipes. The City Municipal Code Chapter 4-040-I stipulates that proposed conveyance facilities must have the capacity to convey the 100-year peak flow event, and that existing downstream conveyance facilities which receive runoff from the proposed site must be able to convey the total 25-year peak flow generated by the proposed site and its tributary area.

8. CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN

As per SWMMWW, the 13 elements and the selected BMPs are described as follow:

- Element 1: Preserve Vegetation / Mark Clearing Limits
  - BMP C233: Silt Fence
- Element 2: Establish Construction Access
  - BMP C107: Construction Road / Parking Area Stabilization
- Element 3: Control Flow Rates:
  - V-12 Detention BMP

- Element 4: Install Sediment Controls
  - BMP C233: Silt Fence / BMP C240: Sediment Trap
- Element 5: Stabilize Soils
  - BMP C140: Dust Control
- Element 6: Protect Slopes
  - BMP C201: Grass-Lined Channels
- Element 7: Protect Drain Inlets
  - BMP C220: Inlet Protection
- Element 8: Stabilize Channels and Outlets
  - BMP C209: Outlet Protection
- Element 9: Control Pollutants
  - BMP C154: Concrete Washout Area
- Element 10: Control De-Watering
  - BMP C236: Vegetative Filtration
- Element 11: Maintain BMPs
  - BMP C160: Certified Erosion and Sediment Control Lead
- Element 12: Manage the Project
  - All BMPs will be inspected, maintained, and repaired all BMPs as needed to assure continued performance of their intended function. Site inspections and monitoring will be conducted in accordance with the Construction Stormwater General Permit or local plan approval authority.
  - The construction SWPPP will be maintained, updated and implemented in accordance with the Construction Stormwater General Permit.
- Element 13: Protect Low Impact Development BMPs
  - BMP C102: Buffer Zones

9. OPERATION AND MAINTAINANCE MANUAL

Proper inspection and maintenance of the detention vault, catch basins, trash rack, and conveyance channels will extend the life and reduce the amount of sediment accumulated in these facilities over time within the conveyance system both upstream and downstream. This in turn will reduce the frequency of maintenance required for the conveyance system and increase its life. Build in provisions to facilitate maintenance operations into the project when it is installed. Maintenance must be a basic consideration in design and in determination of first cost.

The operation and maintenance plan for the project are listed as follows:

- Facilities should be inspected annually and after major storms. The maintenance standards contained in Appendix V-A are measures for determining if maintenance actions are required as

identified through the annual inspection. The inspection and maintenance schedule may require adjustment based upon observations made during inspection.

- Sediment should be removed from catch basins as recommended in Appendix V-A. When accumulated sediment depth exceeds 10% of the diameter of the storage area for ½ length of storage vault or any point depth exceeds 15% of diameter. Then, all sediment and debris removed from storage area. Additional information is included in Volume V, Appendix VA of the SWMMWW.
- If there are any openings or voids allowing material to be transported into the facility. Then, all the joints between tank/pipe sections are to be sealed.
- If any part of tank/pipe is bent out of shape more than 10% of its design shape (Review required by engineer to determine structural stability). Then, tank/pipe is to be repaired or replaced to design.
- When cracks wider than ½-inch and any evidence of soil particles entering the structure through the cracks or maintenance/inspection personal determines that the vault is not structurally sound. Then, vault is to be replaced or repaired to design specifications and is structurally sound. Additional information is included in Volume V, Appendix V-A of the SWMMWW.

Appendix A
Geotechnical Report

January 4, 2023
Project No. 22-1021

SHRI Ganesh, LLC
20924 55th Avenue West
Lynnwood, WA 98036

Attn: Mr. Goutam Jain

Re: Subsurface Conditions Report
Proposed Gas Station
10008 67th Avenue NE
Marysville, WA 98270
(Parcel No. 30051500101800)

Dear Mr. Jain:

As requested, GeoTest Services, Inc. [GeoTest] is pleased to submit this report summarizing the results of our subsurface conditions evaluation for the parcel at the above referenced address. The purpose of this report is to provide a subsurface conditions report for use in the potential development of this property.

GeoTest understands that the subject property is currently in feasibility, in which the feasibility period will end on or around January 9, 2023. If the purchase is completed, GeoTest understands that the buyer/Client is planning on constructing a one-story "C"-store with a fueling island and canopy. A specific development plan was not available as of the writing of this report. It should be noted that our current involvement for this project is only to provide basic information based on the results of our subsurface explorations and laboratory testing. Engineering and design services, a geohazard assessment, or detailed recommendations regarding foundations or infiltration, are outside of the scope of work of this report and were not requested by the Client.

SITE CONDITIONS

This section discusses the general surface and subsurface conditions observed at the project site at the time of our field investigation. Interpretations of the site conditions are based on the results of our review or available information, site reconnaissance, subsurface explorations, laboratory testing, and our experience in the project vicinity.

Surface Conditions

The rectangular-shaped, approximately 1-acre subject property is located at the northwest corner of 67th Avenue NE and 100th Street NE in Marysville, WA. The property is covered with tall grass and generally slopes at a gentle rate from north to south with less than 10 feet of vertical

relief. It appears that some trees were previously situated on the property, but have since been removed. Residential properties border the property to the north. The property to the west is vacant and owned by the City of Marysville.

Subsurface Conditions

Subsurface conditions were explored by advancing four test pits (TP-1 through TP-4) on December 28, 2022. The explorations were advanced to depths ranging from 6.5 to 7 feet below ground surface (BGS) with a tracked excavator subcontracted to GeoTest. Approximate locations of the test pit explorations have been plotted on the *Site and Exploration Plan* (Figure 2).

The explorations encountered approximately 12 to 18 inches of topsoil or previously placed gravel fill overlying native, loose, silty sand to sandy silt (weathered till). At approximately 2 to 3 feet below ground surface (BGS), the soils became unweathered and consisted of dense to very dense/hard to very hard, gravelly, silty sand to sandy silt. The unweathered till was encountered to the maximum explored depth of the test pits (approximately 6.5 to 7 feet BGS). All test pits were excavated until the native soils were very difficult to penetrate with the excavator.

General Geologic Conditions

Geologic information for the project site was obtained from the *Geologic map of the Marysville quadrangle, Snohomish County, Washington* (Minard, 1985), published by the United States Geological Survey. According to this publication, geology within the vicinity of the project site consist of Till (map unit Qvt). Till (referred to locally as Vashon till or hardpan) is a nonsorted mixture of clay, silt, sand, pebbles, cobbles, and boulders (diamicton) with some lenses of stratified soils. This unit is typically dense to very dense or very stiff to hard due to the overriding ice from glacial advance and retreat, in which glaciers in the region were upwards to a mile thick.

The soils encountered in our explorations appear to be consistent with published geologic information.

Groundwater

At the time of our site visit on December 27, 2022, perched groundwater seepage was encountered in all of the test pits an an approximate depth of 1 to 3 feet BGS. The groundwater conditions reported on the exploration logs are for the specific locations and dates indicated, and therefore may not be indicative of other locations and/or times. Groundwater levels are variable and groundwater conditions will fluctuate depending on local subsurface conditions, precipitation, and changes in on-site and off-site use.

SUMMARY

Based on the results of our subsurface investigation and laboratory testing, GeoTest makes the following comments. It should be noted that these findings and comments were presented in our Preliminary Findings letter dated December 30, 2022, with updated commentary provided as necessary.

GeoTest makes the following preliminary findings based on our explorations.

- Native, weathered Till soils were generally encountered within 12 to 18 inches of existing grade. These soils became unweathered and dense to very dense with depth. The native Till soils are typically suitable for building support.
- Design recommendations for shallow conventional foundations commonly require foundations to be supported by firm and unyielding native site soils or properly compacted structural placed over firm and unyielding native soils. Lightly loaded, shallow conventional foundations, supported by the native site soils at depths at least to 18 inches below existing grade would generally be considered suitable for a typical 1-story gas station building or retail store. If larger or more heavily loaded buildings are proposed for the property, further explorations may be needed to formulate foundation design recommendations.
- Additional explorations may be required due to the depth of planned underground storage tanks. If deep underground tanks are planned, we would need to provide recommendations regarding temporary excavations and the effects of buoyancy. GeoTest can provide additional explorations, consultation and/or recommendations, based on the proposed future property development plan, upon request.
- The native till soils encountered in our explorations contain a high percentage of fines. Perched groundwater seepage was also encountered in all of the explorations. The very dense/very hard, unweathered Till is classified as a hydraulic restriction layer per the *Stormwater Management Manual for Western Washington*. Therefore, it appears that these soils are not suitable for the conventional infiltration of stormwater. Approaches other than infiltration should be considered to address stormwater management on this project. Laboratory test results are attached to the end of this report.

LIMITATIONS

The analyses and conclusions provided in this report are based on conditions encountered at the time of the subsurface exploration performed by GeoTest Services, Inc., information from previous studies, and our experience and judgment. Our work has been performed in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in this area. GeoTest Services, Inc. has prepared this subsurface conditions report for the exclusive use of SHRI Ganesh, LLC, and their representatives for preliminary evaluation of the property located at 10007 67th Avenue NE in Marysville, WA. No warranty, expressed or implied, is made.

It should be understood that this report does not constitute a geotechnical engineering report and that additional studies should be expected as part of the design process. The intent of this report is to provide basic information regarding the type of soil (Till) that exists on this property. The soils, in our opinion, are suitable for the support of foundations.

We must presume that the subsurface conditions encountered are representative for the proposed site for the purposes of formulating our conclusions. However, the Client should be aware that subsurface conditions may vary with time and between exploratory locations, and unanticipated conditions may be encountered. If construction reveals differing conditions or the design is modified, GeoTest should retained to reevaluate our conclusions and provide written confirmation or modification, as needed.

We appreciate the opportunity to be of service to you on this project. if any questions should arise regarding this report, please contact the undersigned.

Respectfully,
GeoTest Services Inc.

1/4/23

Gerry D. Bautista, Jr., P.E.
Project Geotechnical Engineer

Attachments:

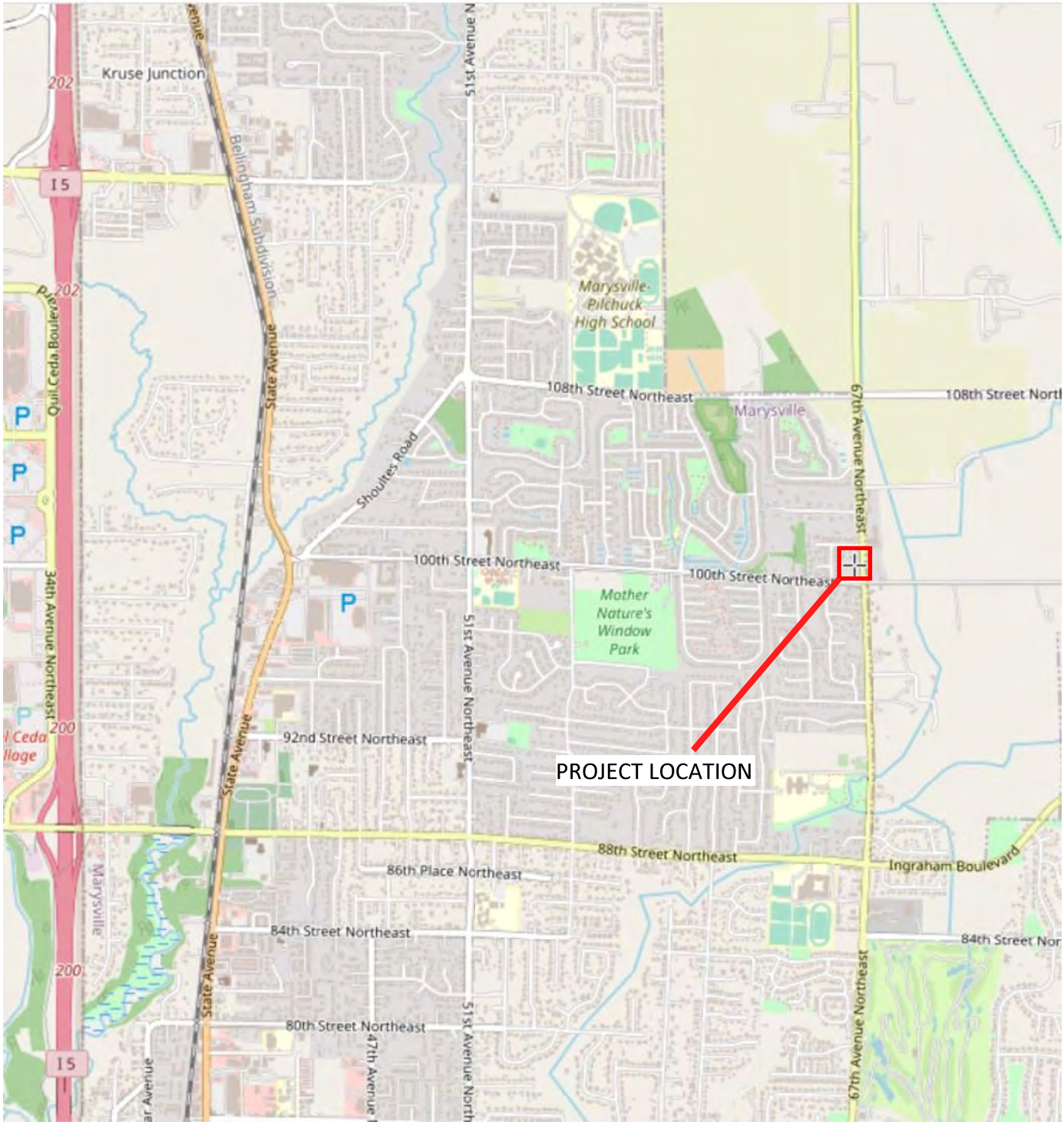
	Figure 1	Vicinity Map
	Figure 2	Site and Exploration Plan
	Figure 3	Soil Classification System and Key
	Figures 4 – 5	Test Pit Logs
	(1 page)	Northwest Agricultural Consultants Laboratory Results
	(4 pages)	Report Limitations and Guidelines for its Use

REFERENCES

Gariepy, D., Graul, C., Heye, A., Howie, D., Labib, F., & Song, K. (n.d.), *2019 Stormwater Management Manual for Western Washington* (2019 SMMWW) (pp. 1-1108) (United States, Washington State Department of Ecology).

Minard, J.P., 1985, *Geologic map of the Marysville quadrangle, Snohomish County, Washington. U*.S. Geological Survey, Miscellaneous Field Studies Map MF-1743, scale 1:24,000.

Snohomish County PDS Map Portal, Snohomish County, WA. Retrieved December 2022 from https://snohomishcountywa.gov/3752/PDS-Map-Portal



N

2000 feet

MAP SOURCE: ACME Mapper 2.2

GEOTEST

Date: 12-29-22	By: GDB	Scale: As Shown	Project 22-1021

VICINITY MAP
PROPOSED GAS STATION
10008 67TH AVENUE NE
MARYSVILLE, WASHINGTON

Figure 1

GEOTEST	Date: 12-15-22	By: CM	Scale: As Shown

SITE AND EXPLORATION PLAN
PROPOSED GAS STATION
10008 67TH AVE NE
MARYSVILLE, WASHINGTON

Project **22-1021**

Figure **2**

Soil Classification System

MAJOR DIVISIONS			GRAPHIC SYMBOL	USCS LETTER SYMBOL	TYPICAL DESCRIPTIONS[1][2]
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well-graded gravel; gravel/sand mixture(s); little or no fines
				GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GM	Silty gravel; gravel/sand/silt mixture(s)
				GC	Clayey gravel; gravel/sand/clay mixture(s)
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well-graded sand; gravelly sand; little or no fines
				SP	Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES (Appreciable amount of fines)		SM	Silty sand; sand/silt mixture(s)
				SC	Clayey sand; sand/clay mixture(s)
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)			ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity
				CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay
				OL	Organic silt; organic, silty clay of low plasticity
	SILT AND CLAY (Liquid limit greater than 50)			MH	Inorganic silt; micaceous or diatomaceous fine sand
				CH	Inorganic clay of high plasticity; fat clay
				OH	Organic clay of medium to high plasticity; organic silt
	HIGHLY ORGANIC SOIL			PT	Peat; humus; swamp soil with high organic content

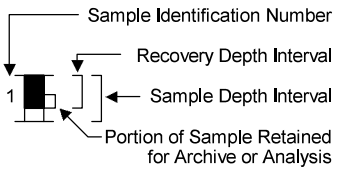
OTHER MATERIALS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
PAVEMENT		AC or PC	Asphalt concrete pavement or Portland cement pavement
ROCK		RK	Rock (See Rock Classification)
WOOD		WD	Wood, lumber, wood chips
DEBRIS		DB	Construction debris, garbage

Notes:
1. Soil descriptions are based on the general approach presented in the *Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*, as outlined in ASTM D 2488. Where laboratory index testing has been conducted, soil classifications are based on the *Standard Test Method for Classification of Soils for Engineering Purposes*, as outlined in ASTM D 2487.
2. Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows:

Primary Constituent: > 50% - "GRAVEL," "SAND," "SILT," "CLAY," etc.
Secondary Constituents: > 30% and ≤ 50% - "very gravelly," "very sandy," "very silty," etc.
> 12% and ≤ 30% - "gravelly," "sandy," "silty," etc.
Additional Constituents: > 5% and ≤ 12% - "slightly gravelly," "slightly sandy," "slightly silty," etc.
≤ 5% - "trace gravel," "trace sand," "trace silt," etc., or not noted.

Drilling and Sampling Key

SAMPLE NUMBER & INTERVAL



SAMPLER TYPE

Code	Description
a	3.25-inch O.D., 2.42-inch I.D. Split Spoon
b	2.00-inch O.D., 1.50-inch I.D. Split Spoon
c	Shelby Tube
d	Grab Sample
e	Other - See text if applicable
1	300-lb Hammer, 30-inch Drop
2	140-lb Hammer, 30-inch Drop
3	Pushed
4	Other - See text if applicable

Groundwater

▽ ATD — Approximate water elevation at time of drilling (ATD) or on date noted. Groundwater levels can fluctuate due to precipitation, seasonal conditions, and other factors.

Field and Lab Test Data

Code	Description
PP = 1.0	Pocket Penetrometer, tsf
TV = 0.5	Torvane, tsf
PID = 100	Photoionization Detector VOC screening, ppm
W = 10	Moisture Content, %
D = 120	Dry Density, pcf
-200 = 60	Material smaller than No. 200 sieve, %
GS	Grain Size - See separate figure for data
AL	Atterberg Limits - See separate figure for data
GT	Other Geotechnical Testing
CA	Chemical Analysis

GEOTEST

Proposed Gas Station
10008 67th Avenue NE
Marysville, Washington

Soil Classification System and Key

Figure 3

TP-1

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	Excavation Method: Tracked Excavator Ground Elevation (ft): 128 Excavated By: Cascade Excavation (Logged: CM)	
0	1	d	W = 19 GS		GM	Loose, dark brown, wet, silty, sandy GRAVEL (angular crushed) (FILL)	▽ Perched groundwater seepage encountered at 1.0 ft.
	2	d			SM	- scattered organics (roots and weeds) at surface	
2					SM	Medium-dense, orange-brown, moist to wet, gravelly, silty SAND (Weathered Till)	
4	3	d	W = 11 GS			Very dense, tan, moist, slightly gravelly, silty SAND, local oxidation (Till)	
6	4	d			ML	Very hard, gray-tan, slightly moist, slightly gravelly, sandy SILT (Till)	
8						Test Pit Completed 12/28/22 Total Depth of Test Pit = 6.5 ft.	
10							
12							

TP-2

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	Excavation Method: Tracked Excavator Ground Elevation (ft): 125 Excavated By: Cascade Excavation (Logged: CM)	
0	5	d	W = 25 GS		SM	Loose, brown to dark brown, moist, gravelly, silty SAND, numerous roots and grass (Topsoil/FILL)	▽ Perched groundwater seepage encountered at 1.5 ft.
2	6	d			ML	Stiff, brown to gray, moist to wet, slightly gravelly, sandy SILT, occasional rootlets (Weathered Till)	
4	7	d			ML	- mottling present	
6	8	d				Very stiff to hard, tan-gray, moist, slightly gravelly, sandy SILT (Till) - becomes very hard, tan	
8						Test Pit Completed 12/28/22 Total Depth of Test Pit = 7.0 ft.	
10							
12							

Notes: Approximate elevations obtained from Snohomish County PDS Map Portal.
All test pits excavated until refusal conditions encountered.

GEOTEST

Proposed Gas Station 10008 67th Avenue NE Marysville, WA	Log of Test Pits	Figure 4

TP-3

Depth (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	SOIL PROFILE	GROUNDWATER
						Excavation Method: Tracked Excavator Ground Elevation (ft): 122 Excavated By: Cascade Excavation (Logged: CM)	
0					SM	Loose, dark brown, moist, slightly gravelly, silty SAND, numerous roots and organics (Topsoil/FILL)	▽ Perched groundwater seepage encountered at 1.3 ft.
	9	d			ML	Stiff, brown-gray, moist to wet, slightly gravelly, sandy SILT (Weathered Till)	
2	10	d					
					ML	Hard, tan, moist, slightly gravelly, sandy SILT (Till)	
4	11	d				- becomes very hard	
	12	d	W = 16 GS			- trace cobbles	
6							
8						Test Pit Completed 12/28/22 Total Depth of Test Pit = 7.0 ft.	
10							
12							

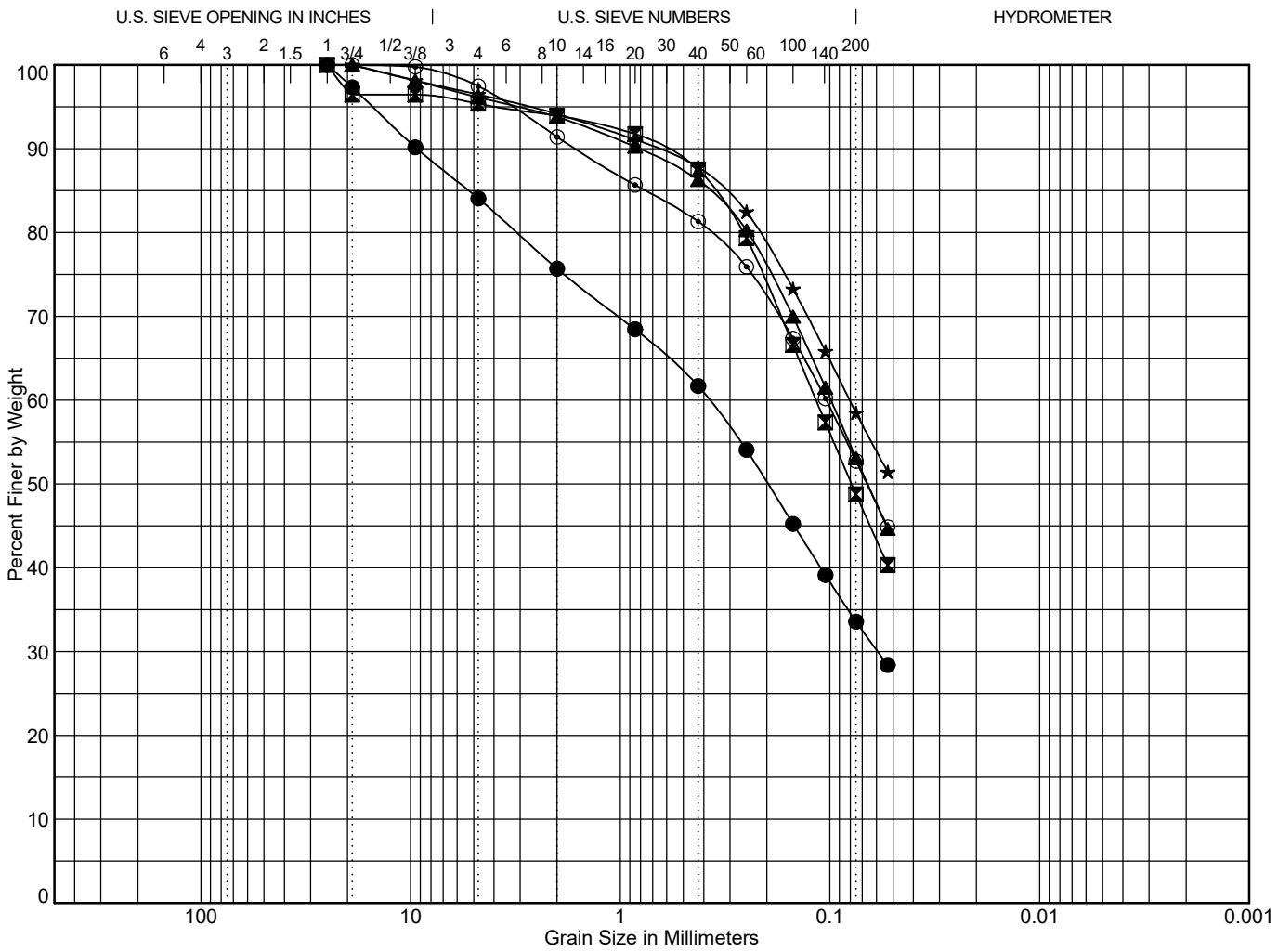
TP-4

Depth (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	SOIL PROFILE	GROUNDWATER
						Excavation Method: Tracked Excavator Ground Elevation (ft): 121 Excavated By: Cascade Excavation (Logged: CM)	
0	13	d			SM	Loose, dark gray, moist, slightly gravelly, silty SAND, numerous roots and grass (Topsoil/FILL)	▽ Perched groundwater seepage encountered at 3.0 ft.
					ML	Stiff, orange-brown, moist to wet, slightly gravelly, sandy SILT (Weathered Till)	
2	14	d	W = 30 GS		SM	- caving observed from 2' to 3' BGS due to water	
						Hard, tan, moist, slightly gravelly, sandy SILT (Till)	
4	15	d				- become very hard, trace cobbles	
	16	d					
6							
8						Test Pit Completed 12/28/22 Total Depth of Test Pit = 7.0 ft.	
10							
12							

Notes: Approximate elevations obtained from Snohomish County PDS Map Portal.
All test pits excavated until refusal conditions encountered.

GEOTEST

Proposed Gas Station 10008 67th Avenue NE Marysville, WA	Log of Test Pits	Figure 5



Cobbles	Gravel		Sand			Silt or Clay
	coarse	fine	coarse	medium	fine	

Point		Depth	Classification	LL	PL	PI	C_c	C_u
●	TP-1	1.5	Gravelly, silty SAND (SM)					
⊠	TP-1	4.0	Slightly gravelly, silty SAND (SM)					
▲	TP-2	2.0	Slightly gravelly, sandy SILT (ML)					
★	TP-3	6.0	Slightly gravelly, sandy SILT (ML)					
⊙	TP-4	2.0	Slightly gravelly, sandy SILT (ML)					

Point		Depth	D_{90}	D_{60}	D_{50}	D_{30}	D_{10}	%Coarse Gravel	% Fine Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Fines
●	TP-1	1.5	9.324	0.378	0.198	0.059	0.015*	2.7	13.3	8.4	14.0	28.1	33.6
⊠	TP-1	4.0	0.638	0.116	0.079	0.035*	0.015*	3.6	1.1	1.5	6.4	38.8	48.8
▲	TP-2	2.0	0.816	0.099	0.066	0.029*	0.013*	0.0	3.9	2.4	7.5	33.2	53.1
★	TP-3	6.0	0.676	0.08	0.049*	0.018*	0.007*	0.0	3.5	2.3	6.4	29.3	58.5
⊙	TP-4	2.0	1.622	0.104	0.067	0.028*	0.011*	0.0	2.5	6.1	10.1	28.6	52.7

*Extrapolated from data

$C_c = D_{30}^2/(D_{60} * D_{10})$

$C_u = D_{60}/D_{10}$

To be well graded: $1 < C_c < 3$ and $C_u > 4$ for GW or $C_u > 6$ for SW

GEOTEST

Proposed Gas Station
10008 67th Avenue NE
Marysville, WA

Grain Size Test Data

Figure 6

Northwest Agricultural Consultants

2545 W Falls Avenue
Kennewick, WA 99336
509.783.7450
www.nwag.com
lab@nwag.com

PAP-Accredited
NAPT

GeoTest Services Inc.
741 Marine Drive
Bellingham, WA 98225

Report: 62037-1-1
Date: December 30, 2022
Project No: 22-1021
Project Name: Proposed Gas Station

Sample ID	pH	Organic Matter	Cation Exchange Capacity
TP2 @ 1.0’	5.3	7.90%	15.9 meq/100g
TP4 @ 0.5’	5.4	6.05%	12.2 meq/100g
Method	**SM 4500-H^+ B**	**ASTM D2974**	**EPA 9081**

REPORT LIMITATIONS AND GUIDELINES FOR ITS USE[1]

Subsurface issues may cause construction delays, cost overruns, claims, and disputes. While you cannot eliminate all such risks, you can manage them. The following information is provided to help:

Geotechnical Services are Performed for Specific Purposes, Persons, and Projects

At GeoTest our geotechnical engineers and geologists structure their services to meet specific needs of our clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of an owner, a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared solely for the client. No one except you should rely on your geotechnical engineer who prepared it. And no one – not even you – should apply the report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report is Based on a Unique Set of Project-Specific Factors

GeoTest's geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the clients goals, objectives, and risk management preferences; the general nature of the structure involved its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless GeoTest, who conducted the study specifically states otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

1Information in this document is based upon material developed by ASFE, Professional Firms Practicing in the Geosciences(asfe.org)

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed, for example, from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed construction,
- alterations in drainage designs; or
- composition of the design team; the passage of time; man-made alterations and construction whether on or adjacent to the site; or by natural alterations and events, such as floods, earthquakes or groundwater fluctuations; or project ownership.

Always inform GeoTest's geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.

Subsurface Conditions Can Change

This geotechnical or geologic report is based on conditions that existed at the time the study was performed. Do not rely on the findings and conclusions of this report, whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. Always contact GeoTest before applying the report to determine if it is still relevant. A minor amount of additional testing or analysis will help determine if the report remains applicable.

Most Geotechnical and Geologic Findings are Professional Opinions

Our site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoTest's engineers and geologists review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ – sometimes significantly – from those indicated in your report. Retaining GeoTest who developed this report to provide construction observation is the most effective method of managing the risks associated with anticipated or unanticipated conditions.

1Information in this document is based upon material developed by ASFE, Professional Firms Practicing in the Geosciences(asfe.org)

A Report's Recommendations are Not Final

Do not over-rely on the construction recommendations included in this report. Those recommendations are not final, because geotechnical engineers or geologists develop them principally from judgment and opinion. GeoTest's geotechnical engineers or geologists can finalize their recommendations only by observing actual subsurface conditions revealed during construction. GeoTest cannot assume responsibility or liability for the report's recommendations if our firm does not perform the construction observation.

A Geotechnical Engineering or Geologic Report may be Subject to Misinterpretation

Misinterpretation of this report by other design team members can result in costly problems. Lower that risk by having GeoTest confer with appropriate members of the design team after submitting the report. Also, we suggest retaining GeoTest to review pertinent elements of the design teams plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having GeoTest participate in pre-bid and preconstruction conferences, and by providing construction observation.

Do not Redraw the Exploration Logs

Our geotechnical engineers and geologists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors of omissions, the logs included in this report should never be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable; but recognizes that separating logs from the report can elevate risk.

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, but preface it with a clearly written letter of transmittal. In that letter, consider advising the contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with GeoTest and/or to conduct additional study to obtain the specific types of information they need or prefer. A pre-bid conference can also be valuable. Be sure contractors have sufficient time to perform additional study. Only then might you be in a position to give contractors the best information available, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

1Information in this document is based upon material developed by ASFE, Professional Firms Practicing in the Geosciences(asfe.org)

In addition, it is recommended that a contingency for unanticipated conditions be included in your project budget and schedule.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering or geology is far less exact than other engineering disciplines. This lack of understanding can create unrealistic expectations that can lead to disappointments, claims, and disputes. To help reduce risk, GeoTest includes an explanatory limitations section in our reports. Read these provisions closely. Ask questions and we encourage our clients or their representative to contact our office if you are unclear as to how these provisions apply to your project.

Environmental Concerns Are Not Covered in this Geotechnical or Geologic Report

The equipment, techniques, and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated containments, etc. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk management guidance. Do not rely on environmental report prepared for some one else.

Obtain Professional Assistance to Deal with Biological Pollutants

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts biological pollutants from growing on indoor surfaces. Biological pollutants includes but is not limited to molds, fungi, spores, bacteria and viruses. To be effective, all such strategies should be devised for the express purpose of prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional biological pollutant prevention consultant. Because just a small amount of water or moisture can lead to the development of severe biological infestations, a number of prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of this study, the geotechnical engineer or geologist in charge of this project is not a biological pollutant prevention consultant; none of the services preformed in connection with this geotechnical engineering or geological study were designed or conducted for the purpose of preventing biological infestations.

1Information in this document is based upon material developed by ASFE, Professional Firms Practicing in the Geosciences(asfe.org)

Appendix B
WWHM Output

WWHM2012

PROJECT REPORT

General Model Information

WWHM2012 Project Name: Crossroads Chevron Detention Tank

Site Name:	Crossroads Chevron
Site Address:	10008 67th Ave NE
City:	Marysville
Report Date:	2/27/2024
Gage:	Everett
Data Start:	1948/10/01
Data End:	2009/09/30
Timestep:	15 Minute
Precip Scale:	0.000 (adjusted)
Version Date:	2023/01/27
Version:	4.2.19

POC Thresholds

Low Flow Threshold for POC1:	50 Percent of the 2 Year
High Flow Threshold for POC1:	50 Year

Landuse Basin Data

Predeveloped Land Use

Basin 1

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
C, Forest, Flat	1
Pervious Total	1
Impervious Land Use	acre
Impervious Total	0
Basin Total	1

Mitigated Land Use

Lawn

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
C, Lawn, Flat	0.304
Pervious Total	0
Impervious Land Use	acre
Impervious Total	0
Basin Total	0

Parking

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
Pervious Total	0
Impervious Land Use	acre
PARKING FLAT	0.498
Impervious Total	0
Basin Total	0

Roof Tops

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
Pervious Total	0
Impervious Land Use	acre
ROOF TOPS FLAT	0.193
Impervious Total	0
Basin Total	0

Mitigated Routing

Vault 1

Width: 35 ft.
Length: 95 ft.
Depth: 7 ft.
Discharge Structure
Riser Height: 6 ft.
Riser Diameter: 18 in.
Notch Type: Rectangular
Notch Width: 0.016 ft.
Notch Height: 1.609 ft.
Orifice 1 Diameter: 0.600 in. Elevation:0 ft.
Element Flows To:
Outlet 1 Outlet 2

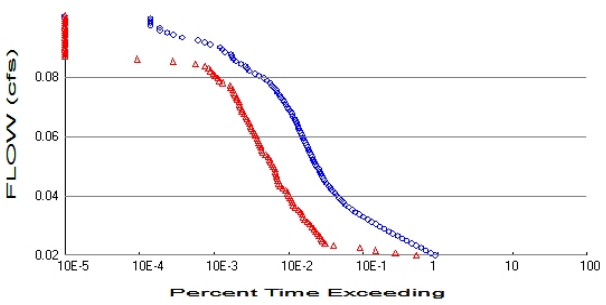
Vault Hydraulic Table

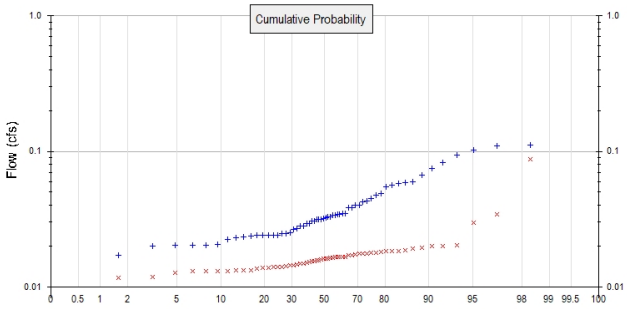
Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.076	0.000	0.000	0.000
0.0778	0.076	0.005	0.002	0.000
0.1556	0.076	0.011	0.003	0.000
0.2333	0.076	0.017	0.004	0.000
0.3111	0.076	0.023	0.005	0.000
0.3889	0.076	0.029	0.006	0.000
0.4667	0.076	0.035	0.006	0.000
0.5444	0.076	0.041	0.007	0.000
0.6222	0.076	0.047	0.007	0.000
0.7000	0.076	0.053	0.008	0.000
0.7778	0.076	0.059	0.008	0.000
0.8556	0.076	0.065	0.009	0.000
0.9333	0.076	0.071	0.009	0.000
1.0111	0.076	0.077	0.009	0.000
1.0889	0.076	0.083	0.010	0.000
1.1667	0.076	0.089	0.010	0.000
1.2444	0.076	0.095	0.010	0.000
1.3222	0.076	0.100	0.011	0.000
1.4000	0.076	0.106	0.011	0.000
1.4778	0.076	0.112	0.011	0.000
1.5556	0.076	0.118	0.012	0.000
1.6333	0.076	0.124	0.012	0.000
1.7111	0.076	0.130	0.012	0.000
1.7889	0.076	0.136	0.013	0.000
1.8667	0.076	0.142	0.013	0.000
1.9444	0.076	0.148	0.013	0.000
2.0222	0.076	0.154	0.013	0.000
2.1000	0.076	0.160	0.014	0.000
2.1778	0.076	0.166	0.014	0.000
2.2556	0.076	0.172	0.014	0.000
2.3333	0.076	0.178	0.014	0.000
2.4111	0.076	0.184	0.015	0.000
2.4889	0.076	0.190	0.015	0.000
2.5667	0.076	0.195	0.015	0.000
2.6444	0.076	0.201	0.015	0.000
2.7222	0.076	0.207	0.016	0.000
2.8000	0.076	0.213	0.016	0.000

2.8778	0.076	0.219	0.016	0.000
2.9556	0.076	0.225	0.016	0.000
3.0333	0.076	0.231	0.017	0.000
3.1111	0.076	0.237	0.017	0.000
3.1889	0.076	0.243	0.017	0.000
3.2667	0.076	0.249	0.017	0.000
3.3444	0.076	0.255	0.017	0.000
3.4222	0.076	0.261	0.018	0.000
3.5000	0.076	0.267	0.018	0.000
3.5778	0.076	0.273	0.018	0.000
3.6556	0.076	0.279	0.018	0.000
3.7333	0.076	0.285	0.018	0.000
3.8111	0.076	0.290	0.019	0.000
3.8889	0.076	0.296	0.019	0.000
3.9667	0.076	0.302	0.019	0.000
4.0444	0.076	0.308	0.019	0.000
4.1222	0.076	0.314	0.019	0.000
4.2000	0.076	0.320	0.020	0.000
4.2778	0.076	0.326	0.020	0.000
4.3556	0.076	0.332	0.020	0.000
4.4333	0.076	0.338	0.021	0.000
4.5111	0.076	0.344	0.022	0.000
4.5889	0.076	0.350	0.025	0.000
4.6667	0.076	0.356	0.028	0.000
4.7444	0.076	0.362	0.031	0.000
4.8222	0.076	0.368	0.035	0.000
4.9000	0.076	0.374	0.039	0.000
4.9778	0.076	0.380	0.043	0.000
5.0556	0.076	0.385	0.047	0.000
5.1333	0.076	0.391	0.051	0.000
5.2111	0.076	0.397	0.055	0.000
5.2889	0.076	0.403	0.060	0.000
5.3667	0.076	0.409	0.064	0.000
5.4444	0.076	0.415	0.069	0.000
5.5222	0.076	0.421	0.074	0.000
5.6000	0.076	0.427	0.080	0.000
5.6778	0.076	0.433	0.086	0.000
5.7556	0.076	0.439	0.092	0.000
5.8333	0.076	0.445	0.122	0.000
5.9111	0.076	0.451	0.130	0.000
5.9889	0.076	0.457	0.139	0.000
6.0667	0.076	0.463	0.414	0.000
6.1444	0.076	0.469	1.009	0.000
6.2222	0.076	0.475	1.777	0.000
6.3000	0.076	0.480	2.642	0.000
6.3778	0.076	0.486	3.527	0.000
6.4556	0.076	0.492	4.357	0.000
6.5333	0.076	0.498	5.065	0.000
6.6111	0.076	0.504	5.609	0.000
6.6889	0.076	0.510	5.990	0.000
6.7667	0.076	0.516	6.346	0.000
6.8444	0.076	0.522	6.654	0.000
6.9222	0.076	0.528	6.947	0.000
7.0000	0.076	0.534	7.228	0.000
7.0778	0.076	0.540	7.499	0.000
7.1556	0.000	0.000	7.760	0.000

Analysis Results

POC 1





+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #1
Total Pervious Area: 1
Total Impervious Area: 0

Mitigated Landuse Totals for POC #1
Total Pervious Area: 0.304
Total Impervious Area: 0.691

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	**Flow(cfs)**
2 year	0.0336
5 year	0.051544
10 year	0.065383
25 year	0.085182
50 year	0.101671
100 year	0.119705

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	**Flow(cfs)**
2 year	0.015872
5 year	0.020655
10 year	0.024188
25 year	0.029082
50 year	0.033053
100 year	0.037313

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #1

Year	**Predeveloped**	**Mitigated**
1949	0.034	0.014
1950	0.034	0.016
1951	0.031	0.014
1952	0.024	0.013
1953	0.020	0.013
1954	0.110	0.015
1955	0.043	0.019
1956	0.038	0.020
1957	0.047	0.017
1958	0.034	0.015

1959	0.034	0.016
1960	0.032	0.016
1961	0.060	0.018
1962	0.029	0.013
1963	0.049	0.015
1964	0.035	0.012
1965	0.029	0.016
1966	0.017	0.014
1967	0.035	0.014
1968	0.042	0.016
1969	0.102	0.015
1970	0.024	0.014
1971	0.038	0.020
1972	0.028	0.015
1973	0.027	0.017
1974	0.058	0.016
1975	0.023	0.013
1976	0.024	0.015
1977	0.020	0.014
1978	0.024	0.013
1979	0.067	0.014
1980	0.031	0.013
1981	0.025	0.013
1982	0.032	0.017
1983	0.055	0.014
1984	0.033	0.020
1985	0.040	0.018
1986	0.094	0.030
1987	0.045	0.020
1988	0.023	0.018
1989	0.024	0.013
1990	0.031	0.017
1991	0.032	0.016
1992	0.025	0.017
1993	0.020	0.012
1994	0.022	0.017
1995	0.033	0.018
1996	0.056	0.018
1997	0.111	0.087
1998	0.020	0.014
1999	0.027	0.017
2000	0.020	0.019
2001	0.008	0.010
2002	0.030	0.017
2003	0.024	0.016
2004	0.040	0.018
2005	0.028	0.016
2006	0.075	0.018
2007	0.059	0.018
2008	0.083	0.034
2009	0.025	0.017

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #1

Rank	Predeveloped	Mitigated
1	0.1113	0.0872
2	0.1098	0.0343
3	0.1024	0.0296

4	0.0938	0.0204
5	0.0827	0.0201
6	0.0745	0.0199
7	0.0672	0.0196
8	0.0597	0.0193
9	0.0589	0.0186
10	0.0576	0.0184
11	0.0560	0.0183
12	0.0546	0.0183
13	0.0485	0.0181
14	0.0473	0.0178
15	0.0448	0.0178
16	0.0432	0.0177
17	0.0421	0.0175
18	0.0402	0.0175
19	0.0399	0.0174
20	0.0382	0.0172
21	0.0381	0.0171
22	0.0349	0.0167
23	0.0346	0.0167
24	0.0343	0.0167
25	0.0342	0.0167
26	0.0339	0.0165
27	0.0336	0.0164
28	0.0330	0.0163
29	0.0328	0.0163
30	0.0323	0.0162
31	0.0320	0.0162
32	0.0316	0.0160
33	0.0315	0.0157
34	0.0313	0.0156
35	0.0307	0.0155
36	0.0305	0.0154
37	0.0295	0.0152
38	0.0292	0.0150
39	0.0281	0.0150
40	0.0280	0.0148
41	0.0267	0.0146
42	0.0266	0.0144
43	0.0252	0.0144
44	0.0247	0.0142
45	0.0246	0.0141
46	0.0242	0.0141
47	0.0242	0.0139
48	0.0242	0.0138
49	0.0241	0.0137
50	0.0239	0.0136
51	0.0236	0.0133
52	0.0235	0.0132
53	0.0232	0.0132
54	0.0224	0.0131
55	0.0205	0.0131
56	0.0204	0.0131
57	0.0203	0.0130
58	0.0203	0.0128
59	0.0201	0.0119
60	0.0171	0.0117
61	0.0081	0.0104

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.0168	19590	10966	55	Pass
0.0177	17002	5777	33	Pass
0.0185	14675	3110	21	Pass
0.0194	12726	1923	15	Pass
0.0202	10934	852	7	Pass
0.0211	9443	651	6	Pass
0.0219	8168	613	7	Pass
0.0228	7075	577	8	Pass
0.0237	6136	549	8	Pass
0.0245	5313	519	9	Pass
0.0254	4654	492	10	Pass
0.0262	4066	467	11	Pass
0.0271	3553	437	12	Pass
0.0279	3136	406	12	Pass
0.0288	2759	381	13	Pass
0.0297	2449	346	14	Pass
0.0305	2145	336	15	Pass
0.0314	1894	324	17	Pass
0.0322	1656	309	18	Pass
0.0331	1508	290	19	Pass
0.0339	1370	261	19	Pass
0.0348	1250	246	19	Pass
0.0357	1154	240	20	Pass
0.0365	1069	234	21	Pass
0.0374	1009	221	21	Pass
0.0382	949	213	22	Pass
0.0391	888	206	23	Pass
0.0399	825	196	23	Pass
0.0408	777	178	22	Pass
0.0417	733	164	22	Pass
0.0425	687	158	22	Pass
0.0434	648	153	23	Pass
0.0442	622	150	24	Pass
0.0451	602	147	24	Pass
0.0459	583	144	24	Pass
0.0468	561	142	25	Pass
0.0477	538	139	25	Pass
0.0485	507	133	26	Pass
0.0494	487	128	26	Pass
0.0502	473	123	26	Pass
0.0511	457	118	25	Pass
0.0519	440	113	25	Pass
0.0528	424	105	24	Pass
0.0537	409	95	23	Pass
0.0545	394	92	23	Pass
0.0554	380	90	23	Pass
0.0562	368	88	23	Pass
0.0571	353	85	24	Pass
0.0579	341	83	24	Pass
0.0588	333	80	24	Pass
0.0597	322	77	23	Pass
0.0605	313	75	23	Pass
0.0614	302	71	23	Pass

0.0622	293	68	23	Pass
0.0631	284	66	23	Pass
0.0640	276	64	23	Pass
0.0648	265	62	23	Pass
0.0657	257	59	22	Pass
0.0665	241	57	23	Pass
0.0674	234	54	23	Pass
0.0682	226	51	22	Pass
0.0691	212	50	23	Pass
0.0700	205	48	23	Pass
0.0708	195	47	24	Pass
0.0717	187	46	24	Pass
0.0725	177	43	24	Pass
0.0734	166	42	25	Pass
0.0742	160	41	25	Pass
0.0751	150	40	26	Pass
0.0760	146	38	26	Pass
0.0768	135	36	26	Pass
0.0777	128	35	27	Pass
0.0785	120	28	23	Pass
0.0794	111	25	22	Pass
0.0802	99	24	24	Pass
0.0811	85	22	25	Pass
0.0820	75	21	28	Pass
0.0828	63	19	30	Pass
0.0837	59	18	30	Pass
0.0845	56	16	28	Pass
0.0854	49	12	24	Pass
0.0862	42	6	14	Pass
0.0871	39	2	5	Pass
0.0880	37	0	0	Pass
0.0888	36	0	0	Pass
0.0897	30	0	0	Pass
0.0905	28	0	0	Pass
0.0914	26	0	0	Pass
0.0922	19	0	0	Pass
0.0931	16	0	0	Pass
0.0940	13	0	0	Pass
0.0948	8	0	0	Pass
0.0957	6	0	0	Pass
0.0965	5	0	0	Pass
0.0974	4	0	0	Pass
0.0982	4	0	0	Pass
0.0991	3	0	0	Pass
0.1000	3	0	0	Pass
0.1008	3	0	0	Pass
0.1017	3	0	0	Pass

Water Quality

Water Quality BMP Flow and Volume for POC #1

On-line facility volume:	0.0251 acre-feet
On-line facility target flow:	0.0127 cfs.
Adjusted for 15 min:	0.0127 cfs.
Off-line facility target flow:	0.0082 cfs.
Adjusted for 15 min:	0.0082 cfs.

LID Report

LID Technique	Used for Treatment ?	Total Volume Needs Treatment (ac-ft)	Volume Through Facility (ac-ft)	Infiltration Volume (ac-ft)	Cumulative Volume Infiltration Credit	Percent Volume Infiltrated	Water Quality	Percent Water Quality Treated	Comment
Vault 1 POC	☐	0.00			☐	0.00			
Total Volume Infiltrated		0.00	0.00	0.00		0.00	0.00	0%	No Treat. Credit
Compliance with LID Standard 8% of 2-yr to 50% of 2-yr									Duration Analysis Result = Failed

Model Default Modifications

Total of 0 changes have been made.

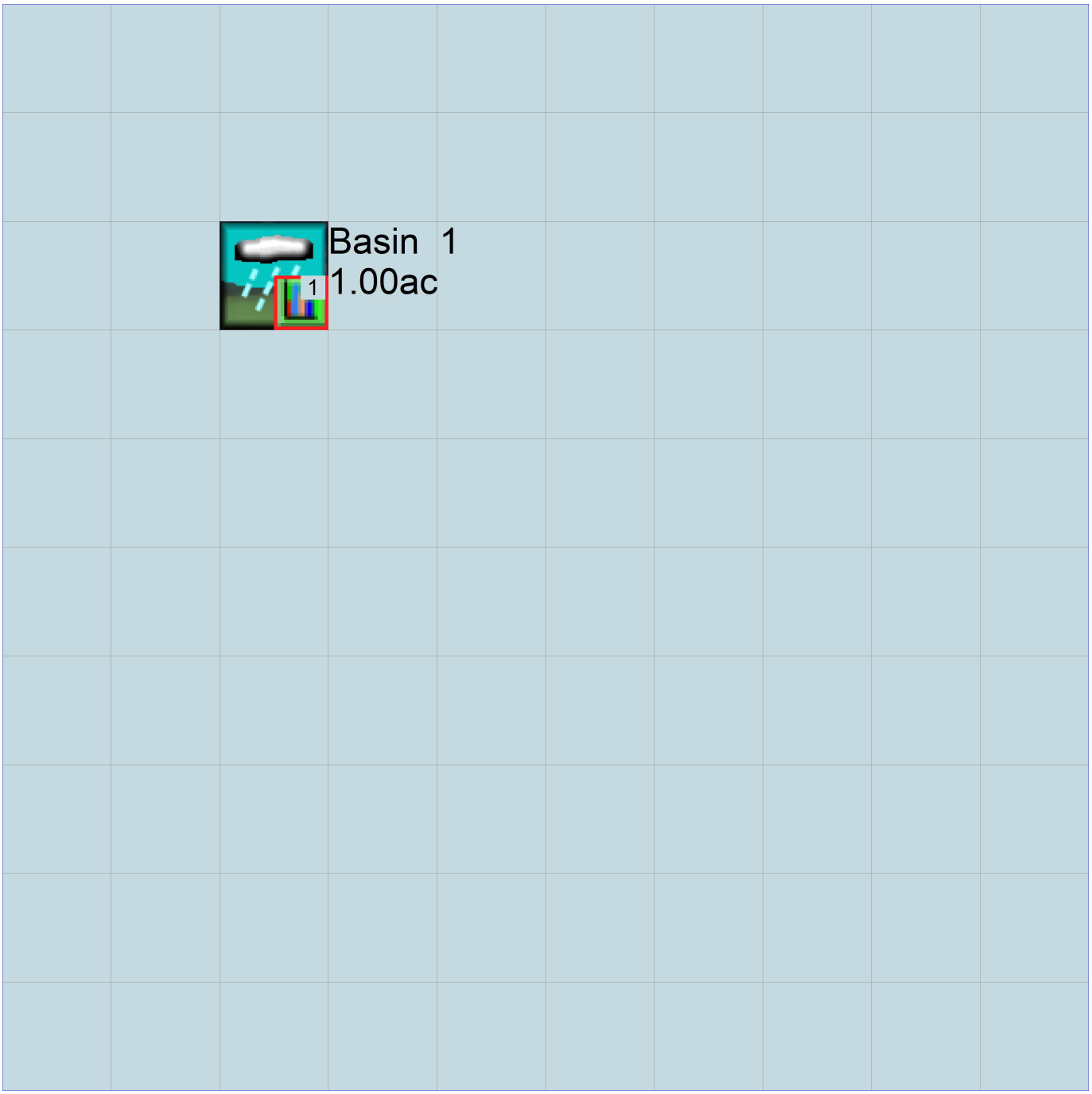
PERLND Changes

No PERLND changes have been made.

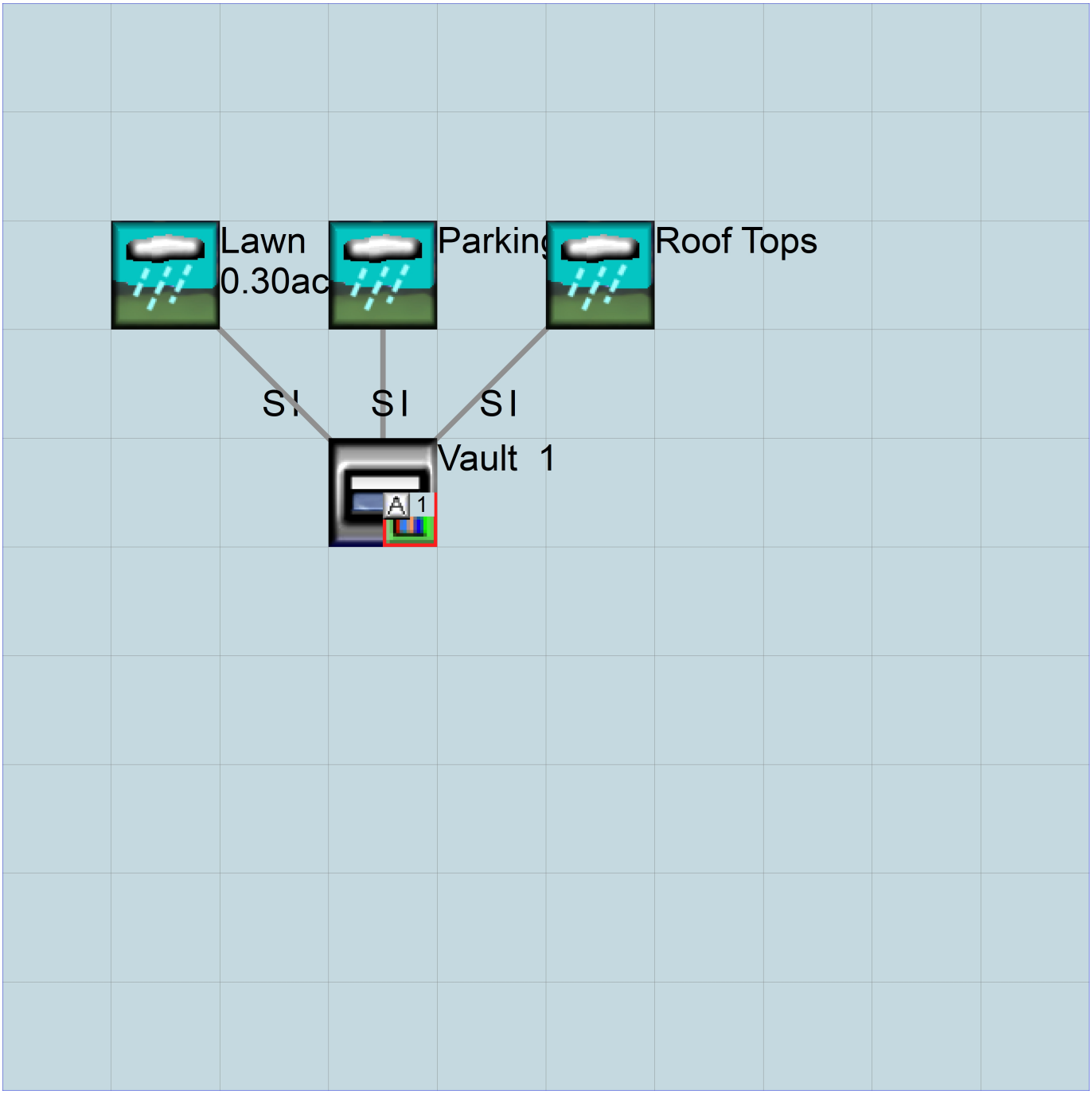
IMPLND Changes

No IMPLND changes have been made.

Appendix
Predeveloped Schematic



Mitigated Schematic



Predeveloped UCI File

Mitigated UCI File

Predeveloped HSPF Message File

Mitigated HSPF Message File

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Appendix C
Stormwater Pipe Calculations

STORMWATER PIPE CALCULATIONS

By using Hazen-William Equation for Pipe flow:
V = velocity of water flowing in the pipe (ft/s)
K = conversion factor on the unit system (K= 0.849 for the metric system and K = 1.318 for the imperical system)
C = roughness coefficient
R = hydraulic radius (ft)
P = Wetted Perimeter (ft)
A = cross sectional area of pipe
S = slope (ft/ft)

Given

Pipe length =	204	ft	from Grading Plan
Pipe drop height =	1.09	ft	from Grading Plan
Material =	RCP		
S(Slope) =	0.005343		

Inputs

For 18" RCP

dia =	1.5	ft	
A=	1.77	sft	As, A =∏(d^2)/4
P=	4.71	ft	As, $P=\pi d$
R=	0.375	ft	As, R = A/P
C=	110		for RCP
K=	1.318		
V=	4.634	ft/s	

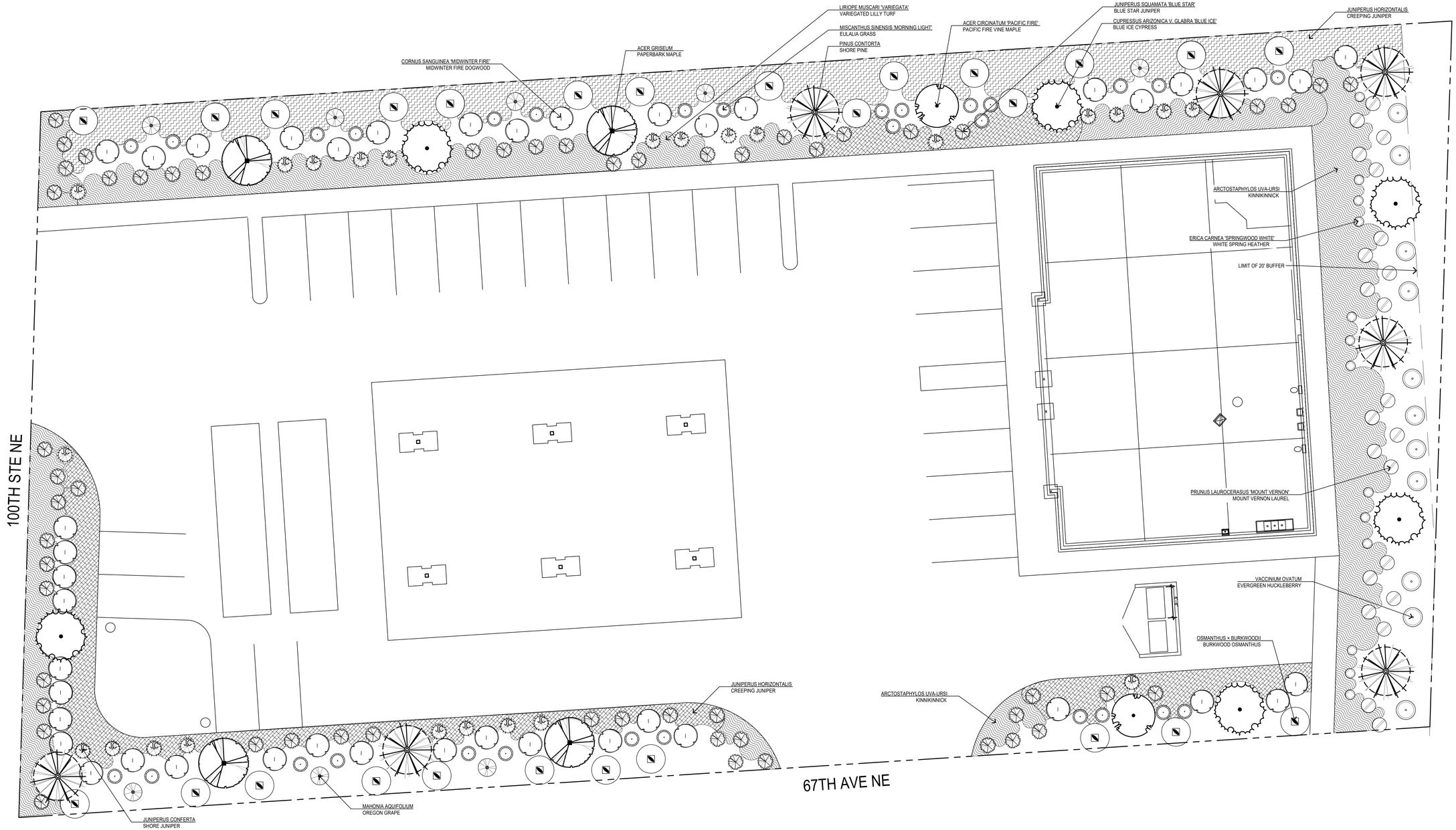
Q = 8.185 cfs As, $Q=vA$

Conclusion

As the assumed runoff is 0.065 cfs for 10-year storm from WWHM Report. But, the pipe capacity is 8.185 cfs. So, we're at the Safer side.

Formula :- $v = k * C * R^{0.63} * S^{0.54}$

SHD LANDSCAPE ARCHITECTURE
SCOTT HOLSAPPLE DESIGN
4303 STONE WAY N SEATTLE WA 98103
(206) 745-5822 www.shd-la.com



0 5' 10' 20'
SCALE: 1" = 10'-0"
NORTH

MARYSVILLE SERVICE STATION

10008 67TH AVE NE
MARYSVILLE, WA 98270
Project # 23012

CALL 2 DAYS BEFORE YOU DIG 811

Issue Title
PERMIT

Issue Date
02.21.2024

DESIGNED BY: MD, MF
DRAWN BY: MF, MS

Rev	Date	Description

Sheet Title
PLANTING PLAN

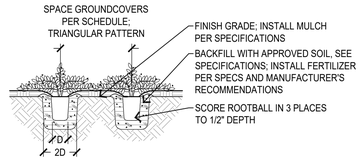
Sheet Number
L1.0

HURD PLANT SCHEDULE

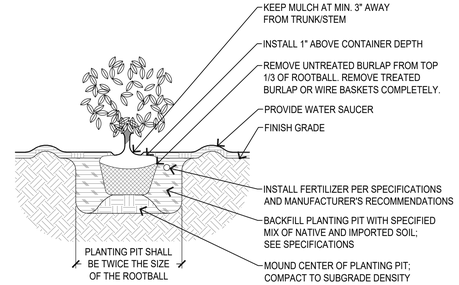
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
		TREES			
	4	ACER GRISEUM	PAPERBARK MAPLE	8' HT.	
	2	ACER CIRCINATUM	VINE MAPLE	8' HT.	NATIVE
	6	CUPRESSUS ARIZONICA V. GLABRA 'BLUE ICE'	BLUE ICE CYPRESS	8' HT.	
	7	PINUS CONTORTA	SHORE PINE	8' HT.	NATIVE
		SHRUBS			
	42	CORNUS SANGUINEA 'MIDWINTER FIRE'	MIDWINTER FIRE DOGWOOD	3 GAL.	
	13	ERICA CARNEA 'SPRINGWOOD WHITE'	WHITE SPRING HEATHER	18" HT.	
	24	JUNIPERUS CONFERTA	SHORE JUNIPER	2 GAL.	
	56	JUNIPERUS SQUAMATA 'BLUE STAR'	BLUE STAR JUNIPER	2 GAL.	
	8	MAHONIA AQUIFOLIUM	OREGON GRAPE	2 GAL.	NATIVE
	29	MISCANTHUS SINENSIS 'MORNING LIGHT'	EULALIA GRASS	2 GAL.	
	26	OSMANTHUS × BURKWOODII	BURKWOOD OSMANTHUS	2 GAL.	
	22	PRUNUS LAUROCERASUS 'MOUNT VERNON'	MOUNT VERNON LAUREL	2 GAL.	
	11	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	24" HT.	NATIVE
		GROUNDCOVER			
	1,210	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK	1 GAL. @ 18" O.C.	NATIVE
	722	JUNIPERUS HORIZONTALIS	CREEPING JUNIPER	1 GAL. @ 18" O.C.	
	529	LIRIOPE MUSCARI 'VARIEGATA'	VARIEGATED LILLY TURF	1 GAL. @ 18" O.C.	

LANDSCAPE CALCULATIONS:

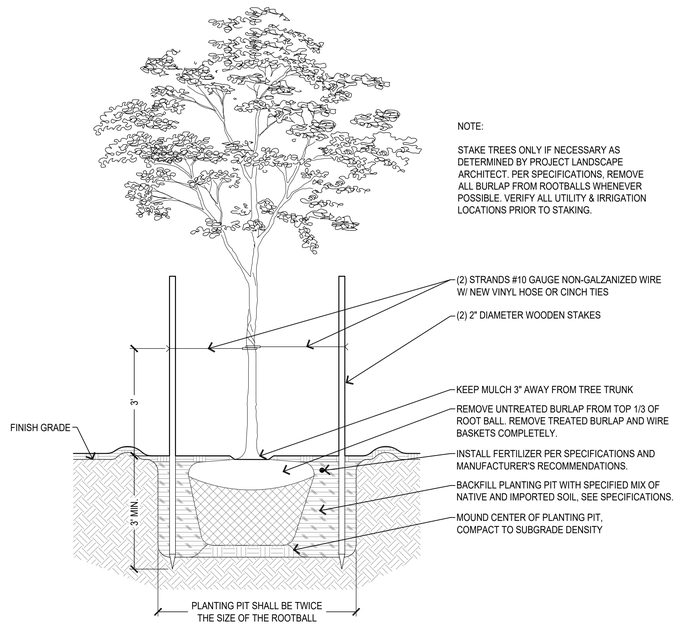
TOTAL AREA OF PLANTING	12,511 SF
TOTAL TREES AND SHRUBS	249
TOTAL EVERGREEN (TREES AND SHRUBS)	172
- MINIMUM PERCENTAGE EVERGREEN ALLOWED	50%
- PERCENTAGE EVERGREEN PROVIDED	69%
TOTAL DECIDUOUS (TREES AND SHRUBS)	77
- MINIMUM PERCENTAGE DECIDUOUS ALLOWED	25%
- PERCENTAGE DECIDUOUS PROVIDED	31%



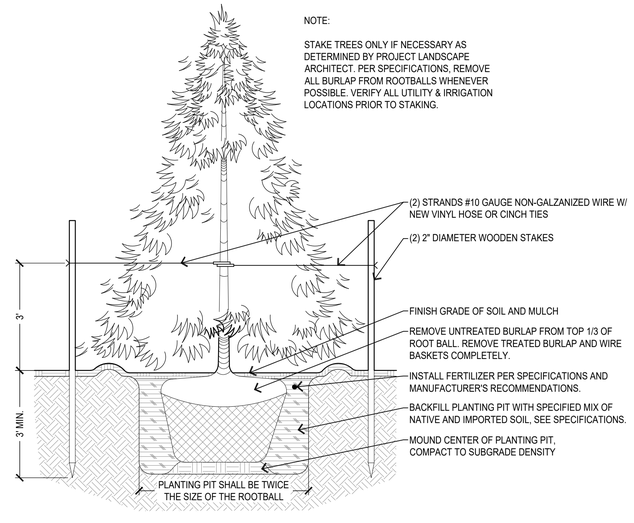
1 GROUNDCOVER PLANTING
1/2"=1'-0"



2 SHRUB PLANTING
1/2"=1'-0"



3 DECIDUOUS TREE PLANTING
1/2"=1'-0"



4 CONIFER PLANTING
1/2"=1'-0"

SHD LANDSCAPE ARCHITECTURE
SCOTT HOLSAPPLE DESIGN
4303 STONE WAY N SEATTLE WA 98103
(206) 745-5822 www.shd-la.com

MARYSVILLE SERVICE STATION

10008 67TH AVE NE
MARYSVILLE, WA 98270
Project # 23012

CALL 2 DAYS BEFORE YOU DIG 811

Issue Title
PERMIT

Issue Date
02.21.2024

DESIGNED BY: MD, MF
DRAWN BY: MF, MS

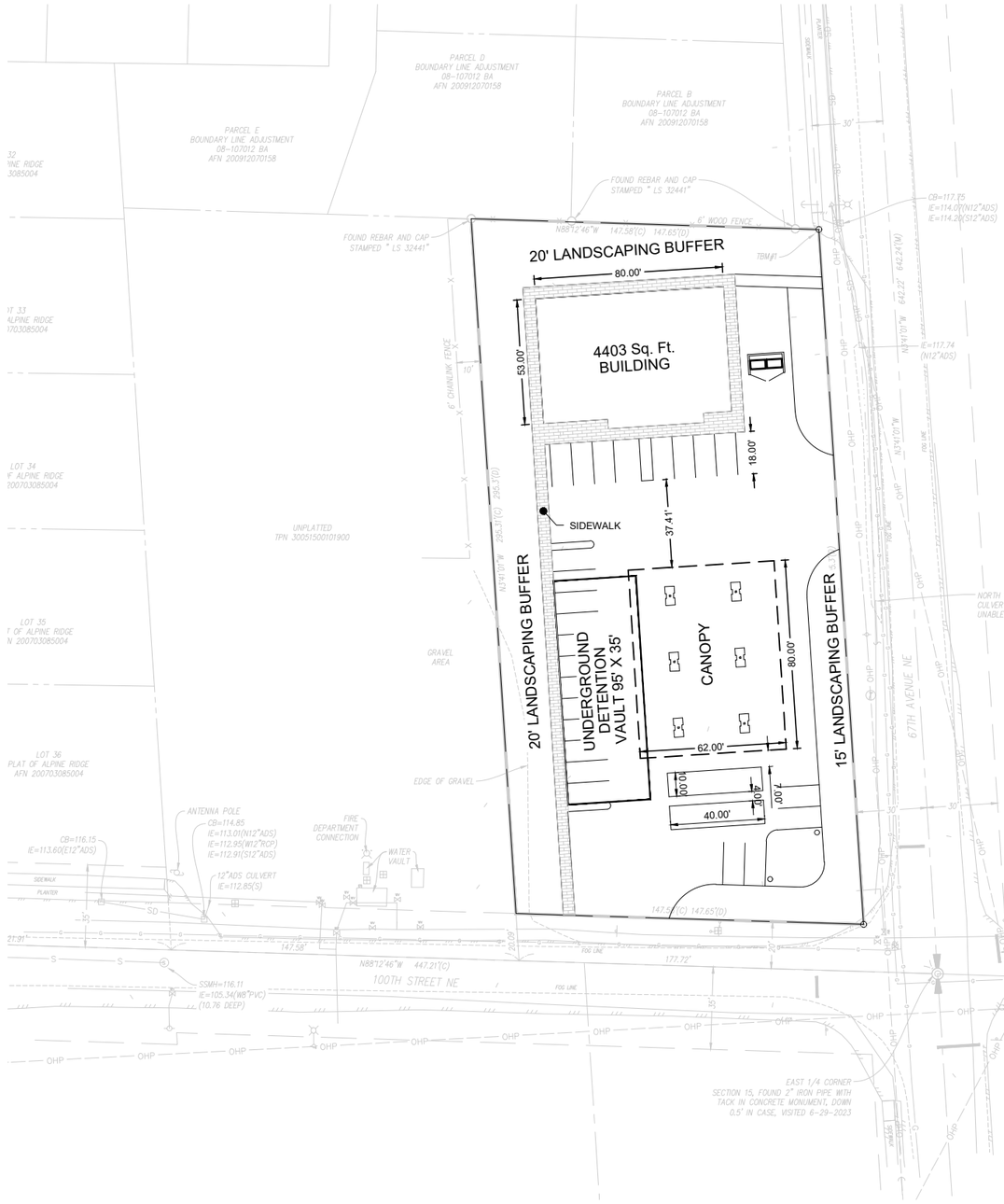
Rev	Date	Description

Sheet Title
PLANTING SCHEDULE & DETAILS

Sheet Number
L-1.1

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

UNDERGROUND DETENTION VAULT

1"=30'-0"

Scale: 30 0 30 60 Feet

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

NO.	DATE	DESCRIPTION	BY

REVISION

SITE PLAN

GEOMETRICS ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd. Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PROJ. NO.	DSN. BY:
00-0000	TI
DATE: 02/29/2024	
SCALE: 1" = 30'	
DRAWING NO. 05 OF 15	

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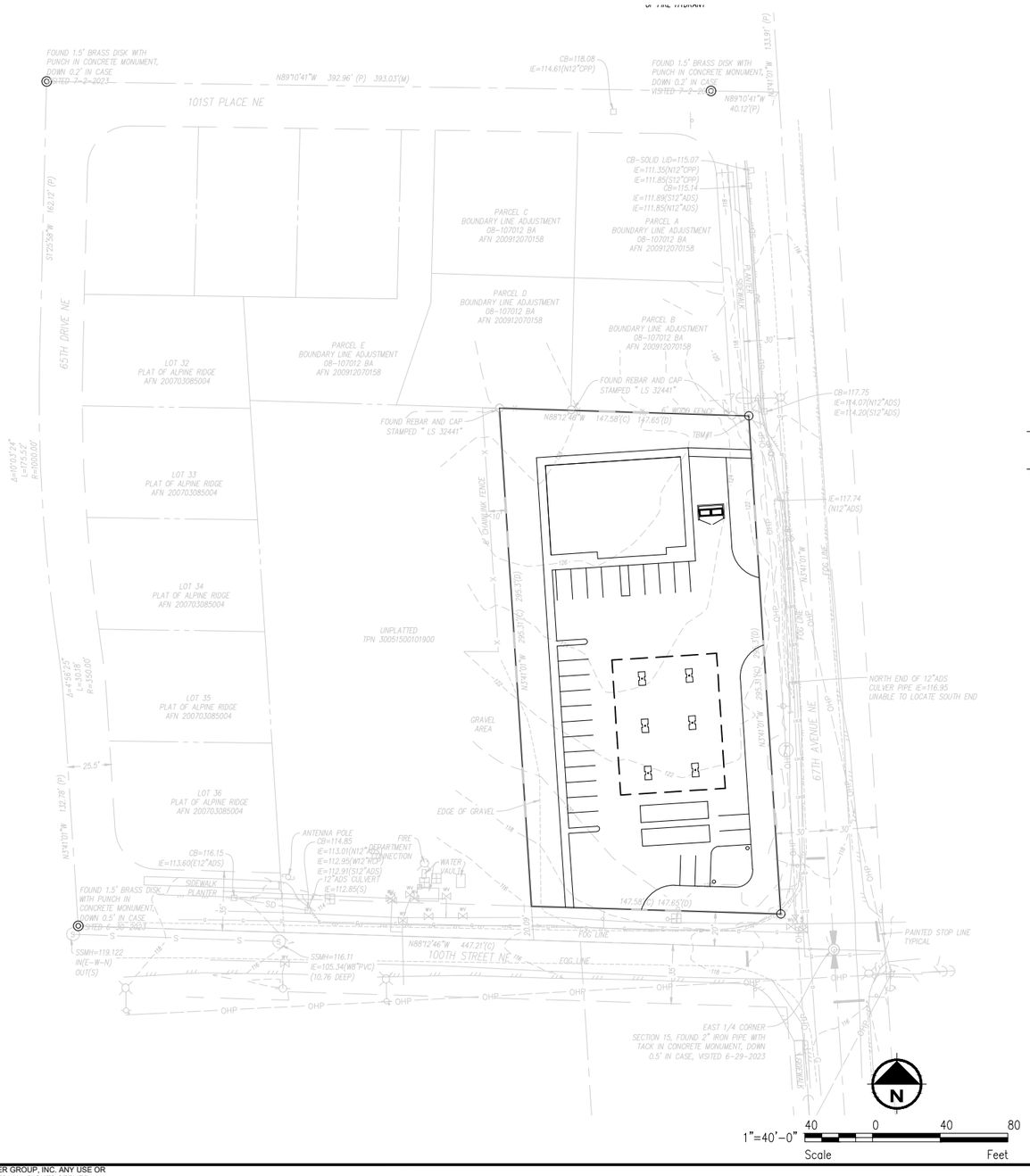
SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



VICINITY MAP

LEGAL DESCRIPTION

BEGINNING AT A POINT 20 FEET NORTH AND 30 FEET WEST OF THE SOUTHEAST COMER OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER, SECTION 15, TOWNSHIP 30 NORTH, RANGE 5 EAST OF THE WILLAMETTE MERIDIAN;
THENCE WEST 147.65 FEET;
THENCE NORTH 295.3 FEET;
THENCE EAST 147.65 FEET;
THENCE SOUTH 295.3 FEET TO THE POINT OF BEGINNING.
SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON

BASIS OF BEARING:
AS DERIVED BETWEEN ONE FOUND 4"X4" CONCRETE MONUMENT AND ONE FOUND 2" IRON PIPE, HAVING A BEARING OF N 03°41'01" W, PER RECORD OF SURVEY, RECORDED UNDER A.F. NO. 202302015010.

REFERENCES: RECORD OF SURVEY, A.F. NO. 202302015010
RECORD OF SURVEY, A.F. NO. 201101135005
PLAT OF ALPINE RIDGE, A.F. NO. 200703085004

VERTICAL DATUM: NAVD 88, SNOHOMISH COUNTY MONUMENT #2111, EAST 1/4 CORNER OF SECTION 15 EL=116.25 (PER GEODETIC GPS)

BM = BENCH MARK: SNOHOMISH COUNTY MONUMENT #2111 EAST 1/4 CORNER OF SECTION 15, ELEVATION=116.25
FOUND , FOUND EAST 1/4 CORNER SECTION 15, DESCRIBED AS 2" IRON PIPE WITH TACK IN CONCRETE MONUMENT, DOWN 0.5' IN CASE, VISITED 6-29-2023. LOCATED IN THE INTERSECTION OF 100TH STREET NE AND 67TH AVENUE NE AND DESCRIBED

TBM#1 = TEMPORARY BENCH MARK: FOUND MAG NAIL WITH WASHER LOCATED IN THE NORTHEAST PROPERTY CORNER OF PARCEL SET IN SOUTH EDGE OF THE ASPHALT WALKING RAMP. ELEVATION = 118.06'

SITE DATA

SITE ADDRESS:	10008 67TH AVE NE MERYSVILLE, WA 98270
TAX CONSULTANT NUMBERS:	300051500101800

OWNER/APPLICANT:
BRADLEY ELLEDGE
14911 CHAIN LAKE RD.
MONROE, WA 98272

SURVEYOR:
ORCA Land Surveying
3605 Colby Avenue,
Everett, WA 98201
425.259.3400

CIVIL ENGINEER:
GEOMETRICS ENGINEERING P.S.INC.
12835 NE Bel-Red Rd, Suite-123,
Bellevue, WA 98005

GENERAL CONTRACTOR:
MEYDENBAUER GROUP
IN THE SE 1/4 OF THE NE 1/4 OF SECTION 15, T.30N., R.5E., W.M.
SNOHOMISH COUNTY, WA

DRAWING INDEX:

1. COVER SHEET
2. NOTES
3. DRAINAGE AREA MAP
4. SWPPP
5. SITE PLAN
6. DRAINAGE AND GRADING PLAN
7. DRAINAGE PLAN AND PROFILE
8. UTILITY PLAN
9. VAULT DETAILS (Sh-1 to Sh-3)
10. DRAINAGE DETAILS (Sh-1 to Sh-4)
11. DETAILS-1
12. DETAILS-2
13. DETAILS-3
14. DETAILS-4
15. DETAILS-5
16. FIRE TRCUCK (EFR) ACCESS ROUTE

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION

NO.	DATE	DESCRIPTION	BY

COVER SHEET

GEOMETRICS ENGINEERING, P.S. INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PROJ. NO: 00-0000	DSN. BY:
DATE: 02/29/2024	
SCALE: 1" = 40'	
DRAWING NO: 01 OF 15	

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SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

GRADING REQUIREMENT AND NOTES

1. ALL GRADING SHALL COMPLY WITH TITTLE 30.638 OF THE SNOHOMISH COUNTY CODE AND CH 18 OF THE IBC. GRADING IS SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL.
2. CALL 1-800-424-5555 PRIOR TO CONSTRUCTION FOR REQUIRED UTILITY LOCATION BEFORE UNDERGROUND CONSTRUCTION.
3. ALL CUT AND FILL SLOPES SHALL BE A MAXIMUM OF 2:1.
4. GRADING PLAN REQUIREMENTS DO NOT TERMINATE WITH THE EXPIRATION OPF THE GRADING PERMIT, UNLESS SHOWN ON THE PLANS AS TEMPORARY, EROSION CONTROL, DRAINAGE CONTROL AND SLOPE MANAGEMENT REQUIREMENTS ARE EXPRESSLY ON-GOING REQUIREMENTS.
5. THE LIMITS SHALL BE MARKED IN THE FIELD BEFORE PERFORMING ANY GRADING OR CLEARING.ALSO MARK THE LIMITS OF ALL SENSITIVE AREAS AND THEIR BUFFERS, DRAINAGE COURSES TO BE UN-DISTURBED, AND TREES TO BE RETAINED.
6. GRADING SHALL HAVE A MINIMUM SETBACK OF 2 FEET FROM THE BOUNDARY LINE, UNLESS SPECIFICALLY SHOWN AS PERMITTED ON THE PLANS.
7. STOCKPILES ARE TO BE LOCATED IN SAFE AREAS AND ADEQUATELY PROTECTED TO PREVENT EROSION.

GENERAL NOTES:

1. THE CITY OF MARYSVILLE GENERAL NOTES, PUBLIC ROADWAY NOTES, STORMWATER NOTES, WATER NOTES, AND WASTEWATER NOTES SUPERSEDE ANY AND ALL PLAN NOTES ADDED BY THE DESIGN ENGINEER UNLESS EXPLICITLY APPROVED BY THE CITY ENGINEER. FOR PLANS UNDER THE JURISDICTION OF UNION COUNTY THE UNION COUNTY NOTES ARE PRIMARY WITH THE CITY NOTES SECONDARY AND THE DESIGNER'S PLANS NOTES SUBSIDIARY TO BOTH.
2. THE CURRENT STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS TOGETHER WITH THE REQUIREMENTS OF THE CITY OF MARYSVILLE, OHIO SHALL GOVERN MATERIALS AND WORKMANSHIP INVOLVED IN IMPROVEMENTS SHOWN ON THESE PLANS, EXCEPT THOSE SPECIFICATIONS MODIFIED BYTHE FOLLOWING SPECIFICATIONS OR CONSTRUCTION DETAILS SET FORTH HEREIN.
3. ALL WORK IS TO BE ACCEPTABLE TO CITY OF MARYSVILLE OFFICIALS. NO WORK IS TO COMMENCE UNTIL ARRANGEMENTS HAVE BEEN MADE WITH THE CITY OF MARYSVILLE ENGINEER FOR INSPECTION. ALL CONSTRUCTION LAYOUT IS TO BE PROVIDED BY THE OWNER.
4. THE CONTRACTOR SHALL CLEAN ADJACENT STREETS ON A DAILY BASIS IF MUD IS TRACKED FROM VEHICLES VISITING THE THIS IS A MINIMUM, MORE FREQUENT CLEANINGS MAY BE REQUIRED IF THE CITY DEEMS NECESSARY.
5. THE DEVELOPER/OWNER SHALL, PRIOR TO ANY CONSTRUCTION OPERATIONS, DEPOSIT WITH THE CITY OF MARYSVILLE, THE TOTAL ESTIMATED COST FOR INSPECTIONS.
6. THE CONTRACTOR SHALL NOTIFY THE CITY OF MARYSVILLE ENGINEER AT LEAST THREE WORKING DAYS PRIOR TO CONSTRUCTION.
7. ALL PERTINENT CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE AVAILABLE ON THE CITY OF MARYSVILLE WEB SITE. (WWW.MARYSVILLEOHIO.ORG)
8. THE CONTRACTOR AND SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS AND PROGRAMS IN CONNECTION WITH THE WORK.
9. THE IDENTITY AND LOCATION OF ALL EXISTING UNDERGROUND FACILITIES KNOWN TO BE IN THE CONSTRUCTION AREA HAS BEEN SHOWN ON THE PLANS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UTILITY. THE CITY OF MARYSVILLE HAS NO RESPONSIBILITY AS TO THE ACCURACY OR DEPTH OF THE UNDERGROUND FACILITIES AS SHOWN ON THE PLANS.
10. INVESTIGATIONS, LOCATION, SUPPORT, AND RESTORATION OF ALL EXISTING UTILITIES, APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
11. WHERE POTENTIAL GRADE CONFLICTS MIGHT OCCUR WITH EXISTING UTILITIES THE CONTRACTOR SHALL UNCOVER THE EXISTING UTILITY IN ADVANCE OF LAYING PIPE IN ORDER THAT THE ENGINEER MAY DETERMINE THE EXACT ELEVATION AND MAKE ANY NECESSARY ADJUSTMENTS.
12. THE CONTRACTOR SHALL GIVE NOTICE TO THE OHIO UTILITIES PROTECTION SERVICE (PHONE 1- 800-362-2764) AND TO THE OWNERS OF THE UTILITY FACILITIES SHOWN ON THE PLAN WHO ARE NOT MEMBERS OF A REGISTERED UTILITY PROTECTION SERVICE. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF ANY UTILITY AS REQUIRED BY THE PLAN WITH THE OWNER OF THE AFFECTED UTILITY.
13. ALL FIELD TILE BROKEN DURING EXCAVATION SHALL BE REPLACED WITH SDR 35 PERFORATED PIPE OR CONNECTED TO THE STORM SEWER SYSTEM.
14. EROSION CONTROL FOR PUBLIC ROADWAYS SHALL UTILIZE "DROP IN" TYPE EROSION CONTROL. THE CURB AND GUTTER INLET PROTECTION UNIT SHALL BE A SEWN GEOTEXTILE FABRIC UNIT ENCLOSING A POROUS STRUCTURE IN THE FORM OF A CYLINDRICAL TUB PLACED IN FRONT AND EXTENDING BEYOND THE INLET OPENING ON BOTH SIDES AND HAVE A GEOTEXTILE FABRIC SACK ATTACHED DESIGNED TO FIT THE OPENING OF THE CATCH BASIN OR DROP INLET AND TO HANG UNDERNEATH THE GRATE AND INTO THE CATCH BASIN.
15. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF TRAFFIC DEVICES FOR CONSTRUCTION AND MAINTENANCE OPERATIONS, PUBLISHED BY ODOT, BUREAU OF TRAFFIC.
16. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY OR ALL EXISTING SIGNS, SHRUBS, FENCES, OR OTHER PHYSICAL FEATURES DAMAGED DURING THE EXECUTION OF THIS CONTRACT AT HIS OWN EXPENSE. ALL REPAIRS SHALL BE TO THE SATISFACTION OF THE OWNER AND THE CITY OF MARYSVILLE.
17. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND GOVERNMENT FEES, LICENSES, AND INSPECTIONS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF IMPROVEMENTS SHOWN ON THESE PLANS.
18. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY AND ALL EXISTING WORK DAMAGED DURING OR DUE TO THE EXECUTION OF THIS CONTRACT AT HIS OWN EXPENSE. ALL SAID WORK SHALL BE TO THE SATISFACTION OF THE OWNER AND THE CITY OF MARYSVILLE.
19. THE CONTRACTOR/ENGINEER/OWNER SHALL PROVIDE AS-BUILT ENGINEERING PLANS FOR SANITARY, STREET, STORM SEWERS, AND WATER LINE, AT THE COMPLETION OF CONTRACT. PLANS SHALL BE SUBMITTED IN HARD COPY AND IN ELECTRONIC FORMAT.
20. ANY SURVEY MONUMENTS OR PROPERTY COMER PINS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A REGISTERED SURVEYOR AT THE CONTRACTOR'S EXPENSE.
21. SURVEY MONUMENTS SHALL BE SET AT THE COMPLETION OF THE CONTRACT, AND A LETTER CERTIFYING THAT THE WORK
22. WAS DONE SHALL BE PROVIDED TO THE CITY ENGINEER.

STORM DRAINAGE REQUIREMENTS AND NOTES

1. CONTRACTOR/DEVELOPER SHALL DEVELOP A STORM WATER POLLUTION PREVENTION PLAN TO PROTECT OHIO'S RESOURCES FROM HARMFUL EFFECTS OF SEDIMENT.
2. STORM SEWERS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
   SIZE SPECIFICATION
   6", 8", 10" ODOT 707.33
   12" AND GREATER ODOT 707.65
3. ALL MANHOLES SHALL BE CITY OF MARYSVILLE STANDARD PRECAST CONCRETE MANHOLES AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS. CASTING TO BE NEENAH #R-1762 OR EQUAL, WITH "MARYSVILLE STORM SEWER" CAST INTO THE LID.
4. MANHOLE CASTINGS ARE TO BE SET, OR SUBSEQUENTLY ADJUSTED TO 2-INCHES ABOVE THE SURFACE GRADE ESTABLISHED BY THE ENGINEER WHEN MANHOLE IS OUTSIDE OF PAVED AREAS. ALL ADJUSTMENTS SHALL BE PERFORMED USING PRECAST RINGS. MASONRY BLOCKS ARE NOT PERMITTED.
5. CATCH BASINS AND CURB INLETS SHALL BE PRECAST CONCRETE OR CONCRETE BRICK LAID IN A FULL BED OF MORTAR AS SHOWN ON THE CONSTRUCTION DRAWINGS.
6. ALL CATCH BASINS AND CURB INLETS WITHIN PAVEMENT SHALL HAVE A STEEL ANGLE FRAME TO SUPPORT THE GRATE.
7. CURB INLET CASTINGS SHALL BE NEENAH R-3067 WITH TYPE 5 VANE GRATES OR EAST JORDAN IRON WORKS #7030 WITH TYPE M4 VANE GRATE.
8. CATCH BASIN GRATES WITHIN PAVEMENT SHALL BE HEAVY DUTY NEENAH R-4852 (2-INCH THICK), OR EQUAL. CATCH BASIN GRATES WITHIN GRASS AREAS SHALL BE NEENAH R-4859, OR EQUAL.
9. ALL CURB INLET AND CATCH BASIN CASTINGS SHALL BE PERMANENTLY CAST WITH A TROUT EMBLEM AND "DUMP NO WASTE", "DRAINS TO WATERWAYS" MESSAGES TO CLEARLY IDENTIFY SEWER.
10. ALL SANITARY AND STORM SEWERS CONSTRUCTED WITH FLEXIBLE CONDUIT SHALL HAVE BEDDING OF ODOT 603 TYPE 3 (#57 STONE) EXTENDING FROM A POINT NOT LESS THAN 4 INCHES BELOW THE BOTTOM OF THE PIPE TO A POINT NOT LESS THAN 12 INCHES ABOVE THE CROWN OF THE PIPE.
11. ANY FIELD TILE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED, AS DIRECTED BY THE CITY ENGINEER, WITH SDR- 35 PERFORATED PIPE. SDR-35 WILL BE USED TO SPAN THE TRENCH, OR TO INTERCEPT AND CONVEY TO THE STORM SEWER. TRENCH TO BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL. THIS COST IS TO BE INCIDENTAL TO THE COST OF THE PROJECT AND IS TO BE INCLUDED IN THE COST OF THE VARIOUS BID ITEMS.
12. ALL PIPE OUTSIDE OF THE RIGHT-OF WAY SHALL HAVE A MINIMUM OF 2-FEET OF COVER. IF EMBANKMENT IS REQUIRED TO ACHIEVE 2-FEET OF COVER, IT SHALL BE PLACED BEFORE INSTALLATION OF THE STORM SEWER.
13. DRAINAGE STRUCTURES SHALL HAVE OPENINGS FOR CURB UNDERDRAIN OUTLETS. UNDERDRAINS TO BE CONSTRUCTED IN ACCORDANCE WITH DETAILS ON SITE PLAN.
14. THE FLOW IN ALL SEWERS, DRAINS, AND WATERCOURSES ENCOUNTERED SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS OWN EXPENSE. WHENEVER SUCH WATERCOURSES ARE DISTURBED OR DESTROYED DURING THE PROSECUTION OF THE WORK, THEY SHALL BE RESTORED BY THE CONTRACTOR, AT HIS OWN EXPENSE, TO A CONDITION SATISFACTORY TO THE ENGINEER.
15. ALL PENETRATIONS IN THE STORM STRUCTURE BY STORM CONDUIT SHALL BE SEALED WITH MASONRY BLOCK, GROUT, AND HAVE A CONCRETE COLLAR POURED AROUND THE CONDUIT THE PIPE AT THE STRUCTURE.
16. ALL STORM SEWERS 12-INCH THROUGH 36-INCH ARE TO BE TESTED VIA MANDREL OR CAMERA/VIDEOED BY THE DEVELOPER PRIOR TO ACCEPTANCE BY THE CITY ENGINEER. ALL TESTING WORK IS TO BE PERFORMED IN THE PRESENCE OF A CITY OF MARYSVILLE REPRESENTATIVE. A COPY OF THE DVD OR MANDREL TEST PAPERWORK ALONG WITH A SUMMARY REPORT IS TO BE SUBMITTED TO THE ASSISTANT CITY ENGINEER.
17. BACKFILL OPERATIONS SHALL CONFORM TO THE STANDARD CONSTRUCTION DRAWINGS AND MEET THE SPECIFICATIONS LISTED BELOW:
   a. STORM TRENCHES OUTSIDE OF THE INFLUENCE OF STREETS SHALL REQUIRE 95% OF MAXIMUM DRY LABORATORY WEIGHT AT PLUS OR MINUS 2% OF OPTIMUM MOISTURE. MATERIAL SHALL BE PER ODOT 203.07 AND SUPPLEMENTAL SPECIFICATION 1015.
   b. STORM, SANITARY, AND UTILITY TRENCHES WITHIN 3 FEET OF THE EDGE OF PAVEMENT AND WITHIN THE CONE OF INFLUENCE SHALL REQUIRE 98% OF THE MAXIMUM DRY LABORATORY WEIGHT AT PLUS OR MINUS 2% OPTIMUM MOISTURE. BACKFILL MATERIAL SHALL BE ODOT 304 AGGREGATE OR COM LSM 185, LOW STRENGTH MORTAR. (LSM) WHERE SAID RESULTS INDICATE THE TRENCH BACKFILL DOES NOT MEET THE COMPACTION REQUIREMENTS OF ODOT 203.07 OF THE CONSTRUCTION AND MATERIALS SPECIFICATION, ALL BACKFILL SHALL BE REMOVED AND RETESTED UNTIL COMPACTION MEETS THE REQUIREMENTS OF 203.07. CONE OF INFLUENCE TO BEGIN 3 FEET FROM THE EDGE OF PAVEMENT AND EXTEND ONE FOOT IN DISTANCE FOR EVERYONE FOOT OF DEPTH.
   c. STORM, SANITARY, AND UTILITY TRENCHES UNDER ROAD PAVEMENT SHALL REQUIRE 98% OF THE MAXIMUM DRY LABORATORY WEIGHT AT PLUS OR MINUS 1.5% OPTIMUM MOISTURE. BACKFILL MATERIAL SHALL BE ODOT 304 AGGREGATE OR COM LSM 185, LOW STRENGTH MORTAR, (LSM). BACKFILL TO BEGIN 3 FEET FROM EDGE OF PAVEMENT AND EXTEND ONE FOOT IN DISTANCE FOR EVERY ONE FOOT OF DEPTH. WHERE SAID RESULTS INDICATE THE TRENCH BACKFILL DOES NOT MEET THE COMPACTION REQUIREMENTS OF ODOT 203.07 OF THE CONSTRUCTION AND MATERIALS SPECIFICATION, ALL BACKFILL SHALL BE REMOVED AND RETESTED UNTIL COMPACTION MEETS THE REQUIREMENTS OF 203.07.
   d. PRIOR TO THE CONSTRUCTION OF STREETS, SOIL TESTS SHALL BE TAKEN AT ALL SANITARY SEWER, DESIGNATED STORM SEWER TRENCHES, AND WATER LINE TRENCHES WHICH CROSS THE PROPOSED PAVEMENT OR WHICH LIE SUCH THAT THE PROPOSED PAVEMENTS ARE LOCATED WITHIN ANY PART OF THE INFLUENCE LINE OF SAID TRENCH. WHERE SAID RESULTS INDICATE THE TRENCH BACKFILL DOES NOT MEET THE COMPACTION REQUIREMENTS OF ODOT 203.12 OF THE CONSTRUCTION AND MATERIALS SPECIFICATION, ALL BACKFILL SHALL BE REMOVED AND RETESTED UNTIL COMPACTION MEETS THE REQUIREMENTS OF 203.12.

EROSION CONTROL REQUIREMENTS AND NOTES:

1. CLEARING LIMITS SHALL BE ESTABLISHED FIRST THEN EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPS) SHALL BE INSTALLED PRIOR TO ANY SITE DISTURBANCE. THE EROSION / SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED PRIOR TO ANY GRADING OR EXTENSIVE LAND CLEARING IN ACCORDANCE WITH THE APPROVED CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THESE FACILITIES MUST BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION AND LANDSCAPING IS COMPLETED. THE PERMANENT VEGETATION COVER IS ESTABLISHED AND THE POTENTIAL FOR ON-SITE EROSON HAS PASSED.
2. A TEMPORARY CONSTRUCTION ENTRANCE SHALL BE ESTABLISHED TO THE SITE. THE STANDARDS AND MAINTENANCE REQUIREMENTS ARE AS FOLLOWS:
   A) INSTALLATION: THE PLAN PROVIDE THE LOCATION AND DIMENSIONS OF THE CONSTRUCTION ENTRANCE. THE AREA OF THE ENTRANCE SHALL BE ON COMPACTED BEARING GROUND, CLEARED OF ALL VEGETATION, ROOTS AND OTHER ORGANIC MATERIAL.
   B) GRAVEL CONSTRUCTION ENTRANCE SHALL BE 4" TO 8" QUARRY SPALLS OVER FILTER FABRIC CONSTRUCTED AT LEAST 12 INCHES THICK. IT MUST EXTEND THE FULL WIDTH OF THE VEHICULAR INGRESS AND EGRESS AREA AND THE MINIMUM LENGTH IS 50 FEET.
   C) MAINTENANCE: THE PERFORMANCE STANDARD IS THAT THE CONSTRUCTION ENTRANCE MUST PREVENT TRACKING OF SEDIMENT, MUD OR DIRT OFF OF THE SITE. IT SHALL BE MAINTAINED AS NECESSARY TO MEET THIS STANDARD. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH NEW QUARRY SPALLS, AS CONDITION DEMAND, AND REPAIR AND / OR CLEAN OUT ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAY OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
3. PUBLIC STREETS ARE TO BE KEPT CLEAR OF DIRT AND DEBRIS DURING CONSTRUCTION, EXCAVATIONS AND FILL OPERATIONS. MATERIAL SHALL BE REMOVED FROM THE STREET BY SWEEPING. PAVED SURFACE MUST BE CLEANED AT THE END OF EACH DAY.
4. SEDIMENT CONTROL FACILITIES SHOWN ON THESE PLANS SHALL BE INSTALLED AS PART OF THE PLAN TO REMOVE SEDIMENT FROM THE WATER BEFORE CLEARING AND GRADING IS ALLOWED. THIS MAY INCLUDE SEDIMENT PONDS, SILT FENCES, SWALES, BERMS, BARRICADES AND OTHER MEASURES. SEE THE CONSTRUCTION SEQUENCE FOR FOR ORDER OF INSTALLATION.
5. THE CONSTRUCTION PLANS INDICATE INSTALLATION OF BEST MANAGEMENT PRACTICE (BMPS) TO RETAIN ALL SEDIMENT ON SITE. ADDITIONAL MEASURES ARE NORMALLY NEEDED TO REMOVE TURBIDITY AND MEET WATER QUALITY STANDARDS. DURING CONSTRUCTION, THE CONTRACTOR MAY REQUIRE ADDITIONAL MEASURED TO PREVENT SEDIMENT OR TURBID WATER FROM LEAVING THE SITE. CONTACT THE DESIGN ENGINEER (OR DESIGNATED EROSION CONTROL PERSON) FOR GUIDANCE ON ADDITIONAL MEASURES.
6. STABILIZED ALL EXPOSED AND NON-WORKED SOIL.
   - FROM MAY 1 TO SEPTEMBER 30 NO UN-WORKED SOIL MAY REMAIN EXPOSED FOR MORE THAN 7 DAYS.
   - COVER DENUDED AREAS AS SPECIFIED IN ON THE PLANS BY APPROPRIATE COVER BMPS (SUCH AS MULCH, SOD, PLASTIC, AND STRAW).
   - COVER MATERIAL SHALL BE STOCKPILED ON SITE.
   - SOIL STOCKPILES SHALL BE STABILIZED AND PROTECTED WITH SEDIMENT RETENTION BMPS WITHIN 24 HOURS.
   - GRADING AND CONSTRUCTION SHALL BE TIME AND CONSTRUCTED IN STAGES TO MINIMIZE SOIL EXPOSURE. CONSTRUCTION SHALL BE TIME TO RECOGNIZE CONDITIONS CRATED BY THE WEATHER.
   - FROM OCTOBER 1 TO APRIL 30 NO UN-WORKED SOIL MAY REMAIN EXPOSED FROM MORE THAN 2 DAYS.
7. AN ESTABLISHED GROUND COVER THAT FULFILLS THE REQUIREMENT OF THE APPROVED CONSTRUCTION PLAN IS REQUIRED FOR ACCEPTANCE BY THE COUNTY.
   - ALL AREAS TO BE SEEDED SHALL BE CULTIVATED BY DISKING, RANKING, HARROWING OR OTHER ACCEPTABLE MEANS.
   - PERFORM ALL CULTIVATING ACROSS OR AT RIGHT ANGLE TO THE SLOPE.
   - COVER THE SITE WITH MULCH, TOPSOIL OR OTHER SOIL AMENDMENTS.
   - IF NECESSARY, SURFACE RUNOFF CONTROL MEASURES SUCH AS GRADIENT TERRACES, INTERCEPTOR DIKE / SWALES, LEVEL SPREADERS, AND SEDIMENT BASIN SHALL BE INSTALLED PRIOR TO SEEDING.
   - IMMEDIATELY FOLLOWING FINISHED GRADING, PERMANENT VEGETATION (CONSISTING OF RAPID, PERSISTENT AND LEGUME) WILL BE APPLIED. MINIMUM 80# PER ACRE) THIS IS TO INCLUDE THE FOLLOWING. 20% ANNUAL, PERENNIAL OR HYBRID RYE GRASS, 40% CREEPING RED RESCUE, 40% WHITE COVER.
   - FERTILIZER SHALL BE APPLIED AT 400# PER ACRE OF 10-20-20 (10 POUNDS PER 1100 SQUARE FEET) OR EQUIVALENT. DEVELOPMENTS ADJACENT TO WATER BODIES SHALL USE NON-PHOSPHORUS FERTILIZER.
   - ALL DISTURBED AREAS SHALL BE SEEDED WITH A PERENNIAL GROUND COVER USING AN APPROVED HYDROSEEDER OR AS OTHERWISE APPROVED BY SNOHOMISH COUNTY.
8. PROTECT CUT AND FILL SLOPES FROM EROSIVE FLOWS AND CONCENTRATED FLOWS UNTIL PERMANENT COVER AND DRAINAGE CONVEYANCE SYSTEM ARE IN PLACE.
9. INSTALL INLET PROTECTION ON ALL STORM DRAIN INLETS DURING CONSTRUCTION SO THAT SEDIMENT AND AND SILT LADEN WATER IS FILTERED OR TREATED TO MINIMIZE SEDIMENT THAT ENTERS THE INLET.
10. CHANNELS, DITCHES, SWALES AND OTHER CONVEYANCE SYSTEMS SHALL BE STABILIZED TO PREVENT EROSION DURING AND AFTER CONSTRUCTION. INSTALL OUTLET PROTECTION FOR ALL CULVERTS.
11. FOLLOW THE SPECIFIC REQUIREMENTS ON THE PLANS TO CONTROL POLLUTANT GENERATED CONSTRUCTION, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS. THIS INCLUDES MAINTENANCE OF CONSTRUCTION EQUIPMENT, FERTILIZERS, APPLICATION OF CHEMICALS, AND WATER TREATMENT SYSTEMS. THE PLAN SHALL BE UPDATED TO RESPOND TO SITE EXPOSURE AND WEATHER CONDITIONS.
    FROM OCTOBER 1 TO APRIL 30 THE CONSTRUCTION SWPPP SHALL CONTAIN A PLAN FOR STORMWATER SAMPLING LOCATIONS, BACKGROUND MEASUREMENTS, AND A PERIODIC REPORTING SCHEDULE. THE REPORTING SCHEDULE SHALL AT A MINIMUM REQUIRES SAMPLES DURING EVERY STORM EVENT THAT GENERATES RUNOFF AND SITE INSPECTION CONDITION REPORT ON THE INSTALLED BMPS. THE MONITORING AND SAMPLING ARE TO BE DONE IN A PROFESSIONAL MANNER CONSISTENT WITH CURRENT SAMPLING PROTOCOLS AND REPORTING REQUIREMENTS. THE SAMPLING POINTS ARE TO BE SHOWN ON A MAP AND MARKED ON THE GROUND.
12. THE WATER FROM DE-WATERING SYSTEMS FOR TRENCHES, VAULTS AND FOUNDATIONS SHALL BE DISCHARGED IN TO A CONTROLLED SYSTEM OR SEDIMENT-RETENTION BMP. ADDITIONAL MEASURES ARE NEEDED TO REMOVE TURBIDITY AND MEET WATER QUALITY STANDARDS.
13. THE CONSTRUCTION EROSION CONTROL BMPS SHALL BE INSPECTED AFTER EACH SIGNIFICANT RAIN EVENT. MAINTENANCE SHALL BE PERFORMED AS NEEDED TO MAINTAIN THE PERFORMANCE AND FUNCTION.
   - SILT BARRIERS AND SEDIMENT POND SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY PROLONGED RAINFALL.
   - NECESSARY REPAIR TO BARRIERS, CHANNELS AND PONDS OR REPLACEMENT SHALL BE ACCOMPLISHED PROMPTLY.
   - SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL FROM SILT BARRIER AND CHECK DAMS.
   - WHEN THE SEDIMENT REACHES THE CLEAN OUT LEVEL IN A SEDIMENT POND, IT SHALL BE REMOVED AND PROPERLY DISPOSED.
   - DEPOSITS MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER, CHECK DAM OR OTHER CATCHMENTS.
   - THE EMBANKMENT OF SEDIMENT BASIN SHOULD BE CHECKED REGULARLY TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
   - THE EMERGENCY SPILLWAY OF A SEDIMENT POND SHOULD BE CHECKED REGULARLY TO ENSURE THAT ITS LINING IS WELL ESTABLISHED AND EROSION-RESISTANT.

ADDITIONAL NOTES:

THE CONTRACTOR SHALL KEEP A SET OF THE EDITION OF THE SNOHOMISH COUNTY EDDS ON-SITE AT ALL TIMES THAT THE PROJECT WAS DESIGNED IN ACCORDANCE WITH.
REMOVE ABANDON PIPES FROM THE RIGHT-OF-WAY.
ALL PIPE SHALL HAVE A MINIMUM OF 12" COVER AT THE TOP OF THE BELL, OR SHALL HAVE A MINIMUM COVER PER THE MANUFACTURER'S
SPECIFICATIONS, WHICHEVER IS GRATER.
PRIOR TO PLACING ANY SURFACE MATERIALS ON THE ROADWAY, IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR UTILITY TO PROVIDE DENSITY TEST REPORTS (AS SPECIFIED IN EDDS) CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF WASHINGTON.

THE DEVELOPER / CONTRACTOR SHALL BE RESPONSIBLE FOR INTERIM TRAFFIC CONTROL DURING CONSTRUCTION ON OR ALONG TRAVELED COUNTY ROADWAYS. THE DEVELOPER CONTRACTOR MUST SUBMIT A TRAFFIC CONTROL PLAN TO PUBLIC WORKS (PERMIT COUNTER)AND RECEIVE APPROVAL PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. PRIOR TO ANY SITE WORK, THE CONTRACTOR SHALL CONTACT THE CHIEF INSPECTOR FOR LAND DEVELOPMENT DIVISION AT (425) 388 - 3385 TO SCHEDULE A RECONSTRUCTION CONFERENCE. FIELD CHANGES REQUIRING REDESIGN SHALL BE SUBMITTED AND APPROVED PRIOR TO CONSTRUCTION. ENGINEERED AS-BUILT SHALL BE REQUIRED PRIOR TO SITE APPROVAL.
ANY DEVELOPER, UTILITY OR OTHER PARTY INTENDING TO TRENCH IN EXISTING OR PROPOSED COUNTY RIGHT-OF-WAY SHALL NOTIFY PLANNING AND DEVELOPMENT SERVICES INSPECTION SECTION NOT LESS THAN 3 WORKING DAYS PRIOR TO PERFORMING THE WEEK.

ADDITIONAL NOTES:

STRUCTURAL BACKFILL AND COMPACTION OF VAULT, ROCKERY, RETAINING WALL FOOTING AND WALLS, AND ROADWAY TRENCH RESTORATION SHALL BE MONITORED, INSPECTED, AND COMPACTION TESTED BY A LICENSED GEOTECHNICAL ENGINEER. FIELD DENSITY TEST SHALL INDICATE A MINIMUM COMPACTION OF 95% OF MAXIMUM DENSITY DETERMINE IN ACCORDANCE WITH ASTM D-1557-70 (MODIFIED PROCTOR).
COMPACTION TEST RESULTS TO BE SUBMITTED WITH AS-BUILT DRAWING.

WATER GRADING NOTES:

1. ALL WATER LINE AND APPURTENANCES, MATERIALS AND INSTALLATION PROCEDURES, SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF MARYSVILLE.
2. ALL WATER LINE MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF MARYSVILLE AND THE AWWA. THE WATER LINE MATERIAL SHALL BE CLEARLY IDENTIFIED AS CONFORMING TO AWWA STANDARDS. WATER LINE PIPE SIZE 4 INCH IN DIAMETER SHALL CONFORM TO THE REQUIREMENTS OF AWWA C900. WATER LINE PIPE SIZES 6 INCHES THROUGH 12 INCHES IN DIAMETER SHALL CONFORM TO THE REQUIREMENTS OF AWWA C909, CLASS 235. WATER LINE PIPE SIZES GREATER THAN 12 INCHES IN DIAMETER SHALL CONFORM TO THE REQUIREMENTS OF AWWA C905.
3. WATERMAINS ARE TO BE INSTALLED IN THE TREE LAWN AND NOT UNDER THE SIDEWALK WHEREVER PRACTICABLE.
4. ALL RESIDENTIAL SERVICE LINES SHALL BE 1-INCH MINIMUM.
5. SERVICE LINES INSTALLED IN SLAB FLOORS TO BE INSTALLED IN A 6-INCH SLEEVE.
6. WATER LINE TRENCHES SHALL BE DEWATERED TO 2" BELOW THE BELL OF PIPE PRIOR TO INSTALLATION.
7. IN CASE OF A CONFLICT IN GRADE BETWEEN STORM SEWERS AND WATER LINE, THE WATER LINE SHALL BE LOWERED.
8. ALL WATER METERS SHALL BE INSTALLED INSIDE OF THE PROPOSED STRUCTURE, NOT IN A METER PIT, UNLESS SAID METER PIT IS APPROVED BY THE CITY OF MARYSVILLE. METER PITS SHALL COMPLY WITH STANDARD DRAWING WTR-07.
9. A BRONZE PAD LOCKABLE METER BYPASS BALL VALVE, APOLLO 75-100 SERIES OR EQUAL, IS REQUIRED FOR 1 ½-INCH AND LARGER METERS.
10. WATER SERVICE BOXES SHALL BE SET AT THE FOLLOWING LOCATIONS:
    SHORT SERVICE RUNS — AT THE RIGHT-OF-WAY LINE OR 1 FOOT BEHIND THE BACK OF SIDEWALK.
    LONG SERVICE RUNS – 4-FEET FROM THE EDGE OF SIDEWALK (BETWEEN SIDEWALK AND CURB) OR CENTERED BETWEEN THE SIDEWALK AND CURB. WATER SERVICE BOXES WILL NOT BE PERMITTED WITHIN THE CONCRETE SIDEWALK OR FUTURE ASPHALT/CONCRETE DRIVEWAYS. NEW CURB BOXES SHALL BE PLACED 2-FEET OFF THE BACK OF CURB OR 1-FOOT BEHIND THE SIDEWALK AND SHALL NOT BE PLACED WITHIN ANY DRIVEWAYS. IF THE CURB BOX ENDS UP IN THE DRIVEWAY AFTER THE HOUSE IS COMPLETED, THE SERVICE SHALL BE RELOCATED OUTSIDE THE RIVEWAY TO 1-FOOT (MINIMUM) FROM THE DRIVEWAY. THE TAP WILL ALSO BE RELOCATED SO THE CURB STOP AND TAP ARE IN LINE WITH NO ADDITIONAL COST THE CITY OF MARYSVILLE.
11. WATER LINES SHALL HAVE A MINIMUM COVER OF 4-FEET 6-INCHES FROM FINAL GRADE.
12. CONTRACTORS SHALL PROVIDE MEGALUG RETAINING GLANDS OR APPROVED EQUAL AT ALL BENDS AND TEES. CONTRACTORS SHALL BACK BENDS, ELBOWS, TEES WITH SOLID CONCRETE BLOCKS AGAINST UNDISTURBED SOIL. HARDWOOD WEDGES SHALL BE USED WHERE NECESSARY.
13. FIRE HYDRANTS SHALL BE MUELLER COMPANY CENTURION 250 HYDRANT WITH A 4 ½ MAIN VALVE OPENING. THEY ARE TO HAVE A THREE-WAY UPPER BARREL WITH ONE 4 ½-INCH PUMPER NOZZLE WITH AN INTEGRAL 5-INCH STORZ CONNECTION INSTALLED, AND TWO 2 ½-INCH HOSE NOZZLES. MUST MEET A.W.W.A. C-502 STANDARDS.
14. ALL SERVICE LINES SHALL BE TYPE K SOFT COPPER CONFORMING TO ASTM B-88, AND UNDERGROUND JOINTS MUST BE COMPRESSION. AWWA C909 WATER LINE SHALL BE USED IF SERVICE EXCEEDS 2 INCHES.
15. WATER LINE SHALL BE DEFLECTED, PER MANUFACTURER SPECIFICATIONS, TO PROVIDE 1-FOOT 6-INCH VERTICAL AND 10-FOOT HORIZONTAL CLEARANCE WITH SEWERS. IF THIS IS N

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

LEGEND

- DRAINAGE SUB-BASIN
- DA-1 / 5.33 — SUB-BASIN LABEL / AREA (AC)
- DRAINAGE FLOW DIRECTION

RATIONAL METHOD

Q = drainage flow (cfs)
C = coefficient describing the physical drianage area
I = rainfall intensity (inches/hour)
A = area (acres)

C(Lawn)= 0.3 A1= 1444 sft 0.033 acre
C(Parking)= 0.9 A2= 12008 sft 0.276 acre

Inputs

C = 0.81
For 100-year 24-hour
I = 0.15 in/hr From NOAA webite

A = 0.31 acres from CAD file

Calculations

Q1 = 0.037676 cfs

Precipitation Frequency Data Output

NOAA Atlas 2

Washington 48.4893887°N 122.1488274°W
Site-specific Extremes

Map	Precipitation (inches)	Precipitation Intensity (in/hr)
2-year 6-hour	0.97	0.16
2-year 24-hour	1.09	0.05
100-year 6-hour	1.94	0.32
100-year 24-hour	2.87	0.12

Go to PDSI
Go to GA

Hydrometeorological Design Studies Center - NOAA/National Weather Service
1325 East-West Highway - Silver Spring, MD 20910 - (301) 713-1669
Tue Feb 20 20:05:05 2024

RATIONAL METHOD

Q = drainage flow (cfs)
C = coefficient describing the physical drianage area
I = rainfall intensity (inches/hour)
A = area (acres)

C(Lawn)= 0.3 A1= 745 sft 0.017 acre
C(Pavement&Canopy)= 0.9 A2= 5316 sft 0.122 acre

Inputs

C = 0.79
For 100-year 24-hour
I = 0.15 in/hr From NOAA webite

A = 0.14 acres from CAD file

Calculations

Q2 = 0.016582 cfs

Precipitation Frequency Data Output

NOAA Atlas 2

Washington 48.4893887°N 122.1488274°W
Site-specific Extremes

Map	Precipitation (inches)	Precipitation Intensity (in/hr)
2-year 6-hour	0.97	0.16
2-year 24-hour	1.10	0.05
100-year 6-hour	1.94	0.32
100-year 24-hour	2.87	0.12

Go to PDSI
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Tue Feb 20 20:05:05 2024

RATIONAL METHOD

Q = drainage flow (cfs)
C = coefficient describing the physical drianage area
I = rainfall intensity (inches/hour)
A = area (acres)

C(Lawn)= 0.3 A1= 2066 sft 0.047 acre
C(Parking)= 0.9 A2= 6565 sft 0.151 acre

Inputs

C = 0.70
For 100-year 24-hour
I = 0.15 in/hr From NOAA webite

A = 0.20 acres from CAD file

Calculations

Q3 = 0.020769 cfs

Precipitation Frequency Data Output

NOAA Atlas 2

Washington 48.4893887°N 122.1488274°W
Site-specific Extremes

Map	Precipitation (inches)	Precipitation Intensity (in/hr)
2-year 6-hour	0.97	0.16
2-year 24-hour	1.09	0.05
100-year 6-hour	1.94	0.32
100-year 24-hour	2.87	0.12

Go to PDSI
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CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION

NO.	DATE	DESCRIPTION	BY

DRAINAGE AREA MAP

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12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PROJ. NO.	DSN. BY:
00-0000	
DATE: 02/29/2024	
SCALE: 1" = 30'	
DRAWING NO. 03 OF 15	

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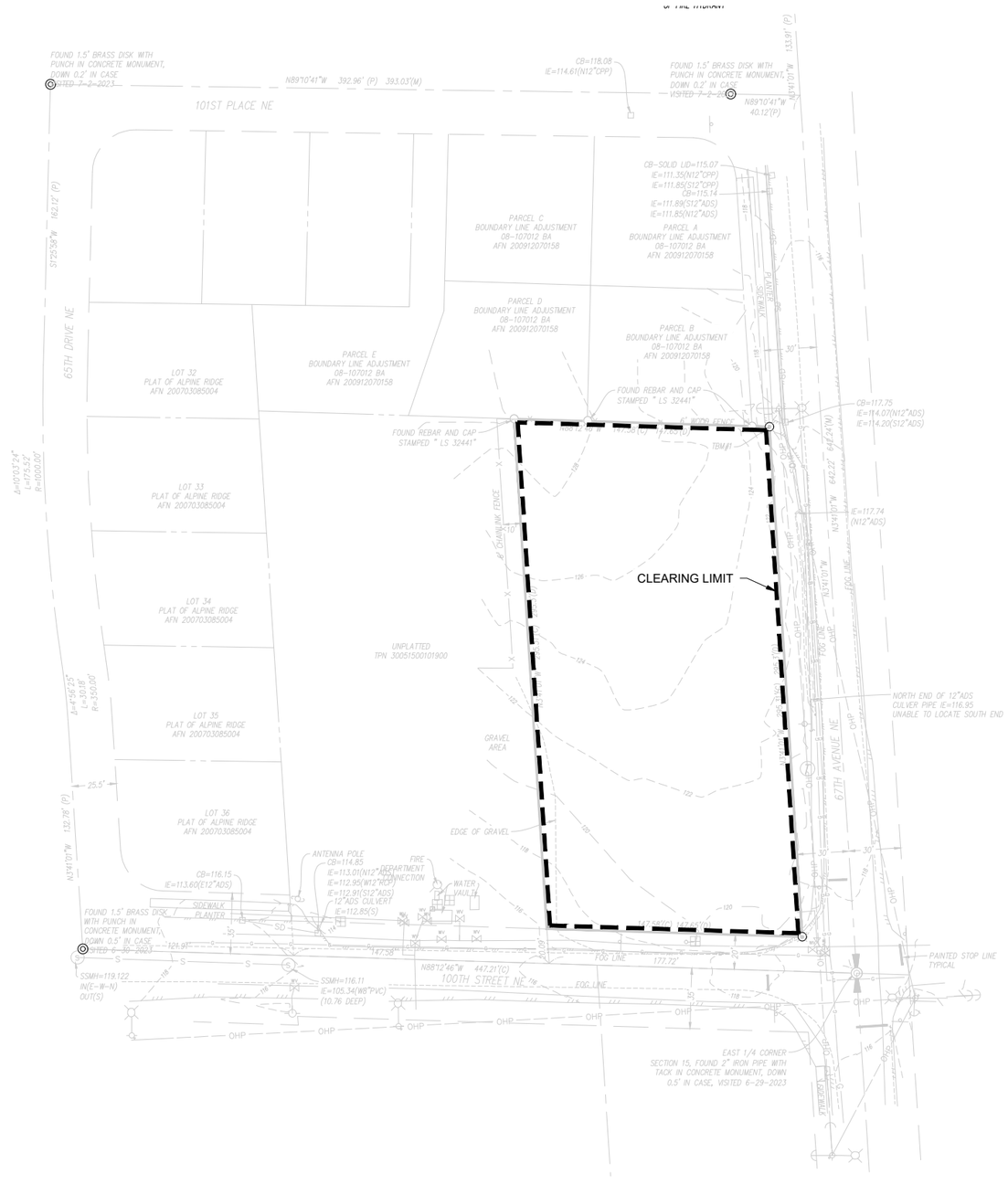

1"=40'-0" (Scale) 40 40 80 Feet

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NO	DATE	DESCRIPTION	BY
01	00/00/22	XYZ	XYZ

SWPPP

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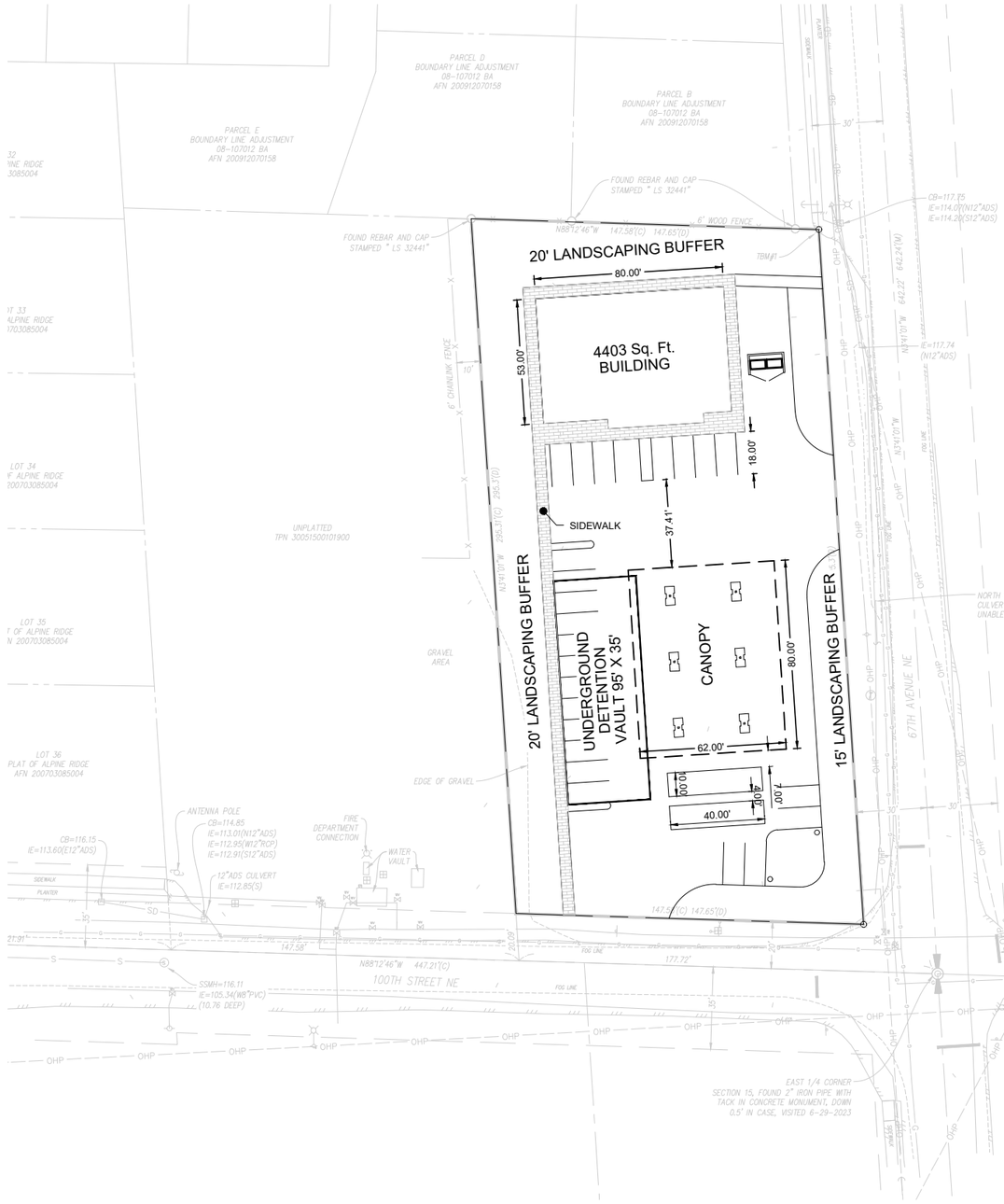

NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

UNDERGROUND DETENTION VAULT

1"=30'-0"
Scale
30 0 30 60
Feet

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DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
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SITE PLAN

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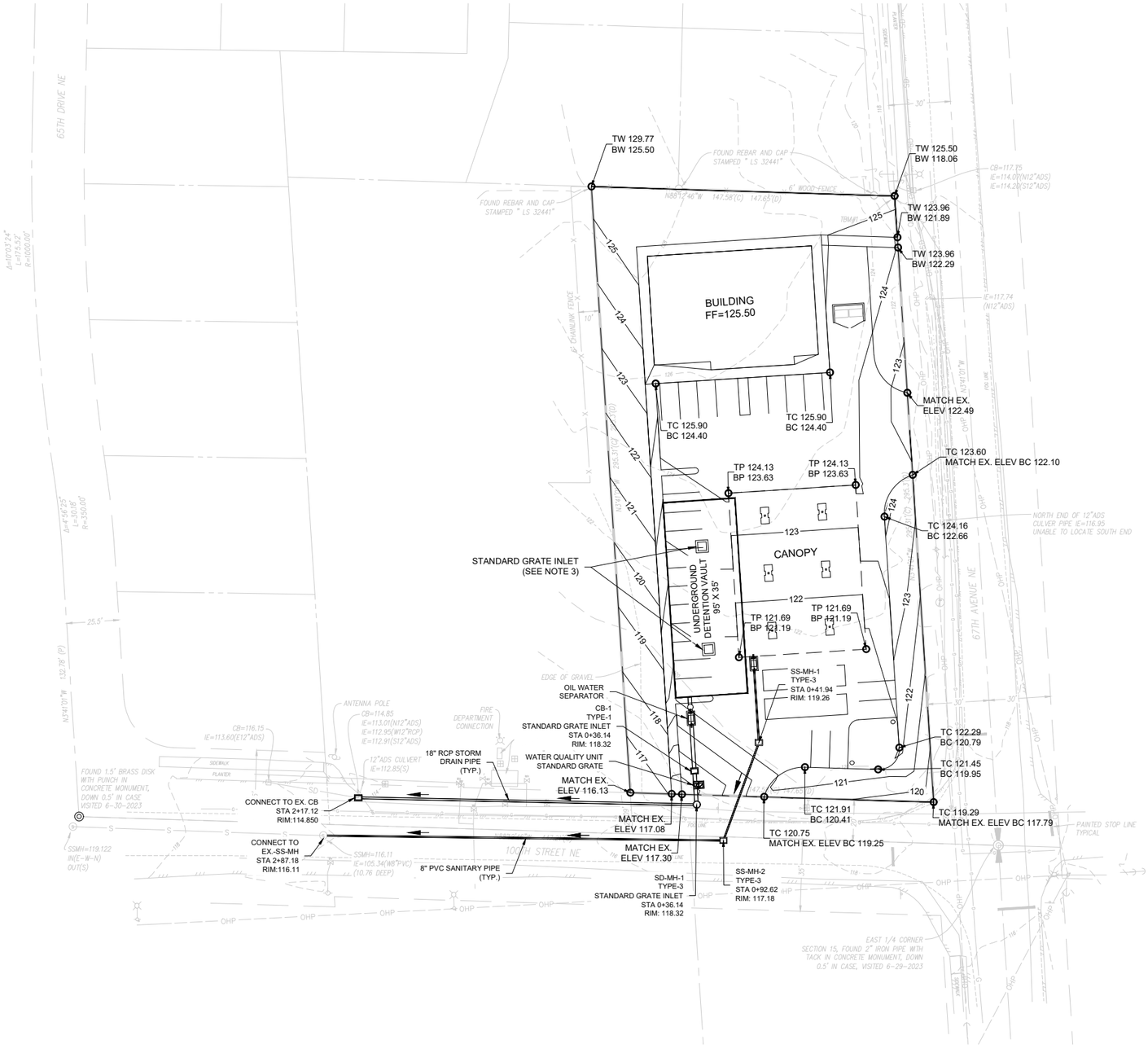
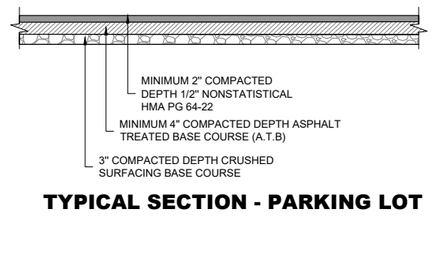


NOTE

1. REFER VAULT DETAIL SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.
2. REFER TO STRUCTURAL DETAILS SHEETS FOR UNDERGROUND DETENTION VAULT CONSTRUCTION.
3. STANDARD GRATE SHALL BE INSTALLED AS PER CITY OF MERYSVILLE STANDARD PLAN 4-080-017.

LEGEND

———	PROPOSED CONTOUR MAJOR
———	PROPOSED CONTOUR MINOR
TW	TOP OF WALL
BW	BOTTOM OF WALL
TC	TOP OF CURB
BC	BOTTOM OF CURB
TP	TOP OF PARKING
BP	BOTTOM OF PARKING
BOT	BOTTOM
←—	FLOW ARROW



TYPICAL SECTION - PARKING LOT

N

1"=30'-0" 30 0 30 60
Scale Feet

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BEFORE YOU DIG
811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

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DRAINAGE AND GRADING PLAN

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CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15,
TOWNSHIP 30 NORTH, RANGE 05
EAST, MARYSVILLE, WS 98270

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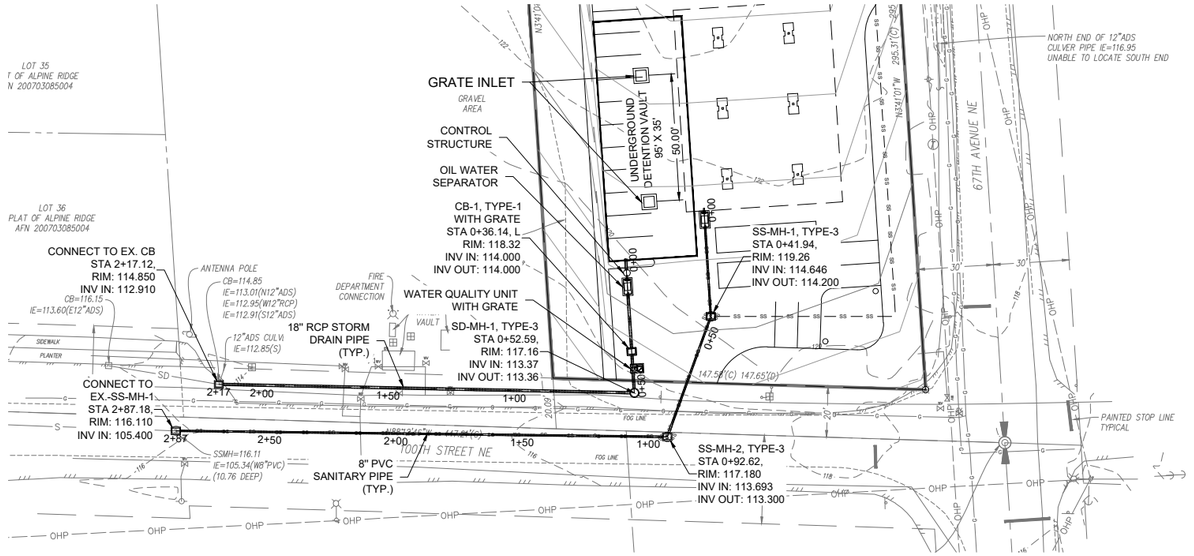
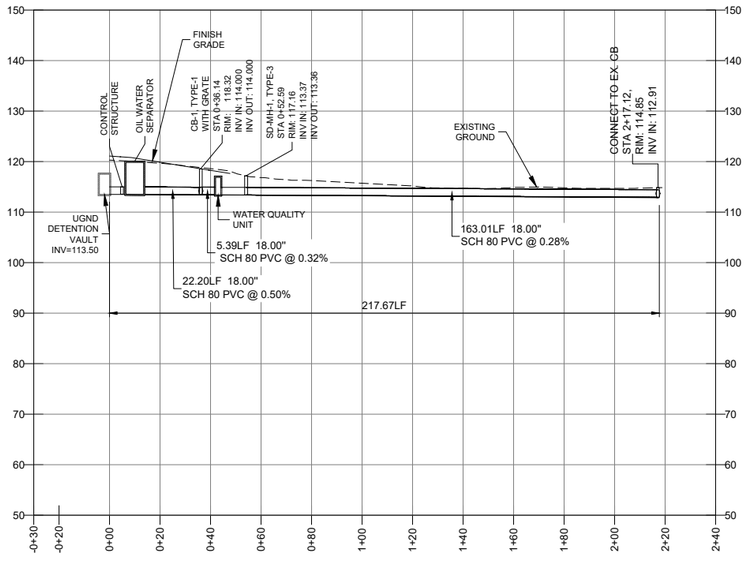
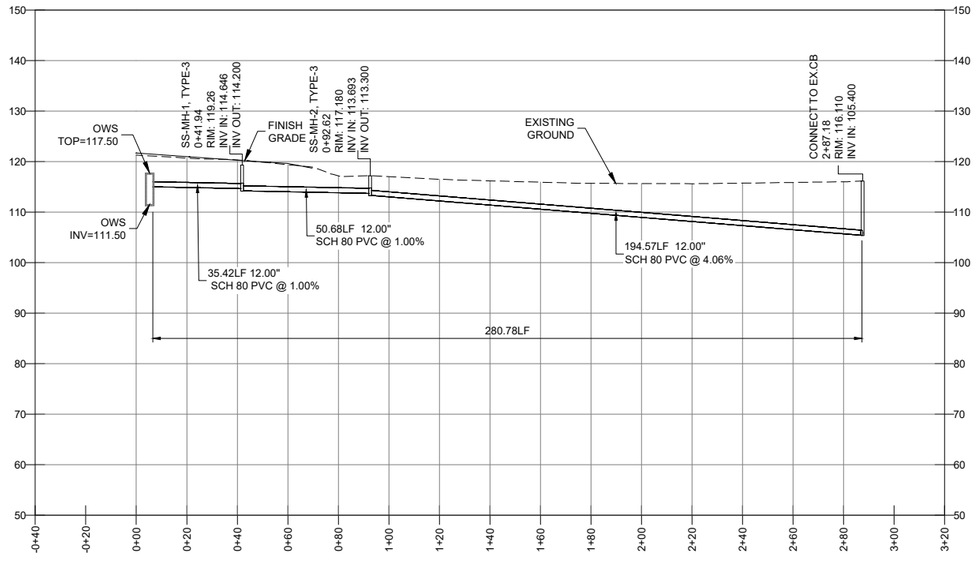




PROFILE - STORM DRAIN



PROFILE - STORM SANITARY

NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

- PROPOSED STORM SANITARY PIPE
- PROPOSED STORM WATER PIPE
- UNDERGROUND DETENTION VAULT
- PROPOSED STORM SANITARY STRUCTURE
- PROPOSED STORM WATER STRUCTURE

1"=30'-0" Scale: 30 0 30 60 Feet

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION NO.	DATE	DESCRIPTION	BY
	00/00/22		

DRAINAGE PLAN AND PROFILE

GEOMETRICS ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PROJ. NO.	DSN. BY:
00-0000	
DATE: 02/29/2024	
SCALE: 1" = 30'	
DRAWING NO. 07 OF 15	

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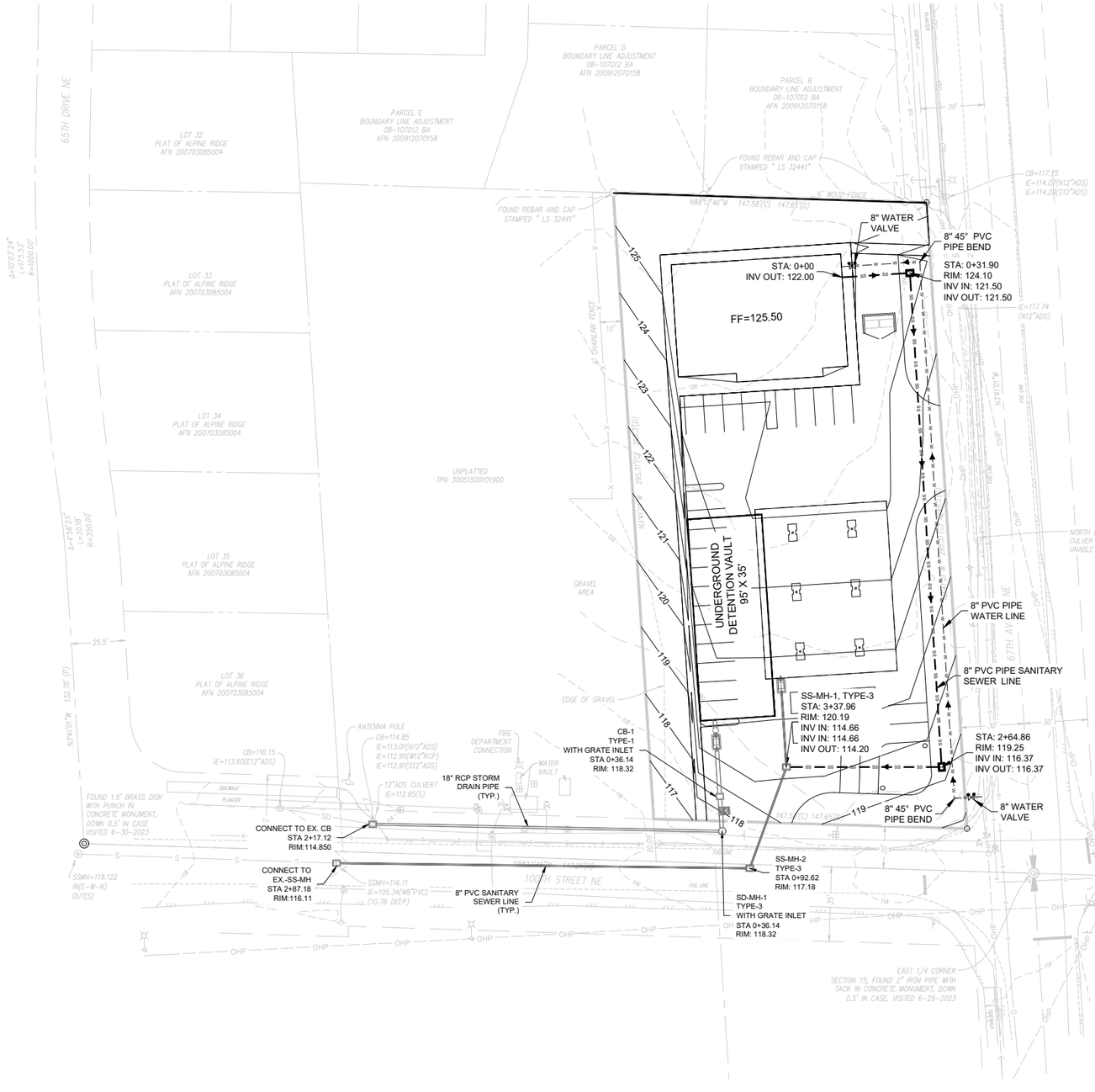
SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

1. REFER VAULT DETAIL SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

— SS — SS —	PROPOSED SANITARY LINE
— W — W —	PROPOSED WATERLINE
———	PROPOSED CONTOUR MAJOR
———	PROPOSED CONTOUR MINOR
TW	TOP OF WALL
BW	BOTTOM OF WALL
TC	TOP OF CURB
BC	BOTTOM OF CURB
BOT	BOTTOM

N

1"=30'-0" Scale: 30 0 30 60 Feet

CALL 48 HOURS
BEFORE YOU DIG
811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

REVISION			
NO.	DATE	DESCRIPTION	BY
01	00/00/22	XYZ	XYZ

PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 64450 — REGISTERED

PROPOSED UTILITY PLAN

GEOMETRICS ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PROJ. NO. 00-0000	DSN. BY:
DATE: 02/29/2024	
SCALE: 1" = 30'	
DRAWING NO. 08 OF 15	

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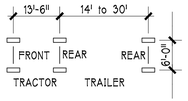
DESIGN CRITERIA

VERTICAL LOADS ON VAULT LID:

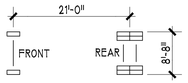
***UNIFORM LIVE LOAD :** = 150PSF

***HS20 TRUCK WHEEL LOADS :**



TRACTOR :
FRONT AXLE = 8,000 lb.
SINGLE REAR AXLE = 32,000 lb.
TRAILER :
SINGLE REAR AXLE = 32,000 lb.

***FIRE TRUCK WHEEL LOADS :**



FRONT AXLE = 22,000 lb.
REAR AXLES (DUAL TANDEM) = 53,000 lb.

***OUTRIGGER LOAD :** 45,000LBS OVER 18" SQ PAD

* = DESIGN UNIFORM LIVE LOAD, OUTRIGGER LOAD AND TRUCK WHEEL LOADS TO BE APPLIED INDEPENDENTLY AND IN COMBINATION WITH THE SOIL COVER DEAD LOAD.

IMPACT FACTOR:
DUE TO THE LOW SPEEDS OF VEHICLES OVER THE LID, AND THE SOIL COVER OVER THE LID, INCREASES IN VEHICLE LOADS TO ACCOUNT FOR IMPACT AND FATIGUE ARE NOT REQUIRED.

SOIL COVER FOR LID DESIGN:
PLANK MANUFACTURER SHALL BE RESPONSIBLE FOR DETERMINING THE SOIL COVER DEPTHS USED IN THE LID DESIGN BASED ON THE VAULT AND FINISHED GRADE ELEVATIONS AS SHOWN ON THE PERMITTED SET OF CIVIL DWGS.

SOIL COVER FOR SUBSTRUCTURE DESIGN:
THE SUBSTRUCTURE WAS DESIGNED FOR A SOIL COVER OF 1.0FT MIN AND 3.5FT MAX.

FOUNDATION DESIGN:
FOUNDATION DESIGN IS BASED ON THE FOLLOWING ASSUMED VALUES TO BE VERIFIED AT THE TIME OF CONSTRUCTION.

ALLOWABLE BEARING PRESSURE: 3,500 PSF

SOIL DESIGN VALUES: DRAINED LEVEL BACKFILL.

AT REST PRESSURE: 55 PCF EFW

SEISMIC ADDITION: E = 12H PSF UNIFORM

SATURATED SOIL DENSITY: 125 PCF

SPECIAL INSPECTION PLAN

GENERAL:
SPECIAL INSPECTION BY A QUALIFIED INSPECTOR IS REQUIRED IN ACCORDANCE WITH THE 2018 IBC.

QUALIFICATION:
THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL.

REQUIRED VERIFICATION & INSPECTION:
THE SPECIAL INSPECTOR SHALL PERFORM THE VERIFICATIONS & INSPECTIONS NOTED IN THE SCHEDULE BELOW

INSPECTION & TESTING SCHEDULE

TYPES OF WORK	FREQ.	2018 IBC SECTION
CAST IN PLACE CONC		
REINFORCING STEEL, PLACEMENT.	P	1705.3
INSTALLATION & FASTENING OF PRECAST PANELS	P	1705.3
PLACEMENT OF CONCRETE	C	1705.3
VERIFYING USE OF REQUIRED DESIGN MIX	P	1705.3
TESTING OF THE CONCRETE FOR SPECIFIED STRENGTH, AIR CONTENT AND SLUMP	C	1705.3
SOILS		
VERIFICATION OF SOIL-BEARING CAPACITY: INSTALLATION OF DRAINAGE SYSTEM:	P	1705.6
PLACEMENT & COMPACTION OF WALL BACKFILL:	P	1705.6

FREQUENCY LEGEND
C = CONTINUOUS P = PERIODIC
SEE REFERENCES AND STANDARDS LISTED WITHIN THE VERIFICATION & INSPECTION SCHEDULE FOR MEANING OF PERIODIC AND CONTINUOUS INSPECTIONS.

CERTIFICATE OF COMPLIANCE:
THE SPECIAL INSPECTION AGENCY SHALL PROVIDE A FINAL LETTER CERTIFICATE OF COMPLIANCE STATING THAT THE REVIEWED WORK WAS COMPLETED IN ACCORDANCE WITH THE PERMITTED DOCUMENTS.

SUBMITTAL OF REPORTS:
ALL SPECIAL INSPECTION REPORTS AND TESTING REPORTS SHALL BE SUBMITTED TO THE OWNER, SITE STRUCTURES AND THE BUILDING OFFICIAL BY THE AGENCY PERFORMING THE INSPECTION OR TESTING.

GENERAL CONSTRUCTION NOTES

CODE:
VAULT DESIGN AND CONSTRUCTION SHALL CONFORM TO THE PROVISIONS OF THE 2018 IBC AS ADOPTED BY THE CITY OF MARYSVILLE, WASHINGTON.

GENERAL DETAILS:
CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.

DISCREPANCIES:
THE CONTRACTOR SHALL NOTIFY ENGINEER UPON FINDING ANY DISCREPANCY OR OMISSION IN THE DRAWINGS OR SPECIFICATIONS.

SHORING & EXCAVATION:
THE CONTRACTOR SHALL BE SOLEY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES, INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES.

WALL BACKFILL:
PRIOR TO BACKFILLING VAULT WALLS THE CONTRACTOR SHALL HAVE PLACED THE LID PLANKS AND PROVIDED A MINIMUM OF 5 DAYS OF CURE ON THE PLANK VOID FILL.

BACKFILL SOIL:
SEE THE GEOTECHNICAL REPORT FOR WALL BACKFILL MATERIAL REQUIREMENTS AND PLACEMENT AND COMPACTION REQUIREMENTS. ALL COMPACTION OCCURING WITHIN 5' OF THE WALL SHALL BE COMPLETED USING HAND OPERATED MACHINERY.

CONCRETE

CONCRETE REQUIREMENTS:

LOCATION	STRENGTH	MAX W/C RATIO
WALLS & C.I.P. LID	4000PSI @ 28 DAYS	0.50
FTGS & GRADE SLAB	4000PSI @ 56 DAYS	0.53
PLANK VOID FILL	TO MEET PLANK MFGR'S REQUIREMENTS*	
PLANK JOINT GROUT	TO MEET PLANK MFGR'S REQUIREMENTS*	

* MINIMUM STRENGTH SHALL BE 3000PSI @ 28 DAYS.

AIR CONTENT:
CONCRETE EXPOSED TO WEATHER SHALL CONTAIN 5% +/-1% ENTRAINED AIR.

MIX DESIGN:
SHALL BE BASED ON FIELD EXPERIENCE OR TRIAL MIXTURES IN CONFORMANCE WITH THE SPECIFICATIONS.

SUBMITTALS:
PROVIDE MIX DESIGNS TO THE ENGINEER FOR REVIEW PRIOR TO PLACEMENT.

MATERIAL REQUIREMENTS:
CEMENT: ASTM C150. ADMIXTURES: ACI 301.
AGGREGATES: ASTM C33. WATER: ASTM C94.

EXPOSURE CATEGORIES:
FREEZING THAWING F0
SULFATE S0
IN CONTACT w/ WATER W1
CORROSION PROTECTION C1

PLACING REQUIREMENTS:

PLACING:
PLACE CONCRETE AS NEARLY AS PRACTICABLE TO ITS FINAL POSITION TO AVOID SEGREGATION.

DEBRIS:
REMOVE ALL DEBRIS FROM FORMS PRIOR TO PLACING CONCRETE.

CONSOLIDATION:
CONSOLIDATE CONCRETE BY SUITABLE MEANS. THOROUGHLY WORK CONCRETE AROUND EMBEDDED ITEMS AND INTO CORNERS OF FORMS.

CURING REQUIREMENTS:

CURING:
CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A SUITABLE PERIOD OF TIME AFTER PLACEMENT.

WEATHER CONDITIONS:
ADEQUATE PRECAUTIONS SHALL BE TAKEN DURING HOT AND COLD WEATHER IN ACCORDANCE WITH THE SPECIFICATIONS.

LID PLANK PLACEMENT:
IN NO CASE SHALL THE LID PLANKS BE PLACED BEFORE THE WALLS HAVE BEEN ALLOWED A MINIMUM OF 3 DAYS OF CURE. WHEN AVERAGE AMBIENT TEMPERATURES ARE LESS THAN 50 DEGREES FAHRENHEIT, THE CONTRACTOR MUST ALLOW A MINIMUM CURE TIME OF 7 DAYS OR PROVIDE AN ADDITIONAL SET OF CYLINDERS TO BE BROKEN AT THE TIME OF LID PLACEMENT DEMONSTRATING A MINIMUM CONCRETE STRENGTH OF 1,000 PSI HAS BEEN REACHED.

FINISH:
a. CONCRETE FINISH TO BE SMOOTH WITH NO FINS, VOIDS, ROCK POCKETS, OR OTHER IRREGULARITIES.
b. CONE SNAP TIES OR EQUIVALENT ARE REQUIRED AND ARE TO BE REMOVED AND SEALED AT ALL INTERIOR WALL SURFACES. NO FLAT TIES ALLOWED.

HOLLOW CORE PLANK

SCOPE OF WORK:
THE WORK INCLUDED IS THE DESIGN, MANUFACTURE AND DELIVERY OF PRECAST PRESTRESSED CONCRETE UNITS. DESIGN PLANK FOR THE MOST CRITICAL OF THE LOADING CONDITIONS AS SHOWN WITHIN THE DESIGN CRITERIA NOTE.

THE MANUFACTURER SHALL SUBMIT STRUCTURAL CALCULATIONS AND PLACEMENT DRAWINGS SIGNED BY A WASHINGTON STATE REGISTERED CIVIL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

THE MANUFACTURER SHALL INSTALL ALL BLOCK OUTS REQUIRED FOR STRUCTURAL CONNECTIONS AS INDICATED ON THESE DRAWINGS. NO OTHER PENETRATIONS ARE ALLOWED WITHOUT THE PRIOR APPROVAL OF THE PLANK MANUFACTURER.

ALL HOLLOW CORE JOINTS SHALL BE GROUTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

DEFERRED SUBMITTALS

THE FOLLOWING AREAS OF WORK SHALL BE CONSIDERED AS "DEFERRED SUBMITTALS" AS DEFINED IN THE 2018 IBC

PRECAST PRESTRESSED HOLLOW CORE PLANK

ALL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF A CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF WASHINGTON WHO HAS CURRENT DESIGN EXPERIENCE IN THE TYPE OF WORK REVIEWED.

THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED BY THE ENGINEER OF RECORD.

COPIES OF THE APPROVED DEFERRED SUBMITTAL DOCUMENTS SHALL BE MAINTAINED ON SITE BY THE GENERAL CONTRACTOR AND MADE AVAILABLE FOR REVIEW AS REQUESTED.

WATERSTOP

PVC WATERSTOP
WATERSTOPS SHALL BE 4" RIBBED WITH CENTER BULB AS MANUFACTURED BY GREENSTREAK, INC - OR EQUIVALENT - AND SHALL BE FORMULATED FROM VIRGIN RAW MATERIAL AND SHALL MEET THE THE ARMY CORPS OF ENGINEERS STANDARD SPECIFICATION CRD-C 572-74. INSTALL WATERSTOP IN ACCORDANCE WITH ALL OF THE MANUFACTURERES RECOMMENDATION. SPLICING OF THE WATERSTOP SHALL BE ACCOMPLISHED WITH A THERMOSTATICALLY CONTROLLEDE SPLICING IRON IN ACCORDANCE WITH THE MANUFACTURERS DIRECTION AND RECOMMENDATIONS.

REINFORCING BAR

MATERIAL REQUIREMENT:

REINFORCING BARS:
USE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, EXCEPT AS NOTED ON THE DRAWINGS.

FABRICATION AND PLACING REQUIREMENTS:

BENDING:
BARS SHALL BE BENT COLD. BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS NOTED OR SHOWN OTHERWISE OR AUTHORIZED BY THE ENGINEER.

PLACING:
REINFORCEMENT SHALL BE SUPPORTED AND TIED TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR BY PLACING OF CONCRETE. MAXIMUM SPACING OF SUPPORTS SHALL BE 3'-6".

CONCRETE COVER:
MINIMUM CONCRETE COVER FOR REINF. SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH_____ 3"

CONCRETE CAST AGAINST FORMS AND EXPOSED TO EARTH_____ 2"

WET SETTINGS:
REINFORCEMENT ANCHOR BOLTS, OR ANY EMBEDDED ITEM WITHIN THE CONCRETE, MAY NOT BE SET INTO THE CONCRETE AFTER IT HAS BEEN POURED WITHIN THE FORMS.

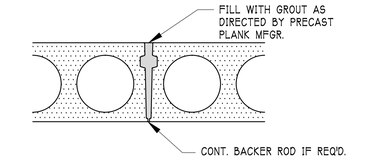
LAP SPLICES:
LAP ALL BARS 28" MIN UNLESS SHOWN OTHERWISE ON THESE DRAWINGS.

SUBMITTALS:
PROVIDE REINFORCING BAR FABRICATION AND PLACEMENT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

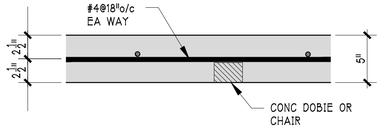
DUCK BILL CHECK VALVE

CHECK VALVE SHALL BE PROCO DUCK BILL STYLE 730, MOLDED CHECK VALVES AS MANUFACTURED BY PROCO PRODUCTS, INC. 2431 NORTH WIGWAM DR. STOCKTON, CA.

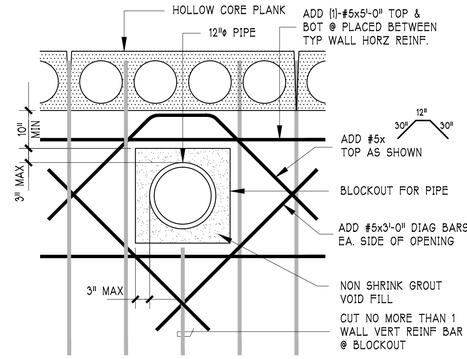
CHECK VALVE SHALL BE INSTALLED OVER THE 4"ø PVC THRU WALL PIPE AND AFFIXED WITH A HEAVY DUTY STAINLESS STEEL CLAMP PER THE MANUFACTURERS INSTRUCTIONS. INSTALL CHECK VALVES IN A HORIZONTAL POSITION.

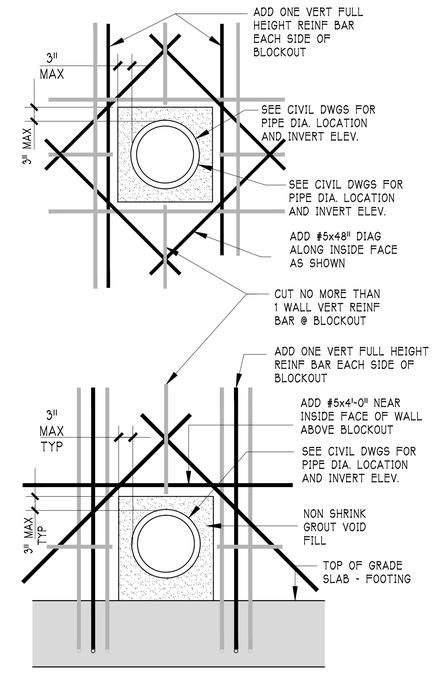


1/S1 TYP PLANK JOINT DETAIL
SCALE 1"=1'-0"



2/S1 TYP GRADE SLAB SECTION
SCALE 1-1/2"=1'-0"





3/S1 WALL REINF @ PIPE PENETRATION
3/4"=1'-0"

DATE:	DESCRIPTION:	CLOUD:
02-23-2024	ISSUED FOR CONST. PERMIT APPLICATION	N/A

site structures
A Division of Kosnik Engineering PC
10505 19th AVE SE, SUITE D
EVERETT, WASHINGTON 98208
PH: (425) - 357 - 9600 EMAIL: DAN@KOSNIK.COM

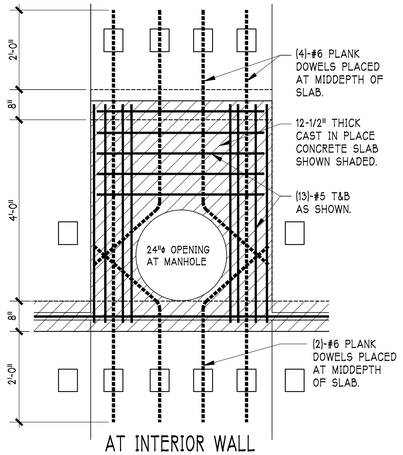
02-23-2024
DANIEL J. KOSNIK
STATE OF WASHINGTON
21744
PROFESSIONAL ENGINEER

10008 67TH AVE NE
MARYSVILLE
STORM WATER DETENTION VAULT
WASHINGTON
CITY OF MARYSVILLE

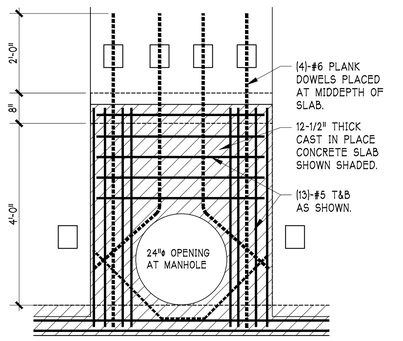
STRUCTURAL NOTES
TYP DETAILS

SHEET:
S1 OF 3
S-23-052

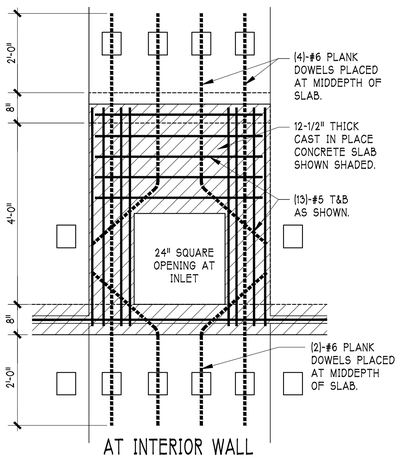
SHEET SIZE 22x34



AT INTERIOR WALL

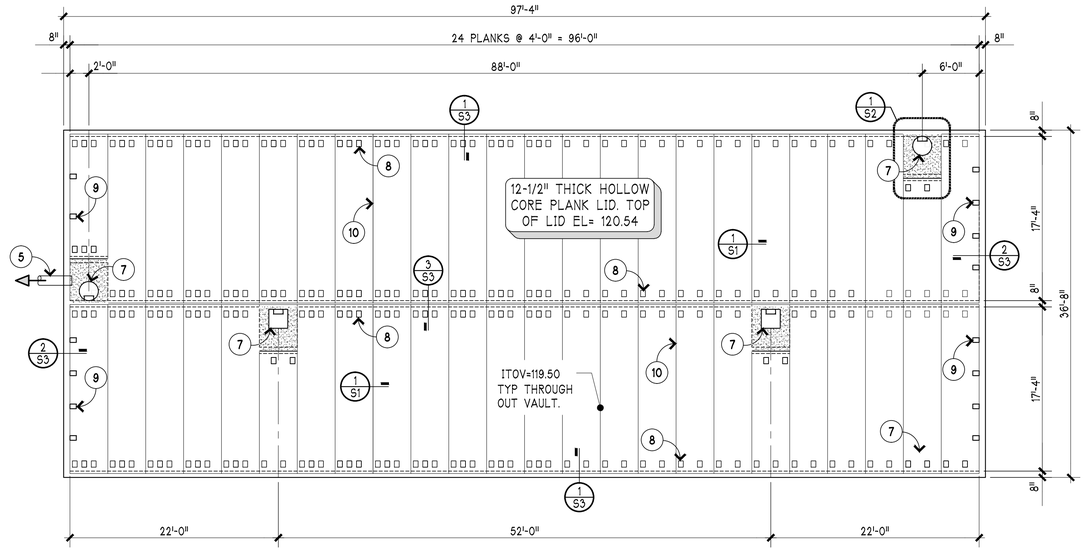


AT PERIMETER WALL



AT INTERIOR WALL

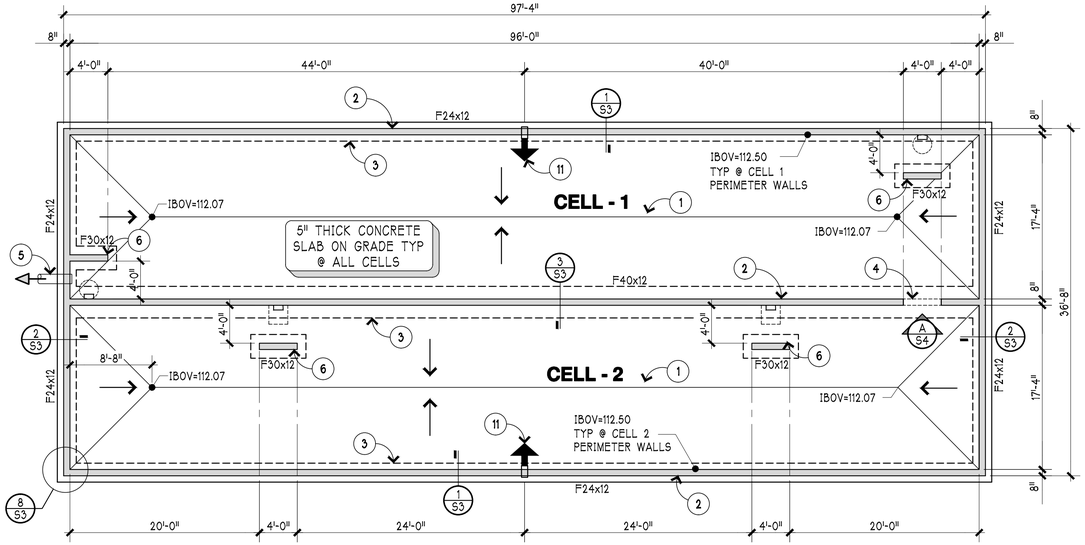
1/S2 LID REINF @ MANHOLE & INLET
SCALE NTS



VAULT LID PLAN

SCALE 1/8" = 1'-0"

F30x12



VAULT FOUNDATION PLAN

SCALE 1/8" = 1'-0"

PLAN KEYNOTES

1. 5" THICK CONCRETE SLAB ON GRADE REINF WITH #4@18"o/c EA WAY. PLACE ALL REINF AT MID-DEPTH OF THE SLAB. SEE 2/S1 FOR REINF PLACEMENT DETAIL. CAST GRADE SLAB IN A SINGLE POUR
2. CAST IN PLACE CONCRETE WALLS TYPICAL AT THE PERIMETER & INTERIOR OF THE VAULT. SEE WALL SECTIONS FOR REINFORCING. PROVIDE ADDED REINF AT PIPE PENETRATIONS AS SHOWN IN 3/S1. PROVIDE REINF @ ALL WALL CORNERS AS SHOWN IN 8/S3.
3. THICKENED SLAB FOOTINGS TO BE CAST WITH THE GRADE SLAB. SEE WALL SECTIONS FOR SIZE & REINF UNO.
4. 4'-0" WIDE OPENING WITHIN THE INTERIOR WALL. SEE A/S3 FOR WALL REINFORCING @ THE OPENING.
5. PIPE INLET OR OUTLET TO VAULT. SEE CIVIL DWGS FOR PIPE DIAMETER & LOCATION. VERIFY INVERT ELEVATION w/ THE CIVIL DWGS. SEE 3/S1 FOR WALL REINF @ PIPE PENETRATION. ADDITIONAL REINFORCING IS NOT REQUIRED FOR PIPES WITH AN O.D. LESS THAN 8" PROVIDED THEY ARE PLACED BEWTEEN THE TYPICAL WALL VERTICAL AND HORZ REINF.
6. 8" THICK KNEE-WALL. REINF w/ #5@12"o/c HORZ & VERT. PLACE VERT. REINF AT THE CENTER OF THE WALL AND EXTEND 10" ABOVE THE TOP OF WALL INTO THE LID CLOSURE. PROVIDE (2)-#5@4"o/c VERT AT THE FREE ENDS OF THE WALL AND (2)-#5 HORZ AT THE TOP OF THE WALL. SEE 7/S3 FOR FTG INFORMATION. PROVIDE (2)#5 HORZ IN LID CLOSURE POUR ABOVE WALL.
7. 24" DIAMETER OPENING OR 24" SQUARE OPENING THRU LID w/ SUPPORTING KNEEWALL TO ACCEPT RISERS, LADDER, RING AND LOCKING MANHOLE COVER OR INLET GRATE PER CIVIL DRAWINGS. SEE 1/S2 FOR LID REINF @ MANHOLE.
8. POUR SLOTS IN TOP OF PLANK. MANUFACTURER TO PROVIDE A MINIMUM OF 2 OR 3 SLOTS @ EACH END OF EACH PLANK AS SHOWN. PLANK MANUFACTURER MAY REQUIRE GROUTING OF ADDITIONAL CELLS BEYOND THE MINIMUM SHOWN. THE GENERAL CONTRACTOR SHALL INCLUDE GROUTING OF THESE ADDED CELLS IN HIS BID. SEE WALL SECTIONS FOR REINF.
9. PROVIDE BLOCKOUTS IN THE EDGE CELL OF THE PLANK PARALLEL TO THE PERIMETER VAULT WALLS. LOCATE BLOCKOUTS APPROXIMATELY AS SHOWN ON THIS PLAN. SEE WALL SECTIONS & DETAILS FOR REINF.
10. 12-1/2" THICK 4'-0" WIDE PRECAST HOLLOW CORE PLANK. SEE DESIGN CRITERIA NOTES ON SHEET S1 FOR PLANK LOADING REQUIREMENTS.
11. PROCO DUCK BILL STYLE 730 CHECK VALVE TIED TO LOWER PERIMETER FOOTING DRAIN. SEE WALL SECTIONS AND STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.

LEGEND

IBOV	INSIDE BOTTOM OF VAULT (TOP OF GRADE SLAB)
ITOV	INSIDE TOP OF VAULT LID (BOTTOM OF LID, TOP OF WALL)
	CIP CONCRETE WALL.
	CONCRETE SPREAD FOOTING
	DIRECTION OF DOWNWARD SLOPE
	DUCK BILL CHECK VALVE
F24x12	24" WIDE x 12" THICK FTG SEE 1 & 2/S3
F40x12	40" WIDE x 12" THICK FTG SEE 3/S3
F30x12	30" WIDE x 12" THICK FTG SEE 2/S2

CONSTRUCTION LOADS

THE VAULT LID HAS BEEN DESIGNED TO CARRY THE "DESIGN LOADS" ONLY AFTER VAULT CONSTRUCTION IS COMPLETE, ALL DESIGN CONCRETE AND GROUT STRENGTHS HAVE BEEN ACHIEVED, AND ALL COVER HAS BEEN PLACED OVER THE VAULT WITHIN THE LIMITS SPECIFIED ON THIS DRAWING. "BOBCAT" OR OTHER LIGHT EQUIPMENT SHALL BE USED FOR PLACEMENT OF MATERIALS OVER THE VAULT LID.

DIMENSIONS & ELEVATIONS

THE CONTRACTOR AND HIS SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THESE DRAWINGS WITH THE CURRENT PERMITTED SET OF CIVIL DRAWINGS, AND SHALL NOTIFY BOTH THE CIVIL & STRUCTURAL ENGINEERS IN WRITING OF ALL DISCREPANCIES BETWEEN THE CIVIL DWGS AND THESE DWGS PRIOR TO CONSTRUCTION.

DATE:	DESCRIPTION:	CLOUD:
02-23-2024	ISSUED FOR CONST. PERMIT APPLICATION	N/A

Site Structures
A Division of Kosnik Engineering PC
10505 19th AVE SE, SUITE D
EVERETT, WASHINGTON 98208
PH: (425) - 357 - 9600 EMAIL: DAN@KOSNIK.COM

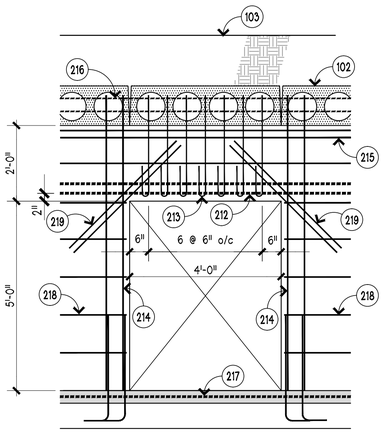
02-23-2024 DANIEL J. KOSNIK STATE OF WASHINGTON 21744 PROFESSIONAL ENGINEER

10008 67TH AVE NE
MARYSVILLE
STORM WATER DETENTION VAULT
CITY OF MARYSVILLE WASHINGTON

LID & FOUNDATION PLANS & DETAILS

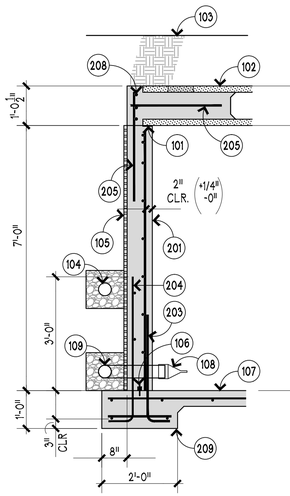
SHEET:
S2 OF 3
S-23-052

SHEET SIZE 22x34



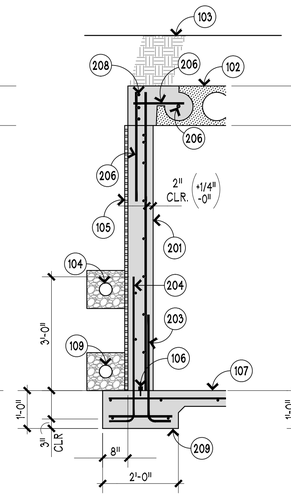
A/S3 WALL REINF @ OPNG

SCALE 1/2"=1'-0"



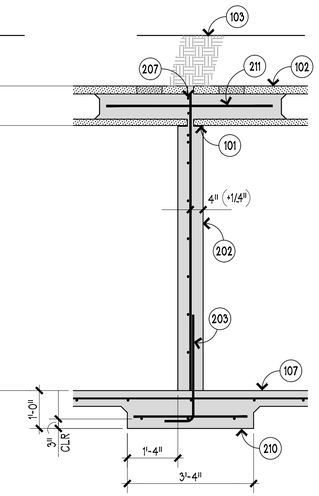
1/S3 TYP WALL SECT

SCALE 1/2"=1'-0"



2/S3 TYP WALL SECT

SCALE 1/2"=1'-0"



3/S3 TYP WALL SECT

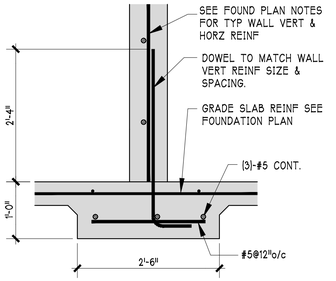
SCALE 1/2"=1'-0"

WALL GENERAL KEYNOTES

101. PLANK TO BEAR 3" MINIMUM ONTO THE TOP OF THE CONCRETE WALL. SEE PLANK MANUFACTURER'S DRAWINGS FOR FINAL BEARING LENGTH. INSTALL BEARING PAD AS DETAILED ON THE PRECAST PLANK PLACEMENT DRAWINGS.
102. 12-1/2" THICK PRECAST HOLLOW CORE PLANK.
103. FINISHED GRADE OVER THE LID. ELEVATION VARIES. SEE DESIGN CRITERIA ON SHEET S1 FOR APPROXIMATE SOIL DEPTHS OVER THE VAULT LID IN ADDITION TO THE CIVIL DWGS FOR FINAL GRADE ELEVATIONS.
104. 4"ø PERFORATED PVC FOOTING DRAIN SET IE=115.00. WRAP IN 16" SQUARE FREE DRAINING GRAVEL BED SET IN FILTER FABRIC. ROUTE DRAIN TO DISCHARGE POINT AS SHOWN ON THE CIVIL DWGS.
105. PREENGINEERED DRAINAGE MATT TO EXTEND OVER THE HEIGHT OF THE WALL AS SHOWN. SEE GEOTECHNICAL REPORT FOR MATERIAL SPECIFICATIONS.
106. 4" PVC RIBBED WATERSTOP w/ CENTER BULB AT ALL PERIMETER WALLS OF THE VAULT. INSTALL AT THE CENTER OF THE WALL, IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
107. SEE FOUNDATION PLAN FOR GRADE SLAB REINFORCING.
108. 4"ø PROCO DUCK BILL STYLE 730 MOLDED CHECK VALVE OR EQUIVALENT. TIE TO 4"ø THRU WALL PVC PIPE IN ACCORDANCE WITH THE PROCO INSTALLATION INSTRUCTIONS. INSTALL IN A HORZ POSITION.
109. 4"ø PERFORATED PVC FOOTING DRAIN. SET IE=113.00. PLACE INTO GRAVEL BED WRAPPED IN FILTER FABRIC. TIE TO SOLID 4"ø SCH 40 PVC PIPE THRU WALL. LOCATE THRU WALL PIPE AT DUCK BILL CHECK VALVE LOCATIONS AS SHOWN ON THE VAULT KEY PLAN. EXTEND PIPE BEYOND FACE OF WALL NO LESS THAN 3" TO ALLOW INSTALLATION OF THE DUCKBILL CHECK VALVE.

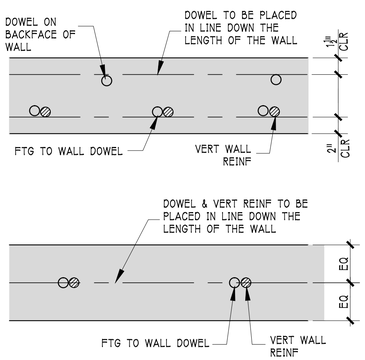
WALL REINFORCING KEYNOTES

201. 8" THICK CONCRETE WALL REINF w/ #5@12"o/c HORZ & VERT. PLACE VERT REINF NEAR THE INSIDE FACE OF THE WALL. PROVIDE (2)-#5 CONT HORZ BARS @ THE TOP OF THE WALL. EXTEND BARS 10" INTO LID CLOSURE POUR WHERE POSSIBLE.
202. 8" THICK CONCRETE WALL REINF w/ #5@12"o/c HORZ & VERT. PLACE VERT REINF @ THE CENTER OF THE WALL. PROVIDE (2)-#5 CONT HORZ BARS @ THE TOP OF THE WALL. EXTEND BARS 10" INTO LID CLOSURE POUR.
203. #5 FOOTING TO WALL DOWELS TO MATCH WALL VERTICAL REINFORCING SPACING. PROVIDE STD HOOK @ END OF BAR CAST INTO FOOTING. DOWELS SHALL BE EMBEDDED A MINIMUM OF 9" INTO 12" THICK FTG. & SHALL EXTEND INTO THE WALL 24" MIN. SEE 5/S3 FOR DOWEL PLACEMENT REQUIREMENTS.
204. #4@18"o/c WALL TO FOOTING DOWELS. EXTEND 36" INTO THE WALL AND 9" INTO THE 12" THICK FOOTING. PROVIDE STD HOOK AT END OF BAR EMBEDED WITHIN FTG. PROVIDE (2)-#4 CONT HORZ. BARS AS SHOWN. SET DOWELS 1-1/2" CLR FROM THE BACKFILLED FACE OF THE WALL. SEE 5/S3FOR DOWEL PLACEMETN DETAIL.
205. LID & WALL TO CLOSURE POUR REINF @ VOID END FILL. SEE 4/S3.
206. LID & WALL TO CLOSURE POUR REINF @ VOID BLOCKOUT. SEE 5/S3.
207. (2)-#5 CONT IN CLOSURE POUR. LAP 36" @ ALL SPLICE LOCATIONS.
208. (3)-#6 CONT IN CLOSURE POUR. LAP 48" @ ALL SPLICE LOCATIONS.
209. REINFORCE FTG w/ (2)-#5 CONT. LONGITUDINAL & #5@18"o/c TRANSVERSE BOT.
210. REINFORCE FTG w/ (3)-#5 CONT. LONGITUDINAL & #5@12"o/c TRANSVERSE BOT.
211. #5x4'-0" PLACED SUCH THAT EACH 48" WIDE PLANK RECEIVES (2) BARS. LOCATE BARS IN VOIDS WITH POUR SLOTS AS SHOWN ON THE PRECAST PLANK PLACEMENT DWGS. PROVIDE ADDITIONAL BARS @ EACH PLANK IF REQ'D AND SHOWN ON THE PRECAST PLANK SHOP DWGS.
212. (2)-#7@2"o/c. EXTEND 30" MIN PAST EA JAMB.
213. #4@6"o/c VERT w/ 180 DEG HOOK & BOT.
214. PROVIDE (2)-#5@6"o/c VERT EA JAMB OF OPENING
215. (2)-#5 CONT AT TOP OF WALL.
216. (2)-#5 CONT IN LID CLOSURE POUR
217. ADD (4)-#5x10'-0" TOP. CENTER ON OPNG. EQUALLY SPACED ACROSS FTG WIDTH.
218. #5@12"o/c TYP CELL DIVIDER WALL HORZ REINFORCING.
219. (2)-#5x4'-0"@3"o/c DIAGONAL BARS EA CORNER. PLACED AT THE CENTER OF THE WALL.



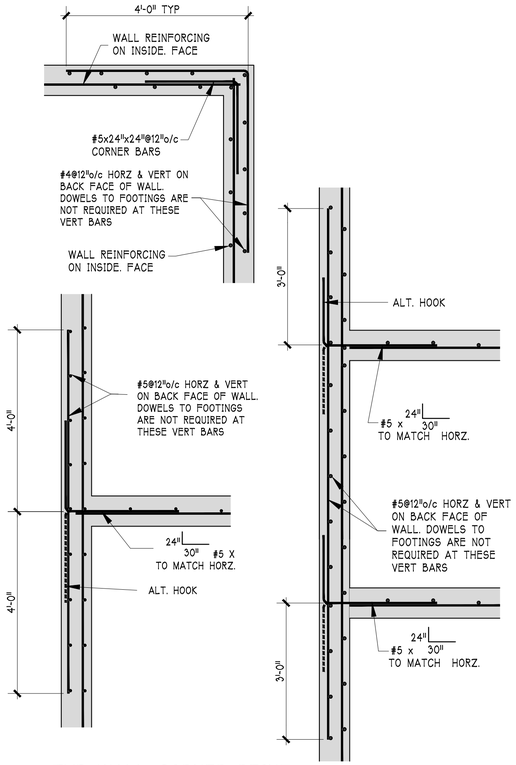
7/S3 KNEEWALL FTG DETAIL

SCALE 3/4"=1'-0"



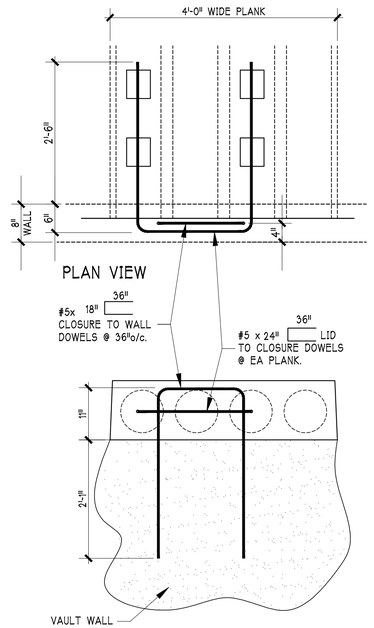
6/S3 TYP FTG DOWEL PLACEMENT DETAIL

SCALE 1"=1'-0"



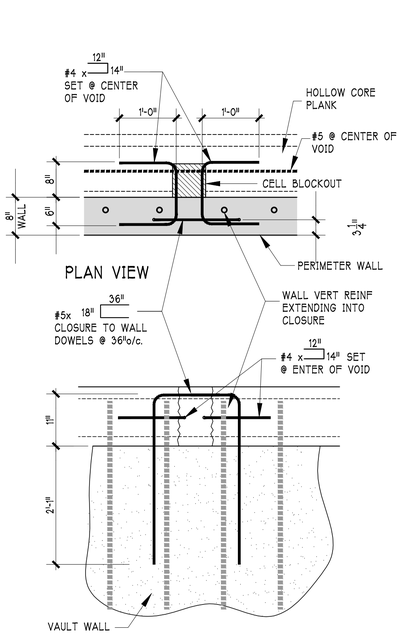
8/S3 TYP WALL CORNER REINF.

NTS



4/S3 LID & WALL TO CLOSURE DOWELS AT PLANK VOID END FILL - 8" WALL

SCALE 3/4"=1'-0"



5/S3 LID & WALL TO CLOSURE DOWELS AT VOID BLOCKOUTS - 8" WALL

SCALE 3/4"=1'-0"

DATE:	DESCRIPTION:	CLOUD:
02-23-2024	ISSUED FOR CONST. PERMIT APPLICATION	N/A

Site Structures
A Division of Kosnik Engineering PC
10505 19th AVE SE, SUITE D
EVERETT, WASHINGTON 98208
PH: (425) - 357 - 9600 E-MAIL: DAN@KOSNIK.COM

02-23-2024 DANIEL J. KOSNIK STATE OF WASHINGTON 20744 PROFESSIONAL ENGINEER

10008 67TH AVE NE
MARYSVILLE
STORM WATER DETENTION VAULT
WASHINGTON
CITY OF MARYSVILLE

WALL SECTIONS & DETAILS

SHEET:

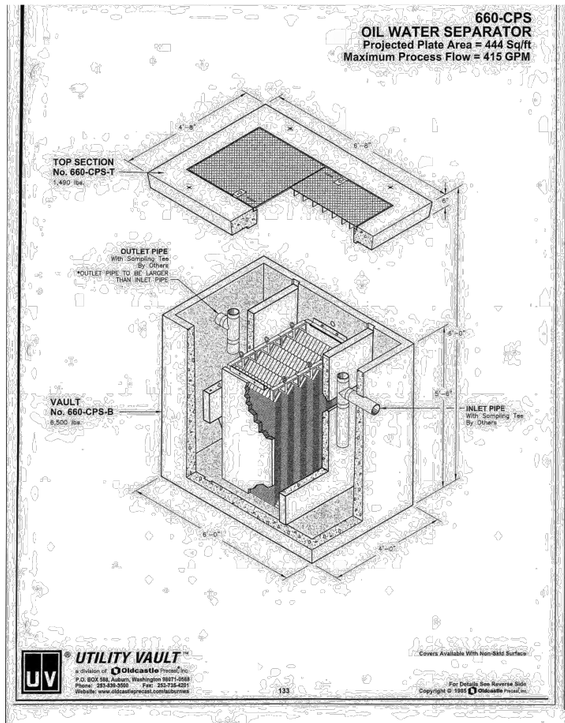
S3 OF 3

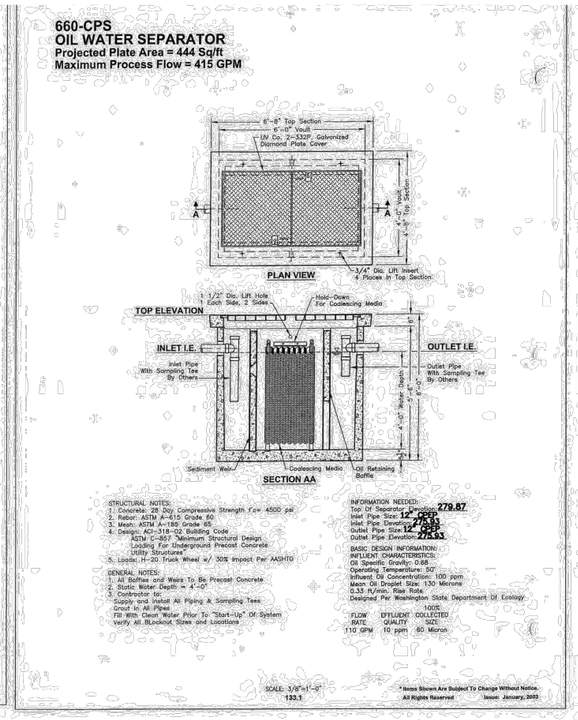
S-23-052

SHEET SIZE 22x34

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



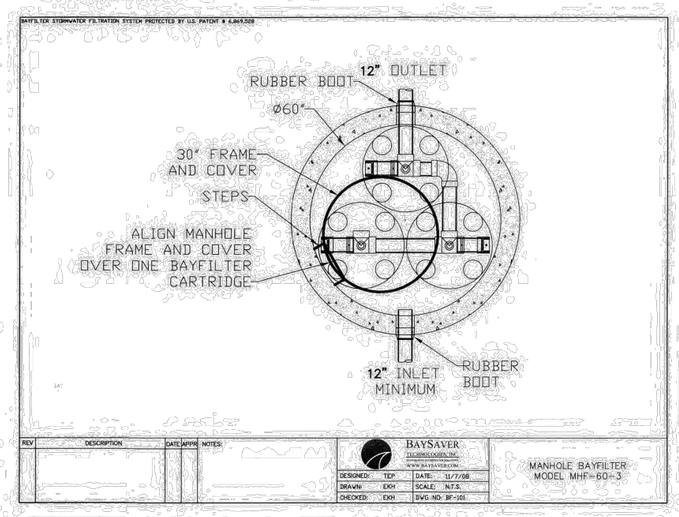


BASIC SOIL AMENDMENT NOTES

1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF TEN PERCENT DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT (BASED ON A LOSS-ON-IGNITION TEST) IN TURF AREAS, AND A pH FROM 6.0 TO 8.0 OR MATCHING THE pH OF THE ORIGINAL UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
2. PLANTING BEDS MUST BE MULCHED WITH 2 INCHES OF ORGANIC MATERIAL.
3. QUALITY OF COMPOST AND OTHER MATERIALS USED TO MEET THE ORGANIC CONTENT REQUIREMENTS:
   a. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST THAT MEETS THE DEFINITION OF "COMPOSTED MATERIALS" IN WAC 173-350-220. THIS CODE IS AVAILABLE ONLINE AT: HTTP://WWW.ECY.WA.GOV/PROGRAMS/SWFA/FACILITIES/350.HTML.
   COMPOST USED IN BIORETENTION AREAS SHOULD BE STABLE, MATURE AND DERIVED FROM YARD DEBRIS, WOOD WASTE, OR OTHER ORGANIC MATERIALS THAT MEET THE INTENT OF THE ORGANIC SOIL AMENDMENT SPECIFICATION. BIOSOLIDS AND MANURE COMPOSTS CAN BE HIGHER IN BIO-ABAILABLE PHOSPHORUS THAN COMPOST DERIVED FROM YARD OR PLANT WASTE AND THEREFOR ARE NOT ALLOWED IN BIORETENTION AREAS DUE TO THE POSSIBILITY OF EXPORTING BIO-AVAILABLE PHOSPHORUS IN EFFLUENT.
   THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 35% TO 65% AND A CARBON TO NITROGEN RATIO BELOW 25:1.
   THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
   b. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIALS AS DEFINED ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND MEETING THE CONTAMINANT STANDARDS OF GRADE A COMPOST.
4. AMEND DISTURBED SOIL ACCORDING TO THE FOLLOWING PROCEDURES:
   a. SCARIFY SUBSOIL TO A DEPTH OF ONE FOOT.
   b. IN PLANTING BEDS, PLACE THREE INCHES OF COMPOST AND TILL IN TO AN EIGHT-INCH DEPTH.
   c. IN TURF AREAS, PLACE TWO INCHES OF COMPOST AND TILL IN TO AN EIGHT-INCH DEPTH.
   d. APPLY TWO TO FOUR INCHES OF ARBORIST WOOD CHIP COARSE BARK MULCH, OR COMPOST MULCH TO PLANTING BEDS AFTER FINAL PLANTING.
   ALTERNATIVELY, DISTURBED SOIL CAN BE AMENDED ON A SITE-CUSTOMIZED MANNER SO THAT IT MEETS THE SOIL QUALITY CRITERIA SET FORTH ABOVE, AS DETERMINED BY A LICENSED ENGINEER, GEOLOGIST, LANDSCAPE ARCHITECT, OR OTHER PERSON AS APPROVED BY SNOHOMISH COUNTY.
5. STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER AND DEPTH REQUIREMENTS BY FOLLOWING THE PROCEDURES IN METHOD (4) ABOVE.
6. IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE ORGANIC MATTER AND DEPTH REQUIREMENTS.

MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.

IF EXISTING TOPSOIL IS STOCKPILED AND REPLACED IN AREAS SHOWN IN THE LEGEND, TESTING WILL BE REQUIRED PER NOTES 1, 4 & 5 ABOVE.



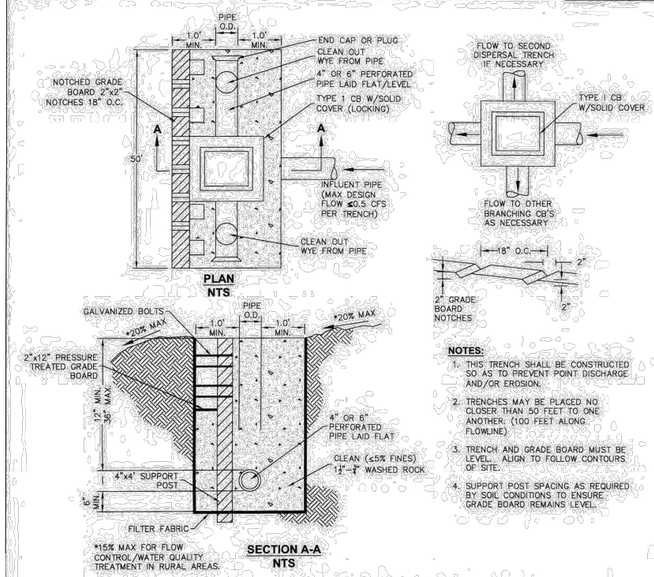


FIGURE 3.7 NPGIS DISPERSION TRENCH
NOT TO SCALE

BAYFILTER INSTALLATION INSTRUCTIONS

INSTALLATION OF A BAYFILTER™ SYSTEM

1. CONTACT UTILITY LOCATOR TO MARK ANY NEARBY UNDERGROUND UTILITIES AND MAKE SURE IT IS SAFE TO EXCAVATE.
2. REFERENCE THE SITE PLAN AND STAKE OUT THE LOCATION OF THE BAYFILTER™ MANHOLE/VAULT.
3. EXCAVATE THE HOLE, PROVIDING ANY SHEETING AND SHORING NECESSARY TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY REGULATIONS.
4. LEVEL THE SUBGRADE TO THE PROPER ELEVATION. VERIFY THE ELEVATION AGAINST THE MANHOLE/VAULT DIMENSIONS, THE INVERT ELEVATIONS, AND THE SITE PLANS. ADJUST THE BASE AGGREGATE, IF NECESSARY.
5. HAVE THE SOIL BEARING CAPACITY VERIFIED BY A LICENSED ENGINEER FOR THE REQUIRED LOAD BEARING CAPACITY. ON SOLID SUBGRADE, SET THE FIRST SECTION OF THE BAYFILTER™ MANHOLE/VAULT.
6. CHECK THE LEVEL AND ELEVATION OF THE FIRST SECTION TO ENSURE IT IS CORRECT BEFORE ADDING ANY RISER SECTIONS.
7. IF ADDITIONAL SECTION(S) ARE REQUIRED, ADD A WATERTIGHT SEAL TO THE FIRST SECTION OF THE BAYFILTER™ MANHOLE/VAULT. SET ADDITIONAL SECTION(S) OF THE MANHOLE/VAULT, ADDING A WATERTIGHT SEAL TO EACH JOINT.
8. INSTALL THE TROLLEY SYSTEM (IF APPLICABLE). SEE SEPARATE INSTRUCTION SHEET.
9. INSTALL THE PVC OUTLET MANIFOLD. GLUE ALL PVC JOINTS WITH THE EXCEPTION OF THE BAYFILTER CARTRIDGE COUPLING.
10. INSTALL THE PVC OUTLET PIPE IN BAYFILTER™ MANHOLE/VAULT.
11. INSTALL THE INLET PIPE TO THE BAYFILTER™ MANHOLE/VAULT.
12. INSTALL BAYFILTER DRAIN DOWN MODULES (DDM) WITH RED MARK ALIGNED TO THE TOP OF THE MANIFOLD SYSTEM.
13. AFTER THE SITE IS STABILIZED, REMOVE ANY ACCUMULATED SEDIMENT OR DEBRIS FROM THE VAULT AND INSTALL THE FLOW DISKS AND THE BAYFILTER™ CARTRIDGES.

TOOL LIST:
- PVC GLUE AND PRIMER
- CRANE / LIFTING MECHANISM TO LOWER THE CARTRIDGES IN THE VAULT (EACH CARTRIDGE WEIGHS 350 LB)
- SCREWDRIVER OR NUT DRIVER FOR FERNCO COUPLERS
- SOFT BLOW HAMMER
- SAW (IN CASE PVC SCH 40 PIPING LENGTH NEEDS TO BE ADJUSTED).

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION

NO.	DATE	DESCRIPTION	BY

DETAILS - 1

GEOMETRICS
ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd. Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PROJ. NO.	DSN. BY:
00-0000	TI
DATE: 02/29/2024	
SCALE: N.T.S.	
DRAWING NO. 10 OF 15	

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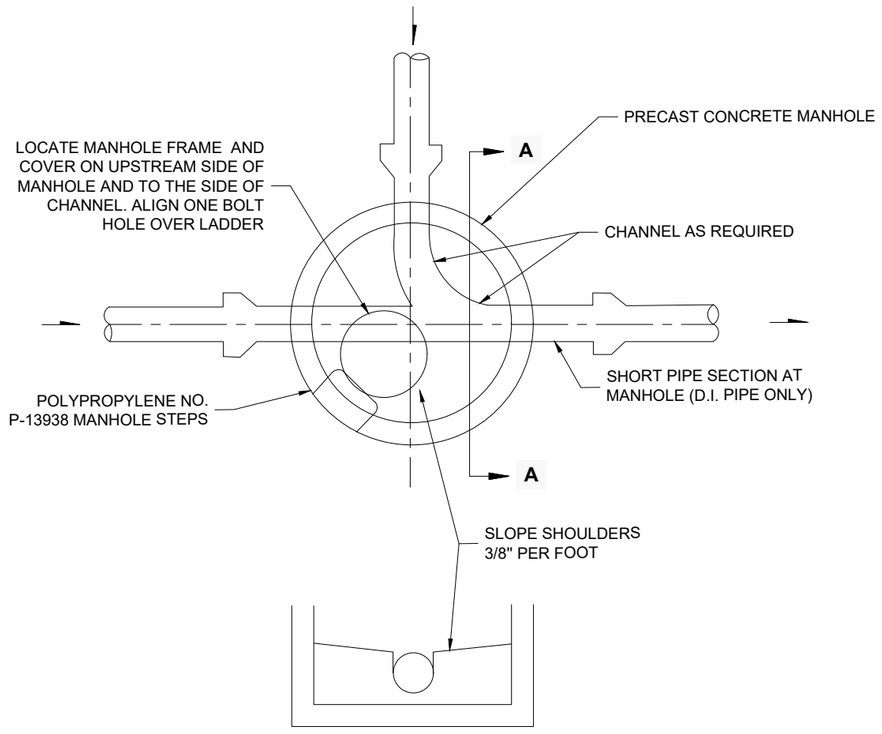
CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

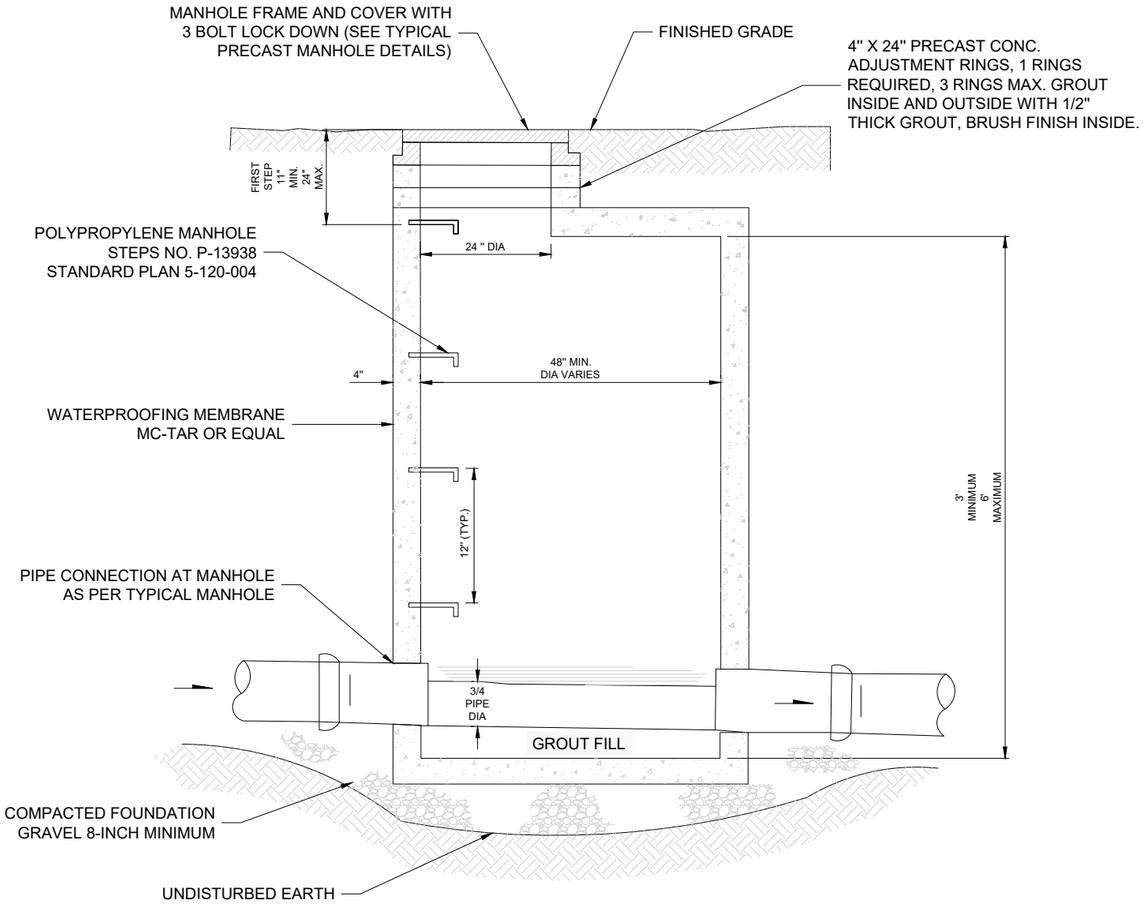


SECTION A-A

NOTES:

1. PIPE CONNECTION TO MANHOLES SHALL BE AS FOLLOWS: PVC PIPE: CAST OR GROUT A MANHOLE COUPLING IN TO WALL. D.I. PIPE: BELL AND SPICOT JOINT OR FLEXIBLE COUPLING EITHER SHALL BE 12" MAXIMUM DISTANCE FROM MANHOLE WALL. PVC AND D.I. PIPE WHAT A WATER TIGHT FLEXIBLE RUBBER BOOT IN MANHOLE WALL, KOR-N-SEAL BOOT OR EQUAL.

MANHOLE PLAN



NOTES:

1. PIPE CONNECTION TO MANHOLES SHALL BE AS FOLLOWS: PVC PIPE: CAST OR GROUT A MANHOLE COUPLING IN TO WALL. D.I. PIPE: BELL AND SPICOT JOINT OR FLEXIBLE COUPLING EITHER SHALL BE 12" MAXIMUM DISTANCE FROM MANHOLE WALL. PVC AND D.I. PIPE WHAT A WATER TIGHT FLEXIBLE RUBBER BOOT IN MANHOLE WALL, KOR-N-SEAL BOOT OR EQUAL.
2. DROP OF GRADE THROUGH MANHOLE SHALL BE 0.10' UNLESS OTHERWISE APPLICABLE.
3. GROUT ALL PICK HOLES AND OUT

TYPE 3 MANHOLE DETAIL

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION			
NO	DATE	DESCRIPTION	BY
01	00/00/22	XYZ	XYZ

MANHOLE PLAN & MANHOLE TYPE-3 DETAIL

GEOMETRICS ENGINEERING, P.S. INC.
12835 NE Bel-Red Rd. Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PROJ. NO.	DSN. BY:
00-0000	TI
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SCALE: 1" = 80'	
DRAWING NO. 10 OF 15	

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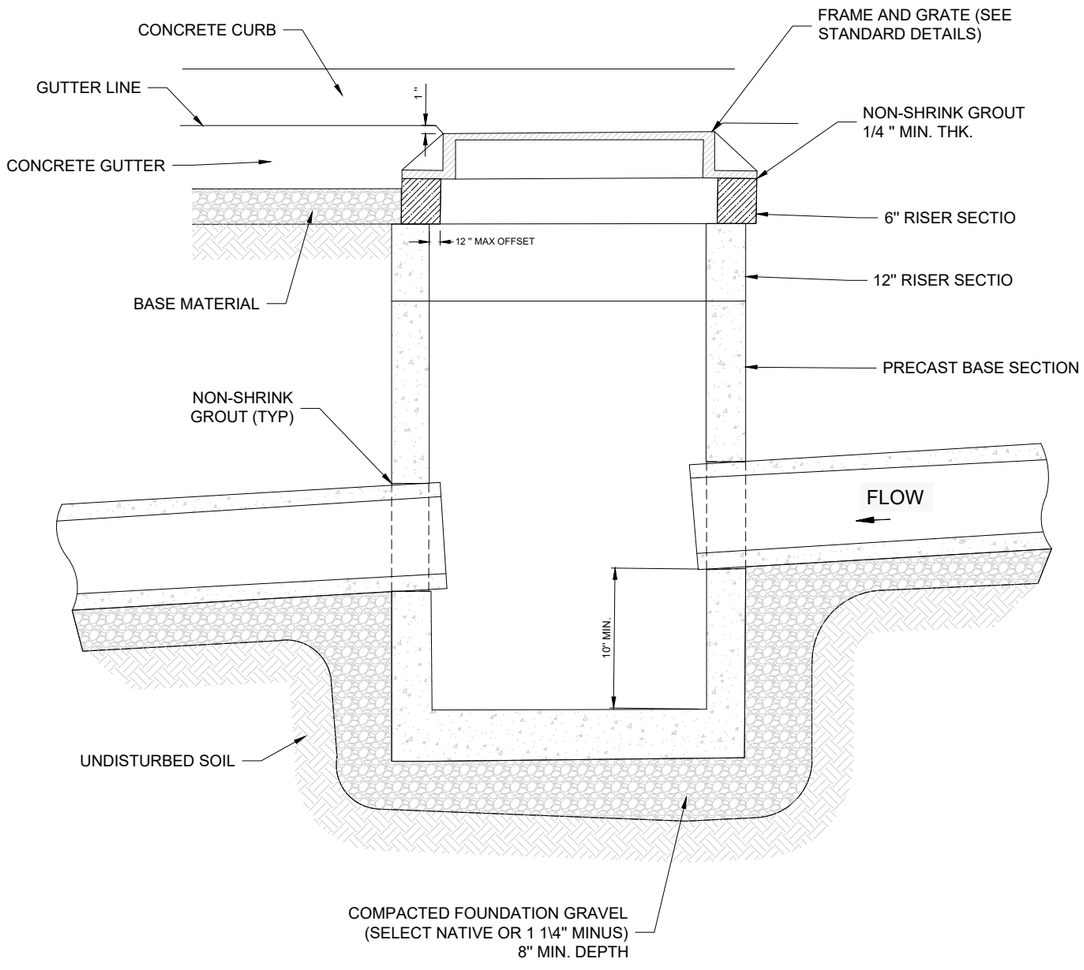

CATCH BASIN INSTALLATION DETAILS TYPE-1 & 1L

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION

NO	DATE	DESCRIPTION	BY
01	00/00/22	XYZ	XYZ

CATCH BASIN INSTALLATION DETAILS TYPE-1 & 1L

GEOMETRICS ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PROJ. NO.	DSN. BY:
00-0000	TI

DATE: 02/29/2024

SCALE: 1" = 80'

DRAWING NO. 10 OF 15

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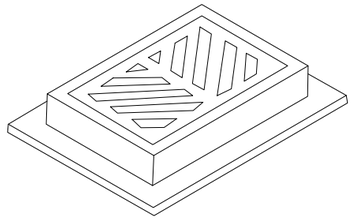
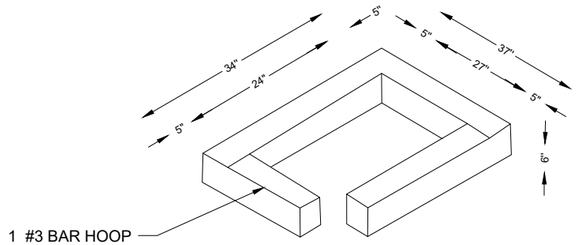
CROSSROADS CHEVRON

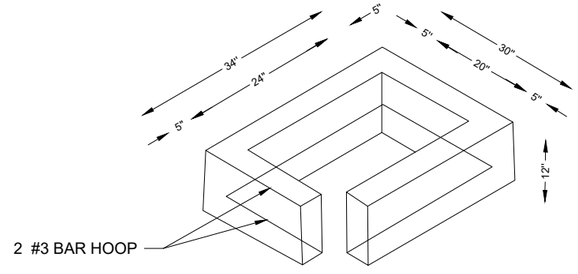
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



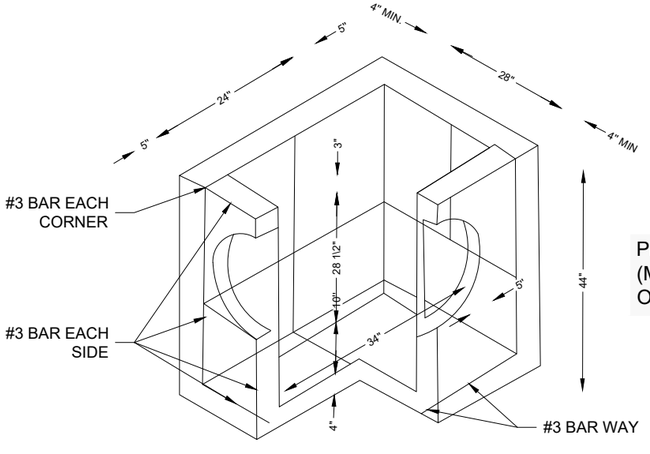
FRAME AND GRATE SEE SEC. 4-080E AND APPLICABLE DWGS.



6" RISER SECTION



12" RISER SECTION



PRECAST BASE SECTION (MEASUREMENT AT THE TOP OF THE BASE)

CATCH BASIN TYPE-1
(18" MAX. DIA)

NOTES:

1. CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (AASHTO M 199) & C890 UNLESS OTHERWISE SHOWN ON PLAN OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
2. AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MIN AREA OF 0.12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.
4. PRECAST BASE SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUT SHALL HAVE A WALL THICKNESS OF 2" MIN. ALL PIPES SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. USED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT.
5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PI[E OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS.
6. ROUND KNOCKOUT MAY BE ON ALL 4 SIDED, WITH MAX. DIAM. OF 20". KNOCKOUT MAY BE EITHER ROUND OR "D" SHAPE.
7. THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'-0".
8. THE TAPPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2'/FT .
9. CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATIONS RR-F-6210. MATING SURFACE SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
10. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
11. FOR CATCH BASIN IN PARKING LOTS REFER TO WSDOT/APWA STANDARD DWG.B1-5.
12. EDGE OF RIOSER OR BRICK SHALL NOT BE MORE THAN 2" FROM VERTICAL EDGE OF CATCH BASIN WALL.
13. MINIMUM 4" ADJUSTMENT SECTION BETWEEN BOTTOM OF GRATE AND TOP OF BASE SECTION.

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DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
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CATCH BASIN TYPE-1 (18" MAX. DIA)

GEOMETRICS ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PROJ. NO.	DSN. BY:
00-0000	TI
DATE: 02/29/2024	
SCALE: 1" = 80'	
DRAWING NO. 10 OF 15	

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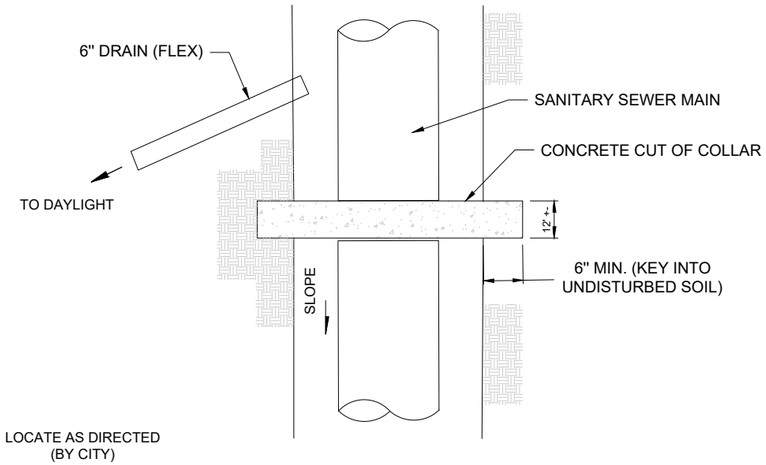
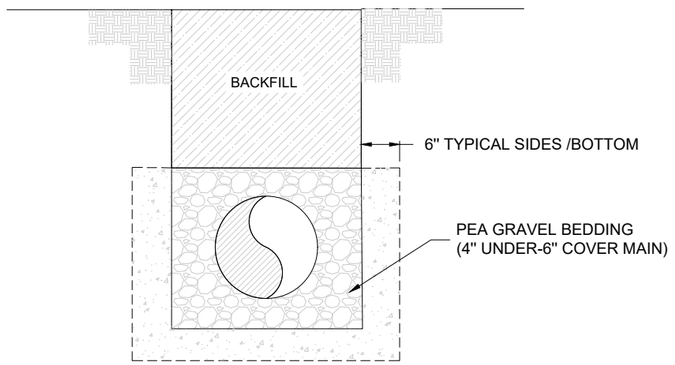
CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



PLAN



SECTION

SANITARY SEWER DRAINAGE
CUT-OFF COLLAR

CALL 48 HOURS
BEFORE YOU DIG
811

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SANITARY SEWER DRAINAGE CUT-OF COLLAR

GEOMETRICS ENGINEERING, P.S. INC.
12835 NE Bel-Red Rd. Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

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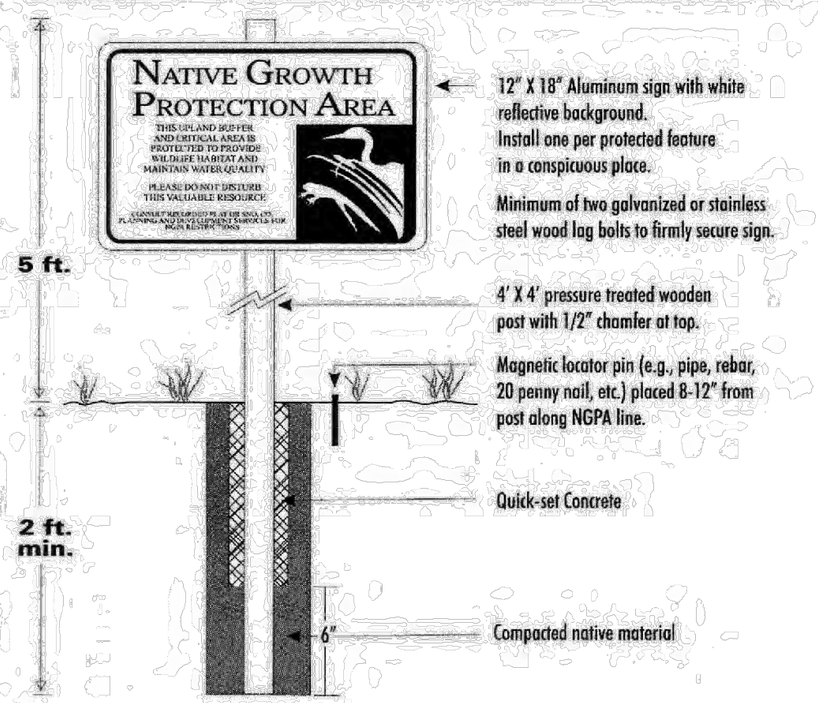
CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

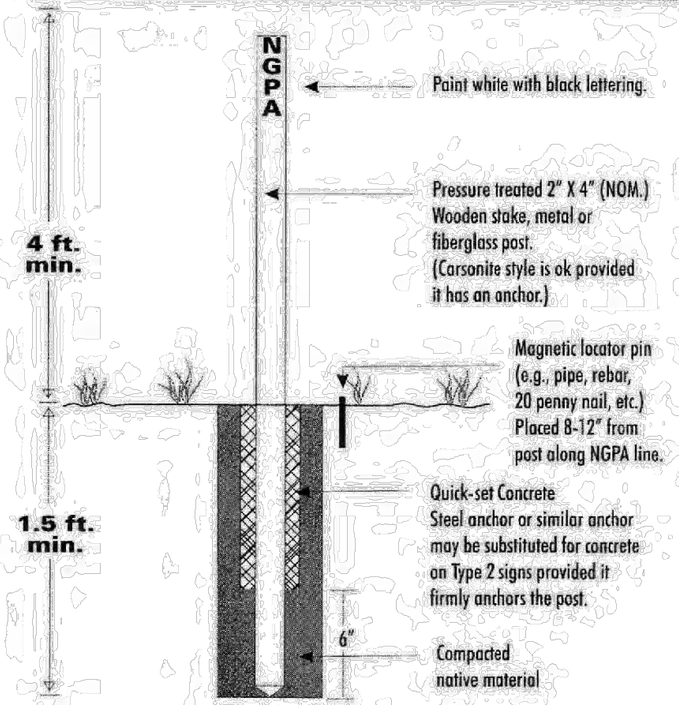
Native Growth Protection Area
Sign Installation Guidelines

TYPE 1 SIGN



- 12" X 18" Aluminum sign with white reflective background. Install one per protected feature in a conspicuous place.
- Minimum of two galvanized or stainless steel wood lag bolts to firmly secure sign.
- 4' X 4' pressure treated wooden post with 1/2" chamfer at top.
- Magnetic locator pin (e.g., pipe, rebar, 20 penny nail, etc.) placed 8-12" from post along NGPA line.
- Quick-set Concrete
- Compacted native material

TYPE 2 SIGN



- Paint white with black lettering.
- Pressure treated 2" X 4" (NOM.) Wooden stake, metal or fiberglass post. (Carsonite style is ok provided it has an anchor.)
- Magnetic locator pin (e.g., pipe, rebar, 20 penny nail, etc.) Placed 8-12" from post along NGPA line.
- Quick-set Concrete Steel anchor or similar anchor may be substituted for concrete on Type 2 signs provided it firmly anchors the post.
- Compacted native material

NOTES:

1. NGPA signs shall be placed no greater than 100 feet apart around the perimeter of the Native Growth Protection Area. Minimum placement shall include one Type 1 sign per wetland, and at least one Type 1 sign shall be placed in any lot that borders the Native Growth Protection Area, unless otherwise approved by the County biologist.
2. Sign placement shall be subject to the approval of Snohomish County. Alternative sign designs may be submitted to Snohomish County for approval.
3. All signs must be secure and permanent.

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DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
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DETAILS - 2

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12835 NE Bel-Red Rd. Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

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DRAWING NO. 11 OF 15	

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CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

DESIGN CRITERIA

VERTICAL LOADS ON VAULT LID:
UNIFORM LIVE LOAD : 150PSF

*HS25 TRUCK WHEEL LOADS :

TRACTOR
FRONT AXLE = 10,000 lb
SINGLE REAR AXLE = 30,000 lb
TRAILER
SINGLE REAR AXLE = 40,000 lb

OUTRIGGER LOAD: OUTRIGGER 45K OVER 24" SQ PAD @ 16PT o/c

* = DESIGN LIVE LOAD AND TRUCK WHEEL LOAD TO BE APPLIED INDEPENDENTLY AND IN COMBINATION WITH THE SOIL COVER DEAD LOAD

AT GRADE GRATING:
SAME AS LID LOADING - EXCLUDING OUTRIGGER

IMPACT & FATIGUE:
DUE TO THE INACCESSABILITY, INFREQUENT ACCESS OF SERVICE VEHICLES OVER THE LID, AND THE SOIL COVER OVER THE LID, INCREASES IN VEHICLE LOADS TO ACCOUNT FOR IMPACT & FATIGUE ARE NOT REQUIRED.

SOIL COVER FOR LID DESIGN:
PLANK MANUFACTURER SHALL BE RESPONSIBLE FOR DETERMINING THE SOIL COVER DEPTHS USED IN THE LID DESIGN BASED ON THE PERMITTED CIVIL DRAWING, VAULT AND FINISHED GRADE ELEVATIONS.

SOIL COVER FOR SUBSTRUCTURE DESIGN:
THE SUBSTRUCTURE WAS DESIGNED FOR A SOIL COVER OF 0.60FT MIN TO 160FT MAX ABOVE THE TOP OF THE LID.

FOUNDATION DESIGN:
FOUNDATION DESIGN IS BASED ON THE FOLLOWING VALUES PROVIDED BY GEOTECH CONSULTANTS, INC IN THEIR REPORT DATED 07-10-14 AND E-MAIL CORRESPONDENCE OF 07-19-17.

ALLOWABLE BEARING PRESSURE:	2,500 PSF
LATERAL EARTH PRESSURES: DRAINED LEVEL BACKFILL	
ACTIVE CONDITION:	35 PCF EFW
AT REST CONDITION:	26H UNIFORM PRESSURE
SEISMIC PRESSURE COMPONENT:	E = 7H PSF UNIFORM
SATURATED SOIL DENSITY:	125 PCF

SPECIAL INSPECTION PLAN

GENERAL:
SPECIAL INSPECTION BY A QUALIFIED INSPECTOR IS REQUIRED IN ACCORDANCE WITH THE 2015 IBC.

QUALIFICATION:
THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL.

REQUIRED VERIFICATION & INSPECTION:
THE SPECIAL INSPECTOR SHALL PERFORM THE VERIFICATIONS & INSPECTIONS NOTED IN THE SCHEDULE BELOW

INSPECTION & TESTING SCHEDULE

TYPES OF WORK	FREQ.	2015 IBC SECTION
CAST IN PLACE CONC		
REINFORCING STEEL, PLACEMENT:	P	1705.3
INSTALLATION & FASTENING OF PRECAST PANELS	P	1705.3
PLACEMENT OF CONCRETE	C	1705.3
VERIFYING USE OF REQUIRED DESIGN MIX	P	1705.3
TESTING OF THE CONCRETE FOR SPECIFIED STRENGTH, AIR CONTENT AND SLUMP	C	1705.3
STRUCTURAL STEEL		
STRUCTURAL STEEL (GRATING) FABRICATION	P	1704.2.5
SOILS		
VERIFICATION OF SOIL-BEARING CAPACITY: INSTALLATION OF DRAINAGE SYSTEM	C	1705.6
PLACEMENT & COMPACTION OF WALL BACKFILL:	P	1705.6

FREQUENCY LEGEND
C = CONTINUOUS P = PERIODIC
SEE REFERENCES AND STANDARDS LISTED WITHIN THE VERIFICATION & INSPECTION SCHEDULE FOR MEANING OF PERIODIC AND CONTINUOUS INSPECTIONS.

SUBMITTAL OF REPORTS:
ALL SPECIAL INSPECTION REPORTS AND TESTING REPORTS SHALL BE SUBMITTED TO THE OWNER, SITE STRUCTURES AND THE BUILDING OFFICIAL BY THE AGENCY PERFORMING THE INSPECTION OR TESTING.

DEFERRED SUBMITTALS

THE FOLLOWING AREAS OF WORK SHALL BE CONSIDERED AS "DEFERRED SUBMITTALS" AS DEFINED IN THE 2015 IBC

a. PRECAST PRESTRESSED HOLLOW CORE PLANK

ALL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF A CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF WASHINGTON WHO HAS CURRENT DESIGN EXPERIENCE IN THE TYPE OF WORK REVIEWED.

SUBMIT ALL DEFERRED SUBMITTAL DOCUMENTS TO THE ENGINEER OF RECORD FOR REVIEW.

THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED BY THE ENGINEER OF RECORD.

STRUCTURAL STEEL

MATERIALS:
b. STEEL WF SHAPES SHALL CONFORM TO ASTM A992 Fy=50KSI
a. OTHER STRUCTURAL STEEL SHAPES & PLATES SHALL CONFORM TO ASTM A36

WELDING:
CONFORM TO AWS D1.1 "STRUCTURAL WELDING CODE - STEEL". WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH WABO REQUIREMENTS. USE E70 ELECTRODES OF TYPE REQUIRED FOR MATERIALS TO BE WELDED.

GALVANIZING:
ALL STEEL SECTIONS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

OPEN METAL GRATING

OPEN METAL GRATING SHALL BE WELDED STEEL BAR GRATING AS SPECIFIED ON THE DRAWINGS. ALL STEEL GRATING AND GRATING COMPONENTS INCLUDING ITEMS EMBEDED WITHIN THE CONCRETE SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

SUPPLIER SHALL PROVIDE ALL COMPONENTS NECESSARY TO INSTALL AND SECURE THE GRATING IN PLACE & SHALL PROVIDE SHOP DRAWINGS DETAILING ALL COMPONENTS OF THE INSTALLATION.

CONCRETE

CONCRETE REQUIREMENTS:

LOCATION	STRENGTH	MAX W/C RATIO
VAULT WALLS	4000PSI @ 28 DAYS	0.50
GRADE SLAB & FTGS	3000PSI @ 28 DAYS	0.55
PLANK VOID FILL	TO MEET PLANK MFGRS REQUIREMENTS*	
PLANK JOINT GROUT	TO MEET PLANK MFGRS REQUIREMENTS*	

* MINIMUM STRENGTH SHALL BE 3000PSI @ 28 DAYS.

AIR CONTENT:
CONCRETE EXPOSED TO WEATHER SHALL CONTAIN 5% +/-1% ENTRAINED AIR.

MIX DESIGN:
SHALL BE BASED ON FIELD EXPERIENCE OR TRIAL MIXTURES IN CONFORMANCE WITH THE SPECIFICATIONS.

EXPOSURE CATEGORIES:

FREEZING THAWING:	F0
SULFATE:	S0
PERMEABILITY:	P1
CORROSION PROTECTION:	C1

MATERIAL REQUIREMENTS:
CEMENT: ASTM C150 ADMIXTURES: ACI 301
AGGREGATES: ASTM C33 WATER: ASTM C94

PLACING REQUIREMENTS:
PLACING:
PLACE CONCRETE AS NEARLY AS PRACTICABLE TO ITS FINAL POSITION TO AVOID SEGREGATION.

DEBRIS:
REMOVE ALL DEBRIS FROM FORMS PRIOR TO PLACING CONCRETE.

CONSOLIDATION:
CONSOLIDATE CONCRETE BY SUITABLE MEANS. THOROUGHLY WORK CONCRETE AROUND EMBEDDED ITEMS AND INTO CORNERS OF FORMS.

CURING REQUIREMENTS:

CURING:
CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A SUITABLE PERIOD OF TIME AFTER PLACEMENT.

WEATHER CONDITIONS:
ADEQUATE PRECAUTIONS SHALL BE TAKEN DURING HOT AND COLD WEATHER IN ACCORDANCE WITH THE SPECIFICATIONS.

LID PLANK PLACEMENT:
IN NO CASE SHALL THE LID PLANKS BE PLACED BEFORE THE WALLS HAVE BEEN ALLOWED A MINIMUM OF 3 DAYS OF CURE. WHEN AVERAGE AMBIENT TEMPERATURES ARE LESS THAN 50 DEGREES FAHRENHEIT, THE CONTRACTOR MUST ALLOW A MINIMUM CURE TIME OF 7 DAYS OR PROVIDE AN ADDITIONAL SET OF CYLINDERS TO BE BROKEN AT THE TIME OF LID PLACEMENT DEMONSTRATING A MINIMUM CONCRETE STRENGTH OF 1000 PSI HAS BEEN REACHED.

REINFORCING BAR

MATERIAL REQUIREMENT:

REINFORCING BARS:
USE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, EXCEPT AS NOTED ON THE DRAWINGS.

FABRICATION AND PLACING REQUIREMENTS:

BENDING:
BARS SHALL BE BENT COLD. BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS NOTED OR SHOWN OTHERWISE OR AUTHORIZED BY THE ENGINEER.

PLACING:
REINFORCEMENT SHALL BE SUPPORTED AND TIED TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR BY PLACING OF CONCRETE. MAXIMUM SPACING OF SUPPORTS SHALL BE 3'-0".

CONCRETE COVER:
MINIMUM CONCRETE COVER FOR REINF. SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH 3"
CONCRETE CAST AGAINST FORMS AND EXPOSED TO EARTH 2"

WET SETTINGS:
REINFORCEMENT ANCHOR BOLTS, OR ANY EMBEDDED ITEM WITHIN THE CONCRETE, MAY NOT BE SET INTO THE CONCRETE AFTER IT HAS BEEN POURED WITHIN THE FORMS.

LAP SPLICES:
LAP ALL BARS 24" MIN UNLESS SHOWN OTHERWISE ON THESE DRAWINGS.

GENERAL CONSTRUCTION NOTES

CODE:
VAULT DESIGN AND CONSTRUCTION SHALL CONFORM TO THE PROVISIONS OF THE 2015 IBC AS ADOPTED BY SNOHOMISH COUNTY, WASHINGTON.

GENERAL DETAILS:
CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.

DISCREPANCIES:
THE CONTRACTOR SHALL NOTIFY ENGINEER UPON FINDING ANY DISCREPANCY OR OMISSION IN THE DRAWINGS OR SPECIFICATIONS.

SHORING & EXCAVATION:
THE CONTRACTOR SHALL BE SOLEY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES, INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES.

WALL BACKFILL:
PRIOR TO BACKFILLING VAULT WALLS THE CONTRACTOR SHALL HAVE PLACED THE LID PLANKS AND PROVIDED A MINIMUM OF 5 DAYS OF CURE ON THE PLANK VOID FILL.

BACKFILL SOIL:
WALL BACKFILL SHALL BE WELL GRADED FREE DRAINING SOIL FREE OF ORGANIC MATERIAL. BACKFILL SHALL BE PLACED IN LIFTS OF NO MORE THAN 8 INCHES AND COMPACTED TO WITHIN 90% OF THE SOILS MAXIMUM DRY DENSITY. ALL COMPACTION OCCURING WITHIN 5' OF THE WALL SHALL BE COMPLETED USING HAND OPERATED MACHINERY.

HOLLOW CORE PLANK

SCOPE OF WORK:
THE WORK INCLUDED IS THE DESIGN, MANUFACTURE AND DELIVERY OF PRECAST PRESTRESSED CONCRETE UNITS. DESIGN PLANK FOR THE MOST CRITICAL OF THE LOADING CONDITIONS AS SHOWN WITHIN THE DESIGN CRITERIA NOTE.

THE MANUFACTURER SHALL SUBMIT STRUCTURAL CALCULATIONS AND PLACEMENT DRAWINGS SIGNED BY A WASHINGTON STATE REGISTERED CIVIL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

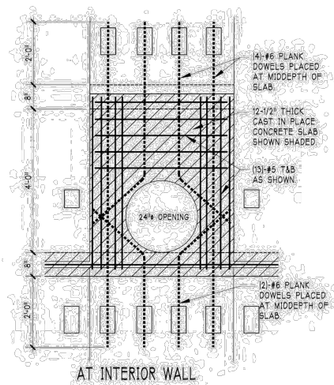
THE MANUFACTURER SHALL INSTALL ALL BLOCK OUTS REQUIRED FOR STRUCTURAL CONNECTIONS AS INDICATED ON THESE DRAWINGS. NO OTHER PENETRATIONS ARE ALLOWED WITHOUT THE PRIOR APPROVAL OF THE PLANK MANUFACTURER.

ALL HOLLOW CORE JOINTS SHALL BE GROUTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

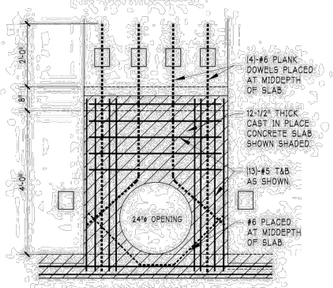
PRESSURE RELIEF VALVE

PRESSURE RELIEF VALVES SHALL BE 4"ø TROY MODEL A2580 HYDROSTATIC RELIEF VALVE AND WALL THIMBLE WITH REMOVABLE GRATE.

CONTRACTOR MAY SUBMIT ALTERNATE VALVE TYPES FOR CONSIDERATION. SUBMIT ALL DOCUMENTS RELATED TO THE ALTERNATE, INCLUDING INSTALLATION DETAILS TO THE ENGINEER FOR REVIEW. VALVES SHALL BE SHOWN TO OPEN AT A PRESSURE DIFFERENTIAL NOT EXCEEDING 9" OF WATER HEAD. ALTERNATE VALVES SHALL BE FULLY SERVICABLE TO MAINTAIN PROPER OPERATION OVER THE LIFE OF THE STRUCTURE.

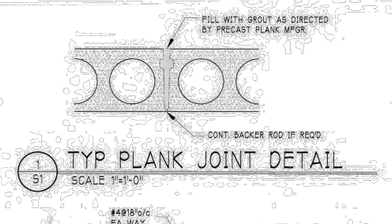


AT INTERIOR WALL



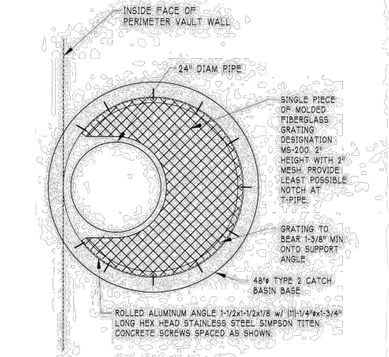
AT PERIMETER WALL

3 S1 LID REINF @ MANHOLE w/ KNEEWALL
NTS

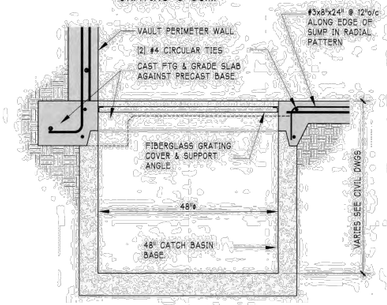


1 S1 TYP PLANK JOINT DETAIL
SCALE 1"=1'-0"

2 S1 TYP GRADE SLAB SECTION
SCALE 1-1/2"=1'-0"

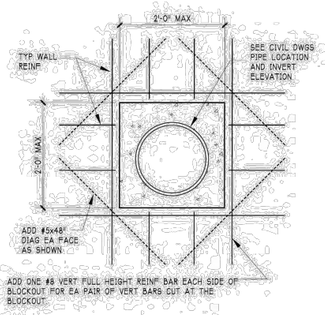


GRATING @ SUMP

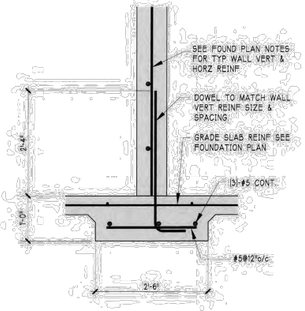


SECTION @ SUMP

6 S1 SUMP DETAIL
SCALE 3/4"=1'-0"



4 S1 WALL REINF @ PIPE PENETRATION
SCALE 3/4"=1'-0"



5 S1 KNEEWALL FTG DETAIL
SCALE 3/4"=1'-0"

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CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
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BY: _____ DATE: _____

R/W/PERMIT NO. _____

NO.	DATE	REVISION DESCRIPTION	BY

DETAILS - 3

GEOMETRICS ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd. Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PROJ. NO. 00-0000	DSN. BY: TI
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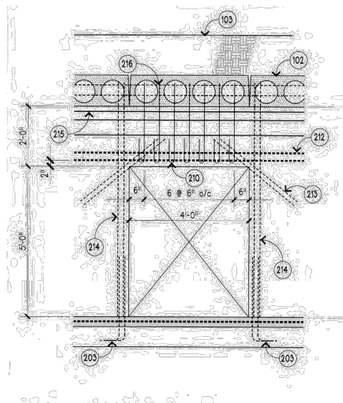
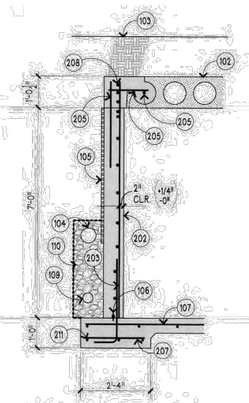
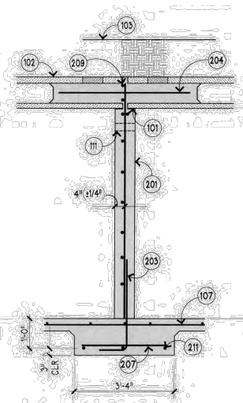


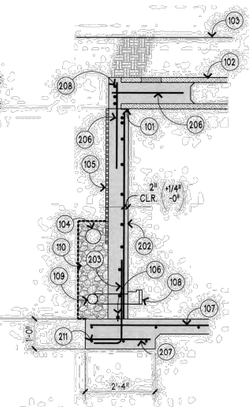
A / S3 WALL REINF @ OPNG
SCALE 1/2"=1'-0"



1 / S3 TYP WALL SECT
SCALE 1/2"=1'-0"



2 / S3 TYP WALL SECT
SCALE 1/2"=1'-0"



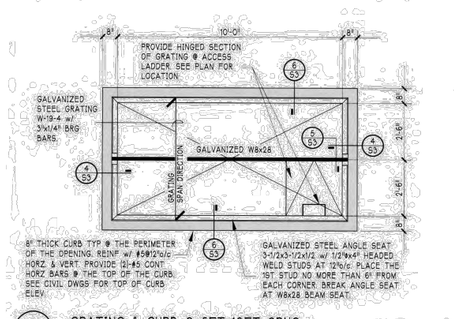
3 / S3 TYP WALL SECT
SCALE 1/2"=1'-0"

WALL GENERAL KEYNOTES

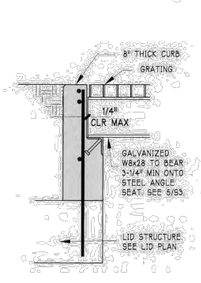
101. PLANK TO BEAR 3" MINIMUM ONTO THE TOP OF THE CONCRETE WALL. SEE PLANK MANUFACTURER'S DRAWINGS FOR FINAL BEARING LENGTH. INSTALL BEARING PAD AS DETAILED ON THE PRECAST PLANK PLACEMENT DRAWINGS.
102. 12-1/2" THICK PRECAST HOLLOW CORE PLANK.
103. FINISHED GRADE. ELEVATION VARIES. SEE DESIGN CRITERIA ON SHEET S1 FOR APPROXIMATE SOIL DEPTHS OVER THE VAULT LID. IN ADDITION TO THE CIVIL DWGS FOR FINAL GRADE ELEVATIONS.
104. 6"ø PERFORATED PVC FOOTING DRAIN SET 1E=273.00 WRAPPED IN FILTER FABRIC. ROUTE DRAIN TO DISCHARGE POINT AS SHOWN ON THE CIVIL DWGS.
105. PREENGINEERED DRAINAGE MATT TO EXTEND OVER THE HEIGHT OF THE WALL. SEE GEOTECHNICAL REPORT FOR MATERIAL SPECIFICATIONS.
106. 4" PVC RIBBED WATERSTOP w/ CENTER BULB AT ALL PERIMETER WALLS OF THE VAULT. INSTALL AT THE CENTER OF THE WALL IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
107. SEE FOUNDATION PLAN FOR GRADE SLAB REINFORCING.
108. WALL PRESSURE RELIEF VALVE, 4"ø TROY MODEL A-2580/04 WITH WALL THIMBLE MODEL 181001 WITH REMOVABLE GRATE. INSTALLATION SHALL BE IN ACCORDANCE WITH ALL OF THE MANUFACTURERS REQUIREMENTS. SET I.E. OF VALVE 6" ABOVE BOTTOM OF VAULT. SEE FOUNDATION PLAN FOR VALVE LOCATIONS. TIE TO 4"ø PERFORATED PVC PTG DRAIN.
109. 4"ø PERFORATED PVC FOOTING DRAIN SET IE 6" ABOVE BOTTOM OF VAULT AT THE WALL. TIE TO THRU-WALL PRESSURE RELIEF VALVES. SEE FOUNDATION PLAN FOR LOCATION.
110. PROVIDE 12" THICK LAYER OF FREE DRAINING GRANULAR FILL BELOW THE UPPER FOOTING DRAIN. APPLY FILTER FABRIC BETWEEN FREE DRAINING MATERIAL & NATIVE BACKFILL MATERIAL. SEE GEOTECHNICAL ENGINEER FOR MATERIALS REQUIREMENTS.
111. PROVIDE (2)-3"ø PVC THRU WALL VENT SLEEVES AT 60FT o/c. SEET TOP OF SLEEVE 6" BELOW TOP OF WALL.

WALL REINFORCING KEYNOTES

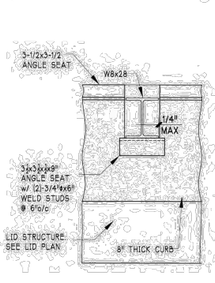
201. 8" THICK CONCRETE WALL REINF w/ #5@12"o/c HORZ & #5@15"o/c VERT. PLACE VERT REINF @ THE CENTER OF THE WALL. PROVIDE (2)-#5 CONT HORZ BARS @ THE TOP OF THE WALL. EXTEND VERT REINF 1'f INTO LID CLOSURE POUR WHERE POSSIBLE.
202. 8" THICK CONCRETE WALL REINF w/ #5@12"o/c HORZ & #5@15"o/c VERT. PLACE VERT REINF NEAR THE INSIDE FACE OF THE WALL. PROVIDE (2)-#5 CONT HORZ. BARS @ THE TOP OF THE WALL. EXTEND VERT REINF 1'f INTO LID CLOSURE POUR WHERE POSSIBLE.
203. #5 FOOTING TO WALL DOWELS TO MATCH WALL VERTICAL REINFORCING SPACING. PROVIDE STD HOOK @ END OF BAR CAST INTO FOOTING. DOWELS SHALL BE EMBEDDED A MINIMUM OF 9" INTO 12" THICK FTG. & SHALL EXTEND INTO THE WALL 28" MIN. SEE 5/S2 FOR DOWEL PLACEMENT REQUIREMENTS.
204. #5x4'-0" PLACED SUCH THAT EACH 48" WIDE PLANK RECEIVES (2) BARS. LOCATE BARS IN VOIDS WITH POUR SLOTS AS SHOWN ON THE PRECAST PLANK PLACEMENT DWGS. PROVIDE ADDITIONAL BARS @ EACH PLANK IF REQD AND SHOWN ON THE PRECAST PLANK SHOP DWGS.
205. LID & WALL TO CLOSURE POUR @ VOID BLOCKOUT. SEE 9/S3
206. LID & WALL TO CLOSURE POUR AT PLANK VOID END FILL. SEE 8/S3
207. #5@15"o/c BOT.
208. (3)-#6 CONT IN CLOSURE POUR. LAP 48" @ ALL SPLICE LOCATIONS. STAGGER SPLICE 10FT.
209. (2)-#5 CONT.
210. #4 @ 6" o/c VERT w/ 180 DEG HOOK & BOT.
211. #5 LONG AS SHOWN. LAP 24" AT ALL SPLICE LOCATIONS.
212. (2)-#7x10'FT @ 2"o/c
213. (2)-#5 x 4'-0" DIAGONAL BARS EA CORNER
214. PROVIDE (2)-#5 VERT EA JAMB OF OPENING
215. (2)-#5 CONT AT TOP OF WALL.
216. (2)-#5 CONT IN LID CLOSURE POUR



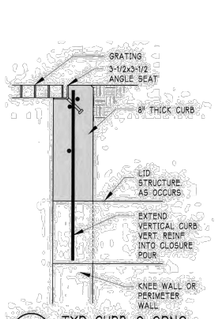
8 / S3 GRATING & CURB @ 5FTx10FT OPNG
SCALE 3/8"=1'-0"



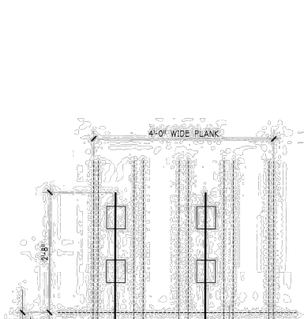
4 / S3 BM SEAT DETAIL
SCALE 1"=1'-0"



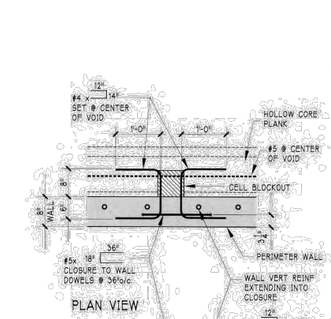
5 / S3 BM SEAT DETAIL
SCALE 1"=1'-0"



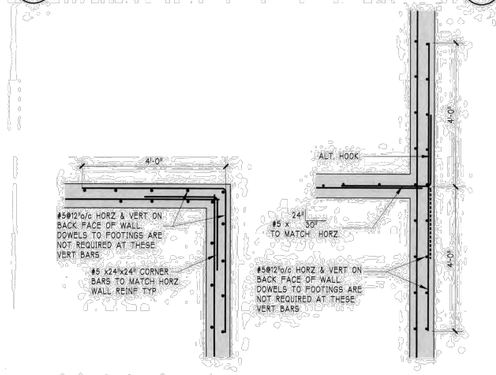
6 / S3 TYP CURB @ OPNG
SCALE 1"=1'-0"



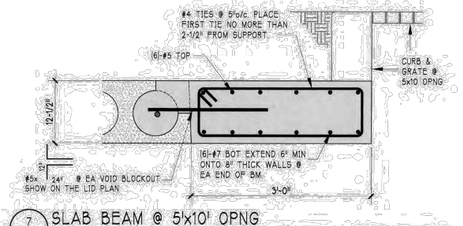
7 / S3 LID & WALL TO CLOSURE DOWELS AT VOID END FILL
SCALE 3/4"=1'-0"



9 / S3 LID & WALL TO CLOSURE DOWELS AT VOID BLOCKOUTS
SCALE 3/4"=1'-0"



10 / S3 TYP WALL CORNER REINF
NTS



7 / S3 SLAB BEAM @ 5'x10' OPNG
SCALE 1"=1'-0"

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

NO	DATE	DESCRIPTION	BY

REVISION

DETAILS - 4

GEOMETRICS ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15,
TOWNSHIP 30 NORTH, RANGE 05
EAST, MARYSVILLE, WS 98270

PROJ. NO.	DSN. BY:
00-0000	TI
DATE: 02/29/2024	
SCALE: N.T.S.	
DRAWING NO. 13 OF 15	

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CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

GENERAL CONSTRUCTION NOTES

CODE:
DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2015 IBC AS ADOPTED BY SNOHOMISH COUNTY, WASHINGTON.

DISCREPANCIES:
THE CONTRACTOR SHALL NOTIFY ENGINEER UPON FINDING ANY DISCREPANCY OR OMISSION IN THE DRAWINGS OR SPECIFICATIONS.

SHORING & EXCAVATION:
THE CONTRACTOR SHALL BE SOLEY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES AND PROTECTION OF ADJACENT PROPERTY.

BACKFILL SOIL:
WALL BACKFILL SHALL BE WELL GRADED FREE DRAINING MATERIAL. BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS. ALL COMPACTION OCCURING WITHIN 3' OF THE WALL SHALL BE COMPLETED USING HAND OPERATED MACHINERY.

DESIGN CRITERIA

FOUNDATION DESIGN:
FOUNDATION DESIGN IS BASED ON THE FOLLOWING VALUES.

ALLOWABLE BEARING PRESSURE:	2,500 PSF
LATERAL EARTH PRESSURES: DRAINED LEVEL BACKFILL	
ACTIVE CONDITION:	35 PCF EFW
PASSIVE CONDITION:	300PCF EFW w/ FS=1.5
SATURATED SOIL DENSITY:	125 PCF
COEFF OF FRICTION:	0.35 w/ FS=1.5

SURCHARGE:
RETAINING WALL DESIGN IS BASED ON A 100PSF UNIFORM SURCHARGE LOAD ON THE BACKFILL SURFACE.

SPECIAL INSPECTION PLAN

GENERAL:
SPECIAL INSPECTION BY A QUALIFIED INSPECTOR IS REQUIRED IN ACCORDANCE WITH THE 2015 IBC.

QUALIFICATION:
THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL.

REQUIRED VERIFICATION & INSPECTION:
THE SPECIAL INSPECTOR SHALL PERFORM THE VERIFICATIONS & INSPECTIONS NOTED IN THE SCHEDULE BELOW

INSPECTION & TESTING SCHEDULE

TYPES OF WORK	FREQ.	2015 IBC SECTION
CAST IN PLACE CONC		
REINFORCING STEEL, PLACEMENT	P	1705.3
PLACEMENT OF CONCRETE	C	1705.3
VERIFYING USE OF REQUIRED DESIGN MIX	P	1705.3
TESTING OF THE CONCRETE FOR SPECIFIED STRENGTH, AIR CONTENT AND SLUMP	C	1705.3
SOILS		
VERIFICATION OF SOIL-BEARING CAPACITY: INSTALLATION OF DRAINAGE SYSTEM: PLACEMENT & COMPACTION OF WALL BACKFILL	C P	1705.6 1705.6

FREQUENCY LEGEND
C = CONTINUOUS P = PERIODIC

SUBMITTAL OF REPORTS:
ALL SPECIAL INSPECTION REPORTS AND TESTING REPORTS SHALL BE SUBMITTED TO THE OWNER, SITE STRUCTURES AND THE BUILDING OFFICIAL BY THE AGENCY PERFORMING THE INSPECTION OR TESTING.

CONCRETE

CONCRETE REQUIREMENTS:

LOCATION	STRENGTH	MAX W/C RATIO
WALLS & FTGS	3500PSI @ 28 DAYS	0.53

AIR CONTENT:
CONC EXPOSED TO WEATHER SHALL CONTAIN 5% +/-1% ENTRAINED AIR

MIX DESIGN:
SHALL BE BASED ON FIELD EXPERIENCE OR TRIAL MIXTURES IN CONFORMANCE WITH THE SPECIFICATIONS.

MATERIAL REQUIREMENTS:
CEMENT: ASTM C150 ADMIXTURES: ACI 301
AGGREGATES: ASTM C33 WATER: ASTM C94

EXPOSURE CATEGORIES:

FREEZING THAWING	F1
SULFATE	S0
PERMEABILITY	P1
CORROSION PROTECTION	C1

PLACING REQUIREMENTS:

PLACING:
PLACE CONCRETE AS NEARLY AS PRACTICABLE TO ITS FINAL POSITION TO AVOID SEGREGATION.

DEBRIS:
REMOVE ALL DEBRIS FROM FORMS PRIOR TO PLACING CONCRETE.

CONSOLIDATION:
CONSOLIDATE CONCRETE BY SUITABLE MEANS. THOROUGHLY WORK CONCRETE AROUND EMBEDDED ITEMS AND INTO CORNERS OF FORMS.

REINFORCING BAR

MATERIAL REQUIREMENT:

REINFORCING BARS:
USE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, EXCEPT AS NOTED ON THE DRAWINGS.

FABRICATION AND PLACING REQUIREMENTS:

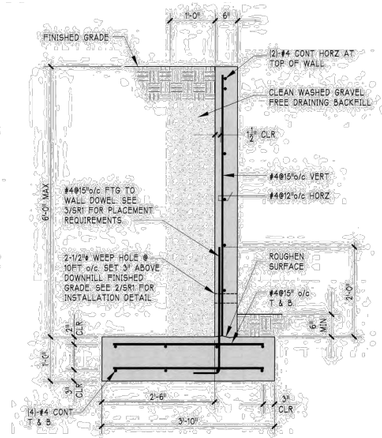
BENDING:
BARS SHALL BE BENT COLD. BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS NOTED OR SHOWN OTHERWISE OR AUTHORIZED BY THE ENGINEER.

CONCRETE COVER:
MINIMUM CONCRETE COVER FOR REINF. SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

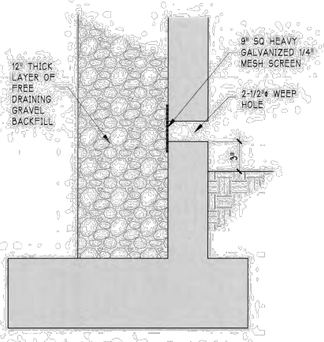
CONCRETE CAST AGAINST EARTH ——— 3"
CONCRETE CAST AGAINST FORMS AND EXPOSED TO EARTH ——— 1-1/2"

WET SETTINGS:
REINFORCEMENT ANCHOR BOLTS, OR ANY EMBEDDED ITEM WITHIN THE CONCRETE, MAY NOT BE SET INTO THE CONCRETE AFTER IT HAS BEEN POURED WITHIN THE FORMS.

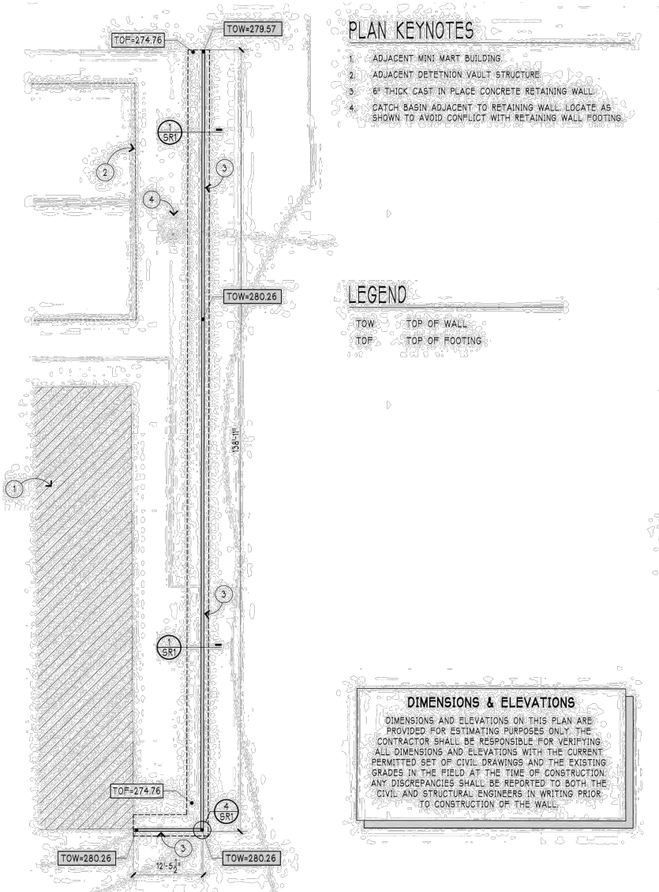
LAP SPLICES:
LAP ALL BARS 24" MIN UNLESS SHOWN OTHERWISE ON THESE DWGS.



1 SR1 KNEEWALL FTG DETAIL
SCALE 3/4"=1'-0"



2 SR1 TYP WEEP HOLE
SCALE 1"=1'-0"



RETAINING WALL SITE PLAN
SCALE 3/32" = 1'-0"

0 2' 4' 8' 16'

PLAN KEYNOTES

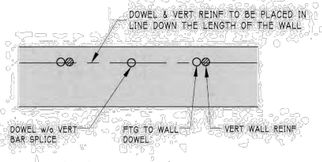
1. ADJACENT MINI MART BUILDING.
2. ADJACENT DETETNION VAULT STRUCTURE.
3. 6" THICK CAST IN PLACE CONCRETE RETAINING WALL.
4. CATCH BASIN ADJACENT TO RETAINING WALL. LOCATE AS SHOWN TO AVOID CONFLICT WITH RETAINING WALL FOOTING.

LEGEND

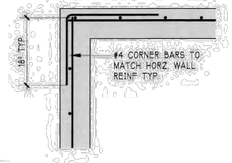
TOW	TOP OF WALL
TOF	TOP OF FOOTING

DIMENSIONS & ELEVATIONS

DIMENSIONS AND ELEVATIONS ON THIS PLAN ARE PROVIDED FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS WITH THE CURRENT PERMITTED SET OF CIVIL DRAWINGS AND THE EXISTING GRADES IN THE FIELD AT THE TIME OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO BOTH THE CIVIL AND STRUCTURAL ENGINEERS IN WRITING PRIOR TO CONSTRUCTION OF THE WALL.



3 SR1 TYP FTG DOWEL PLACEMENT DETAIL
SCALE 1"=1'-0"



4 SR1 TYP WALL CORNER REINF
SCALE 3/4"=1'-0"

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

NO.	DATE	REVISION DESCRIPTION	BY

STRUCTURAL NOTES RET WALL, SITE PLAN & TYPICAL DETAILS

GEOMETRICS ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PROJ. NO.	DSN. BY:
00-0000	TI
DATE: 02/29/2024	
SCALE: N.T.S.	
DRAWING NO. 14 OF 15	

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CROSSROADS CHEVRON

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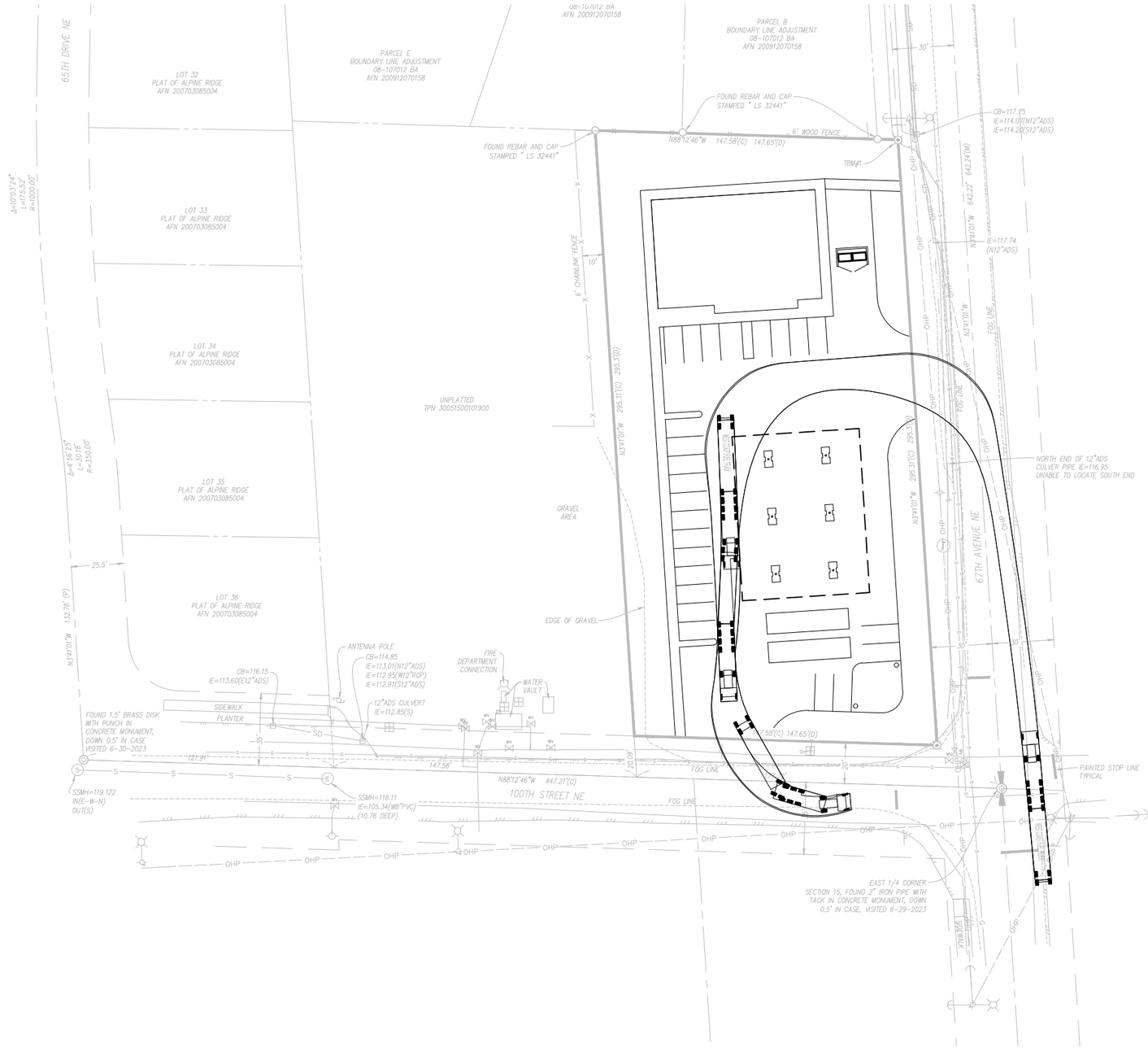

1"=30'-0" Scale: 30 0 30 60 Feet

CALL 48 HOURS
BEFORE YOU DIG
811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

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REVISION NO.	DATE	DESCRIPTION	BY

FIRE TRUCK (EFR)
ACCESS ROUTE

GEOMETRICS
ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd., Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15,
TOWNSHIP 30 NORTH, RANGE 05
EAST, MARYSVILLE, WS 98270

PROJ. NO.	DSN. BY:
00-0000	TI
DATE: 02/29/2024	
SCALE: 1" = 30'	
DRAWING NO. 15 OF 15	

COMMUNITY DEVELOPMENT DEPARTMENT
501 Delta Avenue ◆ Marysville, WA 98270 ◆ (360) 363-8000

March 11, 2024

Meydenbauer Group
John Hansen
12025 Willow Road
Redmond WA 98052

Re: Crossroads Chevron – *Complete Application*
PA24-006

Dear John,

The Community Development Department has reviewed the above referenced application and determined the application complete on March 11, 2024. Any additional information/items that are needed will be requested after all affected departments, local, state and federal agencies have had an opportunity to review the proposal.

If you have any questions regarding this application, please contact me at ahess@marysvillewa.gov, or by phone at 360-363-8215.

Sincerely,

Amy Hess

Amy Hess
Senior Planner

ecc: Chris Holland, Planning Manager

COMMUNITY DEVELOPMENT DEPARTMENT
501 Delta Avenue ◆ Marysville, WA 98270 ◆ (360) 363-8000

NOTICE OF APPLICATION

File Number: PA24-006

Project Title: Crossroads Chevron

Applicant: Meydenbauer Group

Project Contact: John Hansen
12025 Willows Road
Redmond WA 98052
john@meydenbauergroup.com

Project Location: 10008 67th Avenue NE

APN: 30051500101800

Date of Completeness: March 11, 2024

Scan to View Project Materials

NOTICE IS HEREBY GIVEN THAT AN APPLICATION WAS MADE FOR THE FOLLOWING PROPOSAL:

The applicant is proposing construction of a new 4,000 square foot convenience store and Chevron branded service station with canopy and six (6) fuel pumps. The applicant is seeking Commercial Site Plan approval and State Environmental Policy Act (SEPA) review and approval of proposal and associated improvements.

Existing Environmental Documents: SEPA Environmental Checklist, Geotechnical Report, Traffic Impact Analysis, Stormwater Drainage Report

Public Hearing: N/A

Public Comment Period: Written comments must be submitted to the contact person listed below by **4:30 PM on April 8, 2024**.

Document Availability: Application Materials

ANY PERSON HAS THE RIGHT TO RECEIVE NOTICE, PARTICIPATE IN ANY HEARINGS, REQUEST A COPY OF THE FINAL DECISION AND APPEAL THE DECISION AS PROVIDED BY LAW.

For project information or to become a party of record, please contact:
Amy Hess, Senior Planner
(360) 363-8215
ahess@marysvillewa.gov

THIS NOTICE IS NOT TO BE REMOVED CONCEALED OR DESTROYED

REQUEST FOR REVIEW

Community Development Department ◆ 501 Delta Avenue ◆ Marysville, WA 98270
Office Hours: Mon - Fri 8:00 AM - 4:30 PM ◆ Phone: (360) 363-8000

PROJECT INFORMATION					
File Number	PA24006	**Date Sent**	3/12/2024	**Please Return by**	4/2/2024
Project Title	Crossroads Chevron	**Related File Number**(s)	PreA23-004		
Project Description	Construction of a new 4,000 SF 24-hour Convenience Store, including six (6) fuel pump stations, and associated improvements.				

BACKGROUND SUMMARY									
Applicant	Meydenbauer Group, John Hansen								
Location	10008 67th Avenue NE			**APNs**	30051500101800				
Acreage	1.05 acres (45,738 SF)			**Section**	15	**Township**	30	**Range**	05
Comprehensive Plan	Neighborhood Business	**Zoning**	NB	**Shoreline Environment**	N/A				

REVIEWING AGENCIES

Marysville	Local Agencies & Districts	State & Federal	County	Other
☒ **Building**	☐ **Arlington Airport**	☐ **US Army Corps of Engineers**	☐ **Health District**	☐ **Olympic Pipeline**
☒ **Parks**	☐ **Arlington** (city)	☐ **BNSF**	☐ **Planning**	☐ **Puget Sound Energy**
☒ **Police**	☒ **Comcast**	☒ **DAHP**	☐ **Public Works - Land Development**	☒ **Stillaguamish Tribe**
☒ **PW – Development Services**	☐ **Community Transit**	☐ **DNR**	☐	☒ **Tulalip Tribes**
☒ **PW – Engineering**	☐ **Everett** (city)	☐ **DOE** (Bellevue)	☐	☐
☒ **PW – Operations**	☐ **Lake Stevens** (city)	☐ **DOE** (Floodplain)		☐
☒ **PW – Solid Waste**	☒ **Lake Stevens SD 4**	☐ **DOE** (Register)		
☒ **PW – Streets**	☐ **Lakewood SD 306**	☐ **DOE** (Shorelands)		
☒ **PW – Traffic Eng.**	☒ **Marysville Fire District**	☒ **WDFW**		
☒ **PW – Water Res.**	☐ **Marysville SD 25**	☐ **WSDOT**		
☐ **PW – WWTP**	☒ **PUD No. 1** (electric)	☐ **WUTC**		
	☒ **Ziply**			

PROJECT MANAGER

Name Amy Hess **Title** Senior Planner **Phone** 360.363.8215 **E-mail** ahess@marysvillewa.gov

The City of Marysville Community Development Department is reviewing this application and encourages other affected agencies, departments, community groups and municipalities to respond. Your comments will assist the City's evaluation of this application. Furthermore, you will become a Party of Record to this case if you submit a response with your name and address. We highly recommend that you send your comments on letterhead. Without a full name and address, you will not be considered a Party of Record. You may e-mail, fax or send via regular mail your comments to this project manager listed above.

If you have no comments, please check the box below, sign and return this form to the project manager.

☐ **NO COMMENTS** **Signature**: _____ **Date**: _____

☐ **ATTACHED** **Title**: _____ **Agency**: _____

Everett Daily Herald

Affidavit of Publication

State of Washington }
County of Snohomish } ss

Michael Gates being first duly sworn, upon oath deposes and says: that he/she is the legal representative of the Everett Daily Herald a daily newspaper. The said newspaper is a legal newspaper by order of the superior court in the county in which it is published and is now and has been for more than six months prior to the date of the first publication of the Notice hereinafter referred to, published in the English language continually as a daily newspaper in Snohomish County, Washington and is and always has been printed in whole or part in the Everett Daily Herald and is of general circulation in said County, and is a legal newspaper, in accordance with the Chapter 99 of the Laws of 1921, as amended by Chapter 213, Laws of 1941, and approved as a legal newspaper by order of the Superior Court of Snohomish County, State of Washington, by order dated June 16, 1941, and that the annexed is a true copy of EDH993040 PA24-006 as it was published in the regular and entire issue of said paper and not as a supplement form thereof for a period of 1 issue(s), such publication commencing on 03/14/2024 and ending on 03/14/2024 and that said newspaper was regularly distributed to its subscribers during all of said period.

The amount of the fee for such publication is $77.52.

Subscribed and sworn before me on this 18th day of March, 2024.

Linda Phillips
Notary Public
State of Washington
My Appointment Expires 8/29/2025
Commission Number 4117

Notary Public in and for the State of Washington.

COMM DEVEL - CITY OF MARYSVILLE | 88522148
JANIS LAMOUREUX

MARYSVILLE

CITY OF MARYSVILLE
COMMUNITY DEVELOPMENT DEPARTMENT
501 Delta Avenue • Marysville, WA 98270 • (360) 363-8000

NOTICE OF APPLICATION

File Number: PA24-006
Project Title: Crossroads Chevron
Applicant: Meydenbauer Group
Project Contact: John Hansen
12025 Willows Road
Redmond WA 98052
john@meydenbauergroup.com
Project Location: 10008 67th Avenue NE
APN: 30051500101800
Date of Completeness: March 11, 2024

NOTICE IS HEREBY GIVEN THAT AN APPLICATION WAS MADE FOR THE FOLLOWING PROPOSAL:

The applicant is proposing construction of a new 4,000 square foot convenience store and Chevron branded service station with canopy and six (6) fuel pumps. The applicant is seeking Commercial Site Plan approval and State Environmental Policy Act (SEPA) review and approval of proposal and associated improvements.

Existing Environmental Documents: SEPA Environmental Checklist, Geotechnical Report, Traffic Impact Analysis, Stormwater Drainage Report

Public Hearing: N/A

Public Comment Period: Written comments must be submitted to the contact person listed below by 4:30 PM on April 8, 2024.

Document Availability: Application Materials available at http://docs.marysvillewa.gov/ntcomnet/public/?folder=41927f4d

ANY PERSON HAS THE RIGHT TO RECEIVE NOTICE, PARTICIPATE IN ANY HEARINGS, REQUEST A COPY OF THE FINAL DECISION AND APPEAL THE DECISION AS PROVIDED BY LAW.

For project information or to become a party of record, please contact:
Amy Hess, Senior Planner
(360) 363-8215
ahess@marysvillewa.gov

Published: March 14, 2024. EDH993040

COMMUNITY DEVELOPMENT DEPARTMENT
501 Delta Avenue ◆ Marysville, WA 98270
(360) 363-8000

April 8, 2024

John Hansen
Meydenbauer Group
1025 Willow Road
Redmond WA 98052

Re: Crossroads Chevron – *Technical Review 1*
PA 24-006

Dear John,

After preliminary review of the above referenced proposal, the Planning Division has the following technical review comments:

General

1. Include File No. PA24-006 on all future site and landscape plan submittals.

2. Pursuant to MMC 22G.010.360(2), an application shall be forwarded to the hearing examiner for public hearing if … adverse comments are received from at least five persons or agencies during the comment period which are relevant to the decision criteria of Article IV of the same chapter, or state specific reasons why a hearing should be held. To date, 22 citizens have provided comments, therefore, this project shall be forwarded to the Hearing Examiner for public hearing.

3. Please see comments from Shane Whitney related to an Engineering Variance.

4. Many of the comments in the next section are repetitive of what was provided in the Pre-application comments but were not incorporated in to the formal application.

Site and Building Design

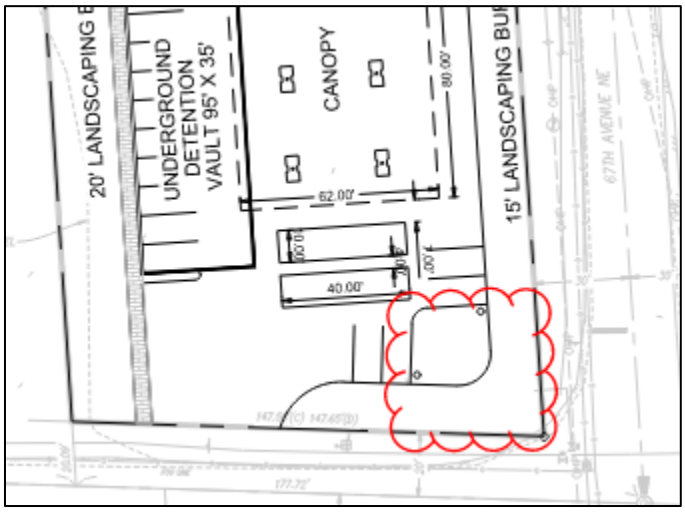
5. Please add impervious surface calculations to the site plan.

6. The project narrative did not include how the site layout, landscaping, lighting, and building design comply with design standards outlined in MMC 22C.020.250. Please provide a narrative of how the proposal is meeting these standards.

7. The site shall be designed to create an attractive street edge and accommodate pedestrian access. Commercial buildings must be oriented towards at least one street and are encouraged to orient towards both streets on a corner lot.

8. A three-foot masonry screen wall, earth berm, or combination shall be provided along all street frontages.

9. A pedestrian plaza, open space area, or architectural focal point should be added to the corner of 100th Street and 67th Avenue NE (see below). Pedestrian paths may also be required when the intersection improvement is determined.



10. A two-foot-plus border of textured paving should be provided:
    a. Around the footprint of the gasoline canopy;
    b. Between the pump area and the store entrance;
    c. Where the public sidewalk crosses the driveways; and
    d. In other pedestrian areas.

    This does not appear to have been provided in any of the required areas.

11. A minimum 5' raised pedestrian pathway shall be provided around the perimeter of the proposed convenience store. Please add detail to the civil construction plans.

12. Specially marked or paved walkways shall be provided from the pump island to the entrance of the convenience store. Such pedestrian pathways are required to be constructed with decorative concrete, clearly denoting the pedestrian pathway. Please add these to the site plan and provide detail on the civil construction plans.

13. A pedestrian connection is required to the sidewalk on 67th Avenue NE.

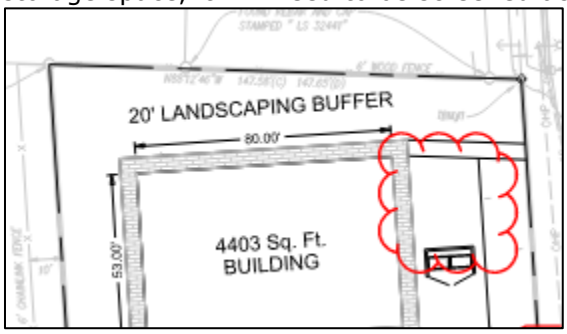
14. Refuse containers shall be screened with a six-foot masonry wall on three sides. Please provide details of enclosure on civil construction plans.

15. Assuming three employees as noted in the SEPA checklist, the total number of parking spaces required is 25. Please provide one additional parking stall to meet the minimum parking spaces required.

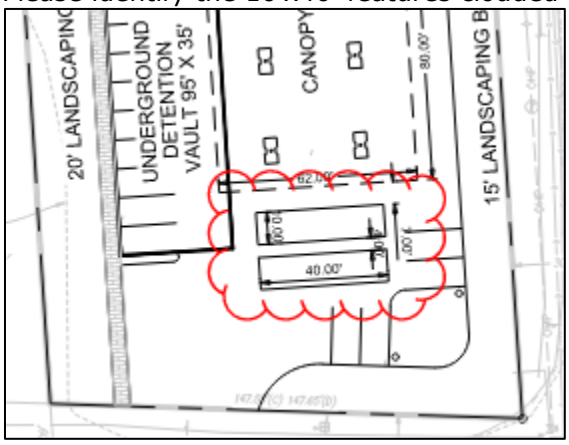
16. Bicycle parking is required, in accordance with MMC 22C.130.030. Five percent of the required auto parking spaces, or a minimum of 1 bicycle parking space, shall be provided.

17. On dead end aisles, aisles shall extend five feet beyond the last stall to provide adequate turnaround. The area clouded below will need to be extended to allow for turnaround.

18. What is the purpose of the area behind the proposed dumpster (clouded below)? If it is storage space, it will need to be screened accordingly.



19. Please identify the 10'x40' features clouded below.



20. No building elevations were submitted. Please note that the corporate design for the canopy and convenience store will not be acceptable. Gas stations and convenience stores shall meet the design standards in MMC 22C.020.265. The requirements were specifically identified in the pre-application comments, please refer to those for additional detail.

21. The proposed convenience store and fuel station canopy shall be required to comply with building design standards outlined in MMC 22C.020.250 and MMC 22C.020.265. Formal building design comments will be provided at the time of building permit submittal.

22. Please provide detail of how mechanical equipment will be screened in accordance with MMC 22C.020.340.

23. Is an air/water station proposed? If so, please depict on the site plan.

24. Prior to civil construction plan approval a parking lot illumination and photometric plan designed in accordance with MMC 22C.130.050(3)(d), shall be provided, demonstrating compliance with the following:

    a. 25' maximum height;

    b. Fixtures shall be full cut-off, dark sky rated, with lower fixtures preferable so as to maintain a human scale;

    c. Pedestrian scale lighting (light fixtures no taller than 15 feet) is encouraged in areas of pedestrian activity. Lighting shall enable pedestrian to identify a face 45 feet away in order to promote safety;

    d. Parking lot lighting shall be designed to provide security lighting to all parking spaces;

    e. Lighting shall be shielded in a manner that does not disturb residential uses or pose a hazard to passing traffic. Lighting should not be permitted to trespass onto adjacent private parcels nor shall light source (luminaire) be visible at the property line;

    f. Fixture design shall incorporate unique design features that coincide with the architectural design of the building(s). A copy of the manufacture's specification (cut sheets) shall be provided; and

    g. Also see MMC 22C.020.250(4)(d) for exterior lighting requirements.

Landscape Plan

25. Pursuant to MMC 22C.020.265, a three-foot wide strip of landscaping shall be provided along at least 50 percent of the buildings frontage. No landscaping is shown along any frontage of the building, please revise accordingly.

26. Street trees shall be planted along 100th Street NE and 67th Avenue NE in accordance with MMC 22C.120.140

27. All garbage collection, dumpsters, recycling areas, loading and outdoor storage or activity areas, shall be screened with an L2 buffer and six-foot masonry wall.

28. A six-foot sight obscuring fence is required on the north and west property boundaries. Please add this to the plans and include a detail of the proposed fence.

SEPA Checklist

29. Pursuant to WAC 197-11-800(2)(g) the proposal is only exempt for fuel storage tanks that have a total capacity of 10,000 gallons or less. If the proposed storage tanks exceed 10,000 gallons, the SEPA checklist shall be revised to include information specific to the tanks.

30. On page 4, item B.1.e., the purpose is listed as "…to build a single-family residential home." This is inconsistent with the actual proposal. Please provide a revised SEPA checklist with an accurate description of the proposal.

31. On page 8, item 4.e states no noxious and invasive species are on or near the site. Himalayan Blackberry was observed on and adjacent to the site during a staff site visit. Please review and revise this response accordingly.

32. On page 10, item 7.b.2 lists hours of construction as 7am to 11pm. Allowable hours for construction are 7am to 7pm.

33. On page 11, item 8.e lists the zoning as NB and R7200. The site is zoned Neighborhood Business (NB) only. R7200 is not a City zone and should be removed from the checklist.

34. On page 11, item 8.f lists the Comprehensive Plan zoning as residential. This is incorrect. The site has a Comprehensive Plan designation of Neighborhood Business, which is a commercial zone, not residential. Please revise.

35. On page 14, item 14.c does not include specific road and intersection improvements required. Please review/revises accordingly.

Traffic Impact Analysis

36. The TIA notes that the intersections of 67th Ave NE at 100th St NE and 67th Ave at 108th St NE are/will be failing, but no mitigation measures are included in the TIA and no improvements are shown on the preliminary civil plans. Please see comments from Engineering Services and Traffic Engineering on required improvements/analysis.

Enclosed are copies of comments received from other City departments, and reviewing agencies. After you have had an opportunity to review, please let me know what technical review comments you need clarification on. Once received I can set up a conference meeting with all of the applicable city and agency representatives. If you have any questions, please contact me at 360.363.8215, or by e-mail at ahess@marysvillewa.gov.

Sincerely,

Amy Hess

Senior Planner

cc: Haylie Miller, CD Director
Chris Holland, Planning Manager

MEMORANDUM

TO: Amy Hess – Senior Planner

FROM: Jesse Hannahs, P.E. – Traffic Engineering Manager

DATE: April 9, 2024

SUBJECT: PA 24-006 – Crossroads Gas Station

I have reviewed the Crossroads Gas Station Pre-application for the proposed development of 10008 67th Ave NE and have the following comments:

1) Traffic impact fees will be required from the City and depending on trip generation/distribution, may be required from the County and State.
    a. Traffic Impact Fee (TIF) calculation improvement projects upon or frontage to be constructed by development shall be allowed for credit against Traffic Impact Fees up to the maximum amount of development TIF including:
        i. 67th Ave NE (frontage improvements) from 88th ST NE to Northern City Limits
        ii. Intersection signalization of 67th Ave NE & 100th ST NE
        iii. Intersection signalization of 67th Ave NE & 108th ST NE
2) A Traffic Impact Analysis (TIA) will be required.
    a. Analysis of City intersections with 25 or greater PM Peak Hour development trips traversing through intersection shall be required. City intersections with less than 25 PM Peak Hour development trips, per TIA Guidelines, do not require analysis.
    b. The intersections of 67th Ave NE & 100th ST NE and 67th Ave NE & 108th ST NE do not meet LOS standards.
        i. While both intersections are included within the Traffic Impact Fee (TIF) Calculation, neither signalization project is included within the City's 6-year Transportation Improvement Plan, with GMA requiring that construction within 6 years by reasonably assumed. Therefore, mitigation of intersection LOS failure will be required of development.
            1. Mitigation measures may include signalization, compact roundabout, descriptive narrative of adherence to Guidelines/GMA or other mitigation/construction measure(s) evaluated and defined by the applicant for review and approval by the City.
3) New roadway construction and frontage improvements to existing roadway shall be required per Comp Plan.
    a. 67th Ave NE:

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PUBLIC WORKS

(360) 363-8100

Public Works
80 Columbia Avenue
Marysville, WA 98270

i. Three lane minor arterial with two-way left turn lane and 5' bike lanes, landscape strips, 5' sidewalks on both sides and street lighting.

b. 100th ST NE:
   i. Three lane minor arterial with two-way left turn lane and 5' bike lanes, 5' sidewalks on both sides, landscape strips and street lighting.

c. Intersection of 67th Ave NE & 100th ST NE
   i. Ultimate intersection shall be signalized thus adequate ROW for signal infrastructure shall be provided on NW corner.

4) Per EDDS 3-301, access management standards shall apply.
   a. Spacing of accesses shall be per EDDS.
   b. Signalization shall be assumed for purposes of access management standards at intersection of 100th ST NE & 67th Ave NE.
5) Per EDDS 3-506, street lighting will be required.
   a. Street Lighting upon all three lane arterials and other public roadways shall be PUD installed fiberglass pole installation type street lighting.
      i. Street lighting shall be designed as minor arterial utilizing 250 watt equivalent LED fixtures.
      ii. Spacing of fixtures should be approximately 180'-220'.
      iii. As part of civil construction approval proposed PUD street lighting locations shall be provided by the City for incorporation into the PUD site electrical plans.
      iv. Contact Eddie Haugen of Snohomish County PUD at (425) 783-8276 or wehaugen@snopud.com for more information regarding PUD design.
6) Signing and Channelization Plans shall be required as part of Civil Construction plans.

PUBLIC WORKS DEPARTMENT
80 Columbia Avenue ◆ Marysville, WA 98270
(360) 363-8100 ◆ (360) 651-5099 FAX

MEMORANDUM

To: Amy Hess, Senior Planner

From: Shane Whitney, Civil Plan Reviewer

RE: 67th Ave Fuel Station, File# PA24-006
New Convenience Store
10008 67th Ave NE & Parcel # 30051500101800

Date: 3/20/2024

The following comments are offered after review of the above referenced application.

1. **Existing utilities**:
    a. Sanitary sewer: The SS clean out across the way in 100th Street is shown on record drawing S427.
    b. Water: The 24 inch DI waterline fronting the parcel on 100th is shown on record drawing W653
    c. Storm: The storm line at the NE corner of the project is shown on record drawing RD272

2. Per MMC 14.03.250, utilities are to be extended along the street frontages of the proposed project.
    a. Water main will be required to be extended along the projects frontage of 67th Ave NE.
    b. Storm drainage will need to be provided for the widened sections of 67th Ave and 100th Street.

3. **Frontage Improvements:** Frontage improvements are required per MMC 12.02A.090 on all projects. Frontage improvements are described as curbs, gutters, and sidewalks; underground storm drainage facilities; patching the street from its preexisting edge to the new curb line; and overlayment of the existing public street to its centerline.
    a. 67th Ave NE is to be a 3 lane arterial, the design to be used is as shown in standard plan 3-201-004.
    b. 100th St NE is to be a 3 lane arterial, the design is also to be compliant with standard plan 3-201-004.

4. **Dedication Requirements:**
    a. For both 100th and 67th, a minimum half width of 35 feet of right-of-way is necessary. The supplied documents did not show any deeding that is to occur.
    b. Additional area may be necessary to accommodate the intersection improvements to allow for the required 35 foot radius.

5. **Access**:
    a. Section 3-301 of the EDDS details the arterial access standards. The Traffic Engineer has previously provided comment on this as well in the preapp.
    b. The spacing of the proposed access do not meet the standard as allowed in the EDDS section 3-301. To allow 2 accesses, an engineering variance will be required. The variance shall be required to be included in the next submittal. If an access is allowed onto 100th street, it would be limited to a right in and right out traffic movement.
    c. The minimum width of a commercial driveway is 24-feet and the maximum is 40-feet. A potential access onto 100th street would need to be configured in a right in and right out traffic movement.
    d. The vertical alignment of the driveway access will need to be compliant with standard plan 3-303-004 of the EDDS.

6. **Drainage:** All projects in the city of Marysville must comply with requirements stipulated under the MMC 14.15.040 and 14.15.050.
    a. Stormwater drainage: The city has adopted the 2019 Ecology Manual. The project will be required to meet all 9 minimum requirements. The following items will need to be addressed in a resubmittal prior to a preliminary approval.
        - The preliminary report will need to address the required frontage improvements that are listed above.
        - The project will be required to go through the feasibility criteria for BMP's as provided in list 2 of the Ecology manual.
        - A pre and post developed basin map for the site will be necessary.
    b. A geotechnical report was submitted. At time of grading permit submittal, a complete geotechnical report will be necessary.
    c. The maximum allowed impervious surface coverage for the Zoning designation is 75%.

Other Comments:

7. Survey control datum NAVD-88 and NAD-83 are required to be used. Civil construction plans will not be accepted in any other datum.

8. Trench restoration is to be completed in accordance with section 3-703 of the EDDS. A full lane or full street overlay may be required.

9. The onsite grading and placement of any retaining walls must be compliant with section 22D.050.030 of the MMC.

10. The location and design of the trash enclosure will need to be approved by our Sanitation group.

11. The sewer connection that is shown on the preliminary plans is not going to work. The extension as shown will not maintain adequate depth. The project will need to connect to the sewer cleanout that is across the street as noted in comment 1 a.

12. A right of way use permit for all work proposed within City right of way is required. Cost for the ROW permit is $648.00 fees must be paid before right of way permit issuance.

13. The applicant is responsible for identifying any existing well or septic systems on site or on adjacent properties. If there are any existing septic systems on site they need to be decommissioned based on the Snohomish Health District standards. If there are any wells on site they need to be decommissioned based on Department of Ecology standards.

14. Engineering construction plan review fees will be due prior to the start of the review of the plan submittal.
    Engineering construction plan review per MMC 22G.030.020:
    $976 plus a $2000 deposit are due for submittal of the grading permit.
    Review fee of $130 per hour will be charged against the deposit.

15. Engineering construction inspection fees will be due prior to issuance of the grading permit.
    Engineering construction inspection fees per MMC 22G.030.020:
    Inspection is charged at $130 per hour with a $2500 deposit required.

16. **All civil construction plan submittals are to be routed directly to Shane Whitney**, Civil Plan Reviewer. The first *civil construction* plan submittal is to consist of a completed grading permit application, a plan set, a copy of the drainage report, and a copy of the geotechnical report. **Once the documents are ready to be submitted, we will provide you a link to where the materials can be uploaded to.**
    a. Review timing:
        i. First review = 5 weeks
        ii. Second review = 3 weeks
        iii. Third review = 3 weeks
        iv. Subsequent reviews will be 3 weeks.

17. Please be advised these comments are in reference to specific items and do not imply a full review of the proposed application. Additional comments which may change the design requirements will be provided during the civil construction plan review process.

If you have additional questions regarding the above comments, please contact me at swhitney@marysvillewa.gov or at (360) 363-8227.

cc: Josh King, PE, Engineering Services Manager

MEMORANDUM

TO: Amy Hess, Senior Planner

FROM: Brad Zahnow, Development Services Technician

DATE: April 8, 2024

SUBJECT: PA24-006 Crossroads Chevron
10008 67th Avenue NE
APN: 30051500101800

Utility Capital Improvement Fees
Capital utility fees are assessed in accordance with the attached rate sheet. The "City" rates will be applicable to this project.

Recovery (Latecomer) Fees
No recovery fees are applicable to this project.

Utility Main Fees
Main fees for an existing 12" water main within 100th St NE may be assessed at $2.25/ft. of frontage if the project connects to this main.

ULID/LID Fees
No ULID or LID fees are applicable to this project.

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(360) 363-8100

Public Works
80 Columbia Avenue
Marysville, WA 98270

MARYSVILLE
PUBLIC WORKS

EST. 1891 MARYSVILLE WASHINGTON

UTILITY CAPITAL IMPROVEMENT CHARGES - 2024

MMC Section 14.07.010 - Marysville Ord. Nos. 2607 & 2670
Community Development Department • 501 Delta Avenue • Marysville, WA 98270
(360) 363-8100 • Office Hours: Monday - Friday 8:00 AM - 4:30 PM

RESIDENTIAL UNITS

Type of Connection		Water		Sewer	
		City	Outside City	City	Outside City
Residential DU*	Eff 1/1/06	$4,750/du	$5,490/du	$4,490/du	$4,890/du
Inspection		Plumb permit varies	Plumb permit	$100	$100
Admin/Filing Fee		$20	$20	$20	$20

*Dwelling unit includes single-family, multi-unit housing, apts, condos, manufactured homes and mobile homes. Main fees or latecomer fees may apply, depending on location.

Type of Connection		Water		Sewer	
		City	Outside City	City	Outside City
Hotel/Motel	Eff 1/1/06	$1,816/rm	$2,099/rm	$1,717/rm	$1,870/rm
RV Park Pads	Eff 1/1/06	$2,375/pad	$2,745/pad	$2,245/pad	$2,445/pad

COMMERCIAL / INDUSTRIAL

WATER

Gallons per Minute	City	Outside City
0 – 2000 gpm	$1.64 / square foot (bldg)	$1.99 / square foot (bldg)
2001 – 4000 gpm	$2.40 / sf	$2.87 / sf
4001+ gpm	$3.16 / sf	$3.80 / sf
Warehouse/Storage (Ord No. 3026, Eff 7/15/16)	$0.48 / sf	$0.65 / sf
Warehouse/Storage with fire sprinklers	$0.36 / sf	$0.49 / sf

SEWER

Type of Use	City	Outside City
Retail Sales/Manufacturing/ Churches/Schools/Day Care	$1.03 / square foot (bldg)	$1.24 / square foot (bldg)
Offices/Medical/Dental/Nursing Homes and all other uses not listed	$1.67 / sf	$2.00 / sf
Warehouses/Storage	$0.49 / sf	$0.65 / sf
Restaurants/Taverns/Espresso	$2.38 / sf	$2.86 / sf
Schools without kitchens	$0.77 / sf	$0.93 / sf

SURFACE WATER / STORM DRAINAGE

Surface water capital fee – Eff 1/1/11	Residential - $95/du	Commercial - $95/3200sf of imp surface

METER SERVICES

Meter Size	Tapping Fee	Meter Drop Fee
5/8" x 3/4"	$1,050	$500
3/4" x 3/4"	$1,075	$525
1"	$1,200	$560
1.5"	$1,600	$750
2"	$1,900 min	$850
3", 4", 6", 8"	Time and Material - $3,500 min + $1K/inch	Included in tapping fee

Fire sprinkler systems may require a larger meter for adequate fire flow – consult your designer.

All non-residential water services, including fire sprinkler systems and irrigation systems, require a backflow prevention assembly to be installed immediately downstream of the water meter. Contact the city's cross connection control specialist at (360) 363-8100 to determine the type of assembly required.

(360) 363-8100

Public Works
80 Columbia Avenue
Marysville, WA 98270

MARYSVILLE FIRE DISTRICT
REGIONAL FIRE AUTHORITY
Fire Marshal's Office
1635 Grove St. Marysville, WA 98270 - (360) 363-8500
MFInspectors@MFDRFA.org - www.marysvillefiredistrict.org

To: Amy Hess, Senior Planner
From: Brian Merkley, Deputy Fire Marshal
Date: March 26, 2024
Subject: PA24-006 ~ Crossroads Chevron ~ 10008 67th Ave NE

I have completed a review of the plans for this project proposing construction of a 4,000 sf convenience store as well as a canopy covering 6 fuel dispensers.

Please see below for comments and requirements related to fire code compliance:

1. **GENERAL INFORMATION:**
   a. The project shall comply with current fire code requirements (2021 IFC) including WA State and local City of Marysville amendments to the fire code, city design standards, and all applicable NFPA standards, including IFC Chapter 33 and NFPA 241 construction codes.
   b. Fire marshal approval of fire access and fire hydrant/water supply systems is required as part of the civil construction plan review and approval process.
   c. Fire inspections can be scheduled via the permit portal with the City of Marysville: https://permits.marysvillewa.gov/Search/permit.aspx. Allow two business days for scheduling and have approved plans and permits onsite. Inspections are required for acceptance testing of fire systems and for final permit approvals. Systems shall be pretested and in good working order prior to scheduling acceptance testing.

2. **WATER RELATED:**
   a. It is the developer's responsibility to see that adequate water for fire protection is attainable. The minimum required fire flow is determined using IFC Appendix B, and depends upon building sizes, construction types, and sprinkler systems. Proof of fire flow will be required.
   b. Documentation/certification of available water supplies for providing the required fire flows is required for final approval of the water system for this project and prior to building construction. Check with the city Public Works Dept. for water system information. *No information provided regarding fire flow.*
   c. Fire hydrants shall comply with city Water Design Standard 2-060 Hydrants, including 5" Storz fittings, with blue reflective hydrant markers to be provided in the roadways, located four inches off the centerline on the hydrant side of the road. *A hydrant will be required at the site to comply with commercial spacing requirements. Along 67th Ave NE is preferred.*
   d. Fire hydrant coverage shall be provided along all roads and at intersections. "Fire hydrants meeting city specifications shall be installed on all extensions of the city water system at the time such extensions are constructed. All hydrants shall be

owned and maintained by the city. The location and frequency of fire hydrants shall be specified by the city utility department and fire department; provided, that fire hydrants in commercial and industrial zones shall be spaced not more than 300 feet apart" (MMC 14.03.050). The location of fire hydrants requires fire marshal approval on civil construction plans.

2. **ACCESS RELATED**:
    a. An adequate access route for fire apparatus must be in service prior to any building construction.
    b. Access for firefighting operations along all sides of all buildings is required. A minimum 10' wide access is required for commercial buildings. All parts of building exteriors should be accessible for firefighting by an approved route around the building, and be within 150 feet of a minimum 20' wide fire apparatus access (within 200' for sprinklered buildings).
    c. A minimum 20 feet wide fire apparatus access road is required. A minimum 26 feet wide fire apparatus access is required in the immediate vicinity of any building more than 30 feet in height for ladder truck operations, and within 20 feet on both sides of fire hydrants.
    d. "**NO PARKING - FIRE LANE**" markings are required anywhere the potential exists for vehicle parking that impedes emergency access.
    e. The city address committee will determine road names and address numbers for the lots.
    f. If vehicle impact protection is deemed required for protection of any equipment it shall comply with IFC Section 312. Guard posts (bollards) are typically required for protection of gas piping, electrical equipment, fire protection piping and hydrants located where they could be subject to vehicular damage.

3. **FUEL DISPENSING REQUIREMENTS:**
    a. Construction documents shall be submitted for review and approval prior to the installation of fuel-dispensing facilities. Construction documents and supporting data shall be submitted with each application for a permit and in such form and detail as required by the fire code official to ascertain whether the work indicated and described is in accordance with the requirements of this code. Construction documents shall be drawn to scale upon suitable material. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant rules and regulations (IFC 105.4).
    b. All work shall comply with manufacturer's specifications and instructions, and fire code requirements including 2021 IFC Chapter 23 for motor fuel dispensing facilities, 2021 IFC Chapter 57 for flammable and combustible liquids, and most recent NFPA 30A standard for motor fuel dispensing facilities. Full compliance must be confirmed by inspections.
    c. Location of dispensing devices shall comply with IFC 2303.1
    d. Dispensing devices shall be located as follows:
        i. Ten feet (3048 mm) or more from lot lines.

ii. Ten feet (3048 mm) or more from buildings having combustible exterior wall surfaces or buildings having noncombustible exterior wall surfaces that are not part of a 1-hour fire-resistance-rated assembly or buildings having combustible overhangs.
Exception: Canopies constructed in accordance with the International Building Code providing weather protection for the fuel islands.
iii. Such that all portions of the vehicle being fueled will be on the premises of the motor fuel-dispensing facility.
iv. Such that the nozzle, when the hose is fully extended, will not reach within 5 feet (1524 mm) of building openings.
v. Twenty feet (6096 mm) or more from fixed sources of ignition.
vi. Such that fuel dispensing is in view of the attendant at attended self-service motor fuel-dispensing facilities as required by Section 2304.2.4

e. Provide an emergency pump shutoff switch located within 100 feet of, but not less than 20 feet from, all fuel dispensers and labeled: EMERGENCY PUMP SHUT OFF SWITCH. Signs shall be provided in approved locations (IFC Section 2303.2).
f. Portable fire extinguishers with minimum 2A-20B-C rating are required in approved locations. They shall be located within 75 feet of the dispensers and tank fill openings (IFC Section 2305.5).
g. Provide warning signage per IFC 2305.6 within sight of each dispenser.
h. Electrical equipment, dispensers, hoses, nozzles and pumps used in fuel dispensing systems shall be listed (IFC Section 2306.7.1). The information submitted does not show if the items are all listed. These items shall all be labeled as listed.
i. Dispenser emergency shutoff valves shall be installed at the base of each dispenser and tested in accordance with IFC Section 2306.7.4.
j. Dispenser hose shall have breakaway device, and be no longer than 18’ max (IFC 2306.7.5).
k. Fuel delivery nozzles shall comply with IFC 2306.7.6 for latch-open and automatic-closing features.
l. Tank vent pipe outlets shall comply with IFC 5704.2.7.3.3
m. Vent pipe outlets for tanks storing Class I, II or IIIA liquids shall be located such that the vapors are released at a safe point outside of buildings and not less than 12 feet (3658 mm) above the finished ground level. Vapors shall be discharged upward or horizontally away from adjacent walls to assist in vapor dispersion. Vent outlets shall be located such that flammable vapors will not be trapped by eaves or other obstructions and shall be at least 5 feet (1524 mm) from building openings.
n. Final approval of installation is subject to fire inspection and field verification of compliance to approved plans and any required revisions.

Amy Hess

From: SPW-Contact.pwCMS <Contact.pwCMS@snoco.org>
Sent: Tuesday, April 2, 2024 4:24 PM
To: Amy Hess
Subject: [External!] SNOCO Comments RE: Request for Review - Crossroads Chevron (PA24-006)

[CAUTION:] This email originated from outside the City of Marysville. **Do not click links or open attachments** unless you recognize the sender and know the content is safe. Contact helpdesk if you have any concerns or questions.

Hi Amy,

I reviewed the TIA for this development but did not find any County mitigation offer forms to review. Would it be possible for this development to submit and fill out the mitigation offer forms so that the County can sign/date and send the forms back?

Thank you,

Caleb Duhnke | *Engineer II*
Snohomish County Public Works | Transportation and Environmental Services
3000 Rockefeller Ave. M/S 607 | Everett, WA 98201
Caleb.Duhnke@co.snohomish.wa.us | 425.312.0920
he/him/his

NOTICE: All emails, and attachments, sent to and from Snohomish County are public records and may be subject to disclosure pursuant to the Public Records Act (RCW 42.56)

-----Original Appointment-----
From: Amy Hess <ahess@marysvillewa.gov>
Sent: Tuesday, March 12, 2024 8:44 AM
To: Mike Snook; Tom Maloney; Brian Merkley; Don McGhee; Jesse Hannahs; jbirchman; Danny Hagen; meyer; Joshua King; Kacey Simon; Shane Whitney; Kim Bryant; Kristy Beedle; Brad Zahnow; Jason Crain; Ryan Carney; Billy Gilbert; Wicklund, Mary; cstevens; Todd Gray; Nance, Rob; stephanie.jolivette@dahp.wa.gov; DFW R4Cplanning; Doug Gresham; Chris Holland; Janis Lamoureux; Ryan Keefe; Tim King; Pretreatment; Jeff Cobb; Elenga, Maureen (DAHP); SPW-Contact.pwCMS
Subject: Request for Review - Crossroads Chevron (PA24-006)
When: Tuesday, April 2, 2024 12:00 AM to Wednesday, April 3, 2024 12:00 AM (UTC-08:00) Pacific Time (US & Canada).
Where: N/A Request for Review

EST. 1891
MARYSVILLE
WASHINGTON

THIS IS NOT A MEETING INVITE – THIS IS A REQUEST FOR REVIEW (RFR) WITH COMMENTS REQUEST RETURNED BY 4.2.2024.	
File Number:	PA24-006

Project Title:	Crossroads Chevron
Project Description:	Construction of a new apprx. 4,000 SF 24-hour Convenience Store, including six (6) fuel and associated improvements.
Applicant/Contact:	Meydenbauer Group, John Hansen
Project Location:	10008 67th Avenue NE
APNs:	30051500101800
Application Materials:	Crossroads Chevron
Please return comments via e-mail to ahess@marysvillewa.gov on or before ***April 2, 2024.***	

COMMUNITY DEVELOPMENT DEPARTMENT
501 Delta Ave Marysville, WA 98270

MEMORANDUM

Date: **March 21, 2024** **PA24-006**

To: **Amy Hess, Senior Planner**

From: **Michael Snook, Building Official**

Re: **Project Name:** Crossroads Chevron
Applicant: Meydenbauer Group, John Hansen
Proposal: Construction of a new approximately 4,000 SF 24-hour Convenience Store, including six (6) fuel pump stations, and associated improvements.
Address: 10008 67th Avenue NE

In response to your request for review of the above project. Please see requirements below;

1. Applicant shall comply with any and or all provisions the 2021 Edition of the International Building, Residential, Mechanical, 2021 Uniform Plumbing Codes, and current Washington State Amendments.

2. All plans and permit applications will be required to be submitted electronically as part of their submittal process. One (1) complete set of building plans, structural calculations, and 2021 Washington State Energy Code work sheets.

3. Contact our office if you have questions in regards to permit applications, checklists and/or handouts that you or your design team will be preparing plans for on your project.

4. If any demolition of any structures is proposed, and you are unsure if permit/s will be required for the removal of any existing structures. Please contact the Building Division at 360-363-8100, to ask any specific questions. An asbestos report will be required for each demo permit.

5. Separate permits will be required for any proposed rockeries or underground storm vaults. One (1) complete set of building plans, structural calculations, site plan, and Geotech Report are to be submitted for review.

6. A grading permit will be required. A Geotechnical report shall be submitted to the City for this project. This is to be an in-depth report to address the following:

    - Soil Classification
    - Required Drainage Systems
    - Soil Compaction Requirements
    - Type of Footings, Foundations, and Slabs Allowed
    - Erosion Control Requirements
    - Retaining Walls
    - Fill and Grade
    - Final Grade

Please provide the below information in regards to this overall project;

1. The building structure will be required to be designed under the 2021 IBC, Chapter 16, and Structural Design Requirements. The seismic zone criteria is to be established under the guidelines of a Washington State Licensed Architect and/or Structural Engineer.

2. Please provide scaled floor plans with square footage.

3. Show on the plans the type of building materials proposed, and if required, what type of fire-resistant construction will be required.

4. Site plan is to show the distance from the proposed structure to the property lines, from all sides of the building.

5. A Fire Sprinkler system will be required. The applicant is to coordinate this requirement with the Fire Marshal's Office.

6. All Electrical installations are to be permitted, inspected and approved through the City. The current code is the 2023 NEC. A separate application, plans, and plan review will be required.

7. Special Inspection will be required. The list of the type of inspections shall be indicated on the plans by the Engineer of Record. The owner is to notify the City of the registered special inspection agency prior to permit issuance.

Building application for plan review will be approximately 4-6 weeks for first-time plan review comments.

We look forward to your project coming to our City!

If I may be of any further assistance, please feel free to contact me.

Michael Snook, Building Official, 360-363-8210 or msnook@marysvillewa.gov during office hours 7:30 am – 4:00 pm, Monday through Friday.

SNOHOMISH COUNTY PUD
PUBLIC UTILITY DISTRICT NO. 1

Providing quality water, power, and service at a competitive price that our customers value

March 19, 2024

Amy Hess
City of Lake Stevens
P. O. Box 257
Lake Stevens. WA 98259

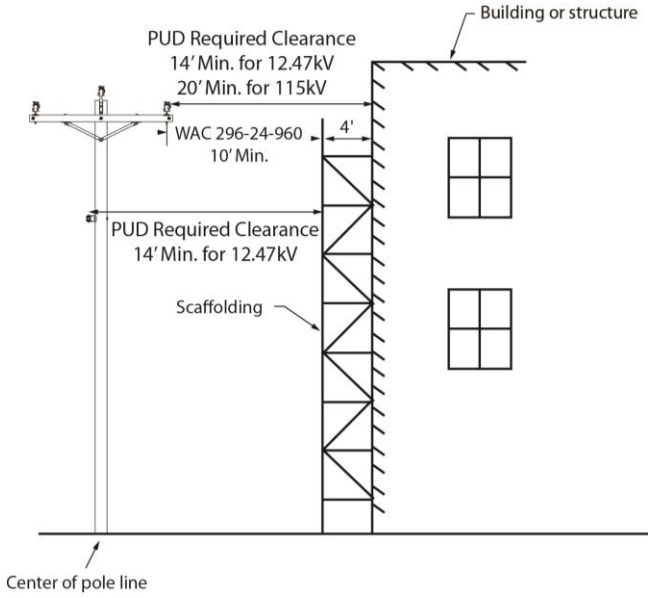
Dear Ms. Hess:

Reference No.: PA24 006 Crossroads Chevron

District DR Number: 24-10-036

The District presently has enough electric system capacity to serve the proposed development. However, the existing District facilities in the local area may require upgrading. Cost of any work, new or upgrade, to existing facilities that is required to connect this proposed development to the District electric system shall be in accordance with the applicable District policy. Please include any required utility work in the scope of all applicable land use/development/stormwater permits.

The developer will be required to supply the District with suitable locations/easements upon its property for any electrical facilities that must be installed to serve the proposed development. It is unlikely that easements will be granted on District-owned property, or consents granted within District transmission line corridors.



Please be advised that per WAC 296-24-960 the minimum worker safety clearance from any District distribution conductor is 10 feet. **Therefore, the District requires a minimum 14-foot clearance from any structure to accommodate workers, scaffolding, and ladders. Minimum worker safety clearance from 115kV transmission wires is 20 feet.**

There are likely no conflicts with transmission facilities. There are existing three-phase power lines and a pole at the northeast property corner with no obvious conflicts. Please work with a local Everett office Engineering Tech for power service to the project. Any relocation, removal or undergrounding of District facilities to accommodate this project and the worker safety clearances shall be at the expense of the project developer and must be coordinated with the PUD in advance of final design.

Please be aware that if your project is being reviewed by Snohomish County and there are critical areas or buffers within your project as defined by Snohomish County in SCC 30.62A.300, you may be required to do a critical-area study. Any utility work that will increase the utility footprint such as

installation, extension, or construction, is subject to these standards and requirements. New utility construction and installation is only allowed within critical areas or buffers when no alternative location exists and when you mitigate any impacts to the area.

Snohomish County may provide critical-area services on a case-by-case basis and has listed its fee structure under SCC 30.86.525. Snohomish PUD requires that, prior to applying for electrical service from the PUD, you address any critical-area considerations and obtain the appropriate approvals to proceed with your project.

Please contact the District prior to design of the proposed project. For information about specific electric service requirements, please call the District's Everett office at 425-783-8272 to contact an Engineering Tech.

Sincerely,

Mary Wicklund *for*

Mark Flury, Senior Manager
Transmission & Distribution System
Operations & Engineering

Cc: John Hansen – john@meydenbauergroup.com

MARYSVILLE
PUBLIC WORKS

MEMORANDUM

TO: Amy Hess, Senior Planner

FROM: Jeff Cobb, WWTP Operations Lead

DATE: March 29, 2024

SUBJECT: Crossroads Chevron – PA24006

ADDRESS - Project Location: 10008 67th Avenue NE, Marysville

In response to the request for review of the above mentioned project. The following comments, conditions and requirements are to be completed.

- When used for fueling stations an Oil Stop valves must be placed in a manhole or other containment device prior to the Coalescing Plate Separator.

- Install a Coalescing Plate Oil/Water Separator. All drains plumbed to the Coalescing Plate Separator must be under a canopy cover or inside of the building. **MMC 14.20.130**

- A detailed plumbing plans will need to be submitted in order to determine all the pretreatment requirements for this site. If the facility is preparing food that may introduce fats, oil and grease into the City of Marysville's sanitary sewer system, a grease interceptor will need to be installed. **MMC 14.20.150**

  All wastewater sanitary sewer plumbing is subject to **MMC 14.20 Pretreatment Requirements** and **City of Marysville Engineering Design Standards.**

Jeff Cobb, WWTP Operations Lead
360-363-8126 Office
425-754-6919 Cell
jcobb@marysvillewa.gov

(360) 363-8100

Public Works
80 Columbia Avenue
Marysville, WA 98270

MEMORANDUM

TO: Amy Hess, Senior Planner

FROM: Ryan Carney, Surface Water Inspector

DATE: 3/26/2024

SUBJECT: PA24-006 Crossroad Chevron

1. For commercial and multifamily projects triggering minimum requirements #6 Runoff Treatment and #7 Flow Control will be required to record a covenant/easement for all of the facilities that will become privately owned and maintained (attached). A draft should be submitted with Civil Plan review documents. An online copy of this form can be found by visiting the City web site: http://www.marysvillewa.gov/96/Community-Development then clicking on “Permit applications, forms and fees” then “Engineering Services.”

2. Please include stormwater facility locations and access points (manholes and grates) on the landscape plans.

If you have questions regarding these comments, please contact me at 360-363-8140 or rcarney@marysvillewa.gov.

cc: Nate Dickey, Storm/Sewer Supervisor

MARYSVILLE
PUBLIC WORKS

(360) 363-8100

Public Works
80 Columbia Avenue
Marysville, WA 98270

Stormwater Covenant and Easement

Community Development Department 80 Columbia Avenue Marysville, WA 98270

(360) 363 -8100 Phone (360) 651-5099 FAX Office Hours: Monday – Friday 7:30 AM -4:00 PM

Instructions Page

For the Developer:

Does your Project trigger minimum requirements #6 Runoff Treatment, or #7 Flow Control AND the facility(ies) will be on private property?

If "no" then this covenant does not need to be recorded.

Otherwise, please complete the enclosed documents. The draft document should be submitted for review with the other civil plan documents. It does not need signatures at that time. Exhibit B-Facilities Maintenance Plan should include a map showing where the storm water features are located on the property and describe the maintenance requirements. Once the infrastructure is built, review the document. If construction altered the stormwater utility layout update the appropriate information. The documents must be signed by all parties with an ownership interest in the property (include additional signature blocks and notary acknowledgement forms as necessary). Have the final document signatures notarized. Record before final occupancy is issued.

Recording notes:

- Do not write within the one-inch border
- Type or print legibly and in an easily readable font
- Print documents single sided and provide original copies with original signatures

When Recorded, Return to:

City of Marysville
Community Development
80 Columbia Ave
Marysville, WA 98270

Stormwater Covenant and Easement
(MMC 14.15.155)

DOCUMENT TITLE: *Project Name* Stormwater Covenant and Easement
Grantor: *Property Owner Name*
Grantee: CITY OF MARYSVILLE, a Municipal Corporation
Legal Description (abbreviated):
Assessor's Parcel(s):
Address:
Reference Number(s):
City of Marysville Project No: City of Marysville Building Permit No:
****Note**** The Auditor/Recorder will rely on the information provided on this form. City staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.

Stormwater Covenant and Easement
(MMC 14.15.155)

This Stormwater Covenant and Easement (the "Agreement") is executed in favor of the City of Marysville (the "City") by the undersigned owner(s) (the "Grantor") of the following described real property situated in the City of Marysville, Snohomish County, State of Washington (the "Property") (insert complete legal description):

(attach Exhibit A if necessary to fit full legal description)

WHEREAS, pursuant to Marysville Municipal Code Chapter 14.15, as may be hereafter amended, a condition of developing the Property requires that it have adequate stormwater drainage; and

WHEREAS, the Grantor has installed a private storm drainage system for the Property; and

WHEREAS, such a private storm drainage system will require ongoing maintenance as detailed in the approved Facility Maintenance Plan to ensure it operates as designed;

WHEREAS, the private storm drainage system includes the following specified drainage control facilities, which are documented in the drainage control plan drawing(s), as amended by record drawing(s) on file with the City of Marysville. The following runoff treatment or flow control facilities are onsite:

	Detention or Infiltration Pond		BMP T8.20 Sand Filter vault
	Detention or Infiltration Vault		BMP T8.30 Linear Sand Filter
	BMP T5.15 Permeable Pavements		BMP T8.40 Media Filter Drain
	Detention Tank/Pipes		BMP T9.10 Basic Biofiltration Swale
	BMP T5.16 Tree Retention and Tree Planting		BMP T9.20 Wet Biofiltration Swale
	BMP T5.17 Vegetated Roofs		BMP T9.30 Continuous Inflow biofiltration Swale
	BMP T5.20 Rainwater Harvesting		BMP T9.40 Basic Filter Strip
	BMP T5.30 Full Dispersion area		BMP T10.10 Wetponds-Basic and Large
	BMP T6.10 Presettling Basin		BMP T10.20 Wetvaults
	BMP T7.10 Infiltration Basins		BMP T10.30 Stormwater Treatment Wetlands
	BMP T7.20 Infiltration trenches		BMP T10.40 Combined Detention and Wetpool Facilities
	BMP T7.30 Bioretention Cells, Swales and Planter Boxes		BMP T11.10 API (Baffle type) Separator bay
	BMP T7.40: Compost-amended Vegetated Filter Strips (CAVFS)		BMP T11.11 Coalescing Plate (CP) Separator Bay

	BMP T8.10 Basic Sand Filter basin		Ecology approved Emerging Technology Manufacturer: Device Name:
	BMP T8.11 Large Sand Filter basin		

Now, therefore, the Grantor, on behalf of Grantor and Grantor's heirs, successors, and assigns, agrees to the following and hereby creates a covenant running with the land that shall be binding upon all parties and their heirs, successors, and assigns forever:

(1) The Grantor, on behalf of the Grantor and the Grantor's heirs, successors, and assigns, agrees to and shall:

(a) inspect and maintain the above described drainage control facilities in accordance with the provisions of Marysville Municipal Code (MMC) Title 14, the approved Facility Maintenance Plan (attached hereto as Exhibit B and incorporated by this reference), and any other provisions applicable to the facilities, as now and hereafter in effect;

(b) implement the terms of the drainage control plan required for development; and

(c) inform all future purchasers, heirs, successors, and assigns of the existence of the drainage control facilities and other elements of the drainage control plan and the limitations of the drainage control facilities.

(2) The Grantor, on behalf of the Grantor and the Grantor's heirs, successors, and assigns, hereby grants permission for authorized representatives of the City of Marysville to enter onto the Property for inspection, monitoring, correction, or abatement of conditions related to the Property's drainage control plan, drainage control facilities, MMC Title 14, or any other MMC provision applicable to drainage control, as now and hereafter in effect.

(3) If the private storm drainage system is not maintained in accordance with the approved or record drawing design, the Grantor, on behalf of the Grantor and the Grantor's heirs, successors, and assigns grants the City the right to inspect and repair the system and assess reasonable costs for the work that may be charged against the Property, the Property owner, or any beneficiary.

(4) The Grantor, on behalf of the Grantor and the Grantor's heirs, successors, and assigns:

(a) Agrees and acknowledges that the City is not responsible for the adequacy or performance of the drainage control plan or the drainage control facilities;

(b) Agrees to accept any and all risks of harm, loss, injury, or damage related to the drainage control plan or the drainage control facilities; and

(c) Hereby waives any right to assert any and all present and future claims against the City, whether known or unknown, for any harm, loss, injury, or damage occurring either on or off the Property, related to the drainage control plan, the drainage control facilities, or drainage

or erosion on the Property, except only for such harm, loss, injury, or damage that directly results from the sole negligence of the City.

(5) This Agreement shall be recorded in the real estate records of the Auditor's Office of Snohomish County, Washington. If any provision of this Agreement is held invalid, the remainder of the Agreement is not affected.

(6) The obligations of the Grantor and each of the Grantor's heirs, successors, and assigns under this Agreement shall terminate when that person sells, devises, or transfers the Property, or his or her interest therein, unless the obligation arises out of a claim of negligence or intentional act of that person.

Now, therefore, to this end, the Grantor, on behalf of the Grantor and the Grantor's heirs, successors, and assigns, hereby grants a perpetual easement to the City of Marysville and its authorized representatives to enter the Property, inspect the private storm drainage system, and make necessary repairs, with any expenses incurred being chargeable against the Property, the Property owner, and any beneficiary.

By: _____ Date: _____

Type signer's name here, Type signer's title or affiliation

Type company name here

Type address here

Type City, State, Zip here

By: _____ Date: _____

Type signer's name here, Type signer's title or affiliation

Type company name here

Type address here

Type City, State, Zip here

ACKNOWLEDGEMENT

(Individual)

STATE OF WASHINGTON)

)ss.

COUNTY OF SNOHOMISH)

I certify that I know or have satisfactory evidence that _____

_____ is the person who appeared before me, and said person acknowledged that he/she signed this instrument and acknowledged it to be his/her free and voluntary act for the uses and purposes mentioned in the instrument.

DATED this _____ day of _____, 20_____.

_____

_____

(Legibly print name of notary)

NOTARY PUBLIC in and for the State of

Washington, residing at _____

My commission expires _____

(Entity)

STATE OF WASHINGTON)

)ss.

COUNTY OF SNOHOMISH)

I certify that I know or have satisfactory evidence that _____

_____ is the person who appeared before me, and said person acknowledged that he/she signed this instrument, on oath stated that he/she was authorized to execute the instrument and acknowledged it as the _____ of _____ to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

DATED this _____ day of _____, 20_____.

_____

_____

(Legibly print name of notary)

NOTARY PUBLIC in and for the State of

Washington, residing at _____

My commission expires _____

ACKNOWLEDGEMENT

(Individual)

STATE OF WASHINGTON)

)ss.

COUNTY OF SNOHOMISH)

I certify that I know or have satisfactory evidence that _____

_____ is the person who appeared before me, and said person acknowledged that he/she signed this instrument and acknowledged it to be his/her free and voluntary act for the uses and purposes mentioned in the instrument.

DATED this _____ day of _____, 20_____.

_____

_____

(Legibly print name of notary)

NOTARY PUBLIC in and for the State of

Washington, residing at _____

My commission expires _____

(Entity)

STATE OF WASHINGTON)

)ss.

COUNTY OF SNOHOMISH)

I certify that I know or have satisfactory evidence that _____

_____ is the person who appeared before me, and said person acknowledged that he/she signed this instrument, on oath stated that he/she was authorized to execute the instrument and acknowledged it as the _____ of _____ to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

DATED this _____ day of _____, 20_____.

_____

_____

(Legibly print name of notary)

NOTARY PUBLIC in and for the State of

Washington, residing at _____

My commission expires _____

EXHIBIT A

LEGAL DESCRIPTION

(Insert complete legal description):

Situated in the City of Marysville, County of Snohomish, State of Washington.

EXHIBIT B

FACILITIES MAINTENANCE PLAN

MARYSVILLE
PUBLIC WORKS

MEMORANDUM

TO: Amy Hess, Associate Planner

FROM: Kim Bryant, Water Operations Supervisor
Tim King, Utility Construction Lead II
Ryan Keefe, Water Operations Lead II

DATE: April 2nd, 2024

SUBJECT: Crossroads Chevron, PA24-006

Public Works Operations has reviewed the Crossroads Chevron submittal and has the following comments:

1. Water tie in shall be a live tap;
2. Do not see location of domestic water meter, irrigation water meter or backflow prevention;
3. Water details not shown;
4. Water mains needs to be ductile iron pipe.

If the applicant has any questions about these comments, I can be contacted at (360) 363-8163 or kbryant@marysvillewa.gov.

(360) 363-8100

Public Works
80 Columbia Avenue
Marysville, WA 98270

Attention Amy Hess, Senior Planner

Subject: Crossroads Chevron Proposal File #PA24-006

Dear Ms. Hess,

Per our phone conversation and as requested by you, we are writing this letter in regards to the above subject proposal and to note our serious concerns for the record.

The Meydenbauer Group Application proposal is for a new 4,000 square foot convenience store and Chevron branded service station with canopy and (6) fuel pumps at 10008 67th Ave NE. This is at the intersection of 67th Ave NE and 100th St. NE in Marysville They are seeking Commercial Site Plan approval and and State Environmental Policy (SEPA) review and approval of the proposal and associated improvements.

This property is zoned single family residential/NB (Neighborhood Business) not commercial. NB function is to provide for local facilities that serve the everyday needs of the surrounding neighborhood rather than the larger surrounding community.

- We would like to note that the services the proposed business would provide can already be obtained only a mile away at the Fred Meyer main grocery store and the service station convenience facility at that location and is therefore not providing any necessary services to the immediate community.

We have reviewed the SEPA Environmental Checklist completed by the Meydenbauer Group and have the following questions/concerns:

- On Page 3 of the report it is noted that the description of the site is predominately a residential zone. NOTE: the west side of 67th Ave NE and the N & S areas of 100th St NE are residences with the exception of a lot on the north side of 100th St NE, and next to the proposed site which is owned and used by the City of Marysville. The East side of 67th Ave is predominately residential/farmland in 5 or more acre tracts and wetlands. There is a Grange Hall at the NE corner of the intersection of 67th Ave NE and 100th St. NE which is used for community events such as dances, birthday parties, craft fairs etc.
-
- On Page 4 item e. It states that the purpose of the new request is to build a single family residential home. That is false -
-
- Page 5 #2 states that site work machinery runs on diesel and that the burning of diesel pollutes! Note: Many of the vehicles that might utilize this business use diesel in their vehicles and would therefore be polluting the air of residents and farm animals in the area.
-
- Page 5 #3a 1 Notes that Allen Creek is in the wider vicinity. NOTE: Fact is that Allen Creek is across 67th Ave NE and to the East not more than ½ mile and has a spawning area for Salmon.

-
-
-
- PAGE 5 & 6 3c.1. this talks about storm water runoff and says any from the proposed business would be disposed to the nearest existing catch basin NOTE: we believe is only the ditches which plug up frequently and floods the driveways of some along 67th Ave NE
-
- Page 6 3c.2. States - “could waste materials enter ground or surface waters”? Answer was - Surface runoff could pick up surface materials namely gas and oil and put it into the ground and that all or most of any water borne surface materials will be filtered out by the drainage vault and biofiltration system for enhanced water quality. NOTE: there are many wells in the area and for some that is their only water. Any gas or oil runoff would pollute these wells.
-
- Page 8 5a. States: Are there any birds or other animals on or near the site? NOTE: There are eagles, seagulls, hummingbirds, crows, ducks, racoons, deer, coyote, farm animals such as horses, goats, donkeys, chickens, cats, dogs etc. Also there are many flocks of migratory birds such as ducks which fly over the area frequently.
-
- Page 9 7a. Addresses Environmental Hazards and states “there will be hazards associated with large concentrated fuel volumes”. NOTE: Our community does not welcome any business that brings possible hazards.
-
- All information from page 10 to through 15 in their entirety

are of concern to our community.

-

With the expected 795 or more vehicles daily the current residences won't even be able to enter/exit their driveways.

67th Ave NE is a two lane country road with ditches on both sides and 100th St NE is also a two lane road but has partial sidewalks. 67th Ave NE is already a on and has become increasingly congested since all of the building, both residential and industrial, to the North and South.

As noted in the Realestate News - Convenience Stores with gas stations are the 2nd worst neighborhood businesses related to property values and noted:

People will be driving in and out of your intersection, hanging out at the property, and buying lots of lotto tickets, cigarettes, and beer when they gas up, all of which, as stated above, is available within 1 mile. Although handy, these shops do nothing to help property values and hurt them significantly according to Zillow.com. Although the realtors questioned on the site did not have exact statistics, common sense would show that the increase in robberies, accidents, traffic and pedestrians would add up to decreased property value. NOTE: Non in this community can afford to have their property values decreased!

In conclusion, most of the folks in our community are opposed to the construction of a convenience store gas station as proposed by the Meydenbauer Group and are requesting a public meeting to address this proposal.

Thank You,
Concerned members of the Community:

Gregory Neff, 9813 67th Ave NE

Rikki & Carlos Gutierrez, 9813 67th Ave NE

Marilyn & Tom Daniels, 9912 67th Ave NE

Cherri & John Fieck, 6610 101st Pl NE

Julie & Dennis Edmondson, 6710 100th St. NE

Ross & Marsha Tanis, 6918 100th St. NE

Anne & Harmen DeJong, 7421 100th St. NE

Justin Edmondson, 8311 96th Dr NE

Chris & Jon Schmuck, 9602 85th Dr NE

Jose Campos, 10117 67th Ave NE

Kelsey & Will Webber, 7415 100th St NE

David Walker, 10025 65th Dr NE

Greg Young, Lake Goodwin

Ron & Chris Underwood, 6327 96th Pl NE

Matt Edwards, 124th St. NE

Brenda Nelson, 5711 100th St Ne Unit 66

Shelly Dragland, 8118 83rd Pl NE

John Everett, 6905 89th Pl NE

The following made comments on neighborhood website that they are opposed but I was unable to get their addresses:

Andrea O'Keefe

Beth Ferris

Waylon F.

Attachment:

To: City of Marysville Community Development Department-

03/18/2024

The following is a basic summary against having a *six-pump gas station - convenient store* requesting a building site location at NW Corner of 67th Ave NE and 100th St NE. As an undergraduate engineering major in the early sixties, I worked part-time for three years for a contractor in Los Angeles California that constructed gas stations [Union-76; Atlantic-Richfield] from underground up. A great amount of effort went into workmanship integrity during the installation of the gas-tanks and associated piping from tanks to dispensing nozzles, especially the threaded plumbing connections. With the tank-plumbing system still exposed the entire installation would be pressurized with air and the fire department would monitor the pressure-gauges for days to determine if leaks occurred due to a drop in air pressure [as an aside we used dry-ice when removing tanks pushing gasoline fumes out preventing possible explosion due to sparks that would occur]. Once satisfied the fire department would sign-off the installation and the system buried while consistently pneumatic- compacting the soil used enhancing soil integrity around tank and piping to support concrete load and vehicles weight from damaging gas tanks, especially the plumbing and connections. Even with all the effort expended to try and ensure no leaks from the gasoline system the traffic vibrations, thermal ground movement causing deflection, hydraulic-hammer from valves pulsing, leaks or various types of spills will eventually occur at gas stations and subsequently must be dug out at the suspected location and repair the leak. *Gasoline does not evaporate underground but travels* and there exists an aquifer at both sixty feet again at one-hundred and twenty feet (where my well pump sets). Once gasoline reaches water wells

and aquifers these locations with the poisonous liquids, (gasoline/diesel), it will contaminate other wells in the Marysville area plus more, and you will have another Fort Lejeune which I would think you do not want.

The following references provide additional information as this writing is not exhaustive but does indicate the proposed Convenient-Store-Gas-Station is not a foolproof installation.

References (not all that exists about gasoline storage but too much exists to list for one to read unless you are a researcher):

About **60 percent** of all underground storage tanks (USTs) have experienced at least one leak and that remediation of the approximately 528,000 total leaks costs over $1 billion a year in state and federal funds.

https://hub.jhu.edu/2014/10/07/gas-station-spills/

https://www.csu.edu/cerc/documents/LUSTThreattoPublicHealth.pdf

https://www.epa.gov/ust/emerging-fuels-and-underground-storage-tanks-usts

https://www.aeaweb.org/research/underground-storage-tanks-health-impacts#:~:text=About 60 percent of all underground storage tanks, billion a year in state and federal funds

"Going Beneath the Surface: Petroleum Pollution, Regulation, and Health**" appears in the January issue of the** *American Economic Journal: Applied Economics***.**

TRAFFIC INCREASE, AFFECTED WATER WELL CASING SOIL, HOME DEPRECIATION

1. Road mitigation study ? Traffic is already unreasonable due to housing development in the Marysville/Arlington area.
2. Ground vibration affects soil stability. Large trucks even vibrate my part underground house as they brake for stop due to wheel bounce on un-even road surface, all vehicle traffic creates too much noise due to existing high traffic flow, see-1 above.

3. Road traffic serious now will only increase. Drivers ignore stop sign as it stands, drivers will run two at a time or not stop all or even abide by Washington State Driving Code, https://apps.leg.wa.gov/RCW/default.aspx?cite=46.61.....Example: first to your right at stop has right away, drivers ignore; others don't even come to complete stop but drive right through intersection.
4. The proposed project by Meydenbauer Group will have a negative effect on my property value due to a commercial gas station-store on opposite corner, not only due to gasoline vapor during truck replenishment but also from pumping, potential leaks above and bel ground, additional noise levels, undesirables attracted to such establishments, trash thrown around (just look at WINCO Foods parking lot; even after they resurface, it's a shame !) on the opposite corner to my home. Increased noise over current, even more cars spinning their tires leaving the intersection which begs the need for a Round-About if this project proceeds.
5. If the project goes through then the City of Marysville needs to hook my home up to City water, as my neighbor to the south is at their expense as the potential for well water contamination is too great to be an absolutely safe consumable as the distance from water well to building site gasoline storage is too close and the potential for aquafer contamination would be great as the thickness nor horizontal size of the aquifer is known for sure but the once dairy farm just north of my location is on same aquafer.

Regards,

Dr. Dennis Edmondson, BSE, MSME, PhD, PhD, PE

(Cancer Researcher)

[CAUTION:] This email originated from outside the City of Marysville. **Do not click links or open attachments** unless you recognize the sender and know the content is safe. Contact helpdesk if you have any concerns or questions.

Good morning sir,

I read on Nextdoor recently that a proposal to have a Shell Convenient/Gas Station to be built at the corner of 10008 67 Ave. NE and 100th St. NE.

I personally do not have a big issue with this being we can not stop growth but to control it. Partly do to that if you need to get gas you have to go State and that is not always convenient.

I would agree to this if 67th and 100th are widened FIRST. These two roads have been a safety issue for vehicles and especially pedestrians for many years.

I would request that 67th be widened with a turn lane in the middle from 88th to 108th and that 100th be widened with a turn lane in the middle from 62nd to 67th at a minimal.

It has frustrated for us many years why we in this state take so long to do a project and wait to put the infrastructure in after housing developments and bushiness are already in place. The developers are gone and made their money and

then the tax payers are asked to pay for these improvements when it should be done first. Just look at the lack of construction activity on I-5 and State where there is current projects going on.
If this is done please make sure it will be done quickly because this will be very disruptive to everybody. Now, being that the population of Marysville has grown so much 67th has become a major through-fair. That is part of the problem when needed projects keep on being kicked down the road.
I am increasing the font so my mother can read it.
Thank you for your time and look forward to your thoughts and hope our family's thoughts are taken serious.

Grammar and spelling checked by Grammarly.
https://www.grammarly.com/
Brian K. Houk

Amy Hess

From: Kristin Kinnamon <bikenbus@gmail.com>
Sent: Monday, March 18, 2024 3:55 PM
To: Amy Hess
Subject: [External!] PA 24-006 Crossroads Chevron comments

Follow Up Flag: Follow up
Flag Status: Flagged

[CAUTION:] This email originated from outside the City of Marysville. **Do not click links or open attachments** unless you recognize the sender and know the content is safe. Contact helpdesk if you have any concerns or questions.

Dear Senior Planner,
I live in the area of this proposal, and have some concerns and questions for the record. After reviewing project documents, I am unclear what frontage improvements and road widths are envisioned for 100th and 67th. A sidewalk should be required on both roads, along with some separation from traffic.
It is disappointing that the Level of Service for people in cars is considered by the city and developers, but not the impact on pedestrians and other vulnerable users. This proposal will increase traffic on 100th, which has inconsistent walkways and a width that encourages speeding. I went for a run on the road yesterday and the pole for the flashing pedestrian beacon on the north side of 100th had been knocked over - I expect by a speeding car. What will this project do to mitigate the increased traffic and risk faced by pedestrians in this area?
67th Avenue also has inconsistent sidewalks. As development occurs, sidewalks have been added (per the city's adopted Complete Streets Ordinance). Hopefully they will be designed to improve the walking environment. In some cases, small sections of sidewalk can actually deteriorate walking conditions.
Sincerely,
Kristin Kinnamon
Marysville, WA
Kristin Kinnamon

Sharing Wheels Community Bike Shop, board member
McClinchy Camano Classic Century, coordinator 2024
B.I.K.E.S. Club of Snohomish County, member
425-923-7868 (personal cell)

August 23, 2024

Amy Hess, Senior Planner
Community Development Department
501 Delta Avenue
Marysville, WA 98270

RE: Crossroads Chevron – Technical Review #1; PA #24-006

Dear Amy,

The following correspondence, prepared by the Meydenbauer Group, is in response to the City of Marysville's technical review comments from April 8, 2024 and contains the project narrative, in addition to a detailed response to the City's individual comments.

Project Narrative

Representing a beneficial addition to the local neighborhood's available services, the Crossroads Chevron is designed to be an architecturally attractive and aesthetic service station that will provide the local community with a conveniently accessible premium fuel station and convenience store along the 67th AVE NE corridor at the intersection of 100th Street NE & 67th AVE NE. In addition to enhancing the street frontage, by developing a pedestrian pathway and bicycle travel lanes along the entirety of the property's street frontage, the Crossroad's Chevron will enhance the neighborhood's appeal with the installation of locally sourced landscaping and thoughtfully designed architecture.

With well maintained landscaping along the property's street frontage, the Crossroad's Chevron will feature trees and plants that are native to the local ecosystem, to enhance the environment for local wildlife and enhance the visual appeal of the property's street frontage. Beyond the street frontage, the property's landscaping will border the north and west property boundaries with a 20' landscaping buffer that will feature similar native vegetation to enhance the holistic appeal of the property from all directions.

Lighting throughout the site will incorporate architectural lighting fixtures that match the design characteristics of the building to enhance the many human-scale design characteristics of the site, providing a level of lighting that enables the identification of a face 45' away, security lighting to all parking spaces, and shielded in accordance with MMC 22C.130.050 such that it does not disturb residential uses or pose a hazard to passing traffic. In addition to parking lot illumination, the Crossroads

Chevron development will install new streetlights that are in compliance with local PUD standards along both 100th Street NE and 67th AVE NE.

Transitioning from the site's elegant landscaping design, the Crossroads Chevron Market and Deli will feature thoughtful architecture that is both aesthetic and inviting to local consumers traveling through the 67th AVE NE & 100th Street NE corridor. As the building's exterior cladding incorporates a variety of materials, there will be several layers that provide definition and contrast that complement the site's surroundings, while roofline modulations give the building depth and conceal the rooftop mounted mechanical systems.

Throughout the site, the property has been designed for ease of access and traffic flow that encourages customers to enjoy all the services that the Crossroads Chevron will offer. With ample parking, there is sufficient space for customers getting fuel to travel in and out of the site without being impeded by guests wishing to stay and enjoy one of the many snack and beverage items offered in the Crossroads Market and Deli, which will feature a full-service deli and large variety of snacks and beverages.

Planning Division Comment Response

General

1. All future submittals will include file no. PA24-006.
2. Understood that the project will be forwarded to the hearing examiner for public hearing.
3. Engineering variances are included in this resubmittal.
4. Understood, we hope that all comments have been addressed in this resubmittal.

Site and Building Design

5. Impervious surface calculations have been added to the site plan.
6. The project narrative above includes how site layout, landscape, lighting, and building design comply with the design standards in MMC 22C.020.250.
7. The building is oriented towards 67th AVE NE to the east and 100th Street NE to the South. In addition, landscaping composed of vegetation native to the area is incorporated into the landscaping buffer, while a bicycle lane, curb, gutter, and sidewalk are incorporated into the entirety of the property's street frontage along the east and the south property boundaries.
8. A 3-foot masonry screen wall is proposed along the entirety of the east and the south property boundaries.
9. A monument sign is proposed for the SE corner of the property, in addition to a pedestrian plaza on the corner of 67th AVE NE and 100th Street NE in property that is set to dedicated to the City as the new ROW.
10. Textured paving is proposed in the following locations:
    a. A 3' border around the footprint of the canopy
    b. A 10' crosswalk is proposed from the canopy to the convenience store.
    c. Crosswalks where public sidewalks cross driveways.

    d. All pedestrian sidewalks that circumnavigate the convenience store and to the South and the East of the store.
11. A 5’ wide raised pedestrian pathway is proposed around the convenience store and details will be included with civil construction plans.
12. Textured paving is proposed in the form of a 10’w crosswalk between the pump island and the convenience store, which will be of a decorative stamped concrete.
13. A pedestrian connection to the sidewalk on 67th AVE NE is included in the site plan.
14. Site plan incorporates a 6’ masonry screen wall around refuse containers and details of the enclosure will be included with the civil construction plans.
15. SEPA checklist has been revised and assumes 2 employees, in addition the store’s size was reduced ~400sf to allow for ample parking. New parking requirement is (3956sf/200 = 19.78 + 2 = 21.78). Site plan includes 22 parking spaces.
16. Bicycle parking is incorporated adjacent to the store on the SW corner.
17. Dead-end aisles now extend 5’ beyond the last stall for adequate turn-around.
18. Site plan has been revised and this area behind dumpster is no longer present.
19. 10’ x 40’ features are now labeled and represent the underground fuel storage tanks.
20. Building elevations and exterior renderings have been included with the resubmittal.
    a. Canopy design is still under evaluation and will be determined in the building permit approval process with guidance from the City of Marysville as to acceptable designs.
21. We understand the City of Marysville’s design requirements and believe the convenience store design meets these requirements through roofline modulation, variations in siding, and glazing.
    a. Canopy design is still under evaluation and will be determined in the building permit approval process with guidance from the City of Marysville as to acceptable designs.
22. Mechanical equipment will be rooftop mounted and screened behind a parapet wall that will be framed on building roof to provide roofline modulation and screening capability.
23. Air/Water station is proposed on the south end of the parking lot.
24. Parking lot illumination standards are understood and a photometric plan designed in accordance with MMC 22C.130.050 will be addressed in civil construction plan approval.

Landscape Plan

25. A 3’ wide landscaping strip is incorporated along at least 50% of the building’s frontage.
26. Street trees are incorporated into the site plan and will be planted along 100th Street NE & 67th AVE NE in accordance with MMC 22C.120.140.
27. All garbage collection areas are screened with a 6’ masonry screen wall.
28. A 6’ sight obscuring fence is proposed along the North and the West property boundaries.

SEPA Checklist

29. Fuel storage tanks are proposed to be 15,000sf and the SEPA checklist has been revised with information specific to the tanks.
30. Page 4, Item B.1.E has been revised to notate the construction of a service station.
31. Page 8, Item 4.E has been revised to include Himalayan Blackberry.

32. Page 10, Item 7.B.2 has been revised to notate the hours of construction as 7am to 7pm.
33. Page 11, Item 8.E has been revised to notate the site is zoned as Neighborhood Business (NB).
34. Page 11, Item 8.F has been revised to notate the site has a Comprehensive Plan zoning designation as Neighborhood Business (NB).
35. Page 14, Item 14.C has been revised to include the roadway improvements planned in the development.

Traffic Impact Analysis

36. Traffic Impact Analysis has been revised with a supplemental memorandum that addresses proposed intersection improvements and their effect on traffic at the intersections of 100th Street NE and 67th AVE NE, as well as 108th Street NE and 67th AVE NE.

Traffic Engineering Review Comment Response

- Items #1 – #4:
    - Response to comments from the Traffic Engineering Manager, Jesse Hannahs, are contained within the memorandum from Brad Lincoln with Kimley-Horn titled ***PA #24-006; Crossroads Chevron; Revised TIA, Comment Response, & Variance Request***, which has been included as a separate file with this submittal.
- Item #5:
    - A street lighting plan provided by Chris Cavallo with TranspGroup has been provided to detail the addition of streetlights according to EDDS 3-506 on ***Page 3*** in a document titled, ***PA #24-006; Crossroads Chevron; Site Plan Binder.***
- Item #6:
    - Signing and channelization plans will be included with Civil Construction plans.

Civil Plan Review Comment Response

1. Existing utilities are notated and will be addressed on Civil Plan Review.
2. Utility extensions:
    a. Understood that water main will need to be extended along 67th AVE NE and this will be shown on civil construction plans.
    b. Storm drainage for widened sections of 67th AVE NE and 100th Street NE are shown on ***Pages 4 & 5*** in ***PA #24-006; Crossroads Chevron; Site Plan Binder.***
3. Frontage improvements are incorporated as bicycle lane, curb, gutter, and sidewalks according to standard plan 3-201-004 on both 67th AVE NE and 100th Street NE.
4. ROW dedication of one ½ width of 35’ of ROW is incorporated on site plan.
5. Arterial access standards are addressed by Brad Lincoln of Kimley-Horn in an application for an engineering variance included in this submittal titled ***PA #24-006; Crossroads Chevron; Revised TIA, Comment Response, & Variance Request.***
6. Drainage:

a. Stormwater drainage is addressed in ***Pages 4 & 5*** of the included document ***PA #24-006; Crossroads Chevron; Site Plan Binder*** as prepared by Geometrics Engineering.
b. A full geotechnical report will be included at the time of grading permit submittal.
c. Impervious surface coverage is (27638sf/39573sf) = 69.84%.

7. Civil construction plans will utilize survey control datum NAVD-88 and NAD-83.
8. Trench restoration will be completed in accordance with section 3-703 of the EDDS and included on the Civil Construction plans.
9. Grading and retaining walls will be compliant with section 22D.050.030 of the MMC and included on the Civil Construction plans.
10. Understood.
11. Sewer connection will be tied in to sewer cleanout across 100th Street NE and shown on Civil Construction Plans.
12. Understood, ROW permits will be obtained for all work in the ROW.
13. Understood, all wells and septic systems on the property and adjacent properties will be shown on Civil Construction plans.
14. Understood that fees for engineering review are due prior to review of plan submittal.
15. Understood that inspection fees are due prior to permit issuance.
16. Understood.
17. Understood, we await additional comments.

Conclusion

In conclusion, the Crossroads Chevron project (PA #24-006) represents a valuable addition to the local community in the 100th Street NE & 67th AVE NE corridor by providing services that are not available without a challenging commute into town and also provides for substantial infrastructure improvements that will greatly enhance travel in the area. If there are any additional requests for information, please contact Matt LaLande with the Meydenbauer Group at (206) 898-4886 or via email at Matt@MeydenbauerGroup.com.

We thank you for your time in reviewing our application and look forward to further discussions about this project.

Sincerely,

Matt LaLande

Digitally signed by Matt LaLande
DN: C=US, E=Matt@MeydenbauerGroup.com, O=Meydenbauer Group, CN=Matt LaLande
Date: 2024.08.26 12:46:25-07'00'

Matt LaLande
Project Manager
(206) 898-4886
Matt@MeydenbauerGroup.com

SEPA[1] Environmental Checklist

Purpose of checklist

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization, or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. **You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown.** You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to **all parts of your proposal**, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for lead agencies

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B, plus the Supplemental Sheet for Nonproject Actions (Part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in "Part B: Environmental Elements" that do not contribute meaningfully to the analysis of the proposal.

[1] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/Checklist-guidance

A.Background

Find help answering background questions[2]

1. **Name of proposed project, if applicable:**

   Crossroads Chevron

2. **Name of applicant:**

   Meydenbauer Group

3. **Address and phone number of applicant and contact person:**

   John Hansen, Meydenbauer Group, 12025 Willows Road, Redmond, WA 98052 425-443-6280

4. **Date checklist prepared:**

   2024.08.20

5. **Agency requesting checklist:**

   City of Marysville

6. **Proposed timing of schedule (including phasing, if applicable):**

   Construction of service station: 12 months from building permit issuance to occupancy permit issuance.

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

   None.

8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

   No slopes, no wetlands, no trees, and no reports.

9. **Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

   None.

10. **List any government approvals or permits that will be needed for your proposal, if known.**

    Commercial building, clear and grade, and Utility Extension.

11. **Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)**

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[2] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-A-Background

New 4,000 sf convenience store and Chevron branded service station with canopy and six (6) pumps on 45,738 sf site. Serving the pumps will be two (2) 15,000 gallon underground storage tanks manufactured by Xerxes to UL1316 standards.

12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

    10008 67th Ave NE, Marysville 98270

    Snohomish County APN: 30051500101800

    SE ¼ of the NE ¼ of Section 15, T.30N., R.5E., W.M.

B.Environmental Elements

1. Earth

Find help answering earth questions[3]

a. **General description of the site:**

    Flat site nestled in a predominantly residential zone.

Circle or highlight one: Flat, rolling, hilly, steep slopes, mountainous, other:

[3] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-earth

b. What is the steepest slope on the site (approximate percent slope)?

3%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them, and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Twelve to 18 inches of topsoil or previously placed gravel fill overlying native, loose, silty sand to sandy silt (weathered till). At approximately 2 to 3 feet below ground surface (BGS), the soils is unweathered and consisted of dense to very dense/hard to very hard, gravelly, silty sand to sandy silt. The unweathered till extends deeper beyond 7 feet BGS.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No surface indication or history of unstable soil was encountered.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

The purpose is to build a service station.

Area of lot = 39,573 sf

Area of Impervious = 27,638 sf

Cut = 1,481 cubic yards

Fill = 588 cubic yards

f. Could erosion occur because of clearing, construction, or use? If so, generally describe.

Some erosion could occur. However, there is a Stormwater protection plan (SWPPP) backed up by on site inspectors as part of the permit application and implementation.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Site is 39,573 sf total. Impervious surface is 27,638 sf total. Impervious is 69.8%.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.

There is a Stormwater protection plan (SWPPP) backed up by on site inspectors as part of the permit application and implementation.

2. Air

Find help answering air questions[4]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Site work machinery runs on diesel. The burning of diesel pollutes. Quantities unknown.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

NA

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Site work machinery equipped with DPFs (diesel particulate filters) and urea acid sprayed into the exhaust.

3. Water

Find help answering water questions[5]

a. Surface:

Find help answering surface water questions[6]

1. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Allen Creek is in the wider vicinity.

2. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No.

3. Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

NA

4. Will the proposal require surface water withdrawals or diversions? Give a general description, purpose, and approximate quantities if known.

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[4] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-Air

[5] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water

[6] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Surface-water

No.

5. **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

   No.

6. **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

   No.

b. **Ground:**

Find help answering ground water questions[7]

1. **Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give a general description, purpose, and approximate quantities if known**

   No.

2. **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

   None.

c. **Water Runoff (including stormwater):**

1. **Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

   The source of runoff is the building roof, landscaping buffer zone, canopy roof, fueling area & parking/pavement area. The runoff is collected through grated openings in the underground vault & catch basin. It is disposed to the nearest existing catch basin through underground 18" diameter RCP pipe.

2. **Could waste materials enter ground or surface waters? If so, generally describe.**

   Surface runoff could pick up surface materials. All or most of any water borne surface materials will be filtered out by the drainage vault and biofiltration system for enhanced water quality. The water volume managed will be 0.04 cfs for 100-year storm.

3. **Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.**

[7] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Groundwater

No. Stormwater management proposed is designed to maintain or reduce the current historical water flow rates to final destinations.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

Detention vaults and biofiltration.

4. Plants

Find help answering plants questions

a. Check the types of vegetation found on the site:

☐ **deciduous tree: alder, maple, aspen, other**

☐ **evergreen tree: fir, cedar, pine, other**

☐ **shrubs**

☒ **grass**

☐ **pasture**

☐ **crop or grain**

☐ **orchards, vineyards, or other permanent crops.**

☐ **wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other**

☐ **water plants: water lily, eelgrass, milfoil, other**

☐ **other types of vegetation**

b. What kind and amount of vegetation will be removed or altered?

Site is was cleared prior to current ownership with grass ground covering. There will be a landscape and irrigation plan as part of the permit application deck reviewed and approved by the City.

c. List threatened and endangered species known to be on or near the site.

There are no threatened or endangered plant species to be known on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.

11,935 sf of proposed planting -

Trees:
Paperbark Maple
Vine Maple
Blue Ice Cypress
Shore Pine

Shrubs:
Midwinter Fire Dogwood

White Spring Heather
Shore Juniper
Blue Star Juniper
Oregon Grape
Eulalia Grass
Burkwood Osmanthus
Mount Vernon Laurel
Evergreen Huckleberry
Groundcover:
Kinnikinnick
Creeping Juniper
Variegated Lilly Turf

e. List all noxious weeds and invasive species known to be on or near the site.

Himalayan Blackberry

5. Animals

Find help answering animal questions[8]

a. List any birds and other animals that have been observed on or near the site or are known to be on or near the site.

Examples include:

- **Birds: hawk, heron, eagle, songbirds, other:**
- **Mammals: deer, bear, elk, beaver, other:**
- **Fish: bass, salmon, trout, herring, shellfish, other:**

None.

b. List any threatened and endangered species known to be on or near the site.

None.

c. Is the site part of a migration route? If so, explain.

NA

d. Proposed measures to preserve or enhance wildlife, if any.

None.

e. List any invasive animal species known to be on or near the site.

None.

[8] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-5-Animals

6. Energy and natural resources

Find help answering energy and natural resource questions[9]

a. **What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

Cooling will be electric. Heating will be gas. This is a convenience store so no manufacturing.

b. **Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

No.

c. **What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.**

The building is going to meet the 2021 WA State Energy Code Commercial Provisions. Features like energy efficient lighting and continuous insulation will be utilized.

7. Environmental health

Health Find help with answering environmental health questions[10]

a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur because of this proposal? If so, describe.**

None during construction. Once occupancy permit received the fuel tanks will be filled. The fuel tanks are 15,000 gallons each. There will be two (2) of them: one (1) for low octane (octane rating 87) and the other will be a evenly split tank for diesel and high octane (octane rating 92).

The fuel tanks are made of fiberglass to UL1316 standards. The fuel tanks are manufactured by Xerxes in Minneapolis, a subsidiary of Mattr Infrastructure Technologies.

UL 1316 is a standard for the design and construction of underground tanks made of fiber-reinforced plastic that store flammable and combustible liquids. The standard applies to tanks with single, double, or multiple walls. The Xerxes tanks are doble wall.

The standard's requirements include: Structural integrity, Material compatibility, Environmental hazards, and Climate change adaptation.

The standard also specifies that tanks must be fabricated, inspected, and tested for leakage before shipment. The system must include:

A dielectric coating on all exposed exterior surfaces

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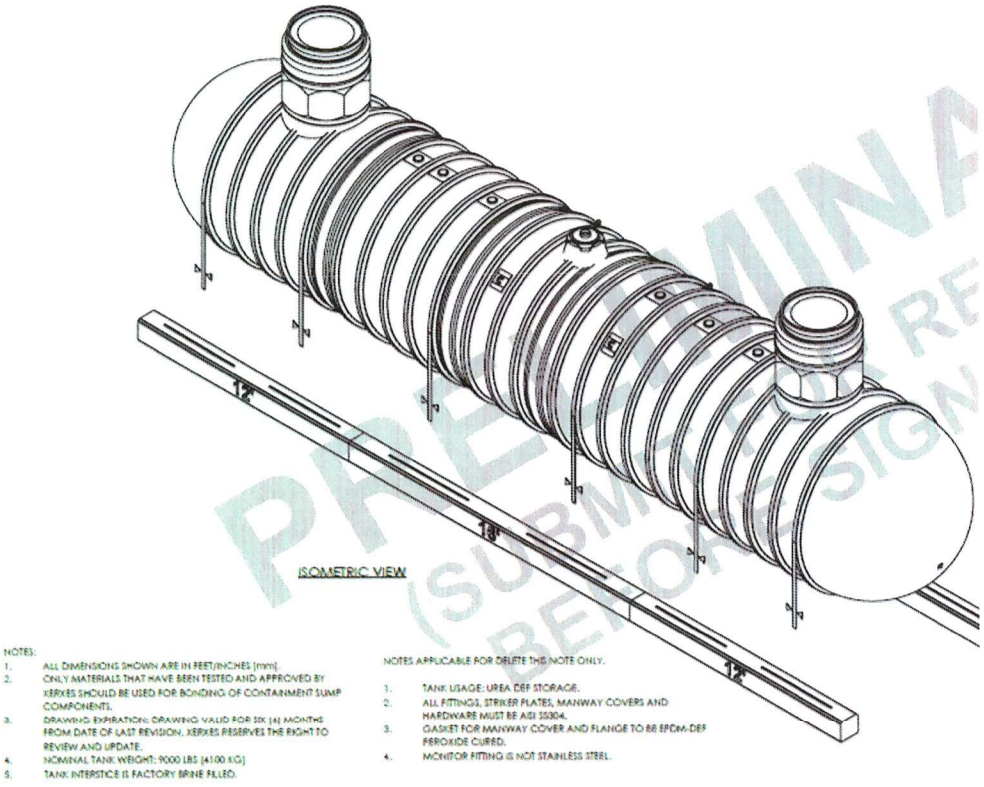
[9] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-6-Energy-natural-resou

[10] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-7-Environmental-health



Electrical insulating devices in each tank opening.

At least two galvanic anodes per tank.

Test station provisions.

The standard also includes performance tests, such as an anode pull test, which requires a lead wire to withstand a 70-pound pull for one minute.

1. **Describe any known or possible contamination at the site from present or past uses.**

   None known of.

2. **Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.**

   None known of.

3. **Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**

   None during development and construction. There will be large fuel volumes stored underground and dispensed through consumer pumps once in operation.

4. **Describe special emergency services that might be required.**

The customary emergency services: Marysville Fire District plus the National Response Team (NRT) and the Environmental Protection Agency (EPA) may also respond in the event of a significant oil spill.

5. **Proposed measures to reduce or control environmental health hazards, if any.**

   All the extensive required environmental hazard mitigation associated with a modern service station will be deployed.

b. Noise

1. **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

   During construction there will be site work equipment in the first few months of construction: backhoe, dozer, and trucks. After that there will be the noises associated with vertical construction: hammering and similar.

2. **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site)?**

   Short term (12 months) during construction:

   Monday through Friday: 7:00 a.m. to 7:00 p.m.

   Saturdays: 8:00 a.m. to 7:00 p.m.

   Sundays: no construction.

   Long term the service station will be open 24 hrs per day with the associated noise of operation.

3. **Proposed measures to reduce or control noise impacts, if any:**

   Site work machinery is equipped with mufflers and diesel particulate filters (DPFs) that have a muffling function as well.

8. Land and shoreline use

Find help answering land and shoreline use questions[11]

a. **What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.**

   Current use: unimproved vacant. Adjacent properties are a mix of single family homes and unimproved vacant.

b. **Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses because of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?**

[11] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-8-Land-shoreline-use

Not known.

1. **Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?**

   Local farm equipment will have much less distance to travel for fuel reducing the net fuel consumption associated with these activities.

c. **Describe any structures on the site.**

   None.

d. **Will any structures be demolished? If so, what?**

   None.

e. **What is the current zoning classification of the site?**

   NB (Neighborhood Business).

f. **What is the current comprehensive plan designation of the site?**

   NB (Neighborhood Business).

g. **If applicable, what is the current shoreline master program designation of the site?**

   NA

h. **Has any part of the site been classified as a critical area by the city or county? If so, specify.**

   No.

i. **Approximately how many people would reside or work in the completed project?**

   None reside. Two (2) adults working 24/7.

j. **Approximately how many people would the completed project displace?**

   NA

k. **Proposed measures to avoid or reduce displacement impacts, if any.**

   NA

l. **Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.**

   City land use designated this site for neighborhood business like a service station.

m. **Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:**

   NA

9. Housing

Find help answering housing questions[12]

a. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

   None.

b. **Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

   None.

c. **Proposed measures to reduce or control housing impacts, if any:**

   This proposal does not displace any housing as City set aside this site for neighborhood business.

10. Aesthetics

Find help answering aesthetics questions[13]

a. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

   20' from finished floor. Exterior will be colored and textured concrete panels and planks.

b. **What views in the immediate vicinity would be altered or obstructed?**

   Housing on 65th Dr NE will have their views east over the valley obstructed.

c. **Proposed measures to reduce or control aesthetic impacts, if any:**

   The façade will be broken up with windows and multiple material choices in order avoid a monolithic aesthetic.

11. Light and glare

Find help answering light and glare questions[14]

a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**

   Service stations by their nature have significant bright lighting. The lighting will be prevalent at night. The lighting will be specifically designed and engineered to be shielded and focus down as well as away from residential neighborhoods.

b. **Could light or glare from the finished project be a safety hazard or interfere with views?**

   Yes.

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[12] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-9-Housing
[13] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-10-Aesthetics
[14] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-11-Light-glare

c. **What existing off-site sources of light or glare may affect your proposal?**

None.

d. **Proposed measures to reduce or control light and glare impacts, if any:**

Licensed lighting professionals work product is part of the permit application deck and approval process.

12. Recreation

Find help answering recreation questions

a. **What designated and informal recreational opportunities are in the immediate vicinity?**

Unknown.

b. **Would the proposed project displace any existing recreational uses? If so, describe.**

No. Many recreational activities require fuel such as boating. The proposed use will allow local recreational users to obtain fuel without excessive travel.

c. **Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

No mitigation as the service station supports local recreational activities by providing fuel and food.

13. Historic and cultural preservation

Find help answering historic and cultural preservation questions[15]

a. **Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.**

None.

b. **Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.**

None.

c. **Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.**

None.

[15] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-13-Historic-cultural-p

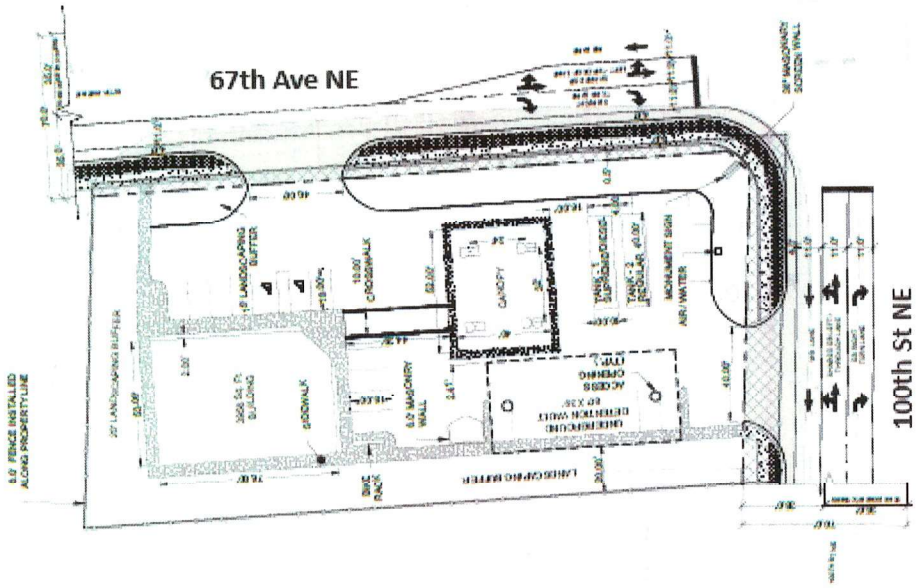
d. **Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.**

None.

14. Transportation

Find help with answering transportation questions[16]

a. **Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.**



b. **Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

c. **Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).**

Both existing roads fronting the development will be widened. Each road will get new curb, gutter, sidewalk, and bicycle lanes. Also left hand turn lanes are being added to

[16] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-14-Transportation

east bound 100th St NE and south bound 67thAve NE. Two (2) street lights are being added: one (1) on 67th Ave NE and the other on 100th St NE. The site has none of these amenities currently.

d. **Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

No.

e. **How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?**

The Development is anticipated to generate approximately 530 new ADTs with approximately 37 new PM peak-hour trips. The level of service analysis has been performed for the PM peak-hour (4:00pm – 6:00pm), which is when volumes on roadways are typically highest and when intersection operations are typically at their worst levels of service. The analysis is based on the rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual. The quantity of heavy vehicles vs. passenger vehicles, there is no specific mention, but in the chart labeled Movement in the Appendix, it is assumed that 3% of vehicles will be heavy vehicles.

Therefore:

530 * 3% = 15.9 new Heavy Vehicle ADT's

37 * 3% = 1.11 new PM peak-hour Heavy Vehicle trips

f. **Will the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.**

No.

g. **Proposed measures to reduce or control transportation impacts, if any:**

Appropriate traffic mitigation fees or road improvements in lieu of traffic mitigation fees will be provided by the project.

15. Public services

Find help answering public service questions[17]

a. **Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.**

Yes. The addition of a significant neighborhood business will result in increased demand on the immediately local police and fire services. However, by re-directing local fuel and convenience store needs then there is a consequent relief on the similar services currently provided in the Soper Hill neighborhood.

[17] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-15-public-services

b. Proposed measures to reduce or control direct impacts on public services, if any.

None. New property owners will be paying property tax and significant sales tax to compensate for increased need of public services. In addition, as written above this proposal results in the redirection of services currently provided and not necessarily a net addition to required services.

16. Utilities

Find help answering utilities questions[18]

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:

Developer bringing in electricity, water, sewer, and natural gas. Refuse service will serve site one it is in operation.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Electricity, provider PUD

Gas, provider PUD.

Water, provider City of Marysville

Sewer, provider City of Marysville

Refuse collection, provider City of Marysville

C.Signature

Find help about who should sign[19]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

X

Type name of signee: John Hansen

Position and agency/organization: President, Meydenbauer Group

Date submitted: 2024.08.20

[18] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-16-utilities

[19] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-C-Signature

D.Supplemental sheet for nonproject actions

Find help for the nonproject actions worksheet[20]

Do not use this section for project actions.

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

From SEPA website:

https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-D-Non-project-actions

Non-Project Actions -

"Non-project actions are governmental actions involving decisions about policies, plans, or programs containing standards for controlling use or modifying the environment, or will govern a series of connected actions."

This SEPA Checklist is for the private development of a service station and is not a governmental action. The below does not apply to this project.

1. **How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?**

    - **Proposed measures to avoid or reduce such increases are:**

2. **How would the proposal be likely to affect plants, animals, fish, or marine life?**

    - **Proposed measures to protect or conserve plants, animals, fish, or marine life are:**

3. **How would the proposal be likely to deplete energy or natural resources?**

    - **Proposed measures to protect or conserve energy and natural resources are:**

[20] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-d-non-project-actions

4. **How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection, such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?**

    - **Proposed measures to protect such resources or to avoid or reduce impacts are:**

5. **How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?**

    - **Proposed measures to avoid or reduce shoreline and land use impacts are:**

6. **How would the proposal be likely to increase demands on transportation or public services and utilities?**

    - **Proposed measures to reduce or respond to such demand(s) are:**

7. **Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.**

Kimley»Horn

MEMORANDUM

To:	Jesse Hannahs, PE, City of Marysville
From:	Brad Lincoln, PE
	Kimley-Horn and Associates, Inc.
Date:	August 5, 2024
Subject:	Revised Trip Generation, Trip Distribution, and Intersection Analysis

Kimley-Horn and Associates, Inc. (Kimley-Horn) has been retained to provide a memorandum for the 67th Avenue Fuel Station (Development) in the City of Marysville (City). This memo summarizes the updated trip generation, trip distribution, and intersection analysis for the Development. The Development is proposed to consist of 8 vehicle fueling positions (VFP), which is a reduction from 12 vehicle fueling positions, and a convenience store. The Development is located in the northwest corner of 100th Street NE at 67th Avenue NE. The site is currently listed as undeveloped per the *Snohomish County Online Property Information (SCOPI)* web map. A site vicinity map is shown in **Figure 1**.

Figure 1: Site Vicinity Map

1. TRIP GENERATION

The Development is proposed to consist of 8 vfp and a convenience store. The trip generation calculations have been performed using data published by the ITE *Trip Generation Manual, 11st Edition* (*2021*). The average trip generation rates for Institute of Transportation Engineers (ITE) Land Use Codes (LUC) 945, Convenience Store/Gas Station, have been used for the trip generation.

Pass-by reductions have been applied to the trip generation calculations. These reductions account for trips currently on the roadway that will visit the Development and are not considered new trips generated by the Development. A pass-by reduction of 75% has been applied to the gas station based on data published by ITE. This methodology is consistent with the initial traffic impact analysis. The trip generation after pass-by reductions for the Development have been summarized in **Table 1**.

Table 1: Trip Generation Summary

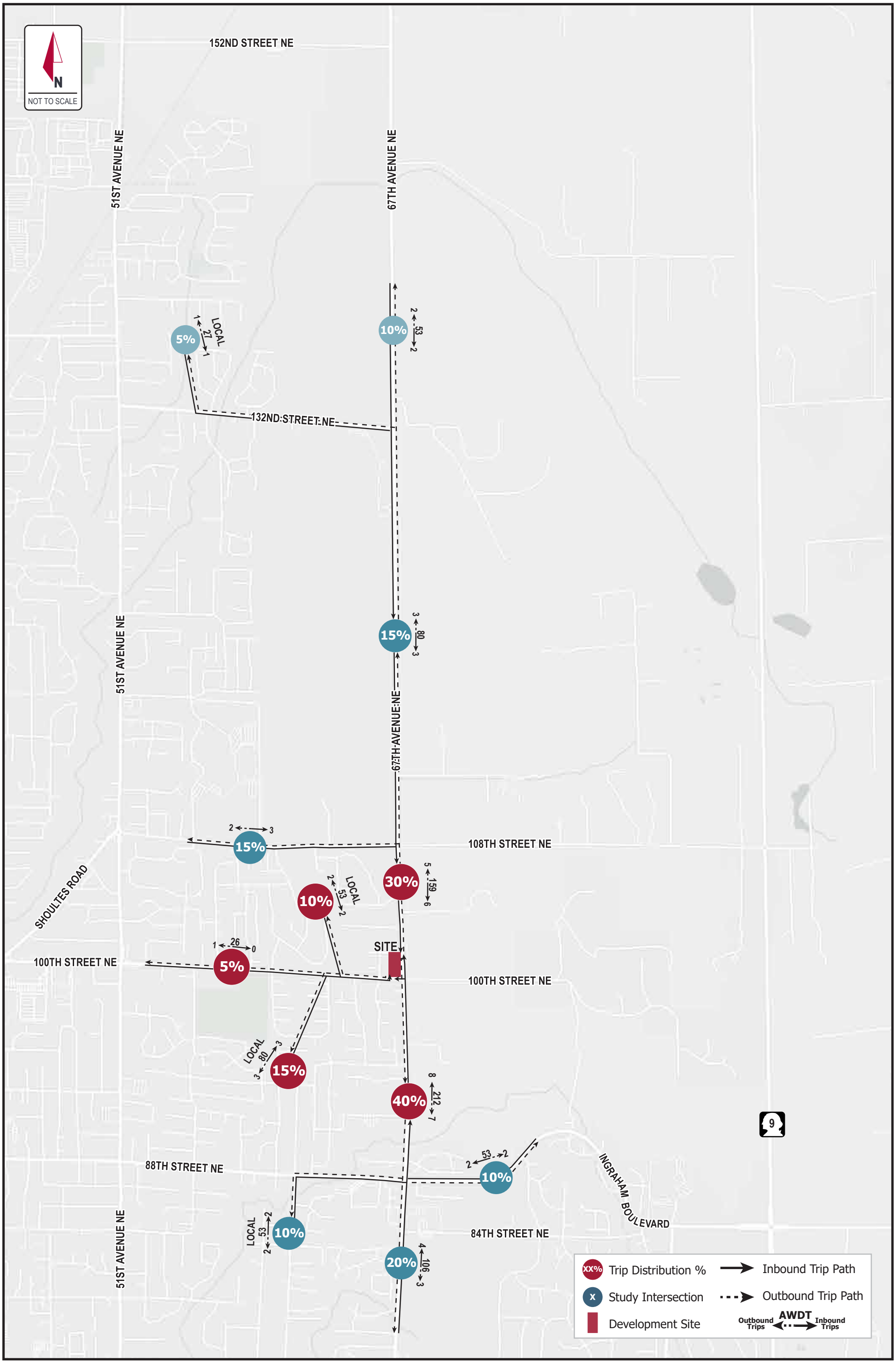
Land Use	Size	Average Daily Trips (ADTs)	PM Peak-Hour Trips		
			In	Out	Total
Convenience Store/Gas Station ITE LUC 945	8 VFP	2,121	74	73	147
Pass-By Trips		1,591	55	55	110
Net New Trips		530	19	18	37

The Development is anticipated to generate approximately 530 new ADTs with approximately 37 new PM peak-hour trips.

2. TRIP DISTRIBUTION

The trip distribution for the Development is based on comparison of 87th Avenue NE North and 136th Street Industrial distributions established by the City since the site is in the middle of the two areas. The trip distributions for the Development have been updated to accommodate the proposed 8 pump stations and the convenience store.

A detailed trip distribution of the PM peak-hour is displayed in **Figure 2**.



Kimley»Horn

FIGURE 2 - PM PEAK-HOUR TRIP DISTRIBUTION

67TH AVENUE GAS STATION - MARYSVILLE,

3. 100TH STREET NE AT 67TH AVENUE NE

The level of service analysis has been performed for the PM peak-hour (4:00pm – 6:00pm), which is when volumes on roadways are typically highest and when intersection operations are typically at their worst levels of service.

The analysis for the intersection of 100th Street NE at 67th Avenue NE has been updated based on the revised trip generation and to evaluate channelization changes that are possible with the right-of-way dedication along the Development frontage. The intersection has been analyzed for the 2026 opening year baseline and future and 2032 horizon year baseline and future for PM peak-hour conditions. The analysis was completed using the same traffic data and methodology as the initial traffic impact analysis. The revised level of service summary with the existing and additional channelization is included in **Table 2**: Intersection Analysis.

Table 2: Intersection Analysis Summary

Year	Opening Year				Horizon Year			
	Baseline		Future		Baseline		Future	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Existing Channelization	C	19.7	C	19.5	E	41.6	E	40.3
Eastbound Left	C	22.3	C	22.1	E	47.7	E	46.7
Eastbound Right	C	22.1	C	21.9	E	47.2	E	46.1
Southbound Right	C	19.7	C	19.6	E	40.7	E	39.4
Eastbound Left and Southbound Right	C	19.6	C	19.4	E	39.5	E	38.5
Eastbound Right and Southbound Right	C	19.5	C	19.3	E	39.1	E	38.1

The analysis shows that the intersection of 100th Street NE at 67th Avenue NE will operate below LOS D under the 2032 horizon year conditions, even without the Development. However, the addition of an eastbound right-turn lane and a southbound right-turn lane mitigates the impacts of the development. It is important that the intersection is ultimately planned to be signalized, but there is not sufficient right-of-way along the east side of the roadway to place a signal pole.

4. 108TH STREET NE AT 67TH AVENUE NE

The intersection of 108th Avenue NE at 67th Avenue NE is planned to be signalized and there is not sufficient right-of-way for intersection improvements to be constructed as part of the development. The traffic mitigation fees that will be paid as part of the conditions of the development and the reduction in size from 12 vfp to 8 vfp should mitigate the impacts of the development on this intersection.

5. TRAFFIC MITIGATION FEES

The City traffic mitigation fees have been calculated using the commercial rates of $2,220 per PM peak-hour trip. The Development will generate 37 new PM peak-hour trips. The City traffic mitigation fees for the Development should therefore be $82,140.00.

APPENDIX

Intersection	
Intersection Delay, s/veh	19.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Future Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	202	17	10	10	184	382	22	13	394	47
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay, s/veh	14.8	11.1	19.2	23.9
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	23%	46%	3%
Vol Thru, %	0%	94%	3%	27%	87%
Vol Right, %	0%	6%	74%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	396	268	37	445
LT Vol	180	0	62	17	13
Through Vol	0	374	8	10	386
RT Vol	0	22	198	10	46
Lane Flow Rate	184	404	273	38	454
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.344	0.695	0.472	0.078	0.739
Departure Headway (Hd)	6.739	6.19	6.216	7.463	5.86
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	531	582	574	483	613
Service Time	4.522	3.973	4.306	5.463	3.939
HCM Lane V/C Ratio	0.347	0.694	0.476	0.079	0.741
HCM Control Delay, s/veh	13.1	22	14.8	11.1	23.9
HCM Lane LOS	B	C	B	B	C
HCM 95th-tile Q	1.5	5.5	2.5	0.3	6.4

Intersection	
Intersection Delay, s/veh	22.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Future Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	202	17	10	10	184	382	22	13	394	47
Number of Lanes	1	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	2
HCM Control Delay, s/veh	13.5	12.1	20	31.3
HCM LOS	B	B	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	46%	3%
Vol Thru, %	0%	94%	0%	4%	27%	87%
Vol Right, %	0%	6%	0%	96%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	396	62	206	37	445
LT Vol	180	0	62	0	17	13
Through Vol	0	374	0	8	10	386
RT Vol	0	22	0	198	10	46
Lane Flow Rate	184	404	63	210	38	454
Geometry Grp	5	5	5	5	4b	4b
Degree of Util (X)	0.349	0.707	0.139	0.393	0.087	0.808
Departure Headway (Hd)	6.85	6.301	7.928	6.725	8.265	6.407
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	522	570	450	532	436	563
Service Time	4.635	4.086	5.722	4.518	6.265	4.485
HCM Lane V/C Ratio	0.352	0.709	0.14	0.395	0.087	0.806
HCM Control Delay, s/veh	13.3	23	12	13.9	12.1	31.3
HCM Lane LOS	B	C	B	B	B	D
HCM 95th-tile Q	1.6	5.7	0.5	1.9	0.3	7.9

Intersection	
Intersection Delay, s/veh	22.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Future Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	202	17	10	10	184	382	22	13	394	47
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	2
HCM Control Delay, s/veh	13.1	12	19.9	31.1
HCM LOS	B	B	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	100%	0%	89%	0%	46%	3%
Vol Thru, %	0%	94%	11%	0%	27%	87%
Vol Right, %	0%	6%	0%	100%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	396	70	198	37	445
LT Vol	180	0	62	0	17	13
Through Vol	0	374	8	0	10	386
RT Vol	0	22	0	198	10	46
Lane Flow Rate	184	404	71	202	38	454
Geometry Grp	5	5	5	5	4b	4b
Degree of Util (X)	0.349	0.706	0.156	0.376	0.087	0.807
Departure Headway (Hd)	6.842	6.293	7.868	6.696	8.253	6.398
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	523	570	454	533	437	563
Service Time	4.625	4.076	5.661	4.488	6.253	4.475
HCM Lane V/C Ratio	0.352	0.709	0.156	0.379	0.087	0.806
HCM Control Delay, s/veh	13.3	22.9	12.1	13.5	12	31.1
HCM Lane LOS	B	C	B	B	B	D
HCM 95th-tile Q	1.6	5.7	0.5	1.7	0.3	7.9

Intersection	
Intersection Delay, s/veh	19.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Future Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	202	17	10	10	184	382	22	13	394	47
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay, s/veh	14.9	11.1	19.6	23.4
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	23%	46%	3%	0%
Vol Thru, %	0%	94%	3%	27%	97%	0%
Vol Right, %	0%	6%	74%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	396	268	37	399	46
LT Vol	180	0	62	17	13	0
Through Vol	0	374	8	10	386	0
RT Vol	0	22	198	10	0	46
Lane Flow Rate	184	404	273	38	407	47
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.347	0.701	0.473	0.079	0.732	0.075
Departure Headway (Hd)	6.793	6.244	6.226	7.49	6.475	5.745
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	525	574	574	481	554	618
Service Time	4.582	4.032	4.32	5.49	4.266	3.535
HCM Lane V/C Ratio	0.35	0.704	0.476	0.079	0.735	0.076
HCM Control Delay, s/veh	13.2	22.5	14.9	11.1	25.1	9
HCM Lane LOS	B	C	B	B	D	A
HCM 95th-tile Q	1.5	5.6	2.5	0.3	6.1	0.2

Intersection	
Intersection Delay, s/veh	19.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Future Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	202	17	10	10	184	382	22	13	394	47
Number of Lanes	1	1	0	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	13.3	11.9	19.8	23.9
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	46%	3%	0%
Vol Thru, %	0%	94%	0%	4%	27%	97%	0%
Vol Right, %	0%	6%	0%	96%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	396	62	206	37	399	46
LT Vol	180	0	62	0	17	13	0
Through Vol	0	374	0	8	10	386	0
RT Vol	0	22	0	198	10	0	46
Lane Flow Rate	184	404	63	210	38	407	47
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.348	0.704	0.138	0.389	0.085	0.737	0.075
Departure Headway (Hd)	6.825	6.276	7.86	6.661	8.122	6.514	5.784
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	523	574	454	536	444	550	614
Service Time	4.611	4.062	5.654	4.453	6.122	4.302	3.572
HCM Lane V/C Ratio	0.352	0.704	0.139	0.392	0.086	0.74	0.077
HCM Control Delay, s/veh	13.3	22.8	11.9	13.7	11.9	25.6	9
HCM Lane LOS	B	C	B	B	B	D	A
HCM 95th-tile Q	1.5	5.6	0.5	1.8	0.3	6.2	0.2

Intersection	
Intersection Delay, s/veh	19.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Future Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	202	17	10	10	184	382	22	13	394	47
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	13	11.9	19.8	23.8
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	89%	0%	46%	3%	0%
Vol Thru, %	0%	94%	11%	0%	27%	97%	0%
Vol Right, %	0%	6%	0%	100%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	396	70	198	37	399	46
LT Vol	180	0	62	0	17	13	0
Through Vol	0	374	8	0	10	386	0
RT Vol	0	22	0	198	10	0	46
Lane Flow Rate	184	404	71	202	38	407	47
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.348	0.704	0.155	0.372	0.085	0.736	0.075
Departure Headway (Hd)	6.817	6.269	7.801	6.632	8.112	6.507	5.777
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	523	574	457	537	444	554	614
Service Time	4.602	4.053	5.594	4.424	6.112	4.295	3.565
HCM Lane V/C Ratio	0.352	0.704	0.155	0.376	0.086	0.735	0.077
HCM Control Delay, s/veh	13.2	22.8	12	13.4	11.9	25.5	9
HCM Lane LOS	B	C	B	B	B	D	A
HCM 95th-tile Q	1.5	5.6	0.5	1.7	0.3	6.2	0.2

Intersection	
Intersection Delay, s/veh	41.6
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Future Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	241	21	12	12	219	455	27	16	470	56
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay, s/veh	20.9	12.7	39.1	59.6
HCM LOS	C	B	E	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	23%	47%	3%
Vol Thru, %	0%	94%	3%	27%	87%
Vol Right, %	0%	6%	74%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	472	319	45	532
LT Vol	215	0	74	21	16
Through Vol	0	446	9	12	461
RT Vol	0	26	236	12	55
Lane Flow Rate	219	482	326	46	543
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.455	0.926	0.626	0.11	0.982
Departure Headway (Hd)	7.472	6.92	6.92	8.661	6.512
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	480	520	521	416	554
Service Time	5.241	4.689	4.979	6.661	4.571
HCM Lane V/C Ratio	0.456	0.927	0.626	0.111	0.98
HCM Control Delay, s/veh	16.4	49.5	20.9	12.7	59.6
HCM Lane LOS	C	E	C	B	F
HCM 95th-tile Q	2.3	11.2	4.3	0.4	13.6

Intersection	
Intersection Delay, s/veh	47.7
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Future Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	241	21	12	12	219	455	27	16	470	56
Number of Lanes	1	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	2
HCM Control Delay, s/veh	16.5	13.6	38.1	81.7
HCM LOS	C	B	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	47%	3%
Vol Thru, %	0%	94%	0%	4%	27%	87%
Vol Right, %	0%	6%	0%	96%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	472	74	245	45	532
LT Vol	215	0	74	0	21	16
Through Vol	0	446	0	9	12	461
RT Vol	0	26	0	236	12	55
Lane Flow Rate	219	482	76	250	46	543
Geometry Grp	5	5	5	5	4b	4b
Degree of Util (X)	0.451	0.917	0.178	0.505	0.116	1.056
Departure Headway (Hd)	7.562	7.01	8.647	7.432	9.368	7.004
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	478	520	418	488	385	521
Service Time	5.262	4.71	6.347	5.132	7.368	5.004
HCM Lane V/C Ratio	0.458	0.927	0.182	0.512	0.119	1.042
HCM Control Delay, s/veh	16.3	48	13.2	17.5	13.6	81.7
HCM Lane LOS	C	E	B	C	B	F
HCM 95th-tile Q	2.3	10.9	0.6	2.8	0.4	16.2

Intersection	
Intersection Delay, s/veh	47.2
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Future Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	241	21	12	12	219	455	27	16	470	56
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	2
HCM Control Delay, s/veh	16	13.6	37.7	81
HCM LOS	C	B	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	100%	0%	89%	0%	47%	3%
Vol Thru, %	0%	94%	11%	0%	27%	87%
Vol Right, %	0%	6%	0%	100%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	472	83	236	45	532
LT Vol	215	0	74	0	21	16
Through Vol	0	446	9	0	12	461
RT Vol	0	26	0	236	12	55
Lane Flow Rate	219	482	85	241	46	543
Geometry Grp	5	5	5	5	4b	4b
Degree of Util (X)	0.45	0.914	0.198	0.485	0.116	1.054
Departure Headway (Hd)	7.544	6.992	8.586	7.4	9.343	6.987
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	480	520	421	491	386	521
Service Time	5.244	4.692	6.286	5.1	7.343	4.987
HCM Lane V/C Ratio	0.456	0.927	0.202	0.491	0.119	1.042
HCM Control Delay, s/veh	16.3	47.4	13.4	16.9	13.6	81
HCM Lane LOS	C	E	B	C	B	F
HCM 95th-tile Q	2.3	10.8	0.7	2.6	0.4	16.1

Intersection	
Intersection Delay, s/veh	40.7
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Future Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	241	21	12	12	219	455	27	16	470	56
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay, s/veh	20.9	12.7	40.3	55.4
HCM LOS	C	B	E	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	23%	47%	3%	0%
Vol Thru, %	0%	94%	3%	27%	97%	0%
Vol Right, %	0%	6%	74%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	472	319	45	477	55
LT Vol	215	0	74	21	16	0
Through Vol	0	446	9	12	461	0
RT Vol	0	26	236	12	0	55
Lane Flow Rate	219	482	326	46	487	56
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.459	0.933	0.625	0.109	0.973	0.101
Departure Headway (Hd)	7.528	6.975	6.908	8.55	7.194	6.458
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	478	520	521	417	501	553
Service Time	5.291	4.738	4.96	6.649	4.953	4.217
HCM Lane V/C Ratio	0.458	0.927	0.626	0.11	0.972	0.101
HCM Control Delay, s/veh	16.6	51.1	20.9	12.7	60.6	9.9
HCM Lane LOS	C	F	C	B	F	A
HCM 95th-tile Q	2.4	11.4	4.3	0.4	12.6	0.3

Intersection	
Intersection Delay, s/veh	39.5
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Future Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	241	21	12	12	219	455	27	16	470	56
Number of Lanes	1	1	0	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	16.5	13.4	39.7	55.3
HCM LOS	C	B	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	47%	3%	0%
Vol Thru, %	0%	94%	0%	4%	27%	97%	0%
Vol Right, %	0%	6%	0%	96%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	472	74	245	45	477	55
LT Vol	215	0	74	0	21	16	0
Through Vol	0	446	0	9	12	461	0
RT Vol	0	26	0	236	12	0	55
Lane Flow Rate	219	482	76	250	46	487	56
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.457	0.93	0.179	0.51	0.116	0.973	0.101
Departure Headway (Hd)	7.503	6.951	8.556	7.345	9.113	7.199	6.464
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	480	520	420	490	392	506	554
Service Time	5.253	4.7	6.305	5.093	7.196	4.947	4.212
HCM Lane V/C Ratio	0.456	0.927	0.181	0.51	0.117	0.962	0.101
HCM Control Delay, s/veh	16.5	50.3	13.2	17.5	13.4	60.5	9.9
HCM Lane LOS	C	F	B	C	B	F	A
HCM 95th-tile Q	2.4	11.3	0.6	2.9	0.4	12.7	0.3

Intersection	
Intersection Delay, s/veh	39.1
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Future Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	241	21	12	12	219	455	27	16	470	56
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	16	13.4	39.4	54.8
HCM LOS	C	B	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	89%	0%	47%	3%	0%
Vol Thru, %	0%	94%	11%	0%	27%	97%	0%
Vol Right, %	0%	6%	0%	100%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	472	83	236	45	477	55
LT Vol	215	0	74	0	21	16	0
Through Vol	0	446	9	0	12	461	0
RT Vol	0	26	0	236	12	0	55
Lane Flow Rate	219	482	85	241	46	487	56
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.456	0.928	0.2	0.489	0.116	0.971	0.101
Departure Headway (Hd)	7.486	6.934	8.496	7.314	9.091	7.185	6.45
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	480	525	423	494	393	506	555
Service Time	5.236	4.684	6.244	5.062	7.172	4.934	4.199
HCM Lane V/C Ratio	0.456	0.918	0.201	0.488	0.117	0.962	0.101
HCM Control Delay, s/veh	16.4	49.9	13.4	16.9	13.4	60	9.9
HCM Lane LOS	C	E	B	C	B	F	A
HCM 95th-tile Q	2.3	11.3	0.7	2.6	0.4	12.6	0.3

Intersection	
Intersection Delay, s/veh	19.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	201	17	10	10	207	355	22	13	390	46
Future Vol, veh/h	62	8	201	17	10	10	207	355	22	13	390	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	205	17	10	10	211	362	22	13	398	47
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay, s/veh	15	11.1	18.3	24.4
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	23%	46%	3%
Vol Thru, %	0%	94%	3%	27%	87%
Vol Right, %	0%	6%	74%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	377	271	37	449
LT Vol	207	0	62	17	13
Through Vol	0	355	8	10	390
RT Vol	0	22	201	10	46
Lane Flow Rate	211	385	277	38	458
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.397	0.664	0.478	0.079	0.747
Departure Headway (Hd)	6.761	6.211	6.223	7.486	5.872
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	528	577	575	481	609
Service Time	4.547	3.996	4.314	5.486	3.953
HCM Lane V/C Ratio	0.4	0.667	0.482	0.079	0.752
HCM Control Delay, s/veh	14	20.6	15	11.1	24.4
HCM Lane LOS	B	C	B	B	C
HCM 95th-tile Q	1.9	4.9	2.6	0.3	6.6

Intersection	
Intersection Delay, s/veh	22.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	201	17	10	10	207	355	22	13	390	46
Future Vol, veh/h	62	8	201	17	10	10	207	355	22	13	390	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	205	17	10	10	211	362	22	13	398	47
Number of Lanes	1	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	2
HCM Control Delay, s/veh	13.5	12.1	18.9	32.2
HCM LOS	B	B	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	46%	3%
Vol Thru, %	0%	94%	0%	4%	27%	87%
Vol Right, %	0%	6%	0%	96%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	377	62	209	37	449
LT Vol	207	0	62	0	17	13
Through Vol	0	355	0	8	10	390
RT Vol	0	22	0	201	10	46
Lane Flow Rate	211	385	63	213	38	458
Geometry Grp	5	5	5	5	4b	4b
Degree of Util (X)	0.403	0.675	0.14	0.399	0.087	0.817
Departure Headway (Hd)	6.872	6.321	7.944	6.74	8.289	6.417
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	520	569	449	531	435	559
Service Time	4.658	4.107	5.737	4.532	6.289	4.495
HCM Lane V/C Ratio	0.406	0.677	0.14	0.401	0.087	0.819
HCM Control Delay, s/veh	14.3	21.4	12	14	12.1	32.2
HCM Lane LOS	B	C	B	B	B	D
HCM 95th-tile Q	1.9	5.1	0.5	1.9	0.3	8.2

Intersection	
Intersection Delay, s/veh	21.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	201	17	10	10	207	355	22	13	390	46
Future Vol, veh/h	62	8	201	17	10	10	207	355	22	13	390	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	205	17	10	10	211	362	22	13	398	47
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	2
HCM Control Delay, s/veh	13.2	12.1	18.8	32
HCM LOS	B	B	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	100%	0%	89%	0%	46%	3%
Vol Thru, %	0%	94%	11%	0%	27%	87%
Vol Right, %	0%	6%	0%	100%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	377	70	201	37	449
LT Vol	207	0	62	0	17	13
Through Vol	0	355	8	0	10	390
RT Vol	0	22	0	201	10	46
Lane Flow Rate	211	385	71	205	38	458
Geometry Grp	5	5	5	5	4b	4b
Degree of Util (X)	0.403	0.674	0.156	0.382	0.087	0.815
Departure Headway (Hd)	6.862	6.312	7.883	6.71	8.274	6.407
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	522	569	452	533	436	564
Service Time	4.646	4.094	5.675	4.501	6.274	4.484
HCM Lane V/C Ratio	0.404	0.677	0.157	0.385	0.087	0.812
HCM Control Delay, s/veh	14.3	21.3	12.1	13.6	12.1	32
HCM Lane LOS	B	C	B	B	B	D
HCM 95th-tile Q	1.9	5.1	0.5	1.8	0.3	8.1

Intersection	
Intersection Delay, s/veh	19.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	201	17	10	10	207	355	22	13	390	46
Future Vol, veh/h	62	8	201	17	10	10	207	355	22	13	390	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	205	17	10	10	211	362	22	13	398	47
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay, s/veh	15	11.2	18.6	24.3
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	23%	46%	3%	0%
Vol Thru, %	0%	94%	3%	27%	97%	0%
Vol Right, %	0%	6%	74%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	377	271	37	403	46
LT Vol	207	0	62	17	13	0
Through Vol	0	355	8	10	390	0
RT Vol	0	22	201	10	0	46
Lane Flow Rate	211	385	277	38	411	47
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.4	0.67	0.479	0.079	0.743	0.075
Departure Headway (Hd)	6.818	6.266	6.235	7.518	6.503	5.773
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	524	573	572	479	551	615
Service Time	4.607	4.055	4.328	5.518	4.294	3.563
HCM Lane V/C Ratio	0.403	0.672	0.484	0.079	0.746	0.076
HCM Control Delay, s/veh	14.1	21	15	11.2	26	9
HCM Lane LOS	B	C	B	B	D	A
HCM 95th-tile Q	1.9	5	2.6	0.3	6.4	0.2

Intersection	
Intersection Delay, s/veh	19.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	201	17	10	10	207	355	22	13	390	46
Future Vol, veh/h	62	8	201	17	10	10	207	355	22	13	390	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	205	17	10	10	211	362	22	13	398	47
Number of Lanes	1	1	0	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	13.4	11.9	18.7	24.6
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	46%	3%	0%
Vol Thru, %	0%	94%	0%	4%	27%	97%	0%
Vol Right, %	0%	6%	0%	96%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	377	62	209	37	403	46
LT Vol	207	0	62	0	17	13	0
Through Vol	0	355	0	8	10	390	0
RT Vol	0	22	0	201	10	0	46
Lane Flow Rate	211	385	63	213	38	411	47
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.402	0.673	0.138	0.396	0.085	0.748	0.076
Departure Headway (Hd)	6.853	6.302	7.881	6.681	8.151	6.547	5.817
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	522	569	452	535	442	547	611
Service Time	4.637	4.086	5.675	4.473	6.151	4.333	3.602
HCM Lane V/C Ratio	0.404	0.677	0.139	0.398	0.086	0.751	0.077
HCM Control Delay, s/veh	14.2	21.2	11.9	13.8	11.9	26.4	9.1
HCM Lane LOS	B	C	B	B	B	D	A
HCM 95th-tile Q	1.9	5.1	0.5	1.9	0.3	6.5	0.2

Intersection	
Intersection Delay, s/veh	19.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	201	17	10	10	207	355	22	13	390	46
Future Vol, veh/h	62	8	201	17	10	10	207	355	22	13	390	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	205	17	10	10	211	362	22	13	398	47
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	13.1	11.9	18.7	24.5
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	89%	0%	46%	3%	0%
Vol Thru, %	0%	94%	11%	0%	27%	97%	0%
Vol Right, %	0%	6%	0%	100%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	377	70	201	37	403	46
LT Vol	207	0	62	0	17	13	0
Through Vol	0	355	8	0	10	390	0
RT Vol	0	22	0	201	10	0	46
Lane Flow Rate	211	385	71	205	38	411	47
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.402	0.673	0.155	0.379	0.085	0.747	0.076
Departure Headway (Hd)	6.845	6.295	7.822	6.653	8.14	6.54	5.81
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	524	569	456	537	443	551	612
Service Time	4.627	4.076	5.615	4.445	6.14	4.325	3.595
HCM Lane V/C Ratio	0.403	0.677	0.156	0.382	0.086	0.746	0.077
HCM Control Delay, s/veh	14.2	21.2	12.1	13.5	11.9	26.3	9.1
HCM Lane LOS	B	C	B	B	B	D	A
HCM 95th-tile Q	1.9	5.1	0.5	1.8	0.3	6.4	0.2

Intersection	
Intersection Delay, s/veh	40.3
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Future Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	244	21	12	12	247	436	27	16	474	56
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay, s/veh	21.1	12.7	34.7	61.5
HCM LOS	C	B	D	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	23%	47%	3%
Vol Thru, %	0%	94%	3%	27%	87%
Vol Right, %	0%	6%	74%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	453	322	45	536
LT Vol	242	0	74	21	16
Through Vol	0	427	9	12	465
RT Vol	0	26	239	12	55
Lane Flow Rate	247	462	329	46	547
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.514	0.891	0.631	0.111	0.99
Departure Headway (Hd)	7.497	6.943	6.913	8.664	6.513
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	479	522	522	416	558
Service Time	5.266	4.712	4.973	6.664	4.571
HCM Lane V/C Ratio	0.516	0.885	0.63	0.111	0.98
HCM Control Delay, s/veh	18	43.6	21.1	12.7	61.5
HCM Lane LOS	C	E	C	B	F
HCM 95th-tile Q	2.9	10.1	4.3	0.4	13.9

Intersection	
Intersection Delay, s/veh	46.7
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Future Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	244	21	12	12	247	436	27	16	474	56
Number of Lanes	1	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	2
HCM Control Delay, s/veh	16.7	13.6	33.9	84.1
HCM LOS	C	B	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	47%	3%
Vol Thru, %	0%	94%	0%	4%	27%	87%
Vol Right, %	0%	6%	0%	96%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	453	74	248	45	536
LT Vol	242	0	74	0	21	16
Through Vol	0	427	0	9	12	465
RT Vol	0	26	0	239	12	55
Lane Flow Rate	247	462	76	253	46	547
Geometry Grp	5	5	5	5	4b	4b
Degree of Util (X)	0.51	0.883	0.176	0.512	0.116	1.064
Departure Headway (Hd)	7.584	7.029	8.646	7.43	9.373	7.004
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	479	518	418	488	385	525
Service Time	5.284	4.729	6.346	5.13	7.373	5.002
HCM Lane V/C Ratio	0.516	0.892	0.182	0.518	0.119	1.042
HCM Control Delay, s/veh	17.9	42.4	13.2	17.7	13.6	84.1
HCM Lane LOS	C	E	B	C	B	F
HCM 95th-tile Q	2.8	9.8	0.6	2.9	0.4	16.5

Intersection	
Intersection Delay, s/veh	46.1
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Future Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	244	21	12	12	247	436	27	16	474	56
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	2
HCM Control Delay, s/veh	16.1	13.6	33.5	83.1
HCM LOS	C	B	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	100%	0%	89%	0%	47%	3%
Vol Thru, %	0%	94%	11%	0%	27%	87%
Vol Right, %	0%	6%	0%	100%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	453	83	239	45	536
LT Vol	242	0	74	0	21	16
Through Vol	0	427	9	0	12	465
RT Vol	0	26	0	239	12	55
Lane Flow Rate	247	462	85	244	46	547
Geometry Grp	5	5	5	5	4b	4b
Degree of Util (X)	0.508	0.88	0.198	0.491	0.116	1.061
Departure Headway (Hd)	7.565	7.011	8.583	7.397	9.346	6.985
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	479	522	421	490	386	525
Service Time	5.265	4.711	6.283	5.097	7.346	4.985
HCM Lane V/C Ratio	0.516	0.885	0.202	0.498	0.119	1.042
HCM Control Delay, s/veh	17.8	41.9	13.4	17	13.6	83.1
HCM Lane LOS	C	E	B	C	B	F
HCM 95th-tile Q	2.8	9.7	0.7	2.7	0.4	16.4

Intersection	
Intersection Delay, s/veh	39.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Future Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	244	21	12	12	247	436	27	16	474	56
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay, s/veh	21.1	12.7	35.6	57.6
HCM LOS	C	B	E	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	23%	47%	3%	0%
Vol Thru, %	0%	94%	3%	27%	97%	0%
Vol Right, %	0%	6%	74%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	453	322	45	481	55
LT Vol	242	0	74	21	16	0
Through Vol	0	427	9	12	465	0
RT Vol	0	26	239	12	0	55
Lane Flow Rate	247	462	329	46	491	56
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.518	0.898	0.63	0.109	0.983	0.101
Departure Headway (Hd)	7.552	6.997	6.902	8.557	7.212	6.476
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	477	518	522	416	501	552
Service Time	5.315	4.759	4.953	6.654	4.969	4.233
HCM Lane V/C Ratio	0.518	0.892	0.63	0.111	0.98	0.101
HCM Control Delay, s/veh	18.2	44.9	21.1	12.7	63	10
HCM Lane LOS	C	E	C	B	F	A
HCM 95th-tile Q	2.9	10.3	4.3	0.4	13	0.3

Intersection	
Intersection Delay, s/veh	38.5
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Future Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	244	21	12	12	247	436	27	16	474	56
Number of Lanes	1	1	0	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	16.7	13.4	35.3	58
HCM LOS	C	B	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	47%	3%	0%
Vol Thru, %	0%	94%	0%	4%	27%	97%	0%
Vol Right, %	0%	6%	0%	96%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	453	74	248	45	481	55
LT Vol	242	0	74	0	21	16	0
Through Vol	0	427	0	9	12	465	0
RT Vol	0	26	0	239	12	0	55
Lane Flow Rate	247	462	76	253	46	491	56
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.517	0.896	0.18	0.517	0.116	0.985	0.101
Departure Headway (Hd)	7.533	6.979	8.566	7.355	9.128	7.226	6.491
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	479	518	419	491	392	501	552
Service Time	5.282	4.727	6.312	5.1	7.209	4.973	4.238
HCM Lane V/C Ratio	0.516	0.892	0.181	0.515	0.117	0.98	0.101
HCM Control Delay, s/veh	18.1	44.5	13.2	17.8	13.4	63.5	10
HCM Lane LOS	C	E	B	C	B	F	A
HCM 95th-tile Q	2.9	10.2	0.6	2.9	0.4	13.1	0.3

Intersection	
Intersection Delay, s/veh	38.1
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Future Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	244	21	12	12	247	436	27	16	474	56
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	16.1	13.4	34.9	57.5
HCM LOS	C	B	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	89%	0%	47%	3%	0%
Vol Thru, %	0%	94%	11%	0%	27%	97%	0%
Vol Right, %	0%	6%	0%	100%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	453	83	239	45	481	55
LT Vol	242	0	74	0	21	16	0
Through Vol	0	427	9	0	12	465	0
RT Vol	0	26	0	239	12	0	55
Lane Flow Rate	247	462	85	244	46	491	56
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.515	0.893	0.2	0.496	0.116	0.983	0.101
Departure Headway (Hd)	7.512	6.958	8.504	7.322	9.103	7.21	6.475
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	479	522	423	493	393	506	553
Service Time	5.263	4.709	6.251	5.069	7.183	4.958	4.223
HCM Lane V/C Ratio	0.516	0.885	0.201	0.495	0.117	0.97	0.101
HCM Control Delay, s/veh	18	43.9	13.4	17.1	13.4	62.9	10
HCM Lane LOS	C	E	B	C	B	F	A
HCM 95th-tile Q	2.9	10.1	0.7	2.7	0.4	13	0.3

TRAFFIC IMPACT ANALYSIS

67TH AVENUE FUEL STATION

JURISDICTION: CITY OF MARYSVILLE, WA
LOCATION: 100TH STREET NE, WEST OF 67TH AVENUE NE

Prepared for:
Meydenbauer Group
1205 Willows Road NE
Redmond, Washington 98052

Prepared by:
Kimley»Horn

March 2024
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TRAFFIC IMPACT ANALYSIS

FOR

67TH AVENUE FUEL STATION

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1. DEVELOPMENT IDENTIFICATION

Kimley-Horn and Associates, Inc. (Kimley-Horn) has been retained to provide a traffic impact analysis for the 67th Avenue Fuel Station (Development). This report is intended to provide the City of Marysville (City) and Snohomish County (County) with the necessary traffic generation, trip distribution, and mitigation fee determination to facilitate their reviews of the Development. The Development is located on the west side of 67th Avenue NE, north of 100th Street NE. A site vicinity map is included in **Figure 1**. The Development is proposed to consist of 12 pump stations and a convenience Store. The site is currently listed as undeveloped per the *Snohomish County Online Property Information (SCOPI)* web map. The site will primarily access the City street network via two proposed accesses, one connected to 100th Street NE and one connected to 67th Avenue NE.

Brad Lincoln, responsible for this report and traffic analysis, is a licensed professional engineer (Civil) in the State of Washington and member of the Washington State section of the Institute of Transportation Engineers (ITE).

Figure 1: Site Vicinity Map

2. METHODOLOGY

Congestion at intersections and along arterials is generally measured in terms of level of service (LOS). In accordance with *Highway Capacity Manual (HCM), 6th Edition* by the Transportation Research Board, road facilities and intersections are rated between LOS A and LOS F, with LOS A being free flow and LOS F being forced flow or over-capacity conditions. The LOS at signalized, roundabout, and all-way stop-controlled intersections is based on the average delay of all approaches. The LOS for two-way stop-controlled intersections is based on average delays for the critical stopped approach. Geometric characteristics and conflicting traffic movements are taken into consideration when determining LOS values. A summary of the intersection LOS criteria is included in **Table 1**.

Table 1: Level of Service Criteria

Level of Service[1]	Expected Delay	Intersection Control Delay (Seconds per Vehicle)	
		Unsignalized Intersections	Signalized Intersections
A	Little/No Delay	≤10	≤10
B	Short Delays	>10 and ≤15	>10 and ≤20
C	Average Delays	>15 and ≤25	>20 and ≤35
D	Long Delays	>25 and ≤35	>35 and ≤55
E	Very Long Delays	>35 and ≤50	>55 and ≤80
F	Extreme Delays[2]	>50	>80

The LOS at two-way stop-controlled intersections is based on the average delay for the stopped approach with the highest delay. The LOS at all-way stop-controlled intersections and signalized intersections is based on the average delay for all vehicles. The LOS analysis for unsignalized and signalized intersections has been performed utilizing the *Synchro 11* software. The City identifies acceptable level of service for intersections as LOS D for the intersections analyzed as part of this report.

The trip generation calculations for the Development are based on average trip generation rates published in the ITE *Trip Generation Manual, 11th Edition (2021)*. The opening year has been estimated for the year 2026, which accounts for a two-year construction window.

[1] **Source:** *Highway Capacity Manual, 6th Edition.*
LOS A: Free-flow traffic conditions, with minimal delay to stopped vehicles (no vehicle is delayed longer than one cycle at signalized intersection).
LOS B: Generally stable traffic flow conditions.
LOS C: Occasional back-ups may develop but delay to vehicles is short term and still tolerable.
LOS D: During short periods of the peak hour, delays to approaching vehicles may be substantial but are tolerable during times of less demand (i.e., vehicles delayed one cycle or less at signal).
LOS E: Intersections operate at or near capacity, with long queues developing on all approaches and long delays.
LOS F: Jammed conditions on all approaches with excessively long delays and vehicles unable to move at times.
[2] When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection.

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3. TRIP GENERATION

The Development is proposed to consist of 12 pump stations and a convenience store, and the site is currently undeveloped. The trip generation calculations have been performed using data published by the ITE *Trip Generation Manual, 11st Edition* (*2021*). The average trip generation rates for ITE Land Use Codes (LUC) 945, Convenience Store/Gas Station, have been used for the trip generation calculations.

Pass-by reductions have been applied to the trip generation calculations. These reductions account for trips currently on the roadway that will visit the Development and are not considered new trips generated by the Development. A pass-by reduction of 75% has been applied to the gas station based on data published by ITE. The trip generation after pass-by reductions for the Development have been summarized in **Table 2**.

Table 2: Trip Generation Summary

Land Use	Size	Average Daily Trips (ADTs)	PM Peak-Hour Trips		
			In	Out	Total
Convenience Store/Gas Station ITE LUC 945	12 Pumps	3,181	111	110	221
Pass-By Trips		2,386	83	83	166
Net New Trips		795	28	27	55

The Development is anticipated to generate approximately 795 new ADTs with 55 new PM peak-hour trips. The trip generation calculations are provided in **Appendix A**.

4. TRIP DISTRIBUTION

The trip distribution for the Development is based on comparison of 87th Avenue NE North and 136th Street Industrial distributions established by the City since the site is in the middle of the two areas. The trip distributions for the Development during the opening and horizon years are:

- 30% to and from the north along 83rd Avenue NE
- 28% to and from the east
  - 20% to and from the south along SR-9
  - 5% to and from the east along SR-92
  - 3% to and from the north along SR-9
- 22% to and from the south along 83rd Avenue NE
- 20% to and from the west along 44th Street NE

Detailed trip distributions for the PM peak-hour during existing conditions are shown in **Figure 2**. The established trip distributions are provided in **Appendix B**.

N
NOT TO SCALE

152ND STREET NE
84
51ST AVENUE NE
67TH AVENUE NE
67TH AVENUE NE AT
108TH STREET NE
82
4
4
4
4
67TH AVENUE NE AT
132ND STREET NE
83
3
1
3
1
67TH AVENUE NE AT
152ND STREET NE
84
2
1
1
2
SR-9 AT
84TH STREET NE
98
1
1
1
1
1
5%
LOCAL
1
39
1
10%
3
80
3
132ND STREET NE
83
15%
4
119
4
82
108TH STREET NE
30%
8
238
8
10%
LOCAL
3
80
3
SHOULTES ROAD
SITE
1
39
2
5%
100TH STREET NE
100TH STREET NE
LOCAL
4
119
4
15%
40%
11
319
11
9
88TH STREET NE
3
80
3
10%
INGRAHAM BOULEVARD
LOCAL
3
80
3
10%
84TH STREET NE
98
5
159
5
20%
51ST AVENUE NE
51ST AVENUE NE
67TH AVENUE NE

XX% Trip Distribution %
X Key Intersection
Development Site
Inbound Trip Path
Outbound Trip Path
AWDT
Outbound Trips
Inbound Trips

Kimley»Horn

FIGURE 2 - PM PEAK-HOUR TRIP DISTRIBUTION
67TH AVENUE GAS STATION - MARYSVILLE,

5. INTERSECTION ANALYSIS

The level of service analysis has been performed for the PM peak-hour (4:00pm – 6:00pm), which is when volumes on roadways are typically highest and when intersection operations are typically at their worst levels of service.

The following intersections have been analyzed for the weekday PM peak-hour:

1. 67th Avenue NE at 88th Street NE
2. 100th Street NE at South Access Driveway
3. 67th Avenue NE at 100th Street NE
4. 67th Avenue NE at East Access Driveway
5. 67th Avenue NE at 108th Street NE

The intersections have been analyzed for the 2023 existing, 2026 opening year baseline and future, and 2032 horizon year baseline and future for PM peak-hour conditions.

5.1. Turning Movements

5.1.1. Snohomish County Intersections

The interlocal agreement between the City and County requires detailed development trip turning movement data at County key intersections impacted with three or more directional trips on an approach or departure. The trips generated by the Development will impact four key intersections during the PM Peak-hour. The PM peak-hour key intersection impacts are shown in tabular form in **Table 3**.

Table 3: Key Intersection Volumes –PM Peak Hour

Intersection	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
#82: 67th Avenue NE at 108th St NE	0	0	4	0	0	0	4	4	0	0	4	0
#83: 67th Avenue NE at 132nd Street NE	0	0	1	0	0	0	1	3	0	0	3	0
#84: 67th Avenue NE at 152nd Street NE	0	0	1	0	0	0	1	2	0	0	2	0
#98: SR-9 at 84th Street NE	1	1	1	0	1	0	1	0	0	0	0	1

The key intersection impacts are also shown in graphical form in **Figure 2** for the PM peak-hour.

5.1.2. Volume Development

The existing PM peak-hour turning movements at the study intersections were collected by the independent count firm Traffic Data Gathering (TDG) in November 2023. The 2023 existing turning movements at the study intersections are shown in **Figure 3**. The count data is included in **Appendix B**.

The future analysis has been performed for an opening year of 2026, which represents when the Development is expected to be constructed. The 2026 opening year baseline turning movements have been calculated by applying a 3% annually compounding growth rate applied to the 2023 existing turning movements. The 2026 opening year baseline turning movements at the study intersections are shown in **Figure 4**. The 2026 opening year future with development turning movements at the study intersections have been calculated by adding the trips generated by the Development to the 2026 opening year baseline turning movements. The 2026 opening year future with development turning movements are shown in **Figure 5**. The pipeline data is included with the existing count data in **Appendix B**.

The study intersections have also been analyzed for the 2032 horizon year conditions (baseline and with development). The horizon year analysis accounts for the typical six-year concurrency period after the expected opening year. The 2032 horizon year baseline turning movements have been calculated using the same 3% annually compounding growth rate. The 2032 horizon year baseline turning movements at the study intersections are shown in **Figure 6**. The 2032 horizon year future with development turning movements at the study intersections have been calculated by adding the trips generated by the Development to the 2032 horizon year baseline turning movements. The 2032 horizon year future with development turning movements are shown in **Figure 7**. The turning movement calculations are included in **Appendix C**.

N
NOT TO SCALE

152ND STREET NE
51ST AVENUE NE
67TH AVENUE NE
132ND STREET NE
108TH STREET NE
SHOULTES ROAD
100TH STREET NE
88TH STREET NE
84TH STREET NE
INGRAHAM BOULEVARD

SITE

67TH AVENUE NE AT 88TH STREET NE

1

↖ 75 ← 377 ↙ 139	↖ 127 ← 188 ↖ 23
82 ↗ 287 → 175 ↘	↖ 142 ← 370 ↖ 44

S SITE ACCESS AT 100TH STREET NE

2

← 216	
245 →	

67TH AVENUE NE AT 100TH STREET NE

3

↖ 42 ← 353 ↙ 12	↖ 9 ← 9 ↖ 16
57 ↗ 7 → 181 ↘	↖ 165 ← 342 ↖ 20

E SITE ACCESS AT 67TH AVENUE NE

4

← 398	
	396 →

67TH AVENUE NE AT 108TH STREET NE

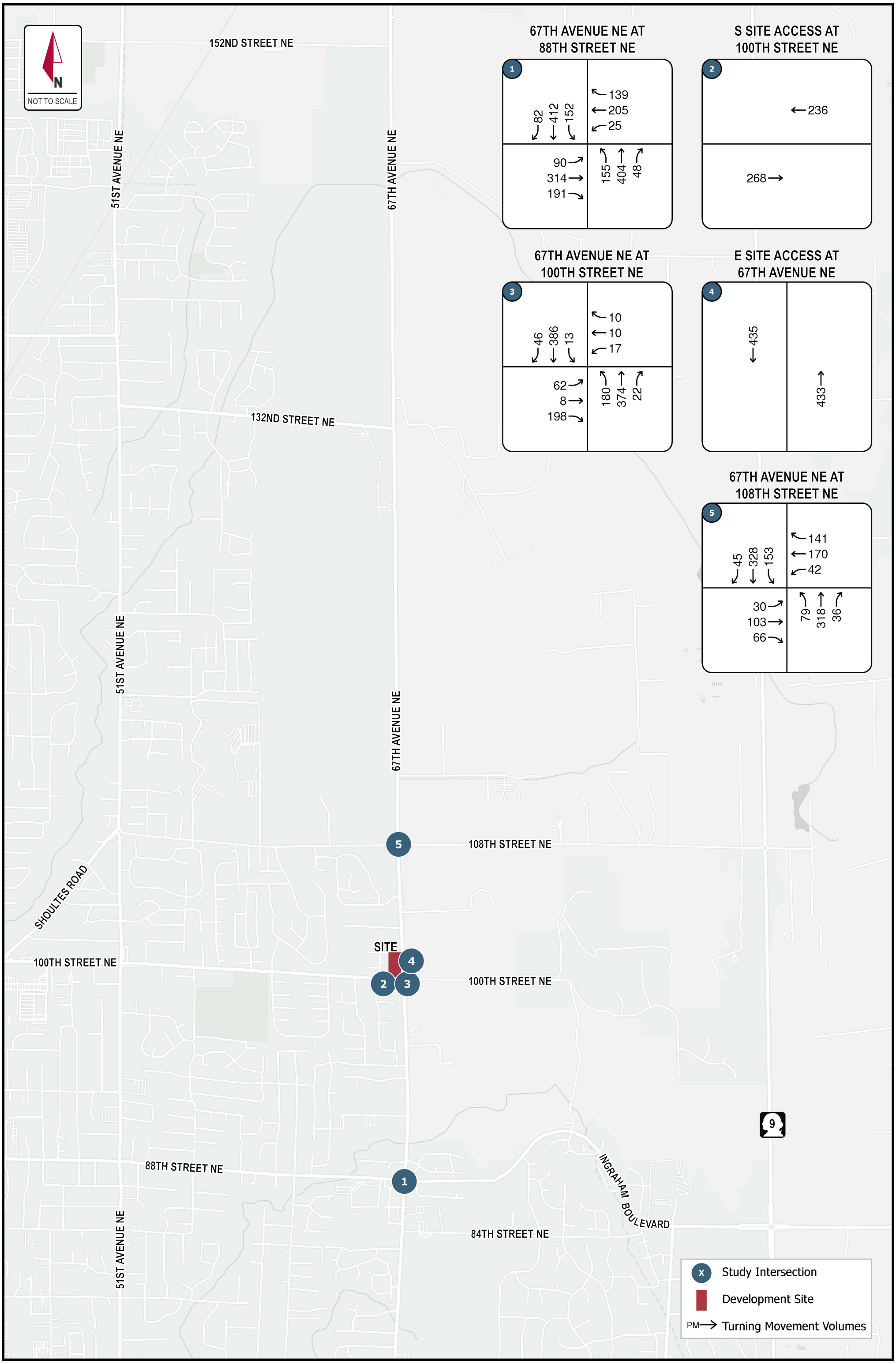
5

↙ 41 ← 300 ↙ 140	↖ 129 ← 156 ↖ 38
27 ↘ 94 → 60 ↘	↖ 72 ← 291 ↖ 33

x Study Intersection
Development Site
PM → Turning Movement Volumes

Kimley»Horn

FIGURE 3 - 2023 EXISTING PM VOLUMES
67TH AVENUE GAS STATION - MARYSVILLE,



Kimley»Horn

FIGURE 4 - 2026 OPENING YEAR - BASELINE PM VOLUMES

67TH AVENUE GAS STATION - MARYSVILLE,

NOT TO SCALE

152ND STREET NE

51ST AVENUE NE

67TH AVENUE NE

132ND STREET NE

108TH STREET NE

SHOULTES ROAD

SITE

100TH STREET NE

88TH STREET NE

84TH STREET NE

INGRAHAM BOULEVARD

9

67TH AVENUE NE AT 88TH STREET NE

1

↖85 ←417 ←155	↖142 ←205 ↖25
93↗ 314→ 191↘	↖155 409→ 48↗

S SITE ACCESS AT 100TH STREET NE

2

↖8 ↙21	↖31 ←236
26↗ 251→	

67TH AVENUE NE AT 100TH STREET NE

3

↖46 ←393 ↖13	↖10 ←10 ↖17
62↗ 8→ 202↘	↖211 354→ 22↗

E SITE ACCESS AT 67TH AVENUE NE

4

↖37 ←406	
45↗ 36↘	↖17 396→

67TH AVENUE NE AT 108TH STREET NE

5

↖45 ↙332 ↙153	↖141 ←170 ↖42
30↗ 103→ 70↘	↖83 ↑322 ↗36

x Study Intersection

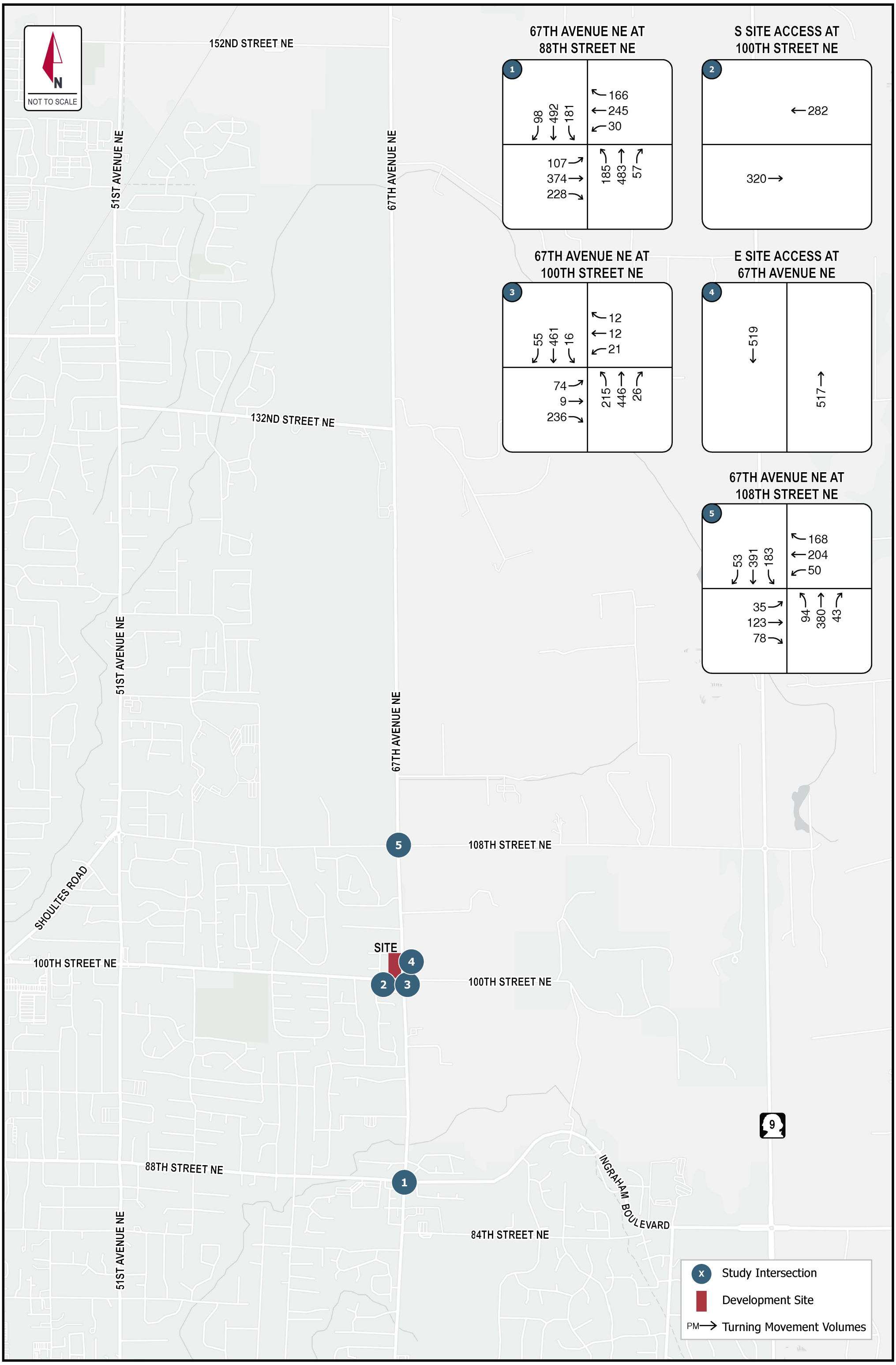
Development Site

PM→ Turning Movement Volumes

Kimley»Horn

FIGURE 5 - 2026 OPENING YEAR - FUTURE WITH DEVELOPMENT PM VOLUMES

67TH AVENUE GAS STATION - MARYSVILLE,



Kimley»Horn

FIGURE 6 - 2032 HORIZON YEAR - BASELINE PM VOLUMES

67TH AVENUE GAS STATION - MARYSVILLE,

N
NOT TO SCALE

152ND STREET NE
51ST AVENUE NE
67TH AVENUE NE
132ND STREET NE
108TH STREET NE
SHOULTES ROAD
100TH STREET NE
88TH STREET NE
84TH STREET NE
INGRAHAM BOULEVARD
SITE

67TH AVENUE NE AT 88TH STREET NE

1

↙101 ←497 ↖184	↖169 ←245 ↖30
110→ 374→ 228↘	185↗ 488↑ 57↗

S SITE ACCESS AT 100TH STREET NE

2

8↙ 21↙	↖31 ←282
26→ 303→	

67TH AVENUE NE AT 100TH STREET NE

3

↙55 ←468 ↙16	↖12 ←12 ↖21
74→ 9→ 240↘	246↗ 426↑ 26↗

E SITE ACCESS AT 67TH AVENUE NE

4

↙37 ←490	
45→ 36↘	17↗ 480↑

67TH AVENUE NE AT 108TH STREET NE

5

↙53 ↙395 ↙183	↖168 ←204 ↖50
35↘ 123→ 82↘	98↗ 384↑ 43↗

x Study Intersection
Development Site
PM→ Turning Movement Volumes

Kimley»Horn

FIGURE 7 - 2032 HORIZON YEAR - FUTURE PM VOLUMES
67TH AVENUE GAS STATION - MARYSVILLE,

5.2. Level of Service Calculations

Level of service was analyzed for current and future operations using *Synchro, Version 11* traffic simulation software. The existing conditions was analyzed using the 2023 collected traffic count data, existing intersection control, channelization, peak-hour factors, and heavy vehicle factors from the 2023 turning movement counts. The level of service summary for the existing conditions is included in **Table 4**.

Table 4. Level of Service Summary – 2023 Existing

Intersection	Approach	LOS	Delay (sec)
1. 67th Avenue NE at 88th Street NE	Signalized	C	20.5
3. 67th Avenue NE at 100th Street NE	All-Way Stop Control	C	16.2
5. 67th Avenue NE at 108th Street NE	All-Way Stop Control	C	23.4

The level of service summary for the 2026 opening-year is included in **Table 5**.

Table 5: Level of Service Summary – 2026 Opening-Year

Intersection	Approach	2026 Baseline		2026 Future w Dev.	
		LOS	Delay (sec)	LOS	Delay (sec)
1. 67th Avenue NE at 88th Street NE	Signalized	C	22.0	C	22.2
2. S Site Access at 100th Street NE	Two-Way Stop Control	-	-	B	12.6
3. 67th Avenue NE at 100th Street NE	All-Way Stop Control	C	19.7	C	19.6
4. E Site Access at 67th Avenue NE	Two-Way Stop Control	-	-	C	17.4
5. 67th Avenue NE at 108th Street NE	All-Way Stop Control	D	33.9	E	35.7

The level of service summary for the 2032 horizon-year is included in **Table 6** for the PM peak-hour.

Table 6: Level of Service Summary – 2032 Horizon-Year

Intersection	Approach	2032 Baseline		2032 Future w Dev.	
		LOS	Delay (sec)	LOS	Delay (sec)
1. 67th Avenue NE at 88th Street NE	Signalized	C	28.0	C	28.3
2. S Site Access at 100th Street NE	Two-Way Stop Control	-	-	B	13.7
3. 67th Avenue NE at 100th Street NE	All-Way Stop Control	E	41.6	E	40.9
4. E Site Access at 67th Avenue NE	Two-Way Stop Control	-	-	C	21.7
5. 67th Avenue NE at 108th Street NE	All-Way Stop Control	F	81.6	F	84.3

The analysis shows that the study intersections currently operate at LOS C during the PM peak-hour during 2023 existing conditions. The study intersections are anticipated to operate at LOS D or better for most 2026 opening-year baseline and future with development conditions except the intersection of 67th Avenue NE at 108th Street NE, which operates at LOS E. Most study intersections are anticipated to operate at LOS C or better for 2032 horizon-year baseline and future conditions except the intersection of 67th Avenue NE at 100th Street NE which operates at LOS E, and 67th Avenue NE at 108th Street NE, which operates at LOS F. The intersection LOS calculations are provided in the **Appendix D**.

5.3. Improvement Analysis

The analysis shows that the intersection of 67th Avenue NE at 100th Street NE will operate below LOS D under the 2032 horizon year conditions, even without the Development, and 67th Avenue NE at 108th Street NE will operate below LOS D under the opening conditions with the Development. There are not planned improvements for the intersection of 67th Avenue NE at 100th Street NE, but the Marysville Transportation Element, published in 2015, identifies the intersection of 67th Avenue NE at 108th Street NE as a long-range intersection project to add turn lane(s) and a traffic signal when warranted. Additional coordination will be required with City staff to determine appropriate and proportionate fees or improvements to address these impacts.

6. COLLISION ANALYSIS

Collision data was obtained from Washington State Department of Transportation (WSDOT) for the time period between January 1, 2018, through December 31, 2022. The number of collisions and types of collisions at the study intersections are summarized in **Table 7**.

Table 7: Collision Type Summary

Intersection		Collision Type						Total
		Angle	Left-Turn	Rear-End	SS Opposite	SS Same	Fixed Object/ Other	
1.	67th Avenue NE at 88th Street NE	9	9	4	1	3	2	28
3.	67th Avenue NE at 100th Street NE	3	0	3	1	0	2	9
5.	67th Avenue NE at 108th Street NE	9	3	1	0	0	3	16
TOTAL		21	12	8	2	3	7	53

The collision data shows a total of 53 collisions at the three study intersections. The intersection of 67th Avenue NE at 88th Street NE had 28 of 53 of the total crashes for the study area, 9 of which were angle crashes, and 9 left-turn crashes. There were no fatalities reported during the five-year period at the study intersections.

The collision rates at the study intersections have also been evaluated. The collisions per million entering vehicles (MEV) is the standard rate for intersections. The daily trips at the study intersection have been estimated using a rate of ten daily trips to one PM peak-hour trip. The collision rates at the study intersections are summarized in **Table 8**.

Table 8: Collision Rate Summary

Intersection	Total Collisions	Collisions per Year		Collision Rate (per MEV)[3]		
		Years	Rate	ADT	Years	Rate
1. 67th Avenue NE at 88th Street NE	28	5	5.6	20,290	5	0.76
2. 67th Avenue NE at 100th Street NE	9	5	0.2	12,130	5	0.41
3. 67th Avenue NE at 108th Street NE	16	5	0.6	13,810	5	0.63

A collision rate of more than 1.0 per million entering vehicles (MEV) is generally used to determine when a more detailed safety analysis is required. The collision rates show that none of the study intersections in the vicinity of the Development have a rate more than 1.0 collisions per MEV at each intersection. Additional analysis of the collision history should therefore not be required. The collision data is provided in **Appendix E**.

7. Site Access

The Development is proposed to two access points. One driveway on the south side of the Development with direct access to 100th Street NE and one driveway on the east side of the Development with direct access to 67th Avenue NE. The access locations appear to have adequate sight distance, based on preliminary evaluations.

8. Transportation Impact Fees

The City has interlocal agreements with the County and WSDOT for transportation impact fees. These transportation impact fees are based on the area wide traffic mitigation fee or actual impacts to improvement projects.

8.1. City of Marysville

The City traffic mitigation fees have been calculated using the commercial rates of $2,220 per PM peak-hour trip. The Development will generate 55 new PM peak-hour trips. The City traffic mitigation fees for the Development should therefore be $122,100.00.

8.2. Snohomish County

The City and County have an interlocal agreement that provides for the payment of traffic mitigation for impacts to County roadways by City developments. Traffic mitigation fees are based on predetermined area impacts or impacts to actual improvement projects. There are not any County projects listed in the Transportation Needs Report that are anticipated to be impacted by three directional PM peak-hour trips generated by the Development. County traffic mitigation fees should therefore not be required for the Development.

[3] The collision rate is based on Million Entering Vehicles.

8.3. Washington State Department of Transportation

The WSDOT mitigation fees are based on impacts to improvement projects identified in the Exhibit C List included in the interlocal agreement between the County and WSDOT. There are not any WSDOT intersections on the Exhibit C List that will be impacted by three directional PM peak-hour trips generated by the Development. WSDOT transportation impact fees should therefore not be required for the Development.

9. CONCLUSIONS

The Development is proposed to consist of 12 pump stations and a convenience store. The site is currently listed as unoccupied. The Development is anticipated to generate approximately 795 new ADTs with approximately 55 new PM peak-hour trips. The City traffic mitigation fees for the Development should therefore be $122,100.00. Additional discussions with City staff will be required to determine if additional fees or improvements are required for impacts to the intersections of 67th Avenue NE at 100th Street NE and 108th Street NE. Neither County nor WSDOT traffic mitigation fees should be required for the Development.

APPENDIX A

TRIP GENERATION CALCULATIONS

67th Ave Gas Station
KH #090223182

Trip Generation for: **Weekday**
(a.k.a.): **Average Weekday Daily Trips (AWDT)**

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Convenience Store/Gas Station (2-4k GFA)	12 units	945	265.12	50%	50%	3181	0%	0	3181	75%	2386	0%	0	795	1193	1193	0	0	398	397
Total						3181		0	3181		2386		0	795	1193	1193	0	0	398	397

67th Ave Gas Station
KH #090223182

Trip Generation for: **Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 4 and 6 PM**
(a.k.a.): **Weekday PM Peak Hour**

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Convenience Store/Gas Station (2-4k GFA)	12 units	945	18.42	50%	50%	221	0%	0	221	75%	166	0%	0	55	83	83	0	0	28	27
Total						221		0	221		166		0	55	83	83	0	0	28	27

APPENDIX B

DISTRIBUTION DATA

136TH ST INDUSTRIAL - EXISTING

City of Marysville

November 2017

- Marysville City Limits
- Other City Limits
- Urban Growth Boundary
- Tulalip Reservation
- Parks and open space
- Interstate Highway
- State Highway
- Arterial
- Schools

N

0 2,000 4,000 6,000 Feet

produced by City of Marysville GIS

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136TH ST INDUSTRIAL - HORIZON

N

City of Marysville

City Limits
City of Marysville Urban Growth Area
Tulalip Reservation
Park
City Park
Fire Station
Police Station
School
Street
Burlington Norther RR
Trails

Marysville Street Classification
Interstate
State Highway
Principal Arterial
Minor Arterial
Collector Arterial
Future Arterial

0 1,250 2,500 5,000 7,500 10,000 Feet

Map Plotted: May, 2018

CITY OF Marysville WASHINGTON

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87TH AVE NORTH - EXISTING

City of Marysville

November 2017

- Marysville City Limits
- Other City Limits
- Urban Growth Boundary
- Tulalip Reservation
- Parks and open space
- Interstate Highway
- State Highway
- Arterial
- Schools

N

0 2,000 4,000 6,000 Feet

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87TH AVE NORTH - HORIZON

N

City of Marysville

City Limits
City of Marysville Urban Growth Area
Tulalip Reservation
Park
City Park

Fire Station
Police Station
School
Street
Burlington Norther RR
Trails

Marysville Street Classification
Interstate
State Highway
Principal Arterial
Minor Arterial
Collector Arterial
Future Arterial

0 1,250 2,500 5,000 7,500 10,000 Feet

Map Plotted: May, 2018

CITY OF Marysville WASHINGTON

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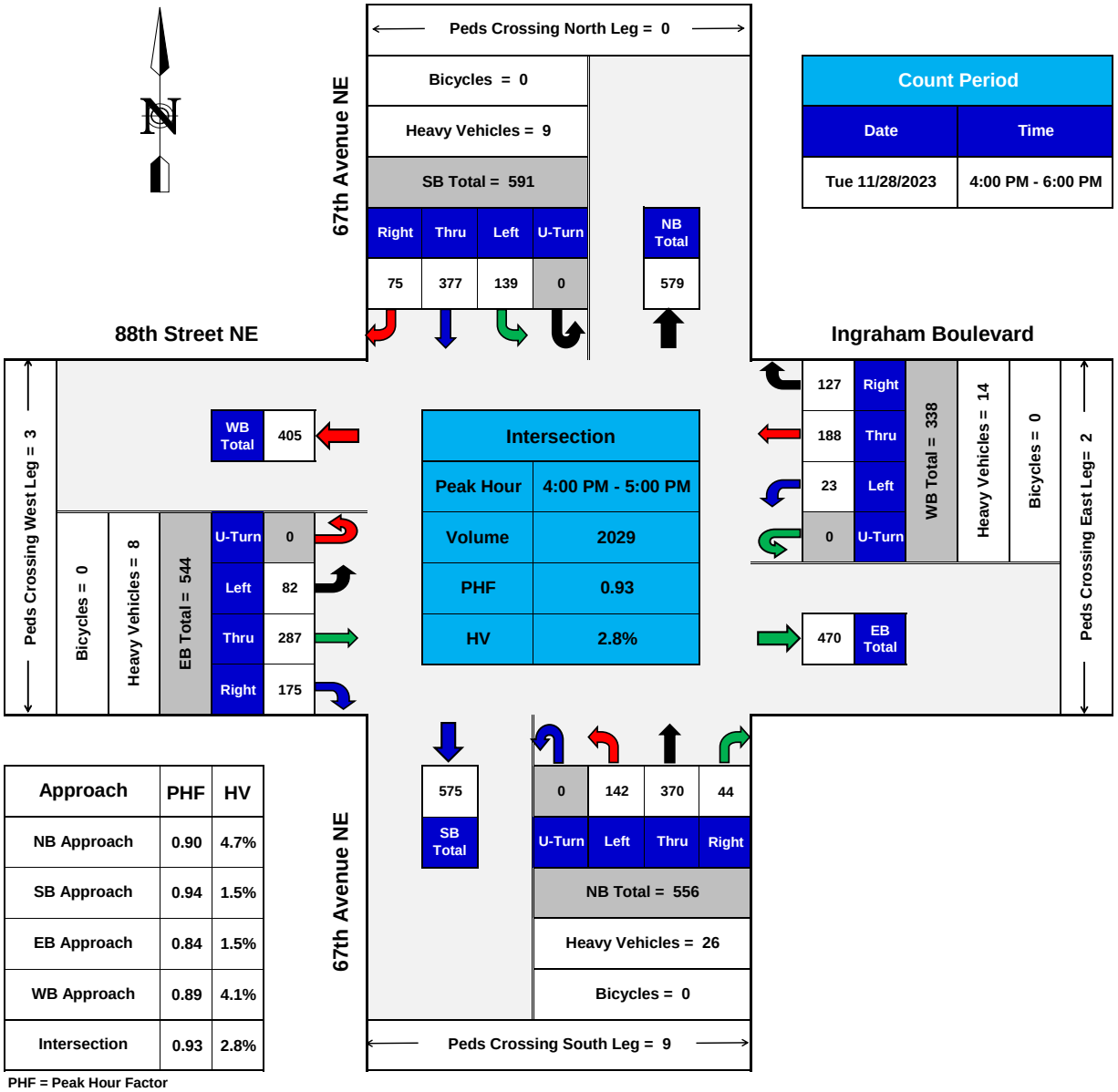
APPENDIX C

COUNT DATA

67th Avenue NE @ 88th Street NE

Marysville, WA



Count Period	
Date	Time
Tue 11/28/2023	4:00 PM - 6:00 PM

Approach	PHF	HV
NB Approach	0.90	4.7%
SB Approach	0.94	1.5%
EB Approach	0.84	1.5%
WB Approach	0.89	4.1%
Intersection	0.93	2.8%

PHF = Peak Hour Factor
HV = Heavy Vehicles

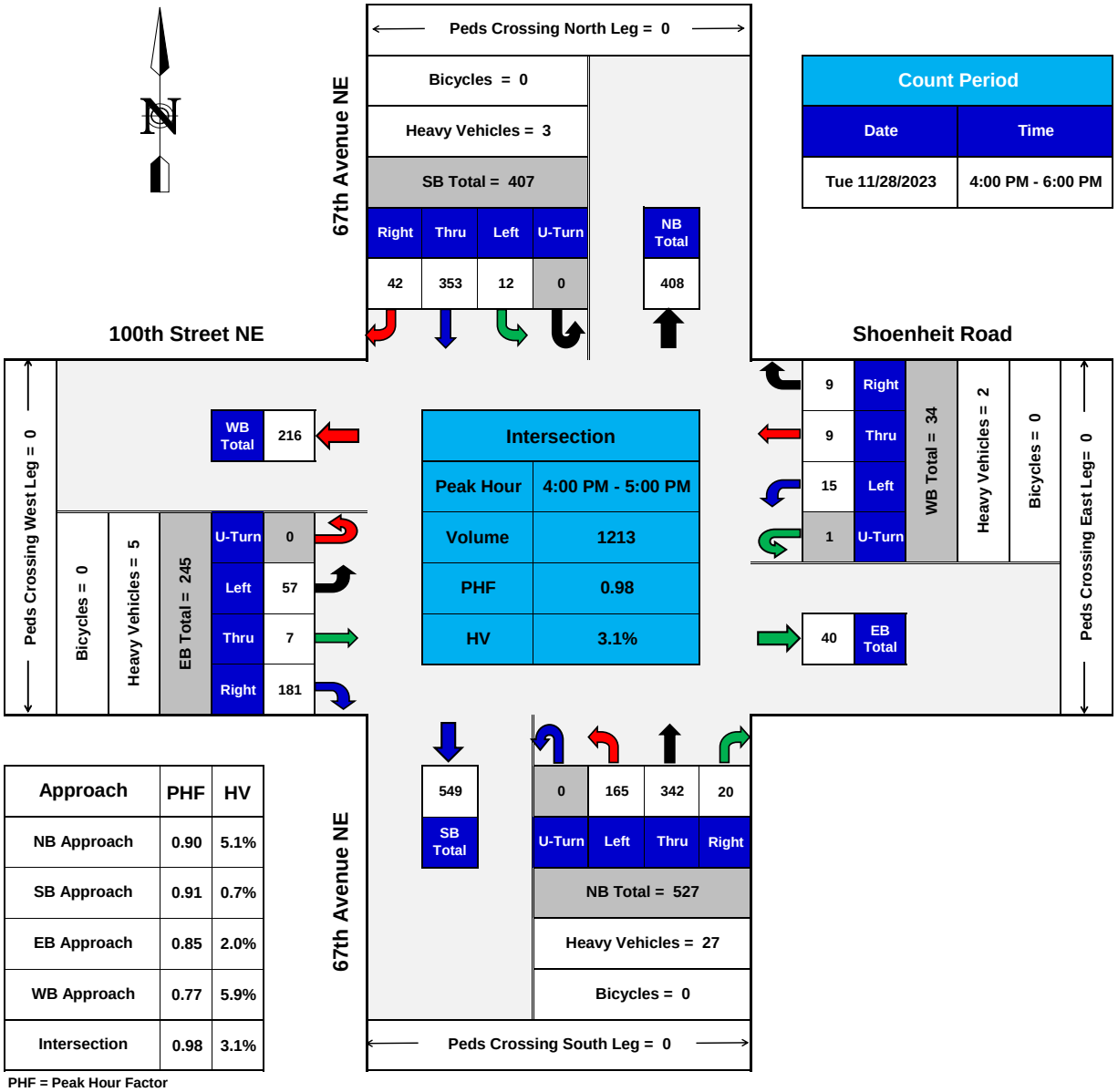
TURNING MOVEMENTS DIAGRAM

PEAK HOUR SUMMARY

TRAFFIC DATA GATHERING

67th Avenue NE @ 100th Street NE

Marysville, WA



Approach	PHF	HV
NB Approach	0.90	5.1%
SB Approach	0.91	0.7%
EB Approach	0.85	2.0%
WB Approach	0.77	5.9%
Intersection	0.98	3.1%

PHF = Peak Hour Factor
HV = Heavy Vehicles

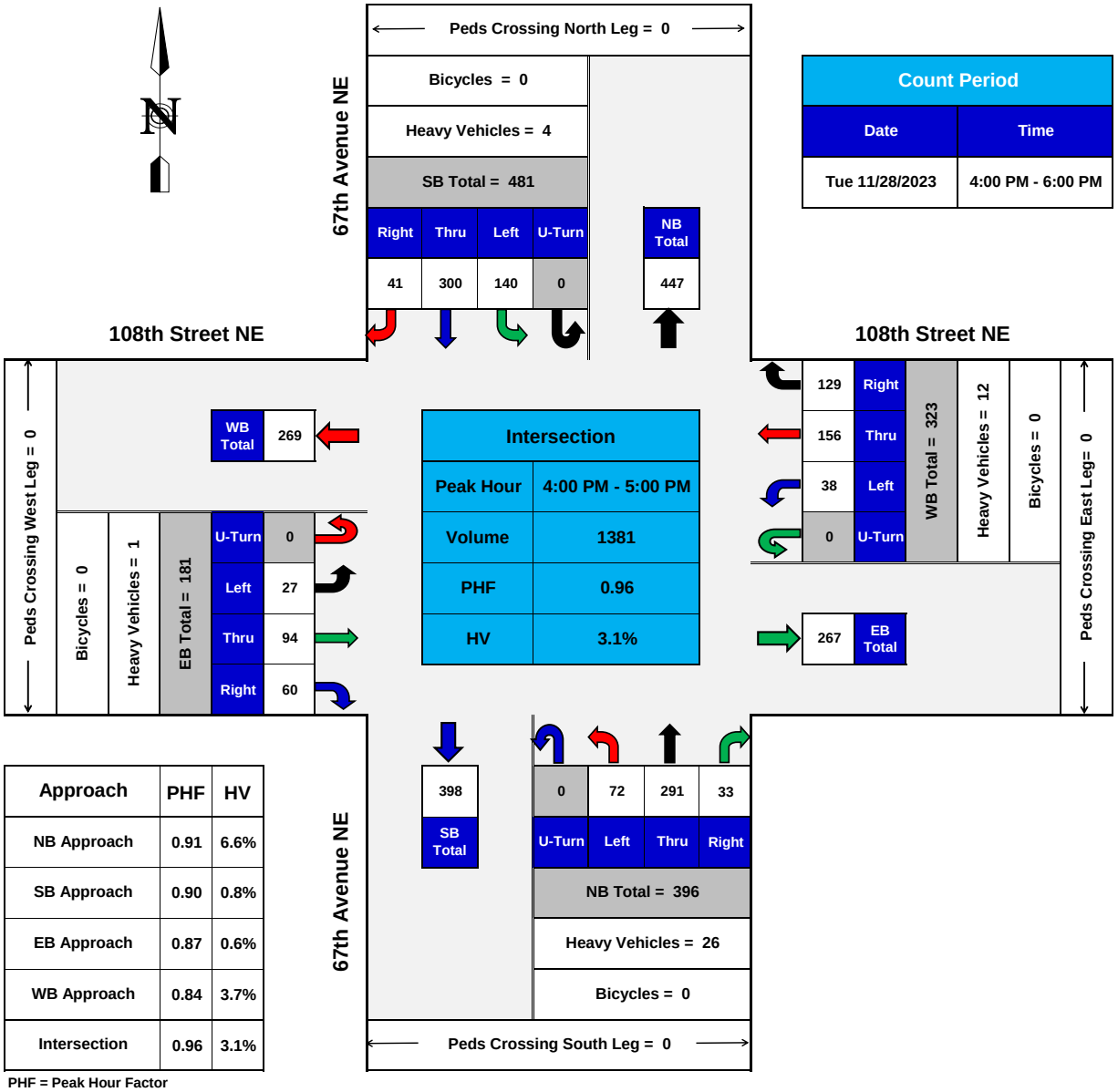
TURNING MOVEMENTS DIAGRAM

PEAK HOUR SUMMARY

TRAFFIC DATA GATHERING

67th Avenue NE @ 108th Street NE

Marysville, WA



Count Period	
Date	Time
Tue 11/28/2023	4:00 PM - 6:00 PM

Approach	PHF	HV
NB Approach	0.91	6.6%
SB Approach	0.90	0.8%
EB Approach	0.87	0.6%
WB Approach	0.84	3.7%
Intersection	0.96	3.1%

PHF = Peak Hour Factor
HV = Heavy Vehicles

TURNING MOVEMENTS DIAGRAM

PEAK HOUR SUMMARY

TRAFFIC DATA GATHERING

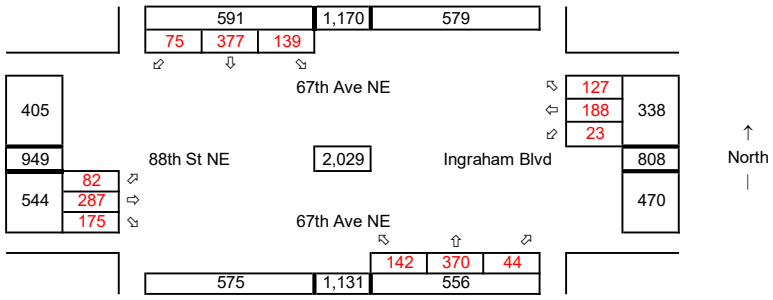
APPENDIX D

TURNING MOVEMENT CALCULATIONS

Synchro ID: 1
Existing
Average Weekday
PM Peak-Hour

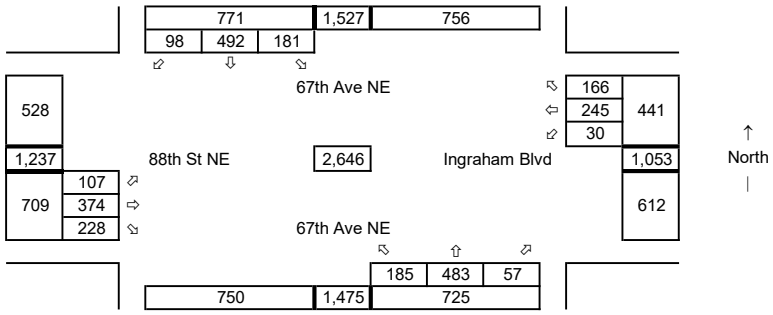
Year: **11/28/2023**

Data Source: **TDG**

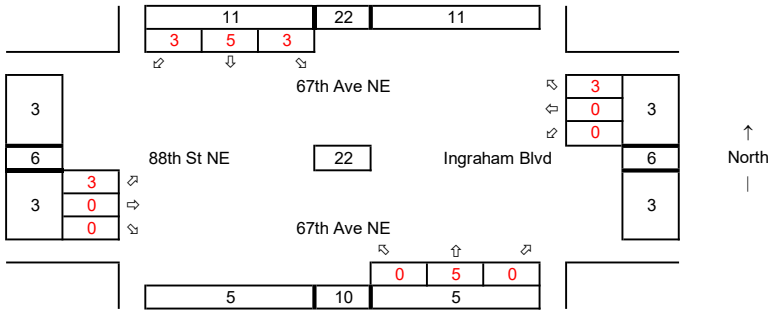


Future without Development
Average Weekday
PM Peak-Hour

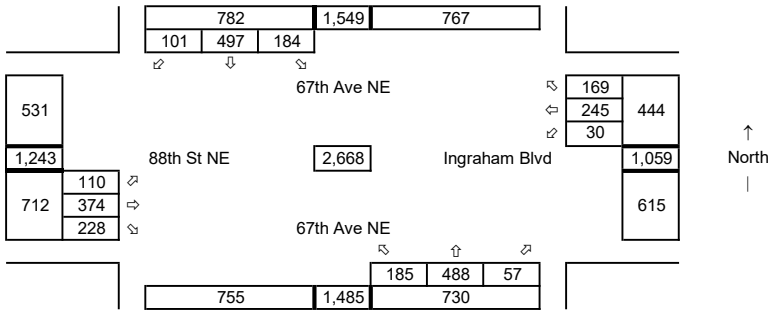
Year: 2032
Growth Rate = 3.0%
Years of Growth = 9
Total Growth = 1.3048



Total Development Trips
Average Weekday
PM Peak-Hour



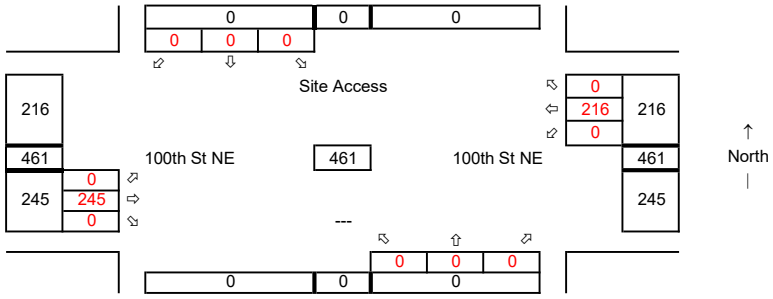
Future with Development
Average Weekday
PM Peak-Hour



Synchro ID: 2
Existing
Average Weekday
PM Peak-Hour

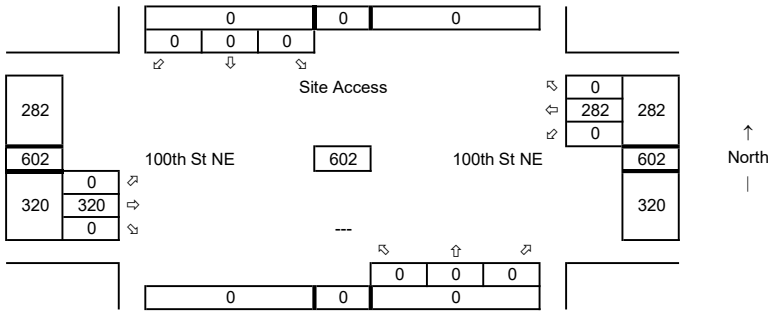
Year: **11/28/2023**

Data Source: **TDG**

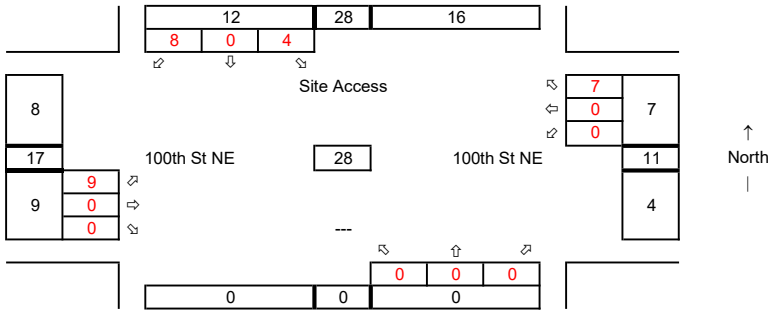


Future without Development
Average Weekday
PM Peak-Hour

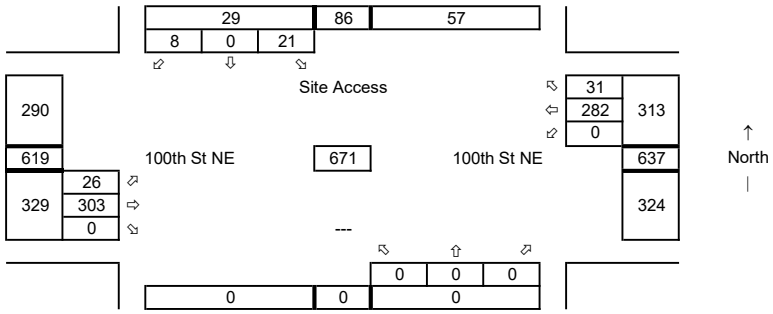
Year: 2032
Growth Rate = 3.0%
Years of Growth = 9
Total Growth = 1.3048



Total Development Trips
Average Weekday
PM Peak-Hour



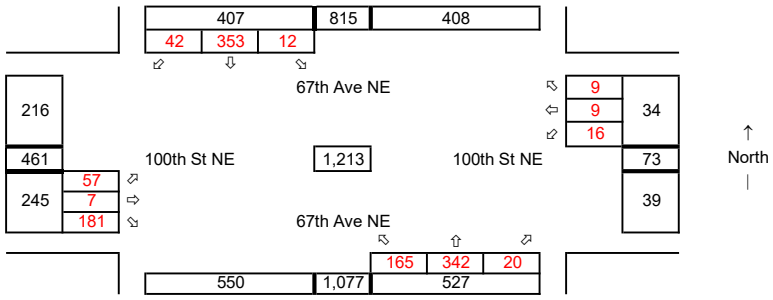
Future with Development
Average Weekday
PM Peak-Hour



Synchro ID: 3
Existing
Average Weekday
PM Peak-Hour

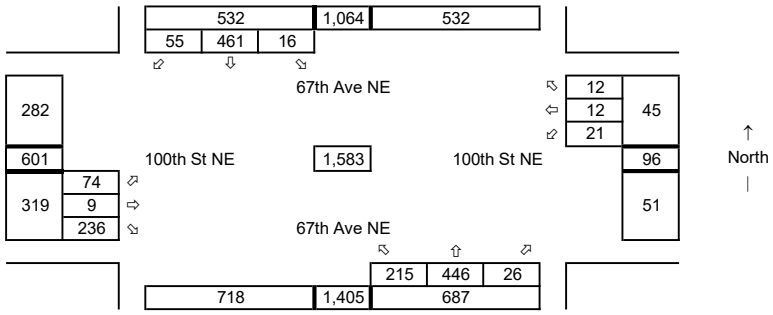
Year: **11/28/2023**

Data Source: **TDG**

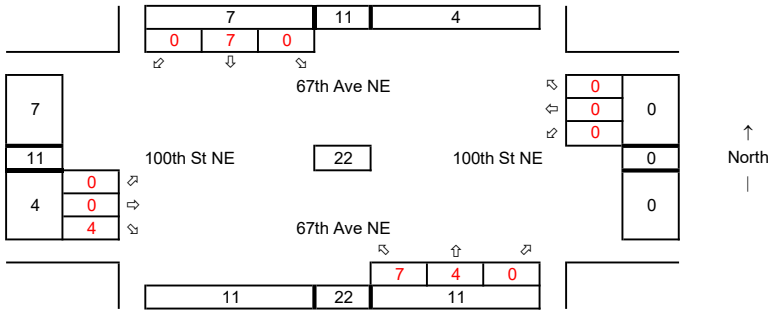


Future without Development
Average Weekday
PM Peak-Hour

Year: 2032
Growth Rate = 3.0%
Years of Growth = 9
Total Growth = 1.3048



Total Development Trips
Average Weekday
PM Peak-Hour

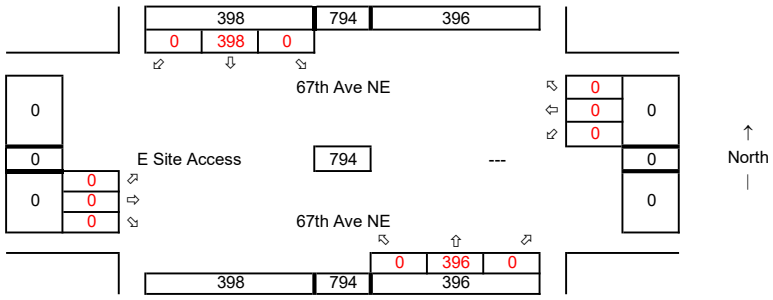


Future with Development
Average Weekday
PM Peak-Hour

Synchro ID: 4
Existing
Average Weekday
PM Peak-Hour

Year: **11/28/2023**

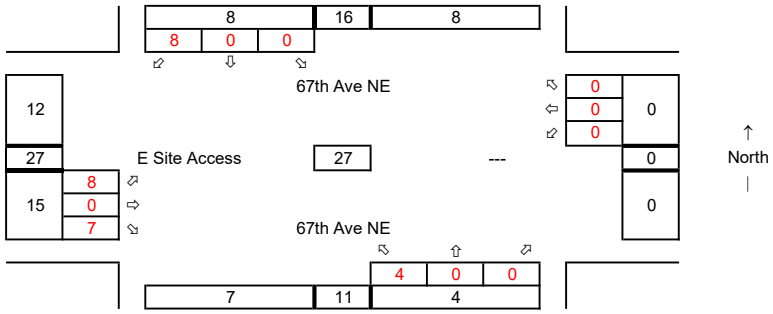
Data Source: **TDG**



Future without Development
Average Weekday
PM Peak-Hour

Year: 2032
Growth Rate = 3.0%
Years of Growth = 9
Total Growth = 1.3048

Total Development Trips
Average Weekday
PM Peak-Hour

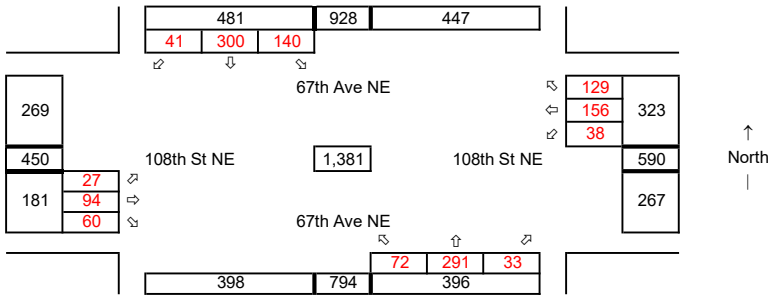


Future with Development
Average Weekday
PM Peak-Hour

Synchro ID: 5
Existing
Average Weekday
PM Peak-Hour

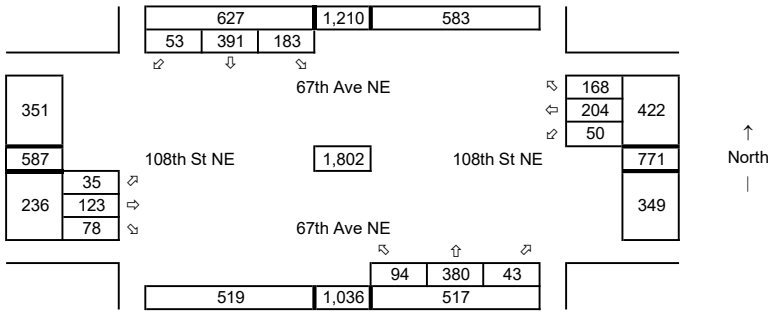
Year: **11/28/2023**

Data Source: **TDG**

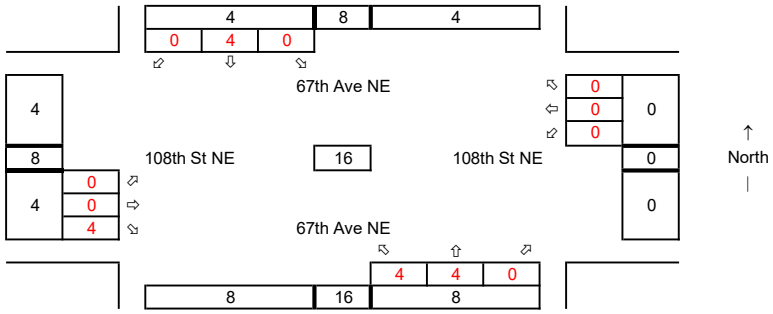


Future without Development
Average Weekday
PM Peak-Hour

Year: 2032
Growth Rate = 3.0%
Years of Growth = 9
Total Growth = 1.3048



Total Development Trips
Average Weekday
PM Peak-Hour

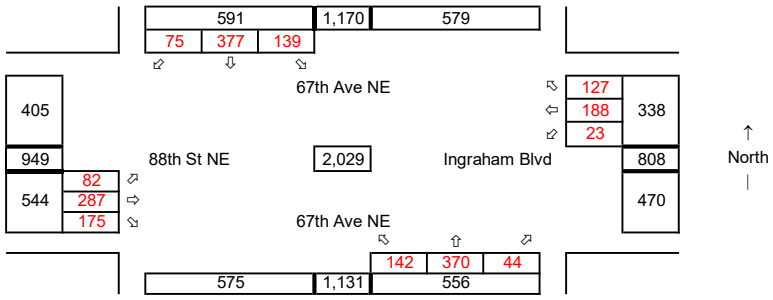


Future with Development
Average Weekday
PM Peak-Hour

Synchro ID: 1
Existing
Average Weekday
PM Peak-Hour

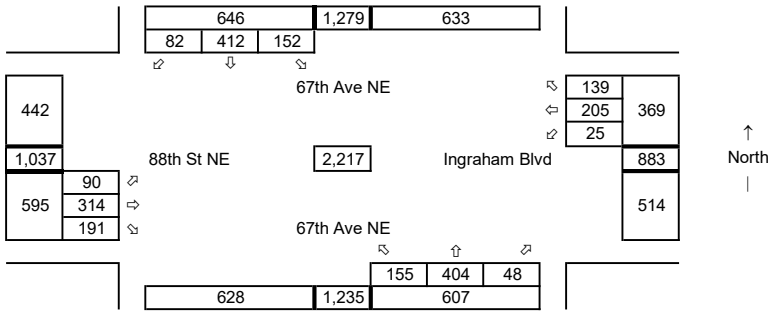
Year: **11/28/2023**

Data Source: **TDG**

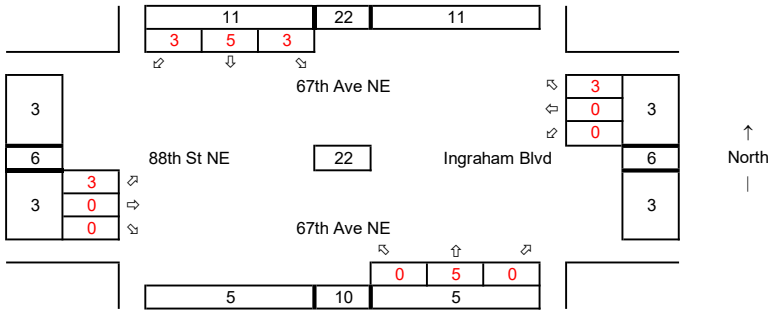


Future without Development
Average Weekday
PM Peak-Hour

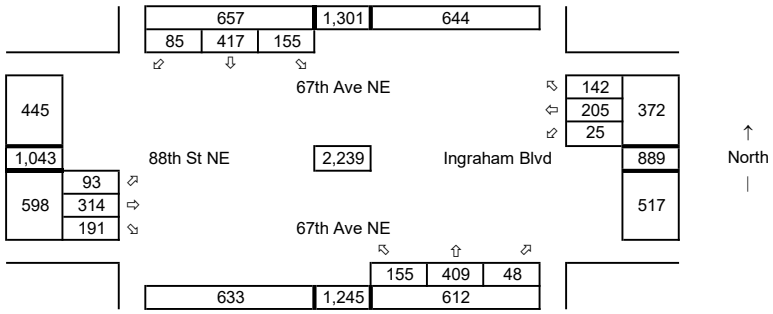
Year: 2026
Growth Rate = 3.0%
Years of Growth = 3
Total Growth = 1.0927



Total Development Trips
Average Weekday
PM Peak-Hour



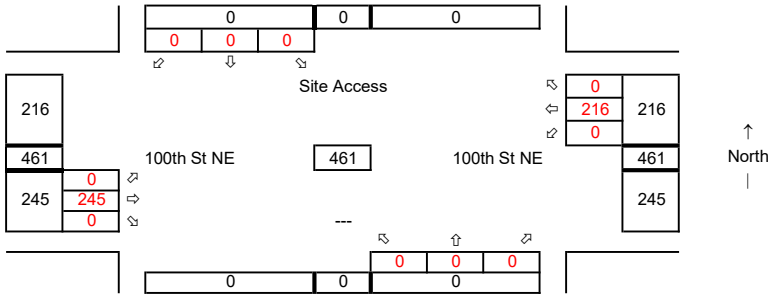
Future with Development
Average Weekday
PM Peak-Hour



Synchro ID: 2
Existing
Average Weekday
PM Peak-Hour

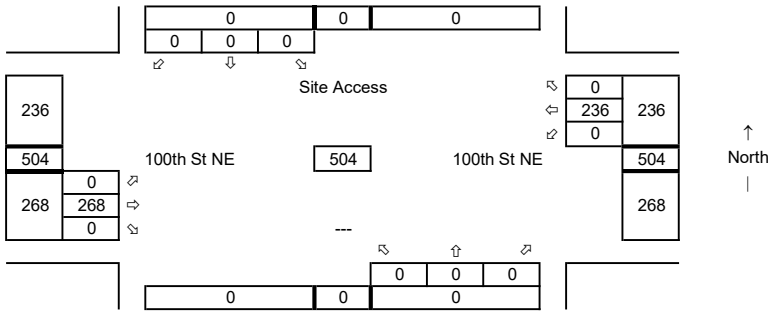
Year: **11/28/2023**

Data Source: **TDG**

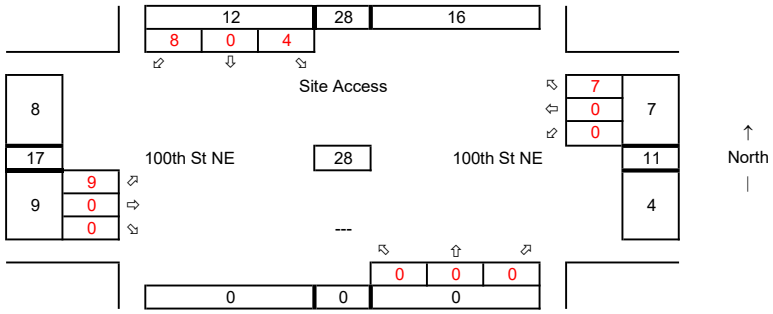


Future without Development
Average Weekday
PM Peak-Hour

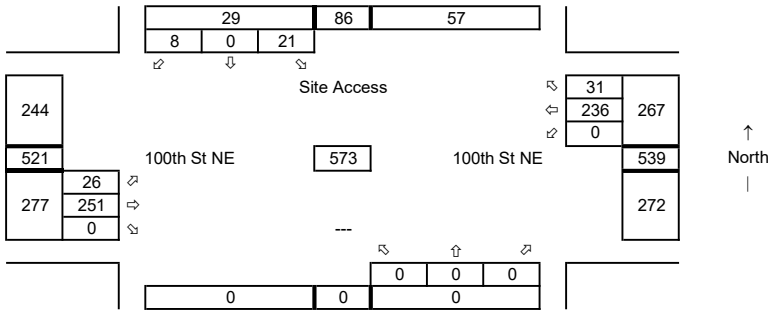
Year: 2026
Growth Rate = 3.0%
Years of Growth = 3
Total Growth = 1.0927



Total Development Trips
Average Weekday
PM Peak-Hour



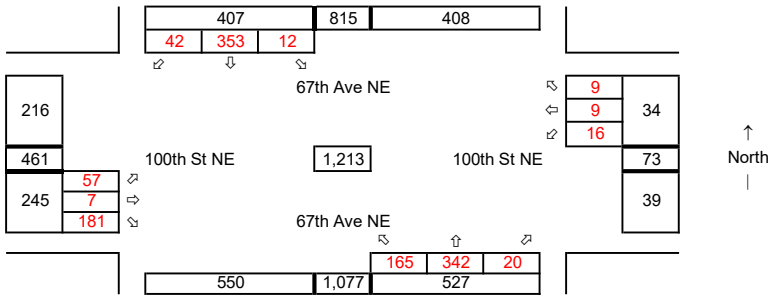
Future with Development
Average Weekday
PM Peak-Hour



Synchro ID: 3
Existing
Average Weekday
PM Peak-Hour

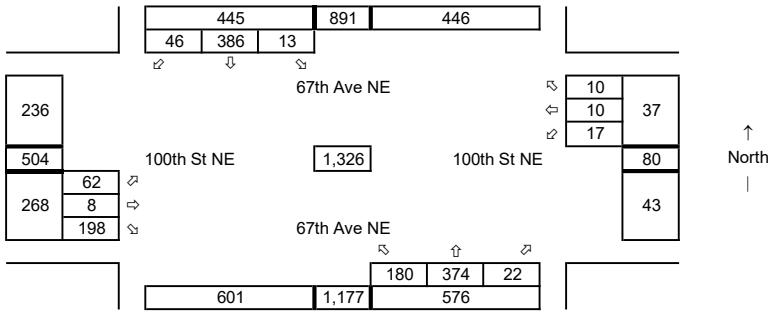
Year: **11/28/2023**

Data Source: **TDG**

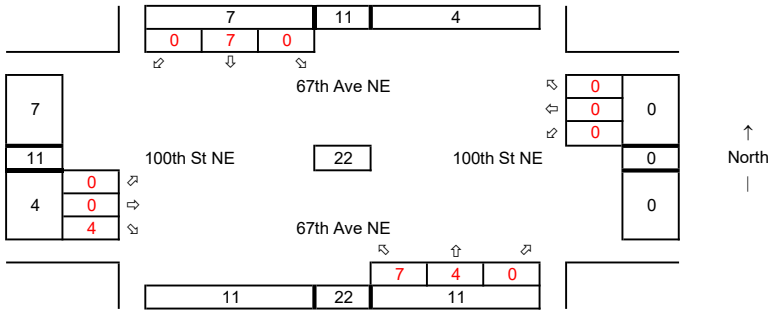


Future without Development
Average Weekday
PM Peak-Hour

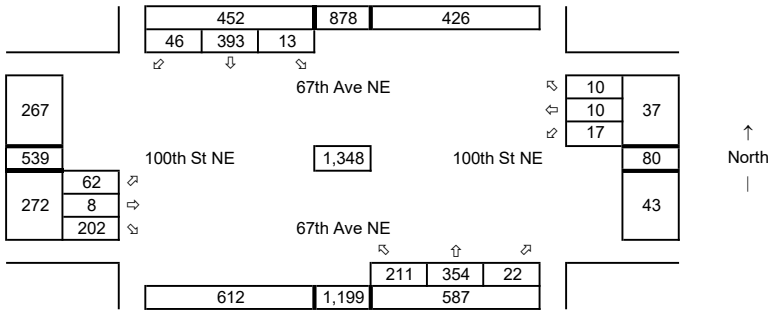
Year: 2026
Growth Rate = 3.0%
Years of Growth = 3
Total Growth = 1.0927



Total Development Trips
Average Weekday
PM Peak-Hour



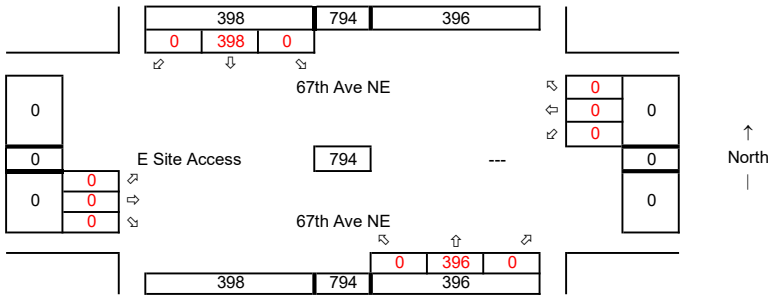
Future with Development
Average Weekday
PM Peak-Hour



Synchro ID: 4
Existing
Average Weekday
PM Peak-Hour

Year: **11/28/2023**

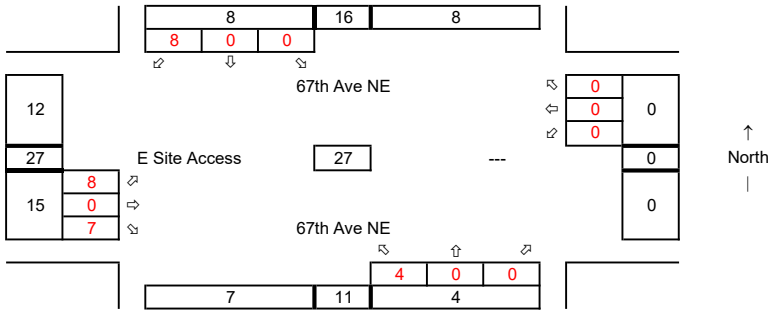
Data Source: **TDG**



Future without Development
Average Weekday
PM Peak-Hour

Year: 2026
Growth Rate = 3.0%
Years of Growth = 3
Total Growth = 1.0927

Total Development Trips
Average Weekday
PM Peak-Hour

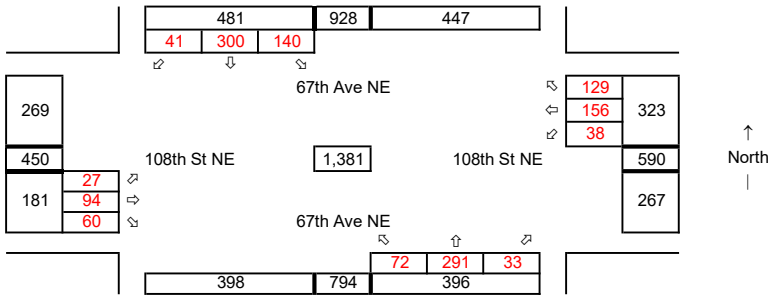


Future with Development
Average Weekday
PM Peak-Hour

Synchro ID: 5
Existing
Average Weekday
PM Peak-Hour

Year: **11/28/2023**

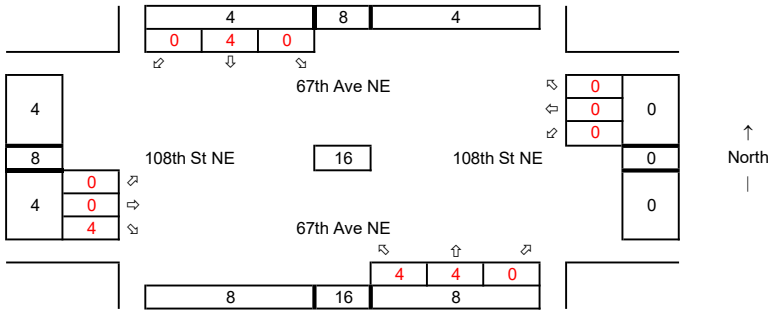
Data Source: **TDG**



Future without Development
Average Weekday
PM Peak-Hour

Year: 2026
Growth Rate = 3.0%
Years of Growth = 3
Total Growth = 1.0927

Total Development Trips
Average Weekday
PM Peak-Hour



Future with Development
Average Weekday
PM Peak-Hour

APPENDIX E

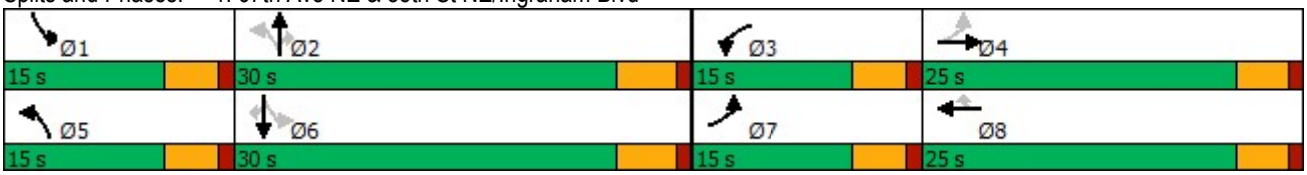
LEVEL OF SERVICE CALCULATIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	287	175	23	188	127	142	370	44	139	377	75
Future Volume (vph)	82	287	175	23	188	127	142	370	44	139	377	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	360		1000	175		230	130		230
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99		0.99			1.00		0.99	1.00		0.99
Frt		0.943				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3263	0	1752	1845	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.454			0.950			0.307			0.332		
Satd. Flow (perm)	837	3263	0	1740	1845	1568	566	1845	1546	612	1845	1545
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		142				141			135			135
Link Speed (mph)		20			35			35			20	
Link Distance (ft)		3597			3125			2176			3823	
Travel Time (s)		122.6			60.9			42.4			130.3	
Confl. Peds. (#/hr)			9	9			3		2	2		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	497	0	25	202	137	153	398	47	149	405	81
Turn Type	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4					8	2		2	6		6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Minimum Split (s)	9.5	32.5		9.5	33.5	33.5	9.5	34.0	34.0	9.5	33.0	33.0
Total Split (s)	15.0	25.0		15.0	25.0	25.0	15.0	30.0	30.0	15.0	30.0	30.0
Total Split (%)	17.6%	29.4%		17.6%	29.4%	29.4%	17.6%	35.3%	35.3%	17.6%	35.3%	35.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	5.0	5.0	4.5	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	21.0	18.2		6.5	13.0	13.0	26.9	20.2	20.2	26.4	20.0	20.0
Actuated g/C Ratio	0.34	0.29		0.10	0.21	0.21	0.43	0.32	0.32	0.42	0.32	0.32
v/c Ratio	0.22	0.47		0.14	0.52	0.31	0.37	0.66	0.08	0.37	0.69	0.14
Control Delay	16.9	16.7		34.7	31.5	7.2	13.2	27.6	0.2	13.2	28.6	1.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	16.7		34.7	31.5	7.2	13.2	27.6	0.2	13.2	28.6	1.6
LOS	B	B		C	C	A	B	C	A	B	C	A
Approach Delay		16.7			22.6			21.7			21.5	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	24	54		10	78	0	32	142	0	31	148	0
Queue Length 95th (ft)	57	129		36	155	41	76	284	0	75	#292	10
Internal Link Dist (ft)		3517			3045			2096			3743	
Turn Bay Length (ft)	230			360		1000	175		230	130		230

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	491	1393		347	714	693	493	873	802	502	871	800
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.36		0.07	0.28	0.20	0.31	0.46	0.06	0.30	0.46	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 62.2			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 64.0%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: 67th Ave NE & 88th St NE/Ingraham Blvd

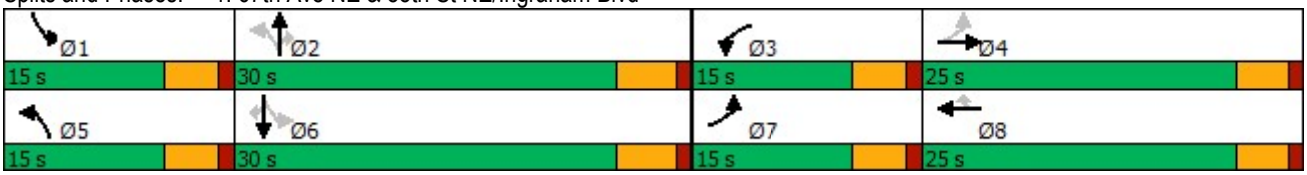


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	314	191	25	205	139	155	404	48	152	412	82
Future Volume (vph)	90	314	191	25	205	139	155	404	48	152	412	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	360		1000	175		230	130		230
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99		0.99			1.00		0.99	1.00		0.99
Frt		0.943				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3263	0	1752	1845	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.418			0.950			0.269			0.290		
Satd. Flow (perm)	771	3263	0	1741	1845	1568	496	1845	1546	535	1845	1545
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		141				149			135			135
Link Speed (mph)		20			35			35			20	
Link Distance (ft)		3597			3125			2176			3823	
Travel Time (s)		122.6			60.9			42.4			130.3	
Confl. Peds. (#/hr)			9	9			3		2	2		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	543	0	27	220	149	167	434	52	163	443	88
Turn Type	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4					8	2		2	6		6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Minimum Split (s)	9.5	32.5		9.5	33.5	33.5	9.5	34.0	34.0	9.5	33.0	33.0
Total Split (s)	15.0	25.0		15.0	25.0	25.0	15.0	30.0	30.0	15.0	30.0	30.0
Total Split (%)	17.6%	29.4%		17.6%	29.4%	29.4%	17.6%	35.3%	35.3%	17.6%	35.3%	35.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	5.0	5.0	4.5	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	22.4	19.4		6.6	14.1	14.1	29.1	22.2	22.2	28.6	21.9	21.9
Actuated g/C Ratio	0.34	0.30		0.10	0.21	0.21	0.44	0.34	0.34	0.44	0.33	0.33
v/c Ratio	0.25	0.51		0.15	0.56	0.33	0.43	0.70	0.09	0.42	0.72	0.15
Control Delay	17.5	17.9		36.2	32.8	7.4	14.6	29.8	0.3	14.5	31.0	2.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	17.9		36.2	32.8	7.4	14.6	29.8	0.3	14.5	31.0	2.1
LOS	B	B		D	C	A	B	C	A	B	C	A
Approach Delay		17.9			23.5			23.6			23.5	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	30	69		12	94	0	37	165	0	36	172	0
Queue Length 95th (ft)	62	145		39	169	45	87	#358	0	85	#371	13
Internal Link Dist (ft)		3517			3045			2096			3743	
Turn Bay Length (ft)	230			360		1000	175		230	130		230

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	464	1350		325	669	663	461	819	761	470	816	758
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.40		0.08	0.33	0.22	0.36	0.53	0.07	0.35	0.54	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 65.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 22.0		Intersection LOS: C	
Intersection Capacity Utilization 67.3%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: 67th Ave NE & 88th St NE/Ingraham Blvd



Intersection	
Intersection Delay, s/veh	19.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Future Vol, veh/h	62	8	198	17	10	10	180	374	22	13	386	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	202	17	10	10	184	382	22	13	394	47
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	14.8	11.1	19.2	23.9
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	23%	46%	3%
Vol Thru, %	0%	94%	3%	27%	87%
Vol Right, %	0%	6%	74%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	396	268	37	445
LT Vol	180	0	62	17	13
Through Vol	0	374	8	10	386
RT Vol	0	22	198	10	46
Lane Flow Rate	184	404	273	38	454
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.344	0.695	0.472	0.078	0.739
Departure Headway (Hd)	6.739	6.19	6.216	7.463	5.86
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	531	582	574	483	613
Service Time	4.522	3.973	4.306	5.463	3.939
HCM Lane V/C Ratio	0.347	0.694	0.476	0.079	0.741
HCM Control Delay	13.1	22	14.8	11.1	23.9
HCM Lane LOS	B	C	B	B	C
HCM 95th-tile Q	1.5	5.5	2.5	0.3	6.4

Intersection	
Intersection Delay, s/veh	33.9
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	103	66	42	170	141	79	318	36	153	328	45
Future Vol, veh/h	30	103	66	42	170	141	79	318	36	153	328	45
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	31	107	69	44	177	147	82	331	38	159	342	47
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	19.7	34.9	36.2	36.8
HCM LOS	C	D	E	E

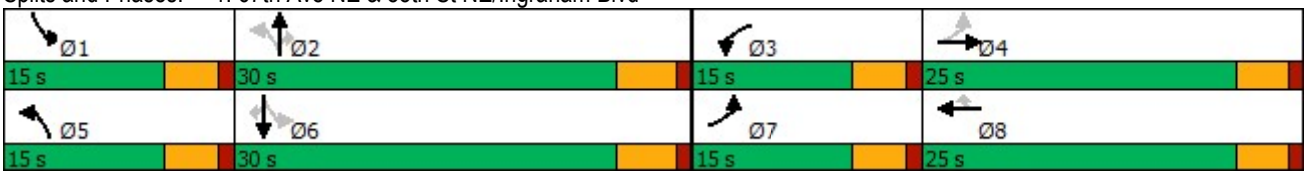
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	15%	12%	100%	0%
Vol Thru, %	0%	90%	52%	48%	0%	88%
Vol Right, %	0%	10%	33%	40%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	354	199	353	153	373
LT Vol	79	0	30	42	153	0
Through Vol	0	318	103	170	0	328
RT Vol	0	36	66	141	0	45
Lane Flow Rate	82	369	207	368	159	389
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.201	0.838	0.491	0.794	0.383	0.869
Departure Headway (Hd)	8.779	8.185	8.527	7.77	8.662	8.056
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	407	443	421	463	414	447
Service Time	6.558	5.965	6.625	5.846	6.445	5.838
HCM Lane V/C Ratio	0.201	0.833	0.492	0.795	0.384	0.87
HCM Control Delay	13.8	41.2	19.7	34.9	16.8	45
HCM Lane LOS	B	E	C	D	C	E
HCM 95th-tile Q	0.7	8.1	2.6	7.2	1.8	8.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	374	228	30	245	166	185	483	57	181	492	98
Future Volume (vph)	107	374	228	30	245	166	185	483	57	181	492	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	360		1000	175		230	130		230
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99		0.99			1.00		0.99	1.00		0.99
Frt		0.943				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3263	0	1752	1845	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.329			0.950			0.160			0.178		
Satd. Flow (perm)	607	3263	0	1743	1845	1568	295	1845	1546	328	1845	1545
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		142				178			135			135
Link Speed (mph)		20			35			35			20	
Link Distance (ft)		3597			3125			2176			3823	
Travel Time (s)		122.6			60.9			42.4			130.3	
Confl. Peds. (#/hr)			9	9			3		2	2		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	647	0	32	263	178	199	519	61	195	529	105
Turn Type	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4					8	2		2	6		6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Minimum Split (s)	9.5	32.5		9.5	33.5	33.5	9.5	34.0	34.0	9.5	33.0	33.0
Total Split (s)	15.0	25.0		15.0	25.0	25.0	15.0	30.0	30.0	15.0	30.0	30.0
Total Split (%)	17.6%	29.4%		17.6%	29.4%	29.4%	17.6%	35.3%	35.3%	17.6%	35.3%	35.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	5.0	5.0	4.5	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	24.8	21.3		6.2	15.6	15.6	34.3	25.0	25.0	33.9	24.7	24.7
Actuated g/C Ratio	0.34	0.29		0.08	0.21	0.21	0.47	0.34	0.34	0.46	0.34	0.34
v/c Ratio	0.35	0.62		0.22	0.67	0.38	0.64	0.83	0.10	0.62	0.85	0.17
Control Delay	19.2	21.1		38.6	37.6	7.1	23.5	39.0	0.3	21.5	41.3	3.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.2	21.1		38.6	37.6	7.1	23.5	39.0	0.3	21.5	41.3	3.3
LOS	B	C		D	D	A	C	D	A	C	D	A
Approach Delay		20.8			26.2			32.0			31.8	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	36	94		15	119	0	50	231	0	49	239	0
Queue Length 95th (ft)	71	184		43	203	49	#131	#468	0	108	#480	23
Internal Link Dist (ft)		3517			3045			2096			3743	
Turn Bay Length (ft)	230			360		1000	175		230	130		230

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	374	1160		257	529	577	359	648	631	370	645	628
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.56		0.12	0.50	0.31	0.55	0.80	0.10	0.53	0.82	0.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 73.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 28.0		Intersection LOS: C	
Intersection Capacity Utilization 75.1%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: 67th Ave NE & 88th St NE/Ingraham Blvd



Intersection	
Intersection Delay, s/veh	41.6
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Future Vol, veh/h	74	9	236	21	12	12	215	446	26	16	461	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	241	21	12	12	219	455	27	16	470	56
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	20.9	12.7	39.1	59.6
HCM LOS	C	B	E	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	23%	47%	3%
Vol Thru, %	0%	94%	3%	27%	87%
Vol Right, %	0%	6%	74%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	472	319	45	532
LT Vol	215	0	74	21	16
Through Vol	0	446	9	12	461
RT Vol	0	26	236	12	55
Lane Flow Rate	219	482	326	46	543
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.455	0.926	0.626	0.11	0.982
Departure Headway (Hd)	7.472	6.92	6.92	8.661	6.512
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	480	520	521	416	554
Service Time	5.241	4.689	4.979	6.661	4.571
HCM Lane V/C Ratio	0.456	0.927	0.626	0.111	0.98
HCM Control Delay	16.4	49.5	20.9	12.7	59.6
HCM Lane LOS	C	E	C	B	F
HCM 95th-tile Q	2.3	11.2	4.3	0.4	13.6

Intersection	
Intersection Delay, s/veh	81.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	123	78	50	204	168	94	380	43	183	391	53
Future Vol, veh/h	35	123	78	50	204	168	94	380	43	183	391	53
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	36	128	81	52	213	175	98	396	45	191	407	55
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	30	85.1	88.8	92.6
HCM LOS	D	F	F	F

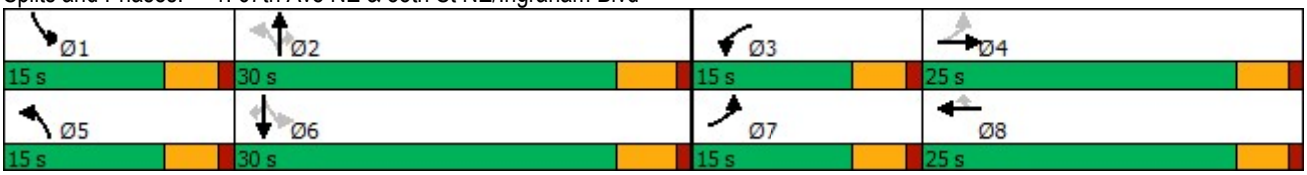
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	15%	12%	100%	0%
Vol Thru, %	0%	90%	52%	48%	0%	88%
Vol Right, %	0%	10%	33%	40%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	423	236	422	183	444
LT Vol	94	0	35	50	183	0
Through Vol	0	380	123	204	0	391
RT Vol	0	43	78	168	0	53
Lane Flow Rate	98	441	246	440	191	462
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.259	1.095	0.647	1.035	0.503	1.145
Departure Headway (Hd)	10.019	9.419	10.171	8.998	10	9.387
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	360	388	356	409	362	389
Service Time	7.719	7.119	8.171	6.998	7.7	7.087
HCM Lane V/C Ratio	0.272	1.137	0.691	1.076	0.528	1.188
HCM Control Delay	16.2	104.9	30	85.1	22.4	121.5
HCM Lane LOS	C	F	D	F	C	F
HCM 95th-tile Q	1	15	4.3	13.4	2.7	16.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	314	191	25	205	142	155	409	48	155	417	85
Future Volume (vph)	93	314	191	25	205	142	155	409	48	155	417	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	360		1000	175		230	130		230
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99		0.99			1.00		0.99	1.00		0.99
Frt		0.943				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3263	0	1752	1845	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.415			0.950			0.263			0.282		
Satd. Flow (perm)	766	3263	0	1741	1845	1568	485	1845	1546	520	1845	1545
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		141				153			135			135
Link Speed (mph)		20			35			35			20	
Link Distance (ft)		3597			3125			2176			3823	
Travel Time (s)		122.6			60.9			42.4			130.3	
Confl. Peds. (#/hr)			9	9			3		2	2		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	100	543	0	27	220	153	167	440	52	167	448	91
Turn Type	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4					8	2		2	6		6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Minimum Split (s)	9.5	32.5		9.5	33.5	33.5	9.5	34.0	34.0	9.5	33.0	33.0
Total Split (s)	15.0	25.0		15.0	25.0	25.0	15.0	30.0	30.0	15.0	30.0	30.0
Total Split (%)	17.6%	29.4%		17.6%	29.4%	29.4%	17.6%	35.3%	35.3%	17.6%	35.3%	35.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	5.0	5.0	4.5	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	22.5	19.5		6.6	14.1	14.1	29.2	22.3	22.3	28.8	22.1	22.1
Actuated g/C Ratio	0.34	0.30		0.10	0.21	0.21	0.44	0.34	0.34	0.44	0.34	0.34
v/c Ratio	0.26	0.51		0.16	0.56	0.34	0.43	0.71	0.08	0.43	0.72	0.15
Control Delay	17.6	17.9		36.3	33.0	7.4	14.8	30.3	0.3	14.8	31.3	2.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	17.9		36.3	33.0	7.4	14.8	30.3	0.3	14.8	31.3	2.3
LOS	B	B		D	C	A	B	C	A	B	C	A
Approach Delay		17.8			23.4			24.0			23.7	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	31	69		12	94	0	37	169	0	37	175	0
Queue Length 95th (ft)	63	145		39	170	45	87	#369	0	87	#379	15
Internal Link Dist (ft)		3517			3045			2096			3743	
Turn Bay Length (ft)	230			360		1000	175		230	130		230

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	462	1350		323	665	663	457	814	757	465	812	755
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.40		0.08	0.33	0.23	0.37	0.54	0.07	0.36	0.55	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 65.8			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 22.2		Intersection LOS: C	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: 67th Ave NE & 88th St NE/Ingraham Blvd



Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		Y	
Traffic Vol, veh/h	26	251	236	31	21	8
Future Vol, veh/h	26	251	236	31	21	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	273	257	34	23	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	291	0	-	0	603	274
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	329	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1271	-	-	-	462	765
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	729	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1271	-	-	-	450	765
Mov Cap-2 Maneuver	-	-	-	-	450	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	729	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1271	-	-	-	508
HCM Lane V/C Ratio	0.022	-	-	-	0.062
HCM Control Delay (s)	7.9	-	-	-	12.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	19.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	8	202	17	10	10	211	354	22	13	393	46
Future Vol, veh/h	62	8	202	17	10	10	211	354	22	13	393	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	8	206	17	10	10	215	361	22	13	401	47
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	15	11.2	18.2	24.9
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	23%	46%	3%
Vol Thru, %	0%	94%	3%	27%	87%
Vol Right, %	0%	6%	74%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	211	376	272	37	452
LT Vol	211	0	62	17	13
Through Vol	0	354	8	10	393
RT Vol	0	22	202	10	46
Lane Flow Rate	215	384	278	38	461
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.405	0.663	0.481	0.079	0.753
Departure Headway (Hd)	6.771	6.22	6.233	7.509	5.879
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	528	576	575	480	609
Service Time	4.56	4.009	4.325	5.509	3.963
HCM Lane V/C Ratio	0.407	0.667	0.483	0.079	0.757
HCM Control Delay	14.2	20.5	15	11.2	24.9
HCM Lane LOS	B	C	B	B	C
HCM 95th-tile Q	1.9	4.9	2.6	0.3	6.7

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	36	17	396	406	37
Future Vol, veh/h	45	36	17	396	406	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	39	18	430	441	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	927	461	481	0	-	0
Stage 1	461	-	-	-	-	-
Stage 2	466	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	298	600	1082	-	-	-
Stage 1	635	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	291	600	1082	-	-	-
Mov Cap-2 Maneuver	291	-	-	-	-	-
Stage 1	621	-	-	-	-	-
Stage 2	632	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.4	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1082	-	377	-	-
HCM Lane V/C Ratio	0.017	-	0.234	-	-
HCM Control Delay (s)	8.4	-	17.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Intersection	
Intersection Delay, s/veh	35.7
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	103	70	42	170	141	83	322	36	153	332	45
Future Vol, veh/h	30	103	70	42	170	141	83	322	36	153	332	45
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	31	107	73	44	177	147	86	335	38	159	346	47
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	20.4	36.1	38.1	39.2
HCM LOS	C	E	E	E

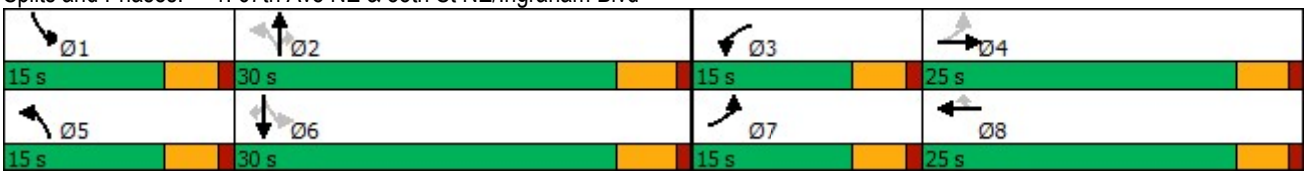
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	15%	12%	100%	0%
Vol Thru, %	0%	90%	51%	48%	0%	88%
Vol Right, %	0%	10%	34%	40%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	358	203	353	153	377
LT Vol	83	0	30	42	153	0
Through Vol	0	322	103	170	0	332
RT Vol	0	36	70	141	0	45
Lane Flow Rate	86	373	211	368	159	393
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.212	0.854	0.511	0.802	0.387	0.887
Departure Headway (Hd)	8.842	8.249	8.697	7.85	8.734	8.128
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	404	436	417	460	410	444
Service Time	6.639	6.046	6.697	5.946	6.532	5.925
HCM Lane V/C Ratio	0.213	0.856	0.506	0.8	0.388	0.885
HCM Control Delay	14	43.7	20.4	36.1	17	48.2
HCM Lane LOS	B	E	C	E	C	E
HCM 95th-tile Q	0.8	8.5	2.8	7.3	1.8	9.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	374	228	30	245	169	185	488	57	184	497	101
Future Volume (vph)	110	374	228	30	245	169	185	488	57	184	497	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	360		1000	175		230	130		230
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99		0.99			1.00		0.99	1.00		0.99
Frt		0.943				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3263	0	1752	1845	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.329			0.950			0.159			0.170		
Satd. Flow (perm)	607	3263	0	1743	1845	1568	293	1845	1546	313	1845	1545
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		142				182			135			135
Link Speed (mph)		20			35			35			20	
Link Distance (ft)		3597			3125			2176			3823	
Travel Time (s)		122.6			60.9			42.4			130.3	
Confl. Peds. (#/hr)			9	9			3		2	2		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	647	0	32	263	182	199	525	61	198	534	109
Turn Type	pm+pt	NA		Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4					8	2		2	6		6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Minimum Split (s)	9.5	32.5		9.5	33.5	33.5	9.5	34.0	34.0	9.5	33.0	33.0
Total Split (s)	15.0	25.0		15.0	25.0	25.0	15.0	30.0	30.0	15.0	30.0	30.0
Total Split (%)	17.6%	29.4%		17.6%	29.4%	29.4%	17.6%	35.3%	35.3%	17.6%	35.3%	35.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	5.0	5.0	4.5	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	25.0	21.4		6.2	15.6	15.6	34.6	25.2	25.2	34.3	25.1	25.1
Actuated g/C Ratio	0.34	0.29		0.08	0.21	0.21	0.47	0.34	0.34	0.46	0.34	0.34
v/c Ratio	0.36	0.62		0.22	0.68	0.38	0.64	0.84	0.10	0.63	0.85	0.18
Control Delay	19.4	21.2		38.7	37.8	7.1	23.8	39.6	0.3	22.7	41.5	3.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	21.2		38.7	37.8	7.1	23.8	39.6	0.3	22.7	41.5	3.6
LOS	B	C		D	D	A	C	D	A	C	D	A
Approach Delay		20.9			26.2			32.6			32.1	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	38	94		15	119	0	50	236	0	50	244	0
Queue Length 95th (ft)	72	184		43	203	49	#132	#475	0	#117	#486	25
Internal Link Dist (ft)		3517			3045			2096			3743	
Turn Bay Length (ft)	230			360		1000	175		230	130		230

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	373	1156		255	525	576	357	641	626	363	640	624
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.56		0.13	0.50	0.32	0.56	0.82	0.10	0.55	0.83	0.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 74			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 28.3		Intersection LOS: C	
Intersection Capacity Utilization 75.4%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: 67th Ave NE & 88th St NE/Ingraham Blvd



Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		Y	
Traffic Vol, veh/h	26	303	282	31	21	8
Future Vol, veh/h	26	303	282	31	21	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	329	307	34	23	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	341	0	-	0	709	324
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	385	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1218	-	-	-	401	717
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	688	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1218	-	-	-	390	717
Mov Cap-2 Maneuver	-	-	-	-	390	-
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	688	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1218	-	-	-	446
HCM Lane V/C Ratio	0.023	-	-	-	0.071
HCM Control Delay (s)	8	-	-	-	13.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	40.9
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	240	21	12	12	246	426	26	16	468	55
Future Vol, veh/h	74	9	240	21	12	12	246	426	26	16	468	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	245	21	12	12	251	435	27	16	478	56
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	21.3	12.8	34.7	63
HCM LOS	C	B	D	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	23%	47%	3%
Vol Thru, %	0%	94%	3%	27%	87%
Vol Right, %	0%	6%	74%	27%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	246	452	323	45	539
LT Vol	246	0	74	21	16
Through Vol	0	426	9	12	468
RT Vol	0	26	240	12	55
Lane Flow Rate	251	461	330	46	550
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.524	0.891	0.634	0.111	0.996
Departure Headway (Hd)	7.512	6.958	6.925	8.687	6.522
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	479	521	521	415	556
Service Time	5.281	4.726	4.983	6.687	4.58
HCM Lane V/C Ratio	0.524	0.885	0.633	0.111	0.989
HCM Control Delay	18.3	43.7	21.3	12.8	63
HCM Lane LOS	C	E	C	B	F
HCM 95th-tile Q	3	10.1	4.4	0.4	14.2

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	36	17	480	490	37
Future Vol, veh/h	45	36	17	480	490	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	39	18	522	533	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1111	553	573	0	-	0
Stage 1	553	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	231	533	1000	-	-	-
Stage 1	576	-	-	-	-	-
Stage 2	573	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	225	533	1000	-	-	-
Mov Cap-2 Maneuver	225	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	573	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.7	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1000	-	303	-	-
HCM Lane V/C Ratio	0.018	-	0.291	-	-
HCM Control Delay (s)	8.7	-	21.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.2	-	-

Intersection	
Intersection Delay, s/veh	84.3
Intersection LOS	F

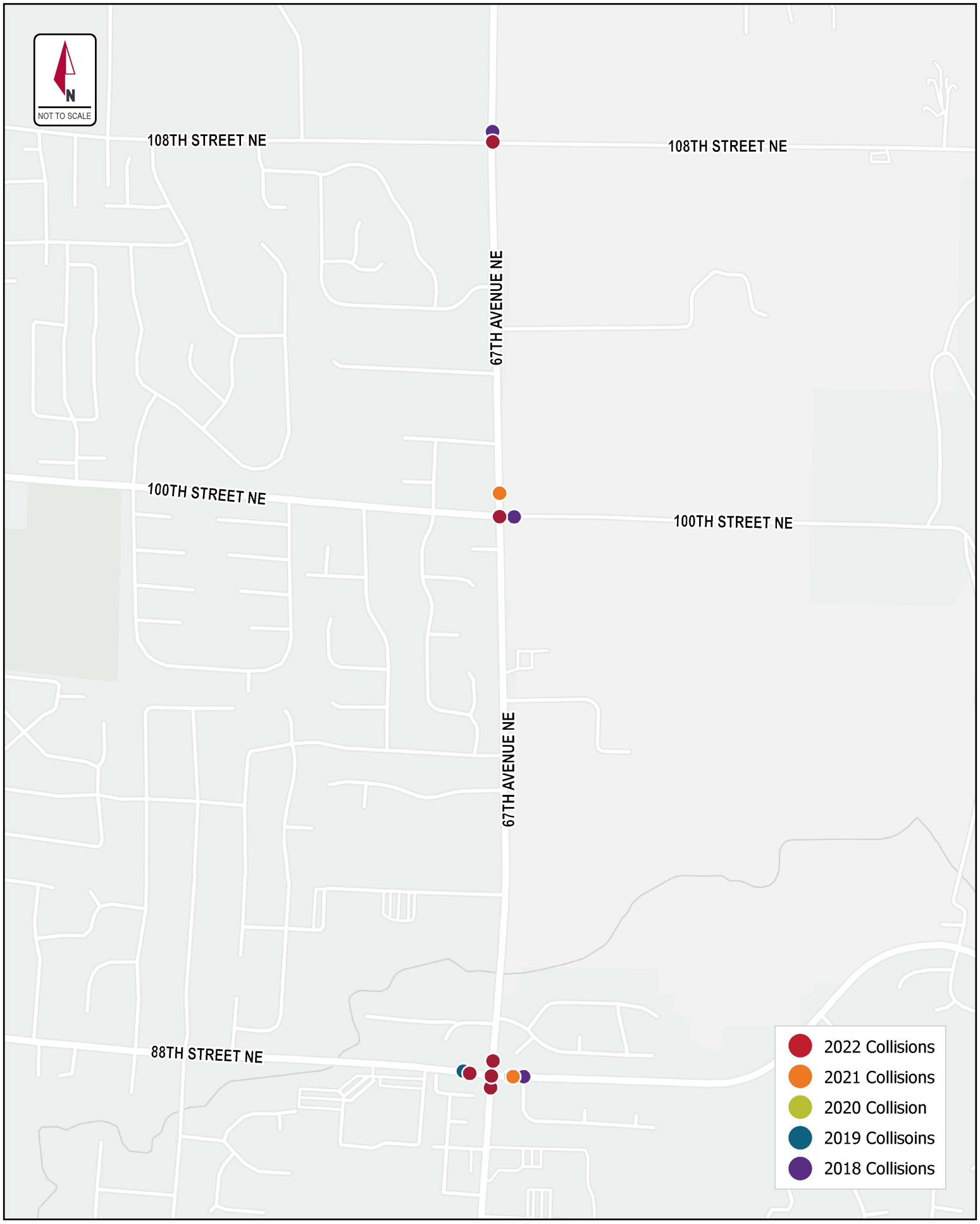
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	123	82	50	204	168	98	384	43	183	395	53
Future Vol, veh/h	35	123	82	50	204	168	98	384	43	183	395	53
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	36	128	85	52	213	175	102	400	45	191	411	55
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	30.3	86.7	92.2	96.7
HCM LOS	D	F	F	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	15%	12%	100%	0%
Vol Thru, %	0%	90%	51%	48%	0%	88%
Vol Right, %	0%	10%	34%	40%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	98	427	240	422	183	448
LT Vol	98	0	35	50	183	0
Through Vol	0	384	123	204	0	395
RT Vol	0	43	82	168	0	53
Lane Flow Rate	102	445	250	440	191	467
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.271	1.109	0.65	1.04	0.505	1.16
Departure Headway (Hd)	10.051	9.451	10.223	9.043	10.037	9.424
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	359	387	355	404	362	387
Service Time	7.751	7.151	8.223	7.043	7.737	7.124
HCM Lane V/C Ratio	0.284	1.15	0.704	1.089	0.528	1.207
HCM Control Delay	16.4	109.6	30.3	86.7	22.5	127
HCM Lane LOS	C	F	D	F	C	F
HCM 95th-tile Q	1.1	15.4	4.3	13.5	2.7	17.3

APPENDIX F

COLLISION DATA



Kimley»Horn

COLLISION DATA (2018-2022)

67TH AVENUE GAS STATION - MARYSVILLE, WA

REPORT	DATE	TIME	INTERSECTION	SEVERITY	# VEHICLES	ROAD CONDITION	LIGHT CONDITION	MANNER OF COLLISION	VEHICLE 1 MANEUVER	VEHICLE 2 MANEUVER
E873823	12/15/2018	23:27	67th Ave NE at 100th St NE	No Apparent Injury	1	Dry	Dark-Street Lights On	Roadway Ditch	Going Straight Ahead	
E955322	8/26/2019	22:44	67th Ave NE at 100th St NE	Suspected Minor Injury	1	Dry	Dark-Street Lights On	Fence	Going Straight Ahead	
EA37152	6/1/2020	20:05	67th Ave NE at 100th St NE	No Apparent Injury	2	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EA81056	11/9/2020	9:33	67th Ave NE at 100th St NE	No Apparent Injury	2	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EA31943	5/3/2020	14:21	67th Ave NE at 100th St NE	Possible Injury	2	Wet	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign
EB38605	6/13/2021	09:30	67th Ave NE at 100th St NE	No Apparent Injury	2	Wet	Daylight	From same direction - both going straight - one stopped - rear-end	Slowing	Stopped at Signal or Stop Sign
EB95973	12/1/2021	17:15	67th Ave NE at 100th St NE	No Apparent Injury	2	Wet	Dark-No Street Lights	From opposite direction - both going straight - sideswipe	Going Straight Ahead	Going Straight Ahead
EC21398	2/18/2022	2:36	67th Ave NE at 100th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	Entering at angle	Making Left Turn	Starting in Traffic Lane
EC62147	7/5/2022	23:11	67th Ave NE at 100th St NE	No Apparent Injury	2	Other	Dark - Unknown Lightin	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign
E877518	12/29/2018	17:25	67th Ave NE at 108th St NE	No Apparent Injury	2	Wet	Dark-Street Lights On	Entering at angle	Starting in Traffic Lane	Starting in Traffic Lane
E873396	12/17/2018	17:19	67th Ave NE at 108th St NE	No Apparent Injury	2	Wet	Dark-No Street Lights	Entering at angle	Going Straight Ahead	Going Straight Ahead
E812822	6/23/2018	0:37	67th Ave NE at 108th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	Entering at angle	Making Left Turn	Going Straight Ahead
E862440	11/19/2018	7:51	67th Ave NE at 108th St NE	No Apparent Injury	2	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
E845036	9/29/2018	11:42	67th Ave NE at 108th St NE	No Apparent Injury	1	Dry	Daylight	Breakage of any part of the vehicle resulting in injury or in further property damage	Going Straight Ahead	
E841980	9/24/2018	5:50	67th Ave NE at 108th St NE	No Apparent Injury	1	Dry	Dark-No Street Lights	Roadway Ditch	Making Right Turn	
E932060	6/19/2019	20:27	67th Ave NE at 108th St NE	Possible Injury	2	Dry	Dusk	Entering at angle	Making Left Turn	Going Straight Ahead
E905406	3/26/2019	18:57	67th Ave NE at 108th St NE	Possible Injury	2	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign
EA45125	7/5/2020	18:10	67th Ave NE at 108th St NE	Suspected Minor Injury	1	Dry	Daylight	Vehicle Strikes Pedalcyclist	Going Straight Ahead	
EA74048	10/21/2020	8:49	67th Ave NE at 108th St NE	Possible Injury	2	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EA32905	5/9/2020	16:36	67th Ave NE at 108th St NE	No Apparent Injury	2	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EA89867	12/10/2020	16:52	67th Ave NE at 108th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn
EB70502	9/22/2021	06:45	67th Ave NE at 108th St NE	No Apparent Injury	2	Dry	Daylight	From opposite direction - one left turn - one straight	Starting in Traffic Lane	Making Left Turn
EA97564	1/10/2021	17:37	67th Ave NE at 108th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	Entering at angle	Going Straight Ahead	Going Straight Ahead
ED25065	12/29/2022	18:12	67th Ave NE at 108th St NE	No Apparent Injury	2	Wet	Dark-No Street Lights	Entering at angle	Making Left Turn	Stopped at Signal or Stop Sign
EC17277	2/4/2022	7:05	67th Ave NE at 108th St NE	No Apparent Injury	2	Wet	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead
E871346	12/12/2018	7:18	67th Ave NE at 88th St NE	No Apparent Injury	3	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead
E794697	5/4/2018	14:38	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	Entering at angle	Merging (Entering Traffic)	Going Straight Ahead
E958331	9/9/2019	16:04	67th Ave NE at 88th St NE	No Apparent Injury	1	Wet	Daylight	Metal Sign Post	Making Left Turn	
E949846	8/13/2019	23:19	67th Ave NE at 88th St NE	No Apparent Injury	1	Dry	Dark-Street Lights On	Utility Box	Going Straight Ahead	
E921630	5/18/2019	21:36	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead
E905805	3/27/2019	18:35	67th Ave NE at 88th St NE	Suspected Minor Injury	2	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
E941347	7/18/2019	19:49	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Going Straight Ahead
E992622	12/11/2019	16:51	67th Ave NE at 88th St NE	No Apparent Injury	2	Wet	Dark-Street Lights On	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead
E995608	12/20/2019	10:20	67th Ave NE at 88th St NE	Possible Injury	2	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EA19507	2/28/2020	22:08	67th Ave NE at 88th St NE	No Apparent Injury	2	Wet	Dark-Street Lights On	Entering at angle	Going Straight Ahead	Making Right Turn
EA35476	5/22/2020	16:20	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	From same direction - both going straight - one stopped - sideswipe	Going Straight Ahead	Stopped at Signal or Stop Sign
EA88826	12/12/2020	18:20	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	From opposite direction - both going straight - sideswipe	Going Straight Ahead	Going Straight Ahead
EB87867	11/10/2021	06:38	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Dawn	Entering at angle	Going Straight Ahead	Making Right Turn
EB72211	9/26/2021	18:35	67th Ave NE at 88th St NE	Possible Injury	2	Wet	Dark-Street Lights On	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn
EB78793	10/17/2021	09:24	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EC06169	12/29/2021	07:47	67th Ave NE at 88th St NE	No Apparent Injury	2	Ice	Daylight	From same direction - all others	Stopped at Signal or Stop Sign	Going Straight Ahead
EB17029	3/4/2021	11:52	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Starting in Traffic Lane	Stopped at Signal or Stop Sign
EA98054	1/13/2021	13:12	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead
EC07507	12/26/2021	05:50	67th Ave NE at 88th St NE	No Apparent Injury	2	Snow/Slush	Dark - Unknown Lightin	From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Going Straight Ahead
EC82545	9/10/2022	13:26	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign
EC69432	7/28/2022	19:20	67th Ave NE at 88th St NE	Possible Injury	2	Dry	Daylight	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn
EC56864	6/18/2022	11:37	67th Ave NE at 88th St NE	Possible Injury	2	Wet	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead
EC35802	3/27/2022	20:15	67th Ave NE at 88th St NE	Possible Injury	2	Dry	Dark-Street Lights On	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn
EC57764	6/19/2022	19:26	67th Ave NE at 88th St NE	Suspected Serious Injury	3	Dry	Daylight	From same direction - all others	Going Straight Ahead	Going Straight Ahead
ED14961	12/15/2022	15:12	67th Ave NE at 88th St NE	Possible Injury	2	Dry	Daylight	Entering at angle	Making Left Turn	Stopped for Traffic
EC91802	10/10/2022	6:14	67th Ave NE at 88th St NE	Possible Injury	2	Dry	Dark-Street Lights On	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead
EC98319	10/29/2022	18:40	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Dark-Street Lights On	Entering at angle	Going Straight Ahead	Going Straight Ahead
EC59893	6/28/2022	17:40	67th Ave NE at 88th St NE	No Apparent Injury	2	Dry	Daylight	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn

MARYSVILLE
PUBLIC WORKS

ENGINEERING VARIANCE REQUEST

One variance request form shall be submitted for each section of the Marysville Municipal Code (MMC) or Engineering Design and Development Standards (EDDS) for which variances are being sought. Each variance shall be considered on a case-by-case basis, and shall not be construed as setting precedent for any subsequent applications.

PROJECT INFORMATION:	
Project Name:	67th Avenue Gas Station
Project Number:	PA 24-006
Request Submittal Date:	08/26/2024

CONTACT INFORMATION:		
Engineer/Surveyor Name:	Brad Lincoln, PE	Professional Stamp
Firm Name:	Kimley-Horn and Associates, Inc.	
Mailing Address:	2828 Colby Avenue, Ste 200 Everett, WA 98201	
E-Mail Address:	brad.lincoln@kimley-horn.com	
Phone Number:	206.485.4774	

VARIANCE REQUEST INFORMATION:	
MMC/EDDS Section:	EDDS 2-05 Corner Clearance from Intersections
$714 Application Fee Submitted:	☐ Yes ☑ No

Variance Justification (attach additional pages if needed):

The variance request is to allow one access to 100th Street NE near the west edge of the property that allows right-in, right-out, and left-in movements while restricting left-out movements. The access to 67th Avenue NE will be near the northern property line and is proposed to be restricted to right-in and right-out only. The Development is also proposed to include widening and re-striping along 100th Street NE and 67th Avenue NE to allow for an eastbound right-turn lane and a southbound right-turn lane. See attached memorandum that addresses the variance decision criteria in MMC 22G.010.420

[See MMC 22G.010.420 for variance decision criteria]

(360) 363-8100

Public Works
501 Delta Avenue
Marysville, WA 98270

MARYSVILLE
PUBLIC WORKS

(360) 363-8100

Public Works
501 Delta Avenue
Marysville, WA 98270

FINDINGS/DECISION (City Staff Use Only)	
Reviewing Staff Member:	
$714 Application Fee Submitted:	☐ Yes ☐ No
Decision:	☐ Approve ☐ Approve with Conditions ☐ Disapprove
Findings/Decision/Conditions:	

Signature/Date

Kimley»Horn

MEMORANDUM

To:	Ken McIntyre, PE, City of Marysville
From:	Brad Lincoln, PE
	Kimley-Horn and Associates, Inc.
Date:	August 20, 2024
Subject:	Variance Request

Kimley-Horn and Associates, Inc. (Kimley-Horn) has been retained to provide a variance request for the 67th Avenue Fuel Station (Development) in the City of Marysville (City). The Development is located in the northwest corner of 100th Street NE at 67th Avenue NE and is proposed to consist of 8 vehicle fueling positions (VFP). The site is currently listed as undeveloped per the *Snohomish County Online Property Information (SCOPI)* web map. A site vicinity map is shown in **Figure 1**.

Figure 1: Site Vicinity Map

The site is proposed to have one access to 100th Street NE and one access to 67th Avenue NE. The proposal is to allow the following movements:

- 100th Street NE Access
  - Right-in
  - Right-out
  - Left-in
- 67th Avenue NE Access
  - Right-in
  - Right-out

This memo addresses the nine points listed under Marysville Municipal Code (MMC) 22G.010.420(1) to allow for this variance.

A. UNNECESARY HARDSHIP

The Development has approximately 150 feet of total frontage along 100th Street NE and approximately 300 feet of total frontage along 67th Avenue NE. The driveway to 100th Street NE is located approximately 90 feet, edge to edge, from 67th Avenue NE; which is the maximum separation feasible given the 20-foot landscaping buffer and the curb radius for an access. The access to 67th Avenue NE is located approximately 190 feet, edge to edge, from the 100th Avenue NE. The access to 67th Avenue NE is not located farther from 100th Avenue NE to accommodate parking and circulation within the site. The intersection of 100th Street NE at 67th Avenue NE is currently all-way stop-control, but is ultimately planned to be signalized. The access separation standards are based on Table 3-3.1 from the City of Marysville *Engineering Design and Development Standards (EDDS)*. The access location to 100th Street NE does not meet standards for an access, even restricted, and the access to 67th Avenue NE meets standards for a full access based on the current stop-control configuration and would meet the standards for right-in/right-out only restricted access with the planned signal.

The proposed use is allowed outright under the current zoning and two accesses are needed to help with circulation, particularly for fuel trucks. A strict enforcement of the access separation standards would limit the use of the property and represent an unnecessary hardship. Providing access to 100th Street NE and 67th Avenue NE, even if there are some restricted movements at the accesses, would allow for a reasonable use of the property.

B. UNIQUE SIZE AND LOCATION

The size of the parcel with only approximately 150 feet of frontage along 100th Street NE means that an access to 100th Street NE cannot meet separation standards, even for a limited access. The approximately 300 feet of frontage along 67th Avenue NE means that an access cannot meet separation standards that meets standards for a full access based on the future signal. Additionally, both 100th Street NE and 67th Avenue NE are arterials. These unique features mean that providing access to the site is impossible to meet separation standards without limiting the site to one restricted access.

C. DEPRIVED OF RIGHTS ENJOYED BY OTHERS

The City has numerous locations where accesses do not meet separation standards and the typical way of addressing these separation deficiencies is to restrict movements at the access. There are roadway improvements that are proposed as part of the Development, including the widening and restriping of 100th Street NE and 67th Avenue NE to provide eastbound and southbound right-turn lanes. There is not sufficient right-of-way, particularly along the east side of 67th Avenue NE, to provide even a temporary signal. These improvements, based on the analysis included in the August 5, 2024 comment memorandum and included with this variance request, would result in there being queue lengths along 100th Street NE of approximately 70 feet for eastbound right-turning vehicles and 20 feet for eastbound through/left-turning vehicles, which would allow space for inbound left-turning vehicles without impacting the eastbound queue. The southbound queue lengths along 67th Avenue NE are anticipated to be approximately 10 feet for right-turning vehicles and 290 feet for through/left-turning vehicles. The restriction of the access to 67th Avenue NE would eliminate left-turn movements. These restrictions are similar to restrictions at other commercial properties within the City that have access in close proximity to intersections. Approving this variance and these access locations and restrictions would therefore afford this property the same rights enjoyed by others.

D. ACTIONS OF THE PROPERTY OWNER

The need for the variance is based on the size of the property and the fact that the site is bound by arterials on both sides. The property owner is not able to control these factors and there are no other feasible access alternatives since the parcel is bound on the west by property owned by the City and bound on the north by single-family houses. The need for this variance is therefore not the result of deliberate actions of the applicant or property owner.

E. HEALTH AND SAFETY

The purpose of access separation standards and the reasons for restricting accesses that don't meet standards is to limit movements that can lead to collisions. This is usually in the form of restricting left-turning movements since they can lead to at-angle collisions and can also lead to backups to through movements where left-turn channelization is not provided. The proposed restrictions would eliminate left-turns at the access to 67th Avenue NE, which has a higher volume than 100th Street NE, and would allow only left-turns in at the 100th Street NE access. The eastbound queue lengths with the proposed channelization improvements show that the access to 100th Street NE is not anticipated to be blocked. The proposed restrictions and channelization additions should therefore adequately address health and safety concerns.

F. PERMITTED USE

The zoning for the site allows the proposed gas station use and therefore approval of this variance will not allow the establishment of the proposed use.

G. CREATION OF LOTS AND DENSITY

Approval of this variance will not affect the creation of lots or changes in residential density since this is a commercial use allowed under the current zoning.

H. MINIMUM NECESSARY

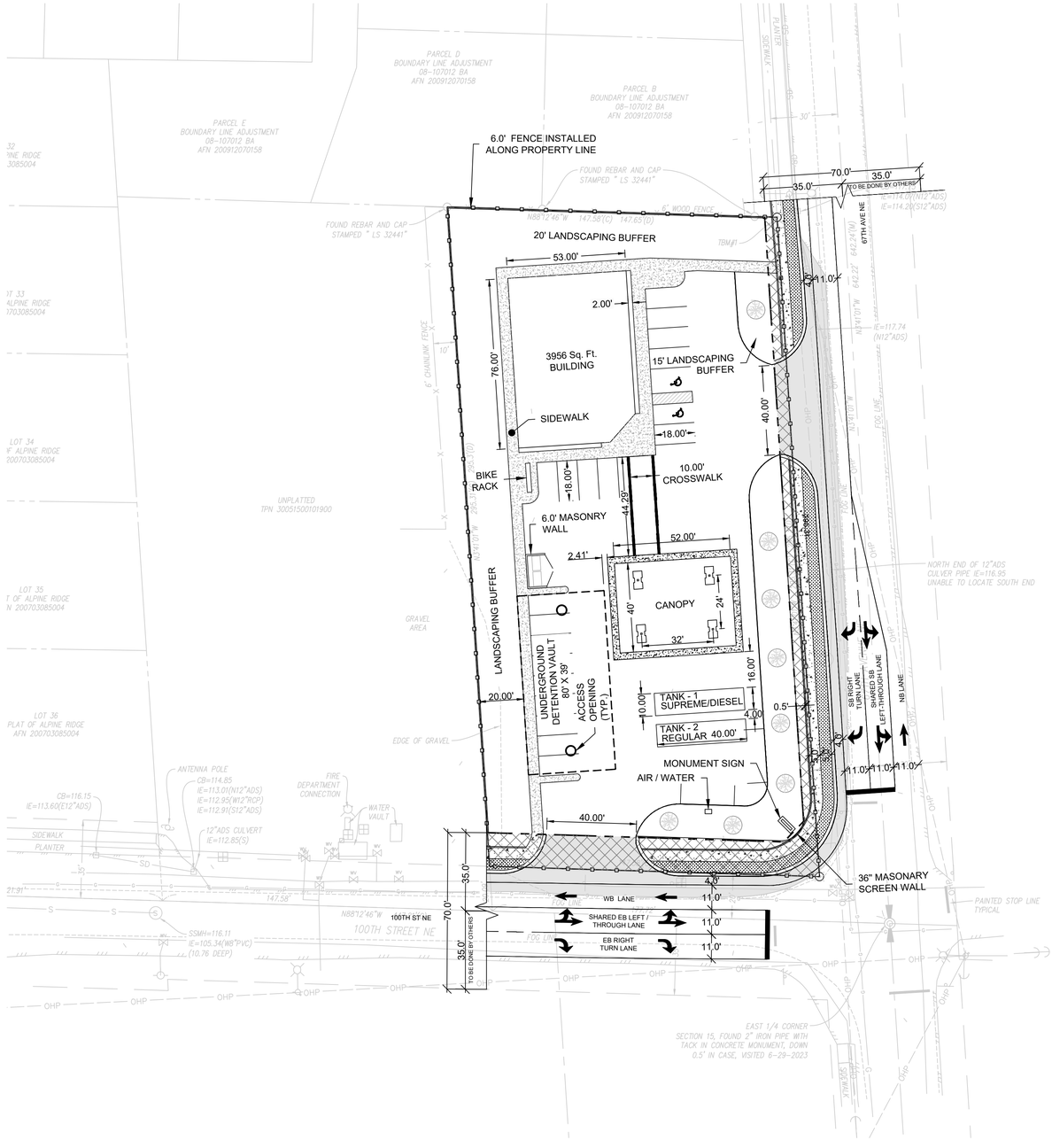
The approval of this variance is the minimum that is necessary to make the use viable since the accesses to 100th Street NE and 67th Avenue NE are proposed to be restricted, as opposed to requesting full access.

I. IMPACTS TO EASEMENTS

Approval of the variance will not infringe upon or interfere with easements since this variance is regarding access locations and restrictions.

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

- BIKE LANE EDGE
- CURB
- LANSCAPE
- SIDEWALK
- ASPHALT WIDENING
- PROPOSED ROW
- UNDERGROUND DETENTION VAULT
- PLOT BOUNDARY

AREA CALCULATIONS

1. TOTAL AREA = 39573.00 SF
2. IMPERVIOUS AREA = 27638.00 SF
3. PERVIOUS AREA = 11935.00 SF

N

1"=30'-0" Scale: 30 0 30 60 Feet

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

NO.	DATE	REVISION DESCRIPTION	BY

NOT FOR CONSTRUCTION

SITE PLAN

GEOMETRICS ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO.	DSN. BY:
PA-24-006	TI
DATE: 08/12/2024	
SCALE: 1" = 30'	
DRAWING NO. 05 OF 15	

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SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

Intersection	
Intersection Delay, s/veh	38.1
Intersection LOS	E

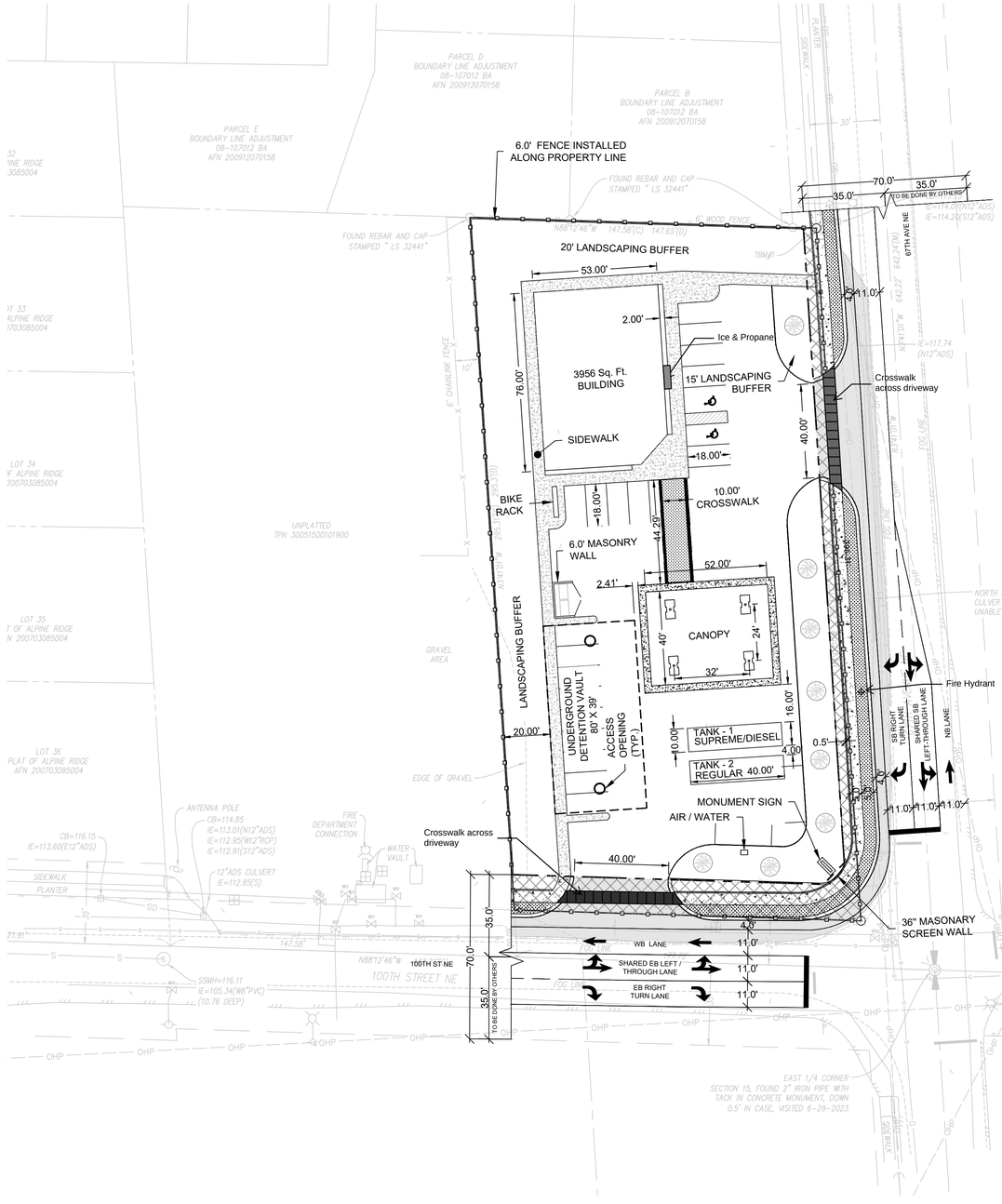
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Future Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	244	21	12	12	247	436	27	16	474	56
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	16.1	13.4	34.9	57.5
HCM LOS	C	B	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	89%	0%	47%	3%	0%
Vol Thru, %	0%	94%	11%	0%	27%	97%	0%
Vol Right, %	0%	6%	0%	100%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	453	83	239	45	481	55
LT Vol	242	0	74	0	21	16	0
Through Vol	0	427	9	0	12	465	0
RT Vol	0	26	0	239	12	0	55
Lane Flow Rate	247	462	85	244	46	491	56
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.515	0.893	0.2	0.496	0.116	0.983	0.101
Departure Headway (Hd)	7.512	6.958	8.504	7.322	9.103	7.21	6.475
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	479	522	423	493	393	506	553
Service Time	5.263	4.709	6.251	5.069	7.183	4.958	4.223
HCM Lane V/C Ratio	0.516	0.885	0.201	0.495	0.117	0.97	0.101
HCM Control Delay, s/veh	18	43.9	13.4	17.1	13.4	62.9	10
HCM Lane LOS	C	E	B	C	B	F	A
HCM 95th-tile Q	2.9	10.1	0.7	2.7	0.4	13	0.3

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

- BIKE LANE EDGE
- CURB
- LANSCAPE
- SIDEWALK
- ASPHALT WIDENING
- PROPOSED ROW
- UNDERGROUND DETENTION VAULT
- PLOT BOUNDARY

AREA CALCULATIONS

1. TOTAL AREA = 39573.00 SF
2. IMPERVIOUS AREA = 27638.00 SF 69.8%
3. PERVIOUS AREA = 11935.00 SF

N

1"=30'-0" Scale: 30 0 30 60 Feet

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

REVISION NO.	DATE	DESCRIPTION	BY

NOT FOR CONSTRUCTION

SITE PLAN

GEOMETRICS ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO.	DSN. BY:
PA-24-006	TI
DATE: 08/12/2024	
SCALE: 1" = 30'	
DRAWING NO. 05 OF 15	

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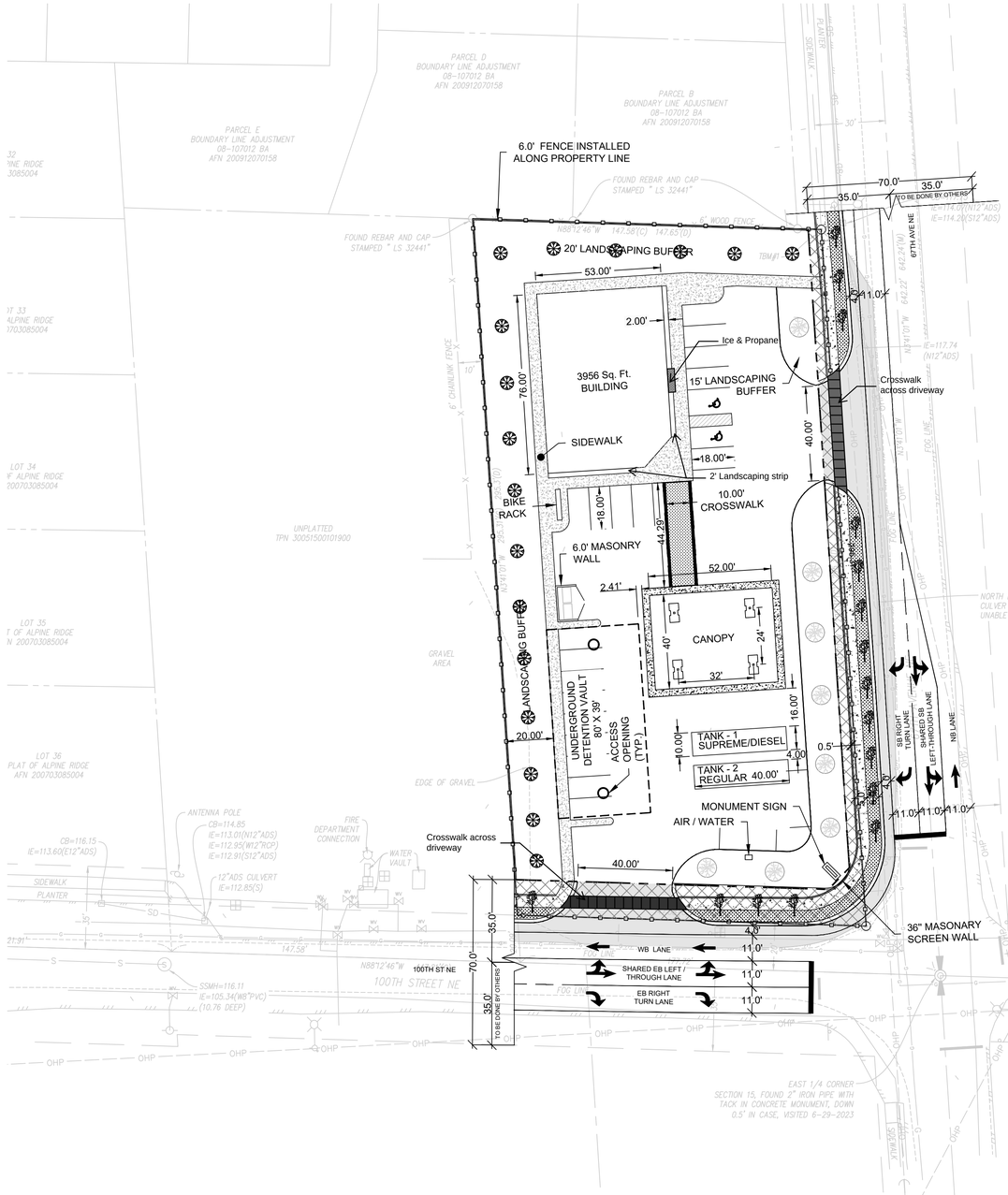
CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

- BIKE LANE EDGE
- CURB
- LANSCAPE
- SIDEWALK
- ASPHALT WIDENING
- PROPOSED ROW
- UNDERGROUND DETENTION VAULT
- PLOT BOUNDARY

AREA CALCULATIONS

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N

1"=30'-0" Scale: 30 0 30 60 Feet

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DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION NO.	DATE	DESCRIPTION	BY

NOT FOR CONSTRUCTION

LANDSCAPING SITE PLAN

GEOMETRICS ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO.	DSN. BY:
PA-24-006	TI
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SCALE: 1" = 30'	
DRAWING NO. 05 OF 15	

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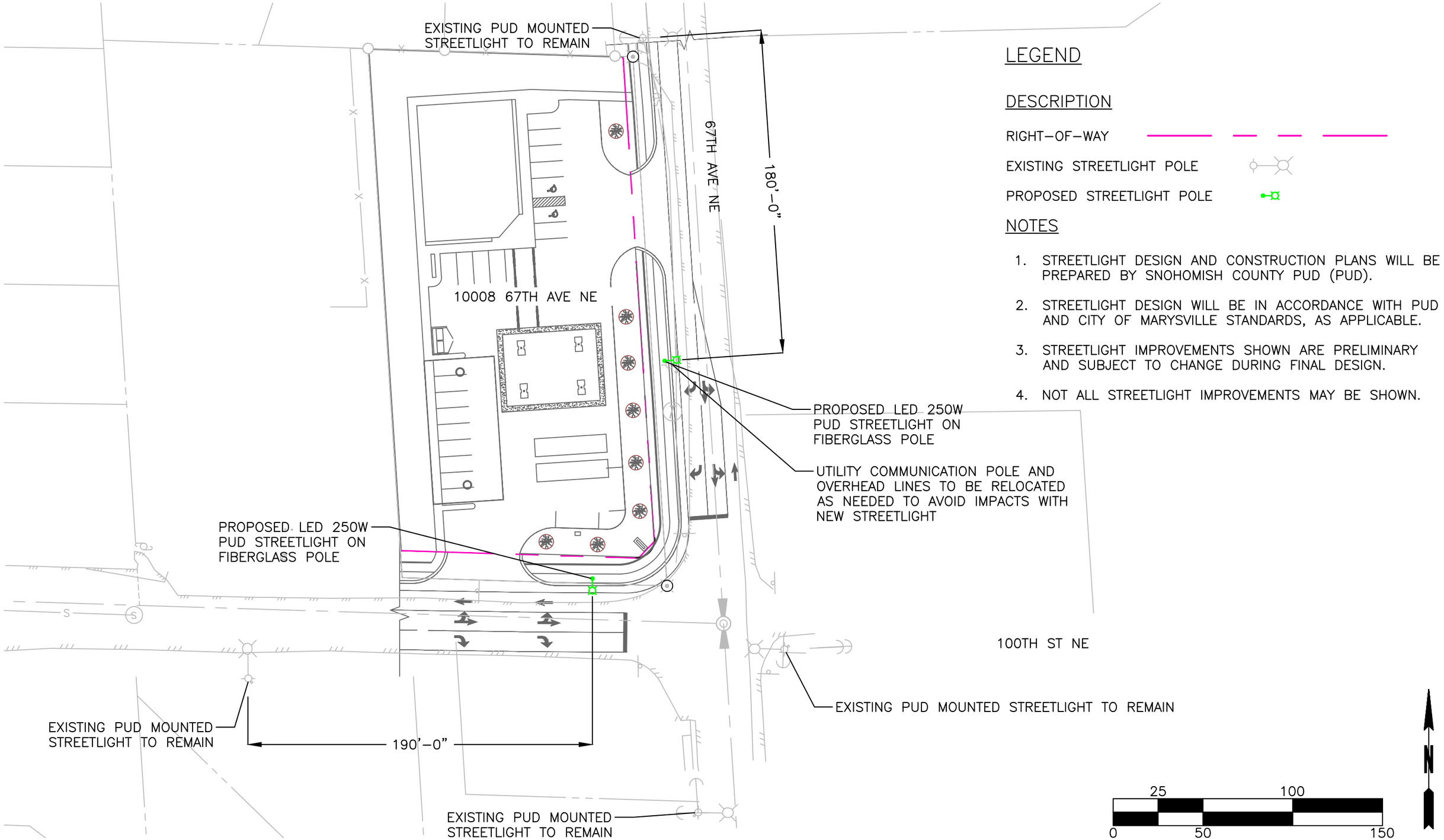


LEGEND

DESCRIPTION

RIGHT–OF–WAY

EXISTING STREETLIGHT POLE

PROPOSED STREETLIGHT POLE

NOTES

1. STREETLIGHT DESIGN AND CONSTRUCTION PLANS WILL BE PREPARED BY SNOHOMISH COUNTY PUD (PUD).
2. STREETLIGHT DESIGN WILL BE IN ACCORDANCE WITH PUD AND CITY OF MARYSVILLE STANDARDS, AS APPLICABLE.
3. STREETLIGHT IMPROVEMENTS SHOWN ARE PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL DESIGN.
4. NOT ALL STREETLIGHT IMPROVEMENTS MAY BE SHOWN.

Crossroads Chevron - Potential Streetlight Layout PA 24-006

August 21, 2024

FIGURE 1

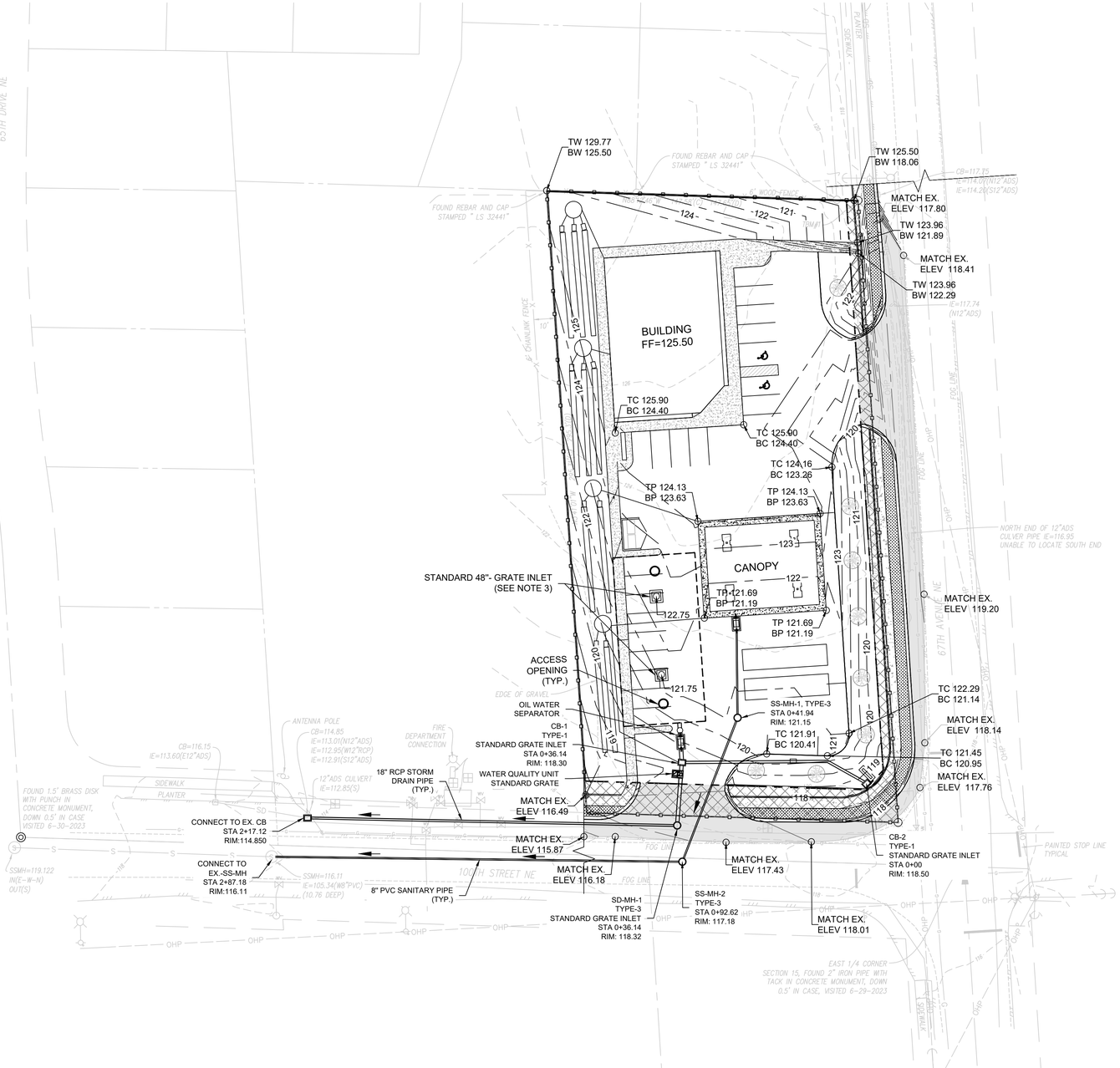
1.23336.00 - Crossroads Chevron

transpogroup WHAT TRANSPORTATION CAN BE.

Aug 21, 2024 - 3:16pm evanh M:\23\1.23336.00 - Marysville Service Station\Engineering\CAD\Conceptual\23336-TG-Potential Streetlight Layout.dwg Layout: Figure 1

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

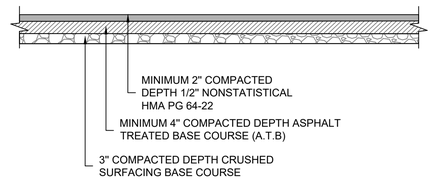


NOTE

1. REFER VAULT DETAIL SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.
2. REFER TO STRUCTURAL DETAILS SHEETS FOR UNDERGROUND DETENTION VAULT CONSTRUCTION.
3. STANDARD GRATE SHALL BE INSTALLED AS PER CITY OF MERYSVILLE STANDARD PLAN 4-080-017.

LEGEND

———	PROPOSED CONTOUR MAJOR
———	PROPOSED CONTOUR MINOR
TW	TOP OF WALL
BW	BOTTOM OF WALL
TC	TOP OF CURB
BC	BOTTOM OF CURB
TP	TOP OF PARKING
BP	BOTTOM OF PARKING
BOT	BOTTOM
←—	FLOW ARROW



TYPICAL SECTION - PARKING LOT

N

1"=30'-0" 30 0 30 60
Scale Feet

CALL 48 HOURS
BEFORE YOU DIG
811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION			
NO.	DATE	DESCRIPTION	BY
01	00/00/22	XYZ	XYZ

NOT FOR CONSTRUCTION

DRAINAGE AND GRADING PLAN

GEOMETRICS ENGINEERING, P.S., INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15,
TOWNSHIP 30 NORTH, RANGE 05
EAST, MARYSVILLE, WS 98270

PERMIT NO. PA-24-006	DSN. BY: TI
DATE: 08/12/2024	
SCALE: 1" = 30'	
DRAWING NO. 06 OF 15	

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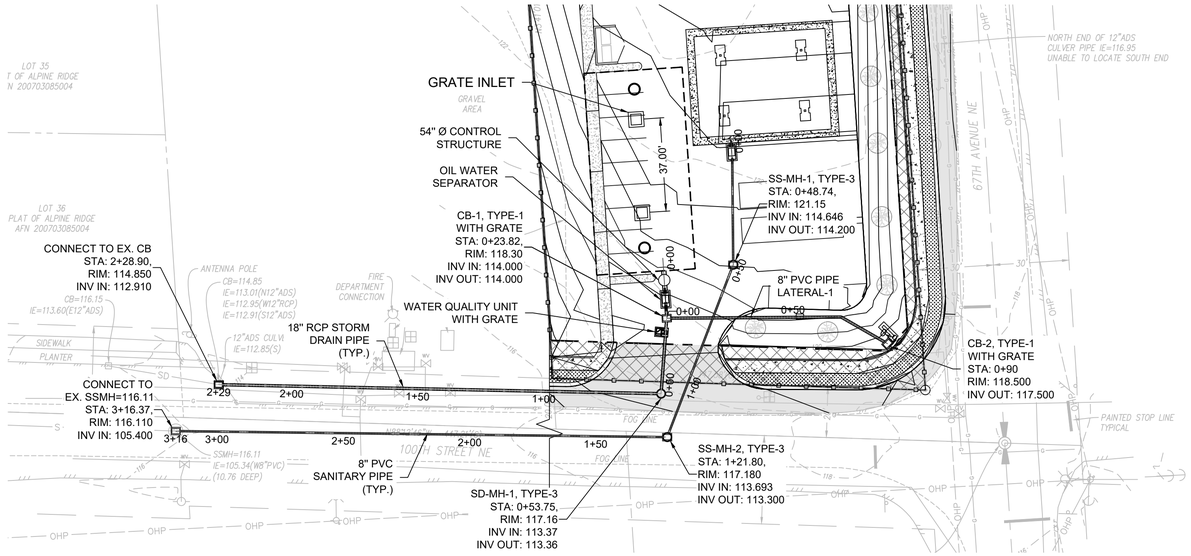
CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

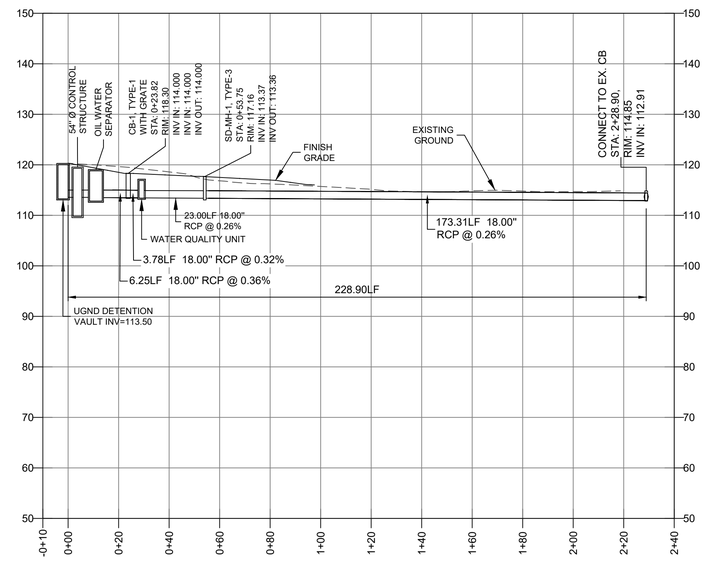
1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

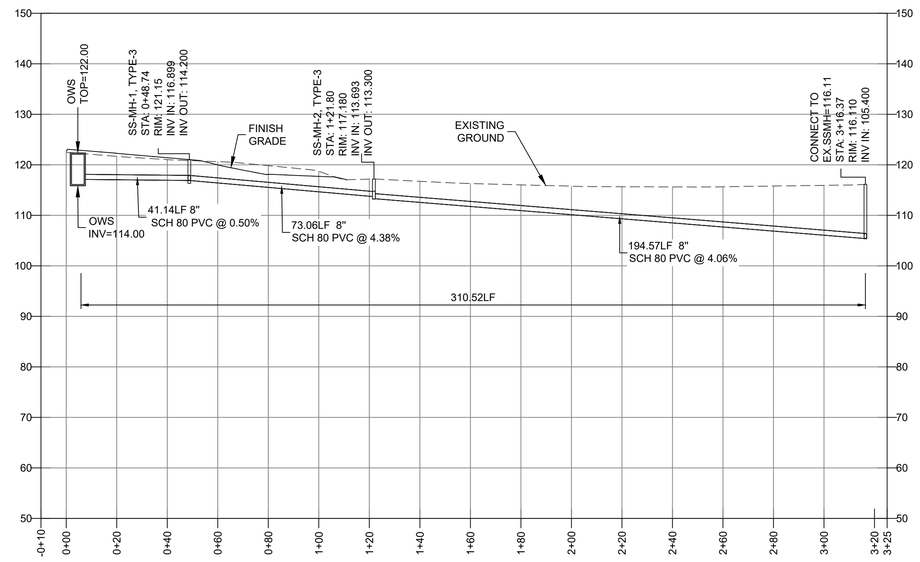
- PROPOSED STORM SANITARY PIPE
- PROPOSED STORM WATER PIPE
- UNDERGROUND DETENTION VAULT
- PROPOSED STORM SANITARY STRUCTURE
- PROPOSED STORM WATER STRUCTURE

N

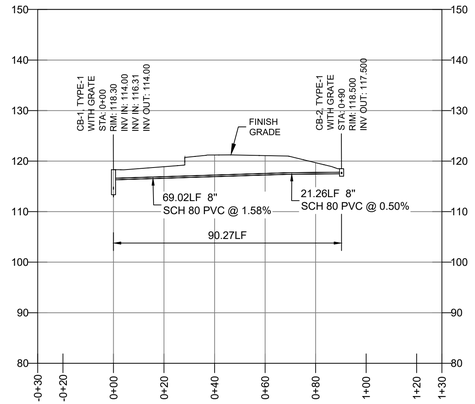
1"=30'-0" Scale: 30 0 30 60 Feet



PROFILE - STORM DRAIN



PROFILE - STORM SANITARY



PROFILE - LATERAL-1

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION NO.	DATE	DESCRIPTION	BY
	00/00/22		

NOT FOR CONSTRUCTION

DRAINAGE PLAN AND PROFILE

GEOMETRICS ENGINEERING, P.S. INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

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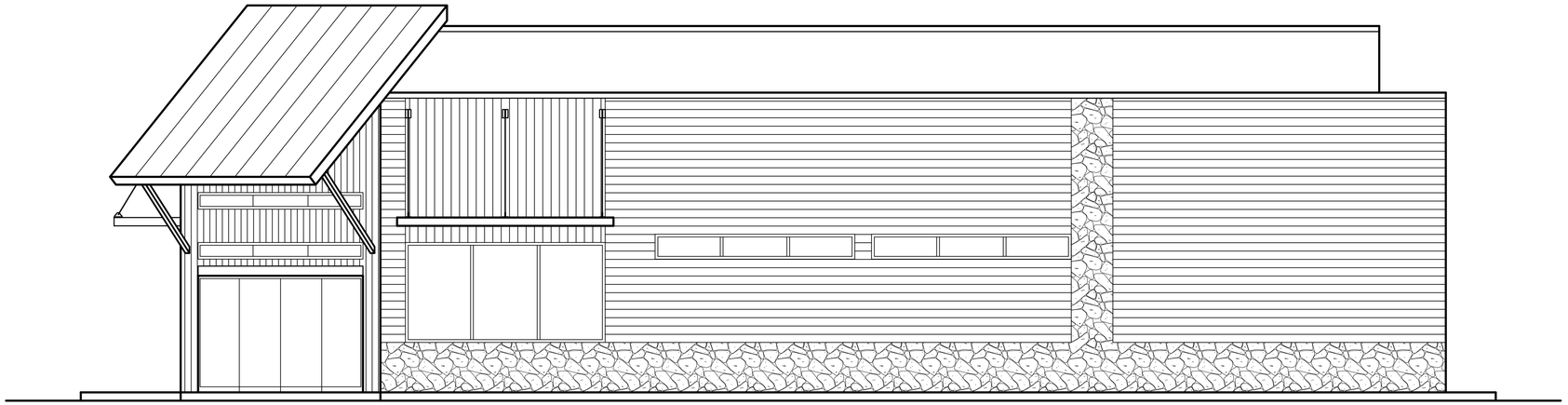
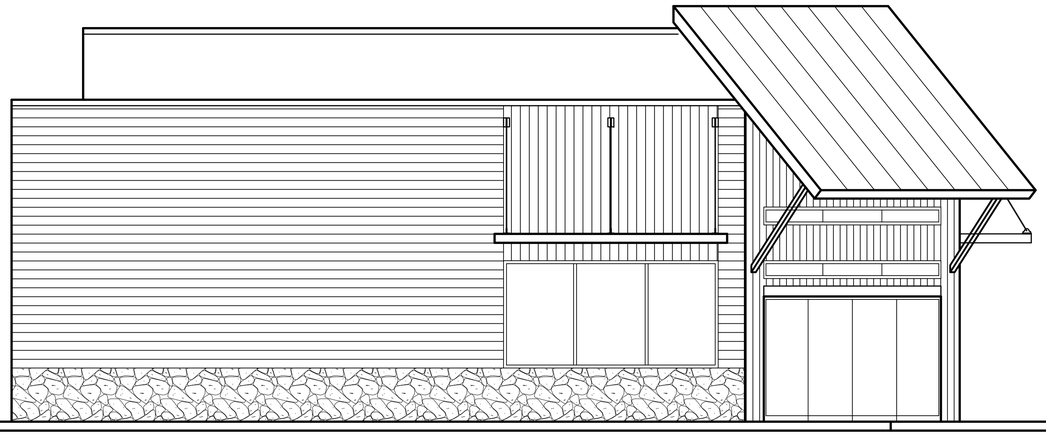


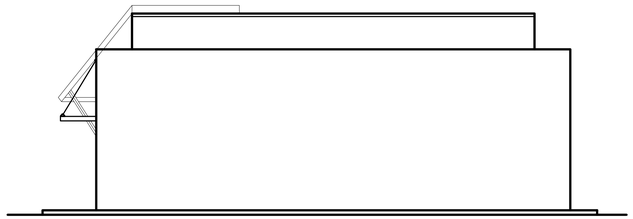
EAST ELEVATION

¼" = 1'-0"



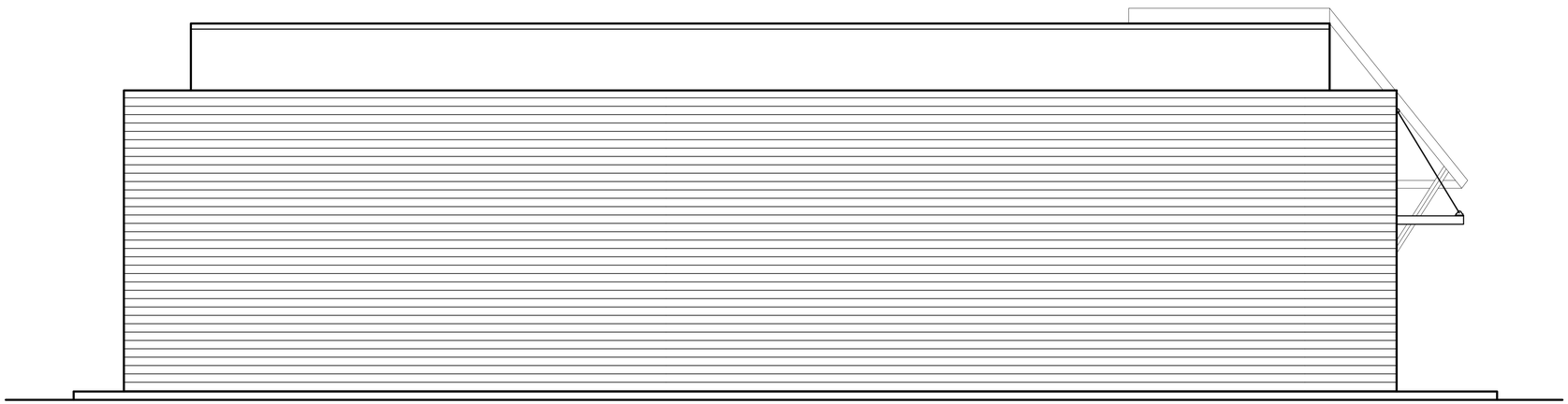
SOUTH ELEVATION

¼" = 1'-0"



NORTH ELEVATION

⅛" = 1'-0"



WEST ELEVATION

¼" = 1'-0"

PA #24-006

400

TOM HERSTAD
BUILDING DESIGN INC.
246 TREMONT AVE. FORT ORCHARD, WA 98366 • (360) 876-6893
FAX - 876-1418 • EMAIL - officetb1@tomherstad.com

ALL WORK SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF LOCAL STATE AND NATIONAL CODES. THE ARCHITECT IS NOT RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS NOR RESPONSIBILITY FOR THE SUPERVISION OR PROPER EXECUTION OF THE CONSTRUCTION WORK OF THE CONTRACTOR.

VERIFY ANY EXISTING CONDITIONS AND DIMENSIONS ON SITE. INDICATED DIMENSIONS ARE TO FINISHED SURFACES OF OTHER MATERIALS UNLESS OTHERWISE NOTED. DIMENSIONS ARE TO FACE OF CONCRETE OR CONCRETE BLOCK UNLESS OTHERWISE NOTED. DO NOT SCALE DRAWINGS. ANY DISCREPANCIES OR ERRORS OR ANOMALIES IN THESE DRAWINGS ARE TO BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

THE REUSE AND/OR MODIFICATION OF THESE PLANS WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE ARCHITECT IS STRICTLY PROHIBITED AND PUNISHABLE BY LAW.

DATE AUG 2024
DRWG 23-003
C - STORE

REVISIONS

CROSSROADS CHEVRON

EXTERIOR ELEVATIONS

SHEET A3

FOOD MARKET DESIGNS
DESIGNING THE MODERN MARKET

Food Market Designs
115 2nd Street, Unit #1269
Langley, WA 98260
360-544-6440

"Exterior Concept"

Design concept- not for construction

Crossroads Chevron
Marysville, WA

PAGE: **01**

DATE: **8.14.2024**

COMMUNITY DEVELOPMENT DEPARTMENT
501 Delta Avenue ◆ Marysville, WA 98270
(360) 363-8000

September 11, 2024

John Hansen
Meydenbauer Group
1025 Willow Road
Redmond WA 98052

Re: Crossroads Chevron – *Technical Review 2*
PA 24-006

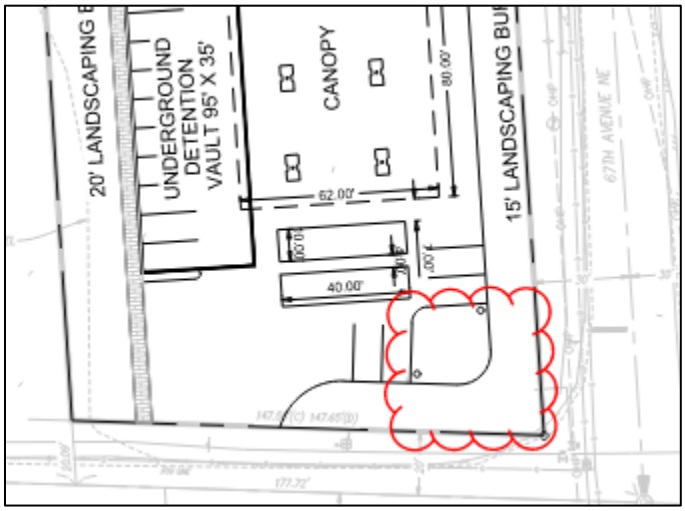
Dear John,

After preliminary review of the above referenced proposal, the Planning Division has the following technical review comments. Please note that these comments are being provided prior to a completed review by the City's Traffic Engineering Department. Once those comments have been provided, additional comments/revisions may be necessary.

Site and Building Design

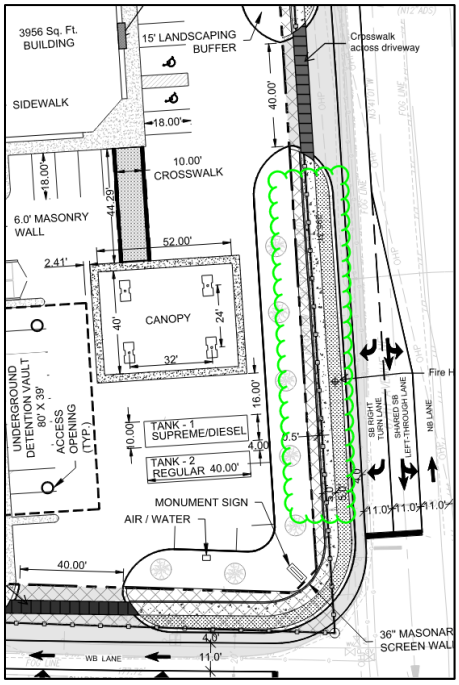
1. Detail of the three-foot masonry wall will be required to be submitted with the civil construction plans.

2. A pedestrian plaza, open space area, or architectural focal point should be added to the corner of 100th Street and 67th Avenue NE (see below). The placement of a monument sign does not create a pedestrian plaza. Please provide detail of the plaza area. It should be accessible from the sidewalk and provide pedestrian amenities, such as benches, landscaping, etc.



3. Details of the textured paving shall be provided with the civil construction plans. Please note that striping/painting is not acceptable; the surfaces shall be stamped/decorative concrete, or some other treatment as approved by the Engineering Services Manager.

4. Please provide a pedestrian connection in the area clouded below to provide a safe path for pedestrians to reach the sidewalk that does not require them to utilize the vehicular driveway.



5. It appears only 20 parking spaces, including the 2 ADA stalls have been provided. Two (2) additional parking stall are required. The area to be used for the air/water station cannot be counted towards required parking.

Landscape Plan

6. Pursuant to MMC 22C.020.265, a three-foot wide strip of landscaping shall be provided along at least 50 percent of the buildings frontage. It appears the landscape strip is only two feet wide. Pease revise accordingly and provide planting details on the landscape plan.

7. All garbage collection, dumpsters, recycling areas, loading and outdoor storage or activity areas, shall be screened with an L2 buffer and six-foot masonry wall. Please add landscape buffer on north side of dumpster enclosure.

Traffic Impact Analysis

8. Please see comments from Engineering Services and Traffic Engineering related to the updated TIA and required improvements/analysis.

Enclosed are copies of comments received from other City departments, and reviewing agencies. After you have had an opportunity to review, please let me know what technical review comments you need clarification on. Once received I can set up a conference meeting with all of the applicable city and agency representatives. If you have any questions, please contact me at 360.363.8215, or by e-mail at ahess@marysvillewa.gov.

Sincerely,

Amy Hess

Senior Planner

cc: Haylie Miller, CD Director
Chris Holland, Planning Manager

MARYSVILLE
PUBLIC WORKS

MEMORANDUM

TO: Amy Hess – Senior Planner

FROM: Jesse Hannahs, P.E. – Traffic Engineering Manager

DATE: September 17, 2024

SUBJECT: PA 24-006 – Crossroads Gas Station

I have reviewed the Crossroads Gas Station site plan for the proposed development of 10008 67th Ave NE and have the following comments:

1) Traffic impact fees will be required from the City and depending on trip generation/distribution, may be required from the County and State.
    a. Traffic Impact Fee (TIF) calculation improvement projects upon or frontage to be constructed by development shall be allowed for credit against Traffic Impact Fees up to the maximum amount of development TIF including:
        i. 67th Ave NE (frontage improvements) from 88th ST NE to Northern City Limits
        ii. Intersection signalization of 67th Ave NE & 100th ST NE
        iii. Intersection signalization of 67th Ave NE & 108th ST NE
2) A Traffic Impact Analysis (TIA) will be required.
    a. Analysis of City intersections with 25 or greater PM Peak Hour development trips traversing through intersection shall be required. City intersections with less than 25 PM Peak Hour development trips, per TIA Guidelines, do not require analysis.
        i. Intersection of 108th ST NE & 67th Ave NE is shared between City of Marysville & Snohomish County.
            1. City TIA Guidelines only require LOS evaluation for intersections with 25 or greater development PM peak hours trips. Intersection does not have 25 PM Peak Hour trips.
            2. Snohomish County TIA Guidelines require evaluation when 3 or more directional trips transverse intersection.
                a. Snohomish County shall provide TIA comments given LOS evaluation results and subsequently whether impact fees or other mitigation are required.
        ii. Intersections of 67th Ave NE & 100th ST NE
            1. Proposed mitigation measure must feasibly work from a construction, operations and safety perspective.
                a. Proposed southbound lane alignment per site plan is not acceptable as location of shared SB through/left turn lane does not provide alignment

(360) 363-8100

Public Works
80 Columbia Avenue
Marysville, WA 98270

for through traffic thus is not acceptable from operations or safety perspective.

2. A maximum of a two lane approach shall be acceptable at a stop controlled intersection as more lanes would result in greater driver confusion and thus diminished traffic safety for all roadway users.
    a. If analyzed lane arrangement of a right turn and shared through/left turn is the only option for intersection concurrency, the right turn lane shall require an 11' pavement width addition with the shared through/left turn lane moved 11' to west and an 11' hatched island in center.
    b. Storage length shall be considered for right turn lane, if proposed, to provide for all-way stop control as well as future signalized intersection in order to not require future reconstruction of frontage.

3) Intersection design of 67th Ave NE & 100th ST NE
    a. Ultimate intersection shall be signalized thus adequate ROW for signal infrastructure shall be provided on NW corner. A minimum of 6' behind sidewalk should be provided as ROW around radius from 5' to west and north of end of corner radius.
    b. Intersection shall be designed so as to not require removal/reconstruction of frontage with future signalization project.
4) Per EDDS 3-301, access management standards shall apply.
    a. Spacing of accesses shall be per EDDS.
    b. Signalization shall be assumed for purposes of access management standards at intersection of 100th ST NE & 67th Ave NE.
    c. Variance Request:
        i. Traffic Division will not support Eastbound Left Turn entry from 100th ST NE.
        ii. Traffic Division will support right-in/right-out access upon 100th ST NE.
    d. All right-in/right-out access points shall include construction of pork chop island(s) to facilitate compliance with restrictions.
5) Per EDDS 3-506, street lighting will be required.
    a. Street Lighting upon all three lane arterials and other public roadways shall be PUD installed fiberglass pole installation type street lighting.
        i. Street lighting shall be designed as minor arterial utilizing 250 watt equivalent LED fixtures.
        ii. Spacing of fixtures should be approximately 180'-220'.
        iii. As part of civil construction approval proposed PUD street lighting locations shall be provided by the City for incorporation into the PUD site electrical plans.
        iv. Contact Eddie Haugen of Snohomish County PUD at (425) 783-8276 or wehaugen@snopud.com for more information regarding PUD design.
6) Signing and Channelization Plans shall be required as part of Civil Construction plans.

PUBLIC WORKS DEPARTMENT
80 Columbia Avenue ◆ Marysville, WA 98270
(360) 363-8100 ◆ (360) 651-5099 FAX

MEMORANDUM

To: Amy Hess, Senior Planner

From: Shane Whitney, Civil Plan Reviewer

RE: 67th Ave Fuel Station, File# PA24-006
New Convenience Store
10008 67th Ave NE & Parcel # 30051500101800

Date: 9/12/2024

The following comments are offered after review of the above referenced revised application. Many of the original comments will remain as they won't change over the life of the project. New comments and comments that still need to be addressed will be in a ***bold italic*** font.

1. **Existing utilities**:
    a. Sanitary sewer: The SS clean out across the way in 100th Street is shown on record drawing S427.
    b. Water: The 24 inch DI waterline fronting the parcel on 100th is shown on record drawing W653
    c. Storm: The storm line at the NE corner of the project is shown on record drawing RD272

2. Per MMC 14.03.250, utilities are to be extended along the street frontages of the proposed project.
    a. Water main will be required to be extended along the projects frontage of 67th Ave NE.
    b. Storm drainage will need to be provided for the widened sections of 67th Ave and 100th Street.

3. **Frontage Improvements:** Frontage improvements are required per MMC 12.02A.090 on all projects. Frontage improvements are described as curbs, gutters, and sidewalks; underground storm drainage facilities; patching the street from its preexisting edge to the new curb line; and overlayment of the existing public street to its centerline.
    a. 67th Ave NE is to be a 3 lane arterial, the design to be used is as shown in standard plan 3-201-004.
    b. 100th St NE is to be a 3 lane arterial, the design is also to be compliant with standard plan 3-201-004.

c. ***The Traffic Engineer will need to review the revised TIA, any recommendations that come from that review will need to be installed.***

4. **Dedication Requirements:**
    a. For both 100th and 67th, a minimum half width of 35 feet of right-of-way is necessary. The supplied documents did not show any deeding that is to occur.
    b. Additional area may be necessary to accommodate the intersection improvements to allow for the required 35 foot radius.

5. **Access**:
    a. Section 3-301 of the EDDS details the arterial access standards. The Traffic Engineer has previously provided comment on this as well in the preapp.
    b. The spacing of the proposed access do not meet the standard as allowed in the EDDS section 3-301. To allow 2 accesses, an engineering variance will be required. ***The variance is under review by the Development Services Manager and the Traffic Engineer. The results of that will dictate any needed changes to the proposed access points for the project.***
    c. The minimum width of a commercial driveway is 24-feet and the maximum is 40-feet.
    d. The vertical alignment of the driveway access will need to be compliant with standard plan 3-303-004 of the EDDS.

6. **Drainage:** All projects in the city of Marysville must comply with requirements stipulated under the MMC 14.15.040 and 14.15.050.
    a. Stormwater drainage: The city has adopted the 2019 Ecology Manual. The project will be required to meet all 9 minimum requirements. The following items will need to be addressed in a resubmittal prior to a preliminary approval.
        - ***The preliminary report will need to address the required frontage improvements that are listed above.***
        - ***A pre and post developed basin map for the site will be necessary.***
    b. A geotechnical report was submitted. At time of grading permit submittal, a complete geotechnical report will be necessary.
    c. The maximum allowed impervious surface coverage for the Zoning designation is 85%.

Other Comments:

7. Survey control datum NAVD-88 and NAD-83 are required to be used. Civil construction plans will not be accepted in any other datum.

8. Trench restoration is to be completed in accordance with section 3-703 of the EDDS. A full lane or full street overlay may be required.

9. The onsite grading and placement of any retaining walls must be compliant with section 22D.050.030 of the MMC.

10. The location and design of the trash enclosure will need to be approved by our Sanitation group.

11. A right of way use permit for all work proposed within City right of way is required. Cost for the ROW permit is $648.00 fees must be paid before right of way permit issuance.

12. The applicant is responsible for identifying any existing well or septic systems on site or on adjacent properties. If there are any existing septic systems on site they need to be decommissioned based on the Snohomish Health District standards. If there are any wells on site they need to be decommissioned based on Department of Ecology standards.

13. Engineering construction plan review fees will be due prior to the start of the review of the plan submittal.
    Engineering construction plan review per MMC 22G.030.020:
    $976 plus a $2000 deposit are due for submittal of the grading permit.
    Review fee of $130 per hour will be charged against the deposit.

14. Engineering construction inspection fees will be due prior to issuance of the grading permit.
    Engineering construction inspection fees per MMC 22G.030.020:
    Inspection is charged at $130 per hour with a $2500 deposit required.

15. **All civil construction plan submittals are to be completed through our online permit portal at the following link:**
    https://permits.marysvillewa.gov/PermitApplication/confirmation.aspx Once the submittal is complete, please email the permit tech's at msvlpermits@marysvillewa.gov

    a. Review timing:
        i. First review = 5 weeks
        ii. Second review = 3 weeks
        iii. Third review = 3 weeks
        iv. Subsequent reviews will be 3 weeks.

2. Please be advised these comments are in reference to specific items and do not imply a full review of the proposed application. Additional comments which may change the design requirements will be provided during the civil construction plan review process.

If you have additional questions regarding the above comments, please contact me at swhitney@marysvillewa.gov or at (360) 363-8227.

cc: Ken McIntyre, PE, Engineering Services Manager

August 23, 2024

Amy Hess, Senior Planner
Community Development Department
501 Delta Avenue
Marysville, WA 98270

RE: Crossroads Chevron – Technical Review #1; PA #24-006

Dear Amy,

The following correspondence, prepared by the Meydenbauer Group, is in response to the City of Marysville's technical review comments from September 11th, 2024 and contains the project narrative, in addition to a detailed response to the City's individual comments.

Project Narrative

Representing a beneficial addition to the local neighborhood's available services, the Crossroads Chevron is designed to be an architecturally attractive and aesthetic service station that will provide the local community with a conveniently accessible premium fuel station and convenience store along the 67th AVE NE corridor at the intersection of 100th Street NE & 67th AVE NE. In addition to enhancing the street frontage, by developing a pedestrian pathway and bicycle travel lanes along the entirety of the property's street frontage, the Crossroad's Chevron will enhance the neighborhood's appeal with the installation of locally sourced landscaping and thoughtfully designed architecture.

With well maintained landscaping along the property's street frontage, the Crossroad's Chevron will feature trees and plants that are native to the local ecosystem, to enhance the environment for local wildlife and enhance the visual appeal of the property's street frontage. Beyond the street frontage, the property's landscaping will border the north and west property boundaries with a 20' landscaping buffer that will feature similar native vegetation to enhance the holistic appeal of the property from all directions.

Lighting throughout the site will incorporate architectural lighting fixtures that match the design characteristics of the building to enhance the many human-scale design characteristics of the site, providing a level of lighting that enables the identification of a face 45' away, security lighting to all parking spaces, and shielded in accordance with MMC 22C.130.050 such that it does not disturb residential uses or pose a hazard to passing traffic. In addition to parking lot illumination, the Crossroads

Chevron development will install new streetlights that are in compliance with local PUD standards along both 100th Street NE and 67th AVE NE.

Transitioning from the site's elegant landscaping design, the Crossroads Chevron Market and Deli will feature thoughtful architecture that is both aesthetic and inviting to local consumers traveling through the 67th AVE NE & 100th Street NE corridor. As the building's exterior cladding incorporates a variety of materials, there will be several layers that provide definition and contrast that complement the site's surroundings, while roofline modulations give the building depth and conceal the rooftop mounted mechanical systems.

Throughout the site, the property has been designed for ease of access and traffic flow that encourages customers to enjoy all the services that the Crossroads Chevron will offer. With ample parking, there is sufficient space for customers getting fuel to travel in and out of the site without being impeded by guests wishing to stay and enjoy one of the many snack and beverage items offered in the Crossroads Market and Deli, which will feature a full-service deli and large variety of snacks and beverages.

Planning Division Comment Response

Site and Building Design

1. Noted. Detail of masonry wall will be included with civil construction plans.
2. The southeast corner now contains 2 pathways to access the property from the street and landscaping will be incorporated into the civil construction plans. In addition, pedestrian plazas and gathering areas have been included on the revised site plan with multiple picnic tables up closer to the building and the curb line expanded to accommodate this.
3. Noted. Detail of the textured paving will be included.
4. Pedestrian connections are included on the east and south property lines.
5. There are now 23 parking stalls (not including the air/water station) and 1 additional motorcycle parking stall.

Landscape Plan

6. Landscape strip is now 3' wide.
7. L2 buffer is now on the north and south side of the trash enclosure.

Traffic Impact Analysis

8. We have discussed the concerns from the Traffic Engineer with him directly and resolved his concerns.

Conclusion

In conclusion, the Crossroads Chevron project (PA #24-006) represents a valuable addition to the local community in the 100th Street NE & 67th AVE NE corridor by providing services that are not available without a challenging commute into town and also provides for substantial infrastructure improvements

that will greatly enhance travel in the area. If there are any additional requests for information, please contact Matt LaLande with the Meydenbauer Group at (206) 898-4886 or via email at Matt@MeydenbauerGroup.com.

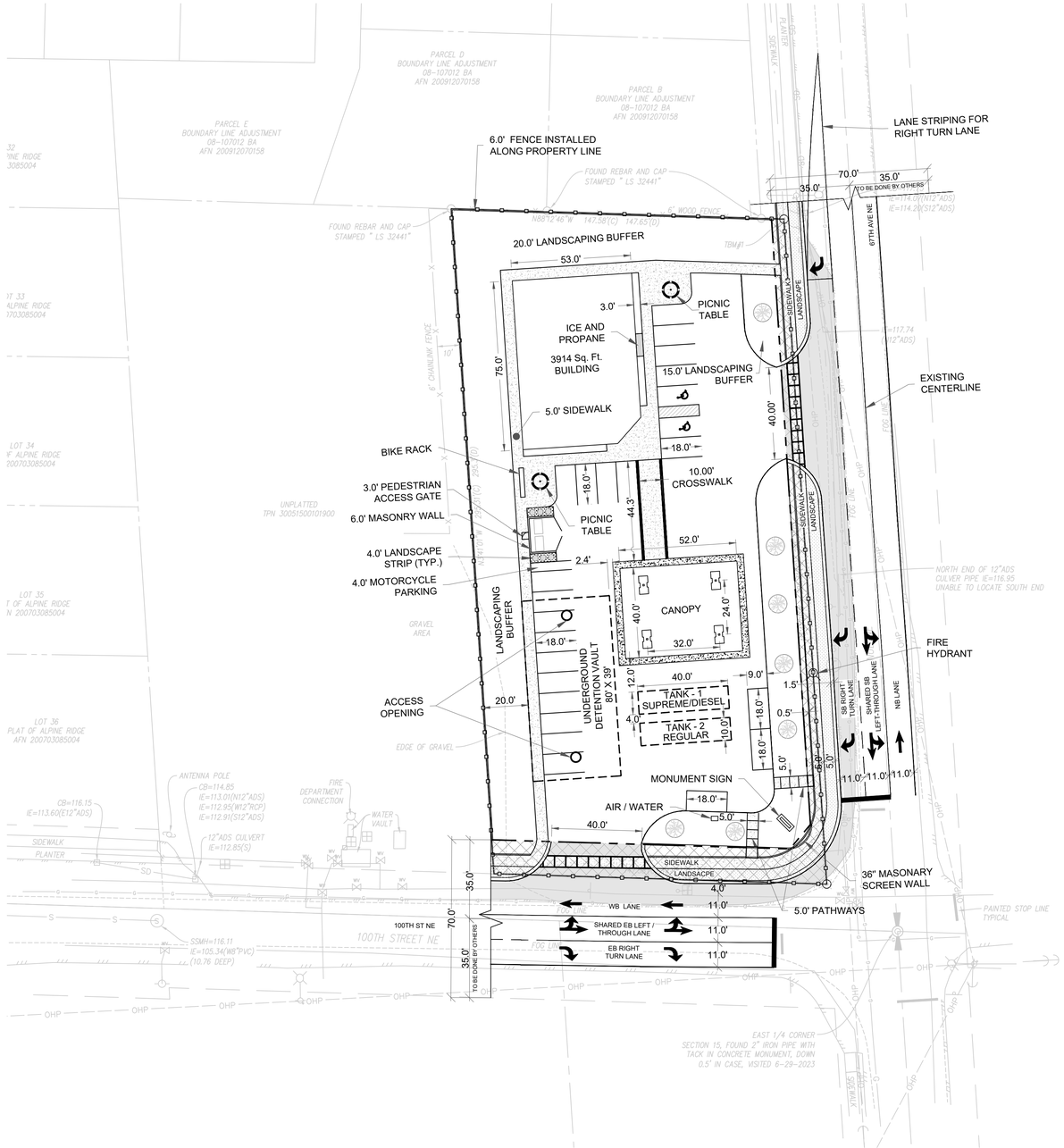
We thank you for your time in reviewing our application and look forward to further discussions about this project.

Sincerely,

Matt LaLande
Project Manager
(206) 898-4886
Matt@MeydenbauerGroup.com

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

- BIKE LANE EDGE
- CURB
- LANSCAPE
- SIDEWALK
- ASPHALT WIDENING
- PROPOSED ROW
- UNDERGROUND DETENTION VAULT / FUEL TANK
- PLOT BOUNDARY

AREA CALCULATIONS

1. TOTAL AREA = 39565.00 SF
2. IMPERVIOUS AREA= 27032.00 SF
3. PERVIOUS AREA = 12533.00 SF

N

1"=30'-0" Scale: 30 0 30 60 Feet

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

NO.	DATE	REVISION DESCRIPTION	BY

NOT FOR CONSTRUCTION

SITE PLAN

GEOMETRICS ENGINEERING, P.S. INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO.	DSN. BY:
PA-24-006	TI
DATE:	09/27/2024
SCALE:	1" = 30'
DRAWING NO.	05 OF 19

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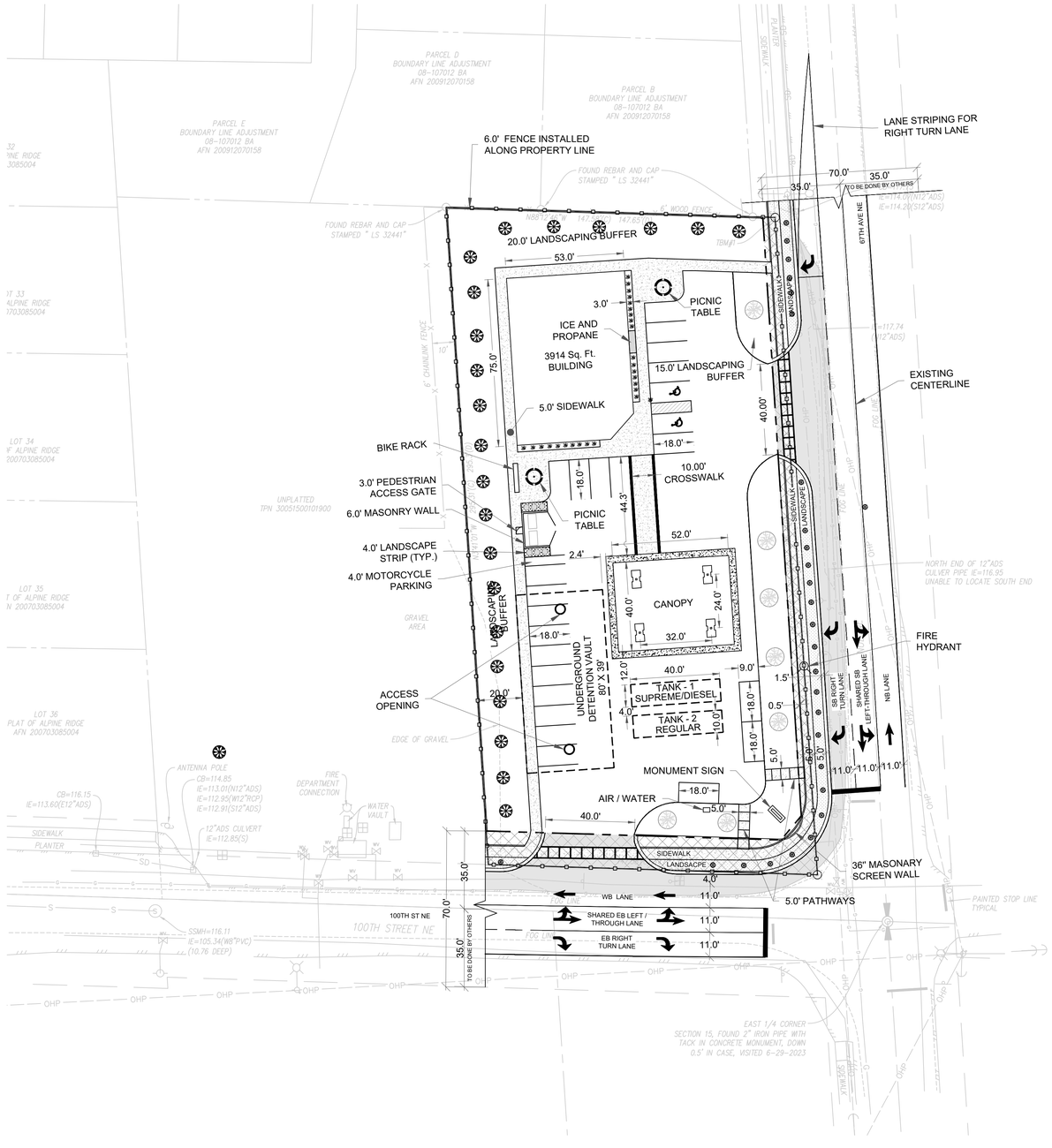
CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

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- BIKE LANE EDGE
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1"=30'-0" Scale: 30 0 30 60 Feet

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

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LANDSCAPING SITE PLAN

GEOMETRICS ENGINEERING, P.S. INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO.	DSN. BY:
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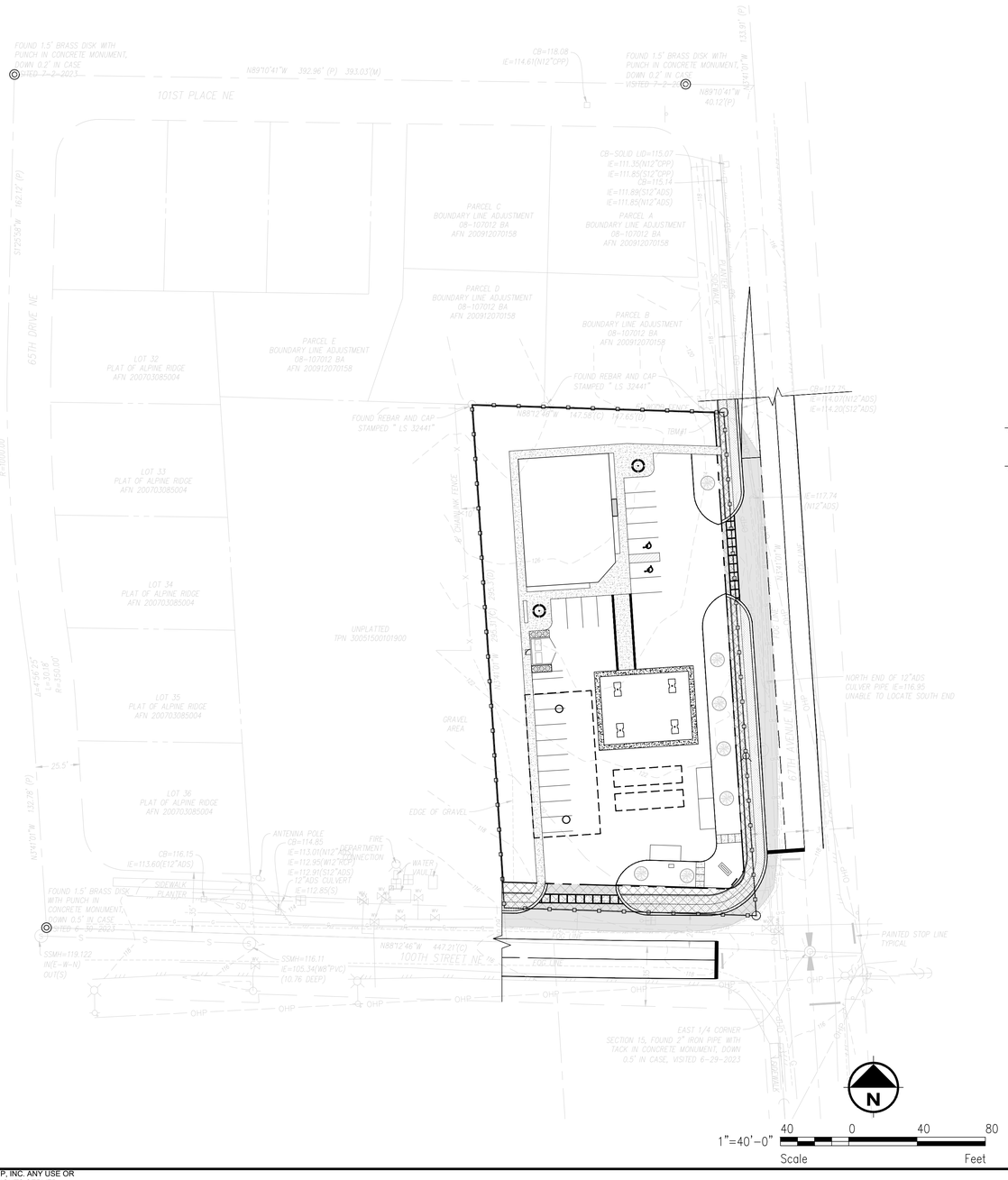
CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



VICINITY MAP

LEGAL DESCRIPTION

BEGINNING AT A POINT 20 FEET NORTH AND 30 FEET WEST OF THE SOUTHEAST COMER OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER, SECTION 15, TOWNSHIP 30 NORTH, RANGE 5 EAST OF THE WILLAMETTE MERIDIAN;
THENCE WEST 147.65 FEET;
THENCE NORTH 295.3 FEET;
THENCE EAST 147.65 FEET;
THENCE SOUTH 295.3 FEET TO THE POINT OF BEGINNING.
SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON

BASIS OF BEARING:
AS DERIVED BETWEEN ONE FOUND 4"X4" CONCRETE MONUMENT AND ONE FOUND 2" IRON PIPE, HAVING A BEARING OF N 03°41'01" W, PER RECORD OF SURVEY, RECORDED UNDER A.F. NO. 202302015010.

REFERENCES: RECORD OF SURVEY, A.F. NO. 202302015010
RECORD OF SURVEY, A.F. NO. 201101135005
PLAT OF ALPINE RIDGE, A.F. NO. 200703085004

VERTICAL DATUM: NAVD 88, SNOHOMISH COUNTY MONUMENT #2111, EAST 1/4 CORNER OF SECTION 15 EL=116.25 (PER GEODETIC GPS)

BM = BENCH MARK: SNOHOMISH COUNTY MONUMENT #2111 EAST 1/4 CORNER OF SECTION 15, ELEVATION=116.25
FOUND , FOUND EAST 1/4 CORNER SECTION 15, DESCRIBED AS 2" IRON PIPE WITH TACK IN CONCRETE MONUMENT, DOWN 0.5' IN CASE, VISITED 6-29-2023. LOCATED IN THE INTERSECTION OF 100TH STREET NE AND 67TH AVENUE NE AND DESCRIBED

TBM#1 = TEMPORARY BENCH MARK: FOUND MAG NAIL WITH WASHER LOCATED IN THE NORTHEAST PROPERTY CORNER OF PARCEL SET IN SOUTH EDGE OF THE ASPHALT WALKING RAMP. ELEVATION = 118.06'

SITE DATA

SITE ADDRESS:	10008 67TH AVE NE MARYSVILLE, WA 98270
TAX CONSULTANT NUMBERS:	300051500101800

OWNER/APPLICANT:
BRADLEY ELLEDGE
14911 CHAIN LAKE RD.
MONROE, WA 98272

SURVEYOR:
ORCA Land Surveying
3605 Colby Avenue,
Everett, WA 98201
425.259.3400

CIVIL ENGINEER:
GEOMETRICS ENGINEERING P.S.INC.
2501 152nd Ave NE Redmond, WA 98052

GENERAL CONTRACTOR:
MEYDENBAUER GROUP
IN THE SE 1/4 OF THE NE 1/4 OF SECTION 15, T.30N., R.5E., W.M.
SNOHOMISH COUNTY, WA

DRAWING INDEX:

1. COVER SHEET
2. NOTES
3. DRAINAGE AREA MAP
4. SWPPP
5. SITE PLAN
6. DRAINAGE AND GRADING PLAN
7. DRAINAGE PLAN AND PROFILE
8. UTILITY PLAN
9. VAULT DETAILS
10. DETAILS -OIL WATER SEPARATOR
11. MANHOLE PLAN & MANHOLE TYPE-3 DETAIL
12. CATCH BASIN INSTALLATION DETAILS TYPE-1 & 1L
13. CATCH BASIN TYPE-1 (18" MAX. DIA)
14. SANITARY SEWER DRAINAGE CUT-OF COLLAR
15. DETAILS-1
16. DETAILS-2
17. DETAILS-3
18. STRUCTURAL DETAILS OF DETENTION VAULT
19. FIRE TRCUCK (EFR) ACCESS ROUTE

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION

NO.	DATE	DESCRIPTION	BY

NOT FOR CONSTRUCTION

COVER SHEET

GEOMETRICS ENGINEERING, P.S. INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO. PA-24-006	DSN. BY: TI
DATE: 10/14/2024	
SCALE: 1" = 40'	
DRAWING NO. 01 OF 19	

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SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

GRADING REQUIREMENT AND NOTES

1. ALL GRADING SHALL COMPLY WITH TITTLE 30.638 OF THE SNOHOMISH COUNTY CODE AND CH 18 OF THE IBC. GRADING IS SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL.
2. CALL 1-800-424-5555 PRIOR TO CONSTRUCTION FOR REQUIRED UTILITY LOCATION BEFORE UNDERGROUND CONSTRUCTION.
3. ALL CUT AND FILL SLOPES SHALL BE A MAXIMUM OF 2:1.
4. GRADING PLAN REQUIREMENTS DO NOT TERMINATE WITH THE EXPIRATION OPF THE GRADING PERMIT, UNLESS SHOWN ON THE PLANS AS TEMPORARY, EROSION CONTROL, DRAINAGE CONTROL AND SLOPE MANAGEMENT REQUIREMENTS ARE EXPRESSLY ON-GOING REQUIREMENTS.
5. THE LIMITS SHALL BE MARKED IN THE FIELD BEFORE PERFORMING ANY GRADING OR CLEARING.ALSO MARK THE LIMITS OF ALL SENSITIVE AREAS AND THEIR BUFFERS, DRAINAGE COURSES TO BE UN-DISTURBED, AND TREES TO BE RETAINED.
6. GRADING SHALL HAVE A MINIMUM SETBACK OF 2 FEET FROM THE BOUNDARY LINE, UNLESS SPECIFICALLY SHOWN AS PERMITTED ON THE PLANS.
7. STOCKPILES ARE TO BE LOCATED IN SAFE AREAS AND ADEQUATELY PROTECTED TO PREVENT EROSION.

GENERAL NOTES:

1. THE CITY OF MARYSVILLE GENERAL NOTES, PUBLIC ROADWAY NOTES, STORMWATER NOTES, WATER NOTES, AND WASTEWATER NOTES SUPERSEDE ANY AND ALL PLAN NOTES ADDED BY THE DESIGN ENGINEER UNLESS EXPLICITLY APPROVED BY THE CITY ENGINEER. FOR PLANS UNDER THE JURISDICTION OF UNION COUNTY THE UNION COUNTY NOTES ARE PRIMARY WITH THE CITY NOTES SECONDARY AND THE DESIGNER'S PLANS NOTES SUBSIDIARY TO BOTH.
2. THE CURRENT STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS TOGETHER WITH THE REQUIREMENTS OF THE CITY OF MARYSVILLE, OHIO SHALL GOVERN MATERIALS AND WORKMANSHIP INVOLVED IN IMPROVEMENTS SHOWN ON THESE PLANS, EXCEPT THOSE SPECIFICATIONS MODIFIED BYTHE FOLLOWING SPECIFICATIONS OR CONSTRUCTION DETAILS SET FORTH HEREIN.
3. ALL WORK IS TO BE ACCEPTABLE TO CITY OF MARYSVILLE OFFICIALS. NO WORK IS TO COMMENCE UNTIL ARRANGEMENTS HAVE BEEN MADE WITH THE CITY OF MARYSVILLE ENGINEER FOR INSPECTION. ALL CONSTRUCTION LAYOUT IS TO BE PROVIDED BY THE OWNER.
4. THE CONTRACTOR SHALL CLEAN ADJACENT STREETS ON A DAILY BASIS IF MUD IS TRACKED FROM VEHICLES VISITING THE THIS IS A MINIMUM, MORE FREQUENT CLEANINGS MAY BE REQUIRED IF THE CITY DEEMS NECESSARY.
5. THE DEVELOPER/OWNER SHALL, PRIOR TO ANY CONSTRUCTION OPERATIONS, DEPOSIT WITH THE CITY OF MARYSVILLE, THE TOTAL ESTIMATED COST FOR INSPECTIONS.
6. THE CONTRACTOR SHALL NOTIFY THE CITY OF MARYSVILLE ENGINEER AT LEAST THREE WORKING DAYS PRIOR TO CONSTRUCTION.
7. ALL PERTINENT CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE AVAILABLE ON THE CITY OF MARYSVILLE WEB SITE. (WWW.MARYSVILLEOHIO.ORG)
8. THE CONTRACTOR AND SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS AND PROGRAMS IN CONNECTION WITH THE WORK.
9. THE IDENTITY AND LOCATION OF ALL EXISTING UNDERGROUND FACILITIES KNOWN TO BE IN THE CONSTRUCTION AREA HAS BEEN SHOWN ON THE PLANS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UTILITY. THE CITY OF MARYSVILLE HAS NO RESPONSIBILITY AS TO THE ACCURACY OR DEPTH OF THE UNDERGROUND FACILITIES AS SHOWN ON THE PLANS.
10. INVESTIGATIONS, LOCATION, SUPPORT, AND RESTORATION OF ALL EXISTING UTILITIES, APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
11. WHERE POTENTIAL GRADE CONFLICTS MIGHT OCCUR WITH EXISTING UTILITIES THE CONTRACTOR SHALL UNCOVER THE EXISTING UTILITY IN ADVANCE OF LAYING PIPE IN ORDER THAT THE ENGINEER MAY DETERMINE THE EXACT ELEVATION AND MAKE ANY NECESSARY ADJUSTMENTS.
12. THE CONTRACTOR SHALL GIVE NOTICE TO THE OHIO UTILITIES PROTECTION SERVICE (PHONE 1- 800-362-2764) AND TO THE OWNERS OF THE UTILITY FACILITIES SHOWN ON THE PLAN WHO ARE NOT MEMBERS OF A REGISTERED UTILITY PROTECTION SERVICE. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF ANY UTILITY AS REQUIRED BY THE PLAN WITH THE OWNER OF THE AFFECTED UTILITY.
13. ALL FIELD TILE BROKEN DURING EXCAVATION SHALL BE REPLACED WITH SDR 35 PERFORATED PIPE OR CONNECTED TO THE STORM SEWER SYSTEM.
14. EROSION CONTROL FOR PUBLIC ROADWAYS SHALL UTILIZE "DROP IN" TYPE EROSION CONTROL. THE CURB AND GUTTER INLET PROTECTION UNIT SHALL BE A SEWN GEOTEXTILE FABRIC UNIT ENCLOSING A POROUS STRUCTURE IN THE FORM OF A CYLINDRICAL TUB PLACED IN FRONT AND EXTENDING BEYOND THE INLET OPENING ON BOTH SIDES AND HAVE A GEOTEXTILE FABRIC SACK ATTACHED DESIGNED TO FIT THE OPENING OF THE CATCH BASIN OR DROP INLET AND TO HANG UNDERNEATH THE GRATE AND INTO THE CATCH BASIN.
15. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF TRAFFIC DEVICES FOR CONSTRUCTION AND MAINTENANCE OPERATIONS, PUBLISHED BY ODOT, BUREAU OF TRAFFIC.
16. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY OR ALL EXISTING SIGNS, SHRUBS, FENCES, OR OTHER PHYSICAL FEATURES DAMAGED DURING THE EXECUTION OF THIS CONTRACT AT HIS OWN EXPENSE. ALL REPAIRS SHALL BE TO THE SATISFACTION OF THE OWNER AND THE CITY OF MARYSVILLE.
17. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND GOVERNMENT FEES, LICENSES, AND INSPECTIONS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF IMPROVEMENTS SHOWN ON THESE PLANS.
18. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY AND ALL EXISTING WORK DAMAGED DURING OR DUE TO THE EXECUTION OF THIS CONTRACT AT HIS OWN EXPENSE. ALL SAID WORK SHALL BE TO THE SATISFACTION OF THE OWNER AND THE CITY OF MARYSVILLE.
19. THE CONTRACTOR/ENGINEER/OWNER SHALL PROVIDE AS-BUILT ENGINEERING PLANS FOR SANITARY, STREET, STORM SEWERS, AND WATER LINE, AT THE COMPLETION OF CONTRACT. PLANS SHALL BE SUBMITTED IN HARD COPY AND IN ELECTRONIC FORMAT.
20. ANY SURVEY MONUMENTS OR PROPERTY COMER PINS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A REGISTERED SURVEYOR AT THE CONTRACTOR'S EXPENSE.
21. SURVEY MONUMENTS SHALL BE SET AT THE COMPLETION OF THE CONTRACT, AND A LETTER CERTIFYING THAT THE WORK
22. WAS DONE SHALL BE PROVIDED TO THE CITY ENGINEER.

STORM DRAINAGE REQUIREMENTS AND NOTES

1. CONTRACTOR/DEVELOPER SHALL DEVELOP A STORM WATER POLLUTION PREVENTION PLAN TO PROTECT OHIO'S RESOURCES FROM HARMFUL EFFECTS OF SEDIMENT.
2. STORM SEWERS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
   SIZE SPECIFICATION
   6", 8", 10" ODOT 707.33
   12" AND GREATER ODOT 707.65
3. ALL MANHOLES SHALL BE CITY OF MARYSVILLE STANDARD PRECAST CONCRETE MANHOLES AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS. CASTING TO BE NEENAH #R-1762 OR EQUAL, WITH "MARYSVILLE STORM SEWER" CAST INTO THE LID.
4. MANHOLE CASTINGS ARE TO BE SET, OR SUBSEQUENTLY ADJUSTED TO 2-INCHES ABOVE THE SURFACE GRADE ESTABLISHED BY THE ENGINEER WHEN MANHOLE IS OUTSIDE OF PAVED AREAS. ALL ADJUSTMENTS SHALL BE PERFORMED USING PRECAST RINGS. MASONRY BLOCKS ARE NOT PERMITTED.
5. CATCH BASINS AND CURB INLETS SHALL BE PRECAST CONCRETE OR CONCRETE BRICK LAID IN A FULL BED OF MORTAR AS SHOWN ON THE CONSTRUCTION DRAWINGS.
6. ALL CATCH BASINS AND CURB INLETS WITHIN PAVEMENT SHALL HAVE A STEEL ANGLE FRAME TO SUPPORT THE GRATE.
7. CURB INLET CASTINGS SHALL BE NEENAH R-3067 WITH TYPE 5 VANE GRATES OR EAST JORDAN IRON WORKS #7030 WITH TYPE M4 VANE GRATE.
8. CATCH BASIN GRATES WITHIN PAVEMENT SHALL BE HEAVY DUTY NEENAH R-4852 (2-INCH THICK), OR EQUAL. CATCH BASIN GRATES WITHIN GRASS AREAS SHALL BE NEENAH R-4859, OR EQUAL.
9. ALL CURB INLET AND CATCH BASIN CASTINGS SHALL BE PERMANENTLY CAST WITH A TROUT EMBLEM AND "DUMP NO WASTE", "DRAINS TO WATERWAYS" MESSAGES TO CLEARLY IDENTIFY SEWER.
10. ALL SANITARY AND STORM SEWERS CONSTRUCTED WITH FLEXIBLE CONDUIT SHALL HAVE BEDDING OF ODOT 603 TYPE 3 (#57 STONE) EXTENDING FROM A POINT NOT LESS THAN 4 INCHES BELOW THE BOTTOM OF THE PIPE TO A POINT NOT LESS THAN 12 INCHES ABOVE THE CROWN OF THE PIPE.
11. ANY FIELD TILE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED, AS DIRECTED BY THE CITY ENGINEER, WITH SDR- 35 PERFORATED PIPE. SDR-35 WILL BE USED TO SPAN THE TRENCH, OR TO INTERCEPT AND CONVEY TO THE STORM SEWER. TRENCH TO BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL. THIS COST IS TO BE INCIDENTAL TO THE COST OF THE PROJECT AND IS TO BE INCLUDED IN THE COST OF THE VARIOUS BID ITEMS.
12. ALL PIPE OUTSIDE OF THE RIGHT-OF WAY SHALL HAVE A MINIMUM OF 2-FEET OF COVER. IF EMBANKMENT IS REQUIRED TO ACHIEVE 2-FEET OF COVER, IT SHALL BE PLACED BEFORE INSTALLATION OF THE STORM SEWER.
13. DRAINAGE STRUCTURES SHALL HAVE OPENINGS FOR CURB UNDERDRAIN OUTLETS. UNDERDRAINS TO BE CONSTRUCTED IN ACCORDANCE WITH DETAILS ON SITE PLAN.
14. THE FLOW IN ALL SEWERS, DRAINS, AND WATERCOURSES ENCOUNTERED SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS OWN EXPENSE. WHENEVER3 SUCH WATERCOURSES ARE DISTURBED OR DESTROYED DURING THE PROSECUTION OF THE WORK, THEY SHALL BE RESTORED BY THE CONTRACTOR, AT HIS OWN EXPENSE, TO A CONDITION SATISFACTORY TO THE ENGINEER.
15. ALL PENETRATIONS IN THE STORM STRUCTURE BY STORM CONDUIT SHALL BE SEALED WITH MASONRY BLOCK, GROUT, AND HAVE A CONCRETE COLLAR POURED AROUND THE CONDUIT THE PIPE AT THE STRUCTURE.
16. ALL STORM SEWERS 12-INCH THROUGH 36-INCH ARE TO BE TESTED VIA MANDREL OR CAMERA/VIDEOED BY THE DEVELOPER PRIOR TO ACCEPTANCE BY THE CITY ENGINEER. ALL TESTING WORK IS TO BE PERFORMED IN THE PRESENCE OF A CITY OF MARYSVILLE REPRESENTATIVE. A COPY OF THE DVD OR MANDREL TEST PAPERWORK ALONG WITH A SUMMARY REPORT IS TO BE SUBMITTED TO THE ASSISTANT CITY ENGINEER.
17. BACKFILL OPERATIONS SHALL CONFORM TO THE STANDARD CONSTRUCTION DRAWINGS AND MEET THE SPECIFICATIONS LISTED BELOW:
   a. STORM TRENCHES OUTSIDE OF THE INFLUENCE OF STREETS SHALL REQUIRE 95% OF MAXIMUM DRY LABORATORY WEIGHT AT PLUS OR MINUS 2% OF OPTIMUM MOISTURE. MATERIAL SHALL BE PER ODOT 203.07 AND SUPPLEMENTAL SPECIFICATION 1015.
   b. STORM, SANITARY, AND UTILITY TRENCHES WITHIN 3 FEET OF THE EDGE OF PAVEMENT AND WITHIN THE CONE OF INFLUENCE SHALL REQUIRE 98% OF THE MAXIMUM DRY LABORATORY WEIGHT AT PLUS OR MINUS 2% OPTIMUM MOISTURE, BACKFILL MATERIAL SHALL BE ODOT 304 AGGREGATE OR COM LSM 185, LOW STRENGTH MORTAR. (LSM) WHERE SAID RESULTS INDICATE THE TRENCH BACKFILL DOES NOT MEET THE COMPACTION REQUIREMENTS OF ODOT 203.07 OF THE CONSTRUCTION AND MATERIALS SPECIFICATION, ALL BACKFILL SHALL BE REMOVED AND RETESTED UNTIL COMPACTION MEETS THE REQUIREMENTS OF 203.07. CONE OF INFLUENCE TO BEGIN 3 FEET FROM THE EDGE OF PAVEMENT AND EXTEND ONE FOOT IN DISTANCE FOR EVERYONE FOOT OF DEPTH.
   c. STORM, SANITARY, AND UTILITY TRENCHES UNDER ROAD PAVEMENT SHALL REQUIRE 98% OF THE MAXIMUM DRY LABORATORY WEIGHT AT PLUS OR MINUS 1.5% OPTIMUM MOISTURE. BACKFILL MATERIAL SHALL BE ODOT 304 AGGREGATE OR COM LSM 185, LOW STRENGTH MORTAR, (LSM). BACKFILL TO BEGIN 3 FEET FROM EDGE OF PAVEMENT AND EXTEND ONE FOOT IN DISTANCE FOR EVERY ONE FOOT OF DEPTH. WHERE SAID RESULTS INDICATE THE TRENCH BACKFILL DOES NOT MEET THE COMPACTION REQUIREMENTS OF ODOT 203.07 OF THE CONSTRUCTION AND MATERIALS SPECIFICATION, ALL BACKFILL SHALL BE REMOVED AND RETESTED UNTIL COMPACTION MEETS THE REQUIREMENTS OF 203.07.
   d. PRIOR TO THE CONSTRUCTION OF STREETS, SOIL TESTS SHALL BE TAKEN AT ALL SANITARY SEWER, DESIGNATED STORM SEWER TRENCHES, AND WATER LINE TRENCHES WHICH CROSS THE PROPOSED PAVEMENT OR WHICH LIE SUCH THAT THE PROPOSED PAVEMENTS ARE LOCATED WITHIN ANY PART OF THE INFLUENCE LINE OF SAID TRENCH. WHERE SAID RESULTS INDICATE THE TRENCH BACKFILL DOES NOT MEET THE COMPACTION REQUIREMENTS OF ODOT 203.12 OF THE CONSTRUCTION AND MATERIALS SPECIFICATION, ALL BACKFILL SHALL BE REMOVED AND RETESTED UNTIL COMPACTION MEETS THE REQUIREMENTS OF 203.12.

EROSION CONTROL REQUIREMENTS AND NOTES:

1. CLEARING LIMITS SHALL BE ESTABLISHED FIRST THEN EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPS) SHALL BE INSTALLED PRIOR TO ANY SITE DISTURBANCE. THE EROSION / SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED PRIOR TO ANY GRADING OR EXTENSIVE LAND CLEARING IN ACCORDANCE WITH THE APPROVED CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THESE FACILITIES MUST BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION AND LANDSCAPING IS COMPLETED, THE PERMANENT VEGETATION COVER IS ESTABLISHED AND THE POTENTIAL FOR ON-SITE EROSON HAS PASSED.
2. A TEMPORARY CONSTRUCTION ENTRANCE SHALL BE ESTABLISHED TO THE SITE. THE STANDARDS AND MAINTENANCE REQUIREMENTS ARE AS FOLLOWS:
   A) INSTALLATION: THE PLAN PROVIDE THE LOCATION AND DIMENSIONS OF THE CONSTRUCTION ENTRANCE. THE AREA OF THE ENTRANCE SHALL BE ON COMPACTED BEARING GROUND, CLEARED OF ALL VEGETATION, ROOTS AND OTHER ORGANIC MATERIAL.
   B) GRAVEL CONSTRUCTION ENTRANCE SHALL BE 4" TO 8" QUARRY SPALLS OVER FILTER FABRIC CONSTRUCTED AT LEAST 12 INCHES THICK. IT MUST EXTEND THE FULL WIDTH OF THE VEHICULAR INGRESS AND EGRESS AREA AND THE MINIMUM LENGTH IS 50 FEET.
   C) MAINTENANCE: THE PERFORMANCE STANDARD IS THAT THE CONSTRUCTION ENTRANCE MUST PREVENT TRACKING OF SEDIMENT, MUD OR DIRT OFF OF THE SITE. IT SHALL BE MAINTAINED AS NECESSARY TO MEET THIS STANDARD. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH NEW QUARRY SPALLS, AS CONDITION DEMAND, AND REPAIR AND / OR CLEAN OUT ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAY OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
3. PUBLIC STREETS ARE TO BE KEPT CLEAR OF DIRT AND DEBRIS DURING CONSTRUCTION, EXCAVATIONS AND FILL OPERATIONS. MATERIAL SHALL BE REMOVED FROM THE STREET BY SWEEPING. PAVED SURFACE MUST BE CLEANED AT THE END OF EACH DAY.
4. SEDIMENT CONTROL FACILITIES SHOWN ON THESE PLANS SHALL BE INSTALLED AS PART OF THE PLAN TO REMOVE SEDIMENT FROM THE WATER BEFORE CLEARING AND GRADING IS ALLOWED. THIS MAY INCLUDE SEDIMENT PONDS, SILT FENCES, SWALES, BERMS, BARRICADES AND OTHER MEASURES. SEE THE CONSTRUCTION SEQUENCE FOR FOR ORDER OF INSTALLATION.
5. THE CONSTRUCTION PLANS INDICATE INSTALLATION OF BEST MANAGEMENT PRACTICE (BMPS) TO RETAIN ALL SEDIMENT ON SITE. ADDITIONAL MEASURES ARE NORMALLY NEEDED TO REMOVE TURBIDITY AND MEET WATER QUALITY STANDARDS. DURING CONSTRUCTION, THE CONTRACTOR MAY REQUIRE ADDITIONAL MEASURED TO PREVENT SEDIMENT OR TURBID WATER FROM LEAVING THE SITE. CONTACT THE DESIGN ENGINEER (OR DESIGNATED EROSION CONTROL PERSON) FOR GUIDANCE ON ADDITIONAL MEASURES.
6. STABILIZED ALL EXPOSED AND NON-WORKED SOIL.
   - FROM MAY 1 TO SEPTEMBER 30 NO UN-WORKED SOIL MAY REMAIN EXPOSED FOR MORE THAN 7 DAYS.
   - COVER DENUDED AREAS AS SPECIFIED IN ON THE PLANS BY APPROPRIATE COVER BMPS (SUCH AS MULCH, SOD, PLASTIC, AND STRAW).
   - COVER MATERIAL SHALL BE STOCKPILED ON SITE.
   - SOIL STOCKPILES SHALL BE STABILIZED AND PROTECTED WITH SEDIMENT RETENTION BMPS WITHIN 24 HOURS.
   - GRADING AND CONSTRUCTION SHALL BE TIME AND CONSTRUCTED IN STAGES TO MINIMIZE SOIL EXPOSURE. CONSTRUCTION SHALL BE TIME TO RECOGNIZE CONDITIONS CRATED BY THE WEATHER.
   - FROM OCTOBER 1 TO APRIL 30 NO UN-WORKED SOIL MAY REMAIN EXPOSED FROM MORE THAN 2 DAYS.
7. AN ESTABLISHED GROUND COVER THAT FULFILLS THE REQUIREMENT OF THE APPROVED CONSTRUCTION PLAN IS REQUIRED FOR ACCEPTANCE BY THE COUNTY.
   - ALL AREAS TO BE SEEDED SHALL BE CULTIVATED BY DISKING, RANKING, HARROWING OR OTHER ACCEPTABLE MEANS.
   - PERFORM ALL CULTIVATING ACROSS OR AT RIGHT ANGLE TO THE SLOPE.
   - COVER THE SITE WITH MULCH, TOPSOIL OR OTHER SOIL AMENDMENTS.
   - IF NECESSARY, SURFACE RUNOFF CONTROL MEASURES SUCH AS GRADIENT TERRACES, INTERCEPTOR DIKE / SWALES, LEVEL SPREADERS, AND SEDIMENT BASIN SHALL BE INSTALLED PRIOR TO SEEDING.
   - IMMEDIATELY FOLLOWING FINISHED GRADING, PERMANENT VEGETATION (CONSISTING OF RAPID, PERSISTENT AND LEGUME) WILL BE APPLIED. MINIMUM 80# PER ACRE) THIS IS TO INCLUDE THE FOLLOWING. 20% ANNUAL, PERENNIAL OR HYBRID RYE GRASS, 40% CREEPING RED RESCUE, 40% WHITE COVER.
   - FERTILIZER SHALL BE APPLIED AT 400# PER ACRE OF 10-20-20 (10 POUNDS PER 1100 SQUARE FEET) OR EQUIVALENT. DEVELOPMENTS ADJACENT TO WATER BODIES SHALL USE NON-PHOSPHORUS FERTILIZER.
   - ALL DISTURBED AREAS SHALL BE SEEDED WITH A PERENNIAL GROUND COVER USING AN APPROVED HYDROSEEDER OR AS OTHERWISE APPROVED BY SNOHOMISH COUNTY.
8. PROTECT CUT AND FILL SLOPES FROM EROSIVE FLOWS AND CONCENTRATED FLOWS UNTIL PERMANENT COVER AND DRAINAGE CONVEYANCE SYSTEM ARE IN PLACE.
9. INSTALL INLET PROTECTION ON ALL STORM DRAIN INLETS DURING CONSTRUCTION SO THAT SEDIMENT AND AND SILT LADEN WATER IS FILTERED OR TREATED TO MINIMIZE SEDIMENT THAT ENTERS THE INLET.
10. CHANNELS, DITCHES, SWALES AND OTHER CONVEYANCE SYSTEMS SHALL BE STABILIZED TO PREVENT EROSION DURING AND AFTER CONSTRUCTION. INSTALL OUTLET PROTECTION FOR ALL CULVERTS.
11. FOLLOW THE SPECIFIC REQUIREMENTS ON THE PLANS TO CONTROL POLLUTANT GENERATED CONSTRUCTION, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS. THIS INCLUDES MAINTENANCE OF CONSTRUCTION EQUIPMENT, FERTILIZERS, APPLICATION OF CHEMICALS, AND WATER TREATMENT SYSTEMS. THE PLAN SHALL BE UPDATED TO RESPOND TO SITE EXPOSURE AND WEATHER CONDITIONS.
    FROM OCTOBER 1 TO APRIL 30 THE CONSTRUCTION SWPPP SHALL CONTAIN A PLAN FOR STORMWATER SAMPLING LOCATIONS, BACKGROUND MEASUREMENTS, AND A PERIODIC REPORTING SCHEDULE. THE REPORTING SCHEDULE SHALL AT A MINIMUM REQUIRES SAMPLES DURING EVERY STORM EVENT THAT GENERATES RUNOFF AND SITE INSPECTION CONDITION REPORT ON THE INSTALLED BMPS. THE MONITORING AND SAMPLING ARE TO BE DONE IN A PROFESSIONAL MANNER CONSISTENT WITH CURRENT SAMPLING PROTOCOLS AND REPORTING REQUIREMENTS. THE SAMPLING POINTS ARE TO BE SHOWN ON A MAP AND MARKED ON THE GROUND.
12. THE WATER FROM DE-WATERING SYSTEMS FOR TRENCHES, VAULTS AND FOUNDATIONS SHALL BE DISCHARGED IN TO A CONTROLLED SYSTEM OR SEDIMENT-RETENTION BMP. ADDITIONAL MEASURES ARE NEEDED TO REMOVE TURBIDITY AND MEET WATER QUALITY STANDARDS.
13. THE CONSTRUCTION EROSION CONTROL BMPS SHALL BE INSPECTED AFTER EACH SIGNIFICANT RAIN EVENT. MAINTENANCE SHALL BE PERFORMED AS NEEDED TO MAINTAIN THE PERFORMANCE AND FUNCTION.
   - SILT BARRIERS AND SEDIMENT POND SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY PROLONGED RAINFALL.
   - NECESSARY REPAIR TO BARRIERS, CHANNELS AND PONDS OR REPLACEMENT SHALL BE ACCOMPLISHED PROMPTLY.
   - SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL FROM SILT BARRIER AND CHECK DAMS.
   - WHEN THE SEDIMENT REACHES THE CLEAN OUT LEVEL IN A SEDIMENT POND, IT SHALL BE REMOVED AND PROPERLY DISPOSED.
   - DEPOSITS MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER, CHECK DAM OR OTHER CATCHMENTS.
   - THE EMBANKMENT OF SEDIMENT BASIN SHOULD BE CHECKED REGULARLY TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
   - THE EMERGENCY SPILLWAY OF A SEDIMENT POND SHOULD BE CHECKED REGULARLY TO ENSURE THAT ITS LINING IS WELL ESTABLISHED AND EROSION-RESISTANT.

ADDITIONAL NOTES:

THE CONTRACTOR SHALL KEEP A SET OF THE EDITION OF THE SNOHOMISH COUNTY EDDS ON-SITE AT ALL TIMES THAT THE PROJECT WAS DESIGNED IN ACCORDANCE WITH.
REMOVE ABANDON PIPES FROM THE RIGHT-OF-WAY.
ALL PIPE SHALL HAVE A MINIMUM OF 12" COVER AT THE TOP OF THE BELL, OR SHALL HAVE A MINIMUM COVER PER THE MANUFACTURER'S
SPECIFICATIONS, WHICHEVER IS GRATER.
PRIOR TO PLACING ANY SURFACE MATERIALS ON THE ROADWAY, IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR UTILITY TO PROVIDE DENSITY TEST REPORTS (AS SPECIFIED IN EDDS) CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF WASHINGTON.

THE DEVELOPER / CONTRACTOR SHALL BE RESPONSIBLE FOR INTERIM TRAFFIC CONTROL DURING CONSTRUCTION ON OR ALONG TRAVELED COUNTY ROADWAYS. THE DEVELOPER CONTRACTOR MUST SUBMIT A TRAFFIC CONTROL PLAN TO PUBLIC WORKS (PERMIT COUNTER)AND RECEIVE APPROVAL PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. PRIOR TO ANY SITE WORK, THE CONTRACTOR SHALL CONTACT THE CHIEF INSPECTOR FOR LAND DEVELOPMENT DIVISION AT (425) 388 - 3385 TO SCHEDULE A RECONSTRUCTION CONFERENCE. FIELD CHANGES REQUIRING REDESIGN SHALL BE SUBMITTED AND APPROVED PRIOR TO CONSTRUCTION. ENGINEERED AS-BUILT SHALL BE REQUIRED PRIOR TO SITE APPROVAL.
ANY DEVELOPER, UTILITY OR OTHER PARTY INTENDING TO TRENCH IN EXISTING OR PROPOSED COUNTY RIGHT-OF-WAY SHALL NOTIFY PLANNING AND DEVELOPMENT SERVICES INSPECTION SECTION NOT LESS THAN 3 WORKING DAYS PRIOR TO PERFORMING THE WEEK.

ADDITIONAL NOTES:

STRUCTURAL BACKFILL AND COMPACTION OF VAULT, ROCKERY, RETAINING WALL FOOTING AND WALLS, AND ROADWAY TRENCH RESTORATION SHALL BE MONITORED, INSPECTED, AND COMPACTION TESTED BY A LICENSED GEOTECHNICAL ENGINEER. FIELD DENSITY TEST SHALL INDICATE A MINIMUM COMPACTION OF 95% OF MAXIMUM DENSITY DETERMINE IN ACCORDANCE WITH ASTM D-1557-70 (MODIFIED PROCTOR).
COMPACTION TEST RESULTS TO BE SUBMITTED WITH AS-BUILT DRAWING.

WATER GRADING NOTES:

1. ALL WATER LINE AND APPURTENANCES, MATERIALS AND INSTALLATION PROCEDURES, SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF MARYSVILLE.
2. ALL WATER LINE MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF MARYSVILLE AND THE AWWA. THE WATER LINE MATERIAL SHALL BE CLEARLY IDENTIFIED AS CONFORMING TO AWWA STANDARDS. WATER LINE PIPE SIZE 4 INCH IN DIAMETER SHALL CONFORM TO THE REQUIREMENTS OF AWWA C900. WATER LINE PIPE SIZES 6 INCHES THROUGH 12 INCHES IN DIAMETER SHALL CONFORM TO THE REQUIREMENTS OF AWWA C909, CLASS 235. WATER LINE PIPE SIZES GREATER THAN 12 INCHES IN DIAMETER SHALL CONFORM TO THE REQUIREMENTS OF AWWA C905.
3. WATERMAINS ARE TO BE INSTALLED IN THE TREE LAWN AND NOT UNDER THE SIDEWALK WHEREVER PRACTICABLE.
4. ALL RESIDENTIAL SERVICE LINES SHALL BE 1-INCH MINIMUM.
5. SERVICE LINES INSTALLED IN SLAB FLOORS TO BE INSTALLED IN A 6-INCH SLEEVE.
6. WATER LINE TRENCHES SHALL BE DEWATERED TO 2" BELOW THE BELL OF PIPE PRIOR TO INSTALLATION.
7. IN CASE OF A CONFLICT IN GRADE BETWEEN STORM SEWERS AND WATER LINE, THE WATER LINE SHALL BE LOWERED.
8. ALL WATER METERS SHALL BE INSTALLED INSIDE OF THE PROPOSED STRUCTURE, NOT IN A METER PIT, UNLESS SAID METER PIT IS APPROVED BY THE CITY OF MARYSVILLE. METER PITS SHALL COMPLY WITH STANDARD DRAWING WTR-07.
9. A BRONZE PAD LOCKABLE METER BYPASS BALL VALVE, APOLLO 75-100 SERIES OR EQUAL, IS REQUIRED FOR 1 ½-INCH AND LARGER METERS.
10. WATER SERVICE BOXES SHALL BE SET AT THE FOLLOWING LOCATIONS:
    SHORT SERVICE RUNS — AT THE RIGHT-OF-WAY LINE OR 1 FOOT BEHIND THE BACK OF SIDEWALK.
    LONG SERVICE RUNS – 4-FEET FROM THE EDGE OF SIDEWALK (BETWEEN SIDEWALK AND CURB) OR CENTERED BETWEEN THE SIDEWALK AND CURB. WATER SERVICE BOXES WILL NOT BE PERMITTED WITHIN THE CONCRETE SIDEWALK OR FUTURE ASPHALT/CONCRETE DRIVEWAYS. NEW CURB BOXES SHALL BE PLACED 2-FEET OFF THE BACK OF CURB OR 1-FOOT BEHIND THE SIDEWALK AND SHALL NOT BE PLACED WITHIN ANY DRIVEWAYS. IF THE CURB BOX ENDS UP IN THE DRIVEWAY AFTER THE HOUSE IS COMPLETED, THE SERVICE SHALL BE RELOCATED OUTSIDE THE RIVEWAY TO 1-FOOT (MINIMUM) FROM THE DRIVEWAY. THE TAP WILL ALSO BE RELOCATED SO THE CURB STOP AND TAP ARE IN LINE WITH NO ADDITIONAL COST THE CITY OF MARYSVILLE.
11. WATER LINES SHALL HAVE A MINIMUM COVER OF 4-FEET 6-INCHES FROM FINAL GRADE.
12. CONTRACTORS SHALL PROVIDE MEGALUG RETAINING GLANDS OR APPROVED EQUAL AT ALL BENDS AND TEES. CONTRACTORS SHALL BACK BENDS, ELBOWS, TEES WITH SOLID CONCRETE BLOCKS AGAINST UNDISTURBED SOIL. HARDWOOD WEDGES SHALL BE USED WHERE NECESSARY.
13. FIRE HYDRANTS SHALL BE MUELLER COMPANY CENTURION 250 HYDRANT WITH A 4 ½ MAIN VALVE OPENING. THEY ARE TO HAVE A THREE-WAY UPPER BARREL WITH ONE 4 ½-INCH PUMPER NOZZLE WITH AN INTEGRAL 5-INCH STORZ CONNECTION INSTALLED, AND TWO 2 ½-INCH HOSE NOZZLES. MUST MEET A.W.W.A. C-502 STANDARDS.
14. ALL SERVICE LINES SHALL BE TYPE K SOFT COPPER CONFORMING TO ASTM B-88, AND UNDERGROUND JOINTS MUST BE COMPRESSION. AWWA C909 WATER LINE SHALL BE USED IF SERVICE EXCEEDS 2 INCHES.
15. WATER LINE SHALL BE DEFLECTED, PER MANUFACTURER SPECIFICATIONS, TO PROVIDE 1-FOOT 6-INCH VERTICAL AND 10-FOOT HORIZONTAL CLEARANCE WITH SEWERS. IF THIS I

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

LEGEND

- DRAINAGE SUB-BASIN
- DA-1 / 5.33 — SUB-BASIN LABEL / AREA (AC)
- DRAINAGE FLOW DIRECTION

RATIONAL METHOD

Q = drainage flow (cfs)
C = coefficient describing the physical drianage area
I = rainfall intensity (inches/hour)
A = area (acres)

C(Lawn)= 0.3 A1= 1444 sft 0.033 acre
C(Parking)= 0.9 A2= 12008 sft 0.276 acre

Inputs

C = 0.81
For 100-year 24-hour
I = 0.15 in/hr From NOAA webite

A = 0.31 acres from CAD file

Calculations

Q1 = 0.037676 cfs

Precipitation Frequency Data Output

NOAA Atlas 2
Washington 48.085360°N 122.148927°W
Site-specific Extremes

Map	Precipitation (inches)	Precipitation Intensity (in/hr)
2-year 6-hour	0.97	0.16
2-year 24-hour	1.80	0.08
100-year 6-hour	1.94	0.32
100-year 24-hour	3.67	0.15

Go to PDSI
Go to IVAU

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Tue Feb 20 20:05:25 2024

RATIONAL METHOD

Q = drainage flow (cfs)
C = coefficient describing the physical drianage area
I = rainfall intensity (inches/hour)
A = area (acres)

C(Lawn)= 0.3 A1= 745 sft 0.017 acre
C(Pavement&Canopy)= 0.9 A2= 5316 sft 0.122 acre

Inputs

C = 0.79
For 100-year 24-hour
I = 0.15 in/hr From NOAA webite

A = 0.14 acres from CAD file

Calculations

Q2 = 0.016582 cfs

Precipitation Frequency Data Output

NOAA Atlas 2
Washington 48.085360°N 122.148927°W
Site-specific Extremes

Map	Precipitation (inches)	Precipitation Intensity (in/hr)
2-year 6-hour	0.97	0.16
2-year 24-hour	1.80	0.08
100-year 6-hour	1.94	0.32
100-year 24-hour	3.67	0.15

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RATIONAL METHOD

Q = drainage flow (cfs)
C = coefficient describing the physical drianage area
I = rainfall intensity (inches/hour)
A = area (acres)

C(Lawn)= 0.3 A1= 2066 sft 0.047 acre
C(Parking)= 0.9 A2= 6565 sft 0.151 acre

Inputs

C = 0.70
For 100-year 24-hour
I = 0.15 in/hr From NOAA webite

A = 0.20 acres from CAD file

Calculations

Q3 = 0.020769 cfs

Precipitation Frequency Data Output

NOAA Atlas 2
Washington 48.085360°N 122.148927°W
Site-specific Extremes

Map	Precipitation (inches)	Precipitation Intensity (in/hr)
2-year 6-hour	0.97	0.16
2-year 24-hour	1.80	0.08
100-year 6-hour	1.94	0.32
100-year 24-hour	3.67	0.15

Go to PDSI
Go to IVAU

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Tue Feb 20 20:05:25 2024

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION

NO.	DATE	DESCRIPTION	BY

NOT FOR CONSTRUCTION

DRAINAGE AREA MAP

GEOMETRICS ENGINEERING, P.S. INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO. PA-24-006 DSN. BY: TI
DATE: 10/14/2024
SCALE: 1" = 30'
DRAWING NO. 03 OF 19

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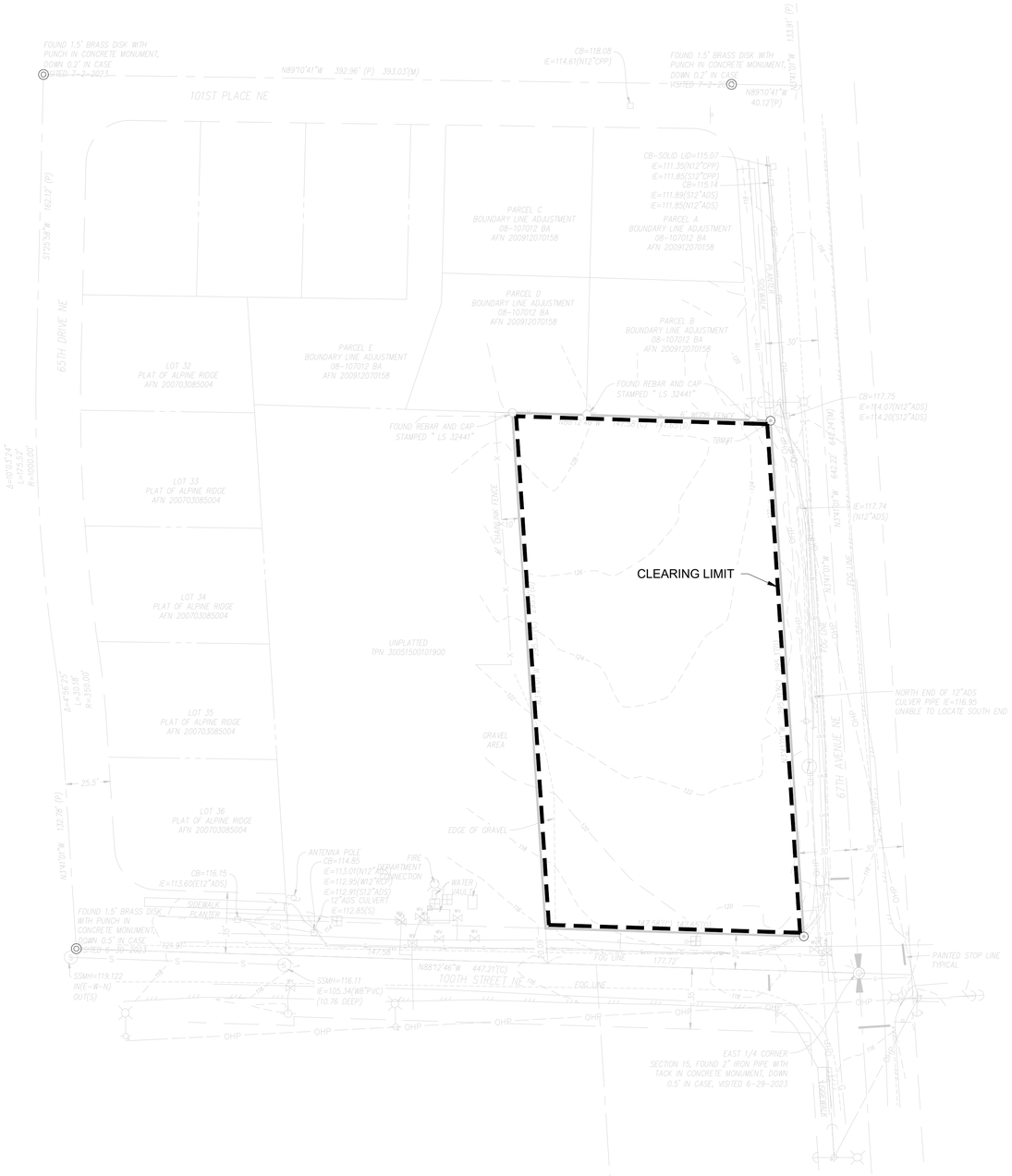
CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



N

1"=40'-0"

40 40 80

Scale Feet

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

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SWPPP

GEOMETRICS ENGINEERING, P.S., INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO.	DSN. BY:
PA-24-006	TI
DATE:	
09/27/2024	
SCALE:	
1" = 40'	
DRAWING NO.	
04 OF 19	

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CROSSROADS CHEVRON

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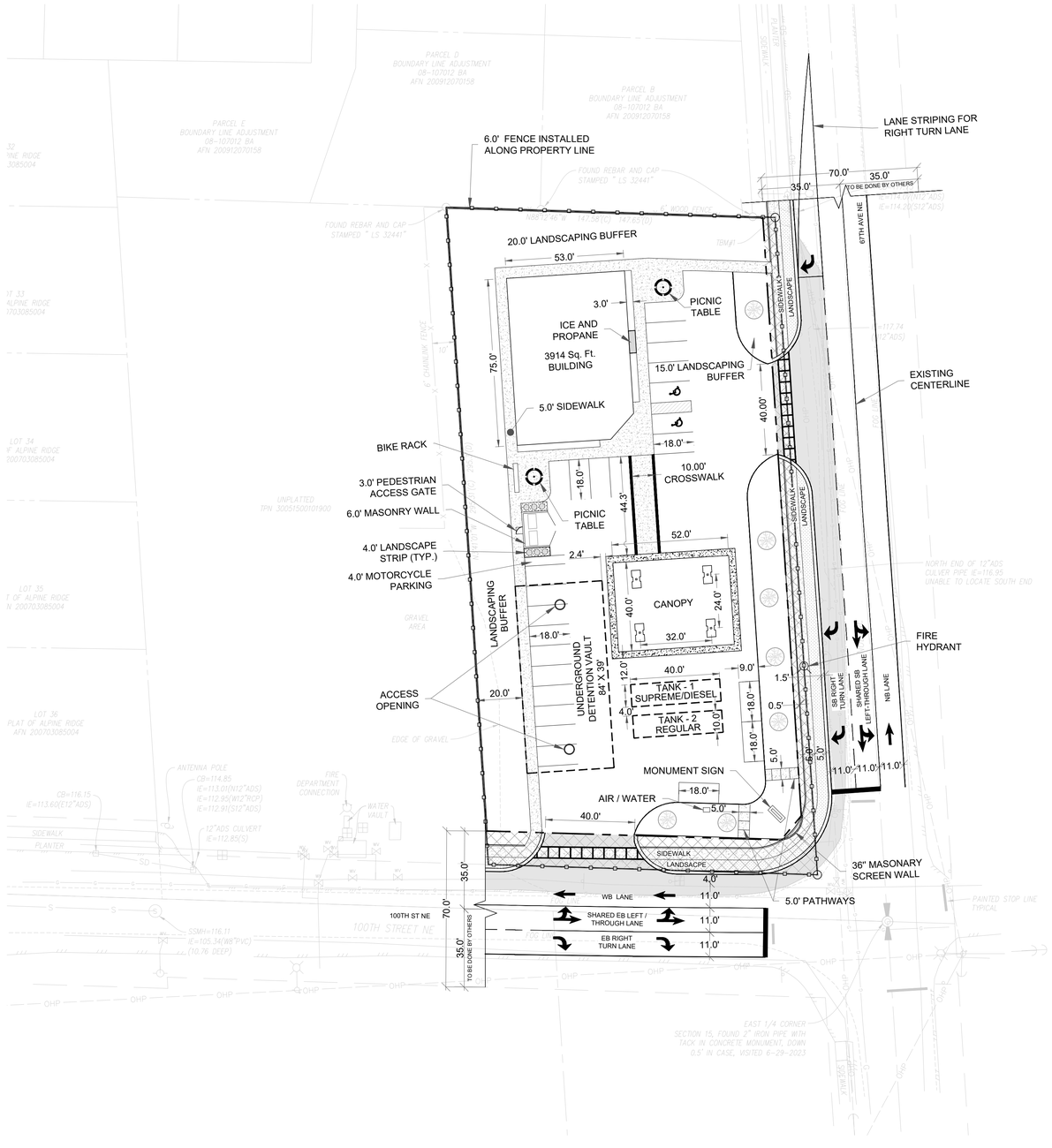

NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

- BIKE LANE EDGE
- CURB
- LANSCAPE
- SIDEWALK
- ASPHALT WIDENING
- PROPOSED ROW
- UNDERGROUND DETENTION VAULT / FUEL TANK
- PLOT BOUNDARY

AREA CALCULATIONS

1. TOTAL AREA = 39565.00 SF
2. IMPERVIOUS AREA= 27032.00 SF
3. PERVIOUS AREA = 12533.00 SF

N

1"=30'-0" Scale: 30 0 30 60 Feet

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SITE PLAN

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CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO. PA-24-006	DSN. BY: TI
DATE: 10/14/2024	
SCALE: 1" = 30'	
DRAWING NO. 05 OF 19	

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CROSSROADS CHEVRON

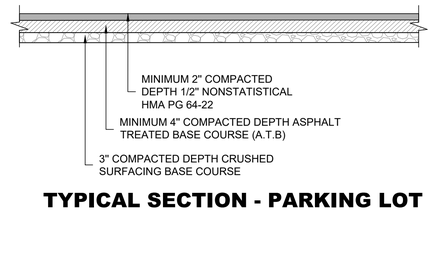
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

NOTE

1. REFER VAULT DETAIL SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.
2. REFER TO STRUCTURAL DETAILS SHEETS FOR UNDERGROUND DETENTION VAULT CONSTRUCTION.
3. STANDARD GRATE SHALL BE INSTALLED AS PER CITY OF MERYSVILLE STANDARD PLAN 4-080-017.

LEGEND

	PROPOSED CONTOUR MAJOR
	PROPOSED CONTOUR MINOR
TW	TOP OF WALL
BW	BOTTOM OF WALL
TC	TOP OF CURB
BC	BOTTOM OF CURB
TP	TOP OF PARKING
BP	BOTTOM OF PARKING
BOT	BOTTOM
	FLOW ARROW



TYPICAL SECTION - PARKING LOT

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BEFORE YOU DIG
811

N

1"=30'-0"
30 0 30 60
Scale Feet

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
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DRAINAGE AND GRADING PLAN

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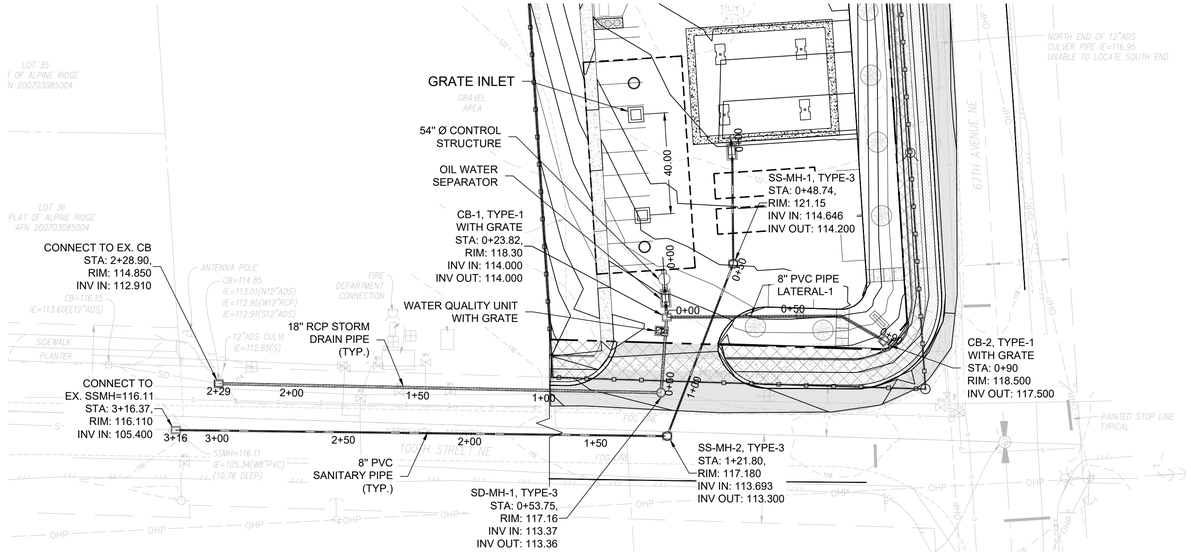


NOTE

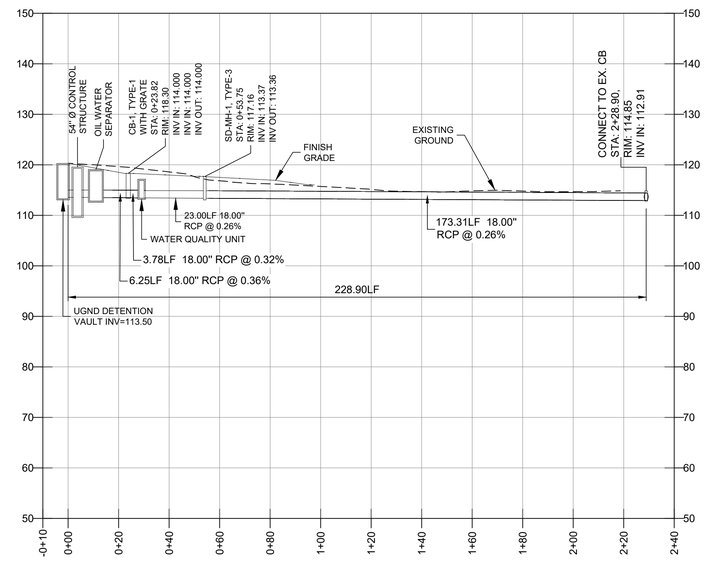
1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

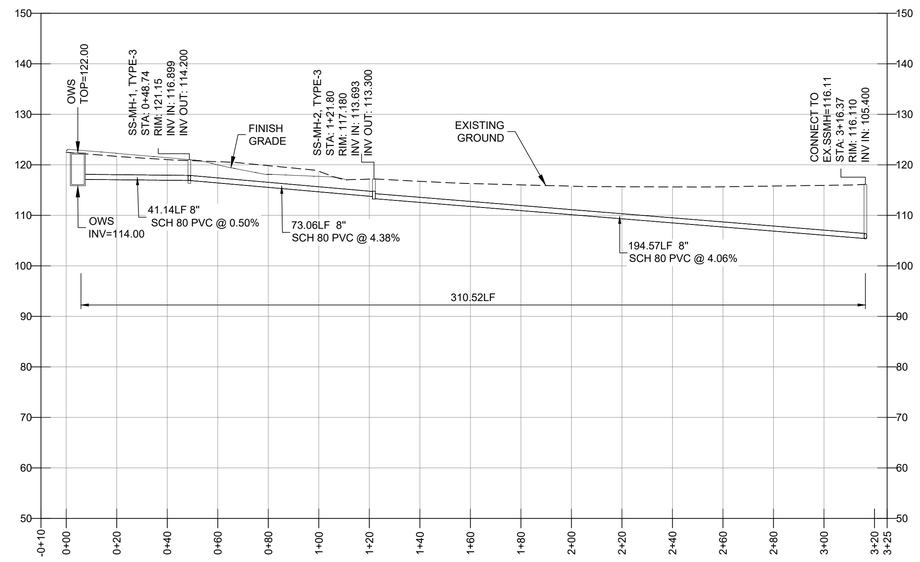
- PROPOSED STORM SANITARY PIPE
- PROPOSED STORM WATER PIPE
- UNDERGROUND DETENTION VAULT
- PROPOSED STORM SANITARY STRUCTURE
- PROPOSED STORM WATER STRUCTURE

N

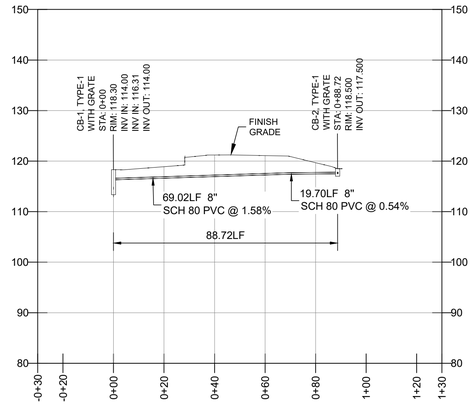
1"=30'-0" Scale: 30 0 30 60 Feet



PROFILE - STORM DRAIN



PROFILE - SANITARY SEWER



PROFILE - LATERAL-1

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DRAINAGE PLAN AND PROFILE

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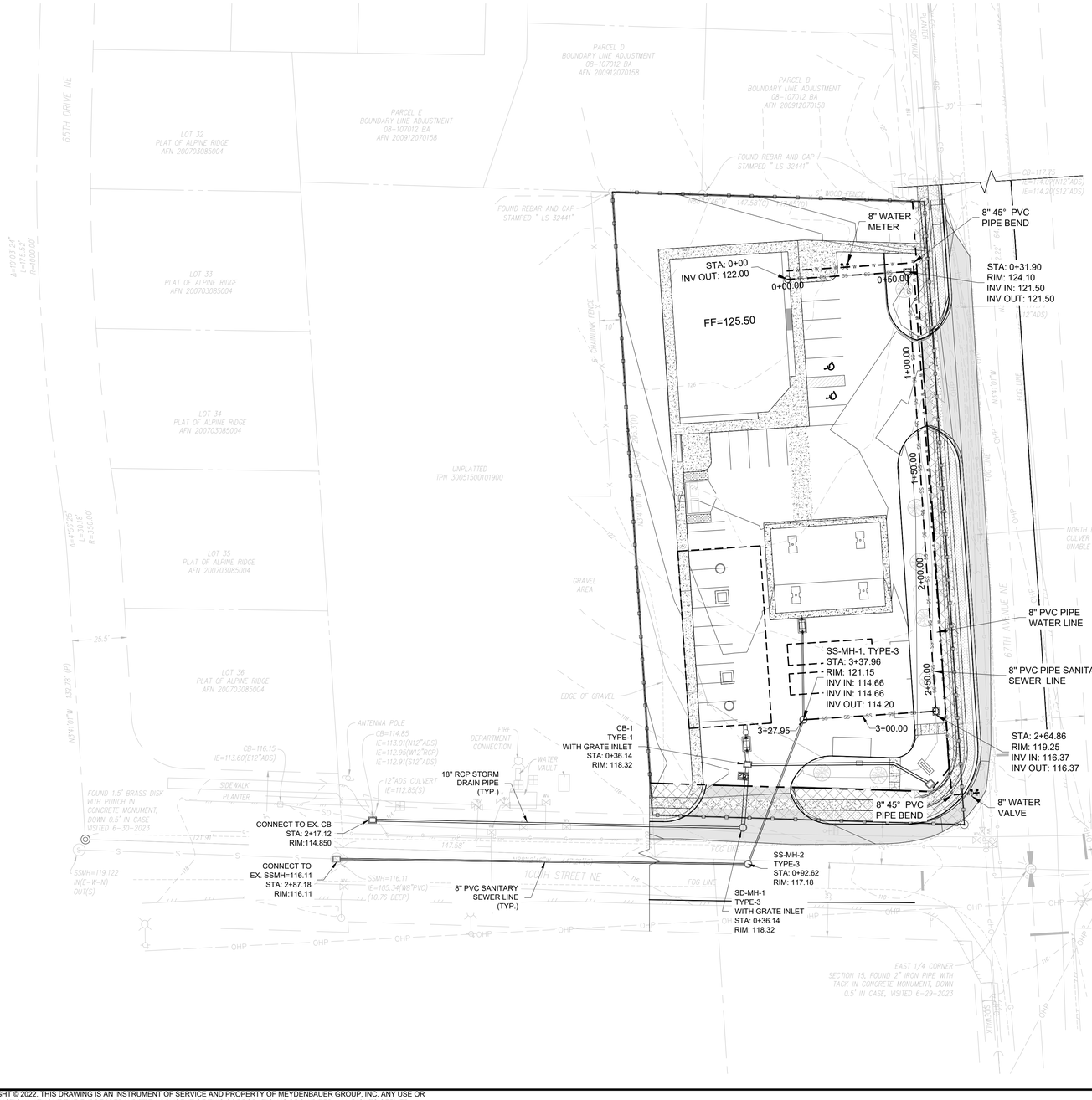

NOTE

1. REFER VAULT DETAIL SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

— SS — SS —	PROPOSED SANITARY LINE
— W — W —	PROPOSED WATERLINE
	PROPOSED CONTOUR MAJOR
	PROPOSED CONTOUR MINOR
TW	TOP OF WALL
BW	BOTTOM OF WALL
TC	TOP OF CURB
BC	BOTTOM OF CURB
BOT	BOTTOM

N

1"=30'-0" 30 0 30 60
Scale Feet

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BEFORE YOU DIG
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CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
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PROPOSED
UTILITY PLAN

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CROSSROADS CHEVRON
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TOWNSHIP 30 NORTH, RANGE 05
EAST, MARYSVILLE, WS 98270

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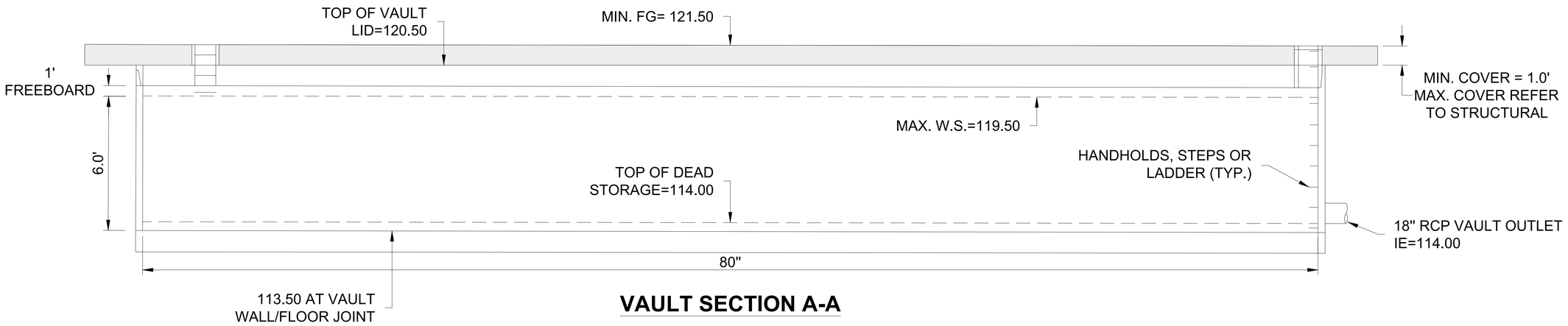
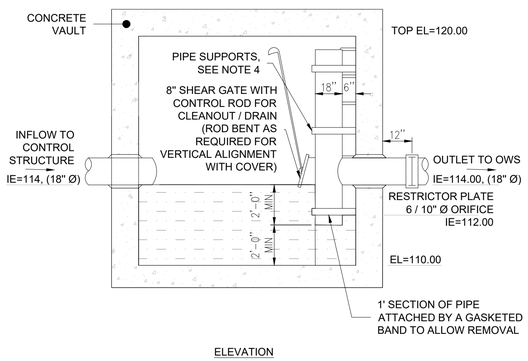
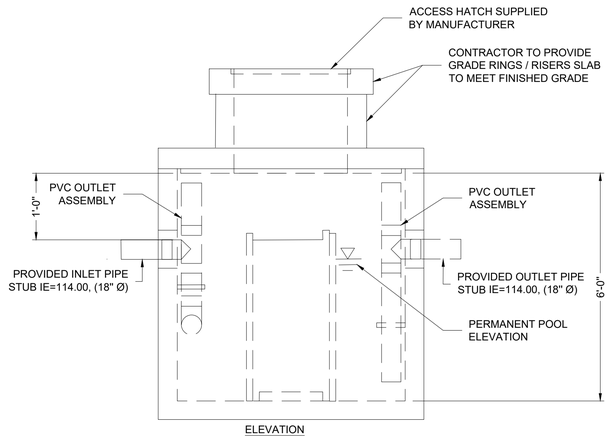


VAULT SECTION A-A



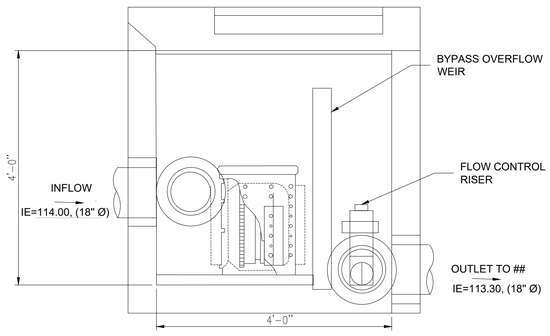
ELEVATION

CONTROL STRUCTURE OF UNDERGROUND DETENTION VAULT



ELEVATION

OIL WATER SEPARATOR FOR STORM WATER



WATER QUALITY UNIT FOR STORM DRAIN

CONTROL RISER NOTES

1. METAL PARTS: CORROSION RESISTANT. NON GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
2. FRAME AND LADDER OR STEPS OFFSET SO:
   A. CLEANOUT GATE IS VISIBLE FROM TOP.
   B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE.
   C. FRAME IS CLEAR OF CURB.
3. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE: OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4".
4. PROVIDE 3" X .090 GAGE SUPPORT BRACKETS ANCHORED TO CONCRETE WALL AT MAXIMUM 3'-0" VERTICAL SPACING.
5. CONTRACTOR TO PROVIDE CONTROL RISER DETAIL PRIOR TO CONSTRUCTION FOR ENGINEERING APPROVAL.

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CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
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VAULT DETAILS

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CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

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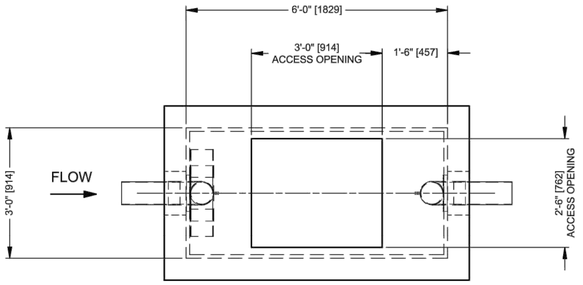
DRAWING NO. 09 OF 19	

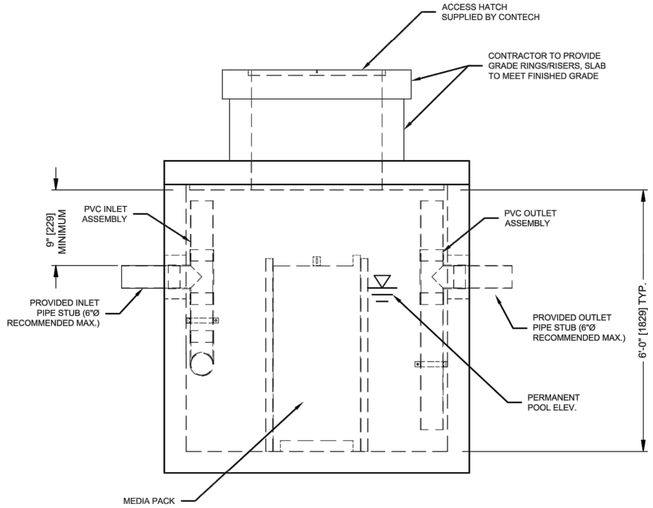
CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



PLAN VIEW

(MEDIA NOT SHOWN FOR CLARITY)



ELEVATION VIEW

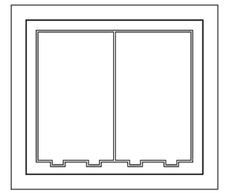
VCL30 DESIGN NOTES

VCL30 RATED TREATMENT CAPACITY IS 110 GPM [6.93 l/s], OR PER LOCAL REGULATIONS. IF THE SITE CONDITIONS EXCEED RATED TREATMENT CAPACITY, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

THE VORTCLAREX SYSTEM SHALL REMOVE ESSENTIALLY ALL FREE AND DISPERSED NON-EMULSIFIED OIL FROM THE WATER STREAM AND PRODUCE A DESIRED EFFLUENT BASED ON AN OIL DROPLET TYPICAL OF THE SITE.

THE VORTCLAREX SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH STOKES LAW AND API BULLETIN NO. 421.

THE STANDARD INLET/OUTLET CONFIGURATION IS SHOWN. FOR OTHER CONFIGURATION OPTIONS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com



30" x 36" [762 x 914] ACCESS HATCH

(ACTUAL PRODUCT MAY VARY)
NOT TO SCALE

GENERAL NOTES

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. VORTCLAREX WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET AASHTO M306 LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION
5. INLET AND OUTLET PIPES MUST BE PERPENDICULAR TO THE VAULT TO ALLOW CONNECTION WITH PROVIDED PIPE STUBS.
6. FLOW LINE IN AND OUT OF THE VORTCLAREX IS RECOMMENDED TO BE AT THE SAME ELEVATION.
7. ALTERNATE UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

INSTALLATION NOTES

1. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
2. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE VORTCLAREX STRUCTURE (LIFTING CLUTCHES PROVIDED).
3. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
4. CONTRACTOR TO PROVIDE AND INSTALL FERNCO, OR EQUIVALENT, COUPLER TO MATE EXISTING TRUNKLINE TO THE PROVIDED PIPE STUBS. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.

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DETAILS - OIL WATER SEPARATOR

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CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

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DSN. BY:	TI
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DRAWING NO.	10 OF 19

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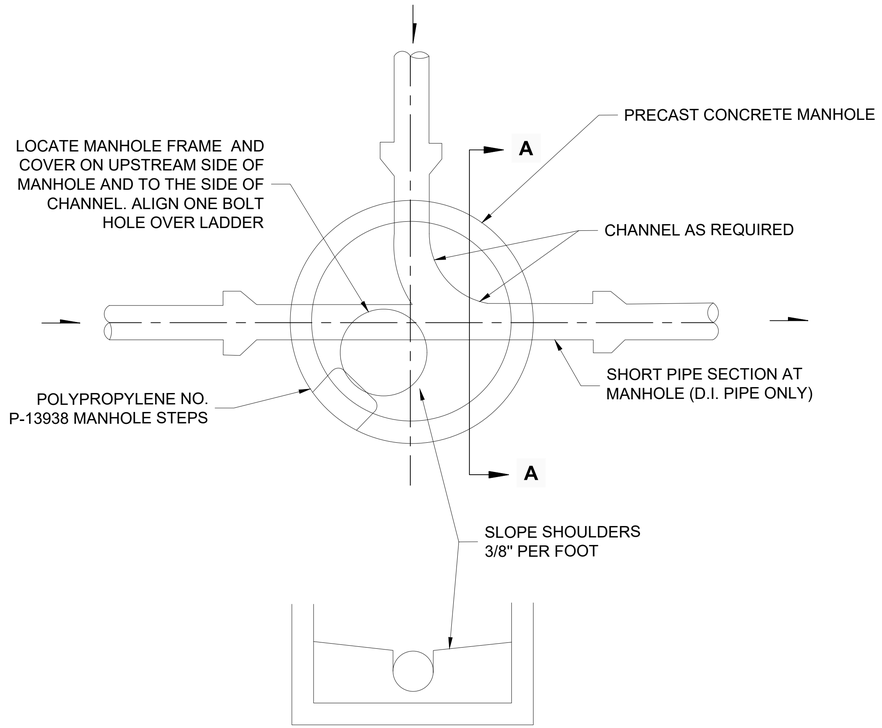
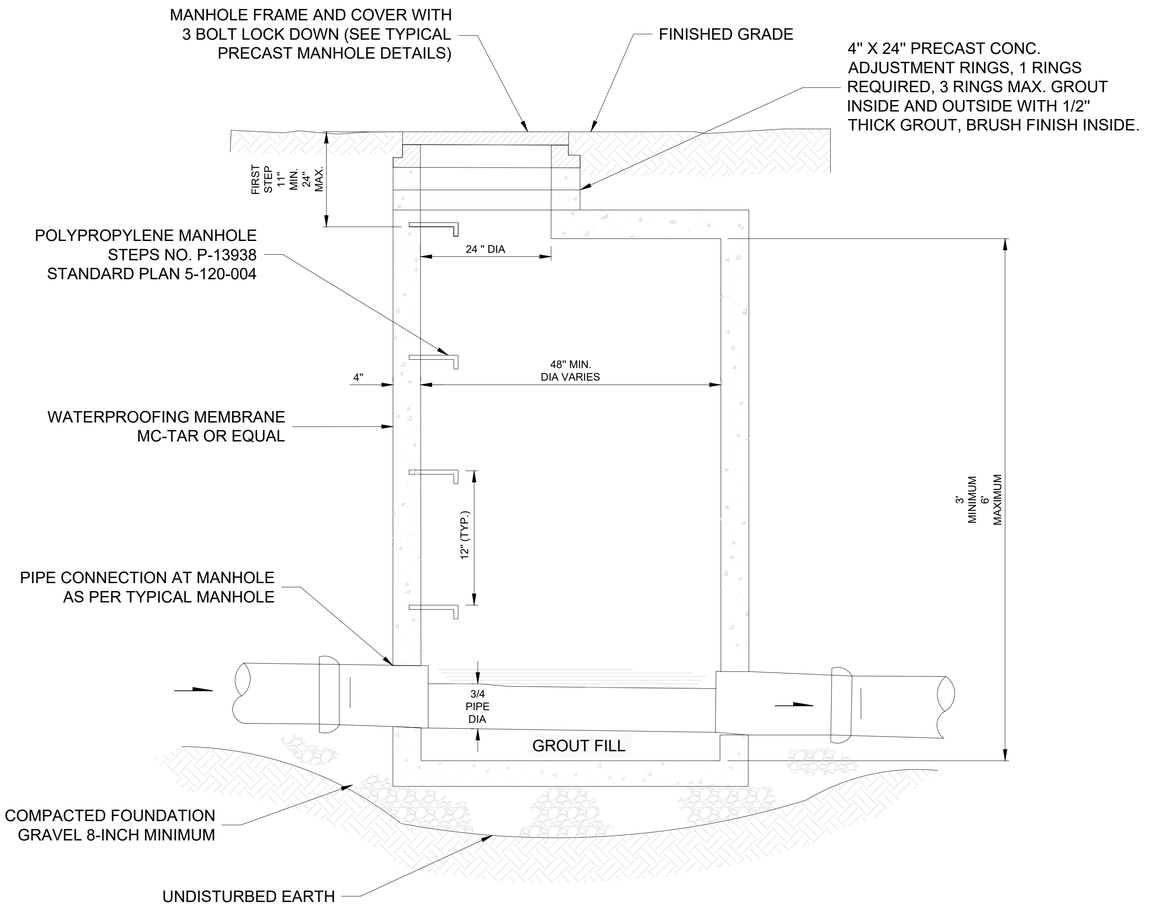


SECTION A-A

NOTES:

1. PIPE CONNECTION TO MANHOLES SHALL BE AS FOLLOWS: PVC PIPE: CAST OR GROUT A MANHOLE COUPLING IN TO WALL. D.I. PIPE: BELL AND SPICOT JOINT OR FLEXIBLE COUPLING EITHER SHALL BE 12" MAXIMUM DISTANCE FROM MANHOLE WALL. PVC AND D.I. PIPE WHAT A WATER TIGHT FLEXIBLE RUBBER BOOT IN MANHOLE WALL, KOR-N-SEAL BOOT OR EQUAL.

MANHOLE PLAN



NOTES:

1. PIPE CONNECTION TO MANHOLES SHALL BE AS FOLLOWS: PVC PIPE: CAST OR GROUT A MANHOLE COUPLING IN TO WALL. D.I. PIPE: BELL AND SPICOT JOINT OR FLEXIBLE COUPLING EITHER SHALL BE 12" MAXIMUM DISTANCE FROM MANHOLE WALL. PVC AND D.I. PIPE WHAT A WATER TIGHT FLEXIBLE RUBBER BOOT IN MANHOLE WALL, KOR-N-SEAL BOOT OR EQUAL.
2. DROP OF GRADE THROUGH MANHOLE SHALL BE 0.10' UNLESS OTHERWISE APPLICABLE.
3. GROUT ALL PICK HOLES AND OUT

TYPE 3 MANHOLE DETAIL

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MANHOLE PLAN & MANHOLE TYPE-3 DETAIL

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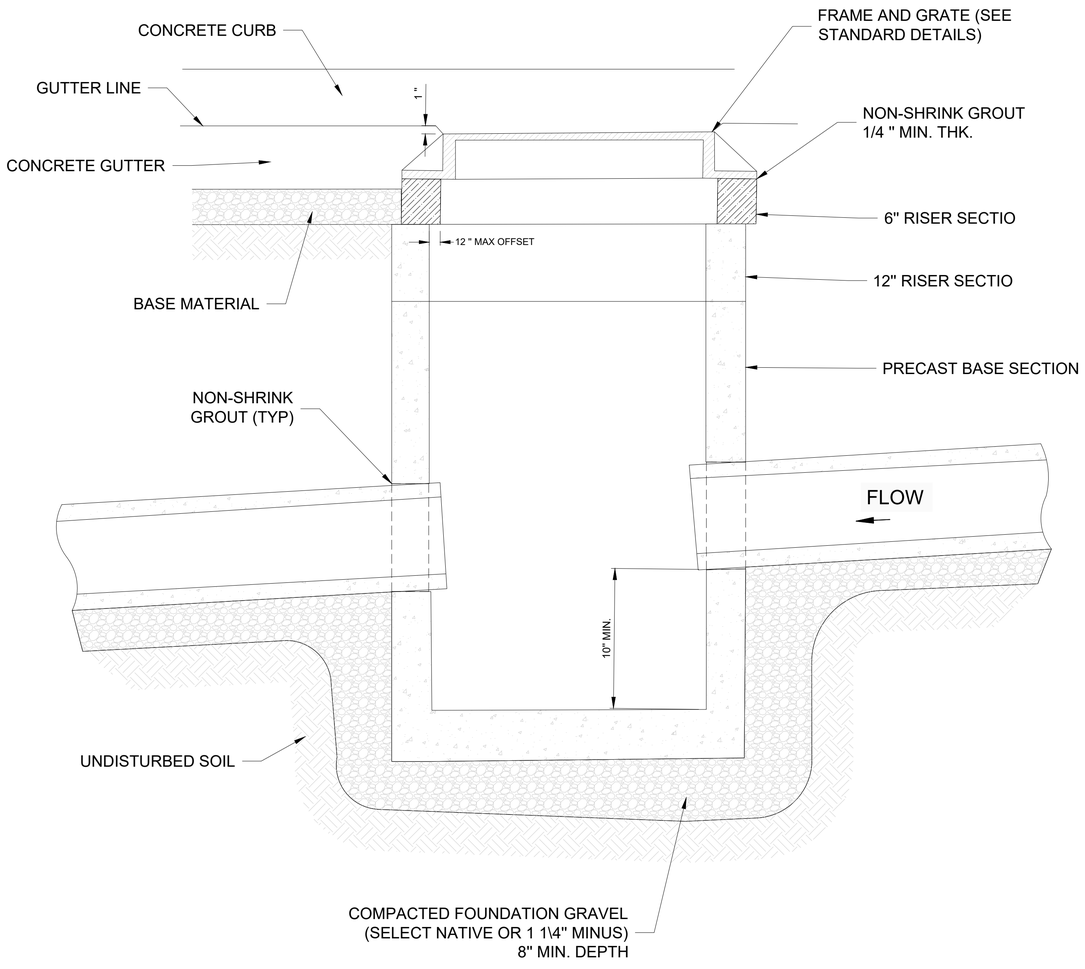

CATCH BASIN INSTALLATION DETAILS TYPE-1 & 1L

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CATCH BASIN INSTALLATION DETAILS TYPE-1 & 1L

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2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO. PA-24-006 | DSN. BY: TI
DATE: 09/27/2024
SCALE: N.T.S.
DRAWING NO. 12 OF 19

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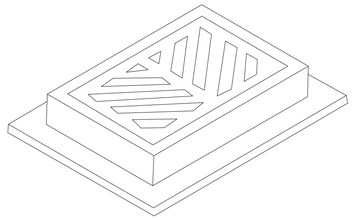
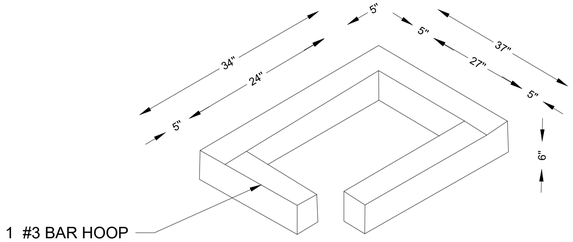
SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

CROSSROADS CHEVRON

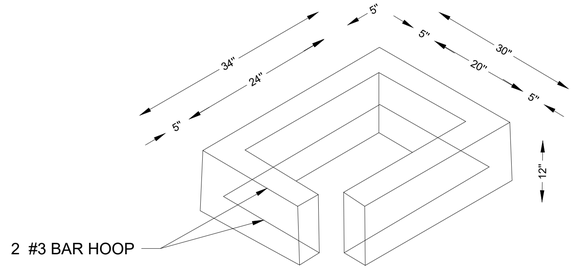
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



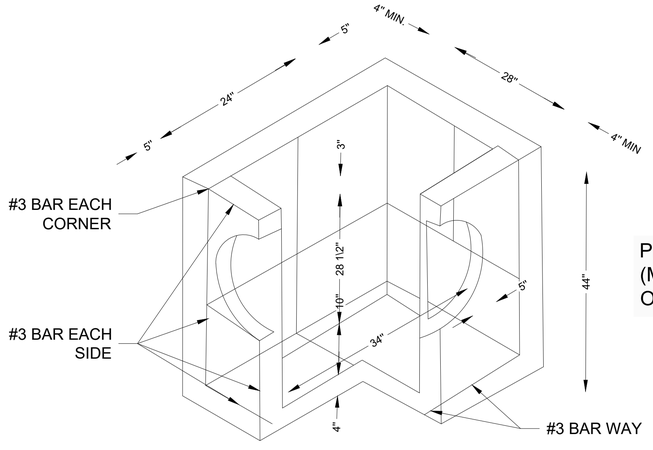
FRAME AND GRATE SEE SEC. 4-080E AND APPLICABLE DWGS.



6" RISER SECTION



12" RISER SECTION



PRECAST BASE SECTION (MEASUREMENT AT THE TOP OF THE BASE)

NOTES:

1. CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (AASHTO M 199) & C890 UNLESS OTHERWISE SHOWN ON PLAN OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
2. AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MIN AREA OF 0.12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.
4. PRECAST BASE SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUT SHALL HAVE A WALL THICKNESS OF 2" MIN. ALL PIPES SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. USED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT.
5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PI[E OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS.
6. ROUND KNOCKOUT MAY BE ON ALL 4 SIDED, WITH MAX. DIAM. OF 20". KNOCKOUT MAY BE EITHER ROUND OR "D" SHAPE.
7. THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'-0".
8. THE TAPPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2'/FT .
9. CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATIONS RR-F-6210. MATING SURFACE SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
10. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
11. FOR CATCH BASIN IN PARKING LOTS REFER TO WSDOT/APWA STANDARD DWG.B1-5.
12. EDGE OF RIOSER OR BRICK SHALL NOT BE MORE THAN 2" FROM VERTICAL EDGE OF CATCH BASIN WALL.
13. MINIMUM 4" ADJUSTMENT SECTION BETWEEN BOTTOM OF GRATE AND TOP OF BASE SECTION.

CATCH BASIN TYPE-1
(18" MAX. DIA)

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION

NO.	DATE	DESCRIPTION	BY

NOT FOR CONSTRUCTION

CATCH BASIN TYPE-1 (18" MAX. DIA)

GEOMETRICS ENGINEERING, P.S. INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

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DRAWING NO.	13 OF 19

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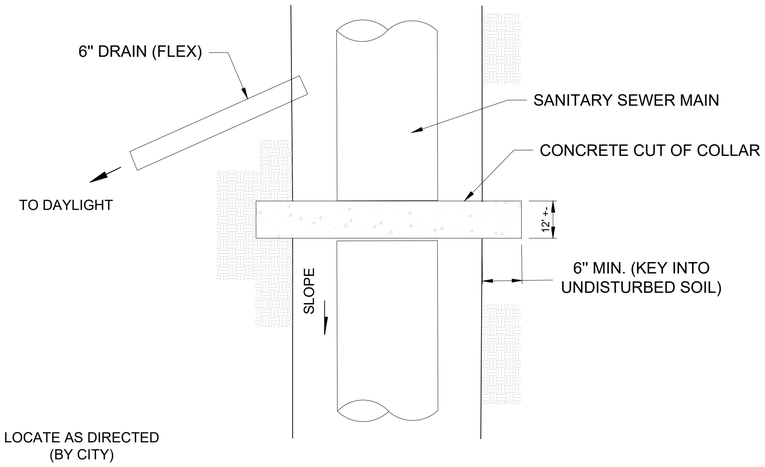
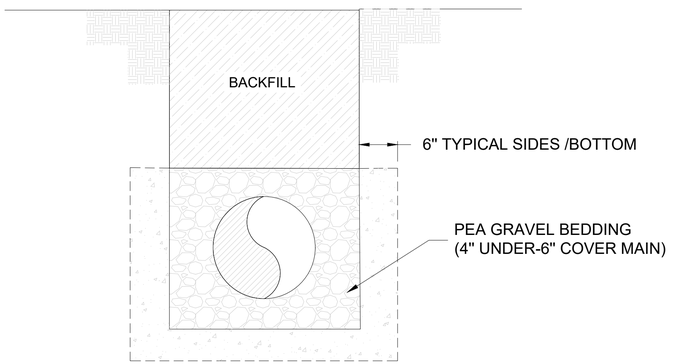


PLAN



SECTION

SANITARY SEWER DRAINAGE CUT-OFF COLLAR

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
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SANITARY SEWER DRAINAGE CUT-OF COLLAR

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2501 152nd Ave NE Redmond, WA 98052

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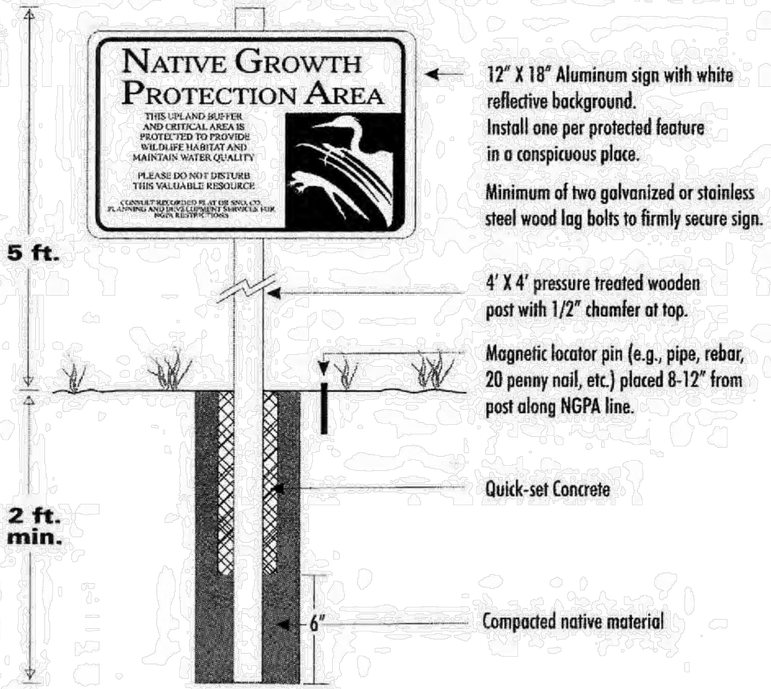
CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

Native Growth Protection Area
Sign Installation Guidelines

TYPE 1 SIGN



12" X 18" Aluminum sign with white reflective background.
Install one per protected feature in a conspicuous place.

Minimum of two galvanized or stainless steel wood lag bolts to firmly secure sign.

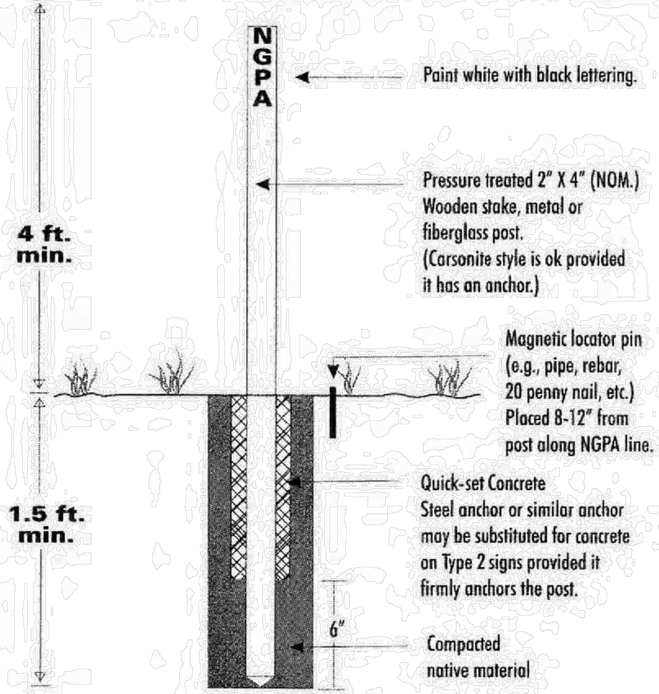
4' X 4' pressure treated wooden post with 1/2" chamfer at top.

Magnetic locator pin (e.g., pipe, rebar, 20 penny nail, etc.) placed 8-12" from post along NGPA line.

Quick-set Concrete

Compacted native material

TYPE 2 SIGN



Paint white with black lettering.

Pressure treated 2" X 4" (NOM.) Wooden stake, metal or fiberglass post.
(Carsonite style is ok provided it has an anchor.)

Magnetic locator pin (e.g., pipe, rebar, 20 penny nail, etc.) Placed 8-12" from post along NGPA line.

Quick-set Concrete
Steel anchor or similar anchor may be substituted for concrete on Type 2 signs provided it firmly anchors the post.

Compacted native material

NOTES:

1. NGPA signs shall be placed no greater than 100 feet apart around the perimeter of the Native Growth Protection Area. Minimum placement shall include one Type 1 sign per wetland, and at least one Type 1 sign shall be placed in any lot that borders the Native Growth Protection Area, unless otherwise approved by the County biologist.
2. Sign placement shall be subject to the approval of Snohomish County. Alternative sign designs may be submitted to Snohomish County for approval.
3. All signs must be secure and permanent.

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DETAILS - 1

GEOMETRICS ENGINEERING, P.S., INC.
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CROSSROADS CHEVRON

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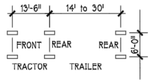
DESIGN CRITERIA

VERTICAL LOADS ON VAULT LID:

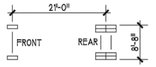
UNIFORM LIVE LOAD : = 150PSF

*HS20 TRUCK WHEEL LOADS :



TRACTOR :
FRONT AXLE = 8,000 lb.
SINGLE REAR AXLE = 32,000 lb.
TRAILER :
SINGLE REAR AXLE = 32,000 lb.

*FIRE TRUCK WHEEL LOADS :



FRONT AXLE = 22,000 lb.
REAR AXLES (DUAL TANDEM) = 53,000 lb.

*OUTRIGGER LOAD : 45,000LBS OVER 18" SQ PAD

* = DESIGN UNIFORM LIVE LOAD, OUTRIGGER LOAD AND TRUCK WHEEL LOADS TO BE APPLIED INDEPENDENTLY AND IN COMBINATION WITH THE SOIL COVER DEAD LOAD.

IMPACT FACTOR:
DUE TO THE LOW SPEEDS OF VEHICLES OVER THE LID, AND THE SOIL COVER OVER THE LID, INCREASES IN VEHICLE LOADS TO ACCOUNT FOR IMPACT AND FATIGUE ARE NOT REQUIRED.

SOIL COVER FOR LID DESIGN:
PLANK MANUFACTURER SHALL BE RESPONSIBLE FOR DETERMINING THE SOIL COVER DEPTHS USED IN THE LID DESIGN BASED ON THE VAULT AND FINISHED GRADE ELEVATIONS AS SHOWN ON THE PERMITTED SET OF CIVIL DWGS.

SOIL COVER FOR SUBSTRUCTURE DESIGN:
THE SUBSTRUCTURE WAS DESIGNED FOR A SOIL COVER OF 1.17FT MIN AND 3.50FT MAX.

FOUNDATION DESIGN:
FOUNDATION DESIGN IS BASED ON THE FOLLOWING ASSUMED VALUES TO BE VERIFIED AT THE TIME OF CONSTRUCTION.

ALLOWABLE BEARING PRESSURE: 3,500 PSF

SOIL DESIGN VALUES: DRAINED LEVEL BACKFILL.
AT REST PRESSURE: 55 PCF EFW
SEISMIC ADDITION: E = 12H PSF UNIFORM

SATURATED SOIL DENSITY: 125 PCF

SPECIAL INSPECTION PLAN

GENERAL:
SPECIAL INSPECTION BY A QUALIFIED INSPECTOR IS REQUIRED IN ACCORDANCE WITH THE 2018 IBC.

QUALIFICATION:
THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL.

REQUIRED VERIFICATION & INSPECTION:
THE SPECIAL INSPECTOR SHALL PERFORM THE VERIFICATIONS & INSPECTIONS NOTED IN THE SCHEDULE BELOW

INSPECTION & TESTING SCHEDULE

TYPES OF WORK	FREQ.	2018 IBC SECTION
CAST IN PLACE CONC		
REINFORCING STEEL, PLACEMENT.	P	1705.3
INSTALLATION & FASTENING OF PRECAST PANELS	P	1705.3
PLACEMENT OF CONCRETE	C	1705.3
VERIFYING USE OF REQUIRED DESIGN MIX	P	1705.3
TESTING OF THE CONCRETE FOR SPECIFIED STRENGTH, AIR CONTENT AND SLUMP	C	1705.3
SOILS		
VERIFICATION OF SOIL-BEARING CAPACITY: INSTALLATION OF DRAINAGE SYSTEM:	P	1705.6
PLACEMENT & COMPACTION OF WALL BACKFILL:	P	1705.6
STRUCTURAL STEEL		
STRUCTURAL STEEL (GRATING) FABRICATION	P	1704.2.5

FREQUENCY LEGEND
C = CONTINUOUS P = PERIODIC
SEE REFERENCES AND STANDARDS LISTED WITHIN THE VERIFICATION & INSPECTION SCHEDULE FOR MEANING OF PERIODIC AND CONTINUOUS INSPECTIONS.

CERTIFICATE OF COMPLIANCE:
THE SPECIAL INSPECTION AGENCY SHALL PROVIDE A FINAL LETTER CERTIFICATE OF COMPLIANCE STATING THAT THE REVIEWED WORK WAS COMPLETED IN ACCORDANCE WITH THE PERMITTED DOCUMENTS.

SUBMITTAL OF REPORTS:
ALL SPECIAL INSPECTION REPORTS AND TESTING REPORTS SHALL BE SUBMITTED TO THE OWNER, SITE STRUCTURES AND THE BUILDING OFFICIAL BY THE AGENCY PERFORMING THE INSPECTION OR TESTING.

GENERAL CONSTRUCTION NOTES

CODE:
VAULT DESIGN AND CONSTRUCTION SHALL CONFORM TO THE PROVISIONS OF THE 2018 IBC AS ADOPTED BY SNOHOMISH COUNTY, WASHINGTON.

GENERAL DETAILS:
CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.

DISCREPANCIES:
THE CONTRACTOR SHALL NOTIFY ENGINEER UPON FINDING ANY DISCREPANCY OR OMISSION IN THE DRAWINGS OR SPECIFICATIONS.

SHORING & EXCAVATION:
THE CONTRACTOR SHALL BE SOLEY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES, INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES.

WALL BACKFILL:
PRIOR TO BACKFILLING VAULT WALLS THE CONTRACTOR SHALL HAVE PLACED THE LID PLANKS AND PROVIDED A MINIMUM OF 5 DAYS OF CURE ON THE PLANK VOID FILL.

BACKFILL SOIL:
SEE THE GEOTECHNICAL REPORT FOR WALL BACKFILL MATERIAL REQUIREMENTS AND PLACEMENT AND COMPACTION REQUIREMENTS. ALL COMPACTION OCCURING WITHIN 5' OF THE WALL SHALL BE COMPLETED USING HAND OPERATED MACHINERY.

CONCRETE

CONCRETE REQUIREMENTS:

LOCATION	STRENGTH	MAX W/C RATIO
WALLS & C.I.P. LID	4000PSI @ 28 DAYS	0.50
FTGS & GRADE SLAB	4000PSI @ 56 DAYS	0.53
PLANK VOID FILL	TO MEET PLANK MFGR'S REQUIREMENTS*	
PLANK JOINT GROUT	TO MEET PLANK MFGR'S REQUIREMENTS*	

* MINIMUM STRENGTH SHALL BE 3000PSI @ 28 DAYS.

AIR CONTENT:
CONCRETE EXPOSED TO WEATHER SHALL CONTAIN 5% +/-1% ENTRAINED AIR.

MIX DESIGN:
SHALL BE BASED ON FIELD EXPERIENCE OR TRIAL MIXTURES IN CONFORMANCE WITH THE SPECIFICATIONS.

SUBMITTALS:
PROVIDE MIX DESIGNS TO THE ENGINEER FOR REVIEW PRIOR TO PLACEMENT.

MATERIAL REQUIREMENTS:
CEMENT: ASTM C150. ADMIXTURES: ACI 301.
AGGREGATES: ASTM C33. WATER: ASTM C94.

EXPOSURE CATEGORIES:
FREEZING THAWING F0
SULFATE S0
IN CONTACT w/ WATER W1
CORROSION PROTECTION C1

PLACING REQUIREMENTS:

PLACING:
PLACE CONCRETE AS NEARLY AS PRACTICABLE TO ITS FINAL POSITION TO AVOID SEGREGATION.

DEBRIS:
REMOVE ALL DEBRIS FROM FORMS PRIOR TO PLACING CONCRETE.

CONSOLIDATION:
CONSOLIDATE CONCRETE BY SUITABLE MEANS. THOROUGHLY WORK CONCRETE AROUND EMBEDDED ITEMS AND INTO CORNERS OF FORMS.

CURING REQUIREMENTS:

CURING:
CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A SUITABLE PERIOD OF TIME AFTER PLACEMENT.

WEATHER CONDITIONS:
ADEQUATE PRECAUTIONS SHALL BE TAKEN DURING HOT AND COLD WEATHER IN ACCORDANCE WITH THE SPECIFICATIONS.

LID PLANK PLACEMENT:
IN NO CASE SHALL THE LID PLANKS BE PLACED BEFORE THE WALLS HAVE BEEN ALLOWED A MINIMUM OF 3 DAYS OF CURE. WHEN AVERAGE AMBIENT TEMPERATURES ARE LESS THAN 50 DEGREES FAHRENHEIT, THE CONTRACTOR MUST ALLOW A MINIMUM CURE TIME OF 7 DAYS OR PROVIDE AN ADDITIONAL SET OF CYLINDERS TO BE BROKEN AT THE TIME OF LID PLACEMENT DEMONSTRATING A MINIMUM CONCRETE STRENGTH OF 1,000 PSI HAS BEEN REACHED.

FINISH:
a. CONCRETE FINISH TO BE SMOOTH WITH NO FINS, VOIDS, ROCK POCKETS, OR OTHER IRREGULARITIES.
b. CONE SNAP TIES OR EQUIVALENT ARE REQUIRED AND ARE TO BE REMOVED AND SEALED AT ALL INTERIOR WALL SURFACES. NO FLAT TIES ALLOWED.

HOLLOW CORE PLANK

SCOPE OF WORK:
THE WORK INCLUDED IS THE DESIGN, MANUFACTURE AND DELIVERY OF PRECAST PRESTRESSED CONCRETE UNITS. DESIGN PLANK FOR THE MOST CRITICAL OF THE LOADING CONDITIONS AS SHOWN WITHIN THE DESIGN CRITERIA NOTE.

THE MANUFACTURER SHALL SUBMIT STRUCTURAL CALCULATIONS AND PLACEMENT DRAWINGS SIGNED BY A WASHINGTON STATE REGISTERED CIVIL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

THE MANUFACTURER SHALL INSTALL ALL BLOCK OUTS REQUIRED FOR STRUCTURAL CONNECTIONS AS INDICATED ON THESE DRAWINGS. NO OTHER PENETRATIONS ARE ALLOWED WITHOUT THE PRIOR APPROVAL OF THE PLANK MANUFACTURER.

ALL HOLLOW CORE JOINTS SHALL BE GROUTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

DEFERRED SUBMITTALS

THE FOLLOWING AREAS OF WORK SHALL BE CONSIDERED AS "DEFERRED SUBMITTALS" AS DEFINED IN THE 2018 IBC

PRECAST PRESTRESSED HOLLOW CORE PLANK

ALL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF A CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF WASHINGTON WHO HAS CURRENT DESIGN EXPERIENCE IN THE TYPE OF WORK REVIEWED.

THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED BY THE ENGINEER OF RECORD.

COPIES OF THE APPROVED DEFERRED SUBMITTAL DOCUMENTS SHALL BE MAINTAINED ON SITE BY THE GENERAL CONTRACTOR AND MADE AVAILABLE FOR REVIEW AS REQUESTED.

WATERSTOP

PVC WATERSTOP
WATERSTOPS SHALL BE 4" RIBBED WITH CENTER BULB AS MANUFACTURED BY GREENSTREAK, INC - OR EQUIVALENT - AND SHALL BE FORMULATED FROM VIRGIN RAW MATERIAL AND SHALL MEET THE THE ARMY CORPS OF ENGINEERS STANDARD SPECIFICATION CRD-C 572-74. INSTALL WATERSTOP IN ACCORDANCE WITH ALL OF THE MANUFACTURERES RECOMMENDATION. SPLICING OF THE WATERSTOP SHALL BE ACCOMPLISHED WITH A THERMOSTATICALLY CONTROLLEDE SPLICING IRON IN ACCORDANCE WITH THE MANUFACTURERS DIRECTION AND RECOMMENDATIONS.

REINFORCING BAR

MATERIAL REQUIREMENT:

REINFORCING BARS:
USE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, EXCEPT AS NOTED ON THE DRAWINGS.

FABRICATION AND PLACING REQUIREMENTS:

BENDING:
BARS SHALL BE BENT COLD. BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS NOTED OR SHOWN OTHERWISE OR AUTHORIZED BY THE ENGINEER.

PLACING:
REINFORCEMENT SHALL BE SUPPORTED AND TIED TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR BY PLACING OF CONCRETE. MAXIMUM SPACING OF SUPPORTS SHALL BE 3'-6".

CONCRETE COVER:
MINIMUM CONCRETE COVER FOR REINF. SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH_____ 3"

CONCRETE CAST AGAINST FORMS AND EXPOSED TO EARTH_____ 2"

WET SETTINGS:
REINFORCEMENT ANCHOR BOLTS, OR ANY EMBEDDED ITEM WITHIN THE CONCRETE, MAY NOT BE SET INTO THE CONCRETE AFTER IT HAS BEEN POURED WITHIN THE FORMS.

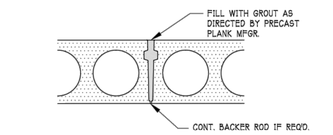
LAP SPLICES:
LAP ALL BARS 28" MIN UNLESS SHOWN OTHERWISE ON THESE DRAWINGS.

SUBMITTALS:
PROVIDE REINFORCING BAR FABRICATION AND PLACEMENT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

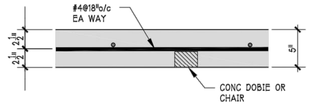
DUCK BILL CHECK VALVE

CHECK VALVE SHALL BE PROCO DUCK BILL STYLE 730, MOLDED CHECK VALVES AS MANUFACTURED BY PROCO PRODUCTS, INC. 2431 NORTH WIGWAM DR. STOCKTON, CA.

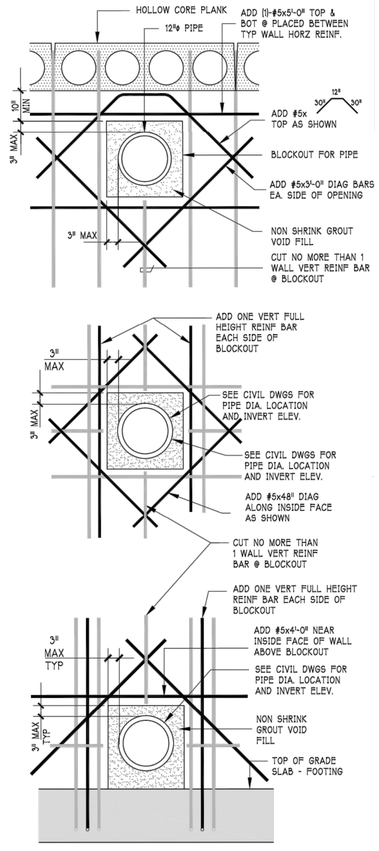
CHECK VALVE SHALL BE INSTALLED OVER THE 4"ø PVC THRU WALL PIPE AND AFFIXED WITH A HEAVY DUTY STAINLESS STEEL CLAMP PER THE MANUFACTURERS INSTRUCTIONS. INSTALL CHECK VALVES IN A HORIZONTAL POSITION.



1 / S1 TYP PLANK JOINT DETAIL
SCALE 1"=1'-0"



2 / S1 TYP GRADE SLAB SECTION
SCALE 1-1/2"=1'-0"



3 / S1 WALL REINF @ PIPE PENETRATION
3/4"=1'-0"

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CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

NO.	DATE	DESCRIPTION	BY

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DETAILS - 2

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2501 152nd Ave NE Redmond, WA 98052

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DRAWING NO. 16 OF 19

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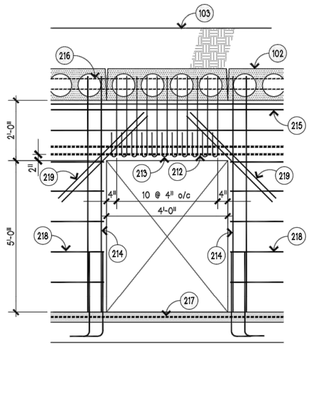
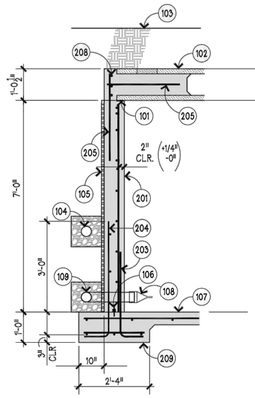
CROSSROADS CHEVRON

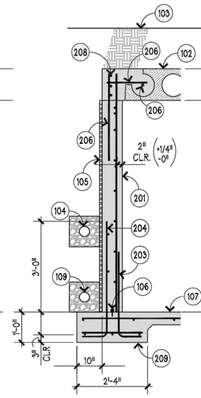
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



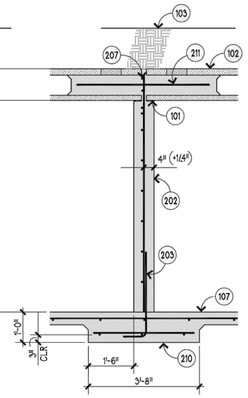
A/S3 WALL REINF @ OPNG
SCALE 1/2"=1'-0"



1/S3 TYP WALL SECT
SCALE 1/2"=1'-0"



2/S3 TYP WALL SECT
SCALE 1/2"=1'-0"



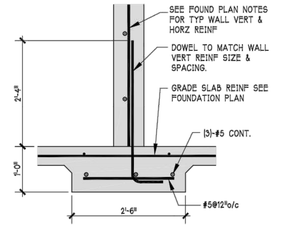
3/S3 TYP WALL SECT
SCALE 1/2"=1'-0"

WALL GENERAL KEYNOTES

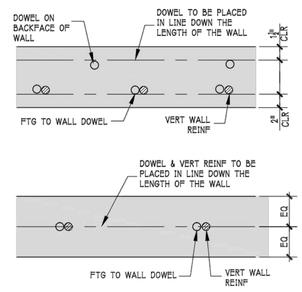
101. PLANK TO BEAR 3" MINIMUM ONTO THE TOP OF THE CONCRETE WALL. SEE PLANK MANUFACTURER'S DRAWINGS FOR FINAL BEARING LENGTH. INSTALL BEARING PAD AS DETAILED ON THE PRECAST PLANK PLACEMENT DRAWINGS.
102. 12-1/2" THICK PRECAST HOLLOW CORE PLANK.
103. FINISHED GRADE OVER THE LID. ELEVATION VARIES. SEE DESIGN CRITERIA ON SHEET S1 FOR APPROXIMATE SOIL DEPTHS OVER THE VAULT LID IN ADDITION TO THE CIVIL DWGS FOR FINAL GRADE ELEVATIONS.
104. 4"ø PERFORATED PVC FOOTING DRAIN SET IE=115.00. WRAP IN 16" SQUARE FREE DRAINING GRAVEL BED SET IN FILTER FABRIC. ROUTE DRAIN TO DISCHARGE POINT AS SHOWN ON THE CIVIL DWGS.
105. PREENGINEERED DRAINAGE MATT TO EXTEND OVER THE HEIGHT OF THE WALL AS SHOWN. SEE GEOTECHNICAL REPORT FOR MATERIAL SPECIFICATIONS.
106. 4" PVC RIBBED WATERSTOP w/ CENTER BULB AT ALL PERIMETER WALLS OF THE VAULT. INSTALL AT THE CENTER OF THE WALL, IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
107. SEE FOUNDATION PLAN FOR GRADE SLAB REINFORCING.
108. 4"ø PROCO DUCK BILL STYLE 730 MOLDED CHECK VALVE OR EQUIVALENT. TIE TO 4"ø THRU WALL PVC PIPE IN ACCORDANCE WITH THE PROCO INSTALLATION INSTRUCTIONS. INSTALL IN A HORZ POSITION.
109. 4"ø PERFORATED PVC FOOTING DRAIN. SET IE=115.00. PLACE INTO GRAVEL BED WRAPPED IN FILTER FABRIC. TIE TO SOLID 4"ø SCH 40 PVC PIPE THRU WALL. LOCATE THRU WALL PIPE AT DUCK BILL CHECK VALVE LOCATIONS AS SHOWN ON THE VAULT KEY PLAN. EXTEND PIPE BEYOND FACE OF WALL NO LESS THAN 3" TO ALLOW INSTALLATION OF THE DUCKBILL CHECK VALVE.

WALL REINFORCING KEYNOTES

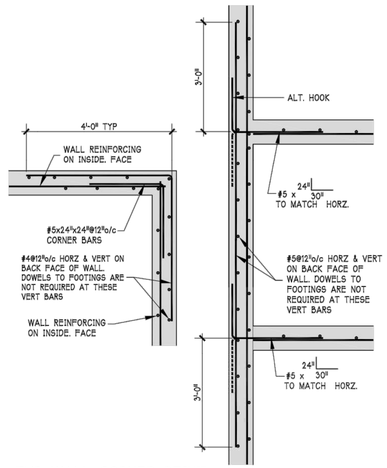
201. 8" THICK CONCRETE WALL REINF w/ #5@12"o/c HORZ & VERT. PLACE VERT REINF NEAR THE INSIDE FACE OF THE WALL. PROVIDE (2)-#5 CONT HORZ BARS @ THE TOP OF THE WALL. EXTEND BARS 10" INTO LID CLOSURE POUR WHERE POSSIBLE.
202. 8" THICK CONCRETE WALL REINF w/ #5@12"o/c HORZ & VERT. PLACE VERT REINF @ THE CENTER OF THE WALL. PROVIDE (2)-#5 CONT HORZ BARS @ THE TOP OF THE WALL. EXTEND BARS 10" INTO LID CLOSURE POUR.
203. #5 FOOTING TO WALL DOWELS TO MATCH WALL VERTICAL REINFORCING SPACING. PROVIDE STD HOOK @ END OF BAR CAST INTO FOOTING. DOWELS SHALL BE EMBEDDED A MINIMUM OF 8" INTO 12" THICK FTG. & SHALL EXTEND INTO THE WALL 24" MIN. SEE 5/S3 FOR DOWEL PLACEMENT REQUIREMENTS.
204. #4@18"o/c WALL TO FOOTING DOWELS. EXTEND 36" INTO THE WALL AND 8" INTO THE 12" THICK FOOTING. PROVIDE STD HOOK AT END OF BAR EMBEDDED WITHIN FTG. PROVIDE (2)-#4 CONT HORZ. BARS AS SHOWN. SET DOWELS 1-1/2" CLR FROM THE BACKFILLED FACE OF THE WALL. SEE 5/S3FOR DOWEL PLACEMETN DETAIL.
205. LID & WALL TO CLOSURE POUR REINF @ VOID END FILL. SEE 4/S3.
206. LID & WALL TO CLOSURE POUR REINF @ VOID BLOCKOUT. SEE 5/S3.
207. (2)-#5 CONT IN CLOSURE POUR. LAP 36" @ ALL SPLICE LOCATIONS.
208. (3)-#6 CONT IN CLOSURE POUR. LAP 48" @ ALL SPLICE LOCATIONS.
209. REINFORCE FTG w/ (3)-#5 CONT. LONGITUDINAL & #5@18"o/c TRANSVERSE BOT.
210. REINFORCE FTG w/ (3)-#5 CONT. LONGITUDINAL & #5@12"o/c TRANSVERSE BOT.
211. #5x4'-0" PLACED SUCH THAT EACH 48" WIDE PLANK RECEIVES (2) BARS. LOCATE BARS IN VOIDS WITH POUR SLOTS AS SHOWN ON THE PRECAST PLANK PLACEMENT DWGS. PROVIDE ADDITIONAL BARS @ EACH PLANK IF REQ'D AND SHOWN ON THE PRECAST PLANK SHOP DWGS.
212. (2)-#7@2"o/c. EXTEND 30" MIN PAST EA JAMB.
213. #4@4"o/c VERT w/ 180 DEG HOOK & BOT.
214. PROVIDE (2)-#5@6"o/c VERT EA JAMB OF OPENING
215. (2)-#5 CONT AT TOP OF WALL.
216. (2)-#5 CONT IN LID CLOSURE POUR
217. ADD (4)-#5x10'-0" TOP, CENTER ON OPNG. EQUALLY SPACED ACROSS FTG WIDTH.
218. #5@12"o/c TYP CELL DIVIDER WALL HORZ REINFORCING.
219. (2)-#5x4'-0"@3"o/c DIAGONAL BARS EA CORNER. PLACED AT THE CENTER OF THE WALL.



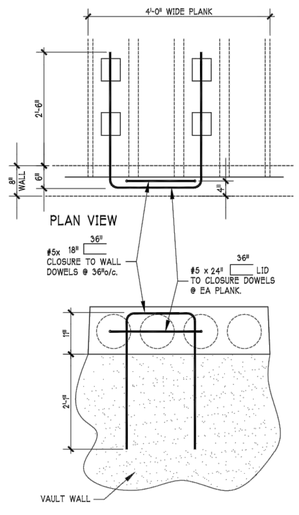
7/S3 KNEEWALL FTG DETAIL
SCALE 3/4"=1'-0"



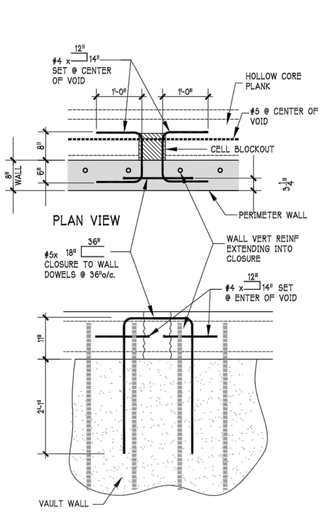
6/S3 TYP FTG DOWEL PLACEMENT DETAIL
SCALE 1"=1'-0"



8/S3 TYP WALL CORNER REINF.
NTS



4/S3 LID & WALL TO CLOSURE DOWELS AT PLANK VOID END FILL - 8" WALL
SCALE 3/4"=1'-0"



5/S3 LID & WALL TO CLOSURE DOWELS AT VOID BLOCKOUTS - 8" WALL
SCALE 3/4"=1'-0"

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

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REVISION NO.	DATE	DESCRIPTION	BY

NOT FOR CONSTRUCTION

DETAILS - 3

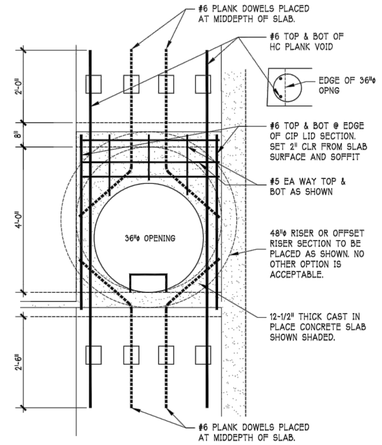
GEOMETRICS ENGINEERING, P.S. INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

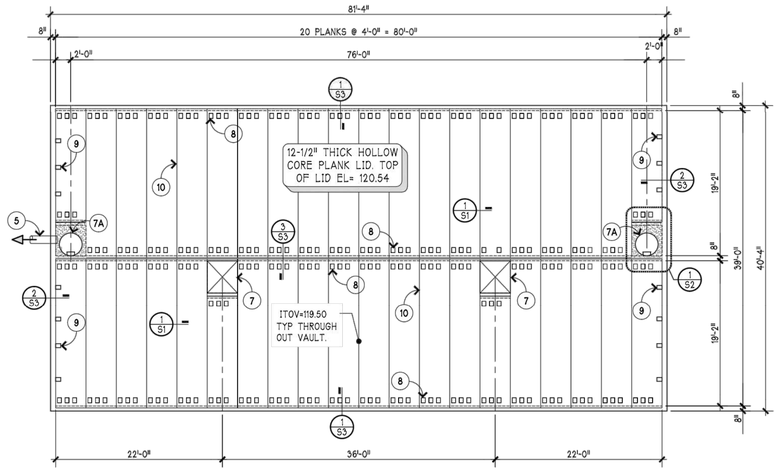
PERMIT NO.	DSN. BY:
PA-24-006	TI
DATE: 09/27/2024	
SCALE: N.T.S.	
DRAWING NO. 17 OF 19	

CROSSROADS CHEVRON

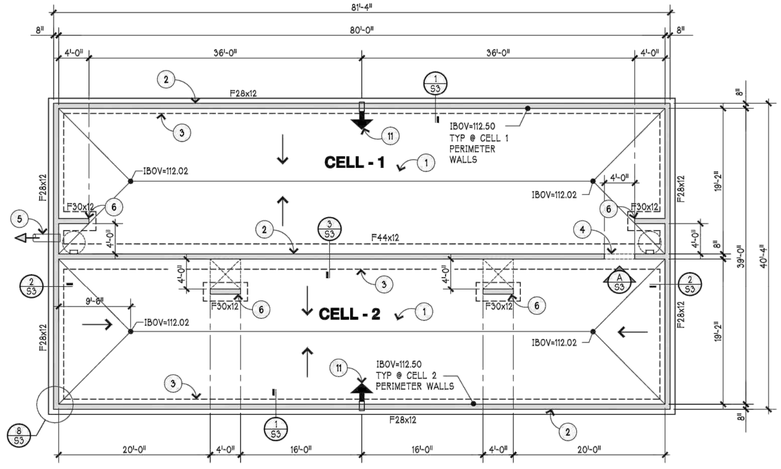
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



1/S2 LID REINF @ MANHOLE
NTS



VAULT LID PLAN
SCALE 1/8" = 1'-0"



VAULT FOUNDATION PLAN
SCALE 1/8" = 1'-0"

PLAN KEYNOTES

1. 5" THICK CONCRETE SLAB ON GRADE REINF WITH #4@18"o/c EA WAY. PLACE ALL REINF AT MID-DEPTH OF THE SLAB. SEE 2/S1 FOR REINF PLACEMENT DETAIL. CAST GRADE SLAB IN A SINGLE POUR
2. CAST IN PLACE CONCRETE WALLS TYPICAL AT THE PERIMETER & INTERIOR OF THE VAULT. SEE WALL SECTIONS FOR REINFORCING. PROVIDE ADDED REINF AT PIPE PENETRATIONS AS SHOWN IN 3/S1. PROVIDE REINF @ ALL WALL CORNERS AS SHOWN IN 8/S3.
3. THICKENED SLAB FOOTINGS TO BE CAST WITH THE GRADE SLAB. SEE WALL SECTIONS FOR SIZE & REINF UNO.
4. 4'-0" WIDE OPENING WITHIN THE INTERIOR WALL. SEE A/S3 FOR WALL REINFORCING @ THE OPENING.
5. PIPE INLET OR OUTLET TO VAULT. SEE CIVIL DWGS FOR PIPE DIAMETER & LOCATION. VERIFY INVERT ELEVATION w/ THE CIVIL DWGS. SEE 3/S1 FOR WALL REINF @ PIPE PENETRATION. ADDITIONAL REINFORCING IS NOT REQUIRED FOR PIPES WITH AN O.D. LESS THAN 8" PROVIDED THEY ARE PLACED BEWTEEN THE TYPICAL WALL VERTICAL AND HORZ REINF.
6. 8" THICK KNEE-WALL. REINF w/ #5@12"o/c HORZ & VERT. PLACE VERT. REINF AT THE CENTER OF THE WALL AND EXTEND 10" ABOVE THE TOP OF WALL INTO THE LID CLOSURE. PROVIDE (2)-#5@4"o/c VERT AT THE FREE ENDS OF THE WALL AND (2)-#5 HORZ AT THE TOP OF THE WALL. SEE 7/S3 FOR FTG INFORMATION. PROVIDE (2)#5 HORZ IN LID CLOSURE POUR ABOVE WALL.
7. 48" SQUARE OPENING THRU LID w/ SUPPORTING KNEEWALL TO ACCEPT 48" SQUARE RISERS AND INLET GRATES AS SHOWN ON THE CIVIL DRAWINGS.
7A. 36" DIAMETER OPENING THRU LID w/ SUPPORTING KNEEWALL TO ACCEPT RISERS, LADDER, RING AND LOCKING MANHOLE COVER AS SHOWN ON THE CIVIL DRAWINGS. SEE 1/S2 FOR LID REINF @ MANHOLE.
8. POUR SLOTS IN TOP OF PLANK. MANUFACTURER TO PROVIDE A MINIMUM OF 3 SLOTS @ EACH END OF EACH PLANK. PLANK MANUFACTURER MAY REQUIRE GROUTING OF ADDITIONAL CELLS BEYOND THE MINIMUM SHOWN. THE GENERAL CONTRACTOR SHALL INCLUDE GROUTING OF THESE ADDED CELLS IN HIS BID. SEE WALL SECTIONS FOR REINF.
9. PROVIDE BLOCKOUTS IN THE EDGE CELL OF THE PLANK PARALLEL TO THE PERIMETER VAULT WALLS. LOCATE BLOCKOUTS APPROXIMATELY AS SHOWN ON THIS PLAN. SEE WALL SECTIONS & DETAILS FOR REINF.
10. 12-1/2" THICK 4'-0" WIDE PRECAST HOLLOW CORE PLANK. SEE DESIGN CRITERIA NOTES ON SHEET S1 FOR PLANK LOADING REQUIREMENTS.
11. PROCO DUCK BILL STYLE 730 CHECK VALVE TIED TO LOWER PERIMETER FOOTING DRAIN. SEE WALL SECTIONS AND STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.

LEGEND

IBOV	INSIDE BOTTOM OF VAULT (TOP OF GRADE SLAB)
ITOV	INSIDE TOP OF VAULT LID (BOTTOM OF LID, TOP OF WALL)
	CIP CONCRETE WALL.
	CONCRETE SPREAD FOOTING
	DIRECTION OF DOWNWARD SLOPE
	DUCK BILL CHECK VALVE
F28x12	28" WIDE x 12" THICK FTG SEE 1 & 2/S3
F44x12	44" WIDE x 12" THICK FTG SEE 3/S3
F30x12	30" WIDE x 12" THICK FTG SEE 2/S2

CONSTRUCTION LOADS

THE VAULT LID HAS BEEN DESIGNED TO CARRY THE "DESIGN LOADS" ONLY AFTER VAULT CONSTRUCTION IS COMPLETE, ALL DESIGN CONCRETE AND GROUT STRENGTHS HAVE BEEN ACHIEVED, AND ALL COVER HAS BEEN PLACED OVER THE VAULT WITHIN THE LIMITS SPECIFIED ON THIS DRAWING. "BOBCAT" OR OTHER LIGHT EQUIPMENT SHALL BE USED FOR PLACEMENT OF MATERIALS OVER THE VAULT LID.

DIMENSIONS & ELEVATIONS

THE CONTRACTOR AND HIS SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THESE DRAWINGS WITH THE CURRENT PERMITTED SET OF CIVIL DRAWINGS, AND SHALL NOTIFY BOTH THE CIVIL & STRUCTURAL ENGINEERS IN WRITING OF ALL DISCREPANCIES BETWEEN THE CIVIL DWGS AND THESE DWGS PRIOR TO CONSTRUCTION.

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION NO.	DATE	DESCRIPTION	BY

NOT FOR CONSTRUCTION

STRUCTURAL DETAILS OF DETENTION VAULT

GEOMETRICS ENGINEERING, P.S., INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO.	DSN. BY:
PA-24-006	TI
DATE:	
09/27/2024	
SCALE:	
N.T.S.	
DRAWING NO.	
18 OF 19	

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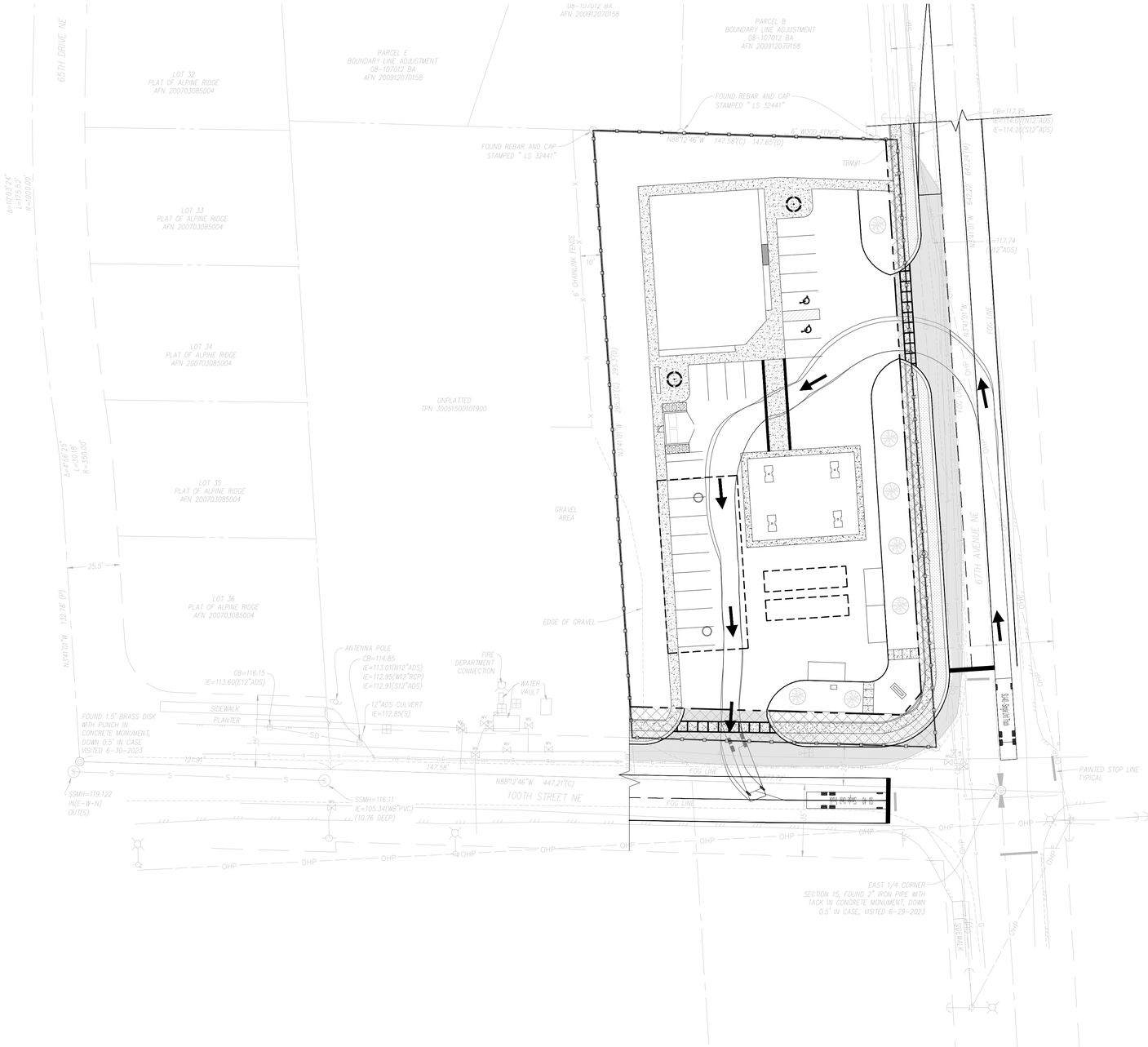
CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



1"=30'-0" Scale: 30 0 30 60 Feet

N

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION

NO.	DATE	DESCRIPTION	BY

NOT FOR CONSTRUCTION

FIRE TRUCK (EFR) ACCESS ROUTE

GEOMETRICS ENGINEERING, P.S. INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

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10/14/2024	
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1" = 30'	
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19 OF 19	

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COMMUNITY DEVELOPMENT DEPARTMENT
501 Delta Avenue ◆ Marysville, WA 98270
(360) 363-8000

October 16, 2024

John Hansen
Meydenbauer Group
1025 Willow Road
Redmond WA 98052

Re: Crossroads Chevron – *Technical Review 3*
PA 24-006

Dear John,

After third review of the above referenced proposal, the Planning Division has the following technical review comments.

While the general layout, building location, and parking appear acceptable to for Planning standards, based on comments from Jesse Hannahs and Shane Whitney (attached) and as previously provided, additional right of way dedication is necessary, and revisions to access are needed, which will likely impact the site plan. Please address comments from Jesse and Shane and submit a revised site plan. Planning may have additional comments upon review of the revised site plan.

Enclosed are copies of comments received from other City departments, and reviewing agencies. After you have had an opportunity to review, please let me know what technical review comments you need clarification on. Once received I can set up a conference meeting with all of the applicable city and agency representatives. If you have any questions, please contact me at 360.363.8215, or by e-mail at ahess@marysvillewa.gov.

Sincerely,

Amy Hess

Senior Planner

cc: Haylie Miller, CD Director
Chris Holland, Planning Manager

MEMORANDUM

TO: Amy Hess – Senior Planner

FROM: Jesse Hannahs, P.E. – Traffic Engineering Manager

DATE: October 11, 2024

SUBJECT: PA 24-006 – Crossroads Gas Station

I have reviewed the Crossroads Gas Station site plan for the proposed development of 10008 67th Ave NE and have the following comments:

1) Traffic impact fees will be required from the City and depending on trip generation/distribution, may be required from the County and State.
    a. Traffic Impact Fee (TIF) calculation worksheet/form shall be required for Snohomish County per email from Caleb Duhnke dated October 1, 2024 at 12:09 PM.
2) A Traffic Impact Analysis (TIA) will be required.
    a. TIA is acceptable.
3) Intersection design of 67th Ave NE & 100th ST NE
    a. Ultimate intersection shall be signalized thus adequate ROW for signal infrastructure shall be provided on NW corner of intersection, SE corner of project site. A minimum of 6' behind sidewalk should be provided as ROW around radius from 5' to west and north of end of corner radius.
        i. ROW as shown on drawing provided for review will not be adequate for future traffic signal installation.
    b. Intersection shall be designed so as to not require removal/reconstruction of frontage with future signalization project.
4) Per EDDS 3-301, access management standards shall apply.
    a. Spacing of accesses shall be per EDDS.
    b. Signalization shall be assumed for purposes of access management standards at intersection of 100th ST NE & 67th Ave NE.
    c. Variance Request:
        i. Traffic Division will not support Eastbound Left Turn entry from 100th ST NE.
        ii. Traffic Division will support right-in/right-out access upon 100th ST NE.
    d. All right-in/right-out access points shall include construction of pork chop island(s) to facilitate compliance with turning restrictions.
        i. Alternative of center lane c-curbing may be considered if pork-chop design can be shown to not enable fuel delivery trucks.
5) Per EDDS 3-506, street lighting will be required.
    a. Street Lighting upon all three lane arterials and other public roadways shall be PUD installed fiberglass pole installation type street lighting.

MARYSVILLE
PUBLIC WORKS

(360) 363-8100

Public Works
80 Columbia Avenue
Marysville, WA 98270

i. Street lighting shall be designed as minor arterial utilizing 250 watt equivalent LED fixtures.
ii. Spacing of fixtures should be approximately 180'-220'.
iii. As part of civil construction approval proposed PUD street lighting locations shall be provided by the City for incorporation into the PUD site electrical plans.
iv. Contact Mike Fleming of Snohomish County PUD at (425) 783-8276 or wehaugen@snopud.com for more information regarding PUD design.

6) Signing and Channelization Plans shall be required as part of Civil Construction plans.

PUBLIC WORKS DEPARTMENT
80 Columbia Avenue ◆ Marysville, WA 98270
(360) 363-8100 ◆ (360) 651-5099 FAX

MEMORANDUM

To: Amy Hess, Senior Planner

From: Shane Whitney, Civil Plan Reviewer

RE: 67th Ave Fuel Station, File# PA24-006
New Convenience Store
10008 67th Ave NE & Parcel # 30051500101800

Date: 10/16/2024

The following comments are offered after review of the above referenced revised application. Many of the original comments will remain as they won't change over the life of the project. New comments and comments that still need to be addressed will be in a ***bold italic*** font.

1. **Existing utilities**:
    a. Sanitary sewer: The SS clean out across the way in 100th Street is shown on record drawing S427.
    b. Water: The 24 inch DI waterline fronting the parcel on 100th is shown on record drawing W653
    c. Storm: The storm line at the NE corner of the project is shown on record drawing RD272

2. Per MMC 14.03.250, utilities are to be extended along the street frontages of the proposed project.
    a. Water main will be required to be extended along the projects frontage of 67th Ave NE.
    b. Storm drainage will need to be provided for the widened sections of 67th Ave and 100th Street.

3. **Frontage Improvements:** Frontage improvements are required per MMC 12.02A.090 on all projects. Frontage improvements are described as curbs, gutters, and sidewalks; underground storm drainage facilities; patching the street from its preexisting edge to the new curb line; and overlayment of the existing public street to its centerline.
    a. 67th Ave NE is to be a 3 lane arterial, the design to be used is as shown in standard plan 3-201-004.
    b. 100th St NE is to be a 3 lane arterial, the design is also to be compliant with standard plan 3-201-004.

4. **Dedication Requirements:**
    a. For both 100th and 67th, a minimum half width of 35 feet of right-of-way is necessary. The supplied documents did not show any deeding that is to occur.
    b. Additional area may be necessary to accommodate the intersection improvements to allow for the required 35 foot radius.

5. **Access**:
    a. Section 3-301 of the EDDS details the arterial access standards. The Traffic Engineer has previously provided comment on this as well in the preapp.
    b. The spacing of the proposed access do not meet the standard as allowed in the EDDS section 3-301. To allow 2 accesses, an engineering variance will be required. ***The variance determination is being issued. The access onto 67th must be shifted to the north as far as possible, it appears that it can go at least another 20 feet. The access onto 100th will be limited to a right-in right-out traffic pattern. A porkchop island will be required.***
    c. The minimum width of a commercial driveway is 24-feet and the maximum is 40-feet.
    d. The vertical alignment of the driveway access will need to be compliant with standard plan 3-303-004 of the EDDS.

6. **Drainage:** All projects in the city of Marysville must comply with requirements stipulated under the MMC 14.15.040 and 14.15.050.
    a. Stormwater drainage: The city has adopted the 2019 Ecology Manual. The project will be required to meet all 9 minimum requirements. The following items will need to be addressed in a resubmittal prior to a preliminary approval.
        - ***The preliminary report will need to address the required frontage improvements that are listed above.***
        - ***A pre and post developed basin map for the site will be necessary.***
    b. A geotechnical report was submitted. At time of grading permit submittal, a complete geotechnical report will be necessary.
    c. The maximum allowed impervious surface coverage for the Zoning designation is 85%.

Other Comments:

7. Survey control datum NAVD-88 and NAD-83 are required to be used. Civil construction plans will not be accepted in any other datum.

8. Trench restoration is to be completed in accordance with section 3-703 of the EDDS. A full lane or full street overlay may be required.

9. The onsite grading and placement of any retaining walls must be compliant with section 22D.050.030 of the MMC.

10. The location and design of the trash enclosure will need to be approved by our Sanitation group.

11. A right of way use permit for all work proposed within City right of way is required. Cost for the ROW permit is $648.00 fees must be paid before right of way permit issuance.

12. The applicant is responsible for identifying any existing well or septic systems on site or on adjacent properties. If there are any existing septic systems on site they need to be decommissioned based on the Snohomish Health District standards. If there are any wells on site they need to be decommissioned based on Department of Ecology standards.

13. Engineering construction plan review fees will be due prior to the start of the review of the plan submittal.
    Engineering construction plan review per MMC 22G.030.020:
    $976 plus a $2000 deposit are due for submittal of the grading permit.
    Review fee of $130 per hour will be charged against the deposit.

14. Engineering construction inspection fees will be due prior to issuance of the grading permit.
    Engineering construction inspection fees per MMC 22G.030.020:
    Inspection is charged at $130 per hour with a $2500 deposit required.

15. **All civil construction plan submittals are to be completed through our online permit portal at the following link:**
    https://permits.marysvillewa.gov/PermitApplication/confirmation.aspx Once the submittal is complete, please email the permit tech's at msvlpermits@marysvillewa.gov

    a. Review timing:
        i. First review = 5 weeks
        ii. Second review = 3 weeks
        iii. Third review = 3 weeks
        iv. Subsequent reviews will be 3 weeks.

2. Please be advised these comments are in reference to specific items and do not imply a full review of the proposed application. Additional comments which may change the design requirements will be provided during the civil construction plan review process.

If you have additional questions regarding the above comments, please contact me at swhitney@marysvillewa.gov or at (360) 363-8227.

cc: Ken McIntyre, PE, Development Services Manager

MARYSVILLE
PUBLIC WORKS

ENGINEERING VARIANCE REQUEST

One variance request form shall be submitted for each section of the Marysville Municipal Code (MMC) or Engineering Design and Development Standards (EDDS) for which variances are being sought. Each variance shall be considered on a case-by-case basis, and shall not be construed as setting precedent for any subsequent applications.

PROJECT INFORMATION:	
Project Name:	67th Avenue Gas Station
Project Number:	PA 24-006
Request Submittal Date:	08/26/2024

CONTACT INFORMATION:		
Engineer/Surveyor Name:	Brad Lincoln, PE	Professional Stamp
Firm Name:	Kimley-Horn and Associates, Inc.	
Mailing Address:	2828 Colby Avenue, Ste 200 Everett, WA 98201	
E-Mail Address:	brad.lincoln@kimley-horn.com	
Phone Number:	206.485.4774	

VARIANCE REQUEST INFORMATION:	
MMC/EDDS Section:	EDDS 2-05 Corner Clearance from Intersections
$714 Application Fee Submitted:	☐ Yes ☑ No

Variance Justification (attach additional pages if needed):

The variance request is to allow one access to 100th Street NE near the west edge of the property that allows right-in, right-out, and left-in movements while restricting left-out movements. The access to 67th Avenue NE will be near the northern property line and is proposed to be restricted to right-in and right-out only. The Development is also proposed to include widening and re-striping along 100th Street NE and 67th Avenue NE to allow for an eastbound right-turn lane and a southbound right-turn lane. See attached memorandum that addresses the variance decision criteria in MMC 22G.010.420

[See MMC 22G.010.420 for variance decision criteria]

(360) 363-8100

Public Works
501 Delta Avenue
Marysville, WA 98270

MARYSVILLE
PUBLIC WORKS

FINDINGS/DECISION (City Staff Use Only)	
Reviewing Staff Member:	Ken McIntyre, PE - Dev. Svcs. Mgr.
$714 Application Fee Submitted:	☐ Yes ☑ No
Decision:	☐ Approve ☑ Approve with Conditions ☐ Disapprove

Findings/Decision/Conditions:

The City has reviewed the request, as well as the attached justification, and finds as follows:

A. Unnecessary Hardship - A two-way access would be convenient for the specific use proposed at the site, but limiting the site to a single access would not necessarily preclude the site from being developed.

B. Unique Size/Location - The site is situated at the intersection of two arterial roadways, and does not have enough frontage-length to provide separation from the intersection in either direction once a future-anticipated signal is installed.

C. Deprived of Rights - As noted in the provided justification, there are other locations in the City that do not meet the access-spacing requirements. However, those locations were likely non-conforming situations that were annexed into the City or designed in conformance with standards that were in place at the time. All new development is expected to meet the current EDDS conditions.

D. Actions of the Property Owner - As mentioned in the provided justification, the second access is needed, at least in-part, to allow for circulation of fuel-trucks through the site. This is a result of the applicant's selected use of the property.

E. Health and Safety - As stated in the provided justification, the separation standards are intended to limit movements that can lead to collisions. So in this situation, the City must balance the need/desire for access to the property, while also considering the potential safety implications.

F. Permitted use - The proposal is a permitted use, and is not a determinative factor for consideration of the requested variance.

-- Continued on next page --

(360) 363-8100

Public Works
501 Delta Avenue
Marysville, WA 98270

Signature/Date

MARYSVILLE
PUBLIC WORKS

FINDINGS/DECISION (City Staff Use Only)	
Reviewing Staff Member:	Ken McIntyre, PE - Dev. Svcs. Mgr.
$714 Application Fee Submitted:	☐ Yes ☑ No
Decision:	☐ Approve ☑ Approve with Conditions ☐ Disapprove

Findings/Decision/Conditions:

-- Continued from previous page --

G. Creation of lots and density - The proposal is consistent with the City's planning code regarding lots and density.

H. Minimum necessary - The City feels that a variance is warranted for this particular property, but not entirely in agreement that the proposal represents the minimum relief necessary for development of the project site.

I. Impacts to easements - The proposal does not infringe upon any known easements.

Conclusion:

The requested variance is approved, subject to the following:

1. The access to 67th Ave NE will be allowed, however, it should be shifted as far north as reasonably possible, to maximize separation from the nearby intersection. It appears that it could be shifted roughly 40-ft to the north, allowing access to the north end of the proposed parking lot.

2. The access onto 100th St NE will be allowed, however, it shall be constructed as a right-in/right-out access with a median island (often referred to as a pork-chop' island) directing outbound traffic to the westbound direction. This is intended to prevent left-turn movements out of the station which would cross at-least one lane and be susceptible to collisions from traffic passing through the intersection.

Ken McIntyre, PE
Asst. City Engineer
2024.10.16
15:40:06-07'00'

Signature/Date

(360) 363-8100

Public Works
501 Delta Avenue
Marysville, WA 98270

Kimley»Horn

MEMORANDUM

To:	Ken McIntyre, PE, City of Marysville
From:	Brad Lincoln, PE
	Kimley-Horn and Associates, Inc.
Date:	August 20, 2024
Subject:	Variance Request

Kimley-Horn and Associates, Inc. (Kimley-Horn) has been retained to provide a variance request for the 67th Avenue Fuel Station (Development) in the City of Marysville (City). The Development is located in the northwest corner of 100th Street NE at 67th Avenue NE and is proposed to consist of 8 vehicle fueling positions (VFP). The site is currently listed as undeveloped per the *Snohomish County Online Property Information (SCOPI)* web map. A site vicinity map is shown in **Figure 1**.

Figure 1: Site Vicinity Map

The site is proposed to have one access to 100th Street NE and one access to 67th Avenue NE. The proposal is to allow the following movements:

- 100th Street NE Access
  - Right-in
  - Right-out
  - Left-in
- 67th Avenue NE Access
  - Right-in
  - Right-out

This memo addresses the nine points listed under Marysville Municipal Code (MMC) 22G.010.420(1) to allow for this variance.

A. UNNECESARY HARDSHIP

The Development has approximately 150 feet of total frontage along 100th Street NE and approximately 300 feet of total frontage along 67th Avenue NE. The driveway to 100th Street NE is located approximately 90 feet, edge to edge, from 67th Avenue NE; which is the maximum separation feasible given the 20-foot landscaping buffer and the curb radius for an access. The access to 67th Avenue NE is located approximately 190 feet, edge to edge, from the 100th Avenue NE. The access to 67th Avenue NE is not located farther from 100th Avenue NE to accommodate parking and circulation within the site. The intersection of 100th Street NE at 67th Avenue NE is currently all-way stop-control, but is ultimately planned to be signalized. The access separation standards are based on Table 3-3.1 from the City of Marysville *Engineering Design and Development Standards (EDDS)*. The access location to 100th Street NE does not meet standards for an access, even restricted, and the access to 67th Avenue NE meets standards for a full access based on the current stop-control configuration and would meet the standards for right-in/right-out only restricted access with the planned signal.

The proposed use is allowed outright under the current zoning and two accesses are needed to help with circulation, particularly for fuel trucks. A strict enforcement of the access separation standards would limit the use of the property and represent an unnecessary hardship. Providing access to 100th Street NE and 67th Avenue NE, even if there are some restricted movements at the accesses, would allow for a reasonable use of the property.

B. UNIQUE SIZE AND LOCATION

The size of the parcel with only approximately 150 feet of frontage along 100th Street NE means that an access to 100th Street NE cannot meet separation standards, even for a limited access. The approximately 300 feet of frontage along 67th Avenue NE means that an access cannot meet separation standards that meets standards for a full access based on the future signal. Additionally, both 100th Street NE and 67th Avenue NE are arterials. These unique features mean that providing access to the site is impossible to meet separation standards without limiting the site to one restricted access.

C. DEPRIVED OF RIGHTS ENJOYED BY OTHERS

The City has numerous locations where accesses do not meet separation standards and the typical way of addressing these separation deficiencies is to restrict movements at the access. There are roadway improvements that are proposed as part of the Development, including the widening and restriping of 100th Street NE and 67th Avenue NE to provide eastbound and southbound right-turn lanes. There is not sufficient right-of-way, particularly along the east side of 67th Avenue NE, to provide even a temporary signal. These improvements, based on the analysis included in the August 5, 2024 comment memorandum and included with this variance request, would result in there being queue lengths along 100th Street NE of approximately 70 feet for eastbound right-turning vehicles and 20 feet for eastbound through/left-turning vehicles, which would allow space for inbound left-turning vehicles without impacting the eastbound queue. The southbound queue lengths along 67th Avenue NE are anticipated to be approximately 10 feet for right-turning vehicles and 290 feet for through/left-turning vehicles. The restriction of the access to 67th Avenue NE would eliminate left-turn movements. These restrictions are similar to restrictions at other commercial properties within the City that have access in close proximity to intersections. Approving this variance and these access locations and restrictions would therefore afford this property the same rights enjoyed by others.

D. ACTIONS OF THE PROPERTY OWNER

The need for the variance is based on the size of the property and the fact that the site is bound by arterials on both sides. The property owner is not able to control these factors and there are no other feasible access alternatives since the parcel is bound on the west by property owned by the City and bound on the north by single-family houses. The need for this variance is therefore not the result of deliberate actions of the applicant or property owner.

E. HEALTH AND SAFETY

The purpose of access separation standards and the reasons for restricting accesses that don't meet standards is to limit movements that can lead to collisions. This is usually in the form of restricting left-turning movements since they can lead to at-angle collisions and can also lead to backups to through movements where left-turn channelization is not provided. The proposed restrictions would eliminate left-turns at the access to 67th Avenue NE, which has a higher volume than 100th Street NE, and would allow only left-turns in at the 100th Street NE access. The eastbound queue lengths with the proposed channelization improvements show that the access to 100th Street NE is not anticipated to be blocked. The proposed restrictions and channelization additions should therefore adequately address health and safety concerns.

F. PERMITTED USE

The zoning for the site allows the proposed gas station use and therefore approval of this variance will not allow the establishment of the proposed use.

G. CREATION OF LOTS AND DENSITY

Approval of this variance will not affect the creation of lots or changes in residential density since this is a commercial use allowed under the current zoning.

H. MINIMUM NECESSARY

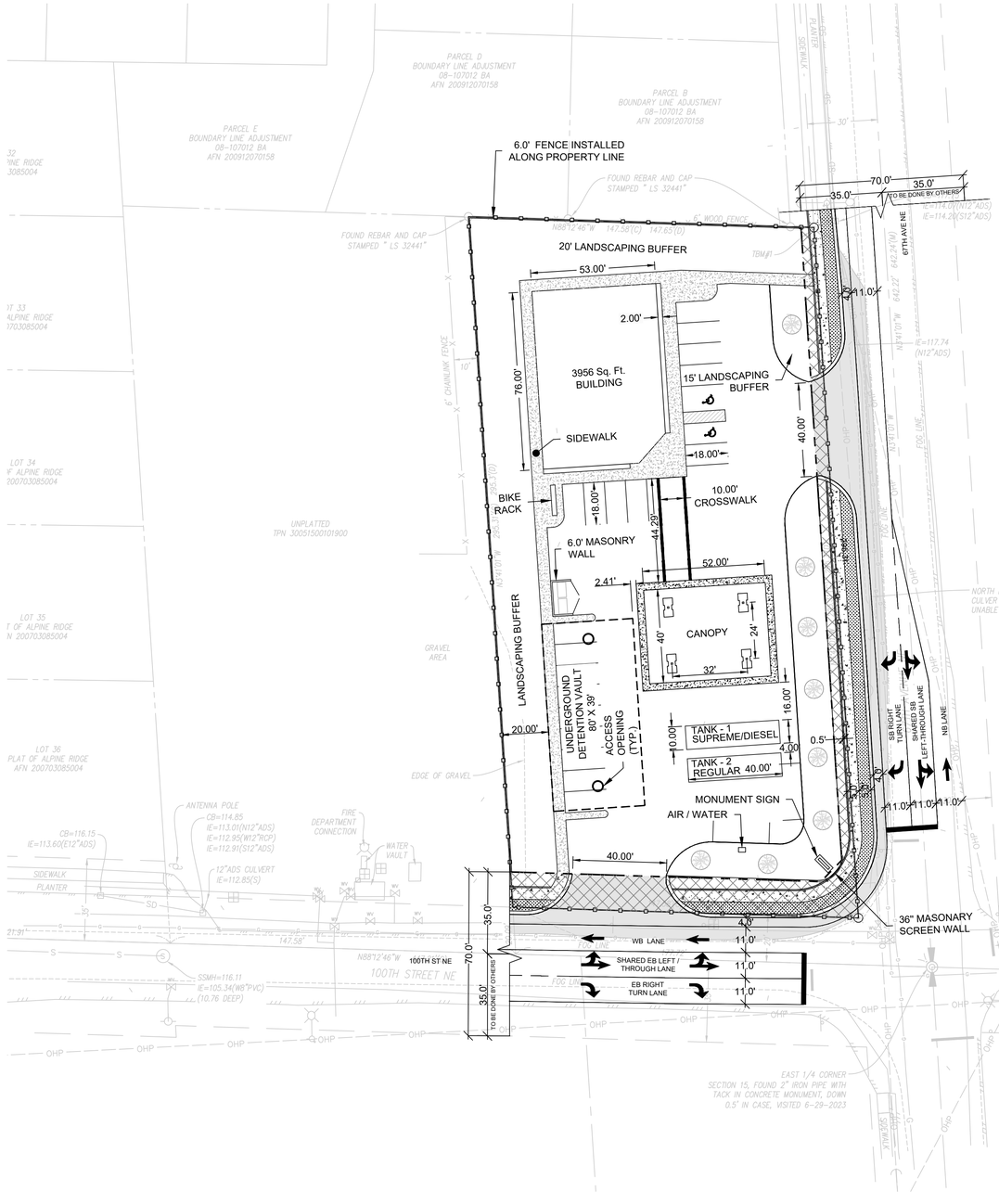
The approval of this variance is the minimum that is necessary to make the use viable since the accesses to 100th Street NE and 67th Avenue NE are proposed to be restricted, as opposed to requesting full access.

I. IMPACTS TO EASEMENTS

Approval of the variance will not infringe upon or interfere with easements since this variance is regarding access locations and restrictions.

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

- BIKE LANE EDGE
- CURB
- LANSCAPE
- SIDEWALK
- ASPHALT WIDENING
- PROPOSED ROW
- UNDERGROUND DETENTION VAULT
- PLOT BOUNDARY

AREA CALCULATIONS

1. TOTAL AREA = 39573.00 SF
2. IMPERVIOUS AREA = 27638.00 SF
3. PERVIOUS AREA = 11935.00 SF

N

1"=30'-0" Scale: 30 0 30 60 Feet

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MERYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

NO.	DATE	REVISION DESCRIPTION	BY

NOT FOR CONSTRUCTION

SITE PLAN

GEOMETRICS ENGINEERING, P.S. INC.
12835 NE Bel-Red Rd, Suite 123, Bellevue, WA 98005

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO.	DSN. BY:
PA-24-006	TI
DATE: 08/12/2024	
SCALE: 1" = 30'	
DRAWING NO. 05 OF 15	

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SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

Intersection	
Intersection Delay, s/veh	38.1
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Future Vol, veh/h	74	9	239	21	12	12	242	427	26	16	465	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	244	21	12	12	247	436	27	16	474	56
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	16.1	13.4	34.9	57.5
HCM LOS	C	B	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	89%	0%	47%	3%	0%
Vol Thru, %	0%	94%	11%	0%	27%	97%	0%
Vol Right, %	0%	6%	0%	100%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	453	83	239	45	481	55
LT Vol	242	0	74	0	21	16	0
Through Vol	0	427	9	0	12	465	0
RT Vol	0	26	0	239	12	0	55
Lane Flow Rate	247	462	85	244	46	491	56
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.515	0.893	0.2	0.496	0.116	0.983	0.101
Departure Headway (Hd)	7.512	6.958	8.504	7.322	9.103	7.21	6.475
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	479	522	423	493	393	506	553
Service Time	5.263	4.709	6.251	5.069	7.183	4.958	4.223
HCM Lane V/C Ratio	0.516	0.885	0.201	0.495	0.117	0.97	0.101
HCM Control Delay, s/veh	18	43.9	13.4	17.1	13.4	62.9	10
HCM Lane LOS	C	E	B	C	B	F	A
HCM 95th-tile Q	2.9	10.1	0.7	2.7	0.4	13	0.3

August 23, 2024

Amy Hess, Senior Planner
Community Development Department
501 Delta Avenue
Marysville, WA 98270

RE: Crossroads Chevron – Technical Review #1; PA #24-006

Dear Amy,

The following correspondence, prepared by the Meydenbauer Group, is in response to the City of Marysville's technical review comments from September 11th, 2024 and contains the project narrative, in addition to a detailed response to the City's individual comments.

Project Narrative

Representing a beneficial addition to the local neighborhood's available services, the Crossroads Chevron is designed to be an architecturally attractive and aesthetic service station that will provide the local community with a conveniently accessible premium fuel station and convenience store along the 67th AVE NE corridor at the intersection of 100th Street NE & 67th AVE NE. In addition to enhancing the street frontage, by developing a pedestrian pathway and bicycle travel lanes along the entirety of the property's street frontage, the Crossroad's Chevron will enhance the neighborhood's appeal with the installation of locally sourced landscaping and thoughtfully designed architecture.

With well maintained landscaping along the property's street frontage, the Crossroad's Chevron will feature trees and plants that are native to the local ecosystem, to enhance the environment for local wildlife and enhance the visual appeal of the property's street frontage. Beyond the street frontage, the property's landscaping will border the north and west property boundaries with a 20' landscaping buffer that will feature similar native vegetation to enhance the holistic appeal of the property from all directions.

Lighting throughout the site will incorporate architectural lighting fixtures that match the design characteristics of the building to enhance the many human-scale design characteristics of the site, providing a level of lighting that enables the identification of a face 45' away, security lighting to all parking spaces, and shielded in accordance with MMC 22C.130.050 such that it does not disturb residential uses or pose a hazard to passing traffic. In addition to parking lot illumination, the Crossroads

Chevron development will install new streetlights that are in compliance with local PUD standards along both 100th Street NE and 67th AVE NE.

Transitioning from the site's elegant landscaping design, the Crossroads Chevron Market and Deli will feature thoughtful architecture that is both aesthetic and inviting to local consumers traveling through the 67th AVE NE & 100th Street NE corridor. As the building's exterior cladding incorporates a variety of materials, there will be several layers that provide definition and contrast that complement the site's surroundings, while roofline modulations give the building depth and conceal the rooftop mounted mechanical systems.

Throughout the site, the property has been designed for ease of access and traffic flow that encourages customers to enjoy all the services that the Crossroads Chevron will offer. With ample parking, there is sufficient space for customers getting fuel to travel in and out of the site without being impeded by guests wishing to stay and enjoy one of the many snack and beverage items offered in the Crossroads Market and Deli, which will feature a full-service deli and large variety of snacks and beverages.

Planning Division Comment Response

Site and Building Design

1. Noted. Detail of masonry wall will be included with civil construction plans.
2. The southeast corner now contains 2 pathways to access the property from the street and landscaping will be incorporated into the civil construction plans. In addition, pedestrian plazas and gathering areas have been included on the revised site plan with multiple picnic tables up closer to the building and the curb line expanded to accommodate this.
3. Noted. Detail of the textured paving will be included.
4. Pedestrian connections are included on the east and south property lines.
5. There are now 23 parking stalls (not including the air/water station) and 1 additional motorcycle parking stall.

Landscape Plan

6. Landscape strip is now 3' wide.
7. L2 buffer is now on the north and south side of the trash enclosure.

Traffic Impact Analysis

8. We have discussed the concerns from the Traffic Engineer with him directly and resolved his concerns.

Conclusion

In conclusion, the Crossroads Chevron project (PA #24-006) represents a valuable addition to the local community in the 100th Street NE & 67th AVE NE corridor by providing services that are not available without a challenging commute into town and also provides for substantial infrastructure improvements

that will greatly enhance travel in the area. If there are any additional requests for information, please contact Matt LaLande with the Meydenbauer Group at (206) 898-4886 or via email at Matt@MeydenbauerGroup.com.

We thank you for your time in reviewing our application and look forward to further discussions about this project.

Sincerely,

Matt LaLande
Project Manager
(206) 898-4886
Matt@MeydenbauerGroup.com

Agenda Bill

HEARING EXAMINER AGENDA ITEM REPORT

DATE: December 5, 2024

SUBMITTED BY: Marisa Nishmura, Community Development

ITEM TYPE: Discussion Item

AGENDA SECTION: **Public Hearings**

SUBJECT: PA24-006 - Crossroads Chevron (2)

SUGGESTED ACTION:

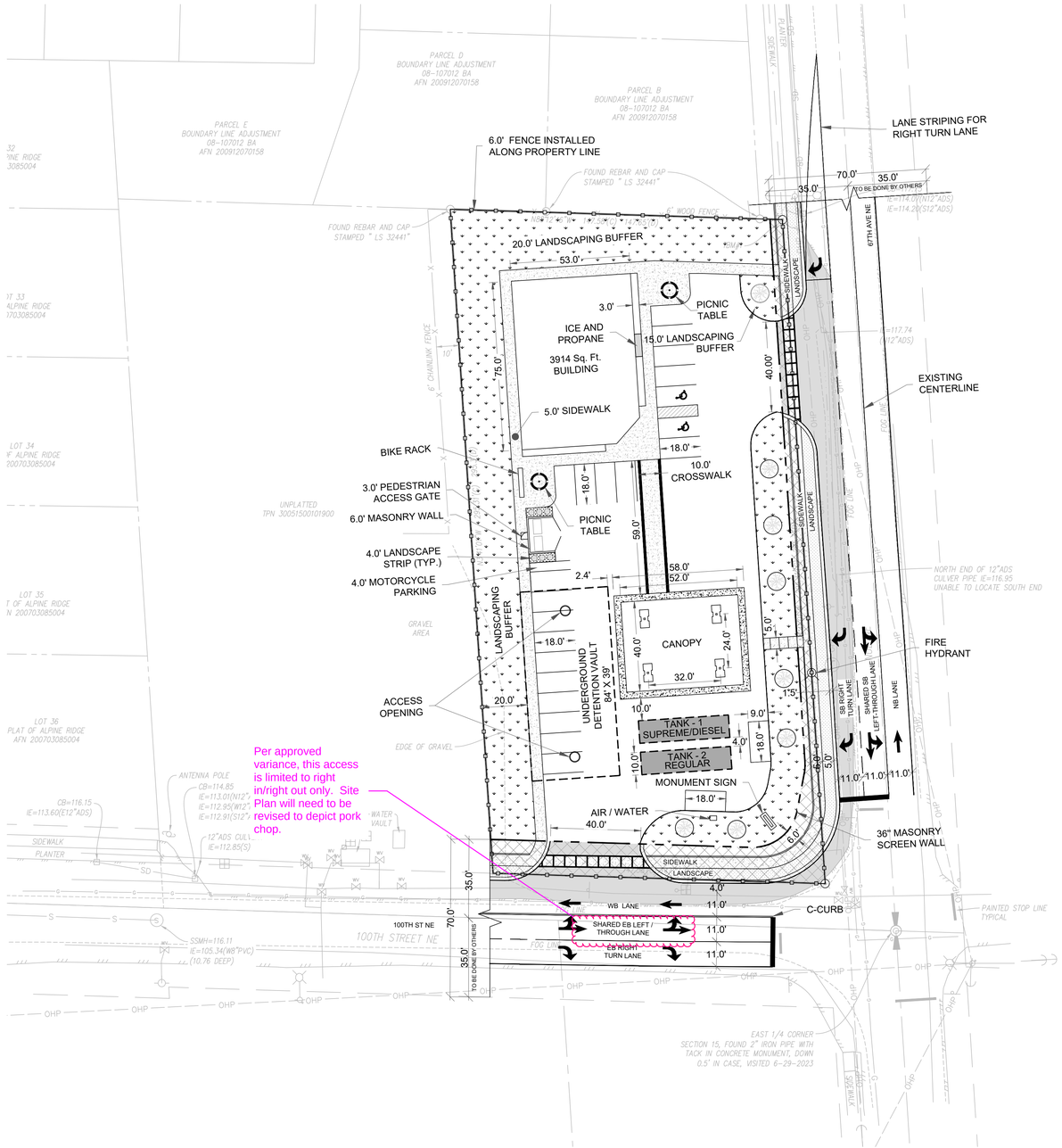
SUMMARY:

ATTACHMENTS:

E033 - Site Plan - PA24-006.pdf
E034 - Drainage Report - PA24-006.pdf
E035 - Site Plan - PA24-006.pdf
E036 - Snohomish County Traffic Offer - PA24-006.pdf
E037 - Concurrency Recommendation - PA24-006.pdf
E038 - Concurrency Acceptance - PA24-006.pdf
E039 - SEPA MDNS - PA24-006.pdf
E040 - Notice of SEPA MDNS - PA24-006.pdf
E041 - Response Letter - PA24-006.pdf
E042 - Notice of Public Hearing - PA24-006.pdf
E043 - Technical Review Comments 4 - PA24-006.pdf
E044 - Correspondence - PA24-006.pdf
E045 - Affidavit of Publication - PA24-006.pdf
E046 - Site Plan - PA24-006.pdf
E047 - Preliminary Site Plan - PA24-006.pdf
E048 - Affidavit of Publication - PA24-006.pdf
E049 - Correspondence - PA24-006.pdf
E050 - Staff Recommendation - PA24-006.pdf

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

- BIKE LANE EDGE
- CURB
- LANSCAPE
- SIDEWALK
- ASPHALT WIDENING
- PROPOSED ROW
- UNDERGROUND DETENTION VAULT / FUEL TANK
- PLOT BOUNDARY

AREA CALCULATIONS

1. TOTAL AREA = 39434.00 SF
2. IMPERVIOUS AREA= 27324.00 SF
3. PERVIOUS AREA = 12110.00 SF

N

1"=30'-0" Scale: 30 0 30 60 Feet

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

NO.	DATE	DESCRIPTION	BY
REVISION			

NOT FOR CONSTRUCTION

SITE PLAN

GEOMETRICS ENGINEERING, P.S. INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO. PA-24-006 | DSN. BY: TI
DATE: 10/14/2024
SCALE: 1" = 30'
DRAWING NO. 05 OF 20

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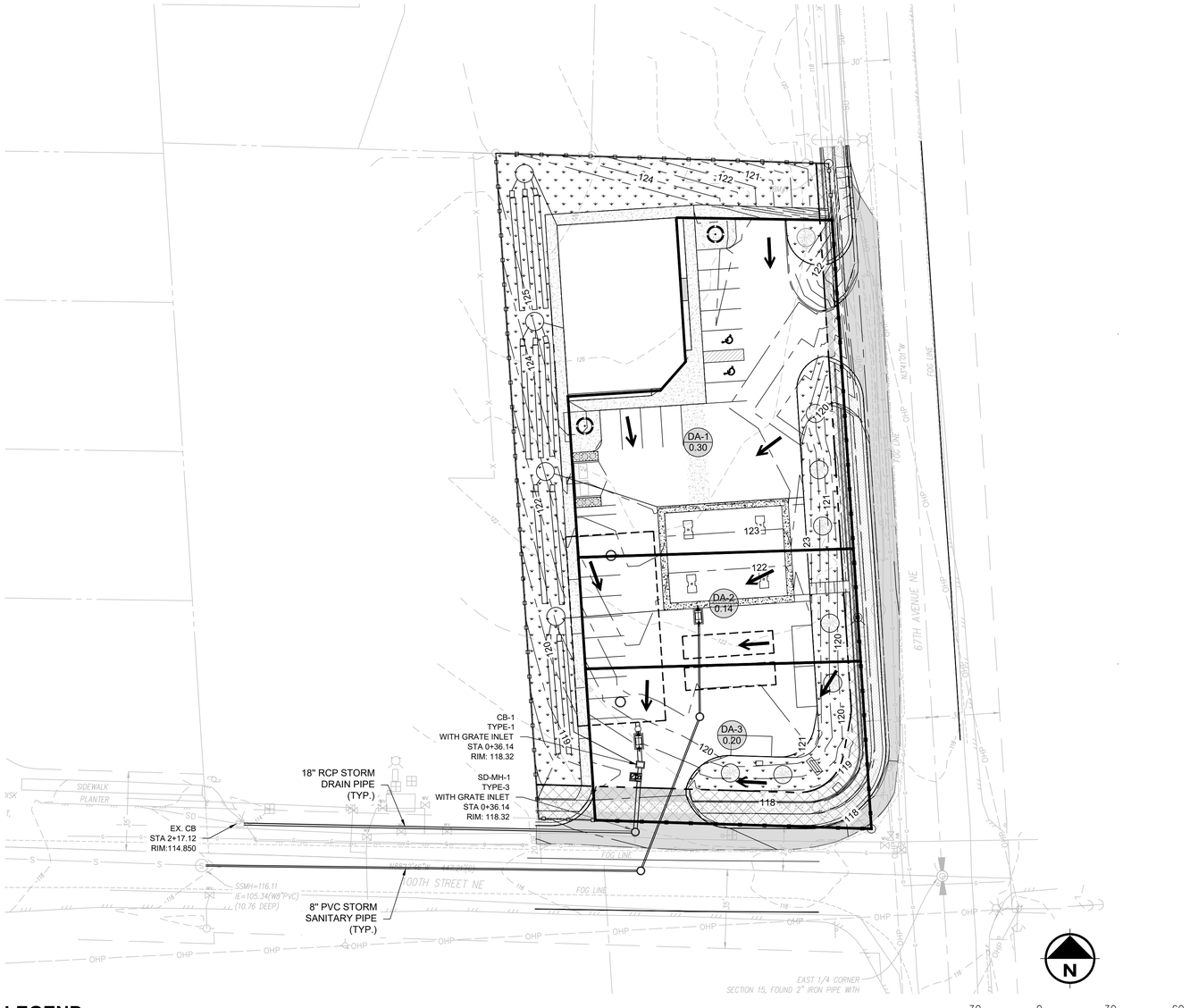
SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



LEGEND

- DRAINAGE SUB-BASIN
- DA-1 5.33 — SUB-BASIN LABEL AREA (AC)
- DRAINAGE FLOW DIRECTION

RATIONAL METHOD

Q = drainage flow (cfs)
C = coefficient describing the physical drianage area
I = rainfall intensity (inches/hour)
A = area (acres)

C(Lawn)= 0.3 A1= 1444 sft 0.033 acre
C(Parking)= 0.9 A2= 12008 sft 0.276 acre

Inputs

C = 0.81
For 100-year 24-hour
I = 3.67 in/hr From NOAA webite

A = 0.31 acres from CAD file

Calculations

Q1 = 0.921795 cfs

Precipitation Frequency Data Output

NOAA Atlas 2

Washington 48.803360°N 122.14852°W
Site-specific Estimates

Map	Precipitation (inches)	Precipitation Intensity (in/hr)
2-year 6-hour	0.97	0.16
2-year 24-hour	1.81	0.08
100-year 6-hour	1.94	0.32
100-year 24-hour	3.67	0.15

Go to PDSI
Go to NOAA

Hydrometeorological Design Studies Center - NOAA/National Weather Service
1325 East West Highway - Silver Spring, MD 20910 - (301) 713-1669
Tue Feb 20 20:05:25 2024

RATIONAL METHOD

Q = drainage flow (cfs)
C = coefficient describing the physical drianage area
I = rainfall intensity (inches/hour)
A = area (acres)

C(Lawn)= 0.3 A1= 745 sft 0.017 acre
C(Pavement&Canopy)= 0.9 A2= 5316 sft 0.122 acre

Inputs

C = 0.79
For 100-year 24-hour
I = 3.67 in/hr From NOAA webite

A = 0.14 acres from CAD file

Calculations

Q2 = 0.405713 cfs

Precipitation Frequency Data Output

NOAA Atlas 2

Washington 48.803360°N 122.14852°W
Site-specific Estimates

Map	Precipitation (inches)	Precipitation Intensity (in/hr)
2-year 6-hour	0.97	0.16
2-year 24-hour	1.81	0.08
100-year 6-hour	1.94	0.32
100-year 24-hour	3.67	0.15

Go to PDSI
Go to NOAA

Hydrometeorological Design Studies Center - NOAA/National Weather Service
1325 East West Highway - Silver Spring, MD 20910 - (301) 713-1669
Tue Feb 20 20:05:25 2024

RATIONAL METHOD

Q = drainage flow (cfs)
C = coefficient describing the physical drianage area
I = rainfall intensity (inches/hour)
A = area (acres)

C(Lawn)= 0.3 A1= 2066 sft 0.047 acre
C(Parking)= 0.9 A2= 6565 sft 0.151 acre

Inputs

C = 0.70
For 100-year 24-hour
I = 3.67 in/hr From NOAA webite

A = 0.20 acres from CAD file

Calculations

Q3 = 0.508147 cfs

Precipitation Frequency Data Output

NOAA Atlas 2

Washington 48.803360°N 122.14852°W
Site-specific Estimates

Map	Precipitation (inches)	Precipitation Intensity (in/hr)
2-year 6-hour	0.97	0.16
2-year 24-hour	1.81	0.08
100-year 6-hour	1.94	0.32
100-year 24-hour	3.67	0.15

Go to PDSI
Go to NOAA

Hydrometeorological Design Studies Center - NOAA/National Weather Service
1325 East West Highway - Silver Spring, MD 20910 - (301) 713-1669
Tue Feb 20 20:05:25 2024

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

NO.	DATE	DESCRIPTION	BY

REVISION

NOT FOR CONSTRUCTION

POST-DEVELOPMENT DRAINAGE BASIN MAP

GEOMETRICS ENGINEERING, P.S., INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO. PA-24-006
DSN. BY: TI
DATE: 10/23/2024
SCALE: 1" = 30'
DRAWING NO. 04 OF 20

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SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

LEGEND

- DRAINAGE SUB-BASIN
- DA-1 / 1.00 — SUB-BASIN LABEL / AREA (AC)
- DRAINAGE FLOW DIRECTION

RATIONAL METHOD

Q = drainage flow (cfs)
C = coefficient describing the physical drianage area
I = rainfall intensity (inches/hour)
A = area (acres)

C(Forest)= 0.3 A= 43381 sft 0.996 acre

Inputs

C = 0.30
For 100-year 24-hour
I = 3.67 in/hr From NOAA webite

A = 1.00 acres from CAD file

Precipitation Frequency Data Output

NOAA Atlas 2

Washington 48.0853487°N 122.1488527°W
Site-specific Extremes

Map	Precipitation (inches)	Precipitation Intensity (in/hr)
2-year 6-hour	0.97	0.16
2-year 24-hour	1.82	0.08
100-year 6-hour	1.94	0.32
100-year 24-hour	3.67	0.15

Go to TOC
Go to Top

Hydrometeorological Design Studies Center - NOAA/National Weather Service
1325 East-West Highway - Silver Spring, MD 20910 - (301) 713-1669
Tue Feb 20 20:03:20 2024

Q = 1.096476 cfs

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

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SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

REVISION NO.	DATE	DESCRIPTION	BY

NOT FOR CONSTRUCTION

PRE-DEVELOPMENT DRAINAGE BASIN MAP

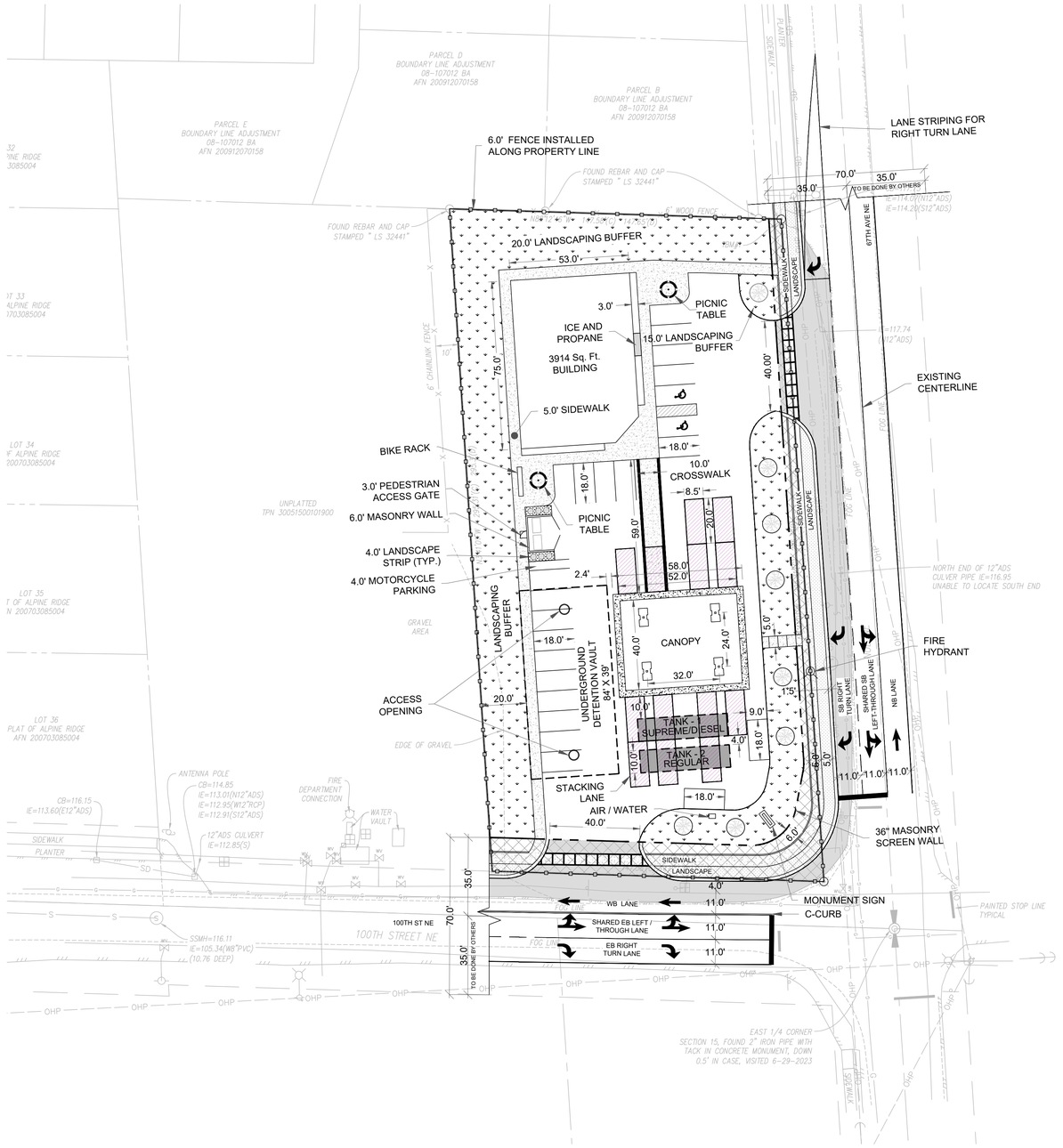
GEOMETRICS ENGINEERING, P.S., INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO.	DSN. BY:
PA-24-006	TI
DATE: 10/23/2024	
SCALE: 1" = 30'	
DRAWING NO. 03 OF 20	

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

- BIKE LANE EDGE
- CURB
- LANSCAPE
- SIDEWALK
- ASPHALT WIDENING
- PROPOSED ROW
- UNDERGROUND DETENTION VAULT / FUEL TANK
- PLOT BOUNDARY

AREA CALCULATIONS

1. TOTAL AREA = 39434.00 SF
2. IMPERVIOUS AREA= 27324.00 SF
3. PERVIOUS AREA = 12110.00 SF

N

1"=30'-0" Scale: 30 0 30 60 Feet

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

REVISION NO.	DATE	DESCRIPTION	BY

NOT FOR CONSTRUCTION

SITE PLAN

GEOMETRICS ENGINEERING, P.S. INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO.	DSN. BY:
PA-24-006	TI
DATE:	
10/14/2024	
SCALE:	
1" = 30'	
DRAWING NO.	
05 OF 20	

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SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.

Traffic Mitigation Offer to Snohomish County

The applicant completes part one and submits it to the City with a completed county traffic worksheet. The City completes part two and sends it to the County. The County completes part three and sends it back to the City.

Part One to be completed by Applicant

Basic Development Information

Name of City in which development is located Marysville, WA

Name of Proposed Development Crossroads Chevron

City Project File Number (if known) PA24-006

Name of Applicant Shri Ganesh LLC

Address of Applicant 20924 55th AVE W, Lynnwood, WA 98036

Proportionate Share Calculation: *Choose Option A or B*

☐ Option A: Based on a percentage of the County's adopted impact fee (attach traffic worksheet)

1. The applicable percentage of the County's fee: _____%

2. Net New Average Daily Traffic: _____ ADT

3. The adopted County impact fee for this development: _____$/ADT

4. Total Proportionate Share Amount: $_____

☒ Option B: Based on a comprehensive traffic study (attach traffic worksheet and traffic study)

_X_ No road improvements are impacted. Hence, proportionate share amount is zero ($0).

_____ The following road improvements are impacted. The calculation of proportionate shares is summarized below.

List by Names/Description the Impacted County Projects (attach other pages if necessary)	County Project ID#	PHTs Impacting Project	Capacity Cost per PHT	Proportionate Share Obligation per Impacted Project
1.				
2.				
3.				
4. Total Proportionate Share Amount (sum of obligations for each impacted project)				$ 0

☐ **Trip Distribution and Assignment if required**

If required, attach AM and PM peak-hour trip distribution and assignment. Attach traffic worksheet showing whether or not AM and PM peak-hour trip distribution is required and include a traffic study.

☐ **Mitigation of Other Impacts if required**

Mitigation of Impacts on Level of Service

_____ No impact or not applicable _____ Mitigation as described in attached traffic study.

Mitigation of Impacts on Inadequate Road Conditions

_____ No impact or not applicable _____ Mitigation as described in attached traffic study.

Mitigation for Impacts on Access or Circulation

_____ No impact or not applicable _____ Mitigation as described in attached traffic study.

☐ **Written Offer**

The Applicant hereby voluntarily agrees to pay the total proportionate share amount shown above for impacts of the proposed development on the capacity of Snohomish County roads and provide mitigation of all other impacts as indicated above and described in attached documents.

BY: Matt LaLande Digitally signed by Matt LaLande DN: C=US, E=Matt@MeydenbauerGroup.com, O=Meydenbauer Group, CN=Matt LaLande Reason: I attest to the accuracy and integrity of this document Date: 2024.10.24 16:08:42-07'00' Date: 10/24/2024

Signature by Authorized Official of Applicant or Authorized Representative

Print Name and Title Matt LaLande / Project Manager

Instructions to Applicant. Submit this Offer, a completed county traffic worksheet, and any other attachments to the City with your initial application.

Part Two: To be completed by the City

Receipt of Written Offer and attachments by City and routing to County

Name of Proposed Development Crossroads Chevron

City Project File Number PA24-006

Date Received 10/24/2024

City Staffer Assigned to Project Amy Hess

Address 501 Delta Ave

Phone 360.363.8215

Instructions to City. Send this offer and all attachments to Snohomish County @ Contact.pwCMS@snoco.org

Received by:

AH Date: 10/25/24 Amy Hess Senior Planner

Initialed by City Staffer | Print Name and Title

Part Three: To be completed by Snohomish County

Receipt of Offer and attachments by Snohomish County and routing back to City

Name of Proposed Development

City Project File Number

Received by:

CD Date: 10/25/2024 Caleb Duhnke, Engineer II - Traffic Operations

Initialed by County Staffer | Print Name and Title

Snohomish County Mitigation Request to City

Snohomish County has reviewed the traffic study worksheet and mitigation offer submitted by the applicant and has determined as follows:

☑ Snohomish County requests that the City impose the mitigation offered above as a condition of approval for the Development. Snohomish County agrees to accept changes in the mitigation payment amount shown above resulting from TDM or lot-yield adjustments approved by the City.

☐ Snohomish County requests that the City require additional supplemental information to adequately evaluate the proposed development's impacts.

☐ The information requested is shown in the notes below.

By: Duhnke, Caleb Digitally signed by Duhnke, Caleb DN: E=Caleb.Duhnke@co.snohomish.wa.us, CN="Duhnke, Caleb" Date: 2024.10.28 10:47:52-07'00' Date: 10/28/2024 Caleb Duhnke, Engineer II - Traffic Operations

Signature by Authorized County Staffer | Print Name and Title

Routing Back to City

Instructions to County Send this offer and all attachments to the City Staffer shown in Part Two above.

Sent by:

Date:

Initialed by City Staffer | Print Name and Title

Notes

EST. 1891
MARYSVILLE
WASHINGTON

PUBLIC WORKS DEPARTMENT
TRAFFIC DIVISION
80 Columbia Avenue ◆ Marysville, WA 98270
(360) 363-8100 ◆ (360) 363-8284 FAX

October 29, 2024

Meydenbauer Group
Attn: John Hansen
12025 Willows Road
Redmond, WA 98052

Re: **Crossroads Chevron – *PA24-006* – Concurrency *Recommendation***

Dear Mr. Hansen,

The applicant is proposing the development of a gas station with convenient store including up to 8 fueling pumps upon a 1.05 acre site located at 10008 67th Avenue NE with APN(s): 30051500101800.

Based on the Traffic Impact Analysis (TIA) prepared by Kimley-Horn & Associates, Inc., dated March 2024 with Memorandum dated August 5, 2024, the proposed development would generate the following Average Daily Trips (ADT), AM peak hour trips (AMPHT), and PM peak hour trips (PMPHT):

USE	**Fueling Pumps** (new)	ADT	AMPHT	PMPHT
Land Use Code 945 – Convenience Store/Gas Station	8	530	N/A	37

Based on our review of existing conditions, as well as other applicable supplemental information submitted with the application, and on file with the City, the following impacts and mitigation obligations are required for Crossroads Chevron:

1. The applicant shall be required to construct frontage improvements along 67th Avenue NE prior to occupancy. Roadway improvements, channelization, site access and street lighting plans shall be required to be reviewed and approved by the City Engineer, prior to construction plan approval.

   1.1. 67th Avenue NE shall be built as a three lane Minor Arterial with bike lanes compliant with SP 3-201-004.

2. The applicant shall be required to construct frontage improvements along 100th Street NE prior to occupancy. Roadway improvements, channelization, site access and street lighting plans shall be required to be reviewed and approved by the City Engineer, prior to construction plan approval.

   2.1. 100th Street NE shall be built as a three lane Collector Arterial with bike lanes compliant with SP 3-201-004.

3. The applicant shall be required to construct intersection improvements at the intersection of 67th Avenue NE and 100th Street NE prior to occupancy. Roadway improvements, channelization, signing and street lighting plans designed per City, State and/or Federal Guidelines/Standards shall be required to be reviewed and approved by the City Engineer, prior to granting of occupancy permits.

   3.1. Intersection improvements shall include the installation of an eastbound right turn lane and a southbound right turn lane with this intersection to remain with all-way stop control.

3.2. Intersection construction shall include the construction of roadway improvements at the all-way stop controlled intersection to provide for the future full planned signalized intersection vehicular lane layout consisting of three lanes with bikes lanes (EDDS 3-201-004) on 67th Avenue NE 100th Street NE without necessity of future modifications to applicant's development frontage.

3.3. Intersection construction shall accommodate for the acceptable alignment of vehicular lanes for the interim all-way stop control with the eastbound and southbound right turn lane additions as well as the future signalized intersection alignment.

3.4. Intersection construction which requires the removal or modification of existing curb/gutter, pedestrian/bicycle facilities, street lighting or other public facilities outside the vehicular lanes shall be required to be repaired and replaced to current City, State and/or Federal Guidelines/Standards as part of the signal construction.

4. The applicant shall be required to dedicate public right-of-way in order to accommodate the required frontage improvements, in accordance with MMC 12.02A.110(1)(c), *Dedication of Road right-of-way – Required setbacks*. Right-of-way widths and required dedication shall be determined by the City Engineer.

4.1. Public right-of-way dedication upon the applicant's development frontage shall be required to accommodate the future signalization of the intersection of 67th Avenue NE and 100th Street NE.

5. In order to mitigate traffic impacts upon the future capacity of the road system, the applicant shall be required to submit payment to the City of Marysville, on a proportionate share cost of the future capacity improvements as set forth in MMC 22D.030.070(3), for the development. **Traffic impact fees shall be per PMPHT, with up to 37 new PMPHTs total for the development, vested at a rate of $2,220 per PMPHT.**

Marysville Municipal Code (MMC) 22D.030.070(1)(d), requires an applicant to make a written proposal for mitigation of a development's traffic impacts to the Public Works Director, prior to finalizing a concurrency determination and conditions of approval. If you have any questions, regarding the developments impacts and recommended mitigation obligations outlined above, please contact Amy Hess, Senior Planner, at ahess@marysvillewa.gov or by phone at 360.363.8215 or Jesse Hannahs, P.E., Traffic Engineering Manager, at jhannahs@marysvillewa.gov or via phone at 360-363-8287.

Sincerely,

Jesse L. Hannahs, P.E.
Traffic Engineering Manager

cc: Amy Hess, Senior Planner
Chris Holland, Planning Manager
Haylie Miller, Community Development Director
Ken McIntyre, P.E., Development Services Manager
Jeff Laycock, P.E., Public Works Director

MEYDENBAUER GROUP
INVESTMENT • DEVELOPMENT • CONSTRUCTION • BROKERAGE
www.MeydenbauerGroup.com 425-609-4440

October 29, 2024

Amy Hess, Senior Planner
Community Development Department
501 Delta Avenue
Marysville, WA 98270

RE: Crossroads Chevron – Acceptance of Traffic Concurrency Recommendations

Dear Ms. Amy Hess,

Please accept the following correspondence as our acceptance of the traffic concurrency recommendations issued by Mr. Jesse Hannahs with the City of Marysville on 10/29/2024.

See the following *Exhibit A* for the accepted document.

Accepted by: John Hansen

Date: October 30, 2024

Signature:

12025 Willows Road NE • Redmond, WA 98052 • 425.609.4440 • Fax 425.671.3803
manager@meydenbauergroup.com

Exhibit A

MARYSVILLE
WASHINGTON

PUBLIC WORKS DEPARTMENT
TRAFFIC DIVISION
80 Columbia Avenue • Marysville, WA 98270
(360) 363-8100 • (360) 363-8284 FAX

October 29, 2024

Meydenbauer Group
Attn: John Hansen
12025 Willows Road
Redmond, WA 98052

Re: **Crossroads Chevron – *PA24-006* – Concurrency *Recommendation***

Dear Mr. Hansen,

The applicant is proposing the development of a gas station with convenient store including up to 8 fueling pumps upon a 1.05 acre site located at 10008 67th Avenue NE with APN(s): 30051500101800.

Based on the Traffic Impact Analysis (TIA) prepared by Kimley-Horn & Associates, Inc., dated March 2024 with Memorandum dated August 5, 2024, the proposed development would generate the following Average Daily Trips (ADT), AM peak hour trips (AMPHT), and PM peak hour trips (PMPHT):

USE	Fueling Pumps (new)	ADT	AMPHT	PMPHT
Land Use Code 945 – Convenience Store/Gas Station	8	530	N/A	37

Based on our review of existing conditions, as well as other applicable supplemental information submitted with the application, and on file with the City, the following impacts and mitigation obligations are required for Crossroads Chevron:

1. The applicant shall be required to construct frontage improvements along 67th Avenue NE prior to occupancy. Roadway improvements, channelization, site access and street lighting plans shall be required to be reviewed and approved by the City Engineer, prior to construction plan approval.
   1.1. 67th Avenue NE shall be built as a three lane Minor Arterial with bike lanes compliant with SP 3-201-004.
2. The applicant shall be required to construct frontage improvements along 100th Street NE prior to occupancy. Roadway improvements, channelization, site access and street lighting plans shall be required to be reviewed and approved by the City Engineer, prior to construction plan approval.
   2.1. 100th Street NE shall be built as a three lane Collector Arterial with bike lanes compliant with SP 3-201-004.
3. The applicant shall be required to construct intersection improvements at the intersection of 67th Avenue NE and 100th Street NE prior to occupancy. Roadway improvements, channelization, signing and street lighting plans designed per City, State and/or Federal Guidelines/Standards shall be required to be reviewed and approved by the City Engineer, prior to granting of occupancy permits.
   3.1. Intersection improvements shall include the installation of an eastbound right turn lane and a southbound right turn lane with this intersection to remain with all-way stop control.

Exhibit A

3.2. Intersection construction shall include the construction of roadway improvements at the all-way stop controlled intersection to provide for the future full planned signalized intersection vehicular lane layout consisting of three lanes with bikes lanes (EDDS 3-201-004) on 67th Avenue NE 100th Street NE without necessity of future modifications to applicant's development frontage.

3.3. Intersection construction shall accommodate for the acceptable alignment of vehicular lanes for the interim all-way stop control with the eastbound and southbound right turn lane additions as well as the future signalized intersection alignment.

3.4. Intersection construction which requires the removal or modification of existing curb/gutter, pedestrian/bicycle facilities, street lighting or other public facilities outside the vehicular lanes shall be required to be repaired and replaced to current City, State and/or Federal Guidelines/Standards as part of the signal construction.

4. The applicant shall be required to dedicate public right-of-way in order to accommodate the required frontage improvements, in accordance with MMC 12.02A.110(1)(c), *Dedication of Road right-of-way – Required setbacks*. Right-of-way widths and required dedication shall be determined by the City Engineer.

4.1. Public right-of-way dedication upon the applicant's development frontage shall be required to accommodate the future signalization of the intersection of 67th Avenue NE and 100th Street NE.

5. In order to mitigate traffic impacts upon the future capacity of the road system, the applicant shall be required to submit payment to the City of Marysville, on a proportionate share cost of the future capacity improvements as set forth in MMC 22D.030.070(3), for the development. **Traffic impact fees shall be per PMPHT, with up to 37 new PMPHTs total for the development, vested at a rate of $2,220 per PMPHT.**

Marysville Municipal Code (MMC) 22D.030.070(1)(d), requires an applicant to make a written proposal for mitigation of a development's traffic impacts to the Public Works Director, prior to finalizing a concurrency determination and conditions of approval. If you have any questions, regarding the developments impacts and recommended mitigation obligations outlined above, please contact Amy Hess, Senior Planner, at ahess@marysvillewa.gov or by phone at 360.363.8215 or Jesse Hannahs, P.E., Traffic Engineering Manager, at jhannahs@marysvillewa.gov or via phone at 360-363-8287.

Sincerely,

Jesse L. Hannahs, P.E.
Traffic Engineering Manager

cc: Amy Hess, Senior Planner
Chris Holland, Planning Manager
Haylie Miller, Community Development Director
Ken McIntyre, P.E., Development Services Manager
Jeff Laycock, P.E., Public Works Director

MITIGATED DETERMINATION OF NON-SIGNIFICANCE

Community Development Department ◆ 501 Delta ◆ Marysville, WA 98270
(360) 363-8000 ◆ Office Hours: Mon - Fri 8:00 AM - 4:30 PM

PROJECT INFORMATION			
Project Title	Crossroads Chevron	**File No.**	PA24-006
Detailed Project Description	The applicant is proposing construction of a new apprx. 4,000 square foot convenience store and Chevron branded service station with canopy and four (4) fuel pump islands (8 total pumps) and associated improvements.		
Project Location	10008 67th Avenue NE	**APN**(s)	30051500101800
Legal Description (abbreviated)	See File No. PA24-006		

	OWNER	APPLICANT	CONTACT
Name	SHRI Ganesh LLC	Meydenbauer Group	John Hansen
Address	20924 55th Ave. W	12025 Willows Road	12025 Willows Road
City, State, ZIP	Lynnwood, WA 98036	Redmond, WA 98052	Redmond, WA 98052

THRESHOLD DETERMINATION	
Lead Agency	☒ **City of Marysville**

The lead agency has determined that this proposal does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is NOT required under RCW 43.21C.030(2)(c). This decision was made after review by the City of Marysville of a completed environmental checklist and other information on file with this agency. This information is available for public review upon request.

☐ There is no comment period for this DNS

☐ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on this DNS.

☐ This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14-days from the date below. Comments must be submitted by:

☒ This MITIGATED DNS is issued under WAC 197-11-350; the lead agency will not act on this proposal for 14-days from the date below. Comments must be submitted by: **November 15, 2024**

SEPA CONTACT			
Name	Amy Hess	**Title**	Senior Planner
Phone	360.363.8215	**E-mail**	ahess@marysvillewa.gov

RESPONSIBLE OFFICIAL			
Name	Haylie Miller	**Title**	CD Director
Address	501 Delta Avenue, WA 98270		

Haylie Miller
Haylie Miller, CD Director

10/30/24
Date

ENVIRONMENTAL IMPACTS	
The proposed construction and subsequent use of the property could result in the following adverse environmental impacts:	
1.	Increase in the amount and rate of stormwater runoff and attendant pollutants from the introduction of paved and building roof surfaces.
2.	Increase in erosion, surface water pollutants, siltation and sedimentation as a result of site preparation and construction.
3.	Increase in demand for police, fire protection and other public services generated as a result of the development.
4.	Increase in noise, dust, light and glare from construction activity and subsequent use of the site.
5.	Increase in vehicular traffic on 67th Avenue NE, 100th Street NE, as well as other City streets and arterials in the vicinity.
6.	Change in character of the site from a vacant site into a convenient store and fuel station.
MITIGATION MEASURES	
The following mitigation measures are required to minimize the probable significant adverse environmental impacts as a result of the proposed development activity:	
1.	The applicant/contractor shall adhere to the requirements outlined in the Conclusions and Recommendations Section of the Geotechnical Engineering Study, prepared by Geotest, dated January 4, 2023, or as amended.
2.	If at any time during construction archaeological resources are observed in the project area, work shall be temporarily suspended at that location and a professional archaeologist should document and assess the discovery. The Department of Archaeology and Historic Preservation (DAHP) and all concerned tribes should be contacted for any issues involving Native American sites. If project activities expose human remains, either in the form of burials or isolated bones or teeth, or other mortuary items, work in that area should be stopped immediately. Local law enforcement, DAHP, and affected tribes should be immediately contacted. No additional excavation should be undertaken until a process has been agreed upon by these parties, and no exposed human remains should be left unattended.
3.	Applicant shall comply with the conditions of the Concurrency Recommendation, dated October 29, 2024.
4.	The applicant, owners and operators must ensure compliance with the Underground Storage Tank (UST) systems and UST system components are installed in accordance with Chapter 173-360A WAC and Chapter 90.76 RCW, or as otherwise amended.

APPEALS

☒ This (M)DNS may be appealed pursuant to the requirements of MMC 22E.030.180. There is a 14 day appeal period on the DNS that commences from the date the DNS was issued. Any appeal must be addressed to the responsible official, accompanied by a filing fee in accordance with MMC 22G.030.020, and be filed in writing at the City of Marysville Community Development Department, 501 Delta Avenue, Marysville, WA 98270. The appeal must be received by 4:30 p.m., **November 15, 2024**. The appeal must contain the items set forth in MMC 22G.010.530.

☐ There is no agency appeal.

DISTRIBUTION				
Marysville	**Local Agencies & Districts**	**State & Federal**	**County**	**Other**
☒ **Building** ☒ **Fire District** ☒ **Police** ☒ **PW – Engineering** ☒ **PW – Engineering** ☒ **PW – Engineering** ☒ **PW – Operations** ☒ **PW – Sanitation** ☐ **PW – Streets** ☒ **PW – Traffic Eng.** (Jesse Hannahs) ☒ **PW – Water Res.**	☐ **Arlington (city)** ☐ **Arlington Airport** ☒ **Community Transit** ☐ **Everett (city)** ☐ **Lake Stevens (city)** ☐ **Lake Stevens SD 4** ☐ **Lakewood SD 306** ☐ **Marysville SD 25** ☒ **PUD No. 1** (electric) ☐ **PUD No. 1** (water) ☒ **Ziply** ☐	☒ **US Army Corps of Engineers** ☐ **BNSF** ☐ **Commerce** (SAW) ☒ **DAHP** ☒ **DOE** (Bellevue) ☒ **WDFW** ☐ **WSDOT** ☐ **WUTC** ☐	☐ **Health District** ☐ **Planning** ☒ **Public Works - Land Development** ☐ **Public Works** ☐ ☐	☐ **Olympic Pipeline** ☐ **Puget Sound Energy** ☒ **Stillaguamish Tribe** ☒ **Tulalip Tribes** ☐ ☐

COMMUNITY DEVELOPMENT DEPARTMENT
501 Delta Avenue ◆ Marysville, WA 98270 ◆ (360) 363-8000

NOTICE OF MITIGATED DETERMINATION OF NON-SIGNIFICANCE

File Number: PA24-006

Project Title: Crossroads Chevron

Applicant: Meydenbauer Group

Project Contact: John Hansen
12025 Willows Road
Redmond WA 98052
john@meydenbauergroup.com

Scan to View SEPA MDNS

Description: Construction of an approximately 4,000 square foot convenience store and fuel service station, consisting of four (4) fuel pump islands (8 total pumps) and associated improvements.

Project Location: 10008 67th Avenue NE

APN: 30051500101800

Project Information: Crossroads Chevron

Leady Agency: City of Marysville – Community Development Department

SEPA Threshold Determination: The lead agency has determined that this proposal does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is NOT required under RCW 43.21C.030(2)(c). This decision was made after review by the City of Marysville of a completed environmental checklist and other information on file with this agency. This information is available for public review upon request.

Public Comment Period: This MDNS is subject to a 14-day comment period. Written comments may be submitted by mail or e-mail to the lead agency's SEPA contact person. Comments must be received by **November 15, 2024**.

Appeals: This MDNS may be appealed pursuant to the requirements of MMC 22E.030.180. Any appeal must be accompanied by a filing fee of $1,750.00, and be filed in writing at the City of Marysville Community Development Department, 501 Delta Avenue, Marysville, WA 98270. The appeal must be received by 4:30 p.m., by **November 15, 2024**. The appeal must contain the items set forth in MMC 22G.010.530.

SEPA Contact: Amy Hess
(360) 363-8215
ahess@marysvillewa.gov

Date Issued: **October 30, 2024**

THIS NOTICE IS NOT TO BE REMOVED CONCEALED OR DESTROYED

October 29, 2024

Amy Hess, Senior Planner
Community Development Department
501 Delta Avenue
Marysville, WA 98270

RE: Crossroads Chevron – Response to Citizen Comments

Dear Amy,

The following correspondence, prepared by the Meydenbauer Group, is in response to comments received by the City of Marysville from local citizens regarding the Crossroads Chevron project PA24-006.

For line item references, please refer to the citizen comments that begin after Page #4 of this document.

1) Letter from *Concerned Members of the Community*

   A) As defined in MMC 22C.020.030, a Neighborhood Business zone (NB) is classified as:

      i) *(a) The purpose of the neighborhood business zone (NB) is to provide convenient daily retail and personal services for a limited service area and to minimize impacts of commercial activities on nearby properties. These purposes are accomplished by:*

         (i) Limiting nonresidential uses to those retail or personal services which can serve the everyday needs of a surrounding residential area;

         (ii) Allowing for a mix of housing and retail/service uses; and

         (iii) Excluding industrial and community/regional business-scaled uses.

      ii) At its most basic core function, the Crossroads Chevron and its associated convenience store provide convenient daily retail services to the nearby properties and general public by offering a premium fuel that is not available at Fred Meyer, while providing a retail location for citizens to purchase such essential items as personal care products, first-aid supplies, a freshly prepared selection of hot and cold foods, and essential items for automobile maintenance.

B) We are in agreement that there are a select few parcels of land that are being used for public works and/or community services, while most of the remaining parcels are residential properties that will be served by the proposed Crossroads Chevron.

C) This error has since been revised to state, "*The purpose is to build a service station."*

D) Site work machinery that will be used in the construction of the Crossroads Chevron are equipped with Diesel Exhaust Fluid (DEF), which reduces the pollutants emitted by these machines to the state and federally mandated level. While the other vehicles that might utilize this business are already going to be in operation regardless of whether this service station is constructed or not.

E) Allen Creek is in the vicinity / the wider vicinity of the project and will not be affected by this development.

F) All stormwater runoff from this development will be detained on-site and conveyed into approved City of Marysville stormwater infrastructure. New stormwater infrastructure will also be installed that will reduce the effect stormwater has on neighboring driveways.

G) The stormwater treatment facilities that will be installed during development of the Crossroads Chevron will capture and detain the significant majority of water on-site and convey it to City of Marysville infrastructure. Any water that flows off-site will be captured by stormwater infrastructure that is installed in the street and therefore not be absorbed into the groundwater supply.

H) There have not been any animals observed on or near the site that would be affected by this development. Currently, this parcel of land consists of long grasses that is bordered by the roadway on the south and the east sides, a residential fence to the north, and City of Marysville Public Works facility to the west.

I) There is no risk of environmental hazard associated with this development. All infrastructure that is to be installed is rated at the maximum level of conformance with building code that meets or exceeds development standards. All precautions will be in place to eliminate any environmental hazards in the operation of this service station, in accordance with state and federal law.

J) There will be significant alterations to the existing roadway with the addition of a center turning lane on eastbound 100th Street NE and a right-turn lane on southbound 67th AVE NE. These roadway modifications will alleviate the access for local residents while entering the roadway.

K) The western side of 67th AVE NE will be developed with a sidewalk that connects to the existing sidewalk, while 100th Street NE will be developed with a sidewalk that spans the entirety of the property's road frontage.

L) Community development presents the opportunity for businesses to generate taxable revenue that will increase the ability of the community to invest in services and development that increase property values for the greater community. Currently, the services that would be offered by the Crossroads Chevron are only available by driving into town, which is not convenient for residents traveling along the 67th AVE NE corridor.

2) Letter from *Dr. Dennis Edmondson*

A) Technology has come a long way since the 1960's and fuel storage tanks are made of extremely durable and well designed materials that are warrantied to not ever result in leaks. In addition, with monitoring technology, there will be advance notice should any issues arise that will indicate a problem exists and prompt a rapid response. Whereas, in a Camp Legeune scenario, there was a combination of inherent disregard for environmental and personal safety that resulted in a documented ongoing groundwater contamination crisis. Therefore, this is not a relevant example to cite as it is not representative of the conditions that will characterize the Crossroads Chevron.

B) Traffic impact studies have been undertaken and the resulting traffic concurrency recommendations will improve traffic in the area.

C) All road surfaces that will be impacted by the development of the Crossroads Chevron will be overlayed with fresh asphalt that will be free of imperfections that cause wheel bounce, however we cannot attest to all roadways in the area, we can only attest to the quality of the roadway that will be constructed in the areas affected by development.

D) Unfortunately, we cannot affect people's personal decision to break the law while driving, however we can improve the quality of the intersection to reduce people's inclination to break such laws and alleviate traffic in the area.

E) We are not aware of any research studies that have proven a link to service centers and decreased property values. With an entrepreneur investing millions of dollars in your neighborhood, we believe that the added services will be of great value to the community as it grows and continues to attract new residents.

F) Aquafer contamination is not a risk we believe to be present with this project because of the detailed installation, testing, and monitoring requirements that will be enforced during construction and following construction during normal business operations.

3) Letter from *Brian K. Hauk*

A) As a requirement of development, 67th AVE NE and 100th Street NE will both be widened with turning lanes added to alleviate traffic concerns in this area. While we cannot affect the progress of other projects in the region, we can ensure that these improvements are not being funded with tax payer funds and these are the sole responsibility of the project.

4) Letter from *Kristin Kinnamon*

A) Part of the fundamental design of this project revolves around street and frontage improvements. We understand that the traffic and pedestrian infrastructure is not adequate at the moment and we have proposed to construct a sidewalk along both 100th Street NE and 67th AVE NE that is separated from the roadway by a 5' landscaping strip that is planted with a variety of native plants. In addition, both 67th AVE NE and 100th Street NE will be widened with added turning lanes to alleviate traffic at this intersection.

Attention Amy Hess, Senior Planner

Subject: Crossroads Chevron Proposal File #PA24-006

Dear Ms. Hess,

Per our phone conversation and as requested by you, we are writing this letter in regards to the above subject proposal and to note our serious concerns for the record.

The Meydenbauer Group Application proposal is for a new 4,000 square foot convenience store and Chevron branded service station with canopy and (6) fuel pumps at 10008 67th Ave NE. This is at the intersection of 67th Ave NE and 100th St. NE in Marysville They are seeking Commercial Site Plan approval and and State Environmental Policy (SEPA) review and approval of the proposal and associated improvements.

1A

This property is zoned single family residential/NB (Neighborhood Business) not commercial. NB function is to provide for local facilities that serve the everyday needs of the surrounding neighborhood rather than the larger surrounding community.

- We would like to note that the services the proposed business would provide can already be obtained only a mile away at the Fred Meyer main grocery store and the service station convenience facility at that location and is therefore not providing any necessary services to the immediate community.

We have reviewed the SEPA Environmental Checklist completed by the Meydenbauer Group and have the following questions/concerns:

1B

- On Page 3 of the report it is noted that the description of the site is predominately a residential zone. NOTE: the west side of 67th Ave NE and the N & S areas of 100th St NE are residences with the exception of a lot on the north side of 100th St NE, and next to the proposed site which is owned and used by the City of Marysville. The East side of 67th Ave is predominately residential/farmland in 5 or more acre tracts and wetlands. There is a Grange Hall at the NE corner of the intersection of 67th Ave NE and 100th St. NE which is used for community events such as dances, birthday parties, craft fairs etc.

1C

- On Page 4 item e. It states that the purpose of the new request is to build a single family residential home. That is false -

1D

- Page 5 #2 states that site work machinery runs on diesel and that the burning of diesel pollutes! Note: Many of the vehicles that might utilize this business use diesel in their vehicles and would therefore be polluting the air of residents and farm animals in the area.

1E

- Page 5 #3a 1 Notes that Allen Creek is in the wider vicinity. NOTE: Fact is that Allen Creek is across 67th Ave NE and to the East not more than ½ mile and has a spawning area for Salmon.

-
-
-
- PAGE 5 & 6 3c.1. this talks about storm water runoff and says any from the proposed business would be disposed to the nearest existing catch basin NOTE: we believe is only the ditches which plug up frequently and floods the driveways of some along 67th Ave NE

1F

-
- Page 6 3c.2. States - "could waste materials enter ground or surface waters"? Answer was - Surface runoff could pick up surface materials namely gas and oil and put it into the ground and that all or most of any water borne surface materials will be filtered out by the drainage vault and biofiltration system for enhanced water quality. NOTE: there are many wells in the area and for some that is their only water. Any gas or oil runoff would pollute these wells.

1G

-
- Page 8 5a. States: Are there any birds or other animals on or near the site? NOTE: There are eagles, seagulls, hummingbirds, crows, ducks, racoons, deer, coyote, farm animals such as horses, goats, donkeys, chickens, cats, dogs etc. Also there are many flocks of migratory birds such as ducks which fly over the area frequently.

1H

-
- Page 9 7a. Addresses Environmental Hazards and states "there will be hazards associated with large concentrated fuel volumes". NOTE: Our community does not welcome any business that brings possible hazards.

1I

-
- All information from page 10 to through 15 in their entirety

are of concern to our community.

-

1J With the expected 795 or more vehicles daily the current residences won't even be able to enter/exit their driveways.

1K 67th Ave NE is a two lane country road with ditches on both sides and 100th St NE is also a two lane road but has partial sidewalks. 67th Ave NE is already a on and has become increasingly congested since all of the building, both residential and industrial, to the North and South.

1L As noted in the Realestate News - Convenience Stores with gas stations are the 2nd worst neighborhood businesses related to property values and noted:

People will be driving in and out of your intersection, hanging out at the property, and buying lots of lotto tickets, cigarettes, and beer when they gas up, all of which, as stated above, is available within 1 mile. Although handy, these shops do nothing to help property values and hurt them significantly according to Zillow.com. Although the realtors questioned on the site did not have exact statistics, common sense would show that the increase in robberies, accidents, traffic and pedestrians would add up to decreased property value. NOTE: Non in this community can afford to have their property values decreased!

In conclusion, most of the folks in our community are opposed to the construction of a convenience store gas station as proposed by the Meydenbauer Group and are requesting a public meeting to address this proposal.

Thank You,
Concerned members of the Community:

Gregory Neff, 9813 67th Ave NE

Rikki & Carlos Gutierrez, 9813 67th Ave NE

Marilyn & Tom Daniels, 9912 67th Ave NE

Cherri & John Fieck, 6610 101st Pl NE

Julie & Dennis Edmondson, 6710 100th St. NE

Ross & Marsha Tanis, 6918 100th St. NE

Anne & Harmen DeJong, 7421 100th St. NE

Justin Edmondson, 8311 96th Dr NE

Chris & Jon Schmuck, 9602 85th Dr NE

Jose Campos, 10117 67th Ave NE

Kelsey & Will Webber, 7415 100th St NE

David Walker, 10025 65th Dr NE

Greg Young, Lake Goodwin

Ron & Chris Underwood, 6327 96th Pl NE

Matt Edwards, 124th St. NE

Brenda Nelson, 5711 100th St Ne Unit 66

Shelly Dragland, 8118 83rd Pl NE

John Everett, 6905 89th Pl NE

The following made comments on neighborhood website that they are opposed but I was unable to get their addresses:

Andrea O'Keefe

Beth Ferris

Waylon F.

Attachment:

To: City of Marysville Community Development Department-

03/18/2024

2A

The following is a basic summary against having a *six-pump gas station - convenient store* requesting a building site location at NW Corner of 67th Ave NE and 100th St NE. As an undergraduate engineering major in the early sixties, I worked part-time for three years for a contractor in Los Angeles California that constructed gas stations [Union-76; Atlantic-Richfield] from underground up. A great amount of effort went into workmanship integrity during the installation of the gas-tanks and associated piping from tanks to dispensing nozzles, especially the threaded plumbing connections. With the tank-plumbing system still exposed the entire installation would be pressurized with air and the fire department would monitor the pressure-gauges for days to determine if leaks occurred due to a drop in air pressure [as an aside we used dry-ice when removing tanks pushing gasoline fumes out preventing possible explosion due to sparks that would occur]. Once satisfied the fire department would sign-off the installation and the system buried while consistently pneumatic- compacting the soil used enhancing soil integrity around tank and piping to support concrete load and vehicles weight from damaging gas tanks, especially the plumbing and connections. Even with all the effort expended to try and ensure no leaks from the gasoline system the traffic vibrations, thermal ground movement causing deflection, hydraulic-hammer from valves pulsing, leaks or various types of spills will eventually occur at gas stations and subsequently must be dug out at the suspected location and repair the leak. *Gasoline does not evaporate underground but travels* and there exists an aquifer at both sixty feet again at one-hundred and twenty feet (where my well pump sets). Once gasoline reaches water wells

and aquifers these locations with the poisonous liquids, (gasoline/diesel), it will contaminate other wells in the Marysville area plus more, and you will have another Fort Lejeune which I would think you do not want.

The following references provide additional information as this writing is not exhaustive but does indicate the proposed Convenient-Store-Gas-Station is not a foolproof installation.

References (not all that exists about gasoline storage but too much exists to list for one to read unless you are a researcher):

About **60 percent** of all underground storage tanks (USTs) have experienced at least one leak and that remediation of the approximately 528,000 total leaks costs over $1 billion a year in state and federal funds.

https://hub.jhu.edu/2014/10/07/gas-station-spills/

https://www.csu.edu/cerc/documents/LUSTThreattoPublicHealth.pdf

https://www.epa.gov/ust/emerging-fuels-and-underground-storage-tanks-usts

https://www.aeaweb.org/research/underground-storage-tanks-health-impacts#:~:text=About 60 percent of all underground storage tanks, billion a year in state and federal funds

"Going Beneath the Surface: Petroleum Pollution, Regulation, and Health**" appears in the January issue of the** *American Economic Journal: Applied Economics***.**

TRAFFIC INCREASE, AFFECTED WATER WELL CASING SOIL, HOME DEPRECIATION

2B

2C

1. Road mitigation study ? Traffic is already unreasonable due to housing development in the Marysville/Arlington area.
2. Ground vibration affects soil stability. Large trucks even vibrate my part underground house as they brake for stop due to wheel bounce on un-even road surface, all vehicle traffic creates too much noise due to existing high traffic flow, see-1 above.

2D

3. Road traffic serious now will only increase. Drivers ignore stop sign as it stands, drivers will run two at a time or not stop all or even abide by Washington State Driving Code, https://apps.leg.wa.gov/RCW/default.aspx?cite=46.61.....Example: first to your right at stop has right away, drivers ignore; others don't even come to complete stop but drive right through intersection.

2E

4. The proposed project by Meydenbauer Group will have a negative effect on my property value due to a commercial gas station-store on opposite corner, not only due to gasoline vapor during truck replenishment but also from pumping, potential leaks above and bel ground, additional noise levels, undesirables attracted to such establishments, trash thrown around (just look at WINCO Foods parking lot; even after they resurface, it's a shame !) on the opposite corner to my home. Increased noise over current, even more cars spinning their tires leaving the intersection which begs the need for a Round-About if this project proceeds.

2F

5. If the project goes through then the City of Marysville needs to hook my home up to City water, as my neighbor to the south is at their expense as the potential for well water contamination is too great to be an absolutely safe consumable as the distance from water well to building site gasoline storage is too close and the potential for aquafer contamination would be great as the thickness nor horizontal size of the aquifer is known for sure but the once dairy farm just north of my location is on same aquafer.

Regards,

Dr. Dennis Edmondson, BSE, MSME, PhD, PhD, PE

(Cancer Researcher)

3A

[CAUTION:] This email originated from outside the City of Marysville. **Do not click links or open attachments** unless you recognize the sender and know the content is safe. Contact helpdesk if you have any concerns or questions.

Good morning sir,

I read on Nextdoor recently that a proposal to have a Shell Convenient/Gas Station to be built at the corner of 10008 67 Ave. NE and 100th St. NE.

I personally do not have a big issue with this being we can not stop growth but to control it. Partly do to that if you need to get gas you have to go State and that is not always convenient.

I would agree to this if 67th and 100th are widened FIRST. These two roads have been a safety issue for vehicles and especially pedestrians for many years.

I would request that 67th be widened with a turn lane in the middle from 88th to 108th and that 100th be widened with a turn lane in the middle from 62nd to 67th at a minimal.

It has frustrated for us many years why we in this state take so long to do a project and wait to put the infrastructure in after housing developments and bushiness are already in place. The developers are gone and made their money and

then the tax payers are asked to pay for these improvements when it should be done first. Just look at the lack of construction activity on I-5 and State where there is current projects going on.
If this is done please make sure it will be done quickly because this will be very disruptive to everybody. Now, being that the population of Marysville has grown so much 67th has become a major through-fair. That is part of the problem when needed projects keep on being kicked down the road.
I am increasing the font so my mother can read it.
Thank you for your time and look forward to your thoughts and hope our family's thoughts are taken serious.

Grammar and spelling checked by Grammarly.
https://www.grammarly.com/
Brian K. Houk

4A

Amy Hess

From: Kristin Kinnamon <bikenbus@gmail.com>
Sent: Monday, March 18, 2024 3:55 PM
To: Amy Hess
Subject: [External!] PA 24-006 Crossroads Chevron comments

Follow Up Flag: Follow up
Flag Status: Flagged

[CAUTION:] This email originated from outside the City of Marysville. **Do not click links or open attachments** unless you recognize the sender and know the content is safe. Contact helpdesk if you have any concerns or questions.

Dear Senior Planner,
I live in the area of this proposal, and have some concerns and questions for the record. After reviewing project documents, I am unclear what frontage improvements and road widths are envisioned for 100th and 67th. A sidewalk should be required on both roads, along with some separation from traffic.
It is disappointing that the Level of Service for people in cars is considered by the city and developers, but not the impact on pedestrians and other vulnerable users. This proposal will increase traffic on 100th, which has inconsistent walkways and a width that encourages speeding. I went for a run on the road yesterday and the pole for the flashing pedestrian beacon on the north side of 100th had been knocked over - I expect by a speeding car. What will this project do to mitigate the increased traffic and risk faced by pedestrians in this area?
67th Avenue also has inconsistent sidewalks. As development occurs, sidewalks have been added (per the city's adopted Complete Streets Ordinance). Hopefully they will be designed to improve the walking environment. In some cases, small sections of sidewalk can actually deteriorate walking conditions.
Sincerely,
Kristin Kinnamon
Marysville, WA
Kristin Kinnamon

Sharing Wheels Community Bike Shop, board member
McClinchy Camano Classic Century, coordinator 2024
B.I.K.E.S. Club of Snohomish County, member
425-923-7868 (personal cell)

November 13th, 2024

Amy Hess, Senior Planner
Community Development Department
501 Delta Avenue
Marysville, WA 98270

RE: Crossroads Chevron – Response to Citizen Comments

Dear Amy,

The following correspondence, prepared by the Meydenbauer Group, is in response to comments received by the City of Marysville from David and Trish Martin for PA24-006 and will be addressed sequentially according to the respondent's letter.

Dear Ms Hess,

My Name is David Martin. I live at 6430 101st Pl NE, less than a city block from the proposed Chevron Station.
May I have the opportunity to voice my concerns with proposal.
First, I'm wondering how plans were approved for a Commercial Building in a Residential zone.
Second, It's common for fuel tanks to leak. I don't want fuel in the ground around my property and in the ground water.
Third, traffic will increase even more than the expected because of the development on Sunnyside.
Fourth, At the other end of 100Street by State Avenue, is a Bar, gas station and restaurant that cater to Illegal drug activity. I don't want that carried down the street to my neighborhood.
Fifth, Many of already buy inexpensive gas at the Costco or Indian Reservation. Chevron has never been inexpensive. But when you really need gas, it's always nice to gouged at the pump.
Sixth, all Gas Stations are at risk of armed robbery. I would not appreciate stay bullets coming my way because of that or a drug deal gone bad.

Many of my Neighbors feel the same way.
Can we just not build the gas station, expand the road and get traffic safely through the area, and not have it impact the neighborhood adversely.

Thank you.

Sincerely,

David and Trish Martin

1) The proposed site of the Crossroads Chevron is zoned as Neighborhood Business.

    a. Neighborhood Business Zones are characterized, according to MMC 22C.020.030, by their common characteristic, *"…to provide convenient daily retail and personal services for a limited service area and to minimize impacts of commercial activities on nearby properties."*

b. As such, the Crossroads Chevron will be providing a convenient fuel station and marketplace for individuals traveling along the 100th Street NE and 67th AVE NE corridor without having to travel into town.

2) The subterranean fuel tanks that will be installed exceed the highest safety standards set forth by elected city, state, and federal lawmakers as statutory law in the construction of fuel service centers.

3) The Crossroads Chevron project will provide the necessary road and frontage improvements to improve safety and the flow of traffic through the intersection of 67th AVE NE and 100th Street NE. In addition, the project will be paying a traffic mitigation fee that will be utilized for further improvements of the roads in the area with future development.

4) We cannot address unsubstantiated allegations of illegal activity and condemn all acts of violence. It is our intention for the Crossroads Chevron to represent a valuable service provider to the community.

5) The Crossroads Chevron will provide a premium fueling option for those who prefer it. It will not be everybody's preferred fueling station and Costco and the Indian Reservation will still be available options should people decide it is in their best interest.

    a. In addition, not all members of the community are members of Costco so the Crossroads Chevron represents an option for them to consider that does not require membership dues.

    b. Fuel prices at the Crossroads Chevron will not "gouge" customers and are influenced by global market forces that determine the price of fuel.

6) Armed robbery is a threat to any business that would seek to establish itself in this Neighborhood Business Zone. We condemn all acts of violence and will have adequate security systems installed to address this concern.

MARYSVILLE COMMUNITY DEVELOPMENT

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that an open record public hearing will be held before the Hearing Examiner on **Thursday, December 5th at 6:00 PM** at 501 Delta Avenue, 2nd Floor – Council Chambers to consider the following proposal:

Scan to View Grant Materials

File Number:	PA24-006
Project Title:	Crossroads Chevron
Applicant:	Meydenbauer Group
Project Contact:	John Hansen 12025 Willows Road Redmond WA 98052 john@meydenbauergroup.com
Project Location:	10008 67th Avenue NE
APN:	30051500101800

Proposal: The applicant is proposing construction of a new approximately 4,000 square foot convenience store and Chevron branded service station with canopy and four (4) fuel islands, totaling eight (8) pumps. The applicant is seeking Commercial Site Plan approval and State Environmental Policy Act (SEPA) review and approval of proposal and associated improvements. Access will be via 67th Avenue and 100th Street NE, with restricted access to 100th Street NE.

Open Record Public Hearing: The public hearing will take place in person at 501 Delta Avenue, 2nd Floor – Council Chambers and via Zoom/teleconference. The Hearing Examiner and City's project manager will attend in person; however, other staff, the applicant, and the public may attend either in person or via Zoom. Access for the hearing impaired and others can be accommodated using Washington Relay Service at 1-800-833-6384 and at the below website:
https://www.dshs.wa.gov/altsa/odhh/telecommunication-relay-services.

The Council Chambers are handicap accessible. Arrangements to reasonably accommodate special needs, including handicap accessibility or interpreter, will be made upon receiving 48-hour advance notice. Contact the City Clerk's Office at 360.363.8000.

- Anyone wishing to provide written or verbal public comment must pre-register by contacting Amy Hess at ahess@marysvillewa.gov by ***noon on Wednesday, December 4th***. If you wish to provide verbal public comment, you will need to provide your name, address, e-mail and phone number.
- **Zoom Meeting Link:** https://us06web.zoom.us/j/81935917709?pwd=soIbTOHyHdZ2ylHAkJLhO1VItug1RL.1
- To listen to the meeting without providing public comment:
  - **Dial in:** 888.475.4499
  - **Meeting ID:** 819 3591 7709

Document Availability: Crossroads Chevron

For Project Information: Amy Hess, Senior Planner - 360.363.8215 or ahess@marysvillewa.gov

Community Development Department, 501 Delta Ave, Marysville, WA 98270

THIS NOTICE IS NOT TO BE REMOVED CONCEALED OR DESTROYED

COMMUNITY DEVELOPMENT DEPARTMENT
501 Delta Avenue ◆ Marysville, WA 98270
(360) 363-8000

November 7, 2024

John Hansen
Meydenbauer Group
1025 Willow Road
Redmond WA 98052

Re: Crossroads Chevron – *Technical Review 4*
PA 24-006

Dear John,

After fourth review of the above referenced proposal, the Planning Division has the following technical review comments.

The general layout, building location, and parking appear acceptable for Planning standards. Please address comments from Jesse Hannahs (attached) and submit a revised site plan. The revised site plan is needed prior to staff drafting a recommendation to the Hearing Examiner for the hearing which is scheduled for December 5th.

If you have any questions, please contact me at 360.363.8215, or by e-mail at ahess@marysvillewa.gov.

Sincerely,

Amy Hess

Senior Planner

cc: Haylie Miller, CD Director
Chris Holland, Planning Manager

MEMORANDUM

TO: Amy Hess – Senior Planner

FROM: Jesse Hannahs, P.E. – Traffic Engineering Manager

DATE: November 6, 2024

SUBJECT: PA 24-006 – Crossroads Gas Station

I have reviewed the Crossroads Gas Station site plan for the proposed development of 10008 67th Ave NE and have the following comments:

1) Intersection design of 67th Ave NE & 100th ST NE
    a. Ultimate intersection shall be signalized thus adequate ROW for signal infrastructure shall be provided on NW corner.
        i. ROW as shown on site plan is acceptable for future signal construction.
2) Per EDDS 3-301, access management standards shall apply.
    a. Per the Variance Request Approval the following are required:
        i. Access on 100th ST NE shall be right-in/right-out only with a pork-chop style island constructed within the access which shall also enable pedestrian traffic per ADA.
        ii. Access on 67th Ave NE shall be shifted as far north on property as feasible and shall be right-in/right-out only with a pork-chop style island constructed within the access which shall also enable pedestrian traffic per ADA.
3) Per EDDS 3-506, street lighting will be required.
    a. Street Lighting upon all three lane arterials and other public roadways shall be PUD installed fiberglass pole installation type street lighting.
        i. Street lighting shall be designed as minor arterial utilizing 250 watt equivalent LED fixtures.
        ii. Spacing of fixtures should be approximately 180'-220'.
        iii. As part of civil construction approval proposed PUD street lighting locations shall be provided by the City for incorporation into the PUD site electrical plans.
        iv. Contact Mike Fleming of Snohomish County PUD at (425) 783-8276 or wehaugen@snopud.com for more information regarding PUD design.
4) Signing and Channelization Plans shall be required as part of Civil Construction plans.

MARYSVILLE
PUBLIC WORKS

(360) 363-8100

Public Works
80 Columbia Avenue
Marysville, WA 98270

Attention Amy Hess, Senior Planner

Subject: Crossroads Chevron Proposal File #PA24-006

Dear Ms. Hess,

Per our phone conversation and as requested by you, we are writing this letter in regards to the above subject proposal and to note our serious concerns for the record.

The Meydenbauer Group Application proposal is for a new 4,000 square foot convenience store and Chevron branded service station with canopy and (6) fuel pumps at 10008 67th Ave NE. This is at the intersection of 67th Ave NE and 100th St. NE in Marysville They are seeking Commercial Site Plan approval and and State Environmental Policy (SEPA) review and approval of the proposal and associated improvements.

This property is zoned single family residential/NB (Neighborhood Business) not commercial. NB function is to provide for local facilities that serve the everyday needs of the surrounding neighborhood rather than the larger surrounding community.

- We would like to note that the services the proposed business would provide can already be obtained only a mile away at the Fred Meyer main grocery store and the service station convenience facility at that location and is therefore not providing any necessary services to the immediate community.

We have reviewed the SEPA Environmental Checklist completed by the Meydenbauer Group and have the following questions/concerns:

- On Page 3 of the report it is noted that the description of the site is predominately a residential zone. NOTE: the west side of 67th Ave NE and the N & S areas of 100th St NE are residences with the exception of a lot on the north side of 100th St NE, and next to the proposed site which is owned and used by the City of Marysville. The East side of 67th Ave is predominately residential/farmland in 5 or more acre tracts and wetlands. There is a Grange Hall at the NE corner of the intersection of 67th Ave NE and 100th St. NE which is used for community events such as dances, birthday parties, craft fairs etc.
-
- On Page 4 item e. It states that the purpose of the new request is to build a single family residential home. That is false -
-
- Page 5 #2 states that site work machinery runs on diesel and that the burning of diesel pollutes! Note: Many of the vehicles that might utilize this business use diesel in their vehicles and would therefore be polluting the air of residents and farm animals in the area.
-
- Page 5 #3a 1 Notes that Allen Creek is in the wider vicinity. NOTE: Fact is that Allen Creek is across 67th Ave NE and to the East not more than ½ mile and has a spawning area for Salmon.

-
-
-
- PAGE 5 & 6 3c.1. this talks about storm water runoff and says any from the proposed business would be disposed to the nearest existing catch basin NOTE: we believe is only the ditches which plug up frequently and floods the driveways of some along 67th Ave NE
-
- Page 6 3c.2. States - “could waste materials enter ground or surface waters”? Answer was - Surface runoff could pick up surface materials namely gas and oil and put it into the ground and that all or most of any water borne surface materials will be filtered out by the drainage vault and biofiltration system for enhanced water quality. NOTE: there are many wells in the area and for some that is their only water. Any gas or oil runoff would pollute these wells.
-
- Page 8 5a. States: Are there any birds or other animals on or near the site? NOTE: There are eagles, seagulls, hummingbirds, crows, ducks, racoons, deer, coyote, farm animals such as horses, goats, donkeys, chickens, cats, dogs etc. Also there are many flocks of migratory birds such as ducks which fly over the area frequently.
-
- Page 9 7a. Addresses Environmental Hazards and states “there will be hazards associated with large concentrated fuel volumes”. NOTE: Our community does not welcome any business that brings possible hazards.
-
- All information from page 10 to through 15 in their entirety

are of concern to our community.

-

With the expected 795 or more vehicles daily the current residences won't even be able to enter/exit their driveways.

67th Ave NE is a two lane country road with ditches on both sides and 100th St NE is also a two lane road but has partial sidewalks. 67th Ave NE is already a on and has become increasingly congested since all of the building, both residential and industrial, to the North and South.

As noted in the Realestate News - Convenience Stores with gas stations are the 2nd worst neighborhood businesses related to property values and noted:

People will be driving in and out of your intersection, hanging out at the property, and buying lots of lotto tickets, cigarettes, and beer when they gas up, all of which, as stated above, is available within 1 mile. Although handy, these shops do nothing to help property values and hurt them significantly according to Zillow.com. Although the realtors questioned on the site did not have exact statistics, common sense would show that the increase in robberies, accidents, traffic and pedestrians would add up to decreased property value. NOTE: Non in this community can afford to have their property values decreased!

In conclusion, most of the folks in our community are opposed to the construction of a convenience store gas station as proposed by the Meydenbauer Group and are requesting a public meeting to address this proposal.

Thank You,
Concerned members of the Community:

Gregory Neff, 9813 67th Ave NE

Rikki & Carlos Gutierrez, 9813 67th Ave NE

Marilyn & Tom Daniels, 9912 67th Ave NE

Cherri & John Fieck, 6610 101st Pl NE

Julie & Dennis Edmondson, 6710 100th St. NE

Ross & Marsha Tanis, 6918 100th St. NE

Anne & Harmen DeJong, 7421 100th St. NE

Justin Edmondson, 8311 96th Dr NE

Chris & Jon Schmuck, 9602 85th Dr NE

Jose Campos, 10117 67th Ave NE

Kelsey & Will Webber, 7415 100th St NE

David Walker, 10025 65th Dr NE

Greg Young, Lake Goodwin

Ron & Chris Underwood, 6327 96th Pl NE

Matt Edwards, 124th St. NE

Brenda Nelson, 5711 100th St Ne Unit 66

Shelly Dragland, 8118 83rd Pl NE

John Everett, 6905 89th Pl NE

The following made comments on neighborhood website that they are opposed but I was unable to get their addresses:

Andrea O'Keefe

Beth Ferris

Waylon F.

Attachment:

To: City of Marysville Community Development Department-

03/18/2024

The following is a basic summary against having a *six-pump gas station - convenient store* requesting a building site location at NW Corner of 67th Ave NE and 100th St NE. As an undergraduate engineering major in the early sixties, I worked part-time for three years for a contractor in Los Angeles California that constructed gas stations [Union-76; Atlantic-Richfield] from underground up. A great amount of effort went into workmanship integrity during the installation of the gas-tanks and associated piping from tanks to dispensing nozzles, especially the threaded plumbing connections. With the tank-plumbing system still exposed the entire installation would be pressurized with air and the fire department would monitor the pressure-gauges for days to determine if leaks occurred due to a drop in air pressure [as an aside we used dry-ice when removing tanks pushing gasoline fumes out preventing possible explosion due to sparks that would occur]. Once satisfied the fire department would sign-off the installation and the system buried while consistently pneumatic- compacting the soil used enhancing soil integrity around tank and piping to support concrete load and vehicles weight from damaging gas tanks, especially the plumbing and connections. Even with all the effort expended to try and ensure no leaks from the gasoline system the traffic vibrations, thermal ground movement causing deflection, hydraulic-hammer from valves pulsing, leaks or various types of spills will eventually occur at gas stations and subsequently must be dug out at the suspected location and repair the leak. *Gasoline does not evaporate underground but travels* and there exists an aquifer at both sixty feet again at one-hundred and twenty feet (where my well pump sets). Once gasoline reaches water wells

and aquifers these locations with the poisonous liquids, (gasoline/diesel), it will contaminate other wells in the Marysville area plus more, and you will have another Fort Lejeune which I would think you do not want.

The following references provide additional information as this writing is not exhaustive but does indicate the proposed Convenient-Store-Gas-Station is not a foolproof installation.

References (not all that exists about gasoline storage but too much exists to list for one to read unless you are a researcher):

About **60 percent** of all underground storage tanks (USTs) have experienced at least one leak and that remediation of the approximately 528,000 total leaks costs over $1 billion a year in state and federal funds.

https://hub.jhu.edu/2014/10/07/gas-station-spills/

https://www.csu.edu/cerc/documents/LUSTThreattoPublicHealth.pdf

https://www.epa.gov/ust/emerging-fuels-and-underground-storage-tanks-usts

https://www.aeaweb.org/research/underground-storage-tanks-health-impacts#:~:text=About 60 percent of all underground storage tanks, billion a year in state and federal funds

"Going Beneath the Surface: Petroleum Pollution, Regulation, and Health**" appears in the January issue of the** *American Economic Journal: Applied Economics***.**

TRAFFIC INCREASE, AFFECTED WATER WELL CASING SOIL, HOME DEPRECIATION

1. Road mitigation study ? Traffic is already unreasonable due to housing development in the Marysville/Arlington area.
2. Ground vibration affects soil stability. Large trucks even vibrate my part underground house as they brake for stop due to wheel bounce on un-even road surface, all vehicle traffic creates too much noise due to existing high traffic flow, see-1 above.

3. Road traffic serious now will only increase. Drivers ignore stop sign as it stands, drivers will run two at a time or not stop all or even abide by Washington State Driving Code, https://apps.leg.wa.gov/RCW/default.aspx?cite=46.61.....Example: first to your right at stop has right away, drivers ignore; others don't even come to complete stop but drive right through intersection.
4. The proposed project by Meydenbauer Group will have a negative effect on my property value due to a commercial gas station-store on opposite corner, not only due to gasoline vapor during truck replenishment but also from pumping, potential leaks above and bel ground, additional noise levels, undesirables attracted to such establishments, trash thrown around (just look at WINCO Foods parking lot; even after they resurface, it's a shame !) on the opposite corner to my home. Increased noise over current, even more cars spinning their tires leaving the intersection which begs the need for a Round-About if this project proceeds.
5. If the project goes through then the City of Marysville needs to hook my home up to City water, as my neighbor to the south is at their expense as the potential for well water contamination is too great to be an absolutely safe consumable as the distance from water well to building site gasoline storage is too close and the potential for aquafer contamination would be great as the thickness nor horizontal size of the aquifer is known for sure but the once dairy farm just north of my location is on same aquafer.

Regards,

Dr. Dennis Edmondson, BSE, MSME, PhD, PhD, PE

(Cancer Researcher)

[CAUTION:] This email originated from outside the City of Marysville. **Do not click links or open attachments** unless you recognize the sender and know the content is safe. Contact helpdesk if you have any concerns or questions.

Good morning sir,

I read on Nextdoor recently that a proposal to have a Shell Convenient/Gas Station to be built at the corner of 10008 67 Ave. NE and 100th St. NE.

I personally do not have a big issue with this being we can not stop growth but to control it. Partly do to that if you need to get gas you have to go State and that is not always convenient.

I would agree to this if 67th and 100th are widened FIRST. These two roads have been a safety issue for vehicles and especially pedestrians for many years.

I would request that 67th be widened with a turn lane in the middle from 88th to 108th and that 100th be widened with a turn lane in the middle from 62nd to 67th at a minimal.

It has frustrated for us many years why we in this state take so long to do a project and wait to put the infrastructure in after housing developments and bushiness are already in place. The developers are gone and made their money and

then the tax payers are asked to pay for these improvements when it should be done first. Just look at the lack of construction activity on I-5 and State where there is current projects going on.
If this is done please make sure it will be done quickly because this will be very disruptive to everybody. Now, being that the population of Marysville has grown so much 67th has become a major through-fair. That is part of the problem when needed projects keep on being kicked down the road.
I am increasing the font so my mother can read it.
Thank you for your time and look forward to your thoughts and hope our family's thoughts are taken serious.

Grammar and spelling checked by Grammarly.
https://www.grammarly.com/
Brian K. Houk

Amy Hess

From: Kristin Kinnamon <bikenbus@gmail.com>
Sent: Monday, March 18, 2024 3:55 PM
To: Amy Hess
Subject: [External!] PA 24-006 Crossroads Chevron comments

Follow Up Flag: Follow up
Flag Status: Flagged

[CAUTION:] This email originated from outside the City of Marysville. **Do not click links or open attachments** unless you recognize the sender and know the content is safe. Contact helpdesk if you have any concerns or questions.

Dear Senior Planner,
I live in the area of this proposal, and have some concerns and questions for the record. After reviewing project documents, I am unclear what frontage improvements and road widths are envisioned for 100th and 67th. A sidewalk should be required on both roads, along with some separation from traffic.
It is disappointing that the Level of Service for people in cars is considered by the city and developers, but not the impact on pedestrians and other vulnerable users. This proposal will increase traffic on 100th, which has inconsistent walkways and a width that encourages speeding. I went for a run on the road yesterday and the pole for the flashing pedestrian beacon on the north side of 100th had been knocked over - I expect by a speeding car. What will this project do to mitigate the increased traffic and risk faced by pedestrians in this area?
67th Avenue also has inconsistent sidewalks. As development occurs, sidewalks have been added (per the city's adopted Complete Streets Ordinance). Hopefully they will be designed to improve the walking environment. In some cases, small sections of sidewalk can actually deteriorate walking conditions.
Sincerely,
Kristin Kinnamon
Marysville, WA
Kristin Kinnamon

Sharing Wheels Community Bike Shop, board member
McClinchy Camano Classic Century, coordinator 2024
B.I.K.E.S. Club of Snohomish County, member
425-923-7868 (personal cell)

Amy Hess

From: DAVID MARTIN <bigbikedavid@yahoo.ca>
Sent: Friday, November 8, 2024 3:06 PM
To: Amy Hess
Subject: [External!] New Chevron Station

[You don't often get email from bigbikedavid@yahoo.ca. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

[CAUTION:] This email originated from outside the City of Marysville. Do not click links or open attachments unless you recognize the sender and know the content is safe. Contact helpdesk if you have any concerns or questions.

Dear Ms Hess,

My Name is David Martin. I live at 6430 101st Pl NE, less than a city block from the proposed Chevron Station.
May I have the opportunity to voice my concerns with proposal.
First, I'm wondering how plans were approved for a Commercial Building in a Residential zone.
Second, It's common for fuel tanks to leak. I don't want fuel in the ground around my property and in the ground water.
Third, traffic will increase even more than the expected because of the development on Sunnyside.
Fourth, At the other end of 100Street by State Avenue, is a Bar, gas station and restaurant that cater to Illegal drug activity. I don't want that carried down the street to my neighborhood.
Fifth, Many of already buy inexpensive gas at the Costco or Indian Reservation. Chevron has never been inexpensive. But when you really need gas, it's always nice to gouged at the pump.
Sixth, all Gas Stations are at risk of armed robbery. I would not appreciate stay bullets coming my way because of that or a drug deal gone bad.

Many of my Neighbors feel the same way.
Can we just not build the gas station, expand the road and get traffic safely through the area, and not have it impact the neighborhood adversely.

Thank you.

Sincerely,

David and Trish Martin

Everett Daily Herald

Affidavit of Publication

State of Washington }
County of Snohomish } ss

Michael Gates being first duly sworn, upon oath deposes and says: that he/she is the legal representative of the Everett Daily Herald a daily newspaper. The said newspaper is a legal newspaper by order of the superior court in the county in which it is published and is now and has been for more than six months prior to the date of the first publication of the Notice hereinafter referred to, published in the English language continually as a daily newspaper in Snohomish County, Washington and is and always has been printed in whole or part in the Everett Daily Herald and is of general circulation in said County, and is a legal newspaper, in accordance with the Chapter 99 of the Laws of 1921, as amended by Chapter 213, Laws of 1941, and approved as a legal newspaper by order of the Superior Court of Snohomish County, State of Washington, by order dated June 16, 1941, and that the annexed is a true copy of EDH1004732 MDNS PA24-006 as it was published in the regular and entire issue of said paper and not as a supplement form thereof for a period of 1 issue(s), such publication commencing on 11/02/2024 and ending on 11/02/2024 and that said newspaper was regularly distributed to its subscribers during all of said period.

The amount of the fee for such publication is $73.96.

Subscribed and sworn before me on this 4th day of November, 2024.

Notary Public in and for the State of Washington.

COMM DEVEL - CITY OF MARYSVILLE | 88522148
MARISA NISHIMURA

RANDIE POSPICAL
Commission Expires 10-20-2027
NOTARY PUBLIC
License Number 23034934
STATE OF WASHINGTON

MARYSVILLE

CITY OF MARYSVILLE
NOTICE OF MITIGATED DETERMINATION OF NON-SIGNIFICANCE

File Number: PA24-006
Project Title: Crossroads Chevron
Applicant: Meydenbauer Group
Project Contact: John Hansen
12025 Willows Road
Redmond WA 98052
john@meydenbauergroup.com

Description: Construction of an approximately 4,000 square foot convenience store and fuel service station, consisting of four (4) fuel pump islands (8 total pumps) and associated improvements.

Project Location: 10008 67th Avenue NE
APN: 30051500101800
Project Information: Crossroads Chevron
Lead Agency: City of Marysville – Community Development Department

SEPA Threshold Determination: The lead agency has determined that this proposal does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is NOT required under RCW 43.21C.030(2)(c). This decision was made after review by the City of Marysville of a completed environmental checklist and other information on file with this agency. This information is available for public review upon request.

Public Comment Period: This MDNS is subject to a 14-day comment period. Written comments may be submitted by mail or e-mail to the lead agency's SEPA contact person. Comments must be received by November 15, 2024.

Appeals: This MDNS may be appealed pursuant to the requirements of MMC 22E.030.180. Any appeal must be accompanied by a filing fee of $1,750.00, and be filed in writing at the City of Marysville Community Development Department, 501 Delta Avenue, Marysville, WA 98270. The appeal must be received by 4:30 p.m., by November 15, 2024. The appeal must contain the items set forth in MMC 22G.010.530.

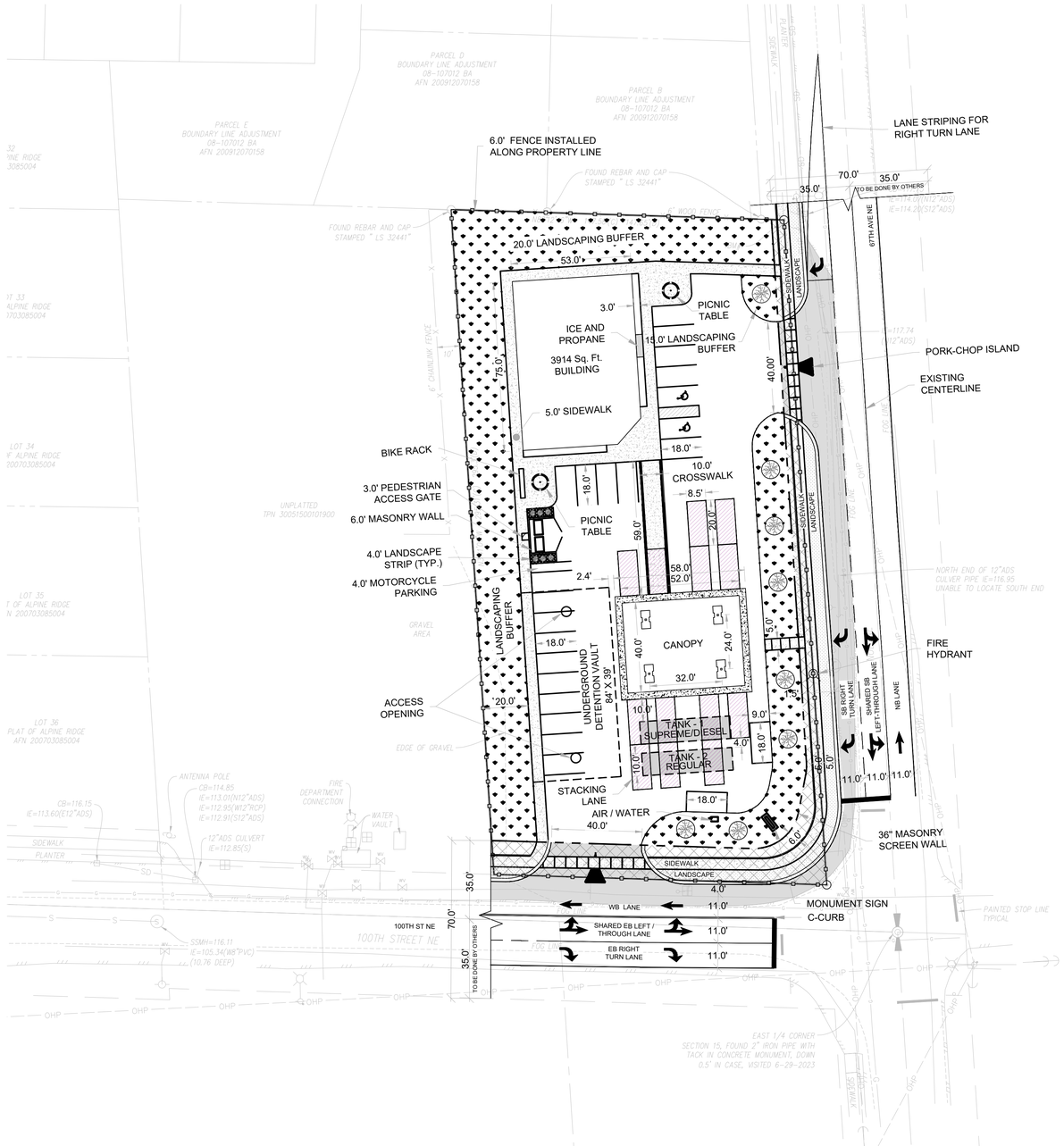
SEPA Contact: Amy Hess
(360) 363-8215
ahess@marysvillewa.gov

Date Issued: October 30, 2024
Published: November 2, 2024.

EDH1004732

CROSSROADS CHEVRON

SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270



NOTE

1. REFER DRAINAGE AND GRADING PLAN SHEET FOR OIL AND WATER SEPARATOR AND STORM FILTER.

LEGEND

- BIKE LANE EDGE
- CURB
- LANSCAPE
- SIDEWALK
- ASPHALT WIDENING
- PROPOSED ROW
- UNDERGROUND DETENTION VAULT / FUEL TANK
- PLOT BOUNDARY

AREA CALCULATIONS

1. TOTAL AREA = 39434.00 SF
2. IMPERVIOUS AREA= 27324.00 SF
3. PERVIOUS AREA = 12110.00 SF

N

1"=30'-0"

30 0 30 60

Scale Feet

CALL 48 HOURS BEFORE YOU DIG 811

CITY OF MARYSVILLE
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W/PERMIT NO. _____

NO.	DATE	DESCRIPTION	BY
REVISION			

NOT FOR CONSTRUCTION

SITE PLAN

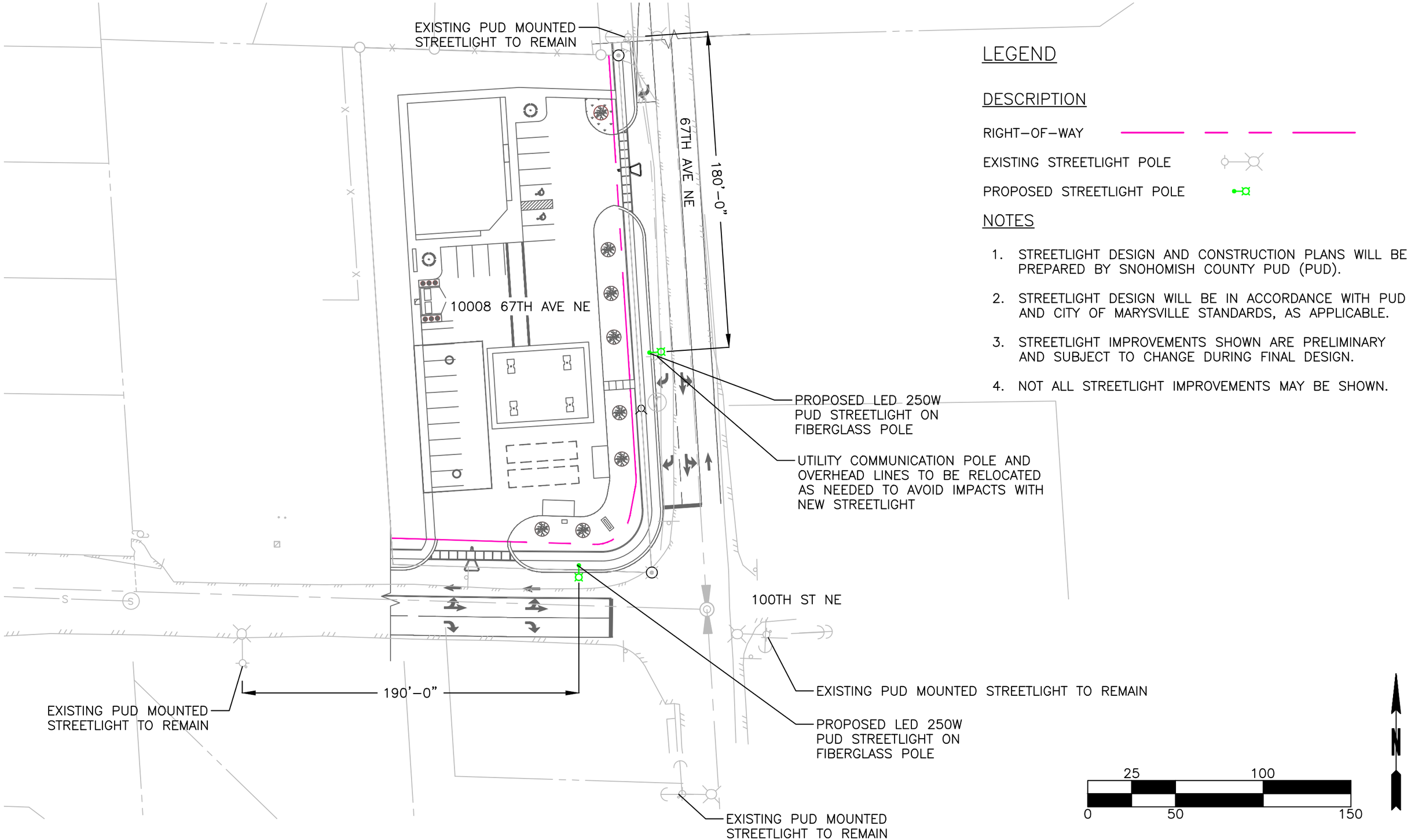
GEOMETRICS ENGINEERING, P.S., INC.
2501 152nd Ave NE Redmond, WA 98052

CROSSROADS CHEVRON
SE 1/4 OF THE NE 1/4 OF SECTION 15, TOWNSHIP 30 NORTH, RANGE 05 EAST, MARYSVILLE, WS 98270

PERMIT NO. PA-24-006
DSN. BY: TI
DATE: 10/14/2024
SCALE: 1" = 30'
DRAWING NO. 05 OF 20

COPYRIGHT © 2022. THIS DRAWING IS AN INSTRUMENT OF SERVICE AND PROPERTY OF MEYDENBAUER GROUP, INC. ANY USE OR REPRODUCTION WITHOUT THE EXPRESSED WRITTEN CONSENT OF THIS CORPORATION IS PROHIBITED. ALL RIGHTS SERVED.

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 22 X 34 SHEET.



LEGEND

DESCRIPTION

RIGHT-OF-WAY

EXISTING STREETLIGHT POLE

PROPOSED STREETLIGHT POLE

NOTES

1. STREETLIGHT DESIGN AND CONSTRUCTION PLANS WILL BE PREPARED BY SNOHOMISH COUNTY PUD (PUD).
2. STREETLIGHT DESIGN WILL BE IN ACCORDANCE WITH PUD AND CITY OF MARYSVILLE STANDARDS, AS APPLICABLE.
3. STREETLIGHT IMPROVEMENTS SHOWN ARE PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL DESIGN.
4. NOT ALL STREETLIGHT IMPROVEMENTS MAY BE SHOWN.

Crossroads Chevron - Potential Streetlight Layout

November 18, 2024

FIGURE 1

1.23336.00 - Crossroads Chevron

transpogroup WHAT TRANSPORTATION CAN BE.

Nov 18, 2024 - 4:56pm evanh M:\23\1.23336.00 - Marysville Service Station\Engineering\CAD\Conceptual\23336-TG-Potential Streetlight Layout.dwg Layout: Figure 1

Everett Daily Herald

Affidavit of Publication

State of Washington }
County of Snohomish } ss

Michael Gates being first duly sworn, upon oath deposes and says: that he/she is the legal representative of the Everett Daily Herald a daily newspaper. The said newspaper is a legal newspaper by order of the superior court in the county in which it is published and is now and has been for more than six months prior to the date of the first publication of the Notice hereinafter referred to, published in the English language continually as a daily newspaper in Snohomish County, Washington and is and always has been printed in whole or part in the Everett Daily Herald and is of general circulation in said County, and is a legal newspaper, in accordance with the Chapter 99 of the Laws of 1921, as amended by Chapter 213, Laws of 1941, and approved as a legal newspaper by order of the Superior Court of Snohomish County, State of Washington, by order dated June 16, 1941, and that the annexed is a true copy of EDH1005014 PA24-006 CROSSROADS as it was published in the regular and entire issue of said paper and not as a supplement form thereof for a period of 1 issue(s), such publication commencing on 11/08/2024 and ending on 11/08/2024 and that said newspaper was regularly distributed to its subscribers during all of said period.

The amount of the fee for such publication is $103.32.

Subscribed and sworn before me on this 8th day of November, 2024.

Notary Public in and for the State of Washington.

COMM DEVEL - CITY OF MARYSVILLE | 88522148
MARISA NISHIMURA

MARYSVILLE

CITY OF MARYSVILLE
COMMUNITY DEVELOPMENT DEPARTMENT
501 Delta Avenue • Marysville, WA 98270 • (360) 363-8000

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that an open record public hearing will be held before the Hearing Examiner on Thursday, December 5th at 6:00 PM at 501 Delta Avenue, 2nd Floor – Council Chambers to consider the following proposal:

File Number: PA24-006
Project Title: Crossroads Chevron
Applicant: Meydenbauer Group
Project Contact: John Hansen
12025 Willows Road
Redmond WA 98052
john@meydenbauergroup.com
Project Location: 10008 67th Avenue NE
APN: 30051500101800

Proposal: The applicant is proposing construction of a new approximately 4,000 square foot convenience store and Chevron branded service station with canopy and four (4) fuel islands, totaling eight (8) pumps. The applicant is seeking Commercial Site Plan approval and State Environmental Policy Act (SEPA) review and approval of proposal and associated improvements. Access will be via 67th Avenue and 100th Street NE, with restricted access to 100th Street NE.

Open Record Public Hearing: The public hearing will take place in person at 501 Delta Avenue, 2nd Floor – Council Chambers and via Zoom/teleconference. The Hearing Examiner and City's project manager will attend in person; however, other staff, the applicant, and the public may attend either in person or via Zoom. Access for the hearing impaired and others can be accommodated using Washington Relay Service at 1-800-833-6384 and at the below website:
https://www.dshs.wa.gov/altsa/odhh/telecommunication-relay-services.

The Council Chambers are handicap accessible. Arrangements to reasonably accommodate special needs, including handicap accessibility or interpreter, will be made upon receiving 48-hour advance notice. Contact the City Clerk's Office at 360.363.8000.

- Anyone wishing to provide written or verbal public comment must pre-register by contacting Amy Hess at ahess@marysvillewa.gov by noon on Wednesday, December 4th. If you wish to provide verbal public comment, you will need to provide your name, address, e-mail and phone number.
- Zoom Meeting Link:

https://us06web.zoom.us/j/81935917709?pwd=solbTOHyHdZ2ylHAkJLhO1Vltug1RL.1

- To listen to the meeting without providing public comment:
- Dial in: 888.475.4499
- Meeting ID: 819 3591 7709

Document Availability: Crossroads Chevron
For Project Information: Amy Hess, Senior Planner - 360.363.8215 or ahess@marysvillewa.gov Community Development Department, 501 Delta Ave, Marysville, WA 98270
Published: November 8, 2024.

EDH1005014

Proofed by Pospical, Randie, 11/08/2024 08:16:19 am

EXHIBIT 049

APPLICANT AND STAFF RESPONSE TO PUBLIC COMMENTS

Multiple Residents (Exhibit 044, pages 1 to 6)

Summary of Comments: Zoning not appropriate for fuel station. Similar services one mile from project site.

Errors in the SEPA Checklist.

Vehicles that burn diesel pollute.

Allen Creek is located across 67th Avenue and has spawning areas for salmon.

Proximity of proposed fuel station to water wells in the area. Potential for pollution of these wells.

Increase in average daily trips will prohibit current residents from being able to enter/exit their driveways.

Condition and state of 67th Avenue is a concern. It is a 2-lane county road with ditches on both sides and has had increased traffic with recent development to the north and south.

Concerns related to property values if project moves forward.

General opposition to the use in this neighborhood.

Applicant's Response:

A) As defined in MMC 22C.020.030, a Neighborhood Business zone (NB) is classified as:

> *i) (a) The purpose of the neighborhood business zone (NB) is to provide convenient daily retail and personal services for a limited service area and to minimize impacts of commercial activities on nearby properties. These purposes are accomplished by:*
>
> > *(i) Limiting nonresidential uses to those retail or personal services which can serve the everyday needs of a surrounding residential area;*
> >
> > *(ii) Allowing for a mix of housing and retail/service uses; and*
> >
> > *(iii) Excluding industrial and community/regional business-scaled uses.*
>
> ii) At its most basic core function, the Crossroads Chevron and its associated convenience store provide convenient daily retail services to the nearby properties and general public by offering a premium fuel that is not available at Fred Meyer, while providing a retail location for citizens to purchase such essential items as personal care products, first-aid supplies, a freshly prepared selection of hot and cold foods, and essential items for automobile maintenance.

B) We are in agreement that there are a select few parcels of land that are being used for public works and/or community services, while most of the remaining parcels are residential properties that will be served by the proposed Crossroads Chevron.

C) This error has since been revised to state, "The purpose is to build a gasoline service station."

D) Site work machinery that will be used in the construction of the Crossroads Chevron are equipped with Diesel Exhaust Fluid (DEF), which reduces the pollutants emitted by these machines to the state and federally mandated level. While the other vehicles that might utilize this business are already going to be in operation regardless of whether this service station is constructed or not.

E) Allen Creek is in the vicinity / the wider vicinity of the project and will not be affected by this development.

F) All stormwater runoff from this development will be detained on-site and conveyed into approved City of Marysville stormwater infrastructure. New stormwater infrastructure will also be installed that will reduce the effect stormwater has on neighboring driveways.

G) The stormwater treatment facilities that will be installed during development of the Crossroads Chevron will capture and detain the significant majority of water on-site and convey it to City of Marysville infrastructure. Any water that flows off-site will be captured by stormwater infrastructure that is installed in the street and therefore not be absorbed into the groundwater supply.

H) There have not been any animals observed on or near the site that would be affected by this development. Currently, this parcel of land consists of long grasses that is bordered by the roadway on the south and the east sides, a residential fence to the north, and City of Marysville Public Works facility to the west.

I) There is no risk of environmental hazard associated with this development. All infrastructure that is to be installed is rated at the maximum level of conformance with building code that meets or exceeds development standards. All precautions will be in place to eliminate any environmental hazards in the operation of this service station, in accordance with state and federal law.

J) There will be significant alterations to the existing roadway with the addition of a center turning lane on eastbound 100th Street NE and a right-turn lane on southbound 67th AVE NE. These roadway modifications will alleviate the access for local residents while entering the roadway.

K) The western side of 67th Avenue NE will be developed with a sidewalk that connects to the existing sidewalk, while 100th Street NE will be developed with a sidewalk that spans the entirety of the property's road frontage.

L) Community development presents the opportunity for businesses to generate taxable revenue that will increase the ability of the community to invest in services and development that increase property values for the greater community. Currently, the services that would be offered by the Crossroads Chevron are only available by driving into town, which is not convenient for residents traveling along the 67th Avenue NE corridor.

Staff Response:

The project site is located within the Neighborhood Business (NB) zone. The NB zone is a commercial zone intended to provide convenient daily retail and personal services for a limited service area and to minimize impacts of large

commercial developments on nearby properties. Gasoline service stations and food stores are permitted uses within the NB zone.

The applicant corrected identified errors in the SEPA checklist, and provided additional information as requested by staff.

The applicant will be required to design their stormwater management system in accordance with the 2019 Department of Ecology (DOE) Stormwater Manual as well as MMC 14.15.040 and 14.15.050. Compliance with these standards will be verified during civil construction plan review.

While animals may be present in the general vicinity, none of the species observed are threatened or endangered. There is little undeveloped, natural space in the area that would provide sufficient habitat.

The fueling components of the development will be designed, installed, and maintained in accordance with all local, state and federal standards.

Many of the expected average daily trips are vehicles that travel this roadway regardless of the proposed fuel station. The applicant will be required to mitigate for the impacts of the development through improvements to the existing roadway and intersections, as well as for future impacts through payment of traffic impact fees. As part of required mitigation, the applicant will install sidewalks along 67th Avenue and 100th Street frontages, helping to increase pedestrian mobility and safety.

Staff has not seen any data that indicates development of vacant parcels has a negative impact on property values. A widely accepted and, in some cases required, strategy known as Crime Prevention Through Environmental Design (CPTED) principles, demonstrate that providing human activity increases natural surveillance that aides in restricting criminal intrusion and creates environments where there is plenty of opportunity for people engaged in their normal behavior to observe the space around them.

Dennis Edmondson (Exhibit 044, pages 7-9).

Summary of Comments: I was an undergraduate engineering major in the early sixties, and worked part-time for a contractor in Los Angeles that constructed gas stations. Great amounts of effort went in to ensuring that tanks were installed properly to prevent leaks. Even with the precautions taken, spills will eventually occur at gas stations and subsequently must be dug out and repaired. Gasoline does not evaporate underground but travels. Aquifers exist and 60 feet and one hundred twenty feet where my well pump sets. Leaks will contaminate wells and aquifers with poisonous liquids.

Traffic is already unreasonable due to housing development in the Marysville/Arlington area. Ground vibration affects soil stability. Large trucks even vibrate my part underground house as they brake for stop due to wheel bounce on un-even road surface, all vehicle traffic creates too much noise due to existing high traffic flow. Drivers ignore stop sign as it stands, drivers will run two at a time or not stop all or even abide by Washington State Driving Code.

The project will have a negative effect on my property value due to a commercial gas station-store on opposite corner, not only due to gasoline vapor during truck replenishment but also from pumping, potential leaks above and below ground, additional noise levels, undesirables attracted to such establishments, trash thrown around. Increased noise over current, even more cars spinning their tires leaving the intersection which begs the need for a round-about if this project proceeds.

If the project goes through then the City of Marysville needs to hook my home up to City water, as my neighbor to the south is at their expense as the potential for well water contamination is too great to be an absolutely safe consumable as the distance from the water well to building site gasoline storage is too close and the potential for aquifer contamination would be great as the thickness nor horizontal size of the aquifer is known for sure.

Applicant Response:

A) Technology has come a long way since the 1960's and fuel storage tanks are made of extremely durable and well-designed materials that are warrantied to not ever result in leaks. In addition, with monitoring technology, there will be advance notice should any issues arise that will indicate a problem exists and prompt a rapid response. Whereas, in a Camp Legeune scenario, there was a combination of inherent disregard for environmental and personal safety that resulted in a documented ongoing groundwater contamination crisis. Therefore, this is not a relevant example to cite as it is not representative of the conditions that will characterize the Crossroads Chevron.

B) Traffic impact studies have been undertaken and the resulting traffic concurrency recommendations will improve traffic in the area.

C) All road surfaces that will be impacted by the development of the Crossroads Chevron will be overlayed with fresh asphalt that will be free of imperfections that cause wheel bounce, however we cannot attest to all roadways in the area, we can only attest to the quality of the roadway that will be constructed in the areas affected by development.

D) Unfortunately, we cannot affect people's personal decision to break the law while driving, however we can improve the quality of the intersection to reduce people's inclination to break such laws and alleviate traffic in the area.

E) We are not aware of any research studies that have proven a link to service centers and decreased property values. With an entrepreneur investing millions of dollars in your neighborhood, we believe that the added services will be of great value to the community as it grows and continues to attract new residents.

F) Aquafer contamination is not a risk we believe to be present with this project because of the detailed installation, testing, and monitoring requirements that will be enforced during construction and following construction during normal business operations.

Staff Response:

The fueling components of the development will be designed, installed, and maintained in accordance with all local, state and federal standards. This includes monitoring technology to ensure very early notice if leaks do occur.

The applicant completed a Traffic Impact Analysis that was reviewed and approved by Jesse Hannahs, PE, Traffic Engineering Manager. It is anticipated that up to approximately 530 Average Daily Trips (ADT) and 37 PM Peak Hour Trips (PMPHT) would be generated from the development.

The traffic concurrency recommendation issued by Jesse Hannahs requires the applicant to complete mitigation obligations for impacts. These include; construction of frontage improvements along 67th Avenue NE and 100th Street NE; construction of intersection improvements at the intersection of 67th Avenue NE and 100th Street NE which will include installation of an eastbound right turn lane and a southbound right turn lane and providing for future full

planned signalized intersection; public right-of-way dedication to accommodate frontage improvements; and payment of traffic impact fees to mitigate impacts upon the future capacity of the road system.

As noted by the applicant, the City cannot affect individual's decisions on following traffic laws. The applicant shall be required to complete mitigation and improvement measures as allowed by local and state standards.

The commenter's property is outside of the City water service area. All stormwater generated from the site will be collected and treated in accordance with Washington State Department of Ecology and City standards. Runoff from the pump area is directed into an oi/water separator before being released to the sanity sewer system.

Brian Houk (Exhibit 044, pages 10 and 11)

Summary of Comments: I personally do not have a big issue with this due to that if you need to get gas you have to go to State and that is not always convenient. I would agree to this if 67th and 100th are widened first. These two roads have been a safety issue for vehicles and especially pedestrians for many years.

I would request that 67th be widened with a turn lane in the middle from 88th to 108th and that 100th be widened with a turn lane in the middle from 62nd to 67th at a minimal.

It is frustrating that developments and businesses are allowed to go in before the infrastructure. The developers are gone and made their money and then the tax payers are asked to pay for these improvements.

If this is done, please make sure it is done quickly because this will be very disruptive to everybody. Hope our family's thoughts are taken serious.

Applicant Response:

As a requirement of development, 67th Avenue NE and 100th Street NE will both be widened with turning lanes added to alleviate traffic concerns in this area. While we cannot affect the progress of other projects in the region, we can ensure that these improvements are not being funded with tax payer funds and these are the sole responsibility of the project.

Staff Response:

The applicant completed a Traffic Impact Analysis that was reviewed and approved by Jesse Hannahs, PE, Traffic Engineering Manager.

The traffic concurrency recommendation issued by Jesse Hannahs requires the applicant to complete mitigation obligations for impacts. These include; construction of frontage improvements along 67th Avenue NE and 100th Street NE; construction of intersection improvements at the intersection of 67th Avenue NE and 100th Street NE which will include installation of an eastbound right turn lane and a southbound right turn lane and providing for future full planned signalized intersection; public right-of-way dedication to accommodate frontage improvements; and payment of traffic impact fees to mitigate impacts upon the future capacity of the road system.

Frontage improvements will include installation of sidewalks along the projects 67th and 100th Street frontages, improving mobility and safety of pedestrians. The applicant shall be required to complete mitigation and improvement measures as allowed by local and state standards prior to occupancy being granted. The City cannot require an applicant to construct improvements for areas outside of what is identified in the Traffic Impact

Analysis as impacted by the proposed development (nexus and proportionality).

Kristin Kinnamon (Exhibit 044, pages 11 and 12)

I live in this area and have some questions and concerns. I am unclear what frontage improvements and road widths are envisioned for 100th and 67th. A sidewalk should be required on both roads, along with some separation from traffic.

It is disappointing that the Level of Service for people in cars is considered by the city and developers, but not the impact on pedestrians and other vulnerable users. This proposal will increase the traffic on 100th, which has inconsistent walkways and a width that encourages speeding. What will this project do to mitigate the increased traffic and risk faced by pedestrians in this area?

67th Avenue also has inconsistent sidewalks. As development occurs, sidewalks have been added (per the city's adopted Complete Streets Ordinance). Hopefully they will be designed to improve the walking environment. In some cases, small section of sidewalk can actually deteriorate walking conditions.

Applicant Response:

A) Part of the fundamental design of this project revolves around street and frontage improvements. We understand that the traffic and pedestrian infrastructure is not adequate at the moment and we have proposed to construct a sidewalk along both 100th Street NE and 67th Avenue NE that is separated from the roadway by a 5' landscaping strip that is planted with a variety of native plants. In addition, both 67th Avenue NE and 100th Street NE will be widened with added turning lanes to alleviate traffic at this intersection.

Staff Response:

The traffic concurrency recommendation issued by Jesse Hannahs requires the applicant to complete mitigation obligations for impacts. These include; construction of frontage improvements along 67th Avenue NE and 100th Street NE; construction of intersection improvements at the intersection of 67th Avenue NE and 100th Street NE which will include installation of an eastbound right turn lane and a southbound right turn lane and providing for future full planned signalized intersection; public right-of-way dedication to accommodate frontage improvements; and payment of traffic impact fees to mitigate impacts upon the future capacity of the road system.

Frontage improvements will include installation of sidewalks along the projects 67th and 100th Street frontages, improving mobility and safety of pedestrians. The applicant shall be required to complete mitigation and improvement measures as allowed by local and state standards prior to occupancy being granted.

David Martin (Exhibit 044, page 13)

I live at 6430 101st Pl NE, less than a city block from the proposed Chevron Station.

May I have the opportunity to voice my concerns with proposal? First, I'm wondering how plans were approved for a Commercial Building in a Residential zone.

Second, it's common for fuel tanks to leak. I don't want fuel in the ground around my property and in the ground water.

Third, traffic will increase even more than the expected because of the development on Sunnyside.

Fourth, at the other end of 100th Street by State Avenue, is a Bar, gas station and restaurant that cater to Illegal drug activity. I don't want that carried down the street to my neighborhood.

Fifth, many of already buy inexpensive gas at the Costco or Indian Reservation. Chevron has never been inexpensive. But when you really need gas, it's always nice to gouged at the pump.

Sixth, all Gas Stations are at risk of armed robbery. I would not appreciate stray bullets coming my way because of that or a drug deal gone bad.

Many of my Neighbors feel the same way.

Can we just not build the gas station, expand the road and get traffic safely through the area, and not have it impact the neighborhood adversely.

Applicant Response:

The subject property is zoned Neighborhood Business. Neighborhood Business Zones are characterized, according to MMC 22C.020.030, by their common characteristic, "…to provide convenient daily retail and personal services for a limited service area and to minimize impacts of commercial activities on nearby properties." As such, the Crossroads Chevron will be providing a convenient fuel station and marketplace for individuals traveling along the 100th Street NE and 67th Avenue NE corridor without having to travel into town.

The subterranean fuel tanks that will be installed exceed the highest safety standards set forth by elected city, state, and federal lawmakers as statutory law in the construction of fuel service centers.

The Crossroads Chevron project will provide the necessary road and frontage improvements to improve safety and the flow of traffic through the intersection of 67th Avenue NE and 100th Street NE. In addition, the project will be paying a traffic mitigation fee that will be utilized for further improvements of the roads in the area with future development.

We cannot address unsubstantiated allegations of illegal activity and condemn all acts of violence. It is our intention for the Crossroads Chevron to represent a valuable service provider to the community.

The Crossroads Chevron will provide a premium fueling option for those who prefer it. It will not be everybody's preferred fueling station and Costco and the Indian Reservation will still be available options should people decide it is in their best interest. In addition, not all members of the community are members of Costco so the Crossroads Chevron represents an option for them to consider that does not require membership dues. Fuel prices at the Crossroads Chevron will not "gouge" customers and are influenced by global market forces that determine the price of fuel.
Armed robbery is a threat to any business that would seek to establish itself in this Neighborhood Business Zone. We condemn all acts of violence and will have adequate security systems installed to address this concern.

Staff Response:

The project site is located within the Neighborhood Business (NB) zone. The NB zone is a commercial zone intended to provide convenient daily retail and personal services for a limited service area and to minimize impacts of large commercial developments on nearby properties. Gasoline service stations and food stores are permitted uses within the NB zone.

The fueling components of the development will be designed, installed, and maintained in accordance with all local, state and federal standards. This includes monitoring technology to ensure very early notice if leaks do occur.

The traffic concurrency recommendation issued by Jesse Hannahs requires the applicant to complete mitigation obligations for impacts. These include; construction of frontage improvements along 67th Avenue NE and 100th Street NE; construction of intersection improvements at the intersection of 67th Avenue NE and 100th Street NE which will include installation of an eastbound right turn lane and a southbound right turn lane and providing for future full planned signalized intersection; public right-of-way dedication to accommodate frontage improvements; and payment of traffic impact fees to mitigate impacts upon the future capacity of the road system.

The City cannot affect individual's decisions on following laws. A widely accepted and, in some cases required, strategy known as Crime Prevention Through Environmental Design (CPTED) Principles, demonstrate that providing human activity increases natural surveillance that aides in restricting criminal intrusion and creates environments where there is plenty of opportunity for people engaged in their normal behavior to observe the space around them.

The City cannot dictate individual retailers/goods prices. In a free market, this is determined by business owners.

STAFF RECOMMENDATION

Community Development Department ◆ 501 Delta Avenue ◆ Marysville, WA 98270
Office Hours: Mon - Fri 8:00 AM - 4:30 PM ◆ Phone: (360) 363-8000

PROJECT INFORMATION									
Project Title	Crossroads Chevron			**Date of Report**	November 21, 2024				
File Number	PA24-006			**Attachments**	See Section 3.0 for links to Exhibits				
Administrative Recommendation	Approve the preliminary Commercial Site Plan subject to the conditions of approval contained in Section 2.0.								
BACKGROUND SUMMARY									
Applicant	Meydenbauer Group								
Request	The applicant is requesting Site Plan Approval in order to construct a fuel station with four (4) fuel pump islands (8 total pumps), associated tanks, canopy and 3,914 square foot convenience store.								
SEPA Status	A SEPA Mitigated Determination of Non-Significance was issued on October 30, 2024. The appeal period expired November 15; no appeals were filed.								
Location	10008 67th Avenue NE			**APNs**	30051500101800				
Acreage (SF)	1.05-acres (39,434 SF)			**Section**	15	**Township**	30N	**Range**	05E
Comprehensive Plan	Neighborhood Business	**Zoning**	NB	**Shoreline Environment**	N/A				
Water Supply	**Current**: None	**Proposed**: Marysville		**Sewer Supply**	**Current**: None	**Proposed**: Marysville			
Present Use of Property	Vacant undeveloped land.								

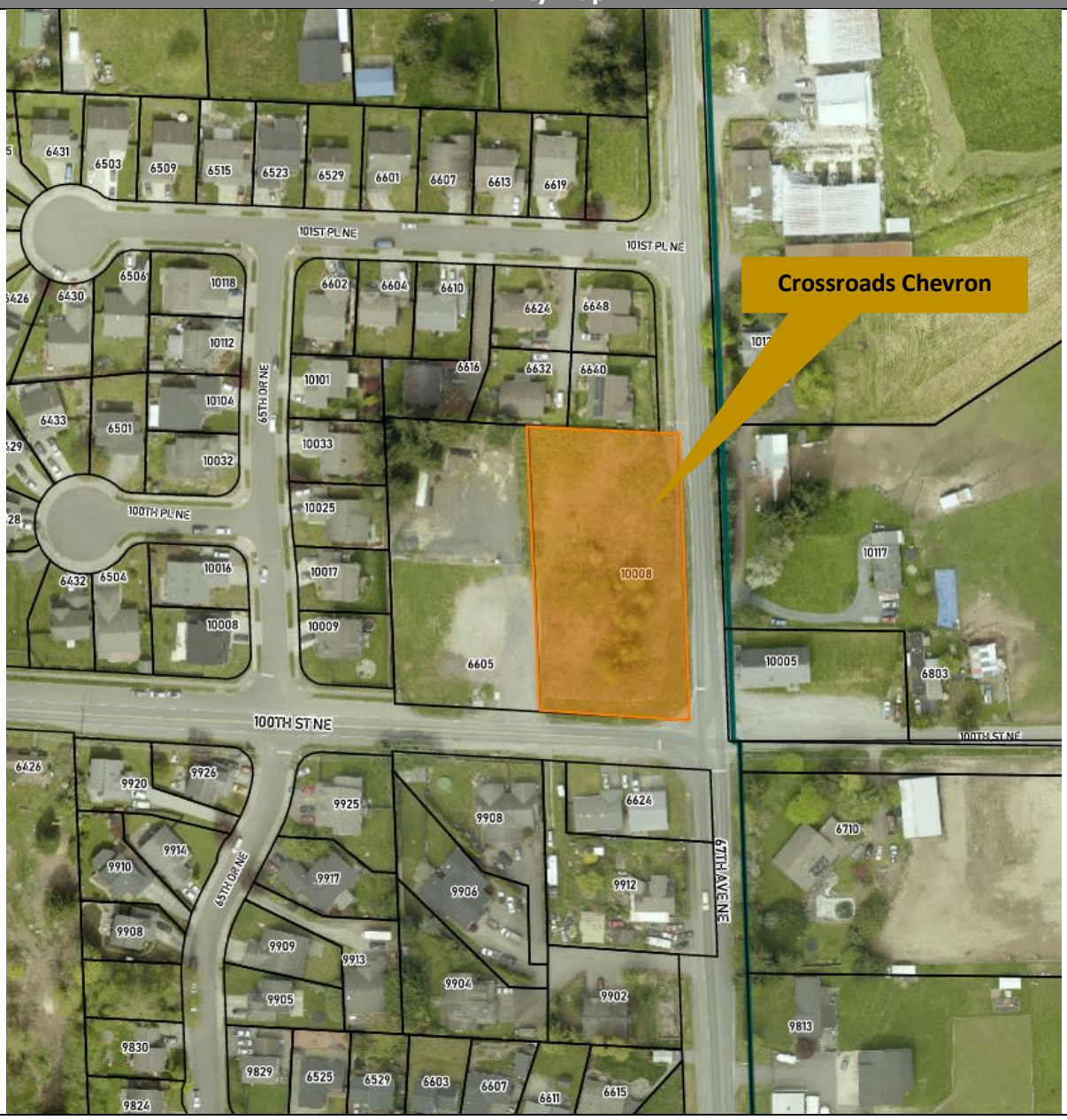
REVIEWING AGENCIES				
Marysville	**Local Agencies & Districts**	**State & Federal**	**County**	**Other**
☒ Building ☒ Fire District ☒ Development Services ☐ Parks ☒ Planning ☒ Police ☒ Public Works	☐ Arlington (city) ☐ Arlington Airport ☒ Comcast ☐ Community Transit ☐ Marysville Fire District ☒ PUD No. 1 ☒ Ziply	☒ BNSF ☒ DAHP ☒ DOE ☒ US Army Corp of Engineers ☒ WDFW ☐ WSDOT ☒ WUTC	☒ Health District ☐ Planning ☒ Public Works - Land Development ☐ Public Works ☐ ☐	☐ Puget Sound Clean Air ☐ Puget Sound Energy ☒ Stillaguamish Tribe ☒ Tulalip Tribes ☒ Parties of Record

ACTION				
☐ **Administrative**	☐ **City Council**	☒ **Quasi-Judicial**	☐ **Planning Commission**	
Date of Hearing	December 5, 2024	☒ **Approved**	☐ **Denied**	☐ **Continued**

STAFF CONTACT			
Name Amy Hess	**Title** Senior Planner	**Phone** 360.363.8215	**E-mail** ahess@marysvillewa.gov

SURROUNDING USES			
	Comprehensive Plan	**Zoning**	**Land Use**
Site	Neighborhood Business	NB	Vacant
North	Single-family, High Density	R-6.5	Single-family residences
East	Unincorporated Snohomish County	R-5	Large lot single-family residences and Grange
South	Single-family, High Density	R-6.5	Single-family residences
West	Single-family, High Density	R-6.5	City of Marysville Utility site, Single-family residences

Vicinity Map



1.0 FINDINGS AND CONCLUSIONS

1. **Description of Proposal**: An application was submitted by Meydenbauer Group in order to construct a fuel station with four (4) fuel pump islands (eight pumps), associated tanks, canopy, and a 3,914 square foot convenience store. The original application proposed six (6) fuel pump islands (12 fuel pumps) but was reduced after technical review by the City.

1.1. Review and approval of a commercial site plan is generally approved administratively by the Community Development Director, as outlined in MMC 22G.010.160(1). However, pursuant to MMC 22G.010.360, if adverse comments are received from at least five person or agencies during the comment persons a public hearing should be held. Therefore, this proposal will be reviewed by the Hearing Examiner at the scheduled public hearing.

2. **Project Location**: The proposed project is located at the northwest corner of 67th Avenue NE and 100th Street NE and is identified as Assessor's Parcel Number (APN) 30051500101800.

3. **Site Description**: The project site is undeveloped and vegetated with grasses, bushes, and blackberry vines. Most of the site is nearly level to gently sloping from north to south with less than 10 feet of vertical relief.

4. **Letter of Completeness**: The application was submitted on March 4, 2024 and determined to be complete on March 11, 2024. A letter of completeness (Exhibit 013) was provided to the applicant in accordance with MMC 22G.010.050.

5. **Public Notice**: Public notice of the development application (Exhibit 014) was provided in accordance with MMC 22G.010.090.

5.1. The notice of application was issued March 12, 2024 with comments requested by April 8, 2024. The full public comments received can be viewed in Exhibit 044 *Correspondence – Public Comments*. Applicant and City Staff Responses to comments can be viewed in full in Exhibit 049 – *Correspondence – Applicant and Staff Response.* Below is a summary of comments received:

Nature of Comment	Applicant Response	Staff Response
Zoning not appropriate for fuel station. Other fuel stations located within one (1) mile of project.	The purpose of the neighborhood business zone (NB) is to provide convenient daily retail and personal services for a limited service area and to minimize impacts of commercial activities on nearby properties. These purposes are accomplished by: (i) Limiting nonresidential uses to those retail or personal services which can serve the everyday needs of a surrounding residential area; (ii) Allowing for a mix of housing and retail/service uses; and	The project site is located within the Neighborhood Business (NB) zone. The NB zone is a commercial zone intended to provide convenient daily retail and personal services for a limited service area and to minimize impacts of large commercial developments on nearby properties. Gasoline service stations and food stores are permitted uses within the NB zone. Marysville Municipal Code does not limit the number of fuel stations in any given

	(iii) Excluding industrial and community/regional business-scaled uses. At its most basic core function, the project will provide convenient daily retail services to the nearby properties and general public by offering a premium fuel that is not available at Fred Meyer, while providing a retail location for citizens to purchase essential items.	area. If the use is permitted within the zone, and the project can demonstrate compliance with all applicable codes and standards, preliminary site plan approval should be granted.
Increase in traffic and number of vehicles on the roadways; traffic safety related to speeding and not complying with stop signs. Lack of sidewalks.	There will be significant alterations to the existing roadway with the addition of a center turning lane on eastbound 100th Street NE and a right-turn lane on southbound 67th AVE NE. Sidewalks will be installed on the projects frontages. Traffic impact studies have been undertaken and the resulting traffic concurrency recommendations will improve traffic in the area. Unfortunately, we cannot affect people's personal decision to break the law while driving, however we can improve the quality of the intersection to reduce people's inclination to break such laws and alleviate traffic in the area.	The applicant will be required to mitigate for the impacts of the development through improvements to the existing roadway, frontage, and intersections, as well as for future impacts through payment of traffic impact fees. As part of required mitigation, the applicant will install sidewalks along 67th Avenue and 100th Street frontages, helping to increase pedestrian mobility and safety. As noted by the applicant, the City cannot affect individual's decisions on following traffic laws. The applicant shall be required to complete mitigation and improvement measures as allowed by local and state standards.
Environmental risk; impact from stormwater runoff; impacts to nearby water wells.	All infrastructure that is to be installed is rated at the maximum level of conformance with building code that meets or exceeds development standards. All precautions will be in place to eliminate any environmental hazards in the operation of this service station, in accordance with state and federal law, including testing and monitoring requirements that will be enforced during construction and during normal business operations. The stormwater treatment facilities that will be installed will	There are no critical areas on site, nor within 500 feet of the subject property. The fueling components of the development will be designed, installed, and maintained in accordance with all local, state and federal standards. The applicant will be required to design their stormwater management system in accordance with the 2019 Department of Ecology (DOE) Stormwater Manual as well as MMC 14.15.040 and 14.15.050. Compliance with these standards will be

	capture and detain the significant majority of water on-site and convey it to City of Marysville infrastructure. Any water that flows off-site will be captured by stormwater infrastructure that is installed in the street and therefore not be absorbed into the groundwater supply.	verified during civil construction plan review.
Negative impact on property values and increase in crime.	We are not aware of any research studies that have proven a link to service centers and decreased property values. Community development presents the opportunity for businesses to generate taxable revenue that will increase the ability of the community to invest in services and development that increase property values for the greater community.	Staff has not seen any data that indicates development of vacant parcels has a negative impact on property values. A widely accepted and, in some cases required, strategy known as Crime Prevention Through Environmental Design (CPTED) principles, demonstrate that providing human activity increases natural surveillance that aides in restricting criminal intrusion.

6. Notice of Public Hearing: The public hearing for the proposed request was advertised in accordance with MMC 22G.010.110, *Notice of public hearing* (Exhibit 042).

Public comments received in response to the Notice of Public Hearing can be viewed in full in Exhibit 044 *Correspondence – Public Comments*. Applicant and City Staff Responses to comments can be viewed in full in Exhibit 049 – *Correspondence – Applicant and Staff Response.*

7. Request for Review: A Request for Review of the proposed development was sent to Local, County, State & Federal Agencies and Districts identified on page 1 of this report. The following comments were received; if the above-referenced agencies are not listed below, no comments were received:

Agency	Nature of Comment
Marysville Fire District	• *Project shall comply with current fire code requirements, including state and local amendments.* • *Access for firefighting operations along all sides of all buildings is required.* • *A hydrant will be required at the site to comply with commercial spacing requirements. Along 67th Ave is preferred.* • *All work shall comply with manufacturer's specifications and instructions, and fire code requirements for motor fuel dispensing facilities, 2021 IFC Chapter 57 for flammable and combustible liquids, and most recent NFPA 30A standard for motor fuel dispensing facilities. Full compliance must by confirmed by inspections.*

	• *The developer will be required to provide fire flow information.*
Snohomish County Public Utility District No. 1 (PUD)	• *The District presently has enough electric system capacity to serve the proposed development. However, the existing District facilities in the local area may require upgrading.* • *The District requires a minimum 14-foot clearance from any structure to accommodate workers, scaffolding and ladders. Minimum worker safety clearance from 115kV transmission wires is 20 feet.* • *The developer will be required to supply the District with suitable locations/easements upon its property for any electrical facilities that must be installed to serve the proposed development. It is unlikely that easements will be granted on District-owned property, or consents granted within District transmission line corridors.* • *There are likely no conflicts with transmission facilities. There are existing three-phase power lines and a pole at the northeast property corner with no obvious conflicts. Please work with a local Everett office Engineering Tech for power service to the project.* • *Any relocation, removal or undergrounding of District facilities to accommodate this project and the worker safety clearances shall be at the expense of the project developer and must be coordinated with the PUD in advance of final design.*
Marysville Public Works – Waste Water Treatment	• *When used for fueling stations an Oil Stop valves must be placed in a manhole or other containment device prior to the Coalescing Plate Separator.* • *Install a Coalescing Plate Oil/Water Separator. All drains plumbed to the Coalescing Plate Separator must be under a canopy cover or inside of the building. MMC 14.20.130* • *A detailed plumbing plans will need to be submitted in order to determine all the pretreatment requirements for this site. If the facility is preparing food that may introduce fats, oil and grease into the City of Marysville's sanitary sewer system, a grease interceptor will need to be installed. MMC 14.20.150* • *All wastewater sanitary sewer plumbing is subject to MMC 14.20 Pretreatment Requirements and City of Marysville Engineering Design Standards.*
City of Marysville – Traffic Division	• *Frontage improvements on 67th Ave. and 100th St. will be required.* • *Ultimate intersection shall be signalized thus adequate ROW for future signal infrastructure shall be provided on NW corner.* • *Traffic Division will support right-in/right-out access upon 100th St. NE. All right—in/right-out access points shall include construction of pork chop island(s) to facilitate compliance with restrictions.*

City of Marysville – Engineering Services	• *Water main will be required to be extended along the projects frontage of 67th Ave. NE.* • *Storm drainage will be required to be provided for the widened sections of 67th Ave. and 100th St.* • *Frontage improvements are required on 67th Ave. and 100th St.* • *An Engineering variance is needed in order to allow the proposed access points that do not meet the spacing standards.*

8. **State Environmental Policy Act Review**: A State Environmental Policy Act (SEPA) Mitigated Determination of Non-Significance (MDNS) was issued on October 30, 2024 (Exhibit 039). The appeal period expired November 15, 2024; no appeals were filed.

9. **Critical Areas**: No critical areas are located on the project site, or within 500 feet of the subject property.

10. **Access and Circulation**: Primary vehicular and pedestrian access to the proposed commercial development is proposed via two 40-foot wide driveways; one off of 100th Street NE and one off of 67th Avenue NE. The proposed driveways do not meet the minimum spacing requirements as prescribed by Engineering Design and Development Standards (EDDS) 2-05 *Corner Clearance from Intersections*. An Engineering variance request (Exhibit 022) was submitted on August 27, 2024, and was approved with conditions on October 16, 2024 (Exhibit 031). The conditions of variance approval are as follows:

10.1. The access to 67th Avenue NE will be allowed, however, it shall be shifted as far north as reasonably possible, to maximize separation from the nearby intersection.

10.2. The access to 100th Street NE will be allowed, however, it shall be constructed as a right-in/right-out access with a median island (often referred to as a 'pork-chop' island) directing outbound traffic to the westbound direction. This is intended to prevent left-turn movements out of the station which would cross at least one lane and be susceptible to collisions from traffic passing through the intersection.

The applicant submitted a site plan demonstrating compliance with the stacking lane requirements outlined in MMC 22C.140.050 (Exhibit 035).

11. **Traffic Concurrency**: A Traffic Impact Analysis (TIA) was prepared by Kimley Horn, dated March 2024 (Exhibit 007). It was updated August 27, 2024 (Exhibit 021). According to the TIA, the proposed development would generate up to approximately 530 new Average Daily Trips (ADT), and 37 PM peak hour trips (PMPHT).

Jesse Hannahs, PE, Traffic Engineering Manager, reviewed the TIAs, and issued a written concurrency recommendation dated October 29, 2024 (Exhibit 037), informing the developer of the project's impacts and mitigation obligation pursuant to Chapter 22D.030, *Traffic Impact Fees and Mitigation*. The conditions of concurrency recommendation are as follows:

11.1. The applicant shall be required to construct frontage improvements along 67th Avenue NE prior to occupancy. Roadway improvements, channelization, site access and street lighting plans shall be required to be reviewed and approved by the City Engineer, prior to construction plan approval.

11.1.1. 67th Avenue NE shall be built as a three lane Minor Arterial with bike lanes compliant with SP 3-201-004.

11.2. The applicant shall be required to construct frontage improvements along 100th Street NE prior to occupancy. Roadway improvements, channelization, site access and street lighting plans shall be required to be reviewed and approved by the City Engineer, prior to construction plan approval.

11.2.1. 100th Street NE shall be built as a three lane Collector Arterial with bike lanes compliant with SP 3-201-004.

11.3. The applicant shall be required to construct intersection improvements at the intersection of 67th Avenue NE and 100th Street NE prior to occupancy. Roadway improvements, channelization, signing and street lighting plans designed per City, State and/or Federal Guidelines/Standards shall be required to be reviewed and approved by the City Engineer, prior to granting of occupancy permits.

11.3.1. Intersection improvements shall include the installation of an eastbound right turn lane and a southbound right turn lane with this intersection to remain with all-way stop control.

11.3.2. Intersection construction shall include the construction of roadway improvements at the all-way stop controlled intersection to provide for the future full planned signalized intersection vehicular lane layout consisting of three lanes with bikes lanes (EDDS 3-201-004) on 67th Avenue NE 100th Street NE without necessity of future modifications to applicant's development frontage.

11.3.3. Intersection construction shall accommodate for the acceptable alignment of vehicular lanes for the interim all-way stop control with the eastbound and southbound right turn lane additions as well as the future signalized intersection alignment.

11.3.4. Intersection construction which requires the removal or modification of existing curb/gutter, pedestrian/bicycle facilities, street lighting or other public facilities outside the vehicular lanes shall be required to be repaired and replaced to current City, State and/or Federal Guidelines/Standards as part of the signal construction.

11.4. The applicant shall be required to dedicate public right-of-way in order to accommodate the required frontage improvements, in accordance with MMC 12.02A.110(1)(c), *Dedication of Road right-of-way – Required setbacks*. Right-of-way widths and required dedication shall be determined by the City Engineer.

11.4.1. Public right-of-way dedication upon the applicant's development frontage shall be required to accommodate the future signalization of the intersection of 67th Avenue NE and 100th Street NE.

11.5. In order to mitigate traffic impacts upon the future capacity of the road system, the applicant shall be required to submit payment to the City of Marysville, on a proportionate share cost of the future capacity improvements as set forth in MMC 22D.030.070(3), for the development. Traffic impact fees shall be per PMPHT, with up to 37 new PMPHTs total for the development, vested at a rate of $2,220 per PMPHT.

The applicant submitted a written proposal, dated October 29, 2024 (Exhibit 038), agreeing to the development's traffic impacts and mitigation measures. Pursuant to MMC 22D.030.070(6)(a)(ii), the traffic concurrency determination and the project's impacts and mitigation obligations shall expire on October 31, 2030.

12. Utilities: Per MMC 14.03.250, utilities are to be extended along the street frontages of the proposed project. Extensions of sewer and water mains as well as a storm drain

system for the roadway extension will be required. The following utilities will be provided to the site:

12.1. Storm Drainage: According to the *Drainage Report*, prepared by Geometrics Engineering PS, Inc., dated February 28, 2024 (Exhibit 009) and updated October 14, 2024 (Exhibit 029), rooftops, parking areas and driveways will be conveyed to an onsite detention vault. Runoff generated from the fueling area will go directly to the southeastern oil and water separator and then through 18" sanitary sewer pipe, and then conveyed south to the existing sanitary sewer. The runoff from the detention vault first goes to the oil & water separator, then it flows to the water quality unit, and then conveyed south to the storm drain (SD) located on the 100th Street NE (southern) side of the project site.

12.2. Water: The applicant will tie into the existing water main within 100th Street NE and extend along both project frontages as required, and on site in order to provide water service.

12.3. Sewer: The applicant will tie into the existing 8-inch PVC sewer main within 100th Street NE and extend along both project frontages as required, and on site in order to serve the development.

If the project is approved, review of required utilities will be addressed during civil construction plan review to ensure compliance with all of the applicable Marysville Municipal Codes.

13. Application Review: MMC 22G.010.140(3) requires the City to determine whether or not the project is consistent with the following items described in the applicable plans and regulations:

13.1. *Type of land use permitted at the site, including uses that may be allowed under certain circumstances, such as planned residential development and conditional uses, if the criteria for their approval have been satisfied.*

Staff Comment: The subject property is currently zoned Neighborhood Business (NB). Pursuant to MMC 22C.020.060, gasoline service stations are permitted outright in the NB zone.

13.2. *Density of residential development in urban growth areas.*

Staff Comment: Not applicable, the proposal is for a commercial use.

13.3. *Availability and adequacy of public facilities identified in the Comprehensive Plan.*

Staff Comment: The proposed development has been reviewed for compliance with the Comprehensive Plan to ensure consistency with the goals and policies related to the NB designation.

Staff finds that the proposed development, as conditioned, is consistent with the City of Marysville Comprehensive Plan and provides the necessary public facilities and improvements based on a review of the projects impacts.

13.4. *Development Standards*

Staff Comment: The purpose of the NB zone is to provide convenient daily retail and personal services for a limited service area and to minimize impacts of commercial activities on nearby properties.

The proposed development and subsequent use of the property will comply with the intent of the NB zone, and as conditioned herein, will meet all of the applicable development standards outlined in MMC Title 22, *Unified Development Code*.

The proposed development, as conditioned herein, makes appropriate provisions for the public use and interest, health, safety and general welfare.

14. Hearing Examiner – Required Findings: MMC 22G.010.170(3) requires that the Hearing Examiner not approve a proposed development without first making the following findings and conclusions:

14.1. *The development is consistent with the comprehensive plan and meets the requirements and intent of the Marysville Municipal Code.*

Staff Comment: The Comprehensive Plan designation for the subject property is Neighborhood Business (NB). If the project were approved, the proposed development and subsequent use of the property would be consistent with the pertinent development policies outlined in the Marysville Comprehensive Plan and the Marysville Municipal Code, as conditioned herein.

14.2. *The development makes adequate provisions for open space, environmentally sensitive areas, drainage, streets and other public ways, transit stops, water supply, sanitary wastes, public utilities and infrastructure, parks and recreation facilities, playgrounds, sites for schools and school grounds.*

Staff Comment: Based on a review of the *Environmental Checklist* (Exhibits 005 and 019), *Geotechnical Report* (Exhibits 009, 029, & 034), *Stormwater Report* (Exhibits 010 & 034), *Traffic Impact Analysis* (Exhibits 007 & 021) and *Preliminary Civil Construction Plan* (Exhibit 012), if the project were approved, future development would make adequate provisions for open space, environmentally sensitive areas, drainage, streets and other public ways, transit stops, water supply, sanitary wastes, public utilities and infrastructure, parks and recreation facilities, playgrounds, sites for schools and school grounds.

14.3. *The development is beneficial to the public health, safety and welfare and is in the public interest.*

Staff Comment: After reviewing the application materials (Exhibits 001 – 048) and reviewing to ensure compliance with the applicable provisions outlined in the Marysville Comprehensive Plan and MMC, if project were approved, future development would be beneficial to the public health, safety and welfare and would be in the public interest as the development would be designed in accordance with applicable MMC requirements.

14.4. *The development does not lower the level of service of transportation and/or neighborhood park facilities below the minimum standards established within the comprehensive plan. If the development results in a level of service lower than those set forth in the comprehensive plan, the development may be approved if improvements or strategies to raise the level of service above the minimum standard are made concurrent with the development. For the purpose of this section, "concurrent with the development" is defined as the required improvements or strategies in place at the time of occupancy, or a financial commitment is in place to complete the improvements or strategies within six years of approval of the development.*

Staff Comment: As conditioned, the development would not lower the level of service of transportation and/or neighborhood park facilities below the minimum standards established within the comprehensive plan.

14.5. *The area, location and features of land proposed for dedication are a direct result of the development proposal, are reasonably needed to mitigate the effects of the development, and are proportional to the impacts created by the development.*

Staff Comment: As conditioned, the area, location and features of land proposed for dedication are a direct result of the development proposal, are reasonably

needed to mitigate the effects of the development, and are proportional to the impacts created by the development.

2.0 RECOMMENDATION

Based on the foregoing findings and conclusions, review of the application materials and other supporting documentation available to the Community Development Department, and the City's regulatory authority to implement the policies, standards, and regulations of the Marysville Comprehensive Plan and Marysville Municipal Code, the Community Development Department respectfully recommends that the Hearing Examiner ***APPROVE*** the proposed Commercial Site Plan, subject to the following conditions:

1. The preliminary site plan received by the Community Development Department (Exhibit 046) shall be the approved preliminary site plan layout.
2. The applicant, owners and operators must ensure compliance with the Underground Storage Tank (UST) systems and UST system components are installed in accordance with Chapter 173-360A WAC and Chapter 90.76 RCW, or as otherwise amended.
3. All necessary power lines, telephones wires, television cables, fire alarm systems and other communication wires, cables or lines shall be placed in underground location either by direct burial or by means of conduit or duct. All such underground installations or systems shall be approved by the appropriate utility company and shall adhere to all governing applicable regulations including, but not limited to, the applicable City and State regulations and specific requirements of the appropriate utility pursuant to MMC 22G.120.270.
4. Pedestrian pathways that traverse a parking area or drive-aisle are required to be constructed with concrete pavers or decorative colored, or stamped concrete clearly denoting the pedestrian pathway. This detail shall be provided on the civil construction plans.
5. Prior to civil construction plan approval, a FINAL Landscape Plan shall be approved and designed in accordance with the applicable landscaping standards outlined in MMC Chapter 22C.120 *Landscaping and Screening*, including:

    5.1. A 20', Type L1 landscape buffer, plus a 6-foot sight-obscuring fence or wall, between the commercial uses and all properties designated single-family by the Marysville Comprehensive Plan.
6. Prior to civil construction plan approval, an illumination plan shall be designed and approved in accordance with applicable lighting standards outlined in MMC 22C.130.050(3)(d).
7. The access to 100th Street NE and 67th Avenue NE shall be constructed as a right-in/right-out access with a median island (often referred to as a 'pork-chop' island, or as otherwise determined by the Engineering Services Department) directing outbound traffic to the westbound/southbound directions respectively. This detail shall be included on the civil construction plans.
8. Prior to building permit issuance, the applicant shall be required to demonstrate all mechanical equipment located on the roof, façade or external portions of a building are architecturally screened so as not to be visible from adjacent properties at street level or the public street. Mechanical equipment shall be screened by a primary building element or structure.
9. Utility meters, electrical conduit, and other service utility apparatus shall be located and/or designed to minimize their visibility to the public. If such elements are

mounted in a location visible from the street, pedestrian pathway, common open space, or shared auto courtyards, they shall be screened by landscaping, fences, or walls.

10. Prior to building permit issuance, the applicant shall be required to demonstrate compliance with the site and building design standards outlined in MMC 22C.020.250 and MMC 22C.020.265.

    10.1. All structures, including but not limited to, canopy and canopy supports, should match architecturally by incorporating similar materials, detailing, roof, and building forms and designed to enhance the residential character of the neighborhood. Design review will include scrutiny of elaborate corporate colors that do not naturally blend into the character of the neighborhood.

11. Pursuant to MMC 22C.020.340, prior to issuing building permits, the applicant shall be required to demonstrate compliance with the following conditions:

    11.1. Where lighted signs and illuminated areas are permitted, such illuminating devices shall be shaded and/or directed so as not to visibly create a nuisance to any property in a residential zoning classification.

    11.2. Mechanical equipment located on the roof, facade or external portions of a building shall be architecturally screened so as not to be visible from adjacent properties at street level or the public street.

    11.3. Equipment or vents which generate noise or air emissions shall be located on the opposite side of the building from adjoining residentially designated properties.

12. The applicant shall be required to comply with the four (4) mitigation measures outlined in the State Environmental Policy Act (SEPA) Mitigated Determination of Non-Significance (MDNS) issued on October 30, 2024 (Exhibit 039).

13. Additional permitting requirements may apply for any large above ground propane or similar type tanks. These will not be permitted to be placed within required landscape buffers, and will need to be screened appropriately.

14. Signage, freestanding or wall, shall require a separate permit and be subject to the sign standards outlined in MMC 22C.160. No commercial signage shall occupy the pump island area.

3.0 EXHIBITS

The following Exhibits can be accessed electronically via the link provided in the exhibit header below.

PA24-006 Crossroads Chevron

001	Land Use Application	026	Response Letter
002	Critical Areas Statement	027	Preliminary Site Plan 10.08.2024
003	Project Narrative	028	Landscape Plan
004	Title Report-Legal Description	029	Drainage Report 10.15.2024
005	Environmental Checklist (SEPA)	030	Technical Review Comments 3

006 Critical Areas Statement

007 Traffic Impact Analysis

008 Geotech Report

009 Drainage Report

010 Preliminary Landscape Plan

011 Preliminary Site Plan

012 Preliminary Civil Plans

013 Letter of Completeness

014 Notice of Application

015 Request for Review

016 Affidavit of Publication

017 First Technical Review Comments

018 Response Letter

019 Environmental Checklist (SEPA) Updated

020 Traffic Impact Analysis Memo

021 Updated Traffic Impact Analysis

022 Variance Request

023 Preliminary Site Plan 08.27.2024

024 Building Elevations

025 Technical Review Comments 2

031 Variance Approval

032 Response Letter

033 Site Plan 10.24.2024

034 Drainage Report – Basin Maps

035 Stacking Lanes Site Plan

036 Snohomish County Traffic Offer

037 Traffic Concurrency Recommendation

038 Traffic Concurrency Acceptance

039 SEPA MDNS

040 Notice of SEPA MDNS

041 Applicant Response to Public Comments

042 Notice of Public Hearing

043 Technical Review Comments 4

044 Public Comments

045 Affidavit of Publication for MDNS

46 Site Plan – 11.14.2024

47 Street Lighting Plan – Preliminary

48 Affidavit of Publication for Public Hearing

49 Correspondence – Applicant and Staff Response to Public Comments

50 Staff Recommendation