



**Clackamas County Planning and Zoning Division
Department of Transportation and Development**

Development Services Building
150 Beaver Creek Road | Oregon City, OR 97045

503-742-4500 | zoninginfo@clackamas.us
www.clackamas.us/planning

NOTICE OF LAND USE APPLICATION IN YOUR AREA

Date: 08/20/2019
Permit Number: Z0365-19
Application: Design Review
From: Clackamas County Planning and Zoning
Notice Mailed To: Property owners within 300 feet
Community Planning Organizations (CPO)
Interested Citizens and Agencies

Application Proposal:

DESIGN REVIEW - 16 Unit Townhome Development: Design review of a 16-unit development of townhomes. Project will include 8, 2 unit townhouses, new site access, circulation, landscaping, and right of way improvements.

This project has been scheduled to be presented to the Design Review Committee on Tuesday, September 17th at 8:30 am. The meeting will be held in the Auditorium of Clackamas County's Development Services Building, located at 150 Beaver Creek Road in Oregon City.

Property Owner: FREDERICK G SHERVEY CONSTRUCTION INC
PO BOX 86320
PORTLAND, OR 97286

Applicant: MONTGOMERY, ANDREW
645 SW VIEWMONT DRIVE
PORTLAND, OR 97225

Address: 7949 SE GLENCOE RD
MILWAUKIE, OR 97222

Legal Description: 12E29DD01200

Zone: HDR-HIGH DENSITY RESIDENTIAL

Staff: Anthony Riederer 503-742-4528 **E-mail:** ariederer@co.clackamas.or.us,

How to Comment on this Application:

1. To be sure your comments will be considered prior to the decision, we need to have them within 20 days of the date of this notice.

Permit Number: Z0365-19

2. You may use the space provided below, mail a separate letter or e-mail the information. Please include the permit number, address the information to the staff member handling this matter, and focus your comments on the approval criteria for the application.

3. Return your mailed comments to: Clackamas County Planning and Zoning, 150 Beaver Creek Rd, Oregon City, OR 97045; FAX to (503) 742-4550.

Community Planning Organization: The following recognized Community Planning Organization (CPO) has been notified of this application. This organization may develop a recommendation on this application. You are welcome to contact this organization and attend their meeting. If this Community Planning Organization is currently inactive, and you are interested in becoming involved in Land Use Planning in your area, please contact the Citizen Involvement Office at (503) 655-8552.

SOUTHGATE (INACTIVE)

OR

Decision Process: In order to be approved, this proposal must meet the approval criteria in the Zoning and Development Ordinance, Section(s)

315, 1000 series, 1102, 1307

The Ordinance criteria for evaluating this application can be obtained from this office or viewed at www.clackamas.us/planning/zdo.html. You may view the submitted application at the following link, <https://accela.clackamas.us/citizenaccess/> within five days of the date of this notice, or at our office during weekday lobby hours, 8:00 am to 4:00 pm, Monday through Thursday and 8:00 am to 3:00 pm Friday.

A decision on this proposal will be made and a copy will be mailed to you. If you disagree with the decision you may appeal to the Land Use Hearings Officer who will conduct a public hearing. There is a \$250 appeal fee.

Comments:

Your Name/Organization

Telephone Number

Clackamas County is committed to providing meaningful access and will make reasonable accommodations, modifications, or provide translation, interpretation or other services upon request. Please contact us at 503-742-4545 or email DRenhard@clackamas.us.

503-742-4696: ¿Traducción e interpretación? |Требуется ли вам устный или письменный перевод? | 翻译或口译? | Cán Biên dịch hoặc Phiên dịch? | 번역 또는 통역?



Planning & Zoning
 Development Services Building
 150 Beavercreek Road | Oregon City, OR | 97045
 Phone: (503) 742-4500 | Fax: (503) 742-4550
 E-mail: zoninginfo@co.clackamas.or.us
 Web: <http://www.clackamas.us/transportation/planning/>

LAND USE APPLICATION

DEEMED COMPLETE

ORIGINAL DATE SUBMITTED: 08/09/2019
 FILE NUMBER: Z0365-19-D
 APPLICATION TYPE: DESIGN REVIEW

The Planning and Zoning Division staff deemed this application complete for the purposes of Oregon Revised Statutes (ORS) 215.427 on: 8/19/19

[Signature]
 Signature

Senior Planner
 Title

Anthony Rieders
 Print Name

Comments: _____

Check one:

The subject property is located inside an urban growth boundary. The 120-day deadline for final action on the application pursuant to ORS 215.427(1) is:
Tuesday, December 17th 2019

The subject property is not located inside an urban growth boundary. The 150-day deadline for final action on the application pursuant to ORS 215.427(1) is:



CLACKAMAS COUNTY PLANNING AND ZONING DIVISION
 DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
 DEVELOPMENT SERVICES BUILDING
 50 BEAVERCREEK ROAD | OREGON CITY, OR 97045
 503-742-4500 | ZONINGINFO@CLACKAMAS.US



Land Use Application

paid 8-09-19 by

Date received: <u>8.09.19</u>	Staff initials: <u>[initials]</u>
Application type: <u>Design Review</u>	File number: <u>20365-19-D</u>
Zone: <u>HDR</u>	Fee: <u>\$110512.00</u>
Violation #:	CPO/Hamlet: <u>Southgate (inactive)</u>

Applicant information:
 What is proposed? 16 TOWNHOMES (8), 2-UNIT TOWNHOMES

Name of applicant: ANDREW MONTGOMERY
 Mailing address: 645 SW VERNON MOUNT DR
 City PORTLAND State OREGON Zip 97225
 Applicant is (select one): Property owner Contract purchaser Agent of the property owner or contract purchaser
 Name of contact person (if other than applicant):
 Mailing address of contact person:

Applicant #s: Wk: 503 504 6492 Cell: Email: APM@TERCAFORMA.BIZ
 Contact person #s: Wk: Cell: Email:

Other persons (if any) to be mailed notices regarding this application:
RICK STERVEY P.O. BOX 66370 PORTLAND OR 97290 OWNER

Name	Address	Zip	Relationship
RICK STERVEY	P.O. BOX 66370 PORTLAND OR	97290	OWNER

Name	Address	Zip	Relationship
SITE ADDRESS:	<u>7949 GLENCOE RD MILWAUKIE OREGON</u>		
TAX LOT #:	<u>152E29DD 01200</u>	Tax	
	<u>T21E R2900 Section 01200</u>	Lot(s)	<u>86</u>
Adjacent properties under same ownership:			Total land area:
T _____	R _____	Section _____	Tax lot(s) _____
T _____	R _____	Section _____	Tax lot(s) _____
T _____	R _____	Section _____	Tax lot(s) _____

I hereby certify that the statements contained herein, along with the evidence submitted, are in all respects true and correct to the best of my knowledge.

Andrew Shumway 8-08-19 Andrew Shumway Construction Inc.
 Property owner or contract purchaser's name (print) Date Owner or contract purchaser's signature
ANDREW MONTGOMERY 8-7-2019 [Signature]
 Applicant's name (print) Date Applicant's signature



Application for Design Review

May 2018

*****A Pre-Application Conference is required prior to filing this application.*****

Date Received: 8-09-19 File No.: _____
 Staff Member: ly Design Review Fee: \$ 16,572.00
 Zone: HDR .384% of Construction Cost: \$ 4.3 mill
 Comp. Plan: MuH (\$650.00 Minimum / \$36,835.00 Maximum Fee)
 Development No.: _____ Project No.: _____

Name of Applicant: Andrew Montgomery TERKAFOKUNA
 Mailing Address: 645 SW VIEWMONT DR PDX 97225
 Phone: 503 296 0076 Email: ARM@TERKAFOKUNA.BIZ

What is proposed?:
(16) TOWNHOME UNITS (8) 2-UNIT TOWNHOMES

Proposed title: The Glencoe Townhomes Sq. ft. of each structure: 3,045
 Estimated completion date: 8-1-2020 Estimated cost of constr (labor & materials): \$ 4.3 MILL
 Site Address: 7949 GLENCOE ROAD
 Total Land Area : .68 Acres
 Legal Description: T 21E R 2900 Section: 01200 Tax Lot(s): 86
 Adjacent Properties Under Same Ownership: T ___ R ___ Section ___ Tax Lot(s) ___

Other persons (if any) to be mailed notices regarding this application:

<u>FREDERICK SHERVEY</u>	<u>PO Box 66370 PORTLAND OR 97290</u>	<u>OWNER</u>
Name	Address	Relationship
Name	Address	Relationship

I hereby certify the statements contained herein, along with the evidence submitted, are in all respects true and correct to the best of my knowledge.

FREDERICK SHERVEY
 Property Owner's Name (Print)
[Signature] 8-9-2019
 Property Owner's Signature Date

ANDREW MONTGOMERY
 Applicant's Name (Print)
[Signature] 8-9-2019
 Applicant's Signature Date

DESIGN REVIEW PRE-APPLICATION CONFERENCE

ZPAC00170-18

CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
LAND USE & ENVIRONMENTAL PLANNING DIVISION
Development Service Building, 150 Beaver Creek Road, Oregon City OR 97045
Phone: (503) 742-4500 Fax: (503) 742-4550

LOCATION: Room 209, Planning, DSB

DATE & TIME: January 9, 2019, 9:30 a.m.

STAFF CONTACT: Anthony Riederer, AICP - Phone: (503) 742-4528 - E-mail:
ariederer@clackamas.us

APPLICANT: Robert Price

LEGAL DESCRIPTION: 21E29DD 01200

SITE ADDRESS: 7949 Glencoe Rd., Milwaukie, Oregon

TOTAL AREA INVOLVED: Approximately 0.69 Acres

PRESENT ZONING: HDR – (High Density Residential)

PROPOSAL: Development of the site with 8, 2-unit townhouses, a total of 16 units. Each unit is proposed to have three bedrooms. Site development is to include new approach and access, site circulation, landscape, and parking.

APPLICABLE AGENCIES & STAFF:

1. County Planning: Anthony Riederer, (503) 742-4528, ariederer@clackamas.us
2. County Engineering: Kaylin Hangartener, (503) 742-4711, khangartener@clackamas.us
3. County Building: Richard Carlson, (503) 742-4769, richardcar@clackamas.us
4. Clackamas County Fire: Matt Amos, matt.amos@clackamasfire.com
5. WES: Eric Carr, (503) 742-4571, ecarr@clackamas.us
6. Clackamas River Water: Betty Johnson, (503) 723-2531, bjohnson@crwater.com
7. SDC charges: Wendi Coryell, (503) 742-4657, wendicor@co.clackamas.or.us
8. County Sustainability: Rick Winterhalter, (503) 742-4466, rickw@clackamas.us
9. Waste Management: (800) 808-5901

Design of roofline shall be defined by cornice or other architectural treatment to provide visual interest, as per 1005.4(D).

Incorporate design elements to increase safety and surveillance as per the standards in 1005.04(G).

Design site and building to address solar access requirements provided per 1005.04(H).

Locate and design mechanical equipment so that it is screened as per the standards provided in 1005.04(J).

Modification of any of the standards of 1005.03 and 1005.04 may be approved as part of the design review if the proposed modification will result in a development that achieves the purpose stated in 1005.01 **as well or better than** the standard being modified.

1005.05: Outdoor Lighting

Design outdoor lighting to comply with the standards in 1005.05(A).

1005.06: Additional Requirements

Meet at least one (1) of the additional requirements listed in 1005.06.

4. ZDO Section 1006 - Utility Lines & Facilities

Location, design, installation, and maintenance of utility lines and facilities shall be carried out with minimum feasible disturbance of soil/site and consistent with rules/regulations of districts for surface water management, per 1006.01(A).

New electric, gas, communications services shall be installed pursuant to the requirements of the district/company serving the development and installed underground, unless prohibited by utility district or company, per 1006.01(B).

Easements shall be provided along property lines as deemed necessary by the Department of Transportation and Development, special districts, and utility companies, as per 1006.01(D).

Development that has need for, or will be provided with, public or community water shall install water service facilities and grant necessary easements pursuant to the requirements of the district or company serving the development, per 1006.01(E).

Approval of a development that requires public or community water service shall be granted only if the applicant provides a preliminary statement of sufficiency from the water system provider, as per 1006.01(F).

Storm drainage to be reviewed by WES. A statement of feasibility is required with your application.

5. ZDO Section 1007 & 1015 - Roads, Circulation & Parking

Circulation and parking to be reviewed by Clackamas County Engineering.

Vehicle access to the site is indicated as a driveway off of Glencoe Rd.

Parking shall meet the standards of 1015.02 as appropriate per the project design.

For information on hauling and capacity requirements, please contact Rick Winterhalter of Clackamas County's Sustainability and Solid Waste program and Sunset Garbage Collection, the local trash/recycling hauler.

Upon receipt of a complete application, processing time will take approximately 8-10 weeks.

PRE-APPLICATION INFORMATION FROM DEVELOPMENT ENGINEERING

FILE NO. ZPAC0170-18

PROJECT: Duplex Buildings – Glencoe Road

LEGAL: T1S., R 2E., Section 29DD, Tax Lots 01200

DATE: January 9, 2019

Engineering staff: Kaylin Hangartner 503-742-4711
khangartner@clackamas.us

- 1) Applicant shall obtain a Development Permit from the County Engineering Section prior to the issuance of a Building Permit. The Development Permit fee is 8.83% of the public road improvement plus 5% of the onsite transportation improvements cost estimate. Issuance of a Development Permit is dependent upon the formal approval, by Engineering staff, of a set of plans in compliance with Roadway Standards section 140. These plans shall also illustrate road or street frontage features, including any existing and proposed pavement striping for a distance of 200 feet beyond the limits of the property lines, and the plans shall be signed and stamped by a Professional Engineer registered in the State of Oregon.
- 2) No right-of-way dedication is required. The existing right-of-way width is 60 feet.
- 3) No traffic study is required, unless ODOT has concerns.
- 4) Applicant shall grant a five to eight foot wide easement for signs, slopes, sidewalks and public utilities along the entire frontage.
- 5) Applicant shall design and construct improvements along the entire site frontage of SE Glencoe Road.
 - a) 16' half-street improvement
 - b) standard curb or curb and gutter
 - c) drainage facilities in conformance with Water Environment Services
 - d) 5-foot wide unobstructed sidewalk behind a minimum 5-foot wide landscape strip with street trees.

If mailboxes, fire hydrants, utility poles, etc, are located within the limits of the sidewalk, an eyebrow shall be constructed so that the full width of the sidewalk is provided around the obstruction. Additional easement, as necessary, shall be granted to provide for any sidewalk eyebrows.

If the sidewalk does not connect to sidewalk on adjacent property, the end of the sidewalk shall require the construction of a fully ADA compliant concrete ramp, adjacent to the end of the sidewalk, providing a transition from the new sidewalk to the edge of pavement.

Also required will be one driveway approach in conformance with Standard Drawing D650. The driveway needs to be in conformance with Standard Drawing R100. And passenger vehicle turnarounds are required for the west end of the parking lot. (Standard Drawing C220).

- 6) Applicant shall provide adequate on site circulation for the parking and maneuvering of all vehicles anticipated to use the parking and maneuvering areas, including a minimum of 24 feet of back up maneuvering room for all 90-degree parking spaces. Loading spaces shall also be afforded adequate maneuvering room. The applicant shall show the paths traced by the extremities of the anticipated large vehicles, including off-tracking, on the site plan to insure adequate turning radii are provided for the large vehicles maneuvering on site and at driveways. All parking and maneuvering areas located within urban areas shall be paved.

- 7) Parking spaces shall meet *ZDO* section 1015 dimensional requirements. The plans shall list the number of parking spaces required and the number of parking spaces provided. The applicant shall label all carpool/vanpool, disabled, and loading berth spaces on the plans. Parking layout geometry shall be in accordance with Zoning and Development Ordinance Table 1015-1 and Figure 1015-1.
- 8) The 20-foot wide private drive minimum centerline radius shall be 40 feet.
- 9) The required intersection sight distance for a design speed of 30mph is 335 feet. The applicant shall provide and maintain adequate intersection sight distances and stopping sight distances. In addition, no plantings at maturity, retaining walls, embankments, fences or any other objects shall be allowed to obstruct vehicular sight distance.

Intersection sight distance is measured from an observation driver's eye height of 3.5 feet (7.6 feet for trucks) above the driveway surface to an object height of 3.5 feet, located in the center of the oncoming travel lane, and typically made from an observation point located 14.5 feet back from the edge of the travel lane for drivers preparing to exit the site and enter onto a road. The top of the 3.5-foot tall object shall be visible for the entire required intersection sight distance from the observation point out to the minimum required intersection sight distance.

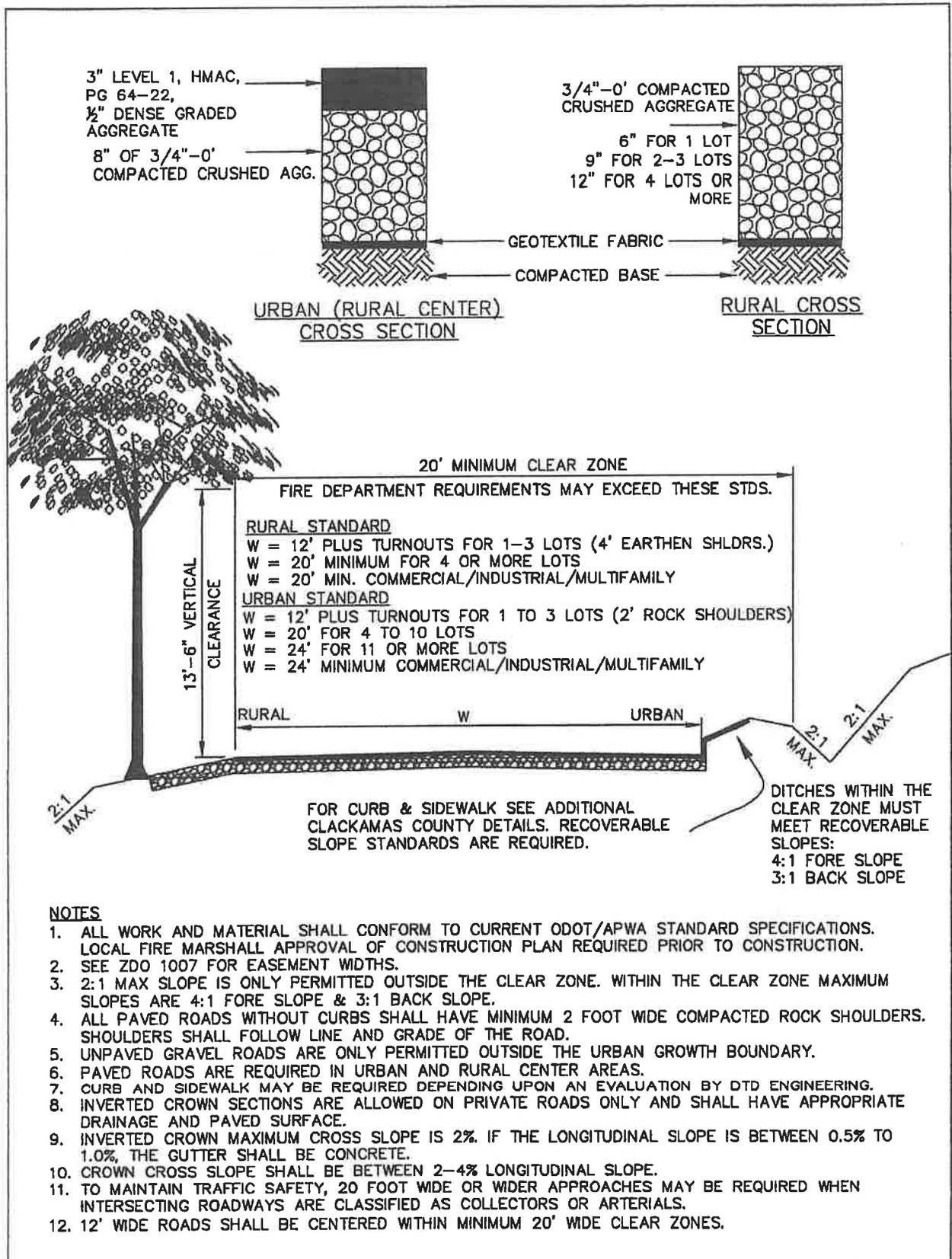
Sight distance measurements for stopping sight distance are made from an observation driver's eye height of 3.5 feet (7.6 feet for trucks) above the travel lane surface to an object height of 2 feet, located in the middle of the same lane as the driver. The top of the 2 foot tall object shall be visible for the entire required stopping sight distance from the observation point out to the minimum required stopping sight distance.

Intersection sight distance for left turning drivers exiting the road and entering the site is measured from an observation driver's eye height of 3.5 feet (7.6 feet for trucks) above the pavement surface to an object height of 3.5 feet, located in the middle of the oncoming travel lane. The top of the 3.5 foot tall object shall be visible for the entire required intersection sight distance from the observation point out to the minimum required intersection sight distance.

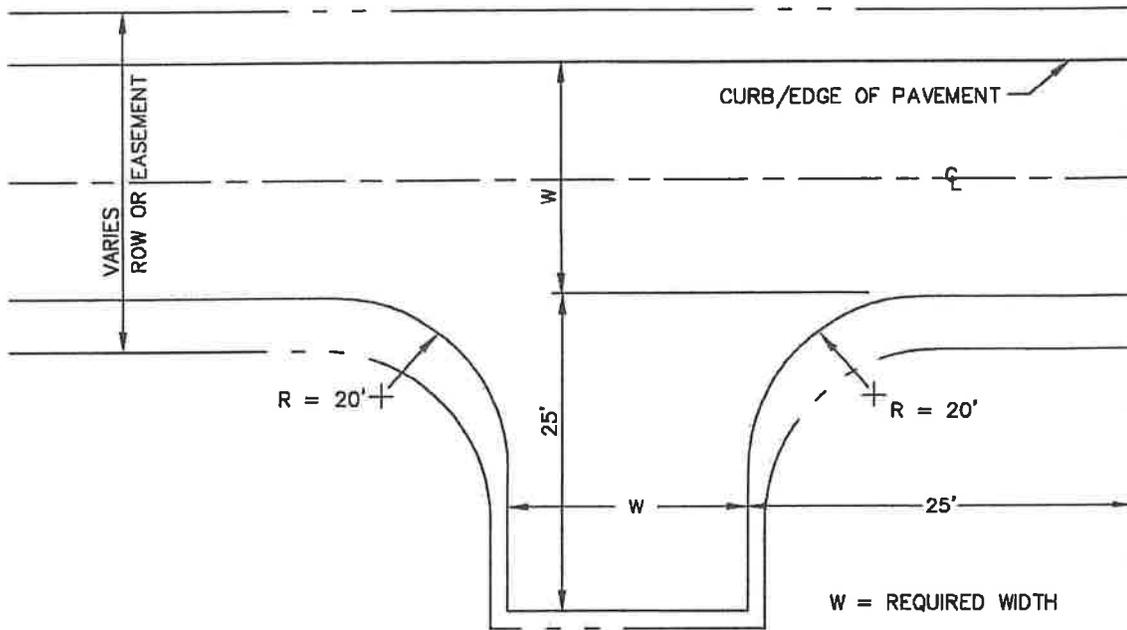
Sight distance requirements are based on the *Clackamas County Roadway Standards* and the American Association of State Highway and Transportation Officials (AASHTO) 2011 publication, "A Policy on Geometric Design of Highways and Streets."

- 10) Applicant shall comply with County Roadway Standards clear zone requirements in accordance with Roadway Standards subsection 245.
- 11) All curbs shall typically be type "C", or curb and gutter if curb line slope is less than one percent, if they carry, direct or channel surface water. Alternative curbs will be considered when it is determined by the Clackamas County Department of Transportation and Development that type "C" curbs or curb and gutter are not appropriate. Extruded curbs for carrying, directing or channeling surface water, or used as a vehicle wheel stop, shall not be allowed.
- 12) Applicant shall provide and implement a signing and pavement-marking plan for on site parking and circulation. This plan shall be reviewed and approved by the Engineering section and the local Fire Marshal prior to the applicant being issued a Development Permit.
- 13) Prior to the issuance of a building permit the applicant shall submit to Clackamas County Engineering Office:
 - a) Written approval from Clackamas Fire District #1 for the planned access, circulation and water source supply.

- b) Written approval from Clackamas River Water District for adequate water supply to service the development.
 - c) Written approval from WES for surface water detention facilities and erosion control measures.
- 14) Plans shall note that "Separate Utility Placement Permits" are required from Clackamas County Engineering when utility connections within the County right-of-way of are proposed.
- 15) Prior to Building Permit approval, the public utility easement shall be provided to Clackamas County DTD, Engineering, for review and recording.
- 16) Prior to commencement of any work, including grading, and prior to issuance of Building and Street Construction permits, the contractor shall:
- a) Provide a traffic control plan for review and approval from Clackamas County's Engineering Office.
 - b) Provide a certificate of liability insurance, naming the County as additionally insured.
 - c) Obtain separate "Utility Placement Permits" for utility installations within the County right-of-way. The applicant shall obtain these permits from the Engineering office prior to the issuance of a Building Permit or the Development Permit.
- 17) Plans should list the utilities serving this site and their phone numbers.
- 18) Prior to certificate of occupancy, applicant shall provide a performance guarantee in the form of a performance bond for the Development Permit in the amount of 125% of the approved Engineer's cost estimate for the incomplete improvements.
- 19) The use of public rights-of-way for construction vehicle and materials staging is not authorized by the Roadway Standards and poses a potentially deleterious effect of the proposed use, because it contributes to congestion, reduces sight distance, and occupies shoulders intended for emergencies and other purposes. To protect the public from such effects, the applicant shall be required to submit a construction vehicle management and staging plan for review and approval by the County DTD, Construction and Development Section, before the County issues a Development Permit. The plan shall show that the construction vehicles and materials will not be staged or queued-up on improved public streets and shoulders without specific authority from DTD for that purpose.



REVISION	DATE	BY	DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT	APPROVAL DATE: 2/1/13	SCALE: N.T.S.	STANDARD DRAWING
RURAL X-SEC EDIT	12/12	RW	150 BEAVERCREEK ROAD OREGON CITY, OR 97045	CLACKAMAS COUNTY	PRIVATE ROADS AND DRIVEWAYS MINIMUM STANDARDS	R100



NOTES

1. TURNAROUND CAN BE ON EITHER SIDE OF STREET.
2. TURNAROUND SHALL BE A MINIMUM OF 20 FEET WIDE OR THE WIDTH OF THE ROAD, WHICHEVER IS GREATER.
3. CURBS ON PUBLIC AND COUNTY ROADS SHALL BE MARKED YELLOW WITH 4" THERMOPLASTIC. CURBS ON PRIVATE ROADS SHALL BE PAINTED RED AND BE POSTED WITH NO PARKING SIGNAGE ON ALTERNATE SIDES OF ROADWAY, 50' ON CENTER.
4. IF NO CURBS ARE PRESENT, STREETS SHALL BE POSTED WITH NO PARKING SIGNAGE ON ALTERNATE SIDES OF ROADWAY, 50' ON CENTER.

REVISION	DATE	BY	DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT 150 BEAVERCREEK ROAD OREGON CITY, OR 97045		APPROVAL DATE: 2/1/13	SCALE: N.T.S.	STANDARD DRAWING
TEXT NOTE 3	12/12	RN			PASSENGER VEHICLE TURNAROUND	C220	
TEXT NOTE 4	12/12	RN					



Clackamas River Water

Attachment County Preliminary Statement of Feasibility

To: Frederick G Shervey Construction, Inc

From: Betty Johnson

Date: January 8, 2019

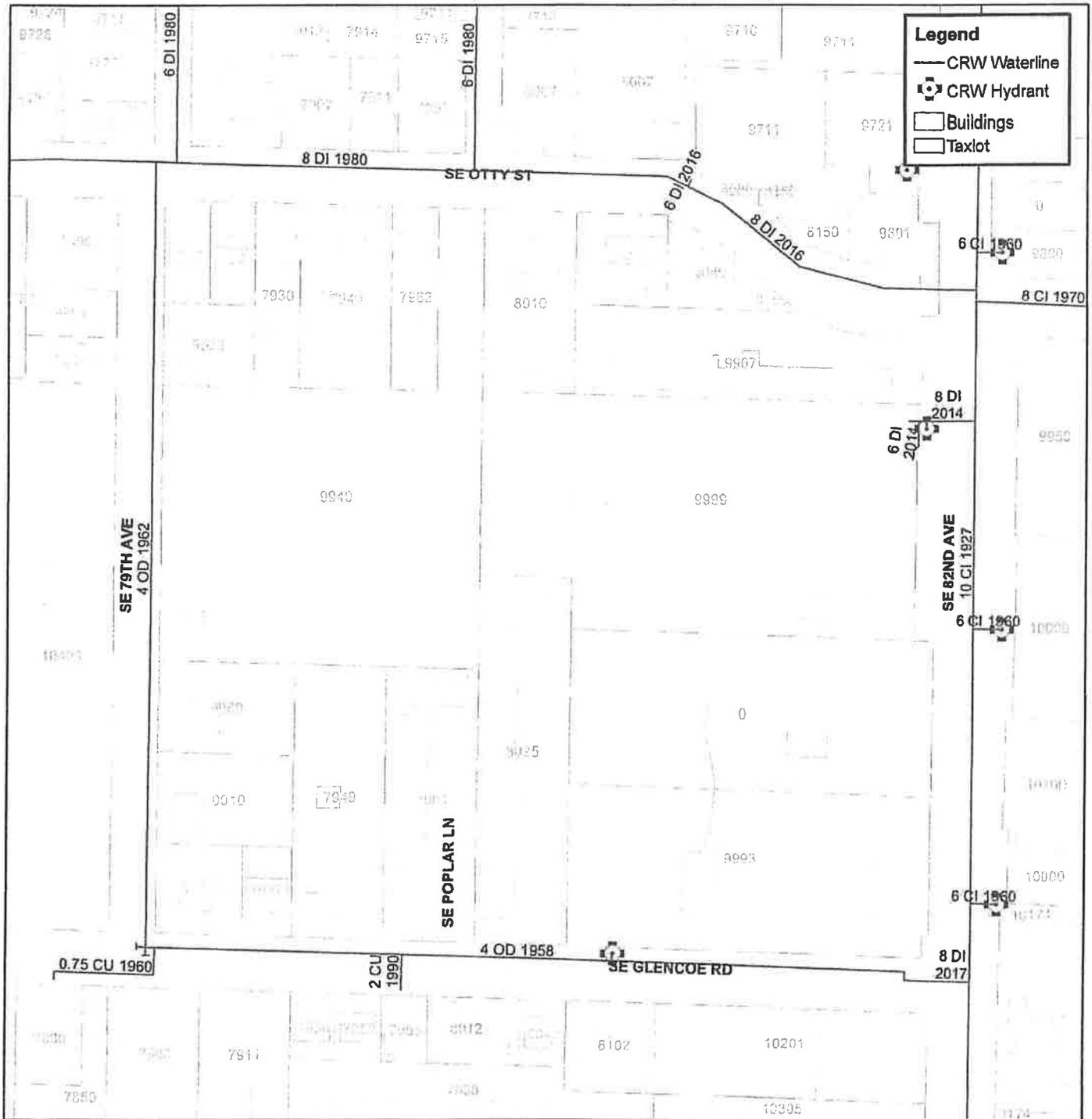
Re: 7949 SE Glencoe Rd, Milwaukie, OR 97222

● Comments:

- A. *“Water service will be provided only from pipes or mains located within public street, alleys or rights-of-way, or within easements furnished to CRW, and to property or premises with frontage to such mains.... Each dwelling or building will be provided with its own water service connection and meter ...No person shall furnish water to other buildings or premises without the written approval of the Board, which may be granted in the sole discretion of the Board, and then only under the specific terms of an agreement approved by CRW”*
- B. Fire hydrant number and distribution shall be in accordance with the Oregon Fire Code C105.1
- C. Placement of fire hydrant systems shall be in accordance with the Oregon Fire Code 507.5.1
- D. Unless Noted on plans or specified otherwise, all construction and backflow devices are to be in accordance with the most recent version of Clackamas River Water standards and the Oregon Administration Rules (OAR), Chapter 333.
- E. All water facilities design, construction, testing and maintenance, where applicable, shall conform to the latest adopted revision of the Oregon state Health Division administrative Rules chapter 333 on Public water System except where provisions outlined in the Clackamas River Water rules and regulations.
- F. For design of District’s water system improvements, hydraulic system must be analyzed using the worst- case scenario envisioned in the district’s current Water System Facilities Plan. The water system analysis shall be conducted using a simultaneous demand for the maximum (peak) day demand or peak hour non-fire demand, whichever is greater, and the fire demand.
- G. Any substantial deviation from the approved construction plans must have prior approval of the Water District.
- H. Easements for water facilities shall be provided along property lines and designated on the final plat, as deemed necessary by the Water District.
- I. Resale of water purchased from the Water District will not be permitted. No user shall resell or permit resale of water directly to any person, or for any use.

- J. An approved water system capable of supplying required fire flow for fire protection shall be provided to all premises upon which buildings are to be constructed.
- K. If water service is adequate with the exception of fire flows, the applicant shall submit a statement to Clackamas River Water from the fire district serving the subject property that states that if and /or what alternate method of fire protection is acceptable.
- L. Upon plan review there may be additional requirements as set forth by the Water District.

Clackamas River Water - 7949 SE Glencoe Rd

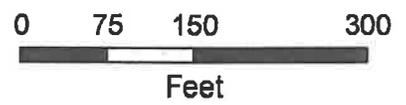
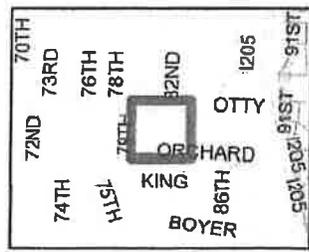


Legend

- CRW Waterline
- CRW Hydrant
- Buildings
- Taxlot

Date: January 8, 2019
 Drawing Name: GIS-Development(9-25-18)
 Drawing Location: I:\Documentatlon\Facility Data
 Drawing By: B.Johnson

MAP FOR REFERENCE PURPOSES ONLY
 The information on this map is derived from Clackamas River Water's digital database. However, there may be map errors or omissions. Please contact Clackamas River Water directly to verify map information. Notification of any errors is appreciated.



CLACKAMAS RIVER WATER
 GEOGRAPHIC INFORMATION SYSTEM
 1879 SE 82nd Drive - Clackamas, Oregon
 503-722-9220 - www.crw.com



Planning Application for:
The Glencoe Townhomes
7949 Glencoe Road, Milwaukie Oregon

Wednesday, August 7, 2019

To: Clackamas County Department of Transportation & Development
Land Use and Environmental Planning Division
Development Services Building, 150 Beaver Creek Road, Oregon City Or 97045

Permit # ZPAC00170-18

Legal description: 21E29DD 01200

Total Area involved: Approximately .68 Acres (100'x300')

Owner/applicant : Mr. Rick Shervey
PO Box 66320
Portland, Oregon 97290

Owner rep.: Terraforma Architecture
645 SW Viewmont Drive
Portland, Oregon 97225

Present Zoning: HDR - (High Density Residential)

Proposal: Development of the site with 8, 2unit townhouses, a total of 16 units. Each unit is proposed to have two bedrooms. Site development is to include new approach and access, site circulation, landscape, and parking.

1. ZDO Section 315 (high density Residential)

Applicant response: Complies, See site plan sheet A1

- District Land Area for Density: 1,742 sf: 30,000 sf / 1,742 sf = 17.22 Max min. 15.
- Minimum lot size: none
- Minimum Front 15'. See site plan
- Maximum Front per 1005.03E,H. NA This code is intended for a different use.
- Minimum Rear: Per 1005.03(L) NA A modification is requested as allowed in 1005.03(L 5) to meet density requirements.
- Building Height: No Maximum

2. ZDO Section 1002 - Protection of Natural features

Applicant response: Complies, See site plan sheet A1

The site is essentially flat and covered with grass and a couple of trees. It had a home on it that was removed. Our plan is to remove the few trees that are there and replant per code.

3. ZDO Section 1005 - Sustainability and Site Design

100.03 General Site Design Standards

Applicant response: Complies, See site plan sheet A1

The buildings are organized in a a very efficient site design to share infrastructure.

All the buildings are arranged so their longest elevations are due south (with-in 20 degrees)

The 5' sidewalk meets the standards of 1005.03(D)

We did our best to meet this requirement by putting our longest elevation at the street. We need a modification, however, as it is not practical for this long narrow lot, to meet the density requirements.

1005.04 Building Design

Applicant response: Complies, See Architectural elevations sheet A3

- A. All facades visible from a public or private street are developed with architectural relief, variety and visual interest. There are two types of sidings used, both gypsum reinforced fiber concrete, lap with a shingle style. The colors of the two sidings are also different to break up the massing (see color boards). The entrances were given particular emphasis by by having the front door framed by two columns. There is a balcony that further breaks up the front facade. The building

facades both on the Glencoe road and the private drives will be further delineated by the use of landscaping. See the landscape plan.

- B. The building entries are clearly defined, highly visible and sheltered with an overhang of 5'.
- C. NA
- D. The eaves overhang 24" and roof vents shall be on opposite side of Glencoe road.
- E. See A response above.
- F. See A response above. The style of the buildings is craftsman / traditional which reflects the older context of the neighborhood. The building's primary views are out the front and back and not into an adjacent units primary living areas.
- G. The buildings primary space windows look down onto the private street for good surveillance. Each unit will have a flood light on photo cell. All parking is on the private street and easily accessible to police patrol. Mail boxes are easily visible and accessible (See site plan A1)
- H. The layout of the property did not allow major windows toward the south. A modification to this requirement based on meeting the density requirements, is requested.
- I. See A and F responses above.
- J. NA
- K. NA
- L. NA

1005.05

Applicant response: Complies, See Sheet A3, front elevation

- A. The outdoor lighting will be on the front facades of the building's front elevation facing the main pedestrian sidewalk and private street. They will not be above 12'. See sheet A3 and cut sheet provided.

1005.06

Applicant response: Complies, See Sheet A1 site plan

- G. The landscaping provided is @ 36% of the total site area, which exceeds the required 25% per Table 1009-1
- R. There are 24 which is exactly the minimum number of parking spaces for 16 units. $1.5 \times 16 = 24$

4. ZDO Section 1006 - Utility Lines & Facilities

Applicant response: Complies, See Civil plans

5. ZDO Section 1007 & 1015 - Roads, Circulation & Parking

Applicant response: Complies, See Civil plans

6. ZDO Section 1009 - Landscaping

Applicant response: Complies, See Landscape plans

7. ZDO Section 1010 - Signs (1010.06 C.)

Applicant response: Complies

See sheet A3.

8. ZDO Section 1012 - Lot Size and Density

Applicant response: Complies

- District Land Area for Density: 1,742 sf: $30,000 \text{ sf} / 1,742 \text{ sf} = 17.22$ Max / Min. 15. (90%) of 17.

9. ZDO Section 1021 - Refuse and Recycling Standards

Applicant response: Complies

See Site plan sheet A1, detail B for garbage enclosures. (4) enclosures with (2) 90 Gal. roller carts for garbage and (2) 90 Gal. roller carts for recycling, and (1) 35 gal. roller cart for glass, as requested by Sunset Garbage Collection.

10. ZDO Section 1015 - Parking and loading

Applicant response: Complies

See Site plan sheet A1 for parking dimensions. There are 1.5 spaces per unit as required by Table 1015-1. There is one in the garage and 2 outside the garage. The access road is asphalt and widths and dimension were coordinated with the fire marshal.

1015.03 Bicycle Parking Standards

See Site plan sheet A1 for bicycle Parking locations: Table 1015-2 requires 0.5 space per dwelling unit. $16 \times 0.5 = 8$ bicycle parking spaces. Eight of the units have garages, where the covered bicycle spaces will be. We also provided 4 more uncovered spaces near two trash enclosures for the general public.



PRE-APPLICATION MEMO

TO: **Anthony Riederer** / Planning Division
FROM: **Erik Carr** / Water Environment Services (ecarr@clackamas.us, 503-742-4571)
DATE: January 9, 2019
SUBJECT: ZPAC0170-18, Glencoe 16-unit MFR

Location: 7949 SE GLENCOE RD
Map/Tax Lot: 12E29DD01200
WES Log #: WES 6-19

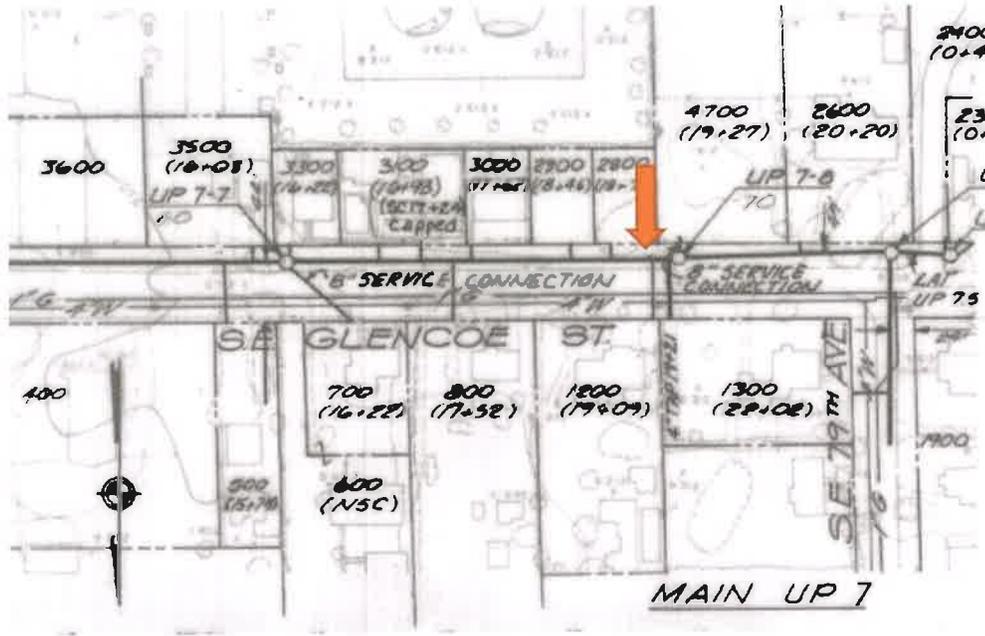
Water Environment Services ("WES/District"), a department of Clackamas County and the service administrator for Clackamas County Service District No. 1 (CCSD#1), offers the following comments:

General Comments:

- 1) The proposed development is located within the service area of Water Environment Services and shall be subject to WES Rules and Regulations, and Standards ("RR&S/Rules") for sanitary sewer services and surface water management, including vegetated buffer and erosion control requirements. The applicant shall procure the necessary plans approvals and permits in accordance with WES Regulations and adopted Sanitary Sewer and Stormwater Standards (available on the WES website).
- 2) **WES anticipates an update to the RR&S, effective July 2019. The applicant shall comply with the RR&S in effect at the time of the land use application submittal.**
- 3) Prior to plan/permit approval, construction plans shall be reviewed for compliance with WES Rules, Design Standards, and Conditions of Approval. Sanitary and stormwater management plans and calculations shall be stamped and signed by a civil engineer licensed by the State of Oregon.
- 4) Upon the completion of construction and certification by the engineer, WES shall inspect and approve the construction of the sanitary and storm systems. The sanitary and storm systems shall be complete in all respects, in accordance with the approved plans, prior to Certificate of Occupancy approval by WES.
- 5) Any requests to modify current WES Design Standards shall be made in accordance with Sanitary Standards, Section 1.7 or Stormwater Standards, Section 1.6. The applicant shall provide all necessary information to evaluate the request prior to land use approval, as determined by WES.
- 6) The proposed development shall be subject to applicable fees and charges, in accordance with WES RR&S. All fees and charges shall be paid before building permits will be issued, and are subject to change without notice to the applicant. Current rates are posted on the WES website. All costs associated with the design, construction and testing of the improvements shall be provided by and at the sole expense of the developer.

Sanitary:

- 7) WES has adequate capacity for sanitary sewer collection and treatment to serve this property. An existing 6" concrete service connection is located at the SW corner of the property, at a depth of 5.5-feet at the property line.
- 8) When development of a property is proposed, all equivalent dwelling units within the boundaries of the proposal shall be connected to the Public Sanitary Sewer System.
 - a. If the developer plans to replat into separate lots, an extension of the public sanitary sewer system will be required with separate service connections to each lot. Each lot will receive a separate monthly service bill.
 - b. Otherwise, the development will utilize one shared connection to the public mainline. The service lateral shall terminate with a clean out at the front edge of the Public Utility Easement (PUE) or the property line. The entire development will receive one monthly service bill.
- 9) Any existing service laterals shall be used where feasible, as determined by WES. If an alternative or modification to the existing connection is proposed, the applicant shall provide justification for the modification to WES for review and approval, including any necessary plans and/or profiles as determined by WES. A new tap to the public mainline may be required and a tap-in fee may apply. Unused laterals shall be abandoned per WES Rules and fees.
- 10) A Collection Sewer Charge (CSC) may apply depending on the type of connection proposed.
- 11) A minimum \$400.00 sanitary plan review fee is due with first plan submittal. Total fees are equal to 4% of the installed cost of the public sanitary sewer extension.
- 12) Sanitary System Development Charges (SDC) shall apply per WES rules and rates at the time of building permit application(s). SDC's are used to increase capacity at the treatment plant. (Rules 4.1)
 - a. Effective July 1, 2018, the rate is \$7,615.00 per EDU.
 - b. Multifamily residential = 0.8 EDU per dwelling unit
 - c. ESTIMATE: 16 units * 0.8 = 12.8 EDU * \$7615 = \$97,472.00



Stormwater Management:

- 13) All development that creates or modifies 5,000 square feet or more of impervious surface area shall be subject to WES Stormwater Standards and require a Surface Water Management Plan and Storm Report (SWM Plan) submitted by a licensed engineer. The Plan shall demonstrate how the development will conform to WES Standards and shall provide an adequate drainage system for all onsite water, all water entering the property from off-site, and all public road frontage improvements. (SW Standards, Section 5)
- 14) All development or redevelopment shall provide an acceptable point of discharge (via piped system, curb and gutter, open channel, or onsite retention) and adequate conveyance of stormwater runoff, as approved by WES. (SW Standards, Section 3)
 - a. Based on the applicant’s pre-app submittal, an adequate point of discharge for this development is unclear.
- 15) The SWM Plan shall document how the development will meet WES Stormwater Standards, including:
 - a. **Water Quality Standard (Section 5.2)** – Water quality facilities shall be designed to capture and treat the first 1-inch of stormwater runoff from a 24-hour storm event using either vegetation (Appendix H) or a Basic Treatment proprietary device (Appendix F).
 - b. **Infiltration/Retention Standard (Section 5.3)** – An approved infiltration facility shall be sized to infiltrate all runoff from the ½”, 24-hour storm event within 96 hours.
 - i. If infiltration is not feasible, the design engineer shall submit a modification request in accordance with Stormwater Standards, Section 1.6. The request shall include a narrative of why the infiltration standard cannot be achieved, as well as an equivalent alternative design that can accomplish the same design intent of these standards, which is to reduce both the discharge rate and runoff volume. Retention options in lieu of the infiltration standard include:

1. **BMP Tool:** WES, in cooperation with other local jurisdictions, has developed a BMP Sizing Tool. The tool sizes facilities so that post-development peak flow durations will match the pre-development peak flow durations ranging from 42% of the 2-year to the 10-year flows, as determined by HSPF continuous rainfall model simulation.
 2. **Engineer's Model:** The project engineer can develop and submit a continuous rainfall runoff model simulation, so that post-development peak flow durations will match the pre-development peak flow durations ranging from 42% of the 2-year to the 10-year flows as determined by the continuous model simulation.
 3. **Flow Control and Retention Standard:** Meet the Detention/Flow Control Standard and retain the first ½" of runoff in a 24-hour period onsite within an approved SW facility. Any storage of the infiltration/retention volume within a vegetative facility shall not exceed 6-inches in height above the vegetation.
- c. **Detention/Flow Control Standard (Section 5.4)** – On-site detention facilities shall be designed to reduce the 2-year post-developed discharge rate to ½ of the 2-year pre-developed discharge rate.
 - d. **Conveyance Standards (Section 5.4)** – The conveyance system shall be sized for a minimum 25-year storm event.
- 16) The SWM Plan shall provide an overflow pathway that will prevent damage to downstream properties in the event of any stormwater facility failure or bypass. The pathway must be clearly identified on the final grading plan. (Section 1.2)
- 17) The SWM Plan shall include the following supporting documentation:
- a. **Downstream Analysis (Section 5.4.4.4)** – Submit a downstream conveyance report based on the entire drainage basin, including all of the proposed upstream development. The report shall demonstrate the existing piping system has the capacity to safely convey a 25-year storm event in accordance with the SW standards. WES may modify this condition if requirements for 25-year onsite retention and emergency overflow can be met.
 - b. **Geotechnical Report (Section 5.3)** – A geotech report will be required. The infiltration tests must correspond to the location and depth of all proposed stormwater facilities, in accordance with *SW Standards, Appendix E*.
- 18) WES requires property owners to inspect and maintain all stormwater management systems, therefore a storm facilities maintenance agreement or maintenance plan shall be required.
- 19) A minimum \$400.00 surface water plan review fee is due with first plan submittal. Total fees are equal to 4% of the installed cost of any surface water management system.
- 20) Surface Water System Development Charges (SDC's) shall apply for any impervious area, per WES rules and rates at the time of building permit application. The current rate is \$205 per 2,500 sqft of impervious surface.



Water Quality Resource Areas & Vegetated Buffers:

21) Undisturbed vegetated buffers shall be required on all developments that are bounded by or contain water quality sensitive areas. In this instance, due to the extent of previous development in this area, a Sensitive Area Certification will likely not be required.

Erosion Control:

22) All construction sites, regardless of size, shall implement proper erosion prevention and sediment control measures. For areas with **800 square feet or more** of disturbance, no grading or construction activity shall commence without an approved erosion control plan/permit. An estimated \$460 permit fee shall apply and be paid with the first plan submittal.

Preliminary Statement of Feasibility (required for Land Use Application):

23) Per County ZDO 1006.04 and 1006.06, the County shall require a Preliminary Statement of Feasibility from the sanitary sewer and surface water service provider that verifies the availability of these services to service this development, or that they can be made available by the developer.

24) **Before WES will sign-off on feasibility, the applicant shall provide preliminary plans that sufficiently demonstrate the proposed development can conform to WES Standards, including:**

- a. One (1) set of preliminary plans for all sanitary and stormwater improvements. The plans shall be scaled, legible and include all existing and proposed impervious surfaces.

- b. One (1) preliminary storm report, including infiltration test results and downstream analysis.
- c. One (1) Statement of Feasibility form, with applicant's information

25) Receipt of the signed Preliminary Statement of Feasibility does not automatically suggest that the WES requirements can be met. Upon land use approval, all final plans, reports, and forms required by WES RR&S for stormwater management and/or connections to the public sanitary sewer system shall be submitted to WES for review and approval.

Commercial Application and Building Permit Fees (ESTIMATE)	
Fee Descriptions	Estimated Fees*
Sanitary Sewer Plan Review <ul style="list-style-type: none"> • \$400 due with first plan submittal 	\$ 400.00
Surface Water Management Plan Review <ul style="list-style-type: none"> • \$400 due with first plan submittal 	\$ 400.00
Sanitary System Development Charge (SDC) <ul style="list-style-type: none"> • \$7,615.00 per EDU 	\$ \$97,472.00
Surface Water System Development Charge (SDC) <ul style="list-style-type: none"> • Current rate: \$205 per ESU (2,500 sq ft of impervious area surface) 	\$ TBD
Collection Sewer Charge	\$ TBD
Erosion Control Permit <ul style="list-style-type: none"> • \$460 plus \$80/acre over 1-acre; due with plan approval 	\$ 460.00
Minimum ESTIMATED Fees =	\$ TBD

**All fees must be paid prior to approval of the building permit(s).*



PRELIMINARY STATEMENT OF FEASIBILITY

To be completed by the applicant:

Applicant's Name: Frederick G Shervey Construction, Inc
 Property Legal Description: T 1 S, R 2E, Section 29DD, Tax Lot(s) 01200
 Site Address: 7949 SE Glencoe Rd, Milwaukie, OR 97222 Project Engineer: _____
 Project Title/Description of Proposed Development: Proposal to develop 16 units in 8-duplex
buildings.

To be completed by the service provider or surface water management authority:

Check all that apply:

- Sanitary sewer capacity in the wastewater treatment system and the sanitary sewage collection system is available to serve the development or can be made available through improvements completed by the developer or the system owner.
- Adequate surface water treatment and conveyance is available to serve the development or can be made available through improvements completed by the developer or the system owner.
- Water service is available in levels appropriate for the development, and adequate water system capacity is available in source, supply, treatment, transmission, storage and distribution or such levels and capacity can be made available through improvements completed by the developer or the system owner. This statement applies does not apply to fire flows.*

**If water service is adequate with the exception of fire flows, the applicant shall submit a statement from the fire district serving the subject property that states that an alternate method of fire protection, such as an on-site water source or a sprinkler system, is acceptable.*

This statement is issued subject to conditions of approval set forth in the attached.

- Adequate sanitary sewer service, surface water management, water service cannot be provided.

Butty Johnson
 Signature of Authorized Representative

Engineering Associate
 Title

January 8, 2019
 Date

Clackamas River Water
 Name of Service Provider or Surface
 Water Management Authority

Completion of this statement does not reserve capacity for the development and does not alter an applicant's obligation to comply with the service provider's or surface water management authority's regulations. Completion of this statement does not obligate the service provider or surface water management authority to finance or construct improvements necessary to provide adequate service for the proposed development. Completion of this statement does not guarantee that land use approval for the proposed development will be granted.



PRELIMINARY STATEMENT OF FEASIBILITY

To be completed by the applicant:

Applicant's Name: Frederick G Shervey
 Property Legal Description: T 1 S, R 2E, Section 29, Tax Lot(s) 1200
 Site Address: 7949 SE Glencoe Road Project Engineer: Summit Engineering
 Project Title/Description of Proposed Development: _____
Glencoe townhomes

To be completed by the service provider or surface water management authority:

Check all that apply:

- Sanitary sewer capacity in the wastewater treatment system and the sanitary sewage collection system is available to serve the development or can be made available through improvements completed by the developer or the system owner.
- Adequate surface water treatment and conveyance is available to serve the development or can be made available through improvements completed by the developer or the system owner.
- Water service is available in levels appropriate for the development, and adequate water system capacity is available in source, supply, treatment, transmission, storage and distribution or such levels and capacity can be made available through improvements completed by the developer or the system owner. This statement applies does not apply to fire flows.*

**If water service is adequate with the exception of fire flows, the applicant shall submit a statement from the fire district serving the subject property that states that an alternate method of fire protection, such as an on-site water source or a sprinkler system, is acceptable.*

- This statement is issued subject to conditions of approval set forth in the attached.
- Adequate sanitary sewer service, surface water management, water service cannot be provided.

D-KP
 Signature of Authorized Representative
WES Permit Supervisor
 Title

8/8/2019
 Date
WES
 Name of Service Provider or Surface
 Water Management Authority

Completion of this statement does not reserve capacity for the development and does not alter an applicant's obligation to comply with the service provider's or surface water management authority's regulations. Completion of this statement does not obligate the service provider or surface water management authority to finance or construct improvements necessary to provide adequate service for the proposed development. Completion of this statement does not guarantee that land use approval for the proposed development will be granted.



August 8, 2019

Fredrick G. Shervey Construction Inc.
Attention: Rick Shervey
PO Box 66320
Portland, Oregon 97290

Sent Via Email To: urbuilder@aol.com

Re: Glencoe Townhomes – Clackamas County, Oregon
Transportation Impact Analysis

Clackamas County File Number ZPAC0170-18-DR
ODOT File Number 8798
C&A Project Number 20190605.00

Dear Mr. Shervey,

This Transportation Impact Analysis (TIA) letter supports the proposed Glencoe Townhomes land use actions and addresses Clackamas County and Oregon Department of Transportation analysis requirements. The following items are specifically addressed:

1. Property Description and Proposed Land Use Actions
2. Study Parameters
3. Access and Roadway Description
4. Sight Distance Analysis
5. Trip Generation
6. Trip Distribution and Traffic Assignment
7. Safety Analysis
8. Summary

1. PROPERTY DESCRIPTION AND PROPOSED LAND USE ACTIONS

The proposed Glencoe Townhomes development is located at 7949 SE Glencoe Road, Milwaukie, (Clackamas County) Oregon. It is described on the Clackamas County Assessor's Map as parcel 21E29DD and tax lot number 01200. The property size is 0.69 acres and is currently undeveloped.

The property is currently zoned High-Density Residential (HDR) and the proposed 16-unit residential townhouse development is an allowed use.

Stopping sight distance (SSD) is the necessary distance for drivers on the major road traveling at or a near the design speed to stop before reaching a stationary object in their path to avoid a collision. This may require a major road vehicle to stop or slow to accommodate the maneuver by a minor road vehicle. Although sight distances exceeding the SSD are desirable, in all cases for safe operations, if the ISD cannot be provided for the minor roadway/access, SSD needs to be provided for the major roadway.

Analysis

Based on County Engineering comment 9, the minimum required ISD is 330 feet to the east and 330 feet to the west. Considering AASHTO ISD requirements, it is assumed the roadway travel speed is 30 MPH.

Per 2013 Clackamas County Roadway Standards Section - 240.4, ISD was measured from a driver’s eye height of 3.5 feet (7.6 feet for trucks) and 14.5 feet from the edge of the nearest travel lane to an object height of 3.5 feet above the roadway surface, consistent with Clackamas County Standard Drawing T300 which is attached for reference. SSD was measured from a driver’s eye height of 3.5 feet (7.6 feet for trucks) to an object height of 2.0 feet above the roadway surface.

Field measurements are shown in attached Figure 1 and are summarized in the following table.

TABLE 1 – SIGHT DISTANCE – GLENCOE ROAD ACCESS					
Turning Movement	Roadway Direction	Roadway Speed (MPH)	Sight Distance		
			Required (ft)	Available (ft)	Requirement Met?
Intersection Sight Distance (ISD)					
Left-Turn from Stop	To the East	30	335	640	Y
	To the West	30	335	350	Y
Right-Turn from Stop	To the East	30	290	640	Y
Left-Turn from Glencoe Road	To the East	30	245	650	Y
Stopping Sight Distance (SSD)					
Eastbound	To the East	30	220	350	Y
Westbound	To the West	30	220	640	Y

As identified in the table above, and in Figure 1, ISD and SSD are met for all turning movements. It is further noted sight distance is available for the entire length of SE Glencoe Road between SE 82nd Avenue and its terminus to the west.

Additionally, vegetation management will be required in the sight triangles to maintain adequate ISD for vehicles exiting the development.

8. SUMMARY

The following conclusions are based on materials contained in this analysis.

1. The proposed Glencoe Townhomes development is located at 7949 SE Glencoe Road, Milwaukie, (Clackamas County) Oregon. It is described on the Clackamas County Assessor's Map as parcel 21E29DD and tax lot number 01200. The property size is 0.69 acres and is currently undeveloped.
2. The property is currently zoned High-Density Residential (HDR) and the proposed 16-unit residential townhouse development is an allowed use.
3. Intersection sight distance (ISD) and stopping sight distance (SSD) are met for all vehicle movements. It is further noted sight distance is available for the entire length of SE Glencoe Road between SE 82nd Avenue and its terminus to the west. Vegetation management will be required in the sight triangles to maintain adequate ISD for vehicles exiting the development.
4. The proposed development is estimated to generate 8 AM peak hour trips and 12 PM peak hour trips.
5. Development trip generation is low and operating impacts at the SE 82nd Avenue (OR 213)/SE Glencoe Road intersection are considered *de minimus*; therefore, no further specific transportation analysis is necessary.
6. Based on crash data, there are no existing safety deficiencies along the study section of SE Glencoe Road and the proposed property access is anticipated to operate in a safe and efficient manner.

Sincerely,

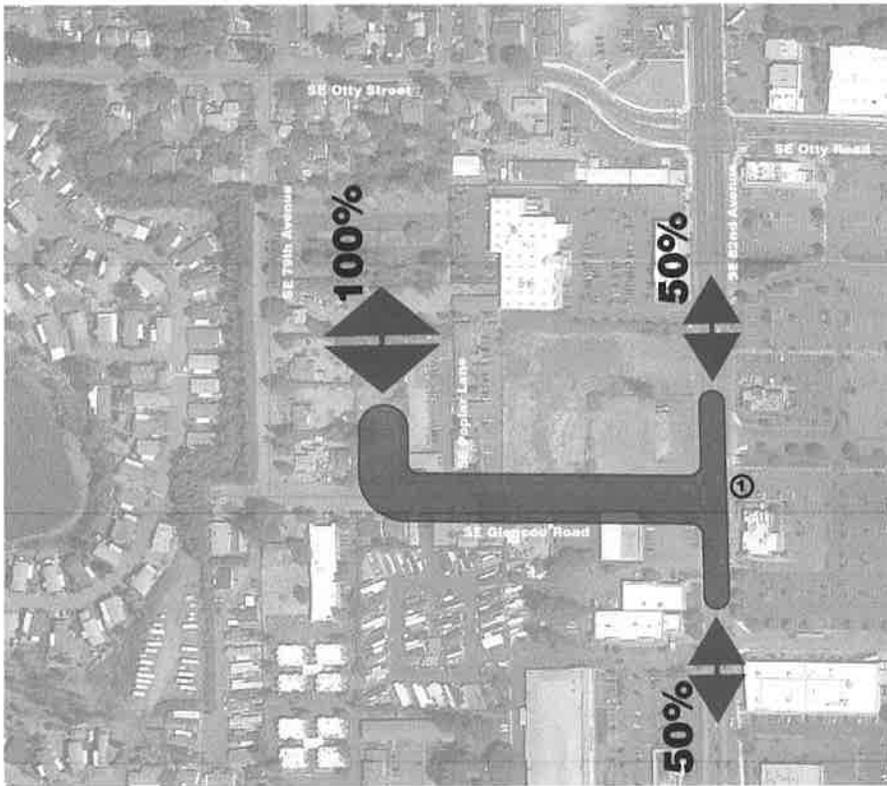


Christopher M. Clemow, PE, PTOE
Transportation Engineer

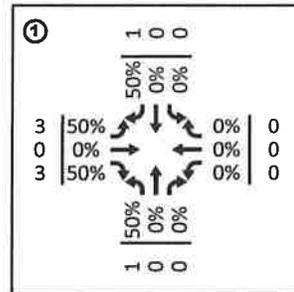


RENEWS 31 DEC 2019

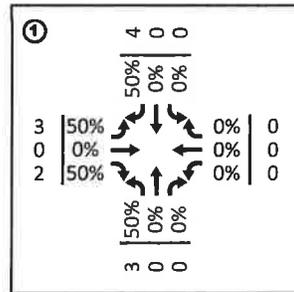
Attachments: Figure 1 – Sight Distance
Figure 2 – Trip Distribution and Traffic Assignment
Crash Data



AM Peak Hour



PM Peak Hour



SITE AREA and PM PEAK HOUR TRIP DISTRIBUTION

Glencoe Townhomes - Cackamas County, Oregon

C&A Project No. 20190605.00

FIGURE

2



1582 Feters Loop
Eugene, Oregon 97402
541-579-8315
cclemow@clemow-associates.com

CLACKAMAS COUNTY
D

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
COUNTY ROAD CRASH LISTING
SE Glenco Rd - Western Terminus to approximately 325 feet East of SE Poplar Ln
January 1, 2013 through December 31, 2017

SER#	E A / C O DATE	MILEPNT	FIRST STREET	RD CHAR	INT-TYP	INT-REL	OFF-RD WITH	CRASH TYP	SRCL	MOVE	PRTC INT	A S	G E LICNS PED	I OC ERROR	ACTN EVENT	CAUSE
UNDOC? D C J L K LAY/LONG				LOCIN	(#LANES) CONTL	DRVRY LGHT SVRTY	DRY	SVRTY	V# OWNER	TO	# TYPE SVRTY	E X RES	I OC ERROR			
02644	N N N 6/29/2015	0.16	SE GLENCOE RD	INTER	3-LEG N	UNKNOWN	Y	CLR	01 NONE	0 TURN-L	01 DRVR INGB	23 M OR-Y		001	091	08
COUNTY	N N Mon 5P			S	0		N	DRY	PSMGR CAR	N E				000	091	00
No	45 26 57.97 -122 34 57.30			05			N	DAY			02 PSNG INJC	23 F		000	000	00

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
000	NONE	NO ACTION OR NON-WARRANTED
001	SKIDDED	SKIDDED
002	ON/OFF V	GETTING ON OR OFF STOPPED OR PARKED VEHICLE
003	LOAD OVR	OVERHANGING LOAD STRUCK ANOTHER VEHICLE, ETC.
006	SLOW DN	SLOWED DOWN
007	AVOIDING	AVOIDING MANEUVER
008	PAR PARK	PARALLEL PARKING
009	ANG PARK	ANGLE PARKING
010	INTERFERE	PASSENGER INTERFERING WITH DRIVER
11	STOPPED	STOPPED IN TRAFFIC NOT WAITING TO MAKE A LEFT TURN
12	STP/L TURN	STOPPED BECAUSE OF LEFT TURN SIGNAL OR WAITING, ETC.
013	STP TURN	STOPPED WHILE EXECUTING A TURN
014	EMR V PKD	EMERGENCY VEHICLE LEGALLY PARKED IN THE ROADWAY
015	GO A/STOP	PROCEED AFTER STOPPING FOR A STOP SIGN/FLASHING RED.
016	TRN A/RED	TURNEED ON RED AFTER STOPPING
017	LOSTCTRL	LOST CONTROL OF VEHICLE
018	EXIT DMV	ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY
019	ENTR DMV	ENTERING ALLEY OR DRIVEWAY FROM STREET OR HIGHWAY
020	STR ENTR	BEFORE ENTERING ROADWAY, STRUCK PEDESTRIAN, ETC., ON SIDEWALK OR SHOULDER
021	NO DRVR	CAR RAN AWAY - NO DRIVER
022	PREV COL	STRUCK, OR WAS STRUCK BY, VEHICLE OR PEDESTRIAN IN PRIOR COLLISION BEFORE ACC. STABILIZED
023	STALLED	VEHICLE STALLED OR DISABLED
024	DRVR DEAD	DEAD BY UNASSOCIATED CAUSE
025	FATIGUE	FATIGUED, SLEEPY, ASLEEP
026	SUN	DRIVER BLINDED BY SUN
027	HDLGHTS	DRIVER BLINDED BY HEADLIGHTS
028	ILLNESS	PHYSICALLY ILL
029	THRU MED	VEHICLE CROSSED, PLUNGED OVER, OR THROUGH MEDIAN BARRIER
030	PURSUIT	PURSuing OR ATTEMPTING TO STOP A VEHICLE
031	PASSING	PASSING SITUATION
032	PKOFRPD	VEHICLE PARKED BEYOND CURB OR SHOULDER
033	CROS MED	VEHICLE CROSSED EARTH OR GRASS MEDIAN
034	X N/SGNL	CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT
5	X W/SGNL	CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT
.36	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
037	BMVN INT	CROSSING BETWEEN INTERSECTIONS
038	DISTRACT	DRIVER'S ATTENTION DISTRACTED
039	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
040	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
041	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
042	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
043	PLAYINRD	PLAYING IN STREET OR ROAD
044	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
045	WORK ON	WORKING IN ROADWAY OR ALONG SHOULDER
046	W/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. WITH TRAFFIC
047	A/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. FACING TRAFFIC
050	LAY ON RD	STANDING OR LYING IN ROADWAY
051	ENT OFFRD	ENTERING / STARTING IN TRAFFIC LANE FROM OFF ROAD
052	MERGING	MERGING

CAUSE CODE TRANSLATION LIST

CAUSE CODE	SHORT DESCRIPTION	LONG DESCRIPTION
00	NO CODE	NO CAUSE ASSOCIATED AT THIS LEVEL
01	TOO-FAST	TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SPEED
02	NO-YIELD	DID NOT YIELD RIGHT-OF-WAY
03	PAS-STOP	PASSED STOP SIGN OR RED FLASHER
04	DIS SIG	DISREGARDED TRAFFIC SIGNAL
05	LEFT-CTR	DRIVE LEFT OF CENTER ON TWO-WAY ROAD; STRADDLING
06	IMP-OVER	IMPROPER OVERTAKING
07	TOO-CLOS	FOLLOWED TOO CLOSELY
08	IMP-TURN	MADE IMPROPER TURN
09	DRINKING	ALCOHOL OR DRUG INVOLVED
10	OTHR-IMP	OTHER IMPROPER DRIVING
11	MECH-DEF	MECHANICAL DEFECT
12	OTHER	OTHER (NOT IMPROPER DRIVING)
13	IMP LN C	IMPROPER CHANGE OF TRAFFIC LANES
14	DIS TCD	DISREGARDED OTHER TRAFFIC CONTROL DEVICE
15	WRNG WAY	WRONG WAY ON ONE-WAY ROAD; WRONG SIDE DIVIDED RO.
16	FATIGUE	DRIVER DROWSY/FATIGUED/SLEEPY
17	ILLNESS	PHYSICAL ILLNESS
18	IN RDWY	NON-MOTORIST ILLEGALLY IN ROADWAY
19	NT VISBL	NON-MOTORIST NOT VISIBLE; NON-REFLECTIVE CLOTHIN
20	IMP PRNG	VEHICLE IMPROPERLY PARKED
21	DEF STER	DEFECTIVE STEERING MECHANISM
22	DEF BRKE	INADEQUATE OR NO BRAKES
24	LOADSHT	VEHICLE LOST LOAD OR LOAD SHIFTED
25	TIREFALL	TIRE FAILURE
26	PHANTOM	PHANTOM / NON-CONTACT VEHICLE
27	INATTENT	INATTENTION
28	NM INAPT	NON-MOTORIST INATTENTION
29	F AVOID	FAILED TO AVOID VEHICLE AHEAD
30	SPEED	DRIVING IN EXCESS OF POSTED SPEED
31	RACING	SPEED RACING (PER PAR)
32	CARELESS	CARELESS DRIVING (PER PAR)
33	RECKLESS	RECKLESS DRIVING (PER PAR)
34	AGGRESSV	AGGRESSIVE DRIVING (PER PAR)
35	RD RAGE	ROAD RAGE (PER PAR)
40	VIEW OBS	VIEW OBSCURED
50	USED MDN	IMPROPER USE OF MEDIAN OR SHOULDER
51	FAIL LN	FAILED TO MAINTAIN LANE
52	OFF RD	RAN OFF ROAD

COLLISION TYPE CODE TRANSLATION LIST

COLL CODE	SHORT DESCRIPTION	LONG DESCRIPTION
6	OTH	MISCELLANEOUS
-	BACK	BACKING
0	PED	PEDESTRIAN
1	ANGL	ANGLE
2	HEAD	HEAD-ON
3	REAR	REAR-END
4	SS-M	SIDESWIPE - MEETING
5	SS-O	SIDESWIPE - OVERTAKING
6	TURN	TURNING MOVEMENT
7	PARK	PARKING MANEUVER
8	NCOL	NON-COLLISION
9	FIX	FIXED OBJECT OR OTHER OBJECT

CRASH TYPE CODE TRANSLATION LIST

CRASH TYPE	SHORT DESCRIPTION	LONG DESCRIPTION
6	OVERTURN	OVERTURNED
0	NON-COLL	OTHER NON-COLLISION
1	OTH RDWY	MOTOR VEHICLE ON OTHER ROADWAY
2	PRKD MV	PARKED MOTOR VEHICLE
3	PED	PEDESTRIAN
4	TRAIN	RAILWAY TRAIN
6	BIKE	PELALCYCLIST
7	ANIMAL	ANIMAL
8	FIX OBJ	FIXED OBJECT
9	OTH OBJ	OTHER OBJECT
A	ANGL-STP	ENTERING AT ANGLE - ONE VEHICLE STOPPED
B	ANGL-OTH	ENTERING AT ANGLE - ALL OTHERS
C	S-STRGHT	FROM SAME DIRECTION - BOTH GOING STRAIGHT
D	S-1TURN	FROM SAME DIRECTION - ONE TURN, ONE STRAIGHT
E	S-1STOP	FROM SAME DIRECTION - ONE STOPPED
F	S-OTHER	FROM SAME DIRECTION-ALL OTHERS, INCLUDING PARKING
G	O-STRGHT	FROM OPPOSITE DIRECTION - BOTH GOING STRAIGHT
H	O-1 L-TURN	FROM OPPOSITE DIRECTION-ONE LEFT TURN, ONE STRAIGHT
I	O-1STOP	FROM OPPOSITE DIRECTION - ONE STOPPED
J	O-OTHER	FROM OPPOSITE DIRECTION-ALL OTHERS INCL. PARKING

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
040	THRU MED	DRIVING THROUGH SAFETY ZONE OR OVER ISLAND
041	F/ST BUS	FAILED TO STOP FOR SCHOOL BUS
042	F/SLO WY	FAILED TO DECREASE SPEED FOR SLOWER MOVING VEHICLE
043	TOO CLOSE	FOLLOWING TOO CLOSELY (MUST BE ON OFFICER'S REPORT)
044	STRDI LN	STRADDLING OR DRIVING ON WRONG LANES
045	IMP CHG	IMPROPER CHANGE OF TRAFFIC LANES
046	WRNG WY	WRONG WAY ON ONE-WAY ROADWAY; WRONG SIDE DIVIDED ROAD
047	BASCULE	DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING POSTED SPEED)
048	OPN DOOR	OPENED DOOR INTO ADJACENT TRAFFIC LANE
049	IMPEDING	IMPEDING TRAFFIC
50	SPEED	DRIVING IN EXCESS OF POSTED SPEED
51	RECKLESS	RECKLESS DRIVING (PER PAR)
52	CARELESS	CARELESS DRIVING (PER PAR)
53	RACING	SPEED RACING (PER PAR)
54	X N/SGNL	CROSSING AT INTERSECTION, NO TRAFFIC SIGNAL PRESENT
55	X W/SGNL	CROSSING AT INTERSECTION, TRAFFIC SIGNAL PRESENT
56	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
57	BTWN INT	CROSSING BETWEEN INTERSECTIONS
59	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
60	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
61	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
62	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
63	PLAYTRND	PLAYING IN STREET OR ROAD
64	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
65	WORK IN RD	WORKING IN ROADWAY OR ALONG SHOULDER
66	LAY ON RD	STANDING OR LYING IN ROADWAY
67	NM IMP USE	IMPROPER USE OF TRAFFIC LANE BY NON-MOTORIST
71	ELUDING	ELUDING / ATTEMPT TO ELUDE
73	F NEG CURV	FAILED TO NEGOTIATE A CURVE
79	FALL LN	FAILED TO MAINTAIN LANE
80	OFF RD	RAN OFF ROAD
81	NO CLEAR	DRIVER MISJUDGED CLEARANCE
82	OVRSTEER	OVER-CORRECTING
83	NOT USED	CODE NOT IN USE
84	OVRLOAD	OVERLOADING OR IMPROPER LOADING OF VEHICLE WITH CARGO OR PASSENGERS
85	DNA DIS TC	UNABLE TO DETERMINE WHICH DRIVER DISREGARDED TRAFFIC CONTROL DEVICE
97		

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
058	OTH SIGN	OTHER SIGN, INCLUDING STREET SIGNS
059	HYDRANT	HYDRANT
060	MARKER	DELIMITER OR MARKER (REFLECTOR POSTS)
061	MALIBOX	MALIBOX
062	TREE	TREE, STUMP OR SHRUBS
063	VEG OHED	TREE BRANCH OR OTHER VEGETATION OVERHEAD, ETC.
064	WIRE/CBL	WIRE OR CABLE ACROSS OR OVER THE ROAD
065	TEMP SGN	TEMPORARY SIGN OR BARRICADE IN ROAD, ETC.
066	PERM SGN	PERMANENT SIGN OR BARRICADE IN/OFF ROAD
067	SLIDE	SLIDES, FALLEN OR FALLING ROCKS
068	FRGN OBJ	FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)
069	EQP WORK	EQUIPMENT WORKING IN/OFF ROAD
070	OTH EQP	OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)
071	MAIN EQP	WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT
072	OTHER WALL	ROCK, BRICK OR OTHER SOLID WALL
073	IRREG PWT	OTHER BUMP (NOT SPEED BUMP), POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)
074	OVERHD OBJ	OTHER OVERHEAD OBJECT (HIGHWAY SIGN, SIGNAL HEAD, ETC.); NOT BRIDGE
075	CAVE IN	BRIDGE OR ROAD CAVE IN
076	HT WATER	HIGH WATER
077	SNO BANK	SNOW BANK
078	LO-HT EDGE	LOW OR HIGH SHOULDER AT PAVEMENT EDGE
079	DITCH	CUT SLOPE OR DITCH EMBANKMENT
080	OBJ FRM MV	STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS)
081	FLY-OBJ	STRUCK BY ROCK OR OTHER MOVING OR FLYING OBJECT (NOT SET IN MOTION BY VEHICLE)
082	VEH HID	VEHICLE OBSCURED VIEW
083	VEG HID	VEGETATION OBSCURED VIEW
084	BLDG HID	VIEW OBSCURED BY FENCE, SIGN, PHONE BOOTH, ETC.
085	WIND GUST	WIND GUST
086	IMMERSED	VEHICLE IMMERSED IN BODY OF WATER
087	FIRE/EXP	FIRE OR EXPLOSION
088	FENC/BLD	FENCE OR BUILDING, ETC.
089	OTHR CRASH	CRASH RELATED TO ANOTHER SEPARATE CRASH
090	TC 1 SLIDE	TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE
091	BUILDING	BUILDING OR OTHER STRUCTURE
092	PHANTOM	OTHER (PHANTOM) NON-CONTACT VEHICLE
093	CELL PHONE	CELL PHONE (ON PAR OR DRIVER IN USE)
094	VIOL GDL	TEENAGE DRIVER IN VIOLATION OF GRADUATED LICENSE PGM
095	GUY WIRE	GUY WIRE
096	BERM	BERM (EARTHEN OR GRAVEL MOUND)
097	GRAVEL	GRAVEL IN ROADWAY
098	ABRPT EDGE	ABRUPT EDGE
099	CELL WTNSSD	CELL PHONE USE WITNESSED BY OTHER PARTICIPANT
100	UNK FIXD	FIXED OBJECT, UNKNOWN TYPE.
101	OTHER OBJ	NON-FIXED OBJECT, OTHER OR UNKNOWN TYPE
102	TEXTING	TEXTING
103	WZ WORKER	WORK ZONE WORKER
104	ON VEHICLE	PASSENGER RIDING ON VEHICLE EXTERIOR
105	PEDAL PSGR	PASSENGER RIDING ON PEDALCYCLE
106	MAN WHLCHR	PEDESTRIAN IN NON-MOTORIZED WHEELCHAIR
107	MTR WHLCHR	PEDESTRIAN IN MOTORIZED WHEELCHAIR
108	OFFICER	LAW ENFORCEMENT / POLICE OFFICER
109	SUB-BIKE	"SUB-BIKE": PEDALCYCLIST INJURED SUBSEQUENT TO COLLISION, ETC.
110	N-MTR	NON-MOTORIST STRUCK VEHICLE
111	S CAR VS V	STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE
112	V VS S CAR	VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM)
113	S CAR BWM	AT OR ON STREET CAR OR TROLLEY RIGHT-OF-WAY

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

FUNC CLASS	DESCRIPTION
01	RURAL PRINCIPAL ARTERIAL - INTERSTATE
02	RURAL PRINCIPAL ARTERIAL - OTHER
06	RURAL MINOR ARTERIAL
07	RURAL MAJOR COLLECTOR
08	RURAL MINOR COLLECTOR
09	RURAL LOCAL
11	URBAN PRINCIPAL ARTERIAL - INTERSTATE
12	URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXP
14	URBAN PRINCIPAL ARTERIAL - OTHER
16	URBAN MINOR ARTERIAL
17	URBAN MAJOR COLLECTOR
18	URBAN MINOR COLLECTOR
19	URBAN LOCAL
78	UNKNOWN RURAL SYSTEM
79	UNKNOWN RURAL NON-SYSTEM
98	UNKNOWN URBAN SYSTEM
99	UNKNOWN URBAN NON-SYSTEM

HIGHWAY COMPONENT TRANSLATION LIST

CODE	DESCRIPTION
0	MAINTAIN STATE HIGHWAY
1	COURTLET
3	FRONTAGE ROAD
6	CONNECTION
8	HIGHWAY - OTHER

INJURY SEVERITY CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
1	KILL	FATAL INJURY (K)
2	INDA	SUSPECTED SERIOUS INJURY (A)
3	INDB	SUSPECTED MINOR INJURY (B)
4	INJC	POSSIBLE INJURY (C)
5	PRI	DIED PRIOR TO CRASH
7	NO<5	NO INJURY - 0 TO 4 YEARS OF AGE
9	NONE	NO APPARENT INJURY (O)

LIGHT CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	DAY	DAYLIGHT
2	DILT	DARKNESS - WITH STREET LIGHTS
3	DARK	DARKNESS - NO STREET LIGHTS
4	DARN	DARK (TWILIGHT)
5	DUSK	DUSK (TWILIGHT)

MEDIAN TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NO MEDIAN
1	RSMD	SOLID MEDIAN BARRIER
2	DIVD	EARTH, GRASS OR PAVED MEDIAN

MILEAGE TYPE CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
0	REGULAR MILEAGE
T	TEMPORARY
Y	SPUR
Z	OVERLAPPING

VEHICLE TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
00	PDO	NOT COLLECTED FOR PDO CRASHES
01	PSNGR CAR	PASSENGER CAR, PICKUP, LIGHT DELIVERY, ETC.
02	BOBTAIL	TRUCK TRACTOR WITH NO TRAILERS (BOBTAIL)
03	FARM TRCTR	FARM TRACTOR OR SELF-PROPELLED FARM EQUIPMENT
04	SEMI TOW	TRUCK TRACTOR WITH TRAILER/MOBILE HOME IN TOW
05	TRUCK	TRUCK WITH NON-DETACHABLE BED, PANEL, ETC.
06	MOPED	MOPED, MINIBIKE, SEATED MOTOR SCOOTER, MOTOR BIKE
07	SCHL BUS	SCHOOL BUS (INCLUDES VAN)
08	OTH BUS	OTHER BUS
09	MTRCYCLE	MOTORCYCLE, DIRT BIKE
10	OTHER	OTHER: FORKLIFT, BACKHOE, ETC.
11	MOTRHOME	MOTORHOME
12	TROLLEY	MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)
13	ATV	ATV
14	MTRSCTR	MOTORIZED SCOOTER (STANDING)
15	SNOMOBILE	SNOMOBILE
99	UNKNOWN	UNKNOWN VEHICLE TYPE

WEATHER CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	CLR	CLEAR
2	CLD	CLOUDY
3	RAIN	RAIN
4	SLT	SLEET
5	FOG	FOG
6	SNOW	SNOW
7	DUST	DUST
8	SMOK	SMOKE
9	ASH	ASH

22 July 2019

Frederick Shervey Construction
urbuilder@aol.com

Re: Three (3) infiltration test at 7949 SE Glencoe Road, Clackamas, OR

Dear Mr. Skoro,

Field Investigation:

Rapid Soil Solutions (RSS) has performed a total of one (1) infiltration test. Figure 1 shows the project site location. The site is flat. Soils found on site match those in below soils map by DOGMI, RSS found the fine-grained flood deposits. Testing was performed for future storm water design.



Figure 1

Infiltration Testing:

Infiltration testing was performed as per the Clackamas County Storm Water Manual. Pre-soak duration is shown on the spread sheet. Testing took place in a sleeve hand augur hole. Infiltration rates vary from 18in at 2ft to 9in at 2.75ft See attached spread sheet with testing location and soil details.

The analysis, conclusions and recommendations contained in this report are based on site conditions as they existed at the time of explorations. Any questions regarding this report please contact me at the below number or email.

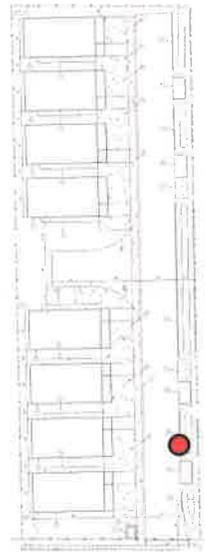
Sincerely,



EXPIRES: 12-31-2020

Mia Mahedy, PE GE.

Rapid Soil Solutions Infiltration Test Results



HA#1

Preliminary Information

Location:	7949 SE Glencoe Rd Milwaukie, Oregon 97222	Performed By: (Supervised by Mia Mahedy, PE, GE)	Rachel Gipe, GIT
Date & Time:	18 July 2019, 9 AM	Instrument Used:	Hand Auger
Weather:	Sunny, 80 degrees	Depth:	32"

HA #1

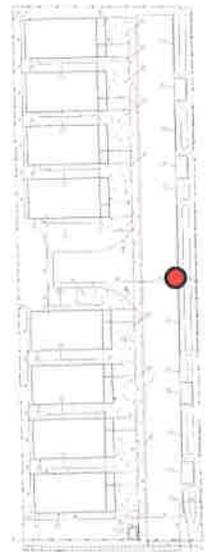
Soil Profile Detail

Depth (ft)	Description
0'-0.5'	Dry, medium brown, fine grained, SILT with gravels and abundant grass roots.
0.5'-2.7'	Dry, medium brown, coarse grained, GRAVEL (fine-course) with some silt
	Refusal at 32" on GRAVEL/COBBLE

Caving during testing resulted in irregular results. A four-hour presoak was initiated at 9:15 AM, at least 12 inches of water was present in the boring at the beginning of each hour during the presoak period. 31 ¼ inches of water infiltrated over the course of the four-hour presoak.

Time	Measurement (inches)	Level Refilled To (inches)	Rate (inches/hour)
1:15	-	12	
1:35	6 ¾		
1:55	4		
2:15	3	13	9
2:35	4 ¾		
2:55	3		
3:15	1 ¾	12 ½	10
3:35	4 ½		
3:55	2		
4:15	½	-	12
Site Infiltration Rate (inches/hour)			9

Rapid Soil Solutions Infiltration Test Results



HA#2

Preliminary Information

Location:	7949 SE Glencoe Rd Milwaukie, Oregon 97222	Performed By: (Supervised by Mia Mahedy, PE, GE)	Rachel Gipe, GIT
Date & Time:	18 July 2019, 9 AM	Instrument Used:	Hand Auger
Weather:	Sunny, 80 degrees	Depth:	2'

HA #2

Soil Profile Detail

Depth (ft)	Description
0'-0.5'	Dry, medium brown, fine grained, SILT with gravels and abundant grass roots.
0.5'-2'	Dry, medium brown, coarse grained, GRAVEL (fine-course) with some silt

A four-hour presoak was initiated at 9:15 AM, at least 12 inches of water was present in the boring at the beginning of each hour during the presoak period. No water was present in the borings after each hour within the presoak period. 48 inches of water infiltrated over the course of the four-hour presoak.

Time	Measurement (inches)	Level Refilled To (inches)	Rate (inches/hour)
1:15	-	12	
1:35	3 ¾		
1:55	0	12	18
2:15	3 ¾		
2:35	0	12	18
2:55	4 ½		
3:15	½	-	17 ¼
Site Infiltration Rate (inches/hour)			17 1/4

Rapid Soil Solutions Infiltration Test Results



Preliminary Information

Location:	7949 SE Glencoe Rd Milwaukie, Oregon 97222	Performed By: (Supervised by Mia Mahedy, PE, GE)	Rachel Gipe, GIT
Date & Time:	18 July 2019, 9 AM	Instrument Used:	Hand Auger
Weather:	Sunny, 80 degrees	Depth:	2'

HA #3

Soil Profile Detail

Depth (ft)	Description
0'-0.5'	Dry, medium brown, fine grained, SILT with gravels and abundant grass roots.
0.5'-3'	Dry, medium brown, coarse grained, GRAVEL (fine-course) with some silt
	Refusal at 3' on GRAVEL/COBBLE

A four-hour presoak was initiated at 9:15 AM, at least 12 inches of water was present in the boring at the beginning of each hour during the presoak period. No water was present in the borings after each hour within the presoak period. 48 inches of water infiltrated over the course of the four-hour presoak.

Time	Measurement (inches)	Level Refilled To (inches)	Rate (inches/hour)
1:15	-	12	
1:35	3 ½		
1:55	0	12	18
2:15	3 ½		
2:35	0	12	18
2:55	3		
3:15	0	-	18
Site Infiltration Rate (inches/hour)			18



Suburban Traditional

Cities across America are surrounded by quaint neighborhoods of stately Colonials, humble post-war Bungalows and sprawling Ranches. These tree-lined streets inspired the Suburban Traditional Palette – established color combinations that befit traditional residential architecture and blend well with suburban landscape. Not to mention make yours the best looking home on the block.



Colors Shown

BODY	TRIM	ACCENT
SW 7591	SW 7008	SW 6989
Red Barn	Alabaster	Domino

Other Colors

					
BODY	TRIM	ACCENT	BODY	TRIM	ACCENT
SW 7521	SW 7555	SW 6027	SW 7624	SW 7541	SW 7505
Dormer Brown	Patience	Cordovan	Slate Tile	Grecian Ivory	Manor House

SITE LIGHTING

Defiant LED Outdoor Dusk to Dawn Area Flood Wall Pack Light

Condition: **New other (see details)**

| Add

Price: **US \$33.99**
Approximately
PHP 1,768.01

Buy It Now

Seller information
homegoods2015 (60)
97.4% Positive feedback

Best Offer:

Make Offer

Add to watchlist

Save this Seller
See other Items

Free postage

Ships from United States

Postage: **FREE** Economy Postage | [See details](#)

Item location: Wheeling, Illinois, United States

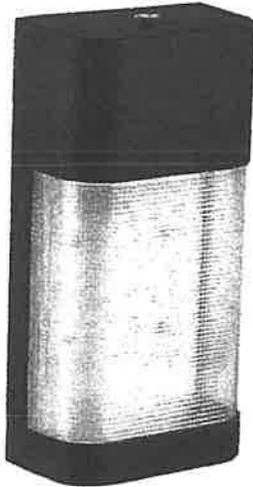
Post to: United States and many other countries | [See details](#)

Delivery: Estimated on or before **Mon. 19 Aug.** to 97225

Payments: **PayPal** | [See payment information](#)

Returns: No Returns Accepted

Coverage: Pay with PayPal and stay 100% Protected. [Learn more](#)



Weather Resistant

LED

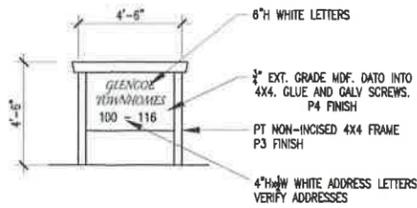
NEW - in open pack for checking and inspection.

An item in excellent, new condition with no wear.

Box may have signs of wear

The Defiant LED Outdoor Dusk to Dawn Area Flood Wall Pack Light is a high-performance, low-maintenance, dependable and reliable area light suitable for wall mounting and replaces 100-Watt incandescent or halogen area lights. This low profile area light is ideal for residential and commercial entrances, patios, walkways, apartment complexes, outlet exteriors, doorways, stairwells, storage areas and hotels. The 50,000 hour lamp certification gives peace of mind that the areas where the this light is installed will be illuminated for years to come at a fraction of the cost it provides.

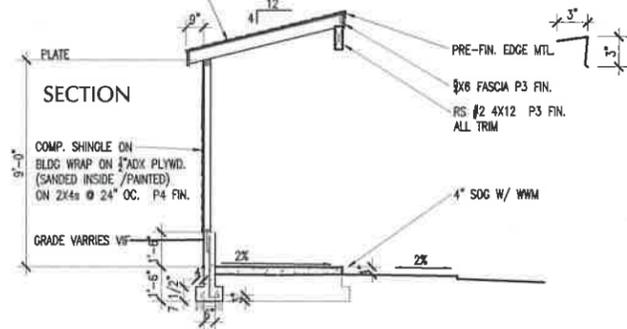
- All-weather die cast aluminum construction
- Black finish
- Prismatic polycarbonate lens
- IP65 rated design
- Integrated LEDs
- Dusk to dawn photo control
- Wall mountable
- Energy Star certified
- Lamp life: 50,000 hours
- Light output: 1400 Lumens
- Color temperature: 4000 Kelvin
- Color rendering index: 80
- Power consumption: 19-Watt
- Efficacy: 74 Lumens per watt



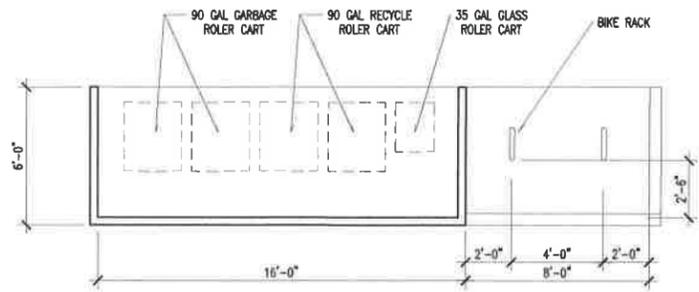
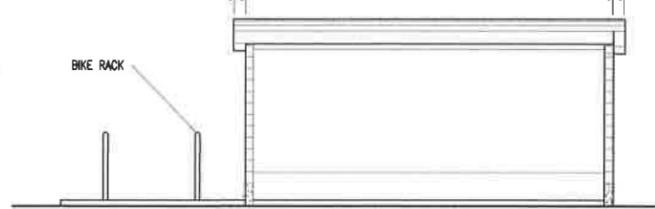
A ENTRANCE SIGN

1/4" = 1'-0" @ 22X34

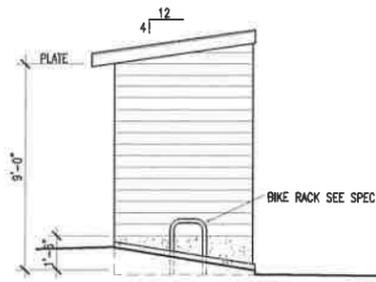
COMP. SHINGLES OVER 30LB BLDG PAPER ON 2X6 RAFTERS @ 24" OC.



STREET ELEVATION



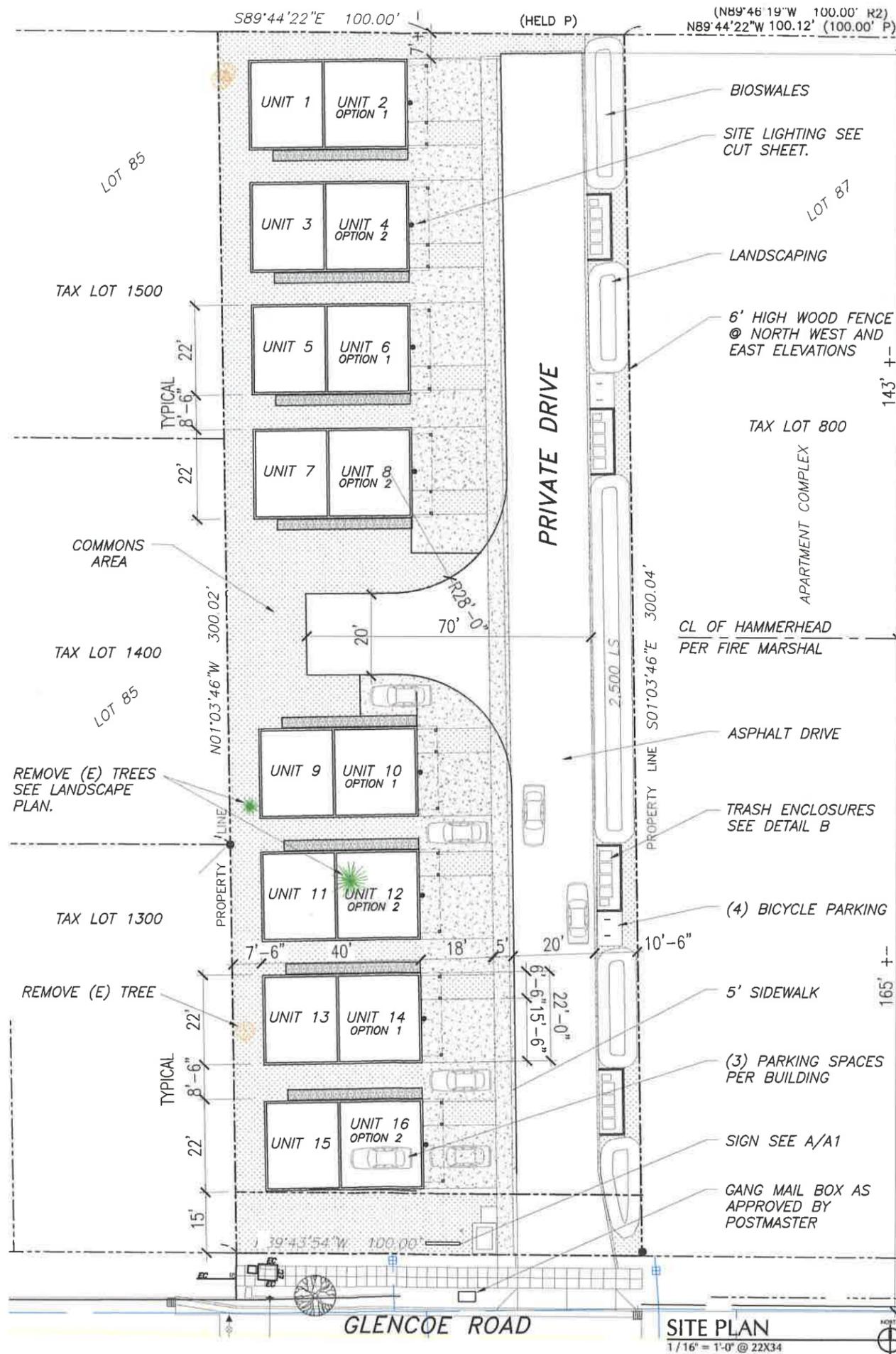
PLAN



ELEVATIONS

B TRASH ENCLOSURE

1/4" = 1'-0" @ 22X34



DRAWING INDEX:

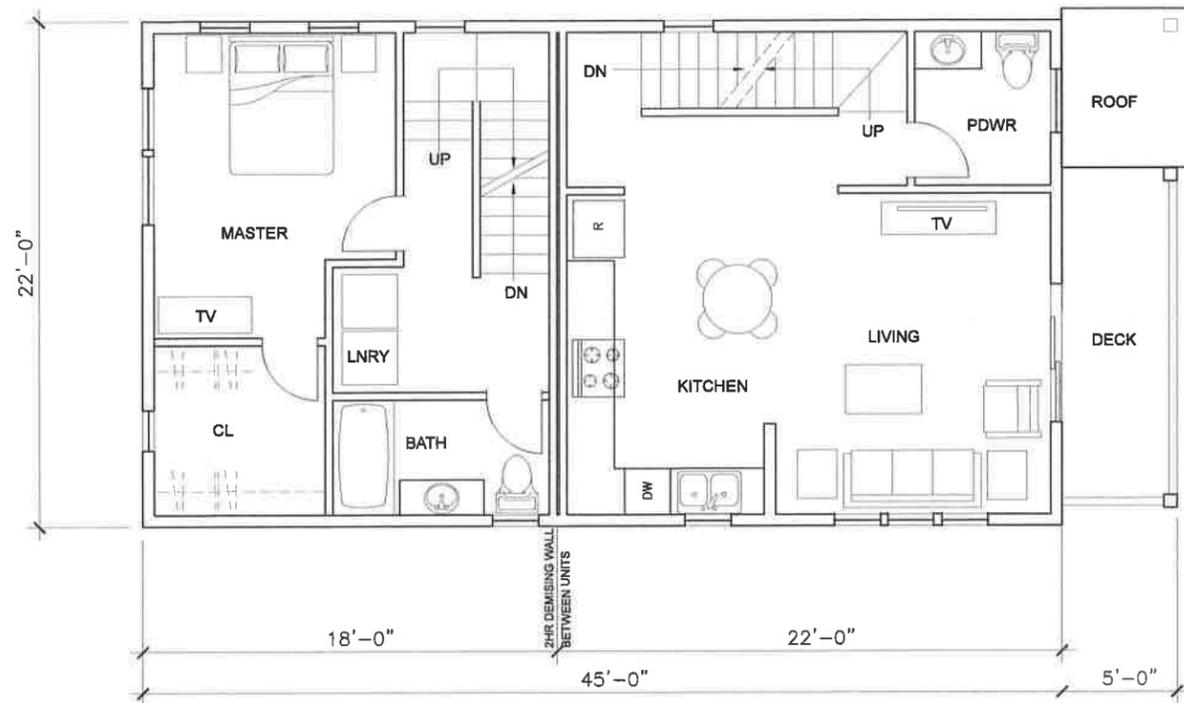
SURVEY/EXISTING CONDITIONS	
ARCHITECTURAL:	
A1	SITE PLAN/SIGNAGE/TRASH ENCL.
A2	FLOOR PLANS OPTION 1
A2.1	FLOOR PLANS OPTION 2
A3	ELEVATIONS OPTION 1
A3.1	ELEVATIONS OPTION 2
CIVIL:	
C1.1	C2.1 SITE PLAN
C2.2	GRADING PLAN
C2.3	UTILITY PLAN
R2.1	HALF STREET IMPROVEMENT PLAN
LANDSCAPE	
L1	LANDSCAPE PLAN

PROJECT INFORMATION:

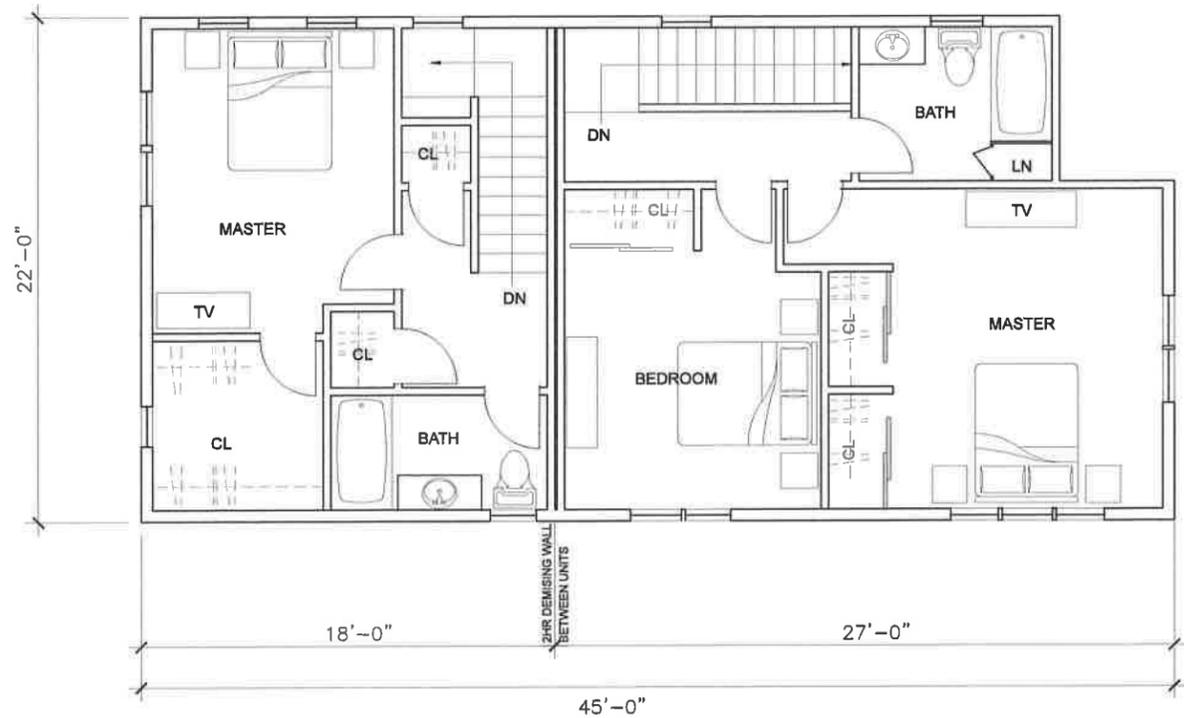
ZONING HDR	HIGH DENSITY RESIDENTIAL
SITE AREA:	.68 ACRES 30,000 SF
LANDSCAPING	36% 10,750 SF
UNITS:	16
PARKING:	1.5/UNIT 24



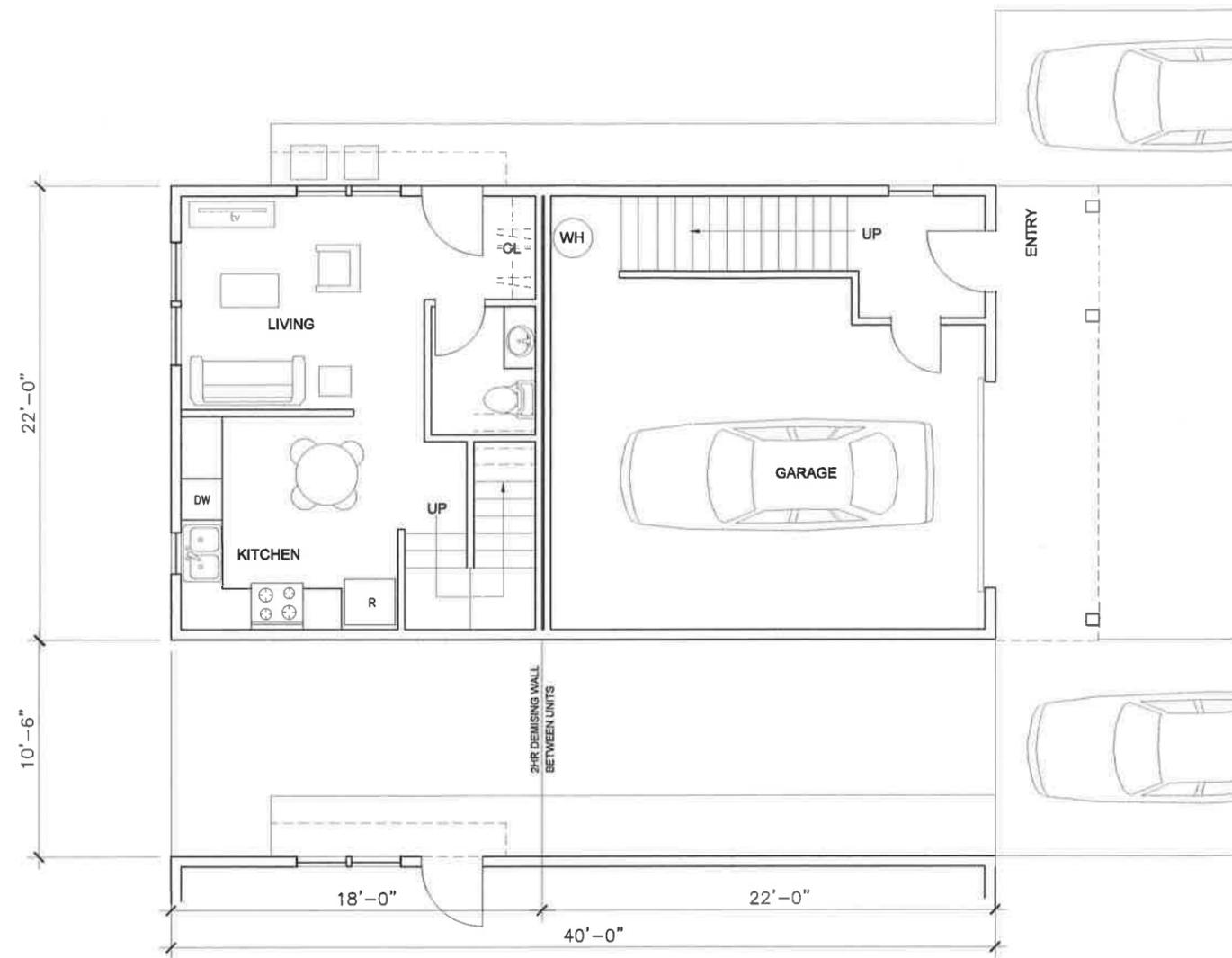
SITE PLAN
1/16" = 1'-0" @ 22X34



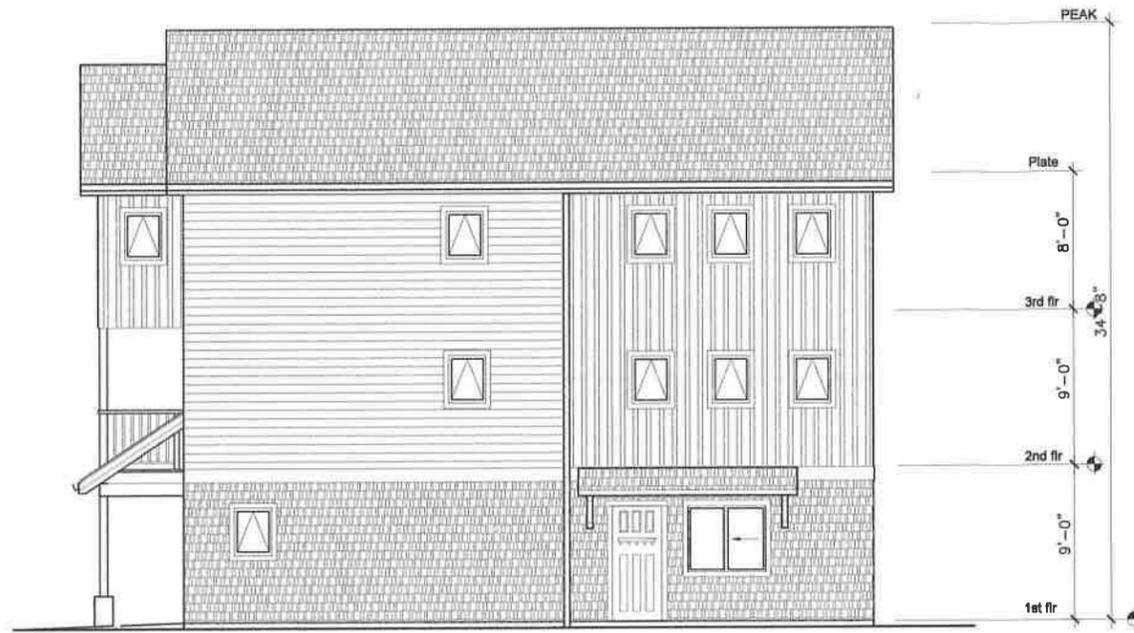
SECOND FLOOR
SCALE: 1/4"= 1'-0"



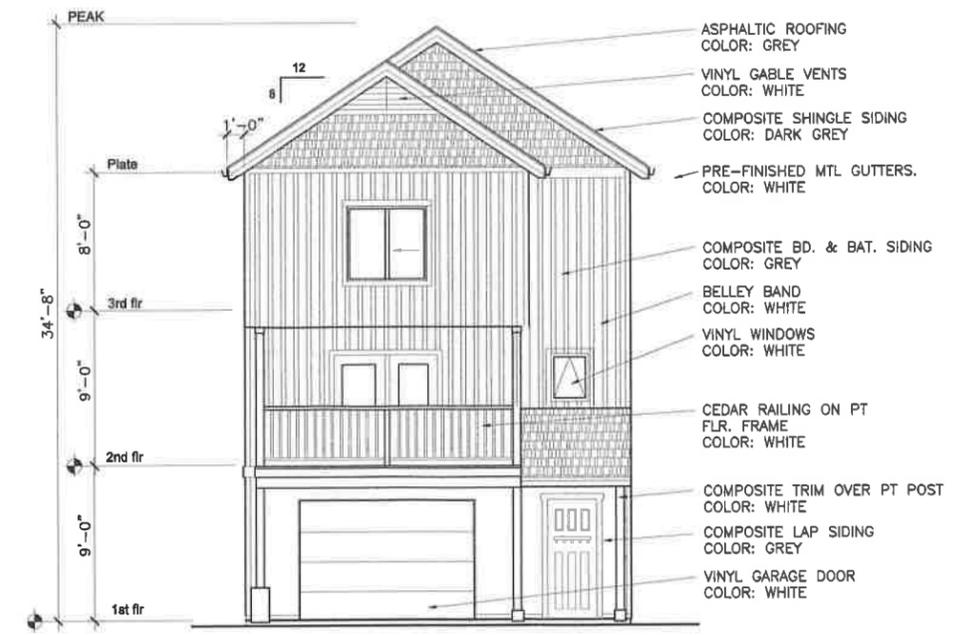
THIRD FLOOR
SCALE: 1/4"= 1'-0"



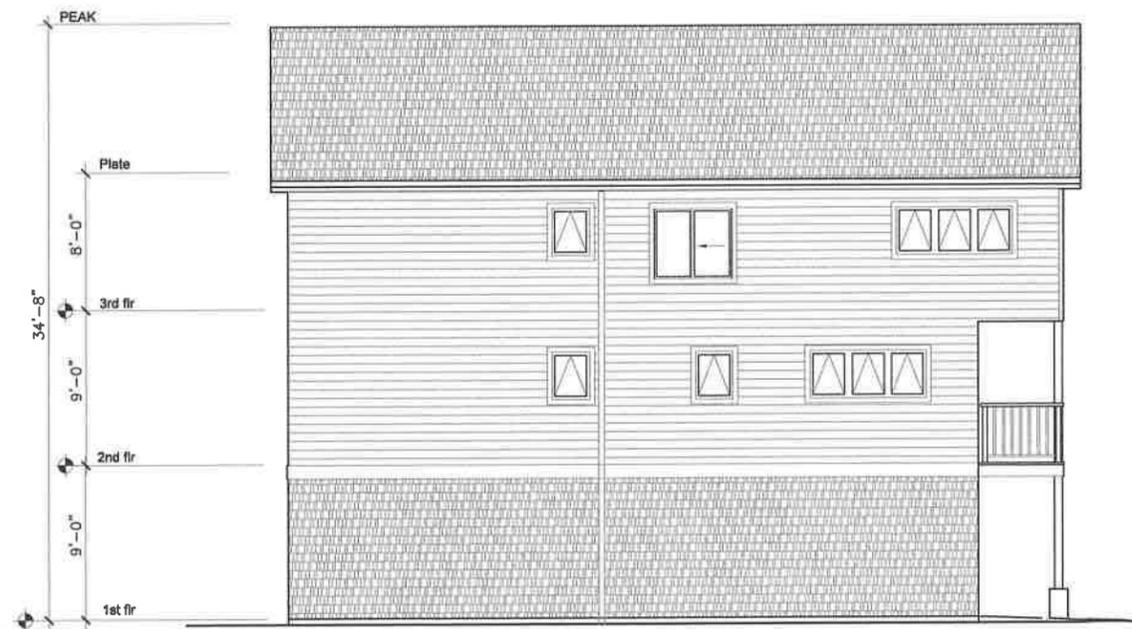
GROUND FLOOR
SCALE: 1/4"= 1'-0"



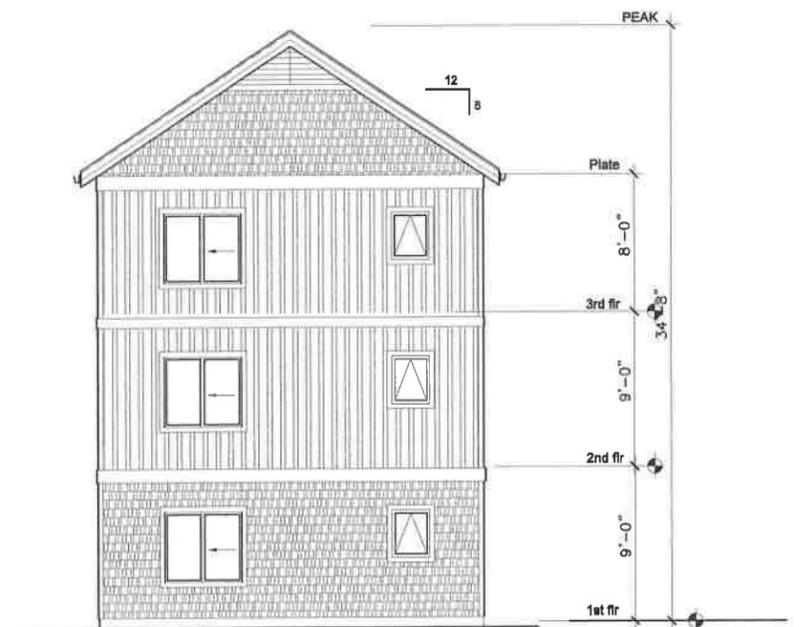
SIDE ELEVATION
SCALE: 3/16" = 1'-0"



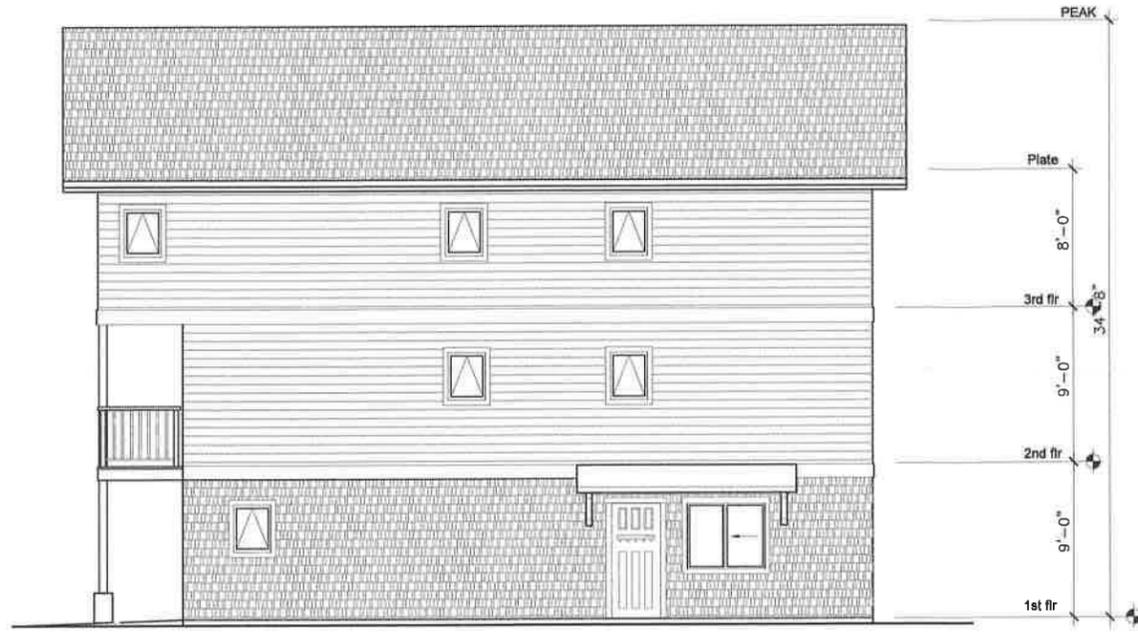
FRONT ELEVATION
SCALE: 3/16" = 1'-0"



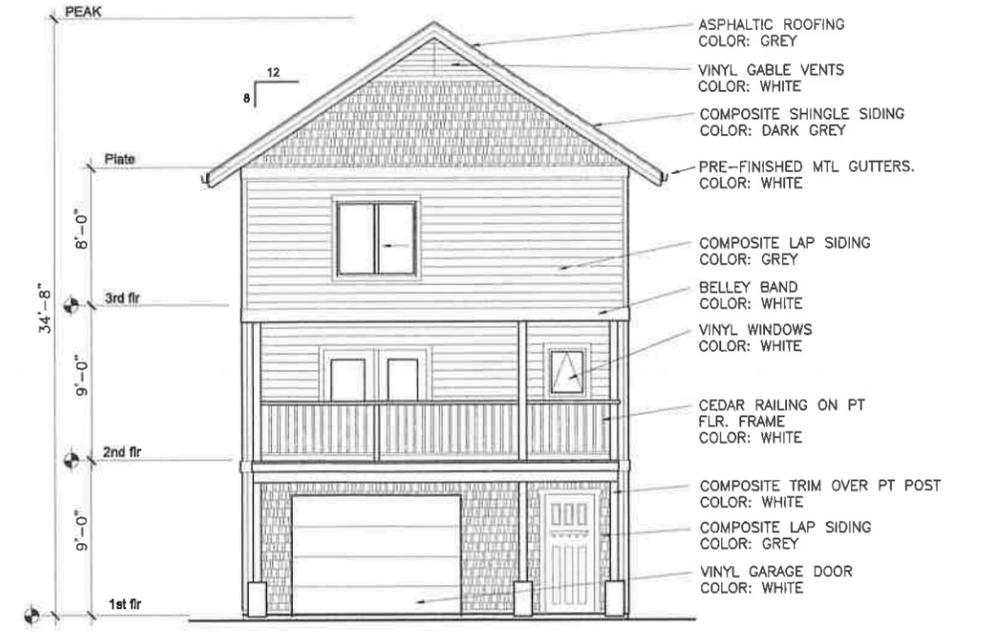
SIDE ELEVATION
SCALE: 3/16" = 1'-0"



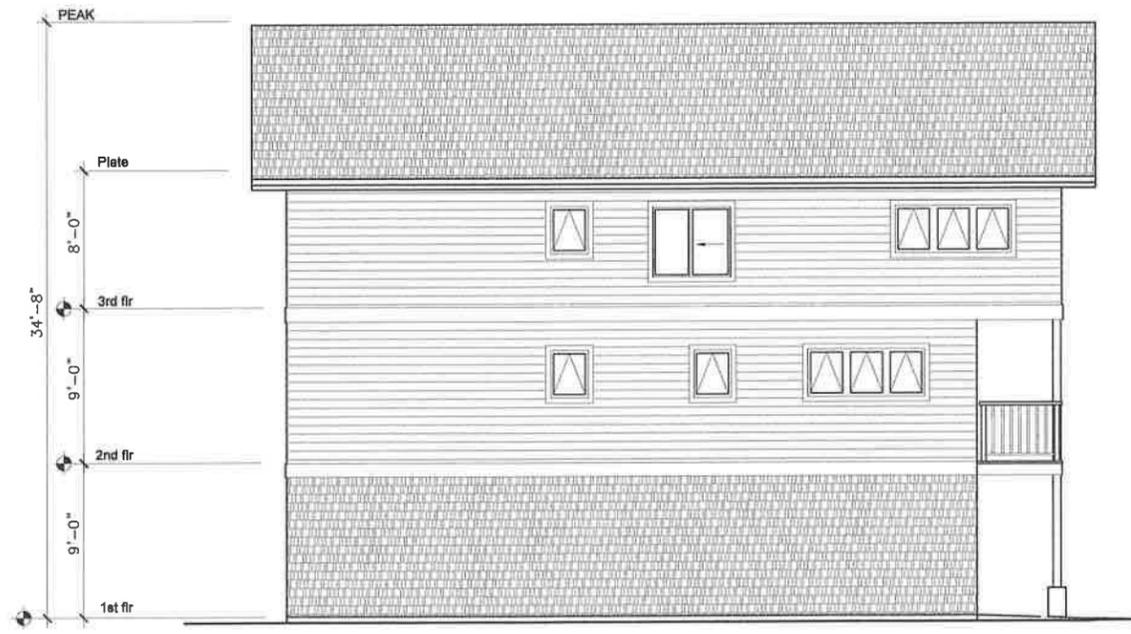
REAR ELEVATION
SCALE: 3/16" = 1'-0"



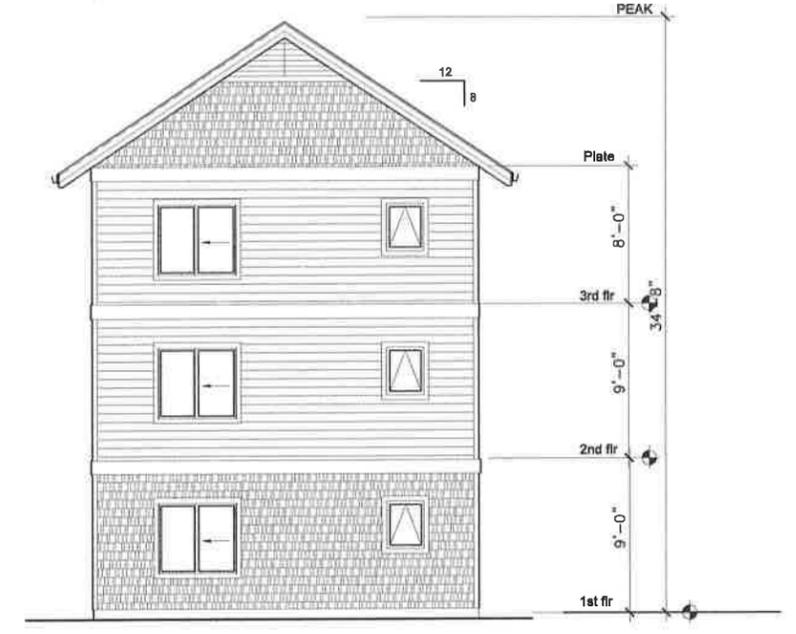
SIDE ELEVATION
SCALE: 3/8" = 1'-0"



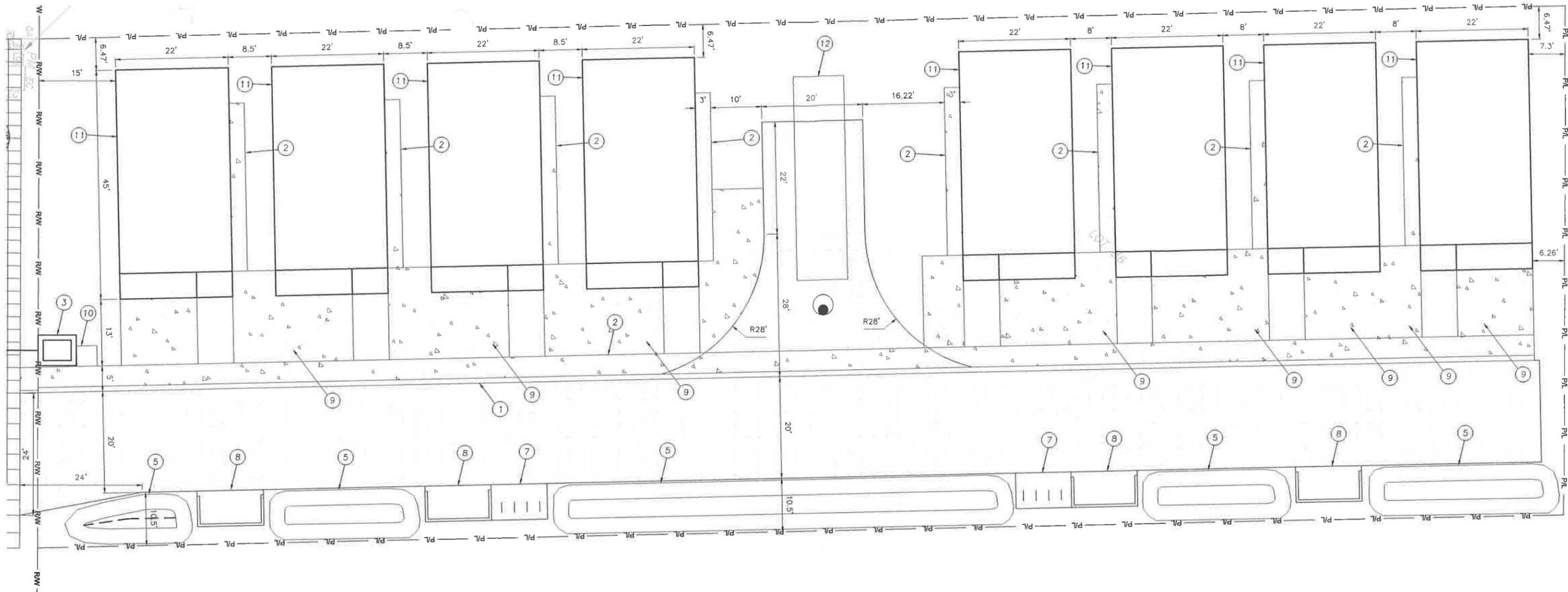
FRONT ELEVATION
SCALE: 3/8" = 1'-0"



SIDE ELEVATION
SCALE: 1/8" = 1'-0"

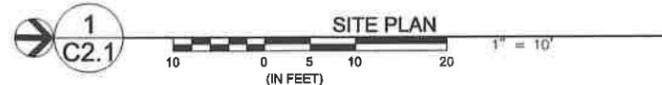


REAR ELEVATION
SCALE: 1/8" = 1'-0"



GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF PORTLAND, THE CURRENT EDITION OF THE UNIFORM PLUMBING CODE, AND THE INTERNATIONAL BUILDING CODE. ALL WORK IN THE PUBLIC R.O.W. REQUIRES A PUBLIC WORKS PERMIT.
2. **EXCAVATION:** EXCAVATE FOR SLABS, PAVING AND OTHER IMPROVEMENTS TO SIZES AND LEVELS SHOWN OR REQUIRED. ALLOW FOR FORM CLEARANCE AND FOR PROPER COMPACTION OF REQUIRED BACKFILLING MATERIAL. EXCAVATORS MUST COMPLY WITH ORS 757.541 THROUGH 757.571; EXCAVATORS SHALL NOTIFY ALL UTILITY COMPANIES FOR LINE LOCATIONS 72 HOURS (MINIMUM) PRIOR TO START OF WORK. DAMAGE TO UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
3. EFFECTIVE EROSION CONTROL IS REQUIRED. EROSION CONTROL DEVICES MUST BE INSTALLED AND MAINTAINED MEETING THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) STANDARDS. THE GOVERNING JURISDICTION SHALL, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE EROSION CONTROL.
4. EFFECTIVE DRAINAGE CONTROL IS REQUIRED. DRAINAGE SHALL BE CONTROLLED WITHIN THE WORK SITE AND SHALL BE SO ROUTED THAT ADJACENT PRIVATE PROPERTY, PUBLIC PROPERTY, AND THE RECEIVING SYSTEM ARE NOT ADVERSELY IMPACTED. THE GOVERNING JURISDICTION MY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE DRAINAGE CONTROL.
5. CONTRACTOR SHALL ADJUST ALL STRUCTURES IMPACTED BY CONSTRUCTION IMPROVEMENTS TO NEW FINISHED GRADES.
6. CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES NOT SHOWN FOR REMOVAL. DAMAGE TO EXISTING STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR WITH CONTRACTOR'S OWN RESOURCES.
7. THE BUILDING OUTLINE SHOWN ON THIS PLAN IS SHOWN FOR REFERENCE ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION, WHETHER MEASURING, STAKING OR OTHERWISE. REFER TO ARCHITECTURAL DRAWINGS FOR ALL MEASUREMENTS, DIMENSIONS, OUTLINE AND FEATURES.
8. REFER TO THE GEOTECHNICAL REPORTS BY FOR INFORMATION REGARDING PAVING, FOUNDATIONS, SITE PREPARATION, CLEARING, GRUBBING, SUBGRADE PREPARATION, ETC.

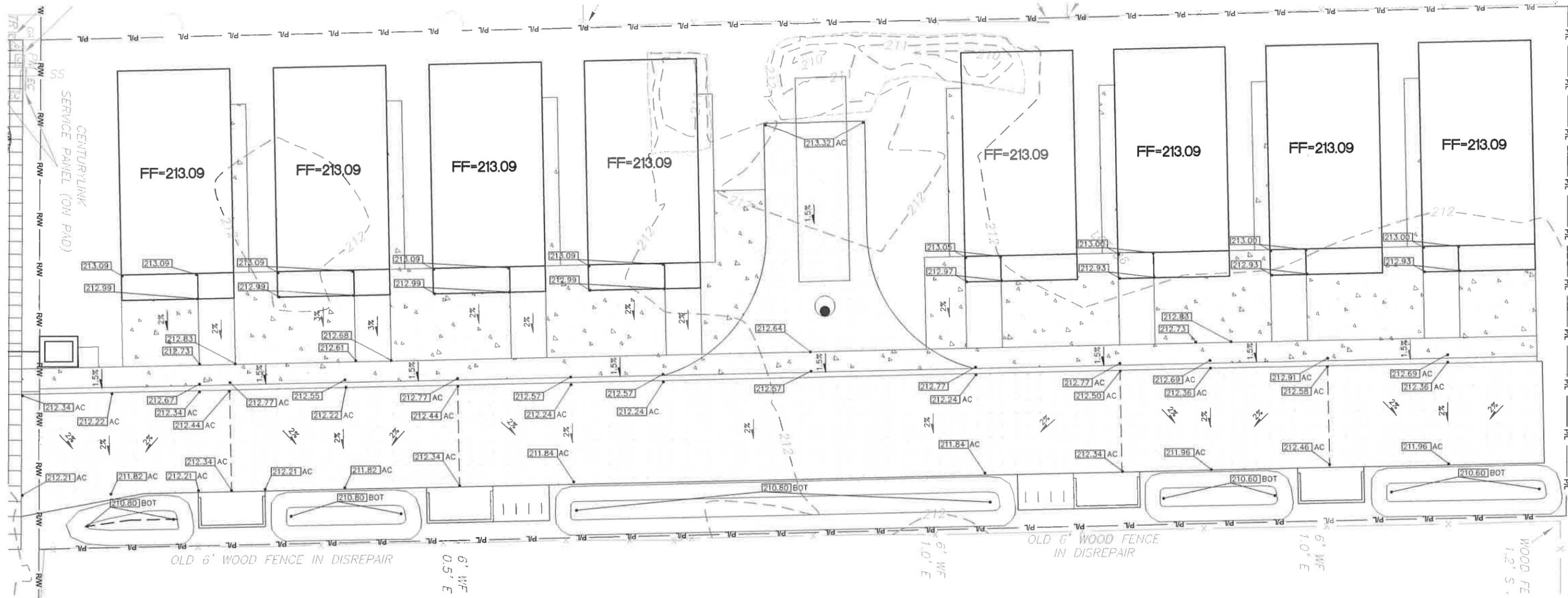


LEGEND

- ASPHALT PAVING PER GEOTECH. REPORT
- DRIVEWAY, CONCRETE PADS AND SIDEWALK
- VERTICAL CURB W/ NO PARKING
- VERTICAL CURB
- PROPERTY LINE
- WATER METER VAULT OR DOUBLE CHECK VAULT
- MANHOLE OR ACCESS LID
- ELECTRICAL METER BY OTHERS

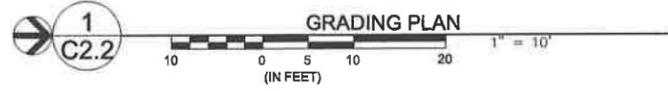
CONSTRUCTION NOTES

1. LOW PROFILE MOUNTABLE CURB PER R0700.
2. CONCRETE SIDEWALK.
3. BACKFLOW PREVENTION IN VAULT PER UTILITY PLAN
4. SITE LIGHTING PER ARCH
5. STORMWATER INFILTRATION BASIN SEE C2.3
6. FENCE PER LANDSCAPE.
7. BIKE PARKING PER ARCH.
8. TRASH ENCLOSURE PER ARCH.
9. CONCRETE PAVING PER GEOTECH.
10. MAIL BOXES PER ARCH/OWNER.
11. DUPLEX PER ARCH PLANS.
12. INFILTRATION TRENCH SEE UTILITY PLAN.



GRADING NOTES

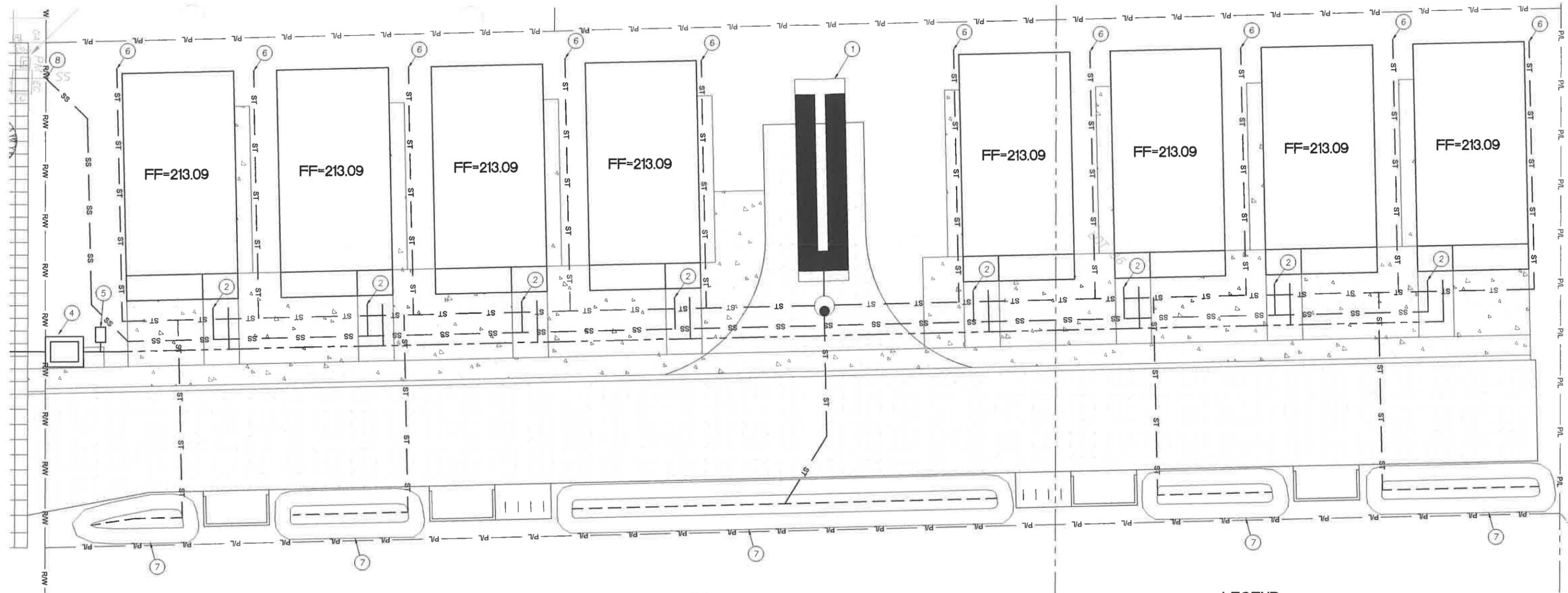
1. **ROUGH GRADING:** BRING ALL FINISHED GRADES TO APPROXIMATE LEVELS INDICATED. WHERE GRADES ARE NOT OTHERWISE INDICATED, FINISHED GRADES ARE TO BE THE SAME AS ADJACENT SIDEWALKS, CURBS, OR THE OBVIOUS GRADE OF ADJACENT STRUCTURE. GRADE TO UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE GRADES ARE GIVEN; OTHERWISE, GRADING SHALL ADHERE TO THE CONTOUR OR SPOT GRADE SHOWN, OR AN INTERPOLATION BETWEEN A GIVEN SPOT GRADE OR CONTOUR. ROUND OFF SURFACES. AVOID ABRUPT CHANGES IN LEVELS. ROUGH GRADE TO ALLOW FOR DEPTH OF CONCRETE SLABS, WALKS AND THEIR BASE COURSES. GRADE FOR PAVED DRIVES AND PAVED PARKING AREAS AS INDICATED AND SPECIFIED HEREIN, AND PROVIDE FOR SURFACE DRAINAGE AS SHOWN, ALLOWING FOR THICKNESS OF SURFACING MATERIAL.
2. **EXCAVATION:** EXCAVATE FOR SLABS, PAVING AND OTHER IMPROVEMENTS TO SIZES AND LEVELS SHOWN OR REQUIRED. ALLOW FOR FORM CLEARANCE AND FOR PROPER COMPACTION OF REQUIRED BACKFILLING MATERIAL. EXCAVATORS MUST COMPLY WITH ORS 757.541 THROUGH 757.571; EXCAVATORS SHALL NOTIFY ALL UTILITY COMPANIES FOR LINE LOCATIONS 72 HOURS (MINIMUM) PRIOR TO START OF WORK. DAMAGE TO UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
3. EFFECTIVE EROSION CONTROL IS REQUIRED. EROSION CONTROL DEVICES MUST BE INSTALLED AND MAINTAINED MEETING THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) STANDARDS. THE GOVERNING JURISDICTION SHALL, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE EROSION CONTROL.
4. EFFECTIVE DRAINAGE CONTROL IS REQUIRED. DRAINAGE SHALL BE CONTROLLED WITHIN THE WORK SITE AND SHALL BE SO ROUTED THAT ADJACENT PRIVATE PROPERTY, PUBLIC PROPERTY, AND THE RECEIVING SYSTEM ARE NOT ADVERSELY IMPACTED. THE GOVERNING JURISDICTION MY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE DRAINAGE CONTROL.
5. SITE TOPSOIL SHALL BE STOCKPILED DURING CONSTRUCTION AND USED FOR LANDSCAPING TO THE EXTENT PRACTICABLE.
6. THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN ON THIS SHEET IS BASED ON A SURVEY DONE BY REPPETO AND ASSOCIATES DATED 06/2019, AND IS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS WITH HIS OWN RESOURCES PRIOR TO THE START OF ANY CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES WITH THE SITE WITH RESPECT TO ANY ELEMENT SHOWN ON THESE PLANS.
7. CONTRACTOR SHALL COORDINATE GRADES AT ALL BUILDING ENTRANCES WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.
8. CONTRACTOR TO ENSURE 1.5% MAX SLOPE AT ALL ADA-ACCESSIBLE PARKING SPACES.
9. CONTRACTOR TO ENSURE 5% MAX SLOPE (EXCLUDING RAMPS) AND 1.5% MAX CROSS-SLOPE AT PEDESTRIAN SIDEWALK CONNECTIONS BETWEEN PUBLIC R.O.W. AND BUILDING ENTRANCES.
10. CONTRACTOR TO ENSURE ALL STRUCTURES IMPACTED BY CONSTRUCTION IMPROVEMENTS ARE ADJUSTED TO NEW FINISHED GRADES.
11. CONTRACTOR TO ENSURE THE FIRST FIVE (5) FEET OF FINISHED GROUND SHALL SLOPE AWAY FROM EACH FACE OF EACH BUILDING AT A MINIMUM OF 2%.



LEGEND

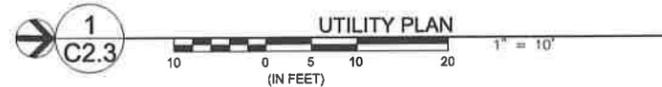
232.81 TC	TOP OF CURB
232.81 AC	ASPHALT ELEVATION
232.81 TW	TOP OF WALL ELEVATION
232.81 BW	BOTTOM GRADE AT FACE OF RETAINING WALL (NOT BOTTOM OF WALL OR WALL FOOTING)
232.81 RIM	CATCH BASIN RIM ELEVATION
— 229 —	PROPOSED 1-FT CONTOUR
— 230 —	PROPOSED 5-FT CONTOUR
- - - 229 - - -	EXISTING 1-FT CONTOUR
- - - 230 - - -	EXISTING 5-FT CONTOUR
—	RIDGE LINE
	RETAINING WALL

THE BACKGROUND SURVEY INFORMATION SHOWN ON THESE PLANS WAS COMPLETED BY REPPETO AND ASSOCIATES, DATED JUNE 19, 2019. ALL INFORMATION SHOWN SHOULD BE VERIFIED PRIOR TO EXCAVATING OR OPENING MATERIALS.



UTILITY NOTES

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF PORTLAND, THE CURRENT EDITION OF THE UNIFORM PLUMBING CODE, AND THE INTERNATIONAL BUILDING CODE. ALL WORK IN THE PUBLIC R.O.W. REQUIRES A PUBLIC WORKS PERMIT.
- THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW REQUIRED FOR INSTALLATION IN THE SPACE PROVIDED. THEY DO NOT SHOW EVERY DIMENSION, COMPONENT, PIECE, SECTION, JOINT OR FITTING REQUIRED TO COMPLETE THE PROJECT. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION. EXISTING UNDERGROUND UTILITIES LAYING WITHIN THE LIMITS OF EXCAVATION SHALL BE VERIFIED AS TO CONDITION, SIZE AND LOCATION BY UNCOVERING, PROVIDING SUCH IS PERMITTED BY LOCAL PUBLIC AUTHORITIES WITH JURISDICTION, BEFORE BEGINNING CONSTRUCTION. CONTRACTOR TO VERIFY EXISTING CONDITIONS WITH HIS/HER OWN RESOURCES PRIOR TO ORDERING MATERIALS, AND SHALL NOTIFY ENGINEER IF THERE ARE ANY DISCREPANCIES.
- PROVIDE CLEANOUTS AS REQUIRED IN THE CURRENT UNIFORM PLUMBING CODE CHAPTER 7, SECTION 707 AND 719, AND CHAPTER 11, SECTION 1103.04. NOTE: NOT ALL REQUIRED CLEANOUTS ARE SHOWN ON THE PLANS.
- ALL STORM PIPING IS SIZED FOR A MANNING'S N VALUE = 0.013. ALL STORM PIPING IS DESIGNED USING CONCENTRIC PIPE TO PIPE AND WYE FITTINGS, UNLESS OTHERWISE NOTED.
- PER SECTION 313.2 OF THE OREGON SPECIALTY PLUMBING CODE, UTILITIES SHOWN UNDER OR WITHIN 5' OF ANY BUILDING OR STRUCTURE (INCLUDING ANY FOUNDATION DRAINAGE PIPING), OR LESS THAN 1' BELOW THE GROUND SURFACE, ARE TO BE CONSTRUCTED OF MATERIALS OTHER THAN THOSE APPROVED TO BE USED UNDER OR WITHIN A BUILDING. TABLE 7-1 AND SECTION 1101.3 LISTS APPROVED PIPE MATERIAL FOR SANITARY AND STORM DRAINAGE, RESPECTIVELY.
- VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES BY POT-HOLING PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- CONTRACTOR TO MAINTAIN A MINIMUM OF 2' OF COVER OVER ALL WATER LINES.
- CONTRACTOR TO MAINTAIN A MINIMUM OF 1' OF COVER OVER ALL STORM LINES IN LANDSCAPED AREAS AND 18" OF COVER IN PAVED AREAS. STORM LINES MAY HAVE LESS THAN 18" OF COVER BUT NOT LESS THAN 12" OF COVER IN PAVED AREAS WHEN DUCTILE IRON PIPE IS USED. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- CONTRACTOR IS RESPONSIBLE FOR COMPATIBILITY BETWEEN PIPE MATERIALS, FITTINGS AND APPURTENANCES.
- FOOTING DRAINS ARE REQUIRED AT ALL FOUNDATIONS AND BACK OF RETAINING WALLS PER PLUMBING CODE.
- WHERE CONNECTING TO AN EXISTING PIPE, AND PRIOR TO ORDERING MATERIALS, THE CONTRACTOR SHALL EXPOSE THE END OF THE EXISTING PIPE AND VERIFY THE LOCATION, SIZE, AND ELEVATION WITH HIS/HER OWN RESOURCES, AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL HYDRANTS, FIRE SUPPRESSION AND FIRE SPRINKLER SYSTEMS SHALL ALSO COMPLY WITH THE LOCAL FIRE DISTRICT REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE TO OBTAINING THE DESIGN, PERMITTING, ACQUISITION OF ALL REQUIRED ELEMENTS, FOR COMPLETE INSTALLATION OF ELECTRICAL SERVICE TO VAULTS FOR SUMP PUMPS, INCLUDING SUMP PUMP AND PIPING.
- ALL 4" WATER LINE AND ABOVE SHALL BE C900 OR APPROVED EQUAL. ALL WATER LINE LESS THAN 4" SHALL FOLLOW THE CURRENT EDITION OF THE OREGON SPECIALTY PLUMBING CODE AND CARRY A MINIMUM 200 PSI TEST PRESSURE OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
- LOCATION AND SIZE OF UTILITY VAULTS SHOWN IS APPROXIMATE ONLY. CONTRACTOR SHALL COORDINATE LOCATION, SIZE AND PLACEMENT OF ALL VAULTS WITH AUTHORITY HAVING JURISDICTION PRIOR TO ORDERING MATERIALS. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- SET VAULT LIDS 3 INCHES HIGHER THAN SURROUNDING GROUND, OR PER LOCAL JURISDICTION STANDARDS. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO INSTALLATION.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLING UTILITY LINES OUT OF THE ZONE OF INFLUENCE OF ALL BUILDING AND OTHER FOOTINGS PER 12/C8.1.
- CONTRACTOR SHALL INSTALL DRYWELL AS DIRECTED BY THE GEOTECHNICAL ENGINEER TO ENSURE THAT THE DRYWELL IS BEING INSTALLED IN WELL GRADED GRAVEL SUITABLE FOR INFILTRATION AS SHOWN IN THE GEOTECHNICAL REPORT DATED APRIL 4, 2016 BY PSI, AS SHOWN IN BORING I-01.

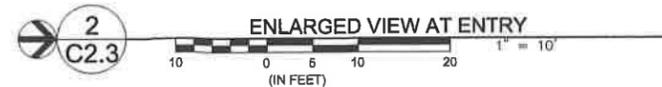
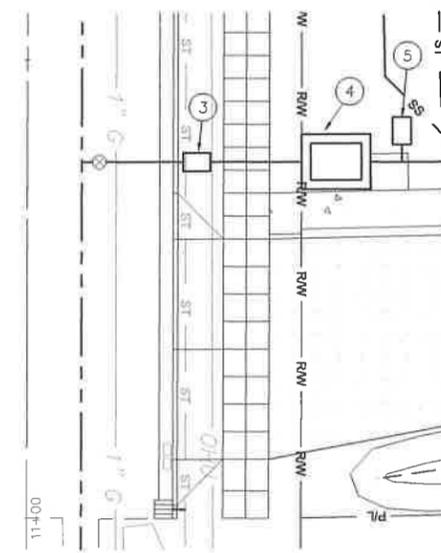


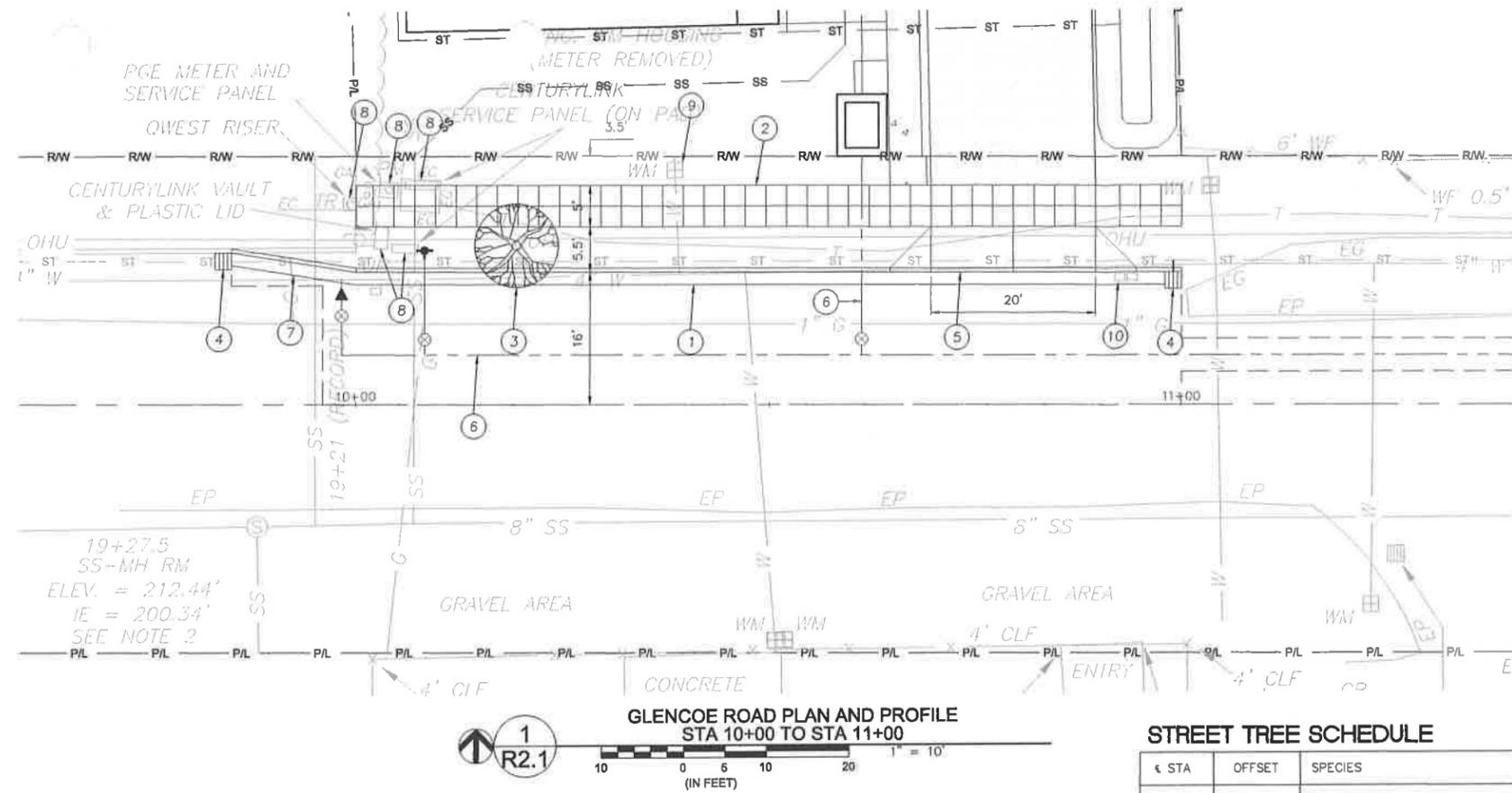
LEGEND

- 229 — PROPOSED 1-FT CONTOUR
- 230 — PROPOSED 5-FT CONTOUR
- 229 — EXISTING 1-FT CONTOUR
- 230 — EXISTING 5-FT CONTOUR
- — — PROPOSED WATER LINE
- — — PROPOSED SANITARY SEWER
- — — PROPOSED STORM SEWER

UTILITY CONSTRUCTION NOTES

- INFILTRATION TRENCH PER X/C8.1
- 4" SANITARY STUB TO BUILDING, CONNECT TO BUILDING PLUMBING PER PLUMBING PLAN.
- INSTALL X" METER WATER SERVICE BY CLACKAMAS RIVER WATER UNDER SEPARATE PERMIT.
- PREMISES-ISOLATION 3" DOUBLE CHECK VALVE ASSEMBLY IN VALVE BOX PER C8.3 FOR DOMESTIC WATER LINE, TO BE INSTALLED PER WATER DISTRICT REQUIREMENTS.
RIM=FLUSH W/ SIDEWALK
- 1 1/2" DOUBLE CHECK VALVE ASSEMBLY FOR IRRIGATION LINE.
- STORM LINE FOR DOWNSPOUTS AT BUILDING. CONTRACTOR TO COORDINATE LOCATION OF REQUIRED DOWNSPOUTS WITH ARCHITECTURAL PLANS AND INSTALL STORM WYES AND LEADERS AS REQUIRED.
- STORMWATER PLANTER PER DETAILS ON C8.2.
RIM=SEE TABLE
IE OUT=SEE TABLE
FG AT BOTTOM=SEE TABLE
BOTTOM OF AMENDED SOIL=SEE TABLE
- CONNECT TO SANITARY STUB. CONTRACTOR TO VERIFY EXISTING PIPE LOCATION, SIZE AND DEPTH.





1
R2.1
GLENCOE ROAD PLAN AND PROFILE
STA 10+00 TO STA 11+00



STREET TREE SCHEDULE

STA	OFFSET	SPECIES
10+32.50	18.5' LT	GINGKO, SARATOGA (GINGKO BILOBA "SARATOGA")
10+32.50	18.5' RT	GINGKO, SARATOGA (GINGKO BILOBA "SARATOGA")

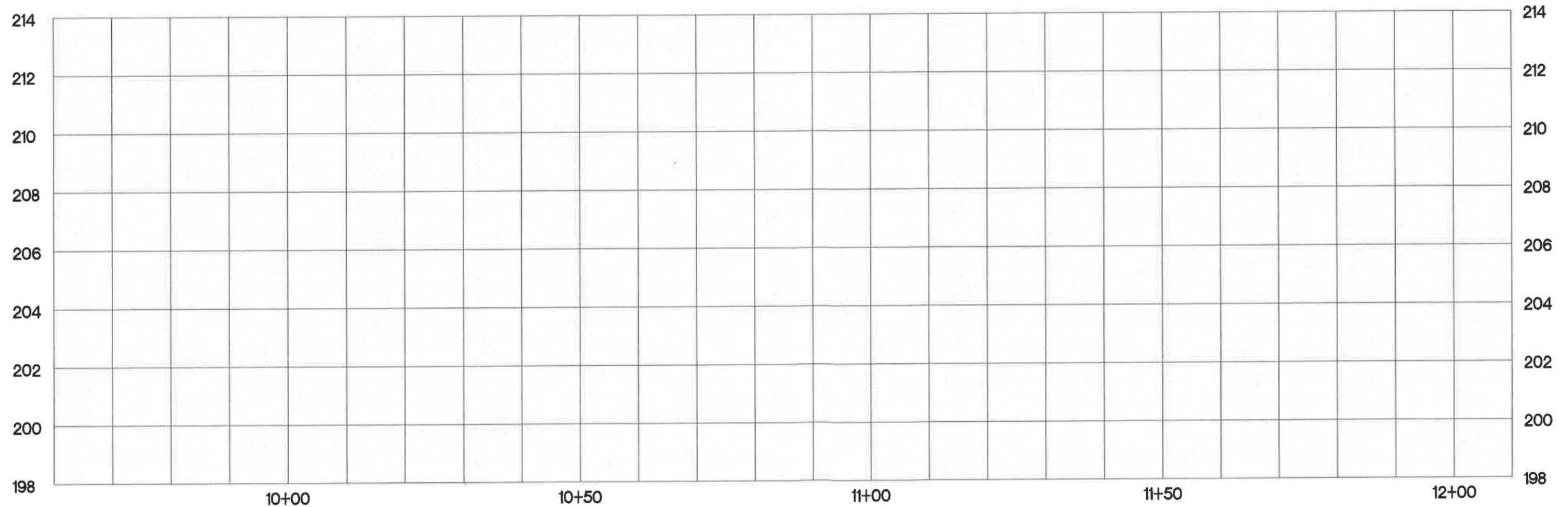
NOTE: ALL STREET TREES SHALL BE MINIMUM 2" CALIPER DBH.
CONTRACTOR TO COORDINATE WITH UNDERGROUND UTILITIES AND VERIFY DEPTH AND LOCATION OF EXISTING UTILITIES PRIOR TO EXCAVATION.

CONSTRUCTION NOTES

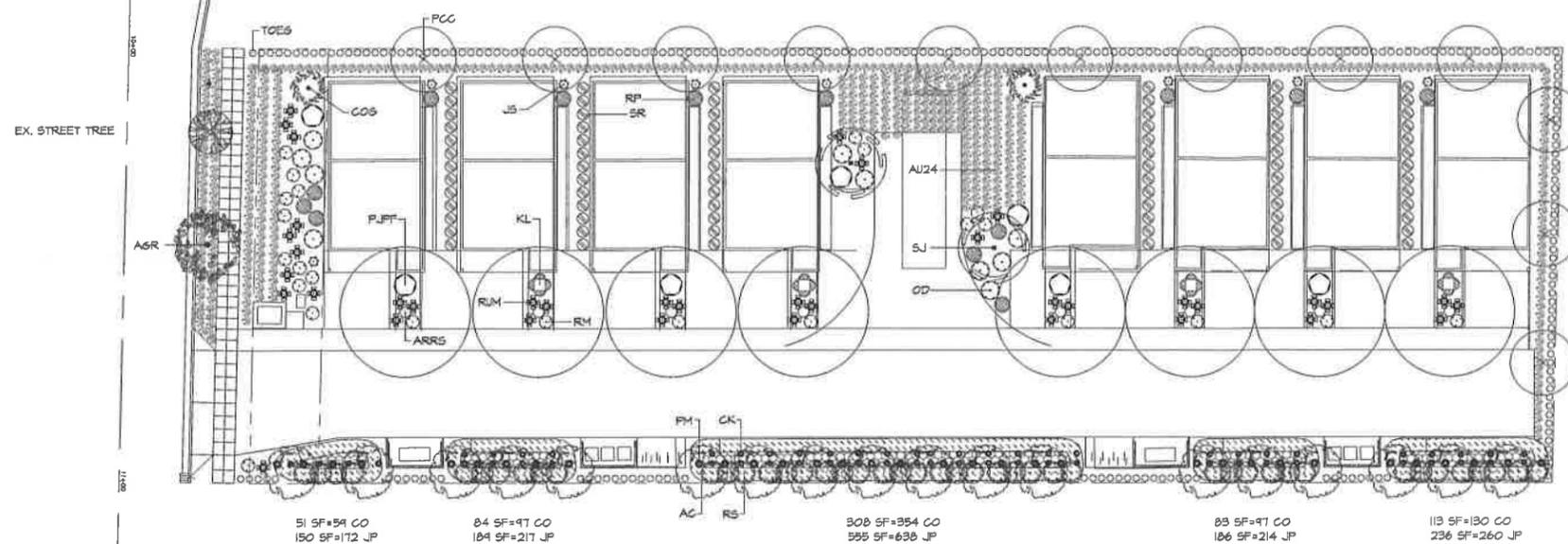
1. CONCRETE CURB AND GUTTER PER DETAIL S150/R .
2. 5' WIDE CONCRETE SIDEWALK PER DETAIL S960/R .
3. INSTALL STREET TREE PER L100/R .
4. INSTALL CATCH BASIN PER S200/R . CONNECT TO EXISTING STORM LINE.
5. INSTALL 20 FT STANDARD DRIVEWAY PER D650/ R AND DETAIL X/R .
6. INSTALL WATER LINE, HYDRANT, AND WATER SERVICE CONNECTIONS UNDER SEPARATE PERMIT FROM CLACKAMAS RIVER WATER DISTRICT.
7. TAPER 6:1 TO MATCH EXISTING CURB.
8. RELOCATE COMMUNICATION VAULTS OUT OF PROPOSED SIDEWALK CORRIDOR. COORDINATE RELOCATION WITH UTILITY.
9. REMOVE EXISTING WATER METER AND SERVICE UNDER SEPARATE PERMIT FROM CLACKAMAS RIVER WATER DISTRICT.
10. RELOCATE MAILBOX.

LEGEND

- AREA OF NEW AC
- PROPOSED POLE AND LUMINAIRE
- PROPOSED JUNCTION BOX
- PROPOSED CURB AND GUTTER
- EXISTING CENTERLINE
- EXISTING RIGHT-OF-WAY
- EXISTING CURB LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND COMMUNICATION
- EXISTING OVERHEAD LINES
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING WATER LINE
- EXISTING MANHOLE
- 232.81 TC TOP OF CURB
- 232.81 GUT GUTTER ELEVATION



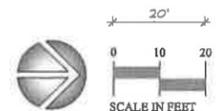
THE BACKGROUND SURVEY INFORMATION SHOWN ON THESE PLANS WAS COMPLETED BY HENKEDY AND ASSOCIATES, DATED JUNE 10, 2016. ALL INFORMATION SHOWN SHOULD BE VERIFIED PRIOR TO EXCAVATION OR OTHER MATERIALS.



PLANT LEGEND "VERIFY ALL QUANTITIES"

SYM.	#	BOTANICAL	COMMON	SIZE
TREES				
ASR	1	ACER GRISEUM "Street Tree"	PAPERBARK MAPLE	2 IN GAL
ARRS	8	ACER RUBRUM "RED SUNSET"	RED MAPLE	2 IN GAL
PCC	12	PYRUS CALLERYANA "CAPITAL"	COLUMNAR FLOWERING PEAR	2 IN GAL
SJ	2	STYRAX JAPONICA	JAPANESE SNOWBELL	2 IN GAL
SHRUBS				
COS	2	CHAMAECYPARIS OBUSA "GRACILIS"	SLENDER HINOKI CYPRESS	8 FT
JS	8	JUNIPERUS C. "SKYROCKET"	SKYROCKET JUNIPER	5FT - 6FT
KL	4	KALMIA LATIFOLIA "Heart of Fire"	Heart of Fire MOUNTAIN LAUREL	5 GAL
OD	OD	OSMANTHUS DELAVAYI	DELAVAY OSMANTHUS	2 GAL
PJFF	7	PIERIS JAPONICA "PINK FLAMINGO"	ANDROMEDA	5 GAL
RM	24	ROSA MEIDILAND "SCARLET"	SCARLET MEIDILAND ROSE	2 GAL
RP	13	RHODODENDRON "P.J.M."	P.J.M. RHODY	2 GAL
RUM	38	RHAPHIOLEPIS U. MINOR "GULF GREEN"	DWARF YEDDO HAWTHORN	2 GAL
SR	78	SARGOCOCGA RUSCIFOLIA	TALL SARGOCOCGA	2 GAL
TOES	234	THUJA O. "EMERALD GREEN"	EMERALD GREEN ARBORVITAE	4 FT - 5 FT
SEDS				
AU24	550	ARCTOSTAPHYLOS UVAURSI-24IN-O.C.	NATIVE KINNIKINNICK	4 IN 24" O.C.

PLANTING PLAN
OWNER TO HANDWATER USING HOSEBIBS



RES FACILITIES

RESPONSIBLE PARTY FOR MAINTENANCE AND MONITORING

Frederick & Shervy
(503) 705-0708
vrbuilder@aol.com
PO Box 66320
Portland, OREGON 97240

- I. SHALL MONITOR THE REQUIRED PLANTINGS FOR TWO YEARS TO ENSURE SURVIVAL AND REPLACEMENT AS DESCRIBED AS FOLLOWS: THE LANDOWNER IS RESPONSIBLE FOR THE ONGOING SURVIVAL OF REQUIRED PLANTINGS AND IS RESPONSIBLE FOR SUPPLYING AND REPLACING ANY DEAD PLANTS.
 - A. CONDUCT ANNUAL PLANT INSPECTION DURING THE EARLY SUMMER GROWING SEASON.
 - B. A COUNT OF THE NUMBER OF PLANTS THAT HAVE DIED. ONE REPLACEMENT PLANT MUST BE PLANTED FOR EACH PLANT THAT HAS DIED (REPLACEMENT MUST OCCUR WITHIN ONE PLANTING SEASON).
 - C. A LIST OF REPLACEMENT PLANTS
 - D. PROVIDE THREE LETTERS (TO SERVE AS MONITORING AND MAINTENANCE REPORTS) TO RES CONTAINING THE ABOVE MONITORING INFORMATION. SUBMIT THE FIRST LETTER TO VERIFY THE SITE HAS BEEN PLANTED, SUBMIT THE SECOND LETTER WITHIN 12 TO 14 MONTHS AFTER INITIAL PLANTING AND THE THIRD LETTER 24 TO 27 MONTHS AFTER INITIAL PLANTING.

RES SWALE -RAINGARDEN-BASIN

PER 100 SQUARE FEET OF FACILITY AREA.

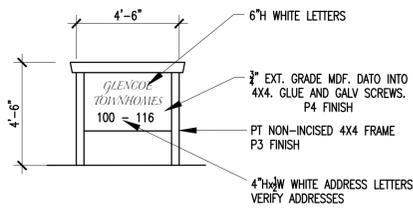
MOISTURE ZONE (A). 3 LARGE SHRUBS / SMALL TREES, 4 SMALL SHRUBS, AND 115 GROUNDCOVER (HERBACEOUS PLANTS).

HERBACEOUS PLANTS: 50 #4 CONTAINER
SMALL SHRUBS / GROUNDCOVER: #1 CONTAINER
LARGE SHRUBS / SMALL TREES: 50"

ALL PLANTING PLANS SHOULD HAVE A MINIMUM OF 50 PERCENT EVERGREEN PLANTS AND AT LEAST TWO SPECIES FROM THE HERBACEOUS AND SMALL SHRUBS/GROUNDCOVER PLANT COMMUNITIES.

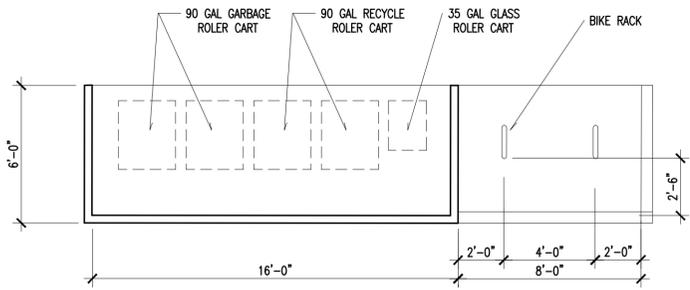
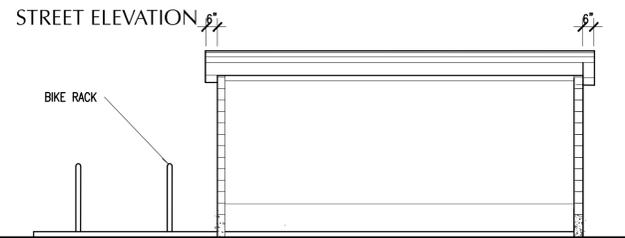
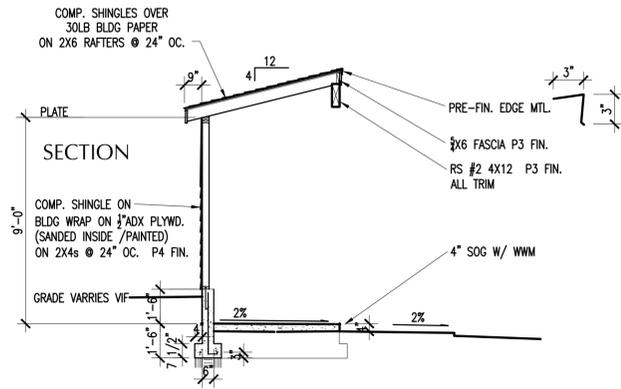
HERBACEOUS PLANTS			
	CAREX OBNUPTA		SLOUGH SEDGE
	JUNCUS PATENS		SPREADING RUSH
SMALL SHRUBS/GROUNDCOVER			
CK	24	CORNUS SERICEA 'KELSEY'	KELSEY RED-TWIG DOGWOOD
FM	14	POLYSTICHUM MUNITUM	POLYSTICHUM MUNITUM, SWORD FERN
LARGE SHRUBS/SMALL TREES			
RS	14	RIBES SANSUMEIJM	RED FLOWERING CURRANT
AC	4	ACER CIRCINATUM	VINE MAPLE

ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232-1987).

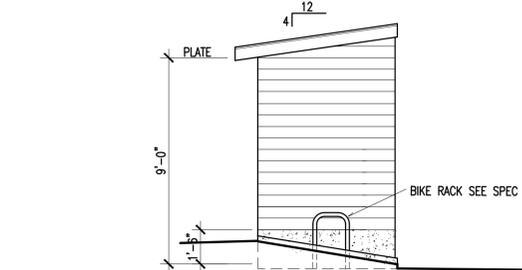


A ENTRANCE SIGN

1/4" = 1'-0" @ 22X34



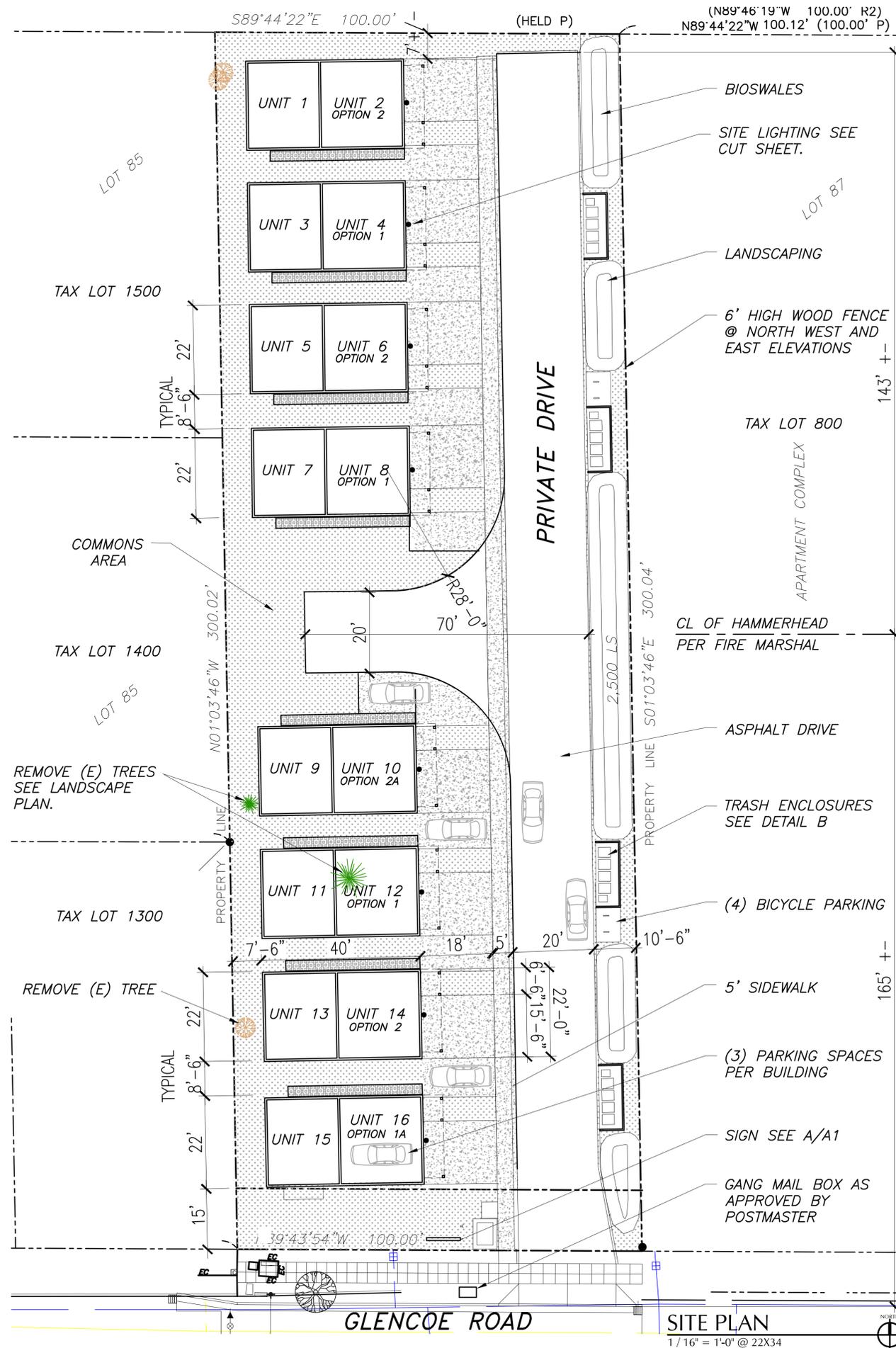
B TRASH ENCLOSURE



ELEVATIONS

B TRASH ENCLOSURE

1/4" = 1'-0" @ 22X34



DRAWING INDEX:

SURVEY/EXISTING CONDITIONS

ARCHITECTURAL:

- A1 SITE PLAN/SIGNAGE/TRASH ENCL.
- A2 FLOOR PLANS OPTION 1
- A2.1 FLOOR PLANS OPTION 2
- A3 ELEVATIONS OPTION 1
- A3.1 ELEVATIONS OPTION 2

CIVIL:

- C1.1 C2.1 SITE PLAN
- C2.2 GRADING PLAN
- C2.3 UTILITY PLAN
- R2.1 HALF STREET IMPROVEMENT PLAN

LANDSCAPE

- L1 LANDSCAPE PLAN

PROJECT INFORMATION:

ZONING HDR	HIGH DENSITY RESIDENTIAL
SITE AREA:	.68 ACRES 30,000 SF
LANDSCAPING	36% 10,750 SF
UNITS:	16
PARKING:	1.5/UNIT 24

VICINITY MAP



THIS PROJECT

GLENCOE TOWNHOMES

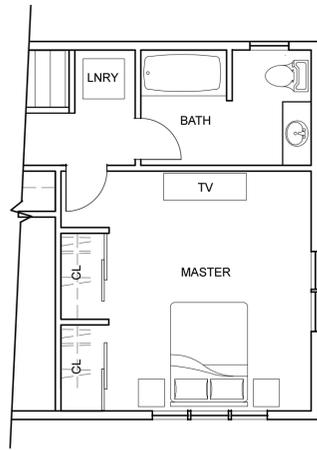
7949 GLENCOE ROAD
MILWAUKIE OREGON

DATE:
PA 08-23-2019

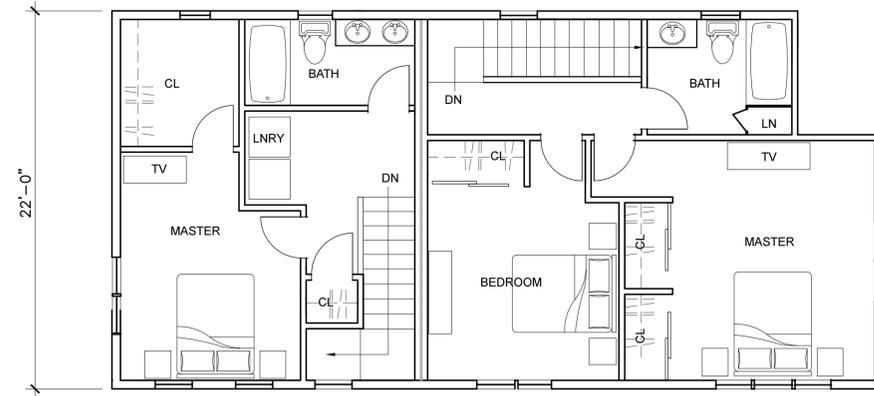
CKD BY:
APM
SHEET:

A1

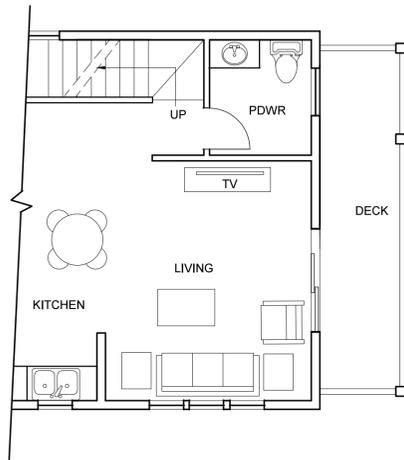
TERRAFORMA
architecture + planning
645 sw viewmont drive
portland, oregon 97225
www.terraforma.biz



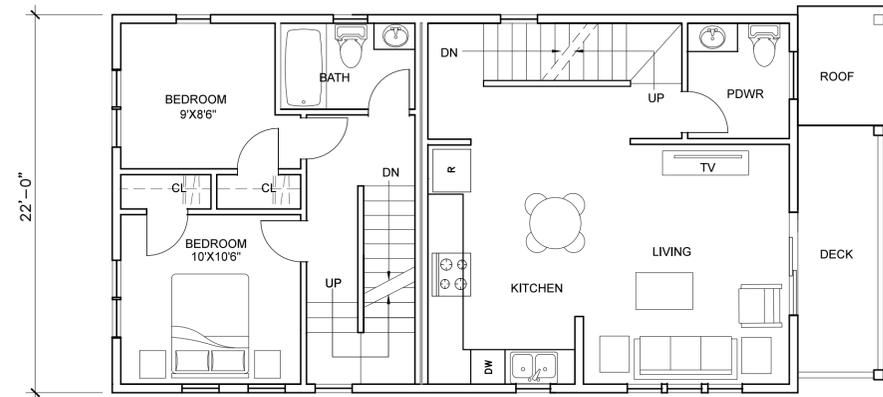
PARTIAL THIRD FLOOR OPT 2
SCALE: 3/16" = 1'-0"



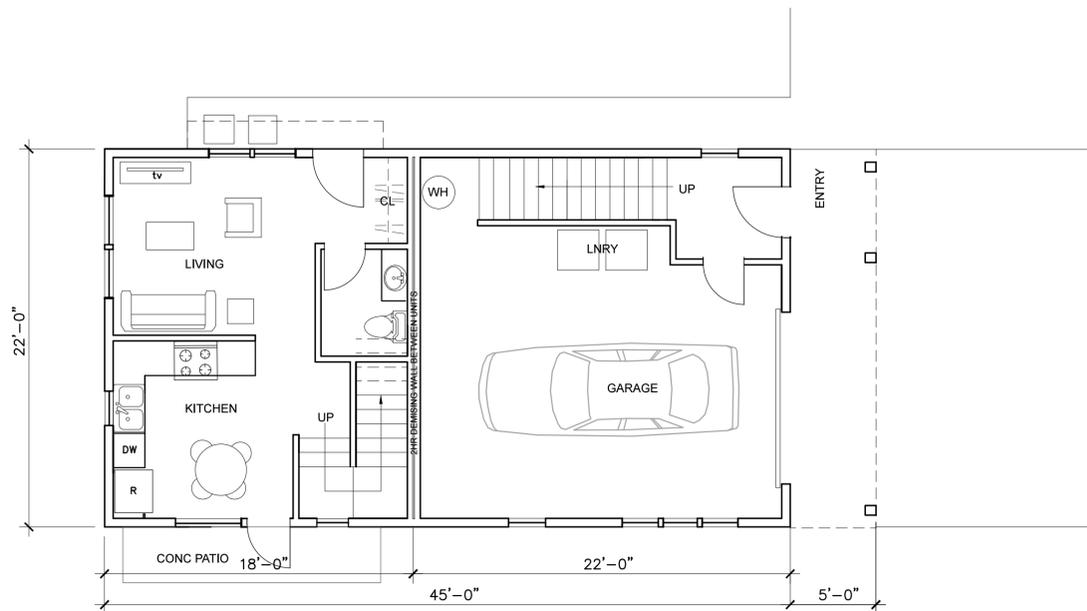
THIRD FLOOR OPTION 1
SCALE: 3/16" = 1'-0"



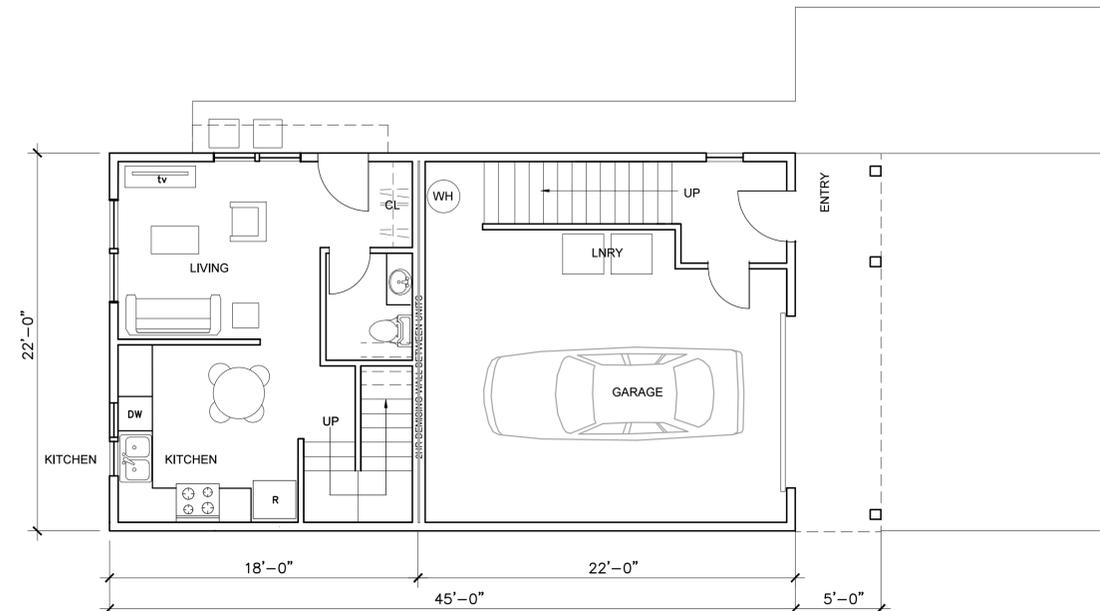
PARTIAL SECOND FLOOR OPT 2
SCALE: 3/16" = 1'-0"



SECOND FLOOR OPTION 1
SCALE: 3/16" = 1'-0"



GROUND FLOOR PLAN FACING GLENCOE ROAD
SCALE: 3/16" = 1'-0"



TYPICAL GROUND FLOOR
SCALE: 3/16" = 1'-0"



THIS PLAN IS THE PROPERTY OF TERRA FORMA ARCHITECTURE + PLANNING AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN AGREEMENT OF TERRA FORMA ARCHITECTURE + PLANNING.

DATE:
PA 08-23-2019

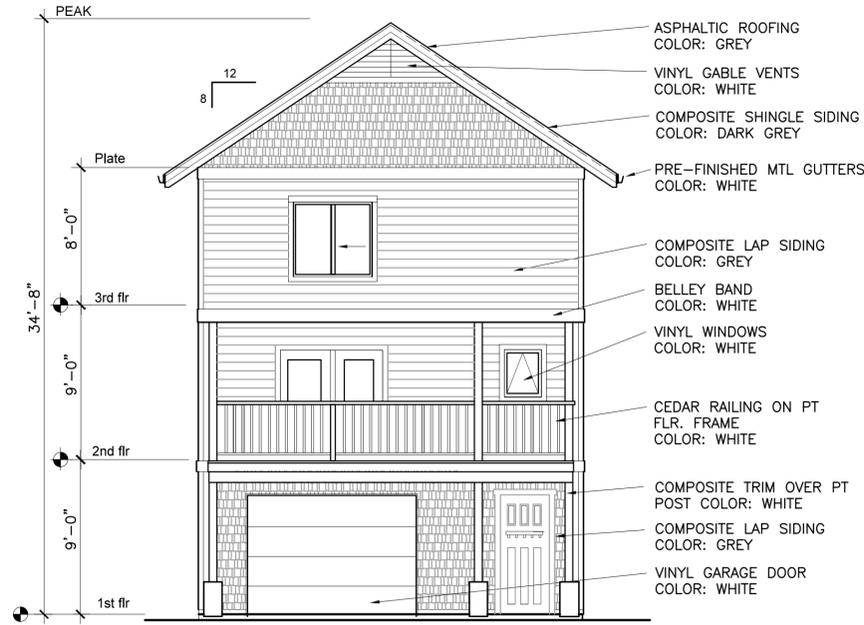
CKD BY:
APM

SHEET:

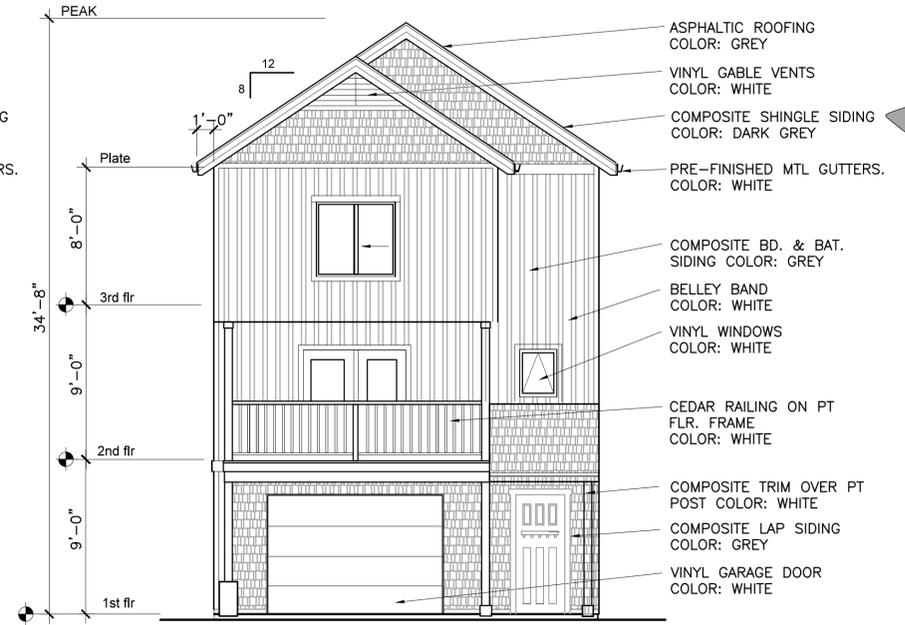
A2



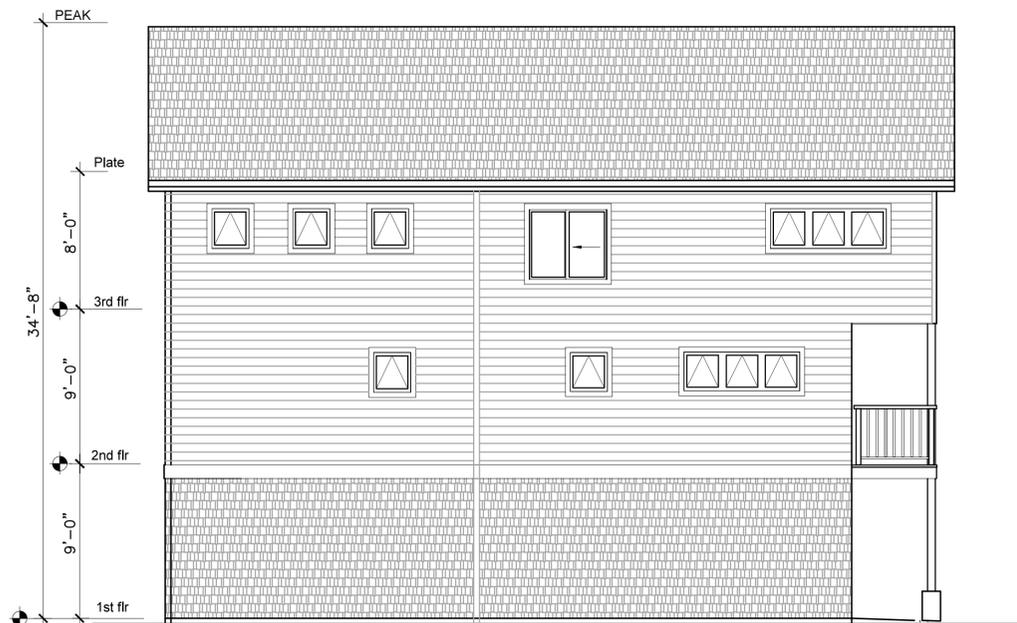
SIDE ELEVATION FACING GLENCOE ROAD
SCALE: 3/16" = 1'-0"



FRONT ELEVATION OPT 2
SCALE: 3/16" = 1'-0"



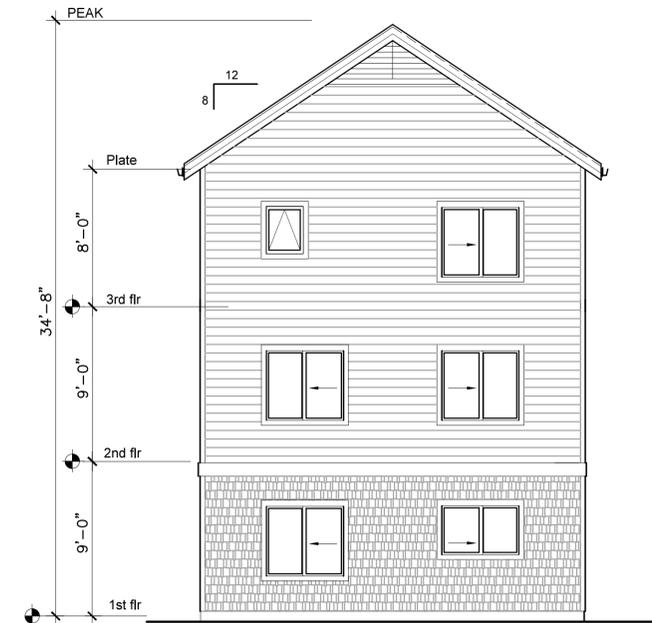
FRONT ELEVATION OP 1
SCALE: 3/16" = 1'-0"



SIDE ELEVATION
SCALE: 3/16" = 1'-0"



SIDE ELEVATION
SCALE: 3/16" = 1'-0"



REAR ELEVATION
SCALE: 3/16" = 1'-0"