PLANNING DEPARTMENT
6101 SE Johnson Creek Blvd
Milwaukie OR 97206
503-786-7630
planning@milwaukieoregon.gov

Application for Land Use Action

Master File #: MLP-2019-001

Review type*: ☐ I ☒ II ☐ III ☐ IV ☐ V

CHOOSE APPLICATION TYPE(S):

Land Division: Partition

Land Division: Partition

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Use separate application forms for:
- Annexation and/or Boundary Change
- Compensation for Reduction in Property Value (Measure 37)
- Daily Display Sign
- Appeal

RESPONSIBLE PARTIES:

APPLICANT (owner or other eligible applicant—see reverse): Pillar Development, LLC, Tony Mullins

Mailing address: 602 SE 38th Drive, Gresham, OR Zip: 97080

Phone(s): 503-706-2598 Email: pillarnw@gmail.com

APPLICANT'S REPRESENTATIVE (if different than above): Isenhart Consulting, LLC, Danelle Isenhart

Mailing address: P.O. Box 2364, Beaverton, OR Zip: 97075

Phone(s): 503-880-4979 Email: danelle@isenhartconsulting.com

SITE INFORMATION:

Address: SE 49th & SE Mullan Map & Tax Lot(s): 1S2E 30CD 2500 & 5200

Comprehensive Plan Designation: LD Zoning: R-7 Size of property: 24,081.00 Sq Ft

PROPOSAL (describe briefly):

2-parcel partition with right-of-way dedication and improvements for SE White Lake Road

SIGNATURE: Tony Mullen

ATTEST: I am the property owner or I am eligible to initiate this application per Milwaukie Municipal Code (MMC) Subsection 19.1001.6.A. If required, I have attached written authorization to submit this application. To the best of my knowledge, the information provided within this application package is complete and accurate.

Submitted by: ↑ Date: 4/24/19

IMPORTANT INFORMATION ON REVERSE SIDE

*For multiple applications, this is based on the highest required review type. See MMC Subsection 19.1001.6.B.1.

MILWAUKIE PLANNING
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Submittal Requirements

For all Land Use Applications
(except Annexations and Development Review)

All land use applications must be accompanied by a signed copy of this form (see reverse for signature block) and the information listed below. The information submitted must be sufficiently detailed and specific to the proposal to allow for adequate review. Failure to submit this information may result in the application being deemed incomplete per the Milwaukie Municipal Code (MMC) and Oregon Revised Statutes.

Contact Milwaukie Planning staff at 503-786-7630 or planning@milwaukieoregon.gov for assistance with Milwaukie's land use application requirements.

1. **All required land use application forms and fees**, including any deposits.

   Applications without the required application forms and fees will not be accepted.

2. **Proof of ownership or eligibility to initiate application** per MMC Subsection 19.1001.6.A.

   Where written authorization is required, applications without written authorization will not be accepted.

3. **Detailed and comprehensive description** of all existing and proposed uses and structures, including a summary of all information contained in any site plans.

   Depending upon the development being proposed, the description may need to include both a written and graphic component such as elevation drawings, 3-D models, photo simulations, etc. Where subjective aspects of the height and mass of the proposed development will be evaluated at a public hearing, temporary onsite "story pole" installations, and photographic representations thereof, may be required at the time of application submittal or prior to the public hearing.

4. **Detailed statement** that demonstrates how the proposal meets the following:

   A. All applicable development standards (listed below):

      1. **Base zone standards** in Chapter 19.300.
      2. **Overlay zone standards** in Chapter 19.400.
      3. **Supplementary development regulations** in Chapter 19.500.
      4. **Off-street parking and loading standards and requirements** in Chapter 19.600.
      5. **Public facility standards and requirements**, including any required street improvements, in Chapter 19.700.

   B. All applicable application-specific approval criteria (check with staff).

   These standards can be found in the MMC, here: www.qcode.us/codes/milwaukie/

5. **Site plan(s), preliminary plat, or final plat** as appropriate.

   See Site Plan, Preliminary Plat, and Final Plat Requirements for guidance.

6. **Copy of valid preapplication conference report**, when a conference was required.

APPLICATION PREPARATION REQUIREMENTS:

- Five hard copies of all application materials are required at the time of submittal. Staff will determine how many additional hard copies are required, if any, once the application has been reviewed for completeness.
- All hard copy application materials larger than 8½ x 11 in. must be folded and be able to fit into a 10- x 13-in. or 12- x 16-in. mailing envelope.
- All hard copy application materials must be collated, including large format plans or graphics.

ADDITIONAL INFORMATION:

- Neighborhood District Associations (NDAs) and their associated Land Use Committees (LUCs) are important parts of Milwaukie's land use process. The City will provide a review copy of your application to the LUC for the subject property. They may contact you or you may wish to contact them. Applicants are strongly encouraged to present their proposal to all applicable NDAs prior to the submittal of a land use application and, where presented, to submit minutes from all such meetings. NDA information: www.milwaukieoregon.gov/citymanager/what-neighborhood-district-association.
- Submittal of a full or partial electronic copy of all application materials is strongly encouraged.

As the authorized applicant I, (print name) Tony Mullins of Pillar Development, attest that all required application materials have been submitted in accordance with City of Milwaukie requirements. I understand that any omission of required items or lack of sufficient detail may constitute grounds for a determination that the application is incomplete per MMC Subsection 19.1003.3 and Oregon Revised Statutes 227.178. I understand that review of the application may be delayed if it is deemed incomplete.

Furthermore, I understand that, if the application triggers the City's sign-posting requirements, I will be required to post signs on the site for a specified period of time. I also understand that I will be required to provide the City with an affidavit of posting prior to issuance of any decision on this application.

Applicant Signature: Tony Mullins

Date: 4/24/19

Official Use Only

Date Received (date stamp below):

PLANNING DEPARTMENT
6101 SE Johnson Creek Blvd
Milwaukie OR 97206

PHONE: *503-786-7630*
FAX: *503-774-8236*
E-MAIL: *planning@milwaukieoregon.gov*

Preliminary Plat Checklist and Procedures

All applications for partitions and subdivisions require submission of preliminary development plans and supporting information in accordance with the Milwaukie Land Division Ordinance. In special cases, certain items listed below may not be required and can be waived by staff. All items below must be submitted except when authorized by staff signature at the end of the form. Errors, omissions, or poor quality may result in the application being rejected or declared incomplete pursuant to the Milwaukie Zoning Ordinance and/or Land Division Ordinance.

Application Checklist

1. Detailed description of how the proposal complies with Land Division Ordinance Section 17.12 Application Procedure and Approval Criteria.
2. Detailed description of how the proposal complies with Land Division Ordinance Section 17.16 Application Requirements and Procedures.
3. Detailed description of how the proposal and application complies with Land Division Ordinance Section 17.20 Preliminary Plat including the following minimum requirements.
   - a Preliminary plats shall be prepared by an Oregon registered land surveyor.
   - b. The following general information shall be submitted with the preliminary plat:
     1) Proposed name of the subdivision/partition. The name shall not duplicate nor resemble the name of another subdivision in the county. Subdivision names shall be approved by the County Surveyor in accordance with Oregon Revised Statutes Chapter 92.
     2) Appropriate identification clearly stating the map is a preliminary plat.
     3) Location by section, township, and range; and a legal description sufficient to define the location and boundaries of the area to be divided.
     4) Names and addresses of the owner, subdivider, and engineer or surveyor.
     5) Other information as may be specified on application forms and checklists prescribed by the Planning Director.
   - c. Vicinity map shall be drawn at an appropriate scale, showing all existing subdivisions, streets, and unsubdivided land between the proposed subdivision and the nearest existing arterial or collector streets; and showing how proposed streets may be extended to connect with existing streets. At a minimum, the vicinity map shall depict future street connections for land within 400 feet of the subject property.
4. Existing conditions plan including the following (12 copies):
   - a. Location, width, and names of all existing or platted streets within or adjacent to the tract, together with easements, railroad right-of-way, and other important features, such as section lines and corners, city boundary lines, and monuments.
   - b. Contour lines related to an established benchmark or other datum approved by the Engineering Director, with intervals at a minimum of 2 feet for slopes up to 10 percent and 5 feet for slopes over 10 percent.

c. Location within the area to be divided, and in the adjoining streets and property, of existing sewers, water mains, culverts, storm drain system, and electric conduits or lines proposed to service the property to be subdivided, and invert elevations of sewer manholes, drain pipes, and culverts.

d. Zoning and existing uses within the tract and 200 feet on all sides, including the location and use of all existing structures indicating those that will remain and those to be removed.

e. Approximate location of areas subject to inundation or stormwater overflow with approximate high-water elevation. Location, width, direction, and flow of all watercourses on or abutting the tract including wetlands and watercourses as shown on City-adopted natural resource and Title 3 maps.

f. Natural features such as rock outcroppings, drainages whether seasonal or perennial, wooded areas, and isolated trees, including type and caliper.

g. Floodway and floodplain boundary.

h. Areas containing slopes of 25 percent or greater

5. The preliminary plat plan shall include the following information (12 copies):

a. Date, north point, scale, address, assessor reference number, and legal description.

b. Name and address of the record owner or owners and of the person who prepared the site plan.

c. Approximate acreage and square feet under a single ownership or, if more than one ownership is involved, the total contiguous acreage of all landowners directly involved in the partition.

d. For land adjacent to and within the area to be divided, the locations, names, and existing widths of all streets, driveways, public safety accesses, easements, and right-of-ways; location, width, and purpose of all other existing easements; and location and size of sewer and waterlines, drainage ways, power poles, and other utilities.

e. Location of existing structures, identifying those to remain in place and those to be removed.

f. Dimensioned lot design and layout, showing proposed setbacks, landscaping, buffers, driveways, lot sizes, and relationship to existing or proposed streets and utility easements.

g. Existing development and natural features for the site and adjacent properties, including those properties within one 100 feet of the proposal, showing buildings, mature trees, topography, and other structures.

h. Elevation and location of flood hazard boundaries.

i. The location, width, name, and approximate centerline grade and curve radii of all streets; the relationship of all streets to any projected streets planned by the City; indication as to whether roads will continue beyond the plat; and existing and proposed grade profiles.

j. Lot and block numbers.

6. A conceptual plan shall be provided for complete subdivision or partitioning of the property, as well as any adjacent vacant or underutilized properties, so that access issues may be addressed in a comprehensive manner. The concept plan shall include documentation that all options for access have been investigated including shared driveways, pedestrian accessways, and new street development.

7. A detailed narrative description demonstrating how the proposal meets all applicable provisions of this title and Title 19.
8. Plans and drawings as necessary to demonstrate compliance with all applicable provisions of chapters of this title and Title 19.
9. A drainage summary report and plan that demonstrates estimated pre- and post-development flows, stormwater collection and management measures, and proposed discharges.
10. Proposed deed restrictions, if any, in outline form.
11. Improvements to be made by the developer and the approximate time such improvements are to be completed. Sufficient detail regarding proposed improvements shall be submitted so that they may be checked for compliance with the objectives of this title, State law, and other applicable City ordinances. If the nature of the improvements is such that it is impractical to prepare all necessary details prior to approval of the preliminary plat, the additional details shall be submitted with the request for final plat approval.
12. 12 copies of a location plan drawn to an appropriate scale (on paper no larger than 8½ by 11 inches) showing nearest cross streets, drives opposite the site, and location of buildings and parking areas on adjoining lots.

Application Procedures

1. A preapplication conference with City staff is highly recommended.
2 Appointments may be made for review of preliminary plat requirements through the Planning Department in advance of formal submission.
3. The Planning Department coordinates with appropriate City departments, the Fire District, and other involved agencies as needed.
4. Applications will be screened for completeness at the time of submission. Incomplete applications will not be accepted.

Please contact Milwaukie Planning staff at 503-786-7630 for any questions or help with this form.

Pillar Development, Tony Mullins	Tony Mullins	4/24/19
Applicant Name	Applicant Signature	Date
Waived Items	Signature of Milwaukie Planner	Date

RESET

May 14, 2019

A P P L I C A N T ' S S T A T E M E N T

APPLICANT/OWNER:	Tony Mullins Pillar Development, LLC 602 SE 38th Drive Gresham, Oregon 97080
APPLICANT'S REPRESENTATIVE:	Danelle Isenhart, AICP Isenhart Consulting, LLC P.O. Box 2364 Beaverton, Oregon 97075
REQUEST:	2-parcel partition
SITE LEGAL DESCRIPTION:	Tax Lots 2500 & 5200; Tax Map 1S2E 30CD Milwaukie, Oregon
SIZE:	24,081 sq. ft.
LOCATION:	Vacant property at SE 49th Avenue & SE Mullan Street
LAND- USE DISTRICT:	R-7

I. APPLICABLE REGULATIONS

A. Milwaukie Comprehensive Plan

B. Milwaukie Municipal Code:

Title 17	Land Division
17.12	Application Procedure & Approval Criteria
17.16	Application Requirements & Procedures
17.20	Preliminary Plat
17.28	Design Standards
17.32	Improvements
Title 19	Zoning Ordinance
19.300	Base Zones
19.400	Overlay Zones and Special Areas
19.500	Supplementary Development Regulations
19.600	Off-Street Parking & Loading
19.700	Public Facility Improvements
19.1200	Solar Access Protection

II. BACKGROUND:

The applicant is requesting a 2-parcel minor land partition for a single-family detached dwelling on each lot for a 24,081 sq. ft. site designated R-7. The subject property is identified by the Clackamas County assessor as Tax Lots 2500 & 5200 of Tax Map 1S2E—30CD. The partition includes a street off of SE 49th Avenue ("SE White Lake Road). The site is currently vacant.

The adjacent properties to the north and south are in the R-7 zone. The adjacent properties to the west and south are in the R-5 zone. The properties across SE 49th Avenue are zoned R-7.

Regarding required improvements along SE White Lake Road (road extension), it will be constructed to meet the requirements of the City. A 50-foot wide dedication is required to complete the required improvements (See Exhibit 3).

All necessary utilities (i.e., power, sanitary sewer, water, etc.) are presently available to the site, as illustrated on the preliminary site/utility plan (Exhibit 3). The applicant is proposing a water line extension from SE 49th Avenue through SE White Lake Road to the western edge of the site. The applicant is also proposing a short sanitary extension and new manhole for the 2-lots to connect to for sanitary laterals to have enough depth to work well for the new homes. Stormwater for each lot will likely be treated with a drywell as infiltration rates support drywell design. Storm design for each lot will be done with building permit.

III. FINDINGS

A. MILWAUKIE COMPREHENSIVE PLAN

COMMENT:

Except where required by the Milwaukie Municipal Code, this application is not required to address the city's goals and policies related to the development of land, since the Milwaukie Comprehensive Plan is implemented by the code.

B. MILWAUKIE MUNICIPAL CODE

TITLE 17 LAND DIVISION

CHAPTER 17.12: APPLICATION PROCEDURE AND APPROVAL CRITERIA

17.12.020 APPLICATION PROCEDURE

A. Applications for land division and property boundary changes shall be processed in accordance with Chapter 19.1000 Type I, Type II, and Type III procedures as indicated in this section.

COMMENT:

This request for a 2-parcel minor land partition is submitted under the Type II application procedure outlined by Section 19.1005.

D. Partitions

1. **Applications for preliminary partition plat shall be processed in accordance with Section 19.1005 Type II Review. Should any associated application subject to Type III review be submitted in conjunction with a partition, the partition application shall be processed according to Section 19.1006 Type III Review.**
2. **Full compliance with all requirements for subdivision may be required if the Planning Commission should determine that the entire parcel being partitioned is in the process of being divided for the purpose of subdivision. This provision applies if the land to be partitioned exceeds 2 acres and within a year is being partitioned into more than 2 parcels, any one of which is less than 1 acre.**

COMMENT:

This request for a 2-parcel minor land partition is submitted under the Type II application procedure outlined by Section 19.1005.

17.12.040 APPROVAL CRITERIA FOR PRELIMINARY PLAT

A. Approval Criteria

The approval authority may approve, approve with conditions, or deny a preliminary plat based on the following approval criteria:

1. **The proposed preliminary plat complies with Title 19 of this code and other applicable ordinances, regulations, and design standards.**

COMMENT:

The proposed preliminary plat for 2 parcels complies with Title 19 and any other applicable ordinances, regulations and design standards, as discussed throughout this report. This criterion is met.

2. **The proposed division will allow reasonable development and will not create the need for a variance of any land division or zoning standard.**

COMMENT:

The proposed 2-parcel minor partition is reasonable development for the site and does not require a variance for any land division or zoning standard. This criterion is met.

3. **The proposed subdivision plat name is not duplicative and the plat otherwise satisfies the provisions of ORS 92.090(1).**

COMMENT:

The proposed development is a partition; therefore, a subdivision plat name is not applicable.

4. **The streets and roads are laid out so as to conform to the plats of subdivisions already approved for adjoining property as to width, general direction, and in all other respects unless the City determines it is in the public interest to modify the street or road pattern.**

COMMENT:

The extension of SE White Lake Road is the only alignment available as the width at SE 49th Avenue is only wide enough for the new right-of-way. Sheet 5 of the plan set shows a future potential alignment to the west for the roadway to connect to the existing section of SE White Lake Road. This criterion is met.

5. **A detailed narrative description demonstrating how the proposal conforms to all applicable code sections and design standards.**

COMMENT:

This narrative responds to all applicable code sections for the proposed 2-parcel partition. This criterion is met.

CHAPTER 17.16: APPLICATION REQUIREMENTS AND PROCEDURES

17.16.060 PRELIMINARY PLAT FOR PARTITION AND SUBDIVISION

The following shall accompany applications for partition:

- **A. Completed application form signed by all owners of property included in the proposal;**
- **B. Application fee as adopted by the City Council;**
- **C. Completed and signed "submission requirements" and "partition checklist" or "subdivision checklist" forms as appropriate;**
- **D. All information specified on the "submission requirements" and "partition checklist" or "subdivision checklist" forms as appropriate;**
- **E. Requirements and information specified in Chapter 17.20; and**
- **F. Any additional information as may be needed to demonstrate compliance with approval criteria. (Ord. 1907 (Attach. 1), 2002)**

COMMENT:

The required submittal requirements have been completed and are included as part of the partition application packet.

CHAPTER 17.20: PRELIMINARY PLAT

17.20.010 SUBMISSION OF PLANS

Applicants for partition, subdivision, and replat shall prepare a preliminary plat and such improvement plans and other supplemental material including as may be required to describe and represent the objectives of the proposal. (Ord. 1907 (Attach. 1), 2002)

COMMENT:

A preliminary plat is included in the proposed plan set (See Exhibit 3). Other required plans are also included in the proposed plan set. This standard is met.

17.20.020 SCALE

The preliminary plat shall be drawn at a scale and on a sheet size that reliably and conveniently represents design details sufficient for the proper plan review and determination of compliance with this title. (Ord. 1907 (Attach. 1), 2002)

COMMENT:

The preliminary plat is drawn to scale and is provided on paper 22" x 34". This standard is met.

17.20.030 GENERAL INFORMATION TO BE SHOWN ON THE PRELIMINARY PLAT

- **A. Preliminary plats shall be prepared by an Oregon registered land surveyor.**
- **B. The following general information shall be submitted with the preliminary plat:**

1. **Proposed name of the subdivision/partition. The name shall not duplicate nor resemble the name of another subdivision in the county. Subdivision names shall be approved by the County Surveyor in accordance with ORS Chapter 92;**
2. **Date, north point, and scale of drawing;**
3. **Appropriate identification clearly stating the map is a preliminary plat;**
4. **Location by section, township, and range; and a legal description sufficient to define the location and boundaries of the area to be divided;**
5. **Names and addresses of the owner, subdivider, and engineer or surveyor;**
6. **Acreage;**
7. **Structures and yard setbacks;**
8. **The location, width, and purpose of easements;**
9. **The location, approximate dimensions, and area of all lots;**
10. **Lot and block numbers; and**
11. **Other information as maybe specified on application forms and checklists prescribed by the Planning Director.**

C. Vicinity map shall be drawn at an appropriate scale, showing all existing subdivisions, streets, and unsubdivided land between the proposed subdivision and the nearest existing arterial or collector streets, and showing how proposed streets may be extended to connect with existing streets. At a minimum, the vicinity map shall depict future street connections for land within 400 feet of the subject property. (Ord. 1907 (Attach. 1), 2002)

COMMENT:

A preliminary plat is included in the proposed plan set (See Exhibit 3). The vicinity map is included on Sheet 1 (See Exhibit 3). This standard is met.

17.20.050 EXISTING CONDITIONS

The following shall be shown on the preliminary plat:

A. Location, width, and names of all existing or platted streets within or adjacent to the tract, together with easements, railroad right-of-way, and other important features, such as section lines and corners, City boundary lines, and monuments.

B. Contour lines related to an established benchmark or other datum approved by the Engineering Director, with intervals at a minimum of 2 feet for slopes up to 10% and 5 feet for slopes over 10%.

C. Location within the area to be divided, and in the adjoining streets and property, of existing sewers, water mains, culverts, storm drain system, and electric conduits or lines proposed to service the property to be subdivided, and invert elevations of sewer manholes, drain pipes, and culverts.

D. Zoning and existing uses within the tract and 200 feet on all sides, including the location and use of all existing structures indicating those that will remain and those to be removed.

E. Approximate location of areas subject to inundation or stormwater overflow with approximate high-water elevation. Location, width, direction, and flow of all watercourses on or abutting the tract including wetlands and watercourses as shown on City-adopted natural resource and Title 3 maps.

F. Natural features such as rock outcroppings, drainages whether seasonal or perennial, wooded areas, and isolated trees, including type and caliper.

G. Floodway and floodplain boundary.

H. Areas containing slopes of 25% or greater. (Ord. 1907 (Attach. 1), 2002)

COMMENT:

An existing conditions plan is included as Sheet 2 (See Exhibit 3). This standard is satisfied.

17.20.060 PROPOSED CONDITIONS

A. 12 copies of a preliminary plat shall be submitted to the Planning Director. The plat shall include the following information:

1. **Date, north point, scale, address, assessor reference number, and legal description;**
2. **Name and address of the record owner or owners and of the person who prepared the site plan;**
3. **Approximate acreage and square feet under a single ownership, or if more than 1 ownership is involved, the total contiguous acreage of all landowners directly involved in the partition;**
4. **For land adjacent to and within the area to be divided, the locations, names, and existing widths of all streets, driveways, public safety accesses, easements, and rights-of-way; location, width, and purpose of all other existing easements; and location and size of sewer and waterlines, drainage ways, power poles, and other utilities;**
5. **Location of existing structures, identifying those to remain in place and those to be removed;**
6. **Lot design and layout, showing proposed setbacks, landscaping, buffers, driveways, lot sizes, and relationship to existing or proposed streets and utility easements;**
7. **Existing development and natural features for the site and adjacent properties, including those properties within 100 feet of the proposal, showing buildings, mature trees, topography, and other structures;**
8. **Elevation and location of flood hazard boundaries;**
9. **The location, width, name, and approximate centerline grade and curve radii of all streets; the relationship of all streets to any projected streets planned by the City; whether roads will continue beyond the plat; and existing and proposed grade profiles. No street name may be used which will duplicate or be confused with the name of an existing street, except for extensions of existing streets. Street names and numbers shall conform to the established pattern in the surrounding area.**

B. A conceptual plan shall be provided for complete subdivision or partitioning of the property, as well as any adjacent vacant or underutilized properties, so that access issues may be addressed in a comprehensive manner. The concept plan shall include documentation that all options for access have been investigated including shared driveways, pedestrian accessways, and new street development.

C. A detailed narrative description demonstrating how the proposal meets all applicable provisions of this title, Title 19, and City design standards, including the Public Works Standards.

D. Plans and drawings as necessary to demonstrate compliance with all applicable provisions of chapters of this title, Title 19, and City design standards, including the Public Works Standards.

E. A drainage summary report and plan prepared in accordance with the applicable Public Works Standards.

F. Proposed deed restrictions, if any, in outline form.

G. Improvements to be made by the developer and the approximate time such improvements are to be completed. Sufficient detail regarding proposed improvements shall be submitted so that they may be checked for compliance with the objectives of this title, State law, and other applicable City ordinances. If the nature of the improvements is such that it is impractical to prepare all necessary details prior to approval of the preliminary plat, the additional details shall be submitted with the request for final plat approval. (Ord. 2003 § 2, 2009; Ord. 1907 (Attach. 1), 2002)

COMMENT:

The preliminary plat and proposed conditions plan have both been submitted for review. A total of 12 copies will be submitted upon completeness determination. This standard is satisfied.

CHAPTER 17.28: DESIGN STANDARDS

17.28.020 PUBLIC FACILITY IMPROVEMENTS

All land divisions and boundary changes that increase the number of lots shall be subject to the requirements and standards contained in Chapter 19.700 Public Facility Improvements and the Public Works Standards for improvements to streets, sidewalks, bicycle facilities, transit facilities, and public utilities. (Ord. 2025 § 3, 2011; Ord. 2003 § 2, 2009; Ord. 1907 (Attach. 1), 2002)

COMMENT:

Chapter 19.700 is applicable for the proposed 2-parcel partition and is discussed below. This standard is satisfied.

17.28.030 EASEMENTS

A. Utility Lines

Easements for sewers, water mains, electric lines, or other public utilities shall be dedicated wherever necessary. The easements shall be provided in accordance with applicable design standards in the Public Works Standards.

B. Watercourses

If a subdivision is traversed by a watercourse such as a drainageway, channel, or stream, there shall be provided a stormwater easement or drainage right-of-way conforming substantially with the lines of the watercourse, and such further width as will be adequate for the purpose of construction and maintenance. Streets, parkways, bicycle ways, or pedestrian ways parallel to major watercourses may be required. (Ord. 2003 § 2, 2009; Ord. 1907 (Attach. 1), 2002)

COMMENT:

Any required easements for utilities will be provided on the final plat. No easements are proposed at this time. No watercourse traverses the site. This standard is satisfied.

17.28.040 GENERAL LOT DESIGN

This section does not apply to units of land that are created for purposes other than land development including parks, natural areas, right-of-way dedications, or reservations of a similar nature. Lots and tracts created for cottage cluster housing development, per Subsection 19.505.4, are also exempt from the requirements of this section.

A. Size and Shape

Lot size, width, shape, and orientation shall be appropriate for the location and the type of use contemplated. Minimum lot standards shall conform to Title 19.

COMMENT:

The proposed 2 parcels are rectangular in shape and meet the minimum lot standards in Title 19. This standard is satisfied.

B. Rectilinear Lots Required

Lot shape shall be rectilinear, except where not practicable due to location along a street radius, or existing lot shape. The sidelines of lots, as far as practicable, shall run at right angles to the street upon which the lots face. As far as practicable, the rear lot line shall run parallel to the street.

COMMENT:

The proposed 2 parcels are rectangular in shape and meet the minimum lot standards in Title 19. The proposed new lot lines are at a 90-degree angle to SE White Lake Road and the rear lot lines are parallel to the street. This standard is satisfied.

C. Limits on Compound Lot Line Segments

Changes in direction along side and rear lot lines shall be avoided. Cumulative lateral changes in direction of a side or rear lot line exceeding 10% of the distance between opposing lot corners along a given lot line may only be permitted through the variance provisions of MMC Subsection 19.911. Changes in direction shall be measured from a straight line drawn between opposing lot corners.

COMMENT:

No changes in direction along side or rear lot lines are proposed. This standard is satisfied.

D. Adjustments to Lot Shape Standard

Lot shape standards may be adjusted subject to Section 19.911 Variances.

COMMENT:

No adjustment to lot shape standards are requested.

E. Limits on Double and Reversed Frontage Lots

Double frontage and reversed frontage lots should be avoided, except where essential to provide separations of residential development from railroads, traffic arteries, or adjacent nonresidential uses, or to overcome specific disadvantages of topography and orientation.

COMMENT:

The proposed parcels are not double or reverse frontage lots.

F. Measurement of Required Frontage

Pursuant to the definition and development standards contained in Title 19 for frontage, required frontage shall be measured along the street upon which the lot takes access. (Ord. 2161 § 2, 2018; Ord. 2051 § 2, 2012; Ord. 2025 § 3, 2011; Ord. 2003 § 2, 2009; Ord. 1907 (Attach. 1), 2002)

COMMENT:

The required frontage for both parcels is measured along SE White Lake Road. Both parcels exceed the required frontage standard in Title 19.

CHAPTER 17.32: IMPROVEMENTS

17.32.020 UTILITY UNDERGROUNDING

All utility lines, including, but not limited to, those required for electric, communication, lighting, cable television services, and related facilities shall be

placed underground. Surface-mounted transformers, surface-mounted connection boxes and meter cabinets, temporary utility service facilities during construction, high-capacity electric and communication feeder lines, and utility transmission lines operating at 50,000 volts or above may be placed above ground. The applicant shall make all necessary arrangements with the serving utility to provide the underground services. (Ord. 2003 § 2, 2009; Ord. 1907 (Attach. 1), 2002)

COMMENT:

All utility lines will be placed underground. This standard is met.

TITLE 19 ZONING ORDINANCE

CHAPTER 19.300: BASE ZONES

19.301 LOW DENSITY RESIDENTIAL ZONES

The low density residential zones are Residential Zone R-10, Residential Zone R-7, and Residential Zone R-5. These zones implement the Low Density and Moderate Density residential land use designations in the Milwaukie Comprehensive Plan.

19.301.1 Purpose

The low density residential zones are intended to create, maintain, and promote neighborhoods with larger lot sizes where the land use is primarily single-family dwellings. They allow for some non-household living uses but maintain the overall character of a single-family neighborhood.

19.301.2 Allowed Uses in Medium and High Density Residential Zones

Uses allowed, either outright or conditionally, in the low density residential zones are listed in Table 19.301.2 below. Similar uses not listed in the table may be allowed through a Director's Determination pursuant to Section 19.903. Notes and/or cross references to other applicable code sections are listed in the "Standards/Additional Provisions" column.

See Section 19.201 Definitions for specific descriptions of the uses listed in the table.

COMMENT:

The applicant is proposing a single-family detached dwelling on each of the two new lots to meet density for the R-7 zone. This is a permitted use in the R-7 zone as listed in Table 19.301.2. This standard is satisfied.

19.301.4 Development Standards

In the low density residential zones, the development standards in Table 19.301.4 apply. Notes and/or cross references to other applicable code

sections are listed in the "Standards/Additional Provisions" column. Additional standards are provided in Subsection 19.301.5.

See Sections 19.201 Definitions and 19.202 Measurements for specific descriptions of standards and measurements listed in the table.

Table 19.301.4

Low Density Residential Development Standards

Standard	R-10	R-7	R-5	Standards/ Additional Provisions
A. Lot Standards				
1. Minimum lot size (sq ft)				**Subsection 19.501.1** Lot Size Exceptions
a. Single-family detached	10,000	7,000	5,000	
b. Duplex	14,000	14,000	10,000	
2. Minimum lot width (ft)	70	60	50	
3. Minimum lot depth (ft)	100		80	
4. Minimum street frontage requirements (ft)				
a. Standard lot			35	
b. Flag lot			25	
c. Double flag lot			35	
B. Development Standards				
1. Minimum yard requirements for primary structures (ft)				**Subsection 19.301.5.A** Side Yards
a. Front yard	20	20	20	**Subsection 19.501.2** Yard Exceptions
b. Side yard	10	5/10	5	**Subsection 19.504.8** Flag Lot Design and Development Standards
c. Street side yard	20	20	15	
d. Rear yard	20	20	20	
2. Maximum building height for primary structures			2.5 stories or 35 ft, whichever is less	**Subsection 19.501.3** Building Height and Side Yard Height Plane Exceptions
3. Side yard height plane limit				**Subsection 19.501.3** Building Height and

a. Height above ground at minimum required side yard depth (ft) b. Slope of plane (degrees)			20 45	Side Yard Height Plane Exceptions
4. Maximum lot coverage (percent of total lot area)		30%	35%	**Section 19.201 "Lot coverage"** definition **Subsection 19.301.5.B** Lot Coverage
5. Minimum vegetation (percent of total lot area)	35%	30%	25%	**Subsection 19.301.5.C** Front Yard Minimum Vegetation **Subsection 19.504.7** Minimum Vegetation
C. Other Standards				
1. Density requirements (dwelling units per acre) a. Minimum b. Maximum	 3.5 4.4	 5.0 6.2	 7.0 8.7	**Subsection 19.301.5.D** Residential Densities **Subsection 19.501.4** Density Exceptions

COMMENT:

The applicant is proposing a single-family detached dwelling on each of the two new lots. Each lot is greater than 7,000 sq. ft. in area, greater than 60 feet in lot width, and greater than 80 feet in lot depth. The two lots are considered standard lots and have greater than 35 feet of street frontage along SE White Lake Road. The dwellings will be designed to meet development standards for the R-7 zone and will show compliance with these requirements at building permit application.

Minimum density for the site is:

(15,296/43,560) * 5 = 1.77 units or 2 units

Maximum density for the site is:

(15,296/43,560) * 6.2 = 2.18 units or 2 units

The applicant is proposing a density of 2 units with a single-family detached dwelling on each of the proposed lots. This standard is satisfied.

19.301.5 Additional Development Standards

A. Side Yards

In the R-7 Zone, one side yard shall be at least 5 ft and one side yard shall be at least 10 ft, except on a corner lot the street side yard shall be 20 ft.

COMMENT:

The applicant is proposing a single-family detached dwelling on each lot. Therefore, the proposed plans show one side setback is 5 feet and the other is 10 feet. This standard is satisfied.

B. Lot Coverage

The lot coverage standards in Subsection 19.301.4.B.4 are modified for specific uses and lot sizes as described below. The reductions and increases are combined for properties that are described by more than one of the situations below.

2. Increased Lot Coverage for Single-Family Detached Dwellings

The maximum lot coverage percentage in Subsection 19.301.4.B.4 is increased by 10 percentage points for development of a single-family detached dwelling, or an addition to an existing single-family detached dwelling, provided that the portions of the structure that are in excess of 20 ft high, or in excess of one story, are limited to the lot coverage standard listed in Subsection 19.301.4.B.4. Only portions of the structure that are less than 20 ft and no taller than one story are allowed to exceed the listed lot coverage standard. See Figure 19.301.5.B.2 for an illustration of this allowance.

A Type II variance per Subsection 19.911.4.A, to further increase this lot coverage allowance, is prohibited.

COMMENT:

The future dwelling on each lot will meet lot coverage. Verification of lot coverage percentage will be done with building permits as the duplex design has not been done.

C. Front Yard Minimum Vegetation

At least 40% of the front yard shall be vegetated. The front yard vegetation area required by this subsection counts toward the minimum required vegetation for the lot. A property may provide less than the 40% of the front yard vegetation requirement if it is necessary to provide a turnaround area so that vehicles can enter a collector or arterial street in a forward motion.

COMMENT:

At least 40% of the front yard on each lot will be vegetated. The remainder of the front yard area will be driveway for the dwelling.

D. Residential Densities

The minimum and maximum development densities in Subsection 19.301.4.C.1 are applicable for land divisions and replats that change the number of lots.

If a proposal for a replat or land division is not able to meet the minimum density requirement—due to the dimensional requirements for lot width, lot depth, or lot frontage—the minimum density requirement shall instead be equal to the maximum number of lots that can be obtained from the site given its dimensional constraints. The inability of new lot lines to meet required yard dimensions from existing structures shall not be considered as a basis for automatically lowering the minimum density requirement.

COMMENT:

Minimum density for the site is:

(15,296/43,560) * 5 = 1.77 units or 2 units

Maximum density for the site is:

(15,296/43,560) * 6.2 = 2.18 units or 2 units

The applicant is proposing a density of 2 units with a single-family detached dwelling on each of the proposed lots. This standard is satisfied.

E. Accessory Structure Standards

Standards specific to accessory structures are contained in Section 19.502.

COMMENT:

No accessory structures are proposed at this time.

F. Number of Dwelling Structures

In the low density residential zones, 1 primary building designed for dwelling purposes shall be permitted per lot. See Subsection 19.504.4.

COMMENT:

As allowed, one single-family detached dwelling is proposed on each of the proposed 2 parcels. This standard is satisfied.

G. Off-Street Parking and Loading

Off-street parking and loading is required as specified in Chapter 19.600.

COMMENT:

Chapter 19.600 is addressed below.

H. Public Facility Improvements

Transportation requirements and public facility improvements are required as specified in Chapter 19.700.

COMMENT:

Chapter 19.700 is addressed below.

I. Additional Standards

Depending upon the type of use and development proposed, the following sections of Chapter 19.500 Supplementary Development Regulations may apply. These sections are referenced for convenience, and do not limit or determine the applicability of other sections within the Milwaukie Municipal Code.

1. **Subsection 19.504.4 Buildings on the Same Lot**
2. **Subsection 19.504.8 Flag Lot Design and Development Standards**
3. **Subsection 19.505.1 Single-Family Dwellings and Duplexes**
4. **Subsection 19.505.2 Garages and Carports**
5. **Subsection 19.506.4 Manufactured Dwelling Siting and Design Standards, Siting Standards**

COMMENT:

Any applicable standards are addressed below.

CHAPTER 19.400: OVERLAY ZONES AND SPECIAL AREAS

COMMENT:

The site is not within an overlay zone or special area. The site does not include any designated natural resources. Therefore, this Chapter is not applicable.

CHAPTER 19.500: SUPPLEMENTARY DEVELOPMENT REGULATIONS

19.504.1 Clear Vision Areas

A clear vision area shall be maintained on the corners of all property at the intersection of 2 streets or a street and a railroad according to the provisions of the clear vision ordinance in Chapter 12.24.

COMMENT:

The property includes the intersection of the new section of SE White Lake Road with SE 49th Avenue. The clear vision areas are not shown on the plans as they are on TL 2600 and 5400, which are not part of this project.

19.504.4 Buildings on the Same Lot

A. In R-10, R-7, and R-5 Zones, 1 primary dwelling shall be permitted per lot. A detached accessory dwelling unit may be permitted per Subsection 19.910.1.

COMMENT:

As allowed, one single-family detached dwelling is proposed on each of the proposed 2 parcels. This standard is satisfied.

19.504.7 Minimum Vegetation

No more than 20% of the required vegetation area shall be covered in mulch or bark dust. Mulch or bark dust under the canopy of trees or shrubs is excluded from this limit. Plans for development shall include landscaping plans which shall be reviewed for conformance to this standard.

COMMENT:

Proposed vegetation will be able to meet this requirement and will be verifying during building permit review.

19.504.11 Preliminary Circulation Plan

A preliminary circulation plan is intended to guide site development by establishing a plan for multimodal access, connectivity, and circulation. A preliminary circulation plan is a conceptual plan, in that it does not establish a precise alignment for street, pedestrian, or bicycle facilities.

A. Applicability

A preliminary circulation plan is required for nonresidential development on sites 3 acres and larger that are subject to development review per Section 19.906 and where any of the following is true:

1. **The site is vacant.**
2. **The proposed new development or redevelopment will result in reconfiguration of the transportation and development pattern for > 50% of the site.**
3. **The development is in the Flex Space Overlay Zone.**

B. Plan Contents

1. **The preliminary circulation plan shall include a site plan, showing land uses; building envelopes and other structures; the pedestrian, bicycle, and vehicle circulation system; vehicle and bicycle parking areas; open areas; existing trees to be preserved; and utility connections. The site plan must also include the following:**

   a. **All existing improvements that will remain after development of the proposed use.**
   b. **All improvements planned in conjunction with the proposed use.**
   c. **Conceptual plans for possible future uses.**
   d. **Pedestrian and bicycle facilities, including safe pedestrian and safe bicycle circulation between the following:**

      (1) Major buildings, activity areas, and transit stops within the site plan boundaries and adjacent streets, pathways, and transit stops.
      (2) Adjacent developments and the proposed development.

2. **The preliminary circulation plan shall include a public right-of-way/easement plan depicting the following, if applicable:**

   Reservation, dedication, or use of the proposed site for public purposes, including, but not limited to the following: rights-of-way, showing the name and location of all existing and proposed public and private access drives within or on the boundary of the proposed site; the right-of-way and paving dimensions; the ownership and maintenance status, if applicable; the location, width, and construction material of all existing and proposed sidewalks; pedestrian accessways and trails; and bicycle accessways and trails.

COMMENT:

A potential circulation plan is included as part of the plan set as Sheet 5 (Exhibit 3). This standard is satisfied.

19.505 BUILDING DESIGN STANDARDS

19.505.1 Single-Family Dwellings and Duplexes

B. Applicability

The design standards in this subsection apply to the types of development listed below when the closest wall of the street-facing façade is within 50 ft of a front or street side lot line.

1. **New single-family detached dwellings, residential homes, duplexes, and rowhouses on individual lots. Placement of a new manufactured home on a lot outside of a manufactured home park is subject to the requirements of Section 19.506 and the standards of Subsection 19.505.1.**

COMMENT:

The applicant is proposing a single-family detached dwelling on each of the 2 proposed parcels. Therefore, the front façade of each dwelling is required to follow the standards of this section. The applicant has not decided on house designs as of yet. Review of the actual dwellings to be built can be completed with the building permit review.

C. Standards

All buildings that meet the applicability provisions in Subsection 19.505.1.B shall meet the following design standards. The graphics provided are intended to illustrate how development could comply with these standards and should not be interpreted as requiring a specific architectural style. An architectural feature may be used to comply with more than one standard.

An applicant may request a variance to the Detailed Design standards in Subsection 19.505.1.C.4 through a Type II review, pursuant to Subsection 19.911.3.B. Variances to any other design standards requires a variance through a Type III review, per Subsection 19.911.3.C.

1. Articulation

All buildings shall incorporate design elements that break up all street-facing façades into smaller planes as follows. See Figure 19.505.1.C.1 for illustration of articulation.

a. For buildings with 30-60 ft of street frontage, a minimum of 1 of the following elements shall be provided along the street-facing façades.

(1) A porch at least 5 ft deep.
(2) A balcony that is at least 2 ft deep and is accessible from an interior room.
(3) A bay window that extends at least 2 ft wide.
(4) A section of the façade that is recessed by at least 2 ft deep and 6 ft long.
(5) A gabled dormer.

b. For buildings with over 60 ft of street frontage, at least 1 element in Subsection 19.505.1.C.1.a(1)-(4) above shall be provided for every 30 ft of street frontage. Elements shall be distributed along the length of the façade so that there are no more than 30 ft between 2 elements.
c. For buildings with less than 30 ft of street frontage, the building articulation standard is not applicable.

COMMENT:

Both parcels have greater than 60 feet of street frontage. Therefore, articulation is required under 1.b above. The applicant has not decided on house designs as of yet. Review of the actual dwellings to be built can be completed with the building permit review.

2. Eyes on the Street

At least 12% of the area of each street-facing façade must be windows or entrance doors. See Figure 19.505.1.C.2 for illustration of eyes on the street.

a. Windows used to meet this standard must be transparent and allow views from the building to the street. Glass blocks and privacy windows in bathrooms do not meet this standard.
b. Half of the total window area in the door(s) of an attached garage counts toward the eyes on the street standard. All of the window area in the street-facing wall(s) of an attached garage count toward meeting this standard.
c. Window area is considered the entire area within the outer window frame, including any interior window grid.
d. Doors used to meet this standard must face the street or be at an angle of no greater than 45 degrees from the street.
e. Door area is considered the portion of the door that moves. Door frames do not count toward this standard.

COMMENT:

The applicant has not decided on house designs as of yet. Review of the actual dwellings to be built can be completed with the building permit review.

3. Main Entrance

At least 1 main entrance must meet both of the following standards. See Figure 19.505.1.C.3 for illustration of main entrances.

a. Be no further than 8 ft behind the longest street-facing wall of the building.
b. Face the street, be at an angle of up to 45 degrees from the street, or open onto a porch. If the entrance opens up onto a porch, the porch must meet all of these additional standards.

(1) Be at least 25 sq ft in area with a minimum 4-ft depth.
(2) Have at least 1 porch entry facing the street.
(3) Have a roof that is no more than 12 ft above the floor of the porch.
(4) Have a roof that covers at least 30% of the porch area.

COMMENT:

The applicant has not decided on house designs as of yet. Review of the actual dwellings to be built can be completed with the building permit review.

4. Detailed Design

All buildings shall include at least 5 of the following features on any street-facing façade. See Figure 19.505.1.C.4 for illustration of detailed design elements.

a. **Covered porch at least 5 ft deep, as measured horizontally from the face of the main building façade to the edge of the deck, and at least 5 ft wide.**
b. **Recessed entry area at least 2 ft deep, as measured horizontally from the face of the main building façade, and at least 5 ft wide.**
c. **Offset on the building face of at least 16 in from 1 exterior wall surface to the other.**
d. **Dormer that is at least 4 ft wide and integrated into the roof form.**
e. **Roof eaves with a minimum projection of 12 in from the intersection of the roof and the exterior walls.**
f. **Roof line offsets of at least 2 ft from the top surface of 1 roof to the top surface of the other.**
g. **Tile or wood shingle roofs.**
h. **Horizontal lap siding between 3 to 7 in wide (the visible portion once installed). The siding material may be wood, fiber-cement, or vinyl.**
i. **Brick, cedar shingles, stucco, or other similar decorative materials covering at least 40% of the street-facing façade.**
j. **Gable roof, hip roof, or gambrel roof design.**
k. **Window trim around all windows at least 3 in wide and 5/8 in deep.**
l. **Window recesses, in all windows, of at least 3 in as measured horizontally from the face of the building façade.**
m. **Balcony that is at least 3 ft deep, 5 ft wide, and accessible from an interior room.**
n. **One roof pitch of at least 500 sq ft in area that is sloped to face the southern sky and has its eave line oriented within 30 degrees of the true north/south axis.**
o. **Bay window at least 2 ft deep and 5 ft long.**
p. **Attached garage width, as measured between the inside of the garage door frame, of 35% or less of the length of the street-facing façade.**

COMMENT:

The applicant has not decided on house designs as of yet. Review of the actual dwellings to be built can be completed with the building permit review.

19.505.2 Garages and Carports

B. Applicability

The standards in this subsection apply to all new attached garages and carports on properties with a single-family detached dwelling, residential home, or duplex when the street-facing façade of the garage, or columns of the carport, are located within 50 ft of the front

property line. Standards for garages in rowhouse development are in Subsection 19.505.5.

COMMENT:

The applicant is proposing a 2-parcel partition with a single-family detached dwelling on each lot. Each dwelling will have the street-facing façade of the garage within 50 feet of the front property line. Therefore, this section is applicable.

C. Standards

1. **The front of a garage or carport can be no closer to the front lot line than the longest street-facing wall of the house that encloses living area. The following exceptions apply:**

   a. **A garage or carport may extend up to 5 ft in front if there is a covered front porch and the garage or carport does not extend beyond the front of the porch.**
   b. **A garage may extend up to 5 ft in front if the garage is part of a 2-story façade that has a window at least 12 sq ft in area on the second story that faces the street.**

2. **The width of a street-facing garage door(s), as measured between the inside of the garage door frame, may not exceed 40% of the total width of the street-facing façades on the same street frontage as the garage door. See Figure 19.505.2.C.2. Notwithstanding this limit, a dwelling is allowed 1 12-ft-wide garage door, regardless of the total width of street-facing façades.**

   The maximum allowed garage width may be increased to 50% of the total width of the street-facing façade if a total of 7 detailed design elements in Subsection 19.505.1.C.4 are included on the street-facing façade.

COMMENT:

The applicant has not decided on house designs as of yet. Review of the actual dwellings to be built can be completed with the building permit review.

CHAPTER 19.600: OFF-STREET PARKING AND LOADING

19.602 APPLICABILITY

19.602.1 General Applicability

The regulations of Chapter 19.600 apply to all off-street parking areas and off-street loading areas, whether required by the City as part of development or a change in use, per Subsection 19.602.3, or voluntarily installed for the convenience of users, per Subsection 19.602.4. Activity that is not described by Subsections 19.602.3 or 4 is exempt from compliance with the provisions of Chapter 19.600. Changes to nonconforming off-street parking and loading are

addressed through Chapter 19.600 and not through the provisions of Chapter 19.800.

19.602.3 Applicability for Development and Change in Use Activity

The provisions of Chapter 19.600 apply to development and changes of use as described in Subsection 19.602.3.

A. Development of a vacant site shall have off-street parking and off-street loading areas that conform to the requirements of Chapter 19.600. Development of a site that results in an increase of 100% or more of the existing floor area and/or structure footprint on a site shall also conform to the requirements of Chapter 19.600. The floor area and/or footprint of structures demolished prior to development or redevelopment on the site shall not be considered when calculating the increase in floor area and/or structural footprints.

COMMENT:

The site is vacant and a 2-parcel partition for 2 single-family detached dwellings is proposed. Off-street parking will be provided for each dwelling with a garage and driveway.

19.605 VEHICLE PARKING QUANTITY REQUIREMENTS

19.605.1 Minimum and Maximum Requirements

A. Development shall provide at least the minimum and not more than the maximum number of parking spaces as listed in Table 19.605.1. Modifications to the standards in Table 19.605.1 may be made as per Section 19.605. Where multiple ratios are listed, the Planning Director shall determine which ratio to apply to the proposed development or use.

Table 19.605.1

Minimum To Maximum Off-Street Parking Requirements

Use	Minimum Required	Maximum Allowed
A. Residential Uses		
1. Single-family dwellings, including rowhouses and manufactured homes.	1 space per dwelling unit.	No maximum.

COMMENT:

Off-street parking will be provided for each dwelling with a garage and driveway. Each dwelling unit will have at least one off-street parking space in the attached garage. This standard is satisfied.

19.607 OFF-STREET PARKING STANDARDS FOR RESIDENTIAL AREAS

19.607.1 Residential Driveways and Vehicle Parking Areas

Subsection 19.607.1 is intended to preserve residential neighborhood character by establishing off-street parking standards. The provisions of Subsection 19.607.1 apply to passenger vehicles and off-street parking areas for rowhouses, cottage clusters, duplexes, single-family detached dwellings, and residential homes in all zones, unless specifically stated otherwise.

A. Dimensions

Off-street parking space dimensions for required parking spaces are 9 ft wide x 18 ft deep.

B. Location

1. **Off-street vehicle parking shall be located on the same lot as the associated dwelling, unless shared parking is approved per Subsection 19.605.4.**
2. **No portion of the required parking space is allowed within the following areas. See Figure 19.607.1.B.2. These standards do not apply to off-street parking for cottage clusters, which are subject to the standards in Subsection 19.505.4.**
   a. **Within the required front yard or within 15 ft of the front lot line, whichever is greater.**
   b. **Within a required street side yard.**

C. Parking Surface Materials

Parking of vehicles shall only be allowed on surfaces described in Subsection 19.607.1.C.

1. **The following areas are required to have a durable and dust-free hard surface, and shall be maintained for all-weather use. The use of pervious concrete, pervious paving, driveway strips, or an in-ground grid or lattice surface is encouraged to reduce stormwater runoff.**
   a. **Required parking space(s).**
   b. **All vehicle parking spaces and maneuvering areas located within a required front or side yard. Areas for boat or RV parking are exempt from this requirement and may be graveled.**
   c. **All off-street parking and maneuvering areas for a residential home.**
2. **Maneuvering areas and unrequired parking areas that are outside of a required front or side yard are allowed to have a gravel surface.**

COMMENT:

Off-street parking will be provided for each dwelling with a garage and driveway. Each dwelling unit will have at least one off-street parking space in the attached garage. The size of the garage is unknown at this time, but will be reviewed to meet this standard at the time of building permit review. This standard is satisfied.

CHAPTER 19.700: PUBLIC FACILITY IMPROVEMENTS

19.702 APPLICABILITY

19.702.1 General

Chapter 19.700 applies to the following types of development in all zones:

A. Partitions.

COMMENT:

The applicant is proposing a 2-parcel partition. Therefore, this Chapter is applicable.

19.703 REVIEW PROCESS

19.703.1 Pre-application Conference

For all proposed development that requires a land use application and is subject to Chapter 19.700 per Section 19.702, the applicant shall schedule a pre-application conference with the City prior to submittal of the land use application. The Engineering Director may waive this requirement for proposals that are not complex.

COMMENT:

A pre-application meeting was held for the proposed 2-parcel partition on July 31, 2018. The notes from this meeting are included as Exhibit 5.

19.703.2 Application Submittal

For all proposed development that is subject to Chapter 19.700 per Section 19.702, one of the following types of applications is required.

A. Development Permit Application

If the proposed development does not require a land use application, compliance with Chapter 19.700 will be reviewed as part of the development permit application submittal.

B. Transportation Facilities Review (TFR) Land Use Application

If the proposed development triggers a transportation impact study (TIS) per Section 19.704, a TFR land use application shall be

required. Compliance with Chapter 19.700 will be reviewed as part of the TFR application submittal and will be subject to a Type II review process as set forth in Section 19.1005. The TFR application shall be consolidated with, and processed concurrently with, any other required land use applications.

If the proposed development does not trigger a TIS per Section 19.704, but does require the submittal of other land use applications, compliance with Chapter 19.700 will be reviewed during the review of the other land use applications.

COMMENT:

Per the pre-application meeting a TIS is not required for the proposed 2-parcel partition.

19.703.3 Approval Criteria

For all proposed development that is subject to Chapter 19.700 per Section 19.702, the required development permit and/or land use application shall demonstrate compliance with the following approval criteria at the time of submittal.

A. Procedures, Requirements, and Standards

Development and related public facility improvements shall comply with procedures, requirements, and standards of Chapter 19.700 and the Public Works Standards.

COMMENT:

The land use application (minor partition) and related public facility improvements (utilities and new street- SE White Lake Road) have been addressed with this narrative and the included plans and documentation to comply with the procedures, requirements and standards of Chapter 19.700 and the Public Works Standards.

B. Transportation Facility Improvements

Development shall provide transportation improvements and mitigation at the time of development in rough proportion to the potential impacts of the development per Section 19.705 Rough Proportionality, except as allowed by Chapter 13.32 Fee in Lieu of Construction.

Development in downtown zones that is exempt per Subsection 19.702.3.B shall only be required to provide transportation improvements that are identified by a Transportation Impact Study as necessary to mitigate the development's transportation impacts. Such development is not required to provide on-site frontage improvements.

COMMENT:

The proposed 2-parcel partition includes the dedication and improvement of the site's frontage of SE White Lake Road. This includes sidewalks, curbs, storm facilities, and pavement in the 50-foot wide right-of-way.

C. Safety and Functionality Standards

The City will not issue any development permits unless the proposed development complies with the City's basic safety and functionality standards, the purpose of which is to ensure that development does not occur in areas where the surrounding public facilities are inadequate. Upon submittal of a development permit application, an applicant shall demonstrate that the development property has or will have all of the following:

1. Adequate street drainage, as determined by the Engineering Director.

COMMENT:

The street drainage will be directed to the proposed storm facilities in the planter strips on either side of SE White Lake Road (See Sheet 3 in Exhibit 3). This standard is satisfied.

2. Safe access and clear vision at intersections, as determined by the Engineering Director.

COMMENT:

There is an existing intersection at the edge of the site with SE 49th Avenue. This intersection will be fully built on the property side with the partition. Clear vision triangles are not show as they would be on properties not part of this project.

3. Adequate public utilities, as determined by the Engineering Director.

COMMENT:

Each parcel will be served by the proposed utilities in SE White Lake Road (See Sheet 4 in Exhibit 3). The applicant is proposing a water line extension from SE 49th Avenue through SE White Lake Road to the western edge of the site. The applicant is also proposing a short sanitary extension and new manhole for the 2-lots to connect to for sanitary laterals to have enough depth to work well for the new homes. This standard is satisfied.

4. Access onto a public street with the minimum paved widths as stated in Subsection 19.703.3.C.5 below.

COMMENT:

The driveway access to the public street (SE White Lake Road) will meet standards. Currently the applicant is proposing a driveway on each lot to serve the single-family

dwelling on the respective lot. This standard is satisfied.

5. **Adequate frontage improvements as follows:**

   a. **For local streets, a minimum paved width of 16 ft along the site's frontage.**
   b. **For nonlocal streets, a minimum paved width of 20 ft along the site's frontage.**
   c. **For all streets, a minimum horizontal right-of-way clearance of 20 ft along the site's frontage.**

COMMENT:

SE 49th Avenue is a neighborhood route with 32' of pavement currently. The proposed new section of SE White Lake Road is a local street and is proposed to have 28 feet of pavement. This standard is satisfied.

6. **Compliance with Level of Service D for all intersections impacted by the development, except those on Oregon Highway 99E that shall be subject to the following:**

   a. **Level of Service F for the first hour of the morning or evening 2-hour peak period.**
   b. **Level of Service E for the second hour of the morning or evening 2-hour peak period.**

COMMENT:

The nearest intersection to the site is SE 49th Avenue and SE Mullan Street. Two new lots with single-family detached dwellings will have little impact to the Level of Service for this intersection.

19.704 TRANSPORTATION IMPACT EVALUATION

The Engineering Director will determine whether a proposed development has impacts on the transportation system by using existing transportation data. If the Engineering Director cannot properly evaluate a proposed development's impacts without a more detailed study, a transportation impact study (TIS) will be required to evaluate the adequacy of the transportation system to serve the proposed development and determine proportionate mitigation of impacts. The TIS determination process and requirements are detailed below.

COMMENT:

Per the pre-application meeting a TIS is not required for the proposed 2-parcel partition.

19.708 TRANSPORTATION FACILITY REQUIREMENTS

19.708.1 General Street Requirements and Standards

D. Development in Non-Downtown Zones

Development in a non-downtown zone that has frontage on a street section shown in the PAR is subject to the requirements of the Milwaukie Public Works Standards, which implements the street design standards and right-of-way dedication requirements contained in the PAR for that street frontage. The following general provisions apply only to street frontages that are not shown in the PAR and for development that is not in any of the downtown zones listed in Subsection 19.708.1.C above:

1. **Streets shall be designed and improved in accordance with the standards of this chapter and the Public Works Standards. ODOT facilities shall be designed consistent with State and federal standards. County facilities shall be designed consistent with County standards.**
2. **Streets shall be designed according to their functional classification per Figure 8-3b of the TSP.**

COMMENT:

SE 49th Avenue is a neighborhood route with 32' of pavement currently. The proposed new section of SE White Lake Road is a local street and is proposed to have 28 feet of pavement. The SE White Lake Road improvements include 28 feet of pavement, curb and gutter, 5-foot landscape strips, and 5-foot sidewalks. This standard is satisfied.

3. **Street right-of-way shall be dedicated to the public for street purposes in accordance with Subsection 19.708.2. Right-of-way shall be dedicated at the corners of street intersections to accommodate the required turning radii and transportation facilities in accordance with Section 19.708 and the Public Works Standards. Additional dedication may be required at intersections for improvements identified by the TSP or a required transportation impact study.**

COMMENT:

A 50-foot wide right-of-way dedication is proposed for SE White Lake Road, which will provide access and frontage to the proposed 2 new parcels. This standard is satisfied.

4. **The City shall not approve any development permits for a proposed development unless it has frontage or approved access to a public street.**

COMMENT:

Each of the 2 proposed parcels have frontage on SE White Lake Road. This standard is satisfied.

5. **Off-site street improvements shall only be required to ensure adequate access to the proposed development and to mitigate for off-site impacts of the proposed development.**

COMMENT:

No off-site street improvements are required. This standard is not applicable.

6. The following provisions apply to all new public streets and extensions to existing public streets.

a. All new streets shall be dedicated and improved in accordance with this chapter.

b. Dedication and construction of a half-street is generally not acceptable. However, a half-street may be approved where it is essential to allow reasonable development of a property and when the review authority finds that it will be possible for the property adjoining the half-street to dedicate and improve the remainder of the street when it develops. The minimum paved roadway width for a half-street shall be the minimum width necessary to accommodate 2 travel lanes pursuant to Subsection 19.708.2.

COMMENT:

A 50-foot wide right-of-way dedication is proposed for SE White Lake Road, which will provide access and frontage to the proposed 2 new parcels. The SE White Lake Road improvements include 28 feet of pavement, curb and gutter, 5-foot landscape strips, and 5-foot sidewalks. Half street improvements are not proposed. This standard is satisfied.

7. Traffic calming may be required for existing or new streets. Traffic calming devices shall be designed in accordance with the Public Works Standards or with the approval of the Engineering Director.

COMMENT:

Traffic calming is not required for the existing SE 49th Avenue or for the new section of SE White Lake Road.

8. Railroad Crossings

Where anticipated development impacts trigger a need to install or improve a railroad crossing, the cost for such improvements may be a condition of development approval.

COMMENT:

There is no railroad crossing near the site. This standard is not applicable.

9. Street Signs

The City shall install all street signs, relative to traffic control and street names, as specified by the Engineering Director. The applicant shall reimburse the City for the cost of all such signs installed by the City.

COMMENT:

The new section of SE White Lake Road will intersect with SE 49th Avenue. A stop sign can be provided along SE White Lake Road at the intersection with SE 49th Avenue. This standard is satisfied.

10. Streetlights

The location of streetlights shall be noted on approved development plans. Streetlights shall be installed in accordance with the Public Works Standards or with the approval of the Engineering Director.

COMMENT:

No streetlights are proposed.

E. Street Layout and Connectivity

1. **The length, width, and shape of blocks shall take lot size standards, access and circulation needs, traffic safety, and topographic limitations into consideration.**
2. **The street network shall be generally rectilinear but may vary due to topography or other natural conditions.**
3. **Streets shall be extended to the boundary lines of the developing property where necessary to give access to or allow for future development of adjoining properties.**

    a. **Temporary turnarounds shall be constructed for street stubs in excess of 150 ft in length. Drainage facilities shall be constructed to properly manage stormwater runoff from temporary turnarounds.**
    b. **Street stubs to adjoining properties shall not be considered turnarounds, unless required and designed as turnarounds, since they are intended to continue as through streets when adjoining properties develop.**
    c. **Reserve strips may be required in order to ensure the eventual continuation or completion of a street.**

4. **Permanent turnarounds shall only be provided when no opportunity exists for creating a through street connection. The lack of present ownership or control over abutting property shall not be grounds for construction of a turnaround. For proposed land division sites that are 3 acres or larger, a street ending in a turnaround shall have a maximum length of 200 ft, as measured from the cross street right-of-way to the farthest point of right-of-way containing the turnaround. For proposed land division sites that are less than 3 acres, a street ending in a turnaround shall have a maximum length of 400 ft, measured from the cross street right-of-way to the farthest point of right-of-way containing the turnaround. Turnarounds shall be designed in accordance with the requirements of the Public Works Standards. The requirements of**

this subsection may be adjusted by the Engineering Director to avoid alignments that encourage nonlocal through traffic.

5. **Closed-end street systems may serve no more than 20 dwellings.**

COMMENT:

SE White Lake Road is proposed to connect to SE 49th Avenue along the site's existing 50' frontage. As shown on the circulation plan, this new section of SE White Lake Road can connect to the existing section to the west in the future. A turnaround is not proposed or required as the proposed road improvements is approximately 160 feet in length. A turnaround was not requested as part of the pre-application review.

F. Intersection Design and Spacing

1. **Connecting street intersections shall be located to provide for traffic flow, safety, and turning movements, as conditions warrant.**
2. **Street and intersection alignments for local streets shall facilitate local circulation but avoid alignments that encourage nonlocal through traffic.**
3. **Streets should generally be aligned to intersect at right angles (90 degrees). Angles of less than 75 degrees will not be permitted unless the Engineering Director has approved a special intersection design.**
4. **New streets shall intersect at existing street intersections so that centerlines are not offset. Where existing streets adjacent to a proposed development do not align properly, conditions shall be imposed on the development to provide for proper alignment.**
5. **Minimum and maximum block perimeter standards are provided in Table 19.708.1.**
6. **Minimum and maximum intersection spacing standards are provided in Table 19.708.1.**

COMMENT:

The intersection of SE White Lake Road and SE 49th Avenue is existing, it is just not fully constructed. Curb and rock base are in place. There is no other site frontage for the street intersection. The alignment of Mullan Street to the east and White Lake Road that is being constructed as part of this partition was created with an existing subdivision.

19.708.2 Street Design Standards

Table 19.708.2 contains the street design elements and dimensional standards for street cross sections by functional classification. Dimensions are shown as ranges to allow for flexibility in developing the most appropriate cross section for a given street or portion of street based on existing conditions and the surrounding development pattern. The additional street design standards in Subsection 19.708.2.A augment the dimensional standards contained in Table 19.708.2. The Engineering Director will rely on Table 19.708.2 and Subsection 19.708.2.A to determine the full-width cross section for a specific street segment based on functional classification. The full-width cross section is the sum total of the widest dimension of all individual street elements. If the Engineering Director determines that a full-width cross section is appropriate

and feasible, a full-width cross section will be required. If the Engineering Director determines that a full-width cross section is not appropriate or feasible, the Engineering Director will modify the full-width cross section requirement using the guidelines provided in Subsection 19.708.2.B. Standards for design speed, horizontal/vertical curves, grades, and curb return radii are specified in the Public Works Standards.

Table 19.708.2
Street Design Standards (Dimensions are Shown in Feet)

Street Classification	Full-Width Right of Way Dimension	Individual Street Elements					
		Travel Lane (Center Lane)	Bike Lane	On-Street Parking	Landscape Strips	Sidewalk Curb Tight	Sidewalk Setback
Local	20'–68'	8' or 10'	5'	6'–8'	3'–5'	6'	5'

COMMENT:

SE 49th Avenue is a neighborhood route with 32' of pavement currently. The proposed new section of SE White Lake Road is a local street and is proposed to have 28 feet of pavement. The SE White Lake Road improvements include 28 feet of pavement, curb and gutter, 5-foot landscape strips, and 5-foot sidewalks. This standard is satisfied.

19.708.3 Sidewalk Requirements and Standards

A. General Provisions

1. **Goals, objectives, and policies relating to walking are included in Chapter 5 of the TSP and provide the context for needed pedestrian improvements. Figure 5-1 of the TSP illustrates the Pedestrian Master Plan and Table 5-3 contains the Pedestrian Action Plan.**
2. **Americans with Disabilities Act (ADA) requirements for public sidewalks shall apply where there is a conflict with City standards.**

B. Sidewalk Requirements

1. **Requirements**

   Sidewalks shall be provided on the public street frontage of all development per the requirements of this chapter. Sidewalks shall generally be constructed within the dedicated public right-of-way, but may be located outside of the right-of-way within a public easement with the approval of the Engineering Director.

2. **Design Standards**

Sidewalks shall be designed and improved in accordance with the requirements of this chapter and the Public Works Standards.

3. Maintenance

Abutting property owners shall be responsible for maintaining sidewalks and landscape strips in accordance with Chapter 12.04.

COMMENT:

The applicant is proposing a 5-foot sidewalk along each side of SE White Lake Road in front of Parcels 1 and 2. The sidewalk has been designed per Public Works Standards. This standard is satisfied.

19.709 PUBLIC UTILITY REQUIREMENTS

19.709.2 Public Utility Improvements

Public utility improvements shall be required for proposed development that would have a detrimental effect on existing public utilities, cause capacity problems for existing public utilities, or fail to meet standards in the Public Works Standards. Development shall be required to complete or otherwise provide for the completion of the required improvements.

19.709.3 Design Standards

Public utility improvements shall be designed and improved in accordance with the requirements of this chapter, the Public Works Standards, and improvement standards and specifications identified by the City during the development review process. The applicant shall provide engineered utility plans to the Engineering Director for review and approval prior to construction to demonstrate compliance with all City standards and requirements.

COMMENT:

Each parcel will be served by the existing and proposed utilities in SE White Lake Road (See Sheet 4 in Exhibit 3). The applicant is proposing a water line extension from SE 49th Avenue through SE White Lake Road to the western edge of the site. The applicant is also proposing a short sanitary extension and new manhole for the 2-lots to connect to for sanitary laterals to have enough depth to work well for the new homes. This standard is satisfied.

CHAPTER 19.1200: SOLAR ACCESS PROTECTION

19.1203 SOLAR ACCESS FOR NEW DEVELOPMENT

19.1203.1 Purpose

The purposes of solar access provisions for new development are to ensure that land is divided so that structures can be oriented to maximize solar access and to minimize shade on adjoining properties from structures and trees.

19.1203.2 Applicability

The solar design standards in Subsection 19.1203.3 shall apply to applications for a development to create lots in single-family zones, except to the extent the Director finds that the applicant has shown one or more of the conditions listed in Subsections 19.1203.4 and 5 exist, and exemptions or adjustments provided for therein are warranted.

COMMENT:

The applicant is proposing a 2-parcel partition in the R-7 zone. Therefore, this Section is applicable.

19.1203.3 Design Standard

At least 80% of the lots in a development subject to these provisions shall comply with one or more of the options in this subsection; provided a development may, but is not required to, use the options in Subsections 19.1203.3.B or C below to comply with Section 19.1203.

A. Basic Requirement

A lot complies with Subsection 19.1203.3 if it:

1. **Has a north-south dimension of 90 ft or more; and**
2. **Has a front lot line that is oriented within 30 degrees of a true east-west axis (see Figure 19.1203.3).**

COMMENT:

Both parcels are off an east-west axis street (SE White Lake Road). Parcel 2 has a north-south dimension of 96.69 feet. However, Parcel 1 only has a north-south dimension of 85 feet. The partition does not meet the basic requirement for 80% of the lots.

B. Protected Solar Building Line Option

In the alternative, a lot complies with Subsection 19.1203.3 if a solar building line is used to protect solar access as follows:

1. **A protected solar building line is designated on the plat or in documents recorded with the plat; and**
2. **The protected solar building line is oriented within 30 degrees of a true east-west axis; and**
3. **There are at least 70 ft between the protected solar building line and the middle of the north-south dimension of the lot to the south, measured along a line perpendicular to the protected solar building line; and**
4. **There are least 45 ft between the protected solar building line and the northern edge of the buildable area of the lot, or habitable structures are situated so that at least 80% of their south-facing wall will not be shaded by structures or nonexempt vegetation (see Figure 19.1202.1-4).**

COMMENT:

The lots have their long dimension oriented along the north-south axis. Parcel 1 can have a protected solar building line at the front property line as the property to the south is Parcel 2 and there is SE White Lake Road in between the lots. Parcel 1 will have 65 feet from the protected solar building line and the northern edge of the buildable area of the lot. Parcel 2 can have a protected solar building line at the southern property line as the property to the south is 200 feet in depth. Parcel 2 will have 76.69 feet from the protect solar building line and the northern edge of the buildable area of the lot. This standard is satisfied.

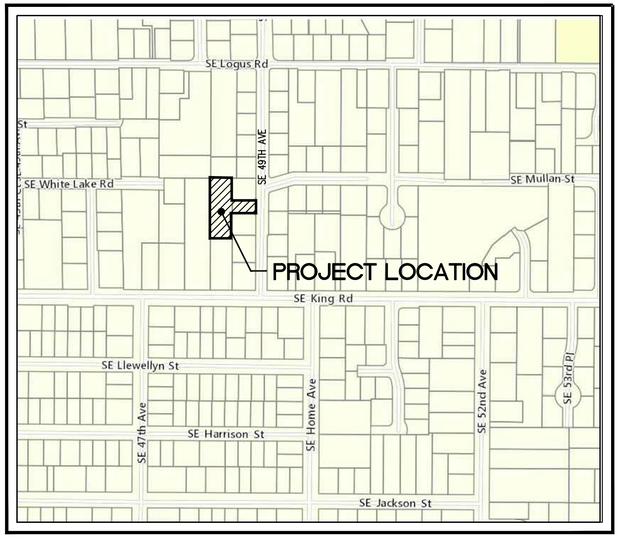
IV. SUMMARY AND CONCLUSIONS

Based upon the findings of this report and the submitted supplemental graphics material, the applicant has demonstrated compliance with the requirements of the relevant sections of the Milwaukie Municipal Code for the requested 2-parcel partition in the R-7 zone. Therefore, the request should be approved.

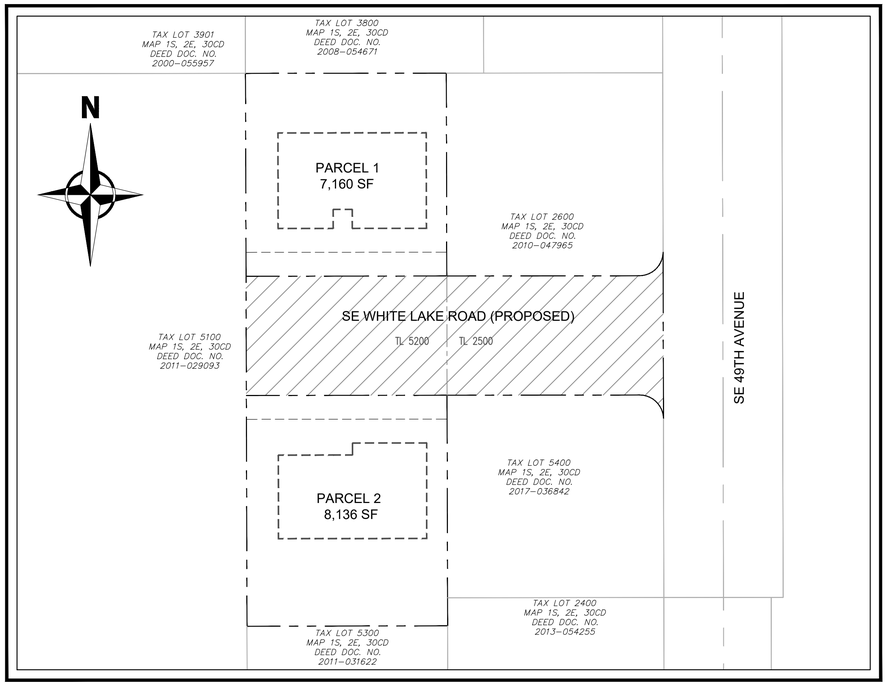
49TH AVE PARTITION

A PRELIMINARY PLAT IN A PORTION

SW 1/4 OF SECTION 30, T.1S., R.2E., W.M.
CLACKAMAS COUNTY, OREGON



VICINITY MAP
NTS



SITE MAP
SCALE : 1"=30'

SITE SUMMARY

ZONING: R-7 LOW-DENSITY RESIDENTIAL DISTRICT

SITE AREA:

TL 2500	= 4,577 SF
TL 5200	= 19,504 SF
TOTAL	= 24,081 SF

TOTAL PROPOSED LOTS: 2

PARCEL 1	= 7,160 SF
PARCEL 2	= 8,136 SF
RIGHT OF WAY DEDICATION (TL 5200)	= 4,208 SF
RIGHT OF WAY DEDICATION (TL 2500)	= 4,577 SF
TOTAL	= 24,081 SF

MINIMUM SETBACKS

FRONT YARD	20'
REAR YARD	20'
SIDE YARD	5' ON ONE SIDE AND 10' ON THE OTHER (FOR INTERIOR LOTS)
STREET SIDE YARD	20' FOR CORNER LOTS

SHEET INDEX

PROJECT CONTACTS

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UTILITY PURVEYORS AND AGENCY CONTACTS

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CITY OF MILWAUKIE PUBLIC WORKS
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PHONE: (503) 786-7600

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CHUCK EATON - ENGINEERING DIRECTOR (503) 786-7605
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CLACKAMAS FIRE DISTRICT #1
MATT AMOS
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MILWAUKIE, OR 97267
PHONE: (503) 742-2660

PROJECT INFORMATION

ADDRESS:
49TH AND MULLAN
MILWAUKIE, OR 97222

TAX LOTS(ZONING):
TL 2500 AND 5200 - MAP12E30CD (R-7 ZONE)

PROJECT DESCRIPTION

PROPOSED 2-LOT PARTITION OF ADJUSTED TL 5200 TO BE DEVELOPED AS SINGLE-FAMILY DETACHED RESIDENTIAL HOMES IN THE R-7 ZONE.

No.	Date	By	Revision Description

Designed By:	Issue Date:
SN/BD	05/15/19
Drawn By:	Issue:
SN/BD	PRELIMINARY
Checked By:	Project No.
BD	20-628-001

REGISTERED PROFESSIONAL ENGINEER 56237PE OREGON JAN. 15, 2008 BRYAN S. DICKERSON
PRELIMINARY
RENEWS: 12/31/19

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49TH AVE PARTITION
NEAR SE 49TH/MULLAN
MILWAUKIE, OR 97222

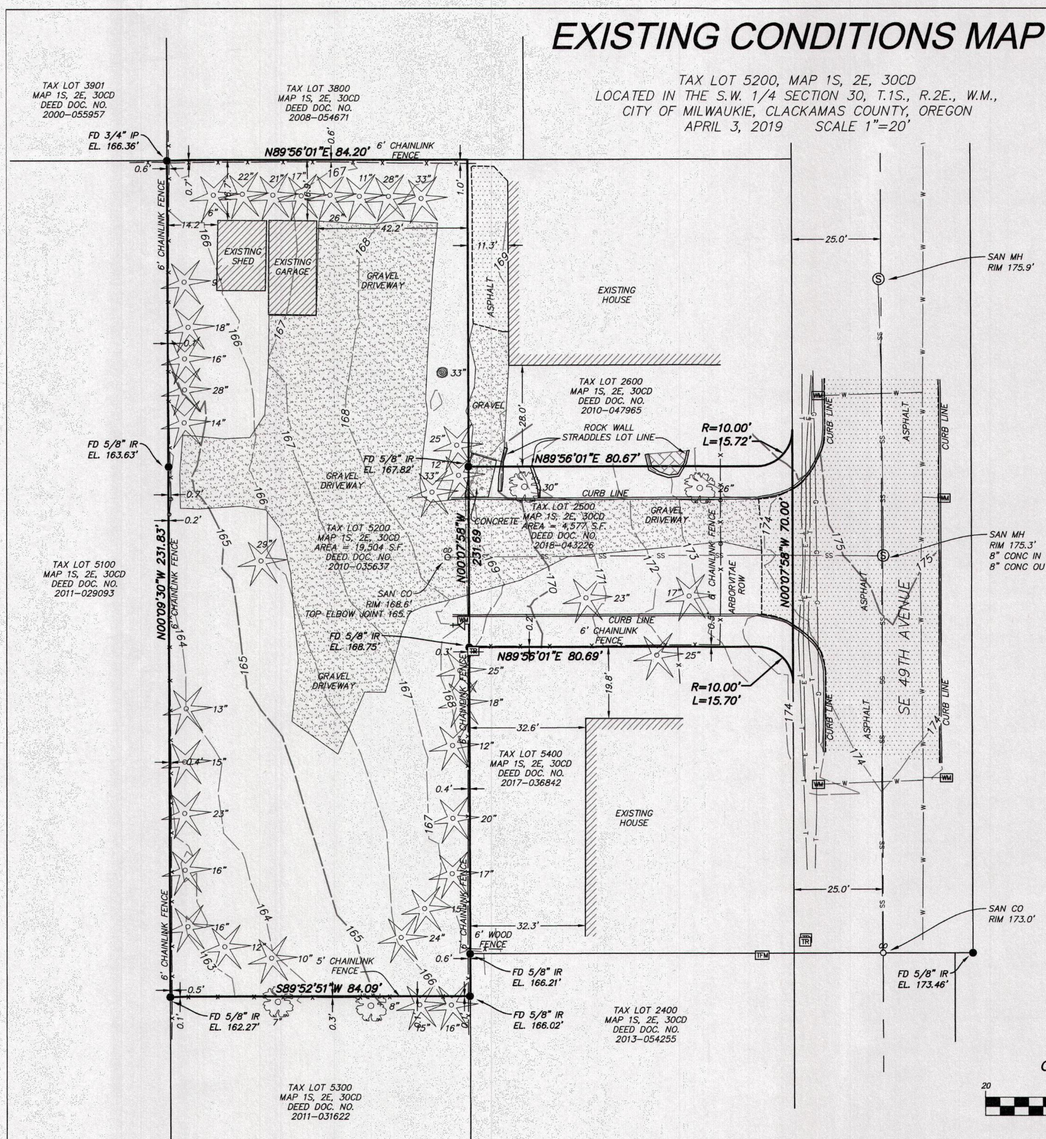
COVER SHEET

1

P:\Oregon\Milwaukie\Pillar Development\2Drawings\WLPD100C.dwg May 15, 2019 - 12:39pm bdickerson

EXISTING CONDITIONS MAP

TAX LOT 5200, MAP 1S, 2E, 30CD
LOCATED IN THE S.W. 1/4 SECTION 30, T.1S., R.2E., W.M.,
CITY OF MILWAUKIE, CLACKAMAS COUNTY, OREGON
APRIL 3, 2019 SCALE 1"=20'



SURVEY NOTES:

THE DATUM FOR THIS SURVEY IS BASED UPON A STATIC GPS OBSERVATION OF LOCAL CONTROL POINTS, PROCESSED THROUGH OPUS. DATUM IS NAVD 88.

A TRIMBLE S6-SERIES ROBOTIC INSTRUMENT WAS USED TO COMPLETE A CLOSED LOOP FIELD TRAVERSE.

THE BASIS OF BEARINGS FOR THIS SURVEY IS PER MONUMENTS FOUND AND HELD PER PARTITION PLAT NO. 1998-014, RECORDS OF CLACKAMAS COUNTY.

THE PURPOSE OF THIS SURVEY IS TO RESOLVE AND DETERMINE THE PERIMETER BOUNDARY OF THE SUBJECT PROPERTY, TO SHOW ALL PERTINENT BOUNDARY ISSUES AND ENCROACHMENTS. NO PROPERTY CORNERS WERE SET IN THIS SURVEY.

NO WARRANTIES ARE MADE AS TO MATTERS OF UNWRITTEN TITLE, SUCH AS ADVERSE POSSESSION, ESTOPPEL, ACQUIESCENCE, ETC.

NO TITLE REPORT WAS SUPPLIED OR USED IN THE PREPARATION OF THIS MAP.

THE UNDERGROUND UTILITIES AS SHOWN ON THIS MAP HAVE BEEN LOCATED FROM FIELD SURVEY OF ABOVE GROUND STRUCTURES AND AS MARKED BY OTHERS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY SURVEYOR.

LEGEND:

Some Symbols shown may not be used on map

- DECIDUOUS TREE
- EVERGREEN TREE
- STORM SEWER MANHOLE
- CATCH BASIN
- SANITARY SEWER CLEANOUT
- SANITARY SEWER MANHOLE
- WATER MANHOLE
- WATER METER
- WATER VALVE
- GAS VALVE
- GAS METER
- BOLLARD
- SIGN
- MAILBOX
- TELEPHONE RISER
- TELEPHONE MANHOLE
- UTILITY BOX
- STORM OUTFALL
- FOUND MONUMENT
- DOWN SPOUT TO STORM SYSTEM
- FD = FOUND
- FI = FIR TREE
- PI = PINE TREE
- CE = CEDAR TREE
- IP = IRON PIPE
- IR = IRON ROD
- YPC = YELLOW PLASTIC CAP
- DE = DECIDUOUS TREE
- TRAFFIC SIGNAL POLE
- UTILITY POLE
- LIGHT POLE
- GUY WIRE
- ELECTRIC BOX
- ELECTRIC METER
- TRANSFORMER
- ELECTRIC RISER
- HEAT PUMP
- WATER SPIGOT
- OVERHEAD LINE
- GAS LINE
- ELECTRICAL LINE
- COMMUNICATIONS LINE
- SANITARY SEWER LINE
- STORM DRAIN LINE
- WATER LINE
- FENCELINE
- HANDRAIL

SIGNED ON: 04/04/19

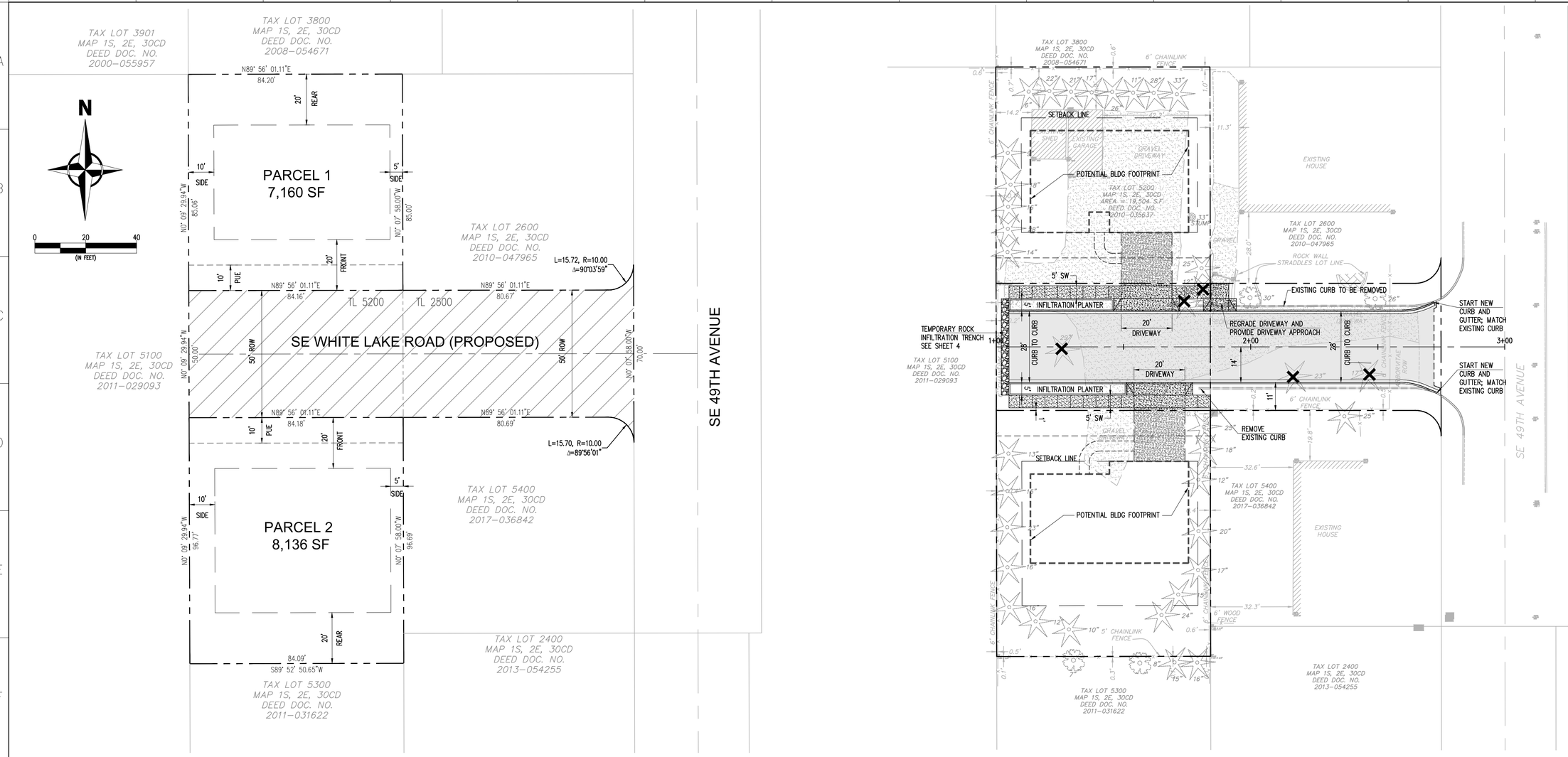
REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 13, 2004
TOBY G. BOLDEN
60377LS

RENEWS: DECEMBER 31, 2019

CENTERLINE CONCEPTS
LAND SURVEYING, INC.
19376 MOLALLA AVE., SUITE 120
OREGON CITY, OREGON 97045
PHONE 503.650.0188 FAX 503.650.0189

Plotted: M: \PROJECTS\PILLAR DEVELOPMENT-49TH AVE\dwg\ECM-C3D.dwg



PRELIMINARY PARTITION PLAT

SCALE: 1" = 20'

GENERAL NOTES:

1. DRIVEWAY AND BUILDING FOOTPRINT LOCATIONS ARE APPROXIMATE AND SUBJECT TO CHANGE AT TIME OF BUILDING PERMIT SUBMITTAL.
2. SIDEWALKS TO BE CONSTRUCTED IN FRONT OF PARCEL 1 AND 2, AT TIME OF HOME CONSTRUCTION.

PROPOSED STREET PLAN

SCALE: 1" = 20'

SITE SUMMARY

ZONING: R-7 LOW-DENSITY RESIDENTIAL DISTRICT

SITE AREA:

TL 2500	= 4,577 SF
TL 5200	= 19,504 SF
TOTAL	= 24,081 SF

TOTAL PROPOSED LOTS: 2

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RIGHT OF WAY DEDICATION (TL 5200)	= 4,208 SF
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TOTAL	= 24,081 SF

MINIMUM SETBACKS

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SIDE YARD	5' ON ONE SIDE AND 10' ON THE OTHER (FOR INTERIOR LOTS)
STREET SIDE YARD	20' FOR CORNER LOTS

No.	Date	By	Revision Description

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SN/BD	05/15/19
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SN/BD	PRELIMINARY
Checked By:	Project No.
BD	20-628-001

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49TH AVE PARTITION
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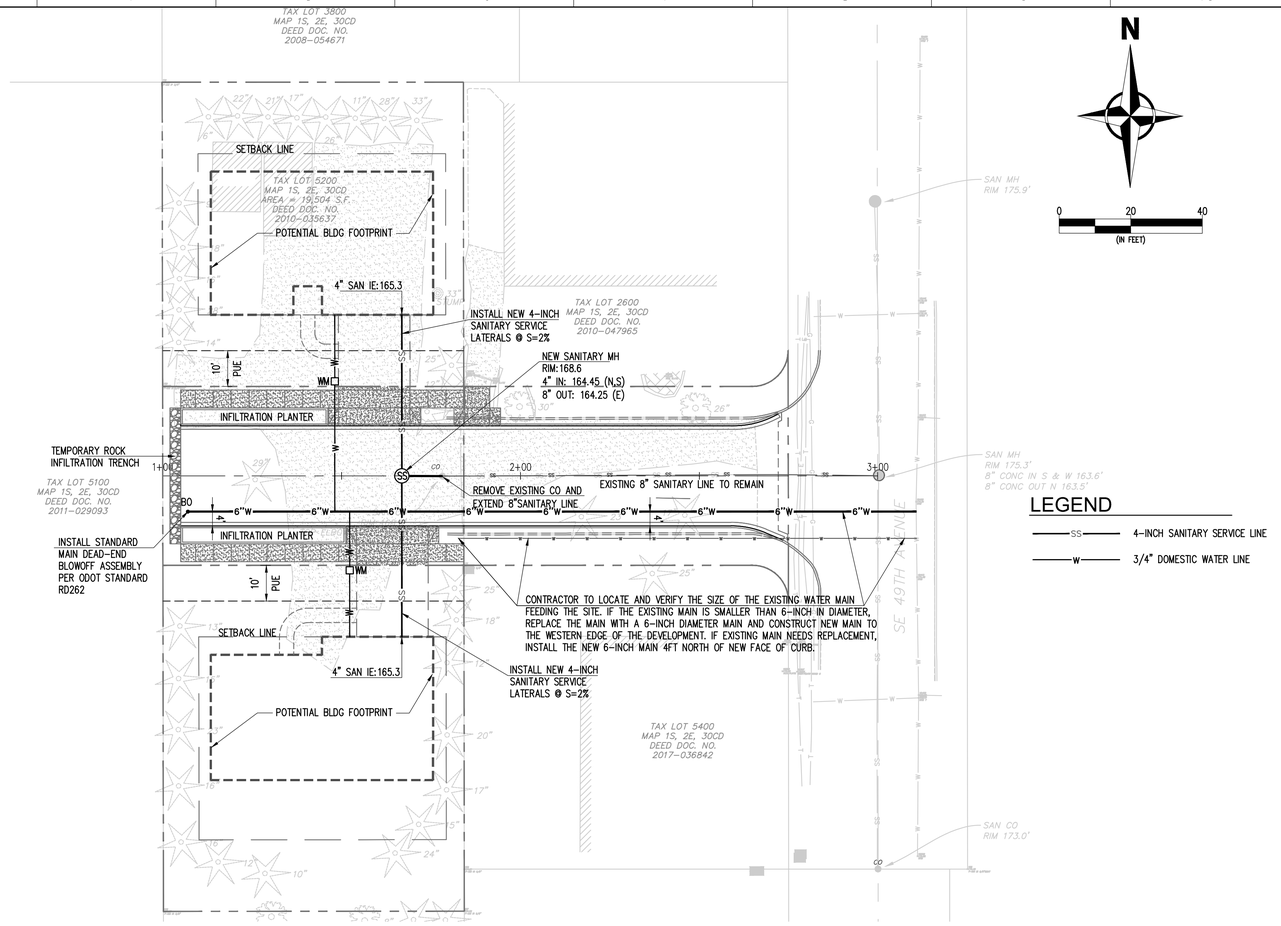
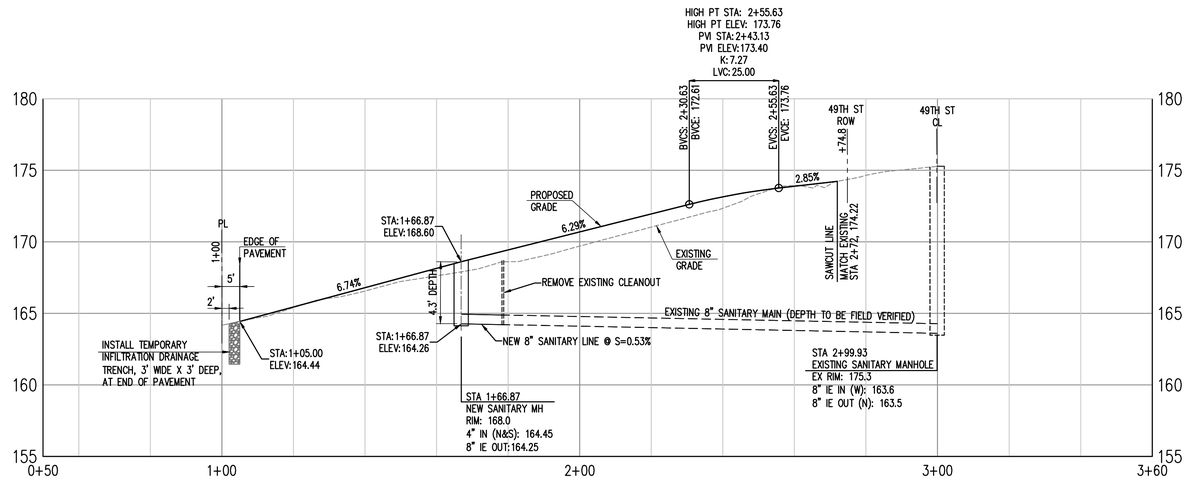
PRELIMINARY
PARTITION PLAT AND
STREET PLAN

3



PRELIMINARY UTILITY PLAN

SCALE: 1" = 20'



PROPOSED STREET AND SANITARY PROFILE

SCALE: 1" = 20' HORIZONTAL
1" = 5' VERTICAL

No.	Date	By	Revision Description

Designed By:	Issue Date:
SN/BD	05/15/19
Drawn By:	Issue:
SN/BD	PRELIMINARY
Checked By:	Project No.
BD	20-628-001

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49TH AVE PARTITION
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MILWAUKIE, OR 97222

PRELIMINARY
UTILITY PLAN

4

CONCEPTUAL FUTURE STREET CONNECTIVITY

SCALE: 1" = 20'

No.	Date	By	Revision Description

Designed By:	Issue Date:
SN/BD	05/15/19
Drawn By:	Issue:
SN/BD	PRELIMINARY
Checked By:	Project No.
BD	20-628-001

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49TH AVE PARTITION
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CONCEPTUAL
CONNECTIVITY PLAN

5

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1 2 E 30CD
MILWAUKIE

S.E.1/4 S.W.1/4 SEC.30 T.1S. R.2E. W.M.
CLACKAMAS COUNTY
1" = 100'

D. L. C.
DANIEL HATHAWAY NO. 40
HECTOR CAMPBEL NO. 41

Cancelled Taxlots

10101
10400
6900
7400
7701
10300
7700
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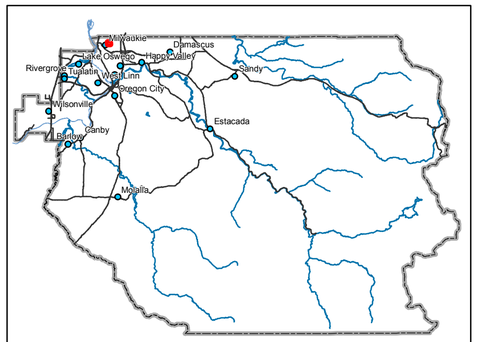
10200

- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- TaxCodeLines
- Map Index
- WaterLines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 1/16th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'



THIS MAP IS FOR ASSESSMENT PURPOSES ONLY

12/13/2018

1 2 E 30CD
MILWAUKIE

CITY OF MILWAUKIE

August 15, 2018

Trisha Clark
Emerio Design LLC
6445 SW Fallbrook Pl #100
Beaverton OR 97008

Re: Preapplication Report

Dear Trisha:

Enclosed is the Preapplication Report Summary from your meeting with the City on July 31, 2018, concerning your proposal for action on property located at SE 49th Ave and SE Mullan St.

A preapplication conference is required prior to submittal of certain types of land use applications in the City of Milwaukie. Where a preapplication conference is required, please be advised of the following:

- Preapplication conferences are valid for a period of 2 years from the date of the conference. If a land use application or development permit has not been submitted within 2 years of the conference date, the Planning Director may require a new preapplication conference.

- If a development proposal is significantly modified after a preapplication conference occurs, the Planning Director may require a new preapplication conference.

If you have any questions concerning the content of this report, please contact the appropriate City staff.

Sincerely,

Alicia Martin

Alicia Martin
Administrative Specialist II

Enclosure

cc: Rick Clark, Clark Nimm Group
Mark Bowlsby, Pillar Develoment
Eric Evans, Emerio Design
Tony Mullins, Pillar Development

CITY OF MILWAUKIE
PRE-APPLICATION CONFERENCE REPORT

PreApp Project ID #: **18-010PA**

This report is provided as a follow-up to a meeting that was held on **7/31/2018** **at** **10:00am**

Applicant Name:	**Trisha Clark**
Company:	**Emerio Design LLC**
Applicant 'Role':	Other
Address Line 1:	6445 SW Fallbrook Pl
Address Line 2:	#100
City, State Zip:	Beaverton OR 97008
Project Name:	**49th Ave Partition**
Description:	**ROW dedication and partition of two parcels for single-family development.**
ProjectAddress:	**12E30CD05200/12E30CD02500**
Zone:	Residential R-7
Occupancy Group:	
ConstructionType:	
Use:	Low Density (LD)
Occupant Load:	
AppsPresent:	Rick Clark, Mark Bowlsby, Trisha Clark, Eric Evans, Tony Mullins
Staff Attendance:	Denny Egner, Brett Kelver, Alex Roller, Matt Amos

BUILDING ISSUES

ADA:	
Structural:	
Mechanical:	
Plumbing:	
Plumb Site Utilities:	
Electrical:	
Notes:	No comments at this time.

Please note all drawings must be individually rolled. If the drawings are small enough to fold they must be individually folded.

FIRE MARSHAL ISSUES

Fire Sprinklers:

Fire Alarms:

Fire Hydrants:

Turn Arounds:

Addressing:

Fire Protection:

Fire Access:

Hazardous Mat.:

Fire Marshal Notes: See attached.

PUBLIC WORKS ISSUES

Water:

Site visit indicated that there is a 2-inch diameter stand pipe. This pipe is not on City records. Applicant will be responsible for determining the size of water main that this stand-pipe is connected to. Section 4 – Water Design Standards 4.0011 allows for a 4-inch diameter main only if the final center line distance is less than 250 ft, and it provides service to not more than 12 residences. The City has determined that the final configuration of White Lake Rd is a connection going to be extended to connect to the existing White Lake Rd, therefore requiring that the main be 6-inch diameter or lager. If the main is smaller than 6-inch diameter, then applicant will be responsible for replacing the main with a 6-inch diameter main and constructing new main to the western edge of the development, with a standard 2-inch blowoff assembly at the west end. If the main is 6-inch or larger, then applicant will be required to extend the main to the west edge of the development, with a standard 2-inch blowoff assembly at the west end.

The development will require new water services and meter assemblies. The water System Development Charge (SDC) is based on the size of water meter serving the property. The water SDC will be assessed and collected at the time the building permits are issued. Fire hydrant spacing along 49th Ave is adequate to provide coverage for the site. Please refer to CFD #1 memorandum for additional requirements.

Sewer:

A City of Milwaukie 8-inch concrete wastewater main has been constructed onsite that connects to the sewer main in 49th Ave. Video inspection indicates that there are two wyes at the end of the main for the two new dwelling units to connect to. Currently, the wastewater System Development Charge (SDC) is comprised of two components. The first component is the City's SDC charge of $1,186 per 16 plumbing fixture units in accordance with the Uniform Plumbing Code and the second component is the County's SDC for treatment of $6,540 per equivalent dwelling unit that the City collects and forwards to the County. Both SDC charges are per connection unit. The wastewater SDC will be assessed and collected at the time the building permits are issued.

Storm:

Submission of a storm water management plan by a registered professional engineer is required as part of the proposed development. The plan shall conform to Section 2 - Stormwater Design Standards of the City of Milwaukie Pubic Works Standards.

The storm water management plan shall demonstrate that the post-development runoff does not exceed the pre-development. Also, the plan shall demonstrate compliance with water quality standards. The City of Milwaukie has adopted the City of Portland 2016 Stormwater Management Manual for design of water quality facilities.

All new impervious surfaces, including replacement of impervious surface with new impervious surfaces, are subject to the water quality standards. See City of Milwaukie Public Works Standards for design and construction standards and detailed drawings.

There is no existing piped system in 49th Ave to accept stormwater discharge from the site. If the runoff cannot be contained within facilities located in the landscape strip of the new street construction, additional infiltration facilities will be required. Storm detention facilities shall be designed to provide storage up to the 25-year storm event, with the safe overflow conveyance for the 100-year storm event. Generally, there is sufficient infiltration to accommodate storm flows. Extension of the public storm system may also be required pending design of street improvements. Storm facilities are usually constructed in the landscape strips and are sized approximately 10% of the size of the impervious area draining to it.

The storm SDC is based on the amount of new impervious surface constructed at the site. One storm SDC unit is the equivalent of 2,706 sq ft of impervious surface. The storm SDC is currently $930 per unit. Each single-family residential property is 1 stormwater unit. The storm SDC will be assessed and collected at the time the building permits are issued.

Street:

The proposed development fronts the west side of 49th Ave, which is classified as a Neighborhood Route. The portion of 49th Ave fronting the proposed development has a right-of-way width of 50 ft, a paved width approximately 32 ft, with curb only on both sides of the road.

The Transportation SDC will be based on the increase in trips generated by the new use per the Trip Generation Handbook from the Institute of Transportation Engineers. The SDC for transportation is $2,114 per trip generated. Credits will be given for any demolished structures, which shall be based upon the existing use of the structures.

Frontage:

Chapter 19.700 of the Milwaukie Municipal Code, herein referred to the “Code”, applies to partitions, subdivisions, new construction and modification and or expansions of existing structures or uses that produce a projected increase in vehicle trips.

Transportation Facility Requirements, Code Section 19.708, states that all rights-of-way, streets, sidewalks, necessary public improvements, and other public transportation facilities located in the public right-of-way and abutting the development site shall be adequate at the time of development or shall be made adequate in a timely manner.

According to Code Table 19.708.2 the standard requirement for the new proposed local street cross section includes the following:

- 8-ft travel lanes
- 6-ft parking lane
- Curb & gutter
- 3 to 5-ft landscape strips
- 5-ft setback sidewalks

The City has determined that partial construction of the standard section is appropriate to serve the development. The required improvements for taxlot 2500 is full width road and curb, but no sidewalk. There is existing standard curb on this taxlot that is spaced 32 ft to face of curb. The width of this taxlot is 50 ft. This allows for a future 3-ft landscape width and 5-ft sidewalk. Applicant will not be required to construct new curb if the existing curb is in good condition. City crews have informed the engineering department that there is base rock, and stabilization fabric underneath the unfinished road in taxlot 2500. Applicant will be responsible for exposing the base. If approved, then additional base construction will not be required prior to paving.

Right of Way:

Applicant will be responsible for dedicating a 50-ft wide right-of-way within taxlot 5200 in line with taxlot 2500. Applicant will also be responsible for dedicating the entirety of taxlot 2500. This will result in a 50-ft wide right-of-way that extends from 49th Ave to the western edge of taxlot 5200.

MMC 19.708.1.F.4 establishes requirements for constructing streets so that centerlines are not offset. The alignment of Mullan St to the east and White Lake Rd that will be created with this development was created with an existing subdivision, so therefore does not require any additional conditions for approval.

Driveways:

Code Section 12.16.040.A states that access to private property shall be permitted with the use of driveway curb cuts and driveways shall meet all applicable guidelines of the Americans with Disabilities Act (ADA). Driveway approaches shall be improved to meet the requirements of Milwaukie's Public Works Standards, Section 5.0085, at the time of development. The access width will need to be at a minimum between 9- and 20-ft wide.

Erosion Control:

Per Code Section 16.28.020(C), an erosion control permit is required prior to placement of fill, site clearing, or land disturbances, including but not limited to grubbing, clearing or removal of ground vegetation, grading, excavation, or other activities, any of which results in the disturbance or exposure of soils exceeding five hundred square feet. The proposed development exceeds the threshold; therefore, an erosion control permit is required.

Code Section 16.28.020(E) states that an erosion control permit is required prior to issuance of building permits or approval of construction plans. Also, Section 16.28.020(B) states that an erosion control plan that meets the requirements of Section 16.28.030 is required prior to any approval of an erosion control permit.

Traffic Impact Study:

MMC 19.704 states the Engineering Director will determine whether a proposed development has impacts on the transportation system by using existing transportation The Engineering Director has determined that a Traffic Impact Study (TIS) is not required for this development at this time. Changes to the application may alter this determination.

PW Notes:

APPLICABILITY OF PRE-APPLICATION REVIEW
The comments provided are preliminary and intended to address the original application materials submitted unless otherwise specifically called out in the notes. The information contained within these notes may change over time due to changes or additional information presented for the development. This pre-application review is for the following:
The division of and dedication of right-of-way through existing parcel. Additional dedication of 2nd existing lot that connects development lot to SE 49th Avenue. Planned construction of two single-family houses on the resulting two parcels.

SYSTEM DEVELOPMENT CHARGES (SDC'S)
All SDC's are calculated, assessed, and collected at the time of building permit issuance. Any changes in the proposed use may result in a change in the SDC's that are assessed. In addition to the SDC's mentioned earlier, there is a Parks & Recreation System Development Charge (SDC) that is triggered

for new dwellings. If there are any additional dwelling units that are proposed, then additional SDC's will be required. There are no existing structures to provide credit. As current Capital Improvement Plan identifies this section of White Lake as a location that will eventually connect it is eligible for transportation SDC Credits. However, only capacity building construction would be eligible for these credits. In this specific case, that would only include sidewalk construction within taxlot 2500.

TREE REMOVAL ON PRIVATE PROPERTY
The City of Milwaukie currently does not have any code addressing tree removal on private property. Our code currently only addresses tree removal in the right-of-way, and City owned property.

REQUIREMENTS AT FINAL PLAT
- Engineered plans for public improvements (street, sidewalk, and utility) are to be submitted and approved prior to start of construction. Plans shall be prepared by a Professional Engineer licensed in the State of Oregon.

- The applicant shall pay an inspection fee of 5.5% of the cost of public improvements prior to start of construction.

- The applicant shall provide a payment and performance bond for 100% of the cost of the public improvements prior to the start of construction.

- The applicant shall provide a set of Mylar "As Constructed" drawings to the City of Milwaukie prior to the final inspection of work and prior to plat approval.

- The applicant shall provide a maintenance bond for 100% of the cost of the public improvements prior to the final inspection.

ADDITIONAL REQUIREMENTS
- All fees mentioned are subject to change in accordance with the City of Milwaukie Master Fee Schedule.

PLANNING ISSUES

Setbacks: Yard requirements for the Residential R-7 zone are established in Milwaukie Municipal Code (MMC) Subsection 19.301.4. Minimum front and rear yards are 20 ft, side yards must be at least 5 ft on one side and 10 ft on the other (for interior lots), and street-side yards must be at least 20 ft (for corner lots).

Landscape: In the R-7 zone, a minimum of 30% of the site must be landscaped once developed with structures. In addition, at least 40% of the front yard area must be vegetated (measured from the front property line to the front face of the house). Vegetated areas may be planted in trees, grass, shrubs, or bark dust for planting beds, with no more than 20% of the landscaped area finished in bark dust (as per MMC Subsection 19.504.7). A maximum of 30% of the site may be covered by structures, including decks or patios over 18 in above grade.

Parking: As per the off-street parking standards of MMC Chapter 19.600, properties that are developed with single-family dwellings must provide at least 1 off-street parking space per dwelling unit. As provided in MMC Subsection 19.607.1, required residential off-street parking spaces must be at least 9 ft wide and 18 ft deep. The required spaces cannot be located within a required front or street-side yard and must have a durable and dust-free hard surface.

Uncovered parking spaces and maneuvering areas cannot exceed 50% of the front yard area and 30% of the required street-side yard area. No more than 3 residential parking spaces are allowed within the required front yard. Parking areas and driveways on the property shall align with the approved driveway approach and shall not be wider than the approach within 5 ft of the right-of-way boundary. Alternately, a gradual widening of the onsite driveway is allowed to the 10-ft point at a ratio of 1:1 (driveway width to distance onto property), starting 2 ft behind the front property line. See the figures provided in MMC 19.607 for more information.

Transportation Review: Two lots to the west of the subject properties is the end of White Lake Rd, while Mullan St intersects 49th Ave just to the north. The adjacent property to the east at 4791 SE King Rd is large enough for future redevelopment but will require a street connection. MMC Subsection 19.708.1.E.3 requires streets to be extended to the boundary lines of the developing property where necessary to give access to or allow for future development of adjoining properties. MMC Subsection 19.708.1.F and MMC Table 19.708.1 provide standards for intersection design and spacing. These requirements must be addressed in the partition application.

The proposed partition will trigger the requirements of MMC Chapter 19.700 Public Facility Improvements. Please see the Public Works (Engineering) notes for more information about the requirements of MMC 19.700 and any associated right-of-way dedication and/or street improvements.

Application Procedures: The land use applications required depend on the applicant's final proposal but likely include the following:
* Partition Replat (Preliminary Plat) (Type II review)
* Final Plat (Type I review) = following the preliminary plat approval

The proposed land division would not modify a plat decided by the Planning Commission (both underlying plats were decided prior to Planning Commission involvement in the partitioning process) and is not a parcel consolidation. As per MMC Table 17.12.020, it is a partition replat that will be processed with Type II review.

The current fee for Type II review is $1,000; the fee for Type I review (for the final plat required following approval of the preliminary plat), the current application fee is $200.

Approval criteria for a replat are established in MMC Subsection 17.12.030 and include (1) compliance with the relevant sections of Title 17 (Land Division) and Title 19 (Zoning), (2) allowing reasonable development and not creating the need for a variance of any land division or zoning standard, and (3) not reducing residential density below minimum density requirements of the applicable zoning district.

The application submittal should include the standard Land Use Application Form and Submittal Requirements Checklist. Since the County Surveyor is likely to require that the replat be recorded as a partition plat, the application should also include or address the relevant items listed on the Preliminary Plat Checklist.

The applicant should submit 5 complete copies of all application materials for the City's initial review. A determination of the application's completeness will be issued within 30 days. If deemed incomplete, additional information will be requested. If deemed complete, additional copies of the application will be required for referral to other departments, the Lewelling Neighborhood District Association (NDA), and other relevant parties and agencies. City staff will inform the applicant of the total number of copies needed.

In the Type II review process, public notice of the application is mailed to property owners and residents within 300 ft of the subject property no later than 7 days after the application is deemed

complete, with 14 days allowed for comments in response. Within 7 days of being deemed complete, a sign giving notice of the application must be posted on the subject property, to remain until the decision is issued. A decision by the Planning Director will not be issued before the end of the 14-day comment period.

Issuance of a decision starts a 15-day appeal period for the applicant and any party who establishes standing. Development permits submitted during the appeal period may be reviewed but are not typically approved until the appeal period has ended.

Prior to submitting the application, the applicant is encouraged to present the project at a regular meeting of the Lewelling NDA, which occurs at 6:30 p.m. on the second Wednesday of every month (location to be determined).

Natural Resource Review: The subject properties do not include any designated natural resource areas.

Lot Geography: The subject properties are rectilinear lots. The Town & Country No. 2 subdivision of 1962 shows what is now Tax lot 2500 as Parcel B, a proposed continuation of Mullan St from the east side of what is now 49th Ave (shown as 47th Ave on the plat map). Dedication of Tax lot 2500 as public right-of-way is necessary to partition Tax lot 5200. Tax lot 2500 is 50 ft by approximately 90 ft. Tax lot 5200, which includes a portion of Lot 31 from the Gibson's Subdivision of the Logus Tracts (platted in 1909), is approximately 84 ft by 232 ft.

Planning Notes: General Note = These notes represent staff's best evaluation of the applicant's proposal(s) in advance of any official submittal of a land use application. They do not represent approval or denial of the proposed action, only an assessment of the issues and likely requirements.

Design standards for single-family dwellings are provided in MMC Subsection 19.505.1 and include requirements on any street-facing façade for articulation, minimum window area, and a main entrance. Additional standards require a minimum number of basic design features. The provisions of MMC Subsection 19.505.2 limit the width and setback location of an attached garage or carport on the street-facing façade.

ADDITIONAL NOTES AND ISSUES

County Health Notes:

Other Notes:

This is only preliminary preapplication conference information based on the applicant's proposal and does not cover all possible development scenarios. Other requirements may be added after an applicant submits land use applications or building permits. City policies and code requirements are subject to change. If you have any questions, please contact the City staff that attended the conference (listed on Page 1). Contact numbers for these staff are City staff listed at the end of the report.

Sincerely,

City of Milwaukie Development Review Team

BUILDING DEPARTMENT

Samantha Vandagriff - Building Official - 503-786-7611

Stephanie Marcinkiewicz
- Inspector/Plans Examiner - 503-786-7613

ENGINEERING DEPARTMENT

Chuck Eaton - Engineering Director - 503-786-7605

Alex Roller - Engineering Tech II - 503-786-7695

COMMUNITY DEVELOPMENT DEPARTMENT

Alma Flores - Comm. Dev. Director - 503-786-7652

Leila Aman - Development Manager - 503-786-7616

Alicia Martin - Admin Specialist - 503-786-7600

PLANNING DEPARTMENT

Dennis Egner - Planning Director - 503-786-7654

David Levitan - Senior Planner - 503-786-7627

Brett Kelver - Associate Planner - 503-786-7657

Vera Kolias - Associate Planner - 503-786-7653

Mary Heberling - Assistant Planner - 503-786-7658

CLACKAMAS FIRE DISTRICT

Mike Boumann - Lieutenant Deputy Fire Marshal - 503-742-2673

Matt Amos - Fire Inspector - 503-742-2661

Clackamas County Fire District #1
Fire Prevention Office

E-mail Memorandum

To: City of Milwaukie Planning Department

From: Matt Amos, Fire Inspector, Clackamas Fire District #1

Date: 8/15/2018

Re: Two Parcel Partition SE 49th Ave, and SE Mulan St. 18-010PA

This review is based upon the current version of the Oregon Fire Code (OFC), as adopted by the Oregon State Fire Marshal's Office. The scope of review is typically limited to fire apparatus access and water supply, although the applicant must comply with all applicable OFC requirements. When buildings are completely protected with an approved automatic fire sprinkler system, the requirements for fire apparatus access and water supply may be modified as approved by the fire code official. The following items should be addressed by the applicant:

COMMENTS:

Access:

1) Provide address numbering that is clearly visible from the street.
2) No part of a building may be more than 150 feet from an approved fire department access road.
3) The inside turning radius and outside turning radius for a 20' wide road shall not be less than 28 feet and 48 feet respectively, measured from the same center point.
4) Provide an approved turnaround for dead end access roads exceeding 150 feet in length.
5) Fire Department turnarounds shall meet the dimensions found in the fire code applications guide.

Water Supply

1) Fire Hydrants, One and Two-Family Dwellings & Accessory Structures: Where a portion of a structure is more than 600 feet from a hydrant on a fire apparatus access road, as measured in an approved route around the exterior of the structure(s), additional fire hydrants and mains shall be provided.
2) Prior to the start of combustible construction required fire hydrants shall be operational and accessible.

2930 S.E. Oak Grove Blvd. • Milwaukie, OR 97267 • 503-742-2660

3) For one and two family dwellings located in areas with reliable municipal fire fighting water supply the following shall apply:
    <3,600 square feet (including attached garage)
        a) 1,000 gpm @ 20 psi with hydrant within 600 feet of furthest portion of new residential construction, (OFC Section B105.2)
    >3,600 square feet (including attached garage)
        a) Shall meet fire flow requirements specified in Appendix B of the current Oregon Fire Code, (OFC, Table B105.1)
        b) Shall meet hydrant coverage as specified in Appendix C of the current Oregon Fire Code, (OFC, Table C105.1)

Fidelity National Title
Company of Oregon

1433 SW 6th Avenue
Portland, OR 97201
Phone: (503)646-4444 / Fax: (503)219-9984

Robert L Correll
2810 NE 22nd Ct
Gresham, OR 97030

Date: July 16, 2018
Order No.: 45141810299-JP
Property: 0 SE 49th Avenue
Milwaukie, OR 97222

Final Loan Policy

Thank you for choosing Fidelity National Title Company of Oregon to provide your title insurance. Attached, please find the following:

Loan Policy

Thank you for allowing us the opportunity to provide for your title and escrow needs. Please let us know if there is anything more we can do.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

Jason Parkrosz
Title Examiner
Jason.Parkrosz@titlegroup.fntg.com

SCHEDULE A

Date of Policy	Amount of Insurance	Premium
July 12, 2018 at 11:25 AM	$525,000.00	$563.00

Name and Address of Title Insurance Company: Fidelity National Title Insurance Company
c/o Jason Parkrosz
Fidelity National Title Company of Oregon
1433 SW 6th Avenue
Portland, OR 97201

Policy No.: 45141810299
Address Reference: 0 SE 49th Avenue, Milwaukie, OR 97222

1. Name of Insured:

   Susan Trone, its successors and/or assigns as their interest may appear

2. The estate or interest in the Land that is encumbered by the Insured Mortgage is:

   A Fee

3. Title is vested in:

   Pillar Development, LLC

4. The Insured Mortgage and its assignments, if any, are described as follows:

   A deed of trust to secure an indebtedness in the amount shown below,

Amount:	$525,000.00
Dated:	July 11, 2018
Trustor/Grantor:	Pillar Development, LLC, an Oregon limited liability company
Trustee:	Fidelity National Title Company of Oregon
Beneficiary:	Robert L Correll
Loan No.:	Not disclosed
Recording Date:	July 12, 2018
Recording No:	2018-043227

   An assignment of the beneficial interest under said deed of trust which names:

Assignee:	Susan Trone
Loan No.:	Not disclosed
Recording Date:	July 12, 2018
Recording No:	2018-043228

5. The Land referred to in this policy is described as follows:

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

EXHIBIT "A"
LEGAL DESCRIPTION

Parcel I:

Lot B, Town and Country No. 2, in the City of Milwaukie, County of Clackamas and State of Oregon.

Parcel II:

Part of Tract 31, Gibson's Subdivision of Tracts 10, 11, 12, 13 and the West 480 feet of tracts 1 and 2 of the Logus Tracts, in the City of Milwauke, County of Clackamas and State of Oregon, more particularly described as follows:

Beginning at the Southwest corner of Lot 1, Block 3, Town and Country No. 2; thence South 11.8 feet, more or less, to the South line of that certain tract conveyed to William G. Hart, et ux., by deed recorded September 20, 1962, in Book 610, Page 628, deed records; thence West along the South line of said Hart tract 84 feet, more or less, to the West line of said Tract 31; thence North along the West line of Tract 31, a distance of 231.8 feet to the North line of Tract 31; thence East along the North line of Tract 31, a distance of 84 feet, more or less, to the West line of the plat of Town and Country No. 2; thence South along the West line of said plat of Town and Country No. 2, a distance of 220 feet to the point of beginning.

10135 SE SUNNYSIDE RD
SUITE 200
CLACKAMAS, OR 97015

T 503.659.9500
F 503.659.2227
WWW.PACLAND.COM

PACLAND

Memorandum

Date: **May 15, 2019**

To: **City of Milwaukie**

From: **Bryan Dickerson and Shawn Nguy, PE**

Subject: **49th Avenue – 2 lot Partition; Pillar Development LLC**
Preliminary Stormwater Calculations

Introduction

PACLAND has prepared this memo to present the results of stormwater drainage analysis for the proposed 2-lot partition associated with Tax Lot 5200 and Tax Lot 2500 on 49th Avenue. The project proposes to divide the existing Tax Lot 5200 into two (2) lots to accommodate future single-family residential developments. Improvements associated with this proposal include the construction on a new public street (SE White Lake Road) with associated sanitary, water, stormwater, landscape, and utility improvements.

Since there is no existing storm pipe system in 49th Ave to accept discharge from the site, stormwater runoff from the new roadway impervious area will be conveyed to stormwater planters for treatment and infiltration within the project area. It is anticipated that stormwater runoff from future residential development will be treated with trapped silt basin and infiltrated on each respective lot using either soakage trenches or drywells.

Site Soils

According to the Soil Survey of Clackamas County, Oregon (Natural Resources Conservation Service), the underlying soil type across the subject site is classified as Latourell Loam with Hydrologic Soil Group B. Refer to Attachment A. Infiltration testing and analysis, completed by Hardman Geotechnical Services Inc, dated April 23, 2019, indicate underlying soils have low to moderate infiltration rates, between 2.1 inches per hour to 7.5 inches per hour, depending on the depth of the infiltration facility. See Attachment A.

Groundwater

Based on geotechnical investigation completed by Hardman Geotechnical Services Inc, dated April 23, 2019, static groundwater was not encountered in the borings to a maximum depth of 8 feet. USGS mapping of the subject site indicates groundwater to be at depths greater than 60 feet.

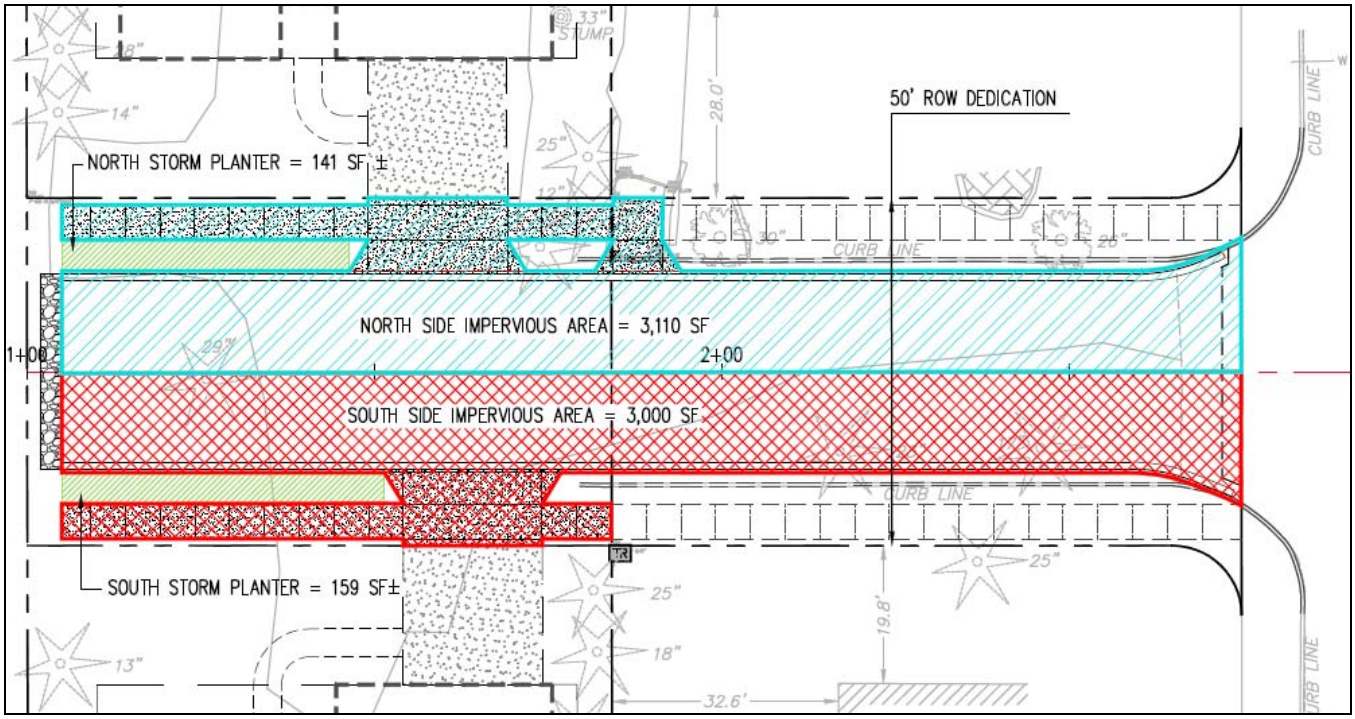
Existing Site Conditions

The subject site (TL 2500 and TL 5200) is approximately 24,081 sq. ft. in size. It is currently comprised of a large gravel area, multiple large trees, and an open grass field with slopes generally ranging from 2% to

12% and draining from east to west. The area of right-of-way dedication to accommodate the new street is approximately 8,785 sq. ft.

Proposed Planter Drainage Area for New Public Street

As shown below, within the new public right-of-way area, the proposed north planter will have approximately 3,100 sq. ft. of new impervious area draining to it, while the south planter will have a drainage area of approximately 3,000 sq. ft. of impervious area.



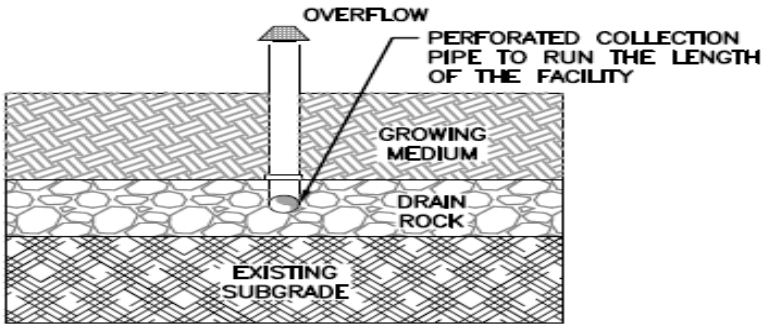
Impervious Areas Associated with Proposed Planters

As noted earlier, runoff from impervious areas associated with future construction of the new homes will be collected and infiltrated on each respective lot using soakage trenches or drywells, with sizing and calculations to be provided during time of building permitting.

Hydraulic Analysis and Modeling

The City of Milwaukie has adopted the City of Portland 2016 Stormwater Management Manual for design of water quality facilities. The City of Portland's stormwater management approach relies on the use of vegetated infiltration planters to comprehensively meet multiple requirements. Vegetated planters meet infiltration, pollution reduction, and flow and volume control requirements for system-specific stormwater requirements. Vegetated planters as proposed, under the City of Portland's Simplified Approach or Presumptive Approach, are assumed to meet pollution reduction and flow control requirements. Refer to Attachment B for planter details.

The project will be utilizing the City of Portland's Presumptive Approach Calculator (PAC) to model and size the proposed street planters for compliance. Since overflow from the planter is directed to the drain rock for onsite infiltration, a stormwater hierarchy category of 2 as shown below is chosen for the planter configuration. The proposed street profile has an approximate 6.2% to 6.8% grade so the Sloped Facility Worksheet within PAC is used to determine the capacity of the proposed planters.



HYBRID
STORMWATER HIERARCHY CATEGORY 2
OVERFLOW DIRECTED TO DRAIN ROCK.

PROPOSED STORM WATER DESIGN APPROACH

Based on field measurement and the expected depth of infiltration for the proposed planters, the native soil infiltration rate of 7.5 inch per hour is expected and will be utilized with a standard factor of safety of 2 within the Presumptive Approach Calculator.

Results and Conclusion

The result of the analysis shows that the proposed planters passed both the pollution requirement and the 10-year storm requirement for on-site infiltration. As shown in the PAC analysis report (Attachment C), the required facility area of the north storm planter is 140 sq. ft., while the required facility area of the south storm planter is 154 sq. ft. As shown in the proposed drainage plan, the provided planter areas meet or exceed the required areas. Overflow from the infiltration planter facility for larger storm events will be directed to a rock level spreader trench location along the west property line at the end of the street to allow for dispersion to properties downstream of the site.

The proposed stormwater management system for this project has been designed in accordance with regulatory criteria described above and is consistent with sound engineering practice. This design has incorporated stormwater quality treatment and detention BMPs to the maximum extent practicable. Therefore, no significant adverse impacts to surrounding surface water are expected as a result of the proposed improvements.

ATTACHMENT A

SOIL DATA AND GEOTECH REPORT

Map Scale: 1:2,120 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
53B	Latourell loam, 3 to 8 percent slopes	17.0	79.5%
71A	Quatama loam, 0 to 3 percent slopes	4.4	20.5%
Totals for Area of Interest		**21.3**	**100.0%**

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April 23, 2019
Project No. 19-2424

Bryan Dickerson
PacLand
10135 SE Sunnyside Road, Suite 200
Clackamas, Oregon 97015

BDickerson@PacLand.com

Subject: Infiltration Testing Results and Pavement Recommendations
SE 49th Avenue at SE Mullan Street
Milwaukie, Oregon

As requested, Hardman Geotechnical Services Inc. (HGSI) performed soil infiltration testing and observed the existing base rock section for the project. The site is located west of SE 49th Avenue near the intersection of SE Mullan Street in Milwaukie, Oregon, as shown on the Vicinity Map, Figure 1. The purpose of this study was to evaluate infiltration rates for subsurface disposal of stormwater and to provide pavement section recommendations. We understand that design of the stormwater infiltration system is to be completed by others.

SITE AND PROJECT DESCRIPTION

The project involves partitioning Tax Lot 5200 into two residential lots, and an extension of the street between the two lots. Infiltration testing has been requested for design of stormwater facilities, as well as pavement section evaluation for the existing street (Tax Lot 2500) and the extension of the street between the two new lots.

The City of Milwaukie has indicated that there is base rock and stabilization fabric underneath the unfinished road in Tax Lot 2500. The new access road is in the same area as this existing gravel driveway. Topography is flat to gently sloping and vegetation consists of grass and trees.

FIELD EXPLORATION AND SUBSURFACE CONDITIONS

On March 29, 2019, HGSI excavated two hand auger borings, designated HA-1 and HA-2, and two test holes, designated DCP-1 and DCP-2. Hand augers were excavated to characterize subsurface soils and to perform falling head infiltration tests. Test holes were excavated to determine the depth of the existing base rock and consistency of the subgrade soils for use in providing pavement recommendations. Subsurface explorations were excavated at the approximate locations shown on the Site Plan, Figure 2.

It should be noted that exploration locations were determined in the field by pacing or taping distances from apparent property corners and other site features shown on the plans provided and should therefore be considered approximate. During the exploration, HGSI observed and recorded pertinent soil information such as color, stratigraphy, strength, and soil moisture. Soils were classified in general accordance with the Unified Soil Classification System (USCS).

Soil Conditions

On-site soils encountered in the explorations are described below:

Base rock: DCP-1encountered 6.5 inches of medium dense, 3/4"-0 crushed rock overlying a geosynthetic fabric overlying an additional 1.5 inches of medium dense, 3/4"-0 crushed rock overlying silt. The total depth of the base rock in DCP-1 was 8 inches. DCP-2 encountered 4 inches of medium dense, 3/4"-0 crushed rock overlying a geosynthetic fabric overlying an additional 2.5 inches of medium dense, 3/4"-0 crushed rock overlying silt. The total depth of the base rock in DCP-2 was 6.5 inches.

Topsoil: Both HA-1 and HA-2 encountered approximately 12 inches of soft, organic silt, at the ground surface.

Native Silt and Fine to Medium Sand: Beneath the topsoil, both hand augers encountered medium stiff to stiff silt consistent in appearance to the Willamette Formation. At a depth of about 5.5 feet, soils transitioned to silty fine to medium sand. Sand appeared to become less silty with depth, and was encountered to the maximum depth of the borings.

Groundwater

A static groundwater table was not encountered in the hand auger borings conducted for this study, which were excavated to a maximum depth of 8 feet. United States Geological Survey mapping of the subject area indicates groundwater lies at an estimated depth of 60 to 80 feet below the ground surface (Snyder, 2008).

Infiltration Testing

Soil infiltration testing was performed using the open hole, falling head method in the hand auger borings. Infiltration testing was performed at depths of 4.5 and 8 feet below ground surface (bgs). Soils in the borings were pre-saturated prior to determining the measured infiltration rate. Water level measurements were taken using HOBO™ data loggers at 1-minute intervals, with measured water pressure corrected for temperature and barometric pressure. The change in water level was recorded at regular intervals over a period of time. See attached HOBO™ water level data logger plots. Following the soil saturation period, infiltration rates were determined based on the slope of the water depth line near the end of each test. Table 1 presents the results of the falling head infiltration tests.

Table 1. Summary of Infiltration Test Results

Test Pit	Depth (feet)	Soil Type	Infiltration Rate (in/hr)	Approx. Hydraulic Head Range (feet)
HA-1	4.5	Silt with trace fine sand	2.1	2.6 to 2.5
HA-2	8	Fine to medium Sand	7.5	5.8 to 5.5

Subgrade Soil Evaluation – DCP Testing

HGSI conducted two Dynamic Cone Penetrometer (DCP) tests to determine the strength parameters of the in-situ soil for support of pavement. Test equipment and methodology were in general accordance with ASTM Test Method D6951/D6951M-09, *Standard Test Method for Use of the Dynamic Cone Penetrometer in Shallow Pavement Applications*. Correlated California Bearing Ratio (CBR) values at the test locations

are summarized on Table 2, for the depth intervals indicated. Correlated CBR values were determined using ASTM D6951/D6951M - 09.

Table 2. DCP Field Test Results and Correlated CBR Values

Test Designation	Test Location	Material Tested	Depth Interval (feet)	Average Penetration Per Blow (mm)	Correlated CBR
DCP-1	See Figure 2	Native Silt	0.9 – 2.7	18	6
DCP-2	See Figure 2	Native Silt	0.7 – 2.5	15	7

CONCLUSIONS AND RECOMMENDATIONS

Infiltration Rates and Stormwater System Design

Based on results of the soil infiltration testing, soils exhibit low to moderate infiltration rates. Infiltration facilities extending to a minimum depth of 4.5 feet may be designed using the measured (ultimate) infiltration rate of 2.1 inches per hours and infiltration facilities extending to a minimum depth of 8 feet may be designed using the measured infiltration rate of 7.5 inches per hour.

The designer should select an appropriate infiltration value based on our test results and the location of the proposed infiltration facility. The infiltration rates do not incorporate a factor of safety. For the design infiltration rate, the system designer should incorporate an appropriate factor of safety against slowing of the rate over time due to biological and sediment clogging.

Infiltration test methods and procedures attempt to simulate the as-built conditions of the planned disposal system. However, due to natural variations in soil properties, actual infiltration rates may vary from the measured and/or recommended design rates. All systems should be constructed such that potential overflow is discharged in a controlled manner away from structures, and all systems should include an adequate factor of safety. Infiltration rates presented in this report should not be applied to inappropriate or complex hydrological models such as a closed basin without extensive further studies.

Typical Pavement Sections

For local residential streets and private drives, we recommended the minimum pavement section on Table 3, following page, for dry weather construction conditions. Within the area of the driveway that has been previously improved, our test holes DCP-1 and DCP-2 indicated 8 and 6.5 inches of base rock, respectively. Subgrade soils beneath the base rock and fabric were stiff and considered suitable to support the final pavement section. To the extent allowed by existing and planned finish grades, the existing base rock and geotextile fabric may remain in place, subject to a proof-roll at the beginning of construction.

Table 3. Recommended Minimum Dry Weather Pavement Sections

Material Layer	Minimum Thickness (inches) Streets	Compaction Standard
Asphaltic Concrete (AC)	3	92% of Rice Density (top lift) 91% of Rice Density (lower lifts) AASHTO T-209
Crushed Aggregate Base ¾"-0 (leveling course)	2	95% of Modified Proctor ASTM D1557
Crushed Aggregate Base 1½"-0	8	95% of Modified Proctor ASTM D1557
Recommended Subgrade	12	95% of Standard Proctor or approved native

As noted previously, the existing base rock is considered suitable to be left in place in the lower portion of the pavement section. An additional 3.5 to 2 inches of base rock would be needed to be placed following a successful proof-roll, prior to paving.

In new pavement areas, the native soil subgrade should be ripped or tilled to a minimum depth of 12 inches, moisture conditioned, and recompacted in-place to at least 95 percent of ASTM D698 (Standard Proctor) or equivalent. In order to verify subgrade strength, we recommend proof-rolling directly on subgrade with a loaded dump truck during dry weather and on top of base course in wet weather. Soft areas that pump, rut, or weave should be stabilized prior to paving. If pavement areas are to be constructed during wet weather, HGSI should review subgrade at the time of construction so that condition specific recommendations can be provided. Wet weather pavement construction is likely to require soil amendment or geotextile fabric and an increase in base course thickness.

During placement of pavement section materials, density testing should be performed to verify compliance with project specifications. Generally, one subgrade, one base course, and one AC compaction test is performed for every 100 to 200 linear feet of paving.

UNCERTAINTIES AND LIMITATIONS

We have prepared this report for the owner and his/her consultants for use in design of this project only. The conclusions and interpretations presented in this report should not be construed as a warranty of the subsurface conditions. Experience has shown that soil and groundwater conditions can vary significantly over small distances. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, HGSI should be notified for review of the recommendations of this report, and revision of such if necessary.

Within the limitations of scope, schedule and budget, HGSI executed these services in accordance with generally accepted professional principles and practices in the field of geotechnical engineering at the time the report was prepared. No warranty, expressed or implied, is made. The scope of our work did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous or toxic substances in the soil, surface water, or groundwater at this site.

We appreciate this opportunity to be of service.

Sincerely,

HARDMAN GEOTECHNICAL SERVICES INC.

Scott L. Hardman, P.E., G.E.
Geotechnical Engineer

Attachments: Reference
Figure 1 – Vicinity Map
Figure 2 – Site Plan
Hand Auger Boring Logs – HA-1 and HA-2
HOBO™ water level plots – HA-1 and HA-2

REFERENCE

Snyder, D.T., 2008, Estimated Depth to Ground Water and Configuration of the Water Table in the Portland, Oregon Area: U.S. Geological Survey Scientific Investigations Report 2008–5059, 41 p., 3 plates.

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VICINITY MAP

Base Map: USGS Gladstone Quad, from US Topo, 2015

Not to Scale

Project: SE 49th Avenue Milwaukie, Oregon	Project No. 19-2424	FIGURE 1

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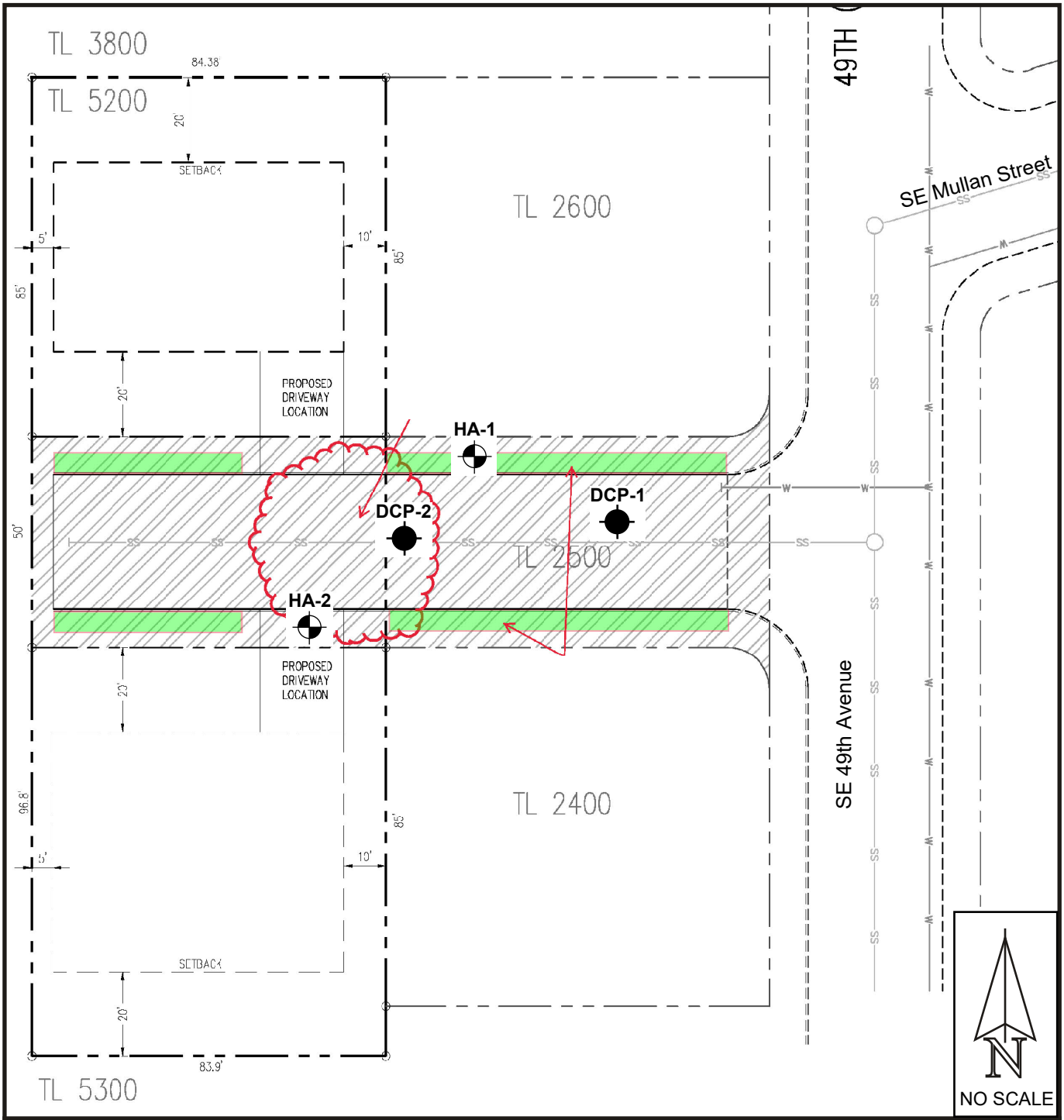
SITE PLAN



Legend

HA-2 Hand Auger Boring

DCP-2 DCP Test

Base map provided by PacLand

Project: SE 49th Avenue Milwaukie, Oregon	Project No. 19-2424	FIGURE 2

HAND AUGER BORING LOG

Project: SE 49th Avenue Milwaukie, Oregon	Project No. 19-2424	Boring No. HA-1

Depth (ft)	Sample Interval	Sample Designation	In-Situ Dry Density (lb/ft³)	Moisture Content (%)	Groundwater	Material Description
						Soft, highly organic SILT with gravel (OL), dark brown, moist (Topsoil / Fill)
2						Medium stiff, SILT (ML), brown, moist (Willamette Formation)
						Stiff, SILT (ML), brown with gray mottling, moist (Willamette Formation)
4						Stiff, SILT with trace fine sand (ML), brown with gray mottling, moist (Willamette Formation)
						Boring terminated at 4.5 feet to perform infiltration test No seepage or groundwater encountered
6						
8						
10						
12						
14						
16						

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Portland, Oregon 97223
(503) 530-8076

LEGEND

S-1 — Soil Sample Depth Interval and Designation

Water Level at Time of Drilling

Date Drilled: 3/29/19

Logged By: PBR

HAND AUGER BORING LOG

Project: SE 49th Avenue Milwaukie, Oregon	Project No. 19-2424	Boring No. HA- 2

Depth (ft)	Sample Interval	Sample Designation	In-Situ Dry Density (lb/ft³)	Moisture Content (%)	Groundwater	Material Description
						Soft, highly organic SILT with gravel (OL), dark brown, moist (Topsoil / Fill)
						Medium stiff, SILT (ML), brown, moist (Willamette Formation)
2						Stiff, SILT (ML), brown with gray mottling, moist (Willamette Formation)
						Stiff to very stiff, SILT with trace fine sand (ML), brown with gray mottling, moist (Willamette Formation)
4						Increased fine sand content with depth
						Medium dense, fine to medium grained SAND (SP), brown, moist (Willamette Formation)
6						
8						Boring terminated at 8 feet No seepage or groundwater encountered
10						
12						
14						
16						

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LEGEND

S-1 — Soil Sample Depth Interval and Designation

Water Level at Time of Drilling

Date Drilled: 3/29/19

Logged By: PBR

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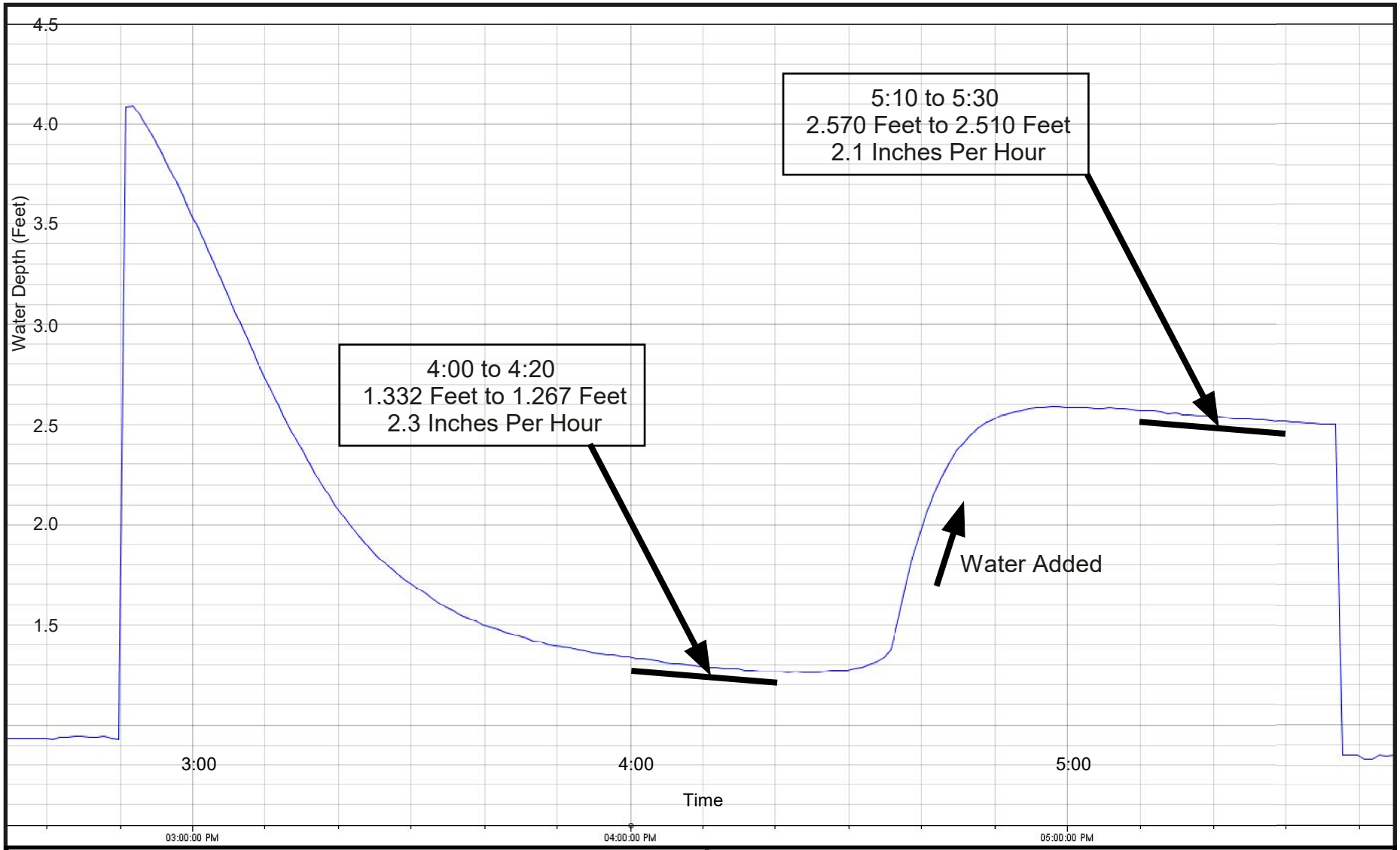
INFILTRATION TEST DATA



Project No: 19-2424

Project: SE 49th Avenue
Milwaukie, Oregon

Boring: HA-1
Depth: 4.5 Feet

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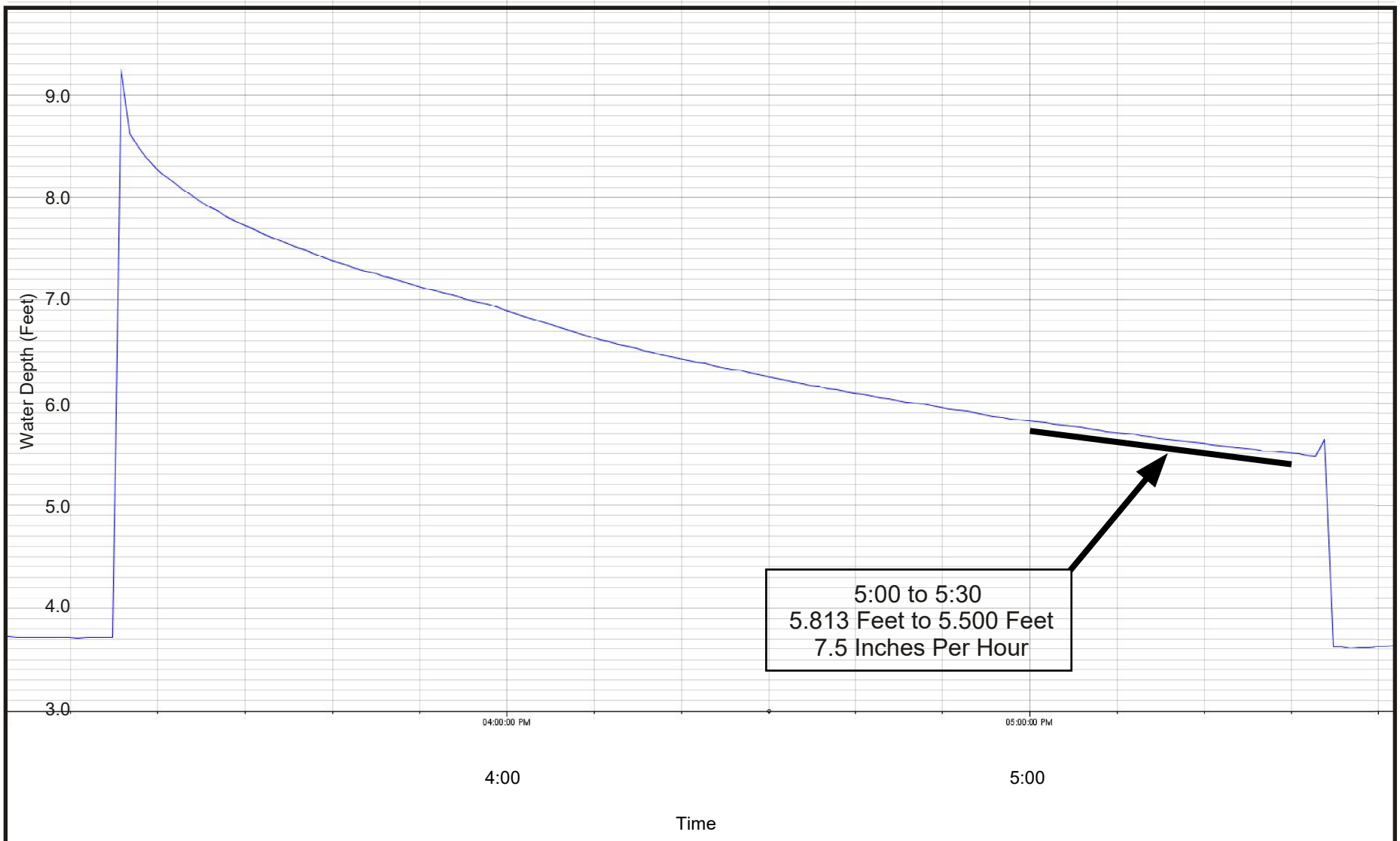
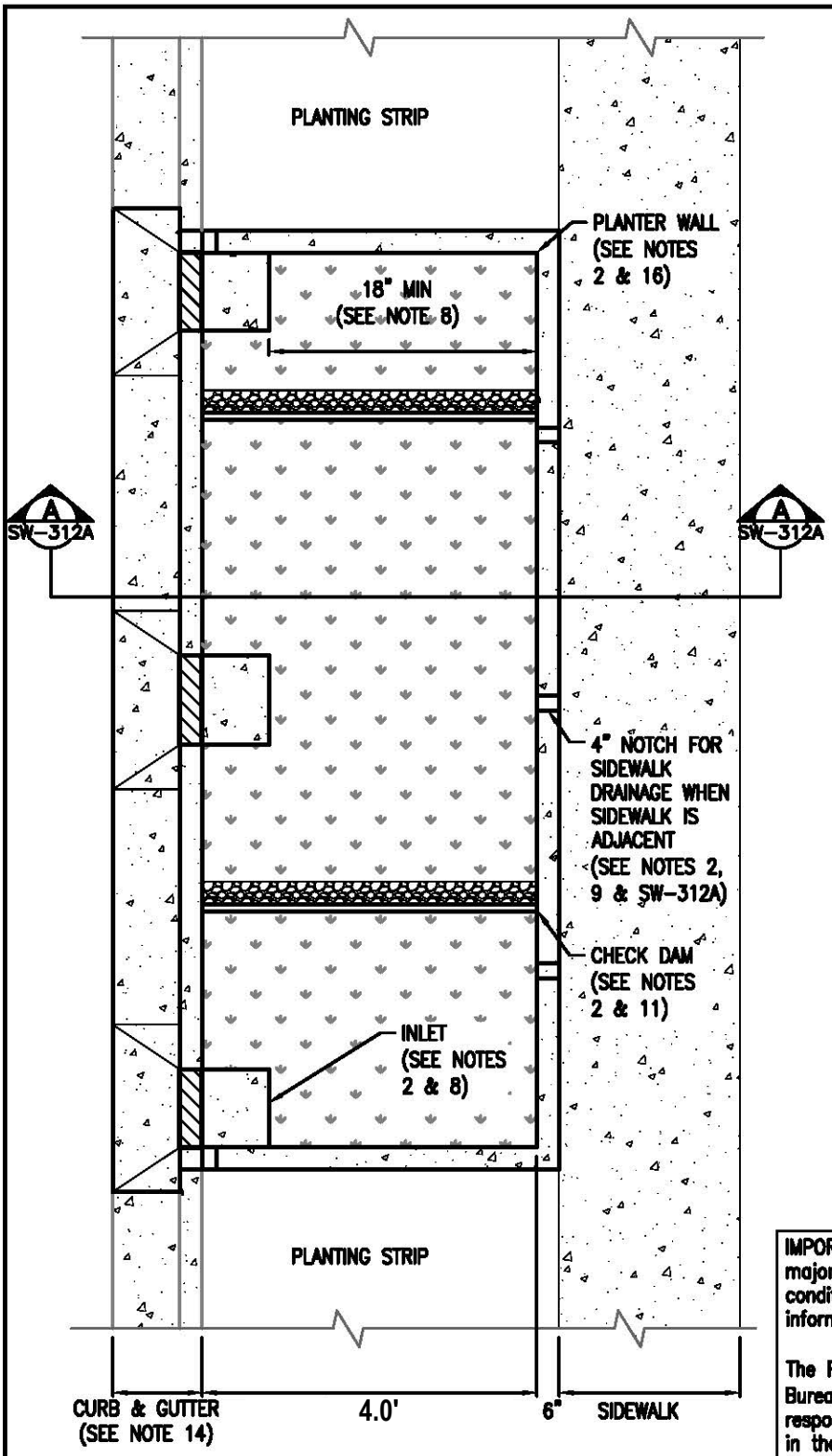
INFILTRATION TEST DATA



Project No: 19-2424 Project: SE 49th Avenue Milwaukie, Oregon	Boring: HA-2 Depth: 8 Feet

ATTACHMENT B

Proposed Stormwater Planter Details



PLAN VIEW

– DRAWING NOT TO SCALE –

DESIGNER INFORMATION:

1. Adapt this plan view example to your engineered design. Maximize surface storage.
2. Provide beginning and ending stations for each facility. Provide stationing and/or dimensions and elevations at each inlet, outlet, check dam, planter corner and sidewalk notches.
3. Sidewalk elevation must be set above check dam and inlet elevations to allow overflow to drain to street before sidewalk.
4. Proposed utility lines to be located out of facility.
5. Longitudinal slope of planter matches the road, unless otherwise specified.
6. Area and Depth of facility are based upon engineering calculations and right-of-way constraints. See Chapter 2 of the City of Portland Stormwater Management Manual (SWMM).
7. Minimum interior planter width is 3ft. A minimum of 4 feet is required for planters with street trees.
8. If less than 18" between splash pad and planter wall, extend pad to wall.
9. Place one notch at low point of sidewalk. Space additional notches approximately 6ft apart.

RELATED DETAILS AND RESOURCES:

10. Inlet details SW–331 and SW–332
11. Check Dam details SW–342 and SW–343
12. Special requirements for water lines, meters, and fire hydrants (see SW–316B)
13. Planter Planting Template (see SW–315)
14. Curb and Gutter per PBOT standard drawing P–540
15. Stormwater facility construction and blended soil requirements see City of Portland Standard Construction Specifications, sections 00415 and 01040.14(d)
16. Planter wall detail (see SW–313)

IMPORTANT: Utility conflicts and existing conditions can create major design variables. Locate utilities and survey existing conditions prior to beginning design work and include information on design drawings.

The Portland Bureau of Transportation (PBOT), Portland Water Bureau (PWB), and Bureau of Environmental Services (BES) are responsible for the review and approval of Stormwater Swales in the public right of way. Stormwater facilities in Wellhead Protection Areas may require special containment measures as required by City Code 21.35.

For more information contact:

PBOT	(503) 823–7884	BES	(503) 823–7761
PWB	(503) 823–7368	Urban Forestry	(503) 823–4489

STORMWATER MANAGEMENT MANUAL TYPICAL DETAILS

– Green Streets –

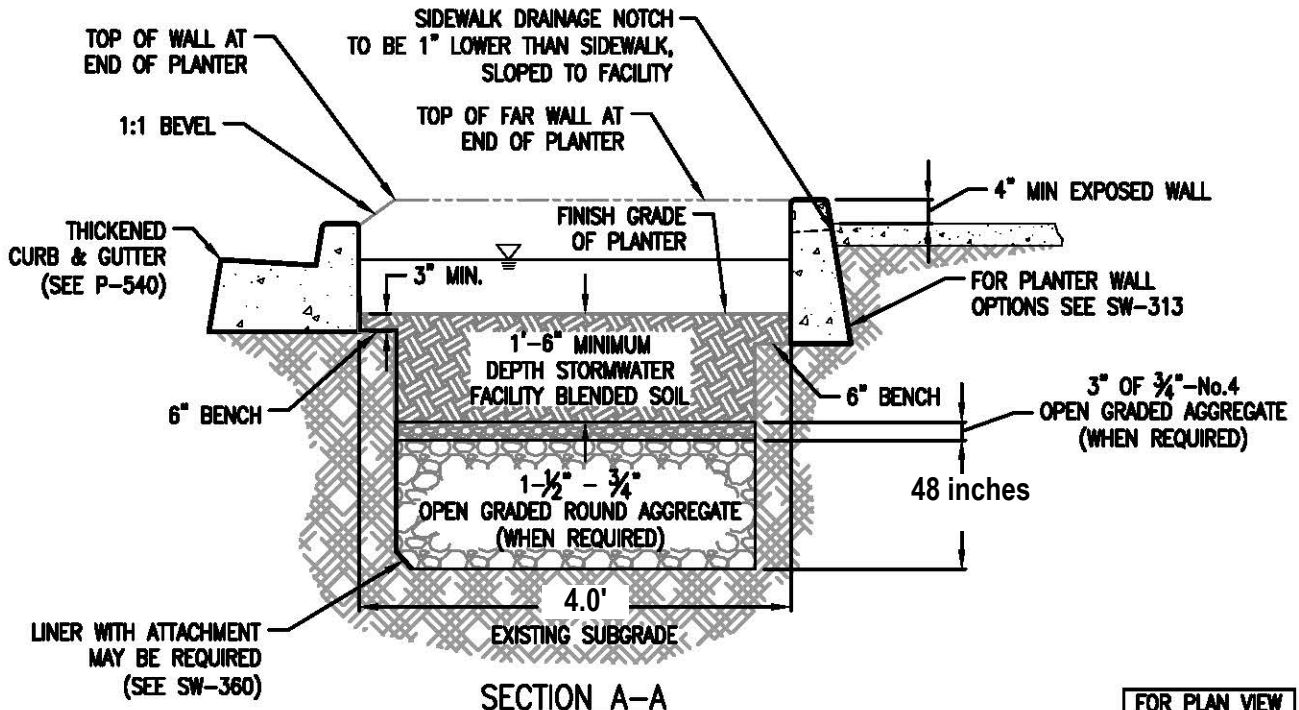
Plan View without Parking Planters

Bureau of Environmental Services

NUMBER

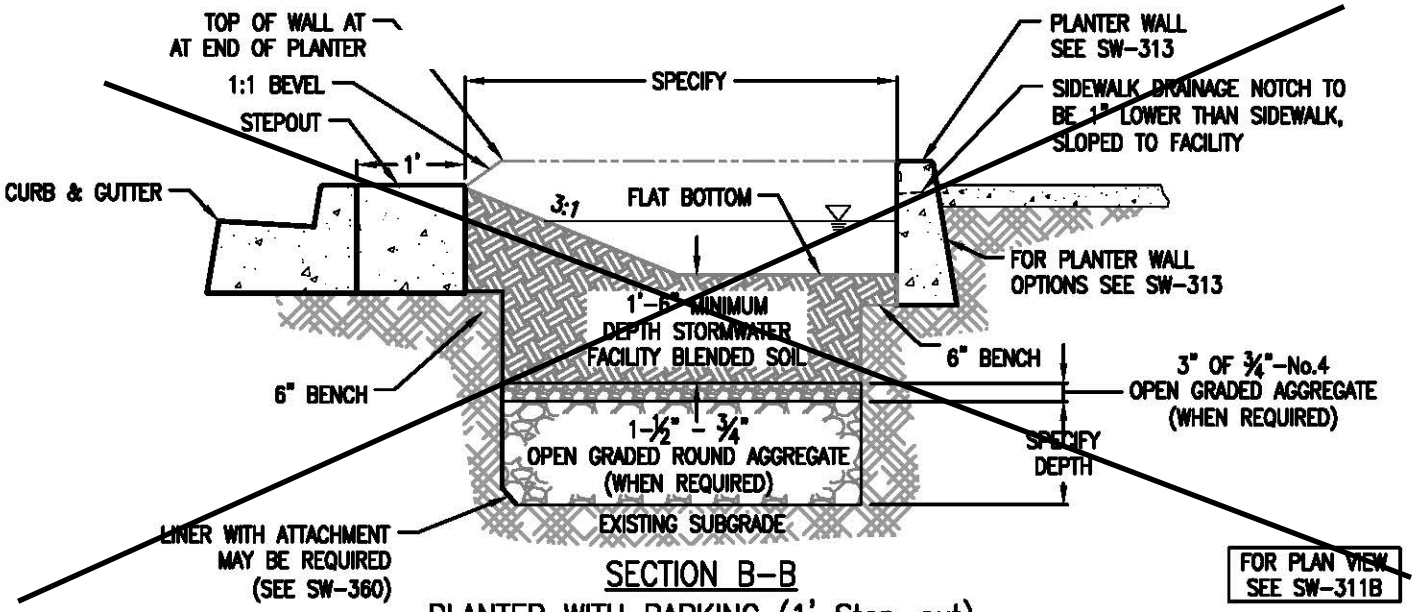
SW–310

7–1–2016



SECTION A-A
PLANTER WITHOUT PARKING

FOR PLAN VIEW SEE SW-310



SECTION B-B
PLANTER WITH PARKING (1' Step-out)

FOR PLAN VIEW SEE SW-311B

DESIGNER INFORMATION

1. Show liner and perf-pipe in the Section view if they are required.
2. Maximize 9" of surface storage.
3. Minimun facility width is 30" from back of curb to face of planter wall.
4. Top of curb and top of sidewalk at approximately same elevation, unless stormwater facility retrofit.

CONSTRUCTION NOTE

In facilities that are unlined, fracture and loosen soil to a depth of 12" below grade before installing blended soil or aggregate. Do not till.

- DRAWING NOT TO SCALE -

STORMWATER MANAGEMENT MANUAL TYPICAL DETAILS

- Green Streets -

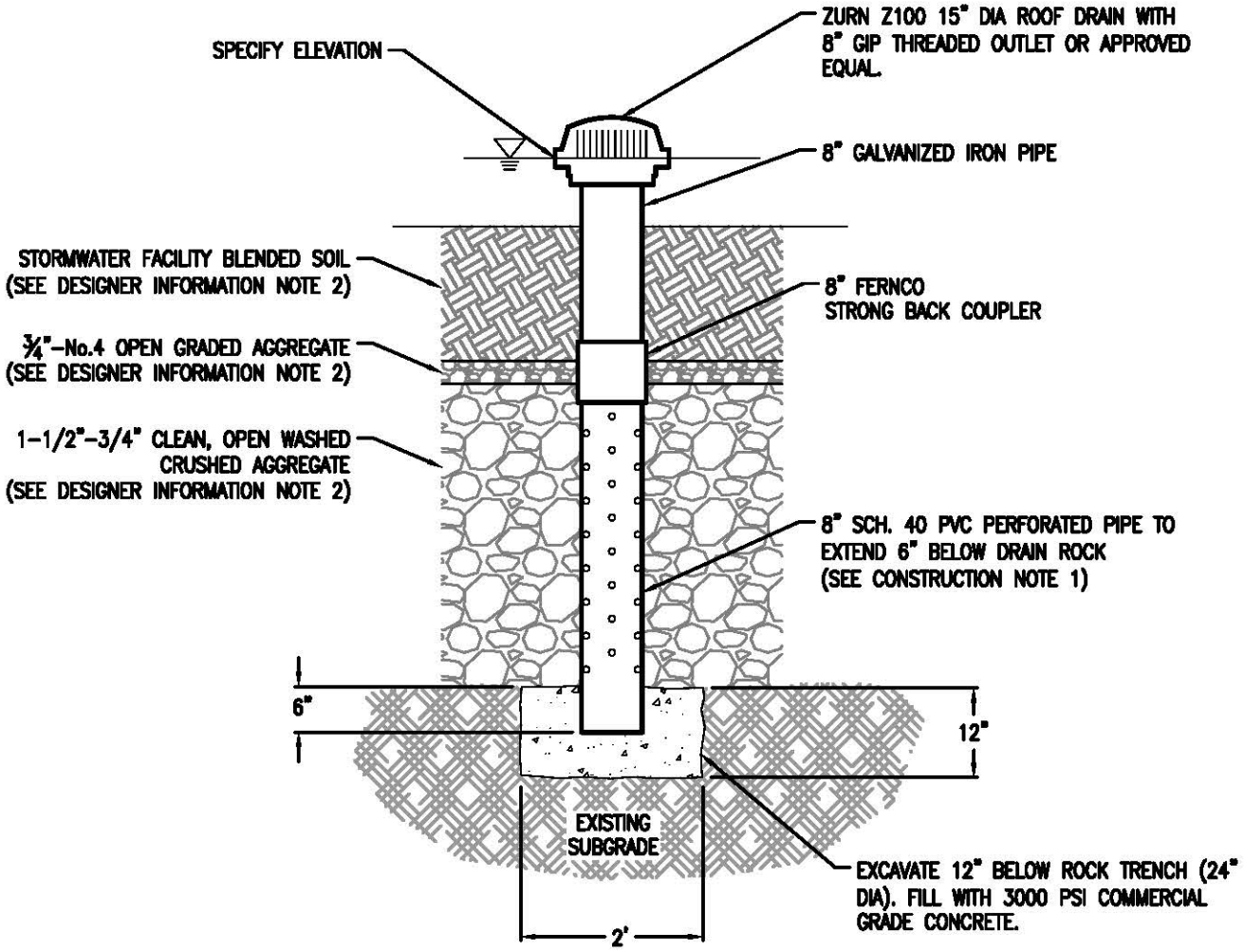
Section Views
Planters

Bureau of Environmental Services

NUMBER

SW-312A

7-1-2016



DESIGNER INFORMATION

1. Show overflow drain in swale, planter or curb extension section. Separate swale, planter or curb extension section views may not be needed.
2. Dimension stormwater facility blended soil and rock layers per your design.

CONSTRUCTION NOTE

1. Perforate 8" Schedule 40 PVC with ½" holes, 90 degrees around pipe, rows 2" apart. Offset holes in rows by 45°.

– DRAWING NOT TO SCALE –

STORMWATER MANAGEMENT MANUAL TYPICAL DETAILS

– Green Streets –

Overflow Drain

Overflow Inlets

Bureau of Environmental Services

NUMBER

SW–351

7–1–2016

ATTACHMENT C

Presumptive Approach Calculation Output File

PAC Report

Project Name 49th Street Planters	Permit No.	Created 4/25/19 7:34 AM
Project Address 10197 SE 49th Milwaukie, OR 97222	Designer Shawn Nguy	Last Modified 4/25/19 7:56 AM
	Company PACLAND	Report Generated 4/25/19 7:56 AM

Project Summary

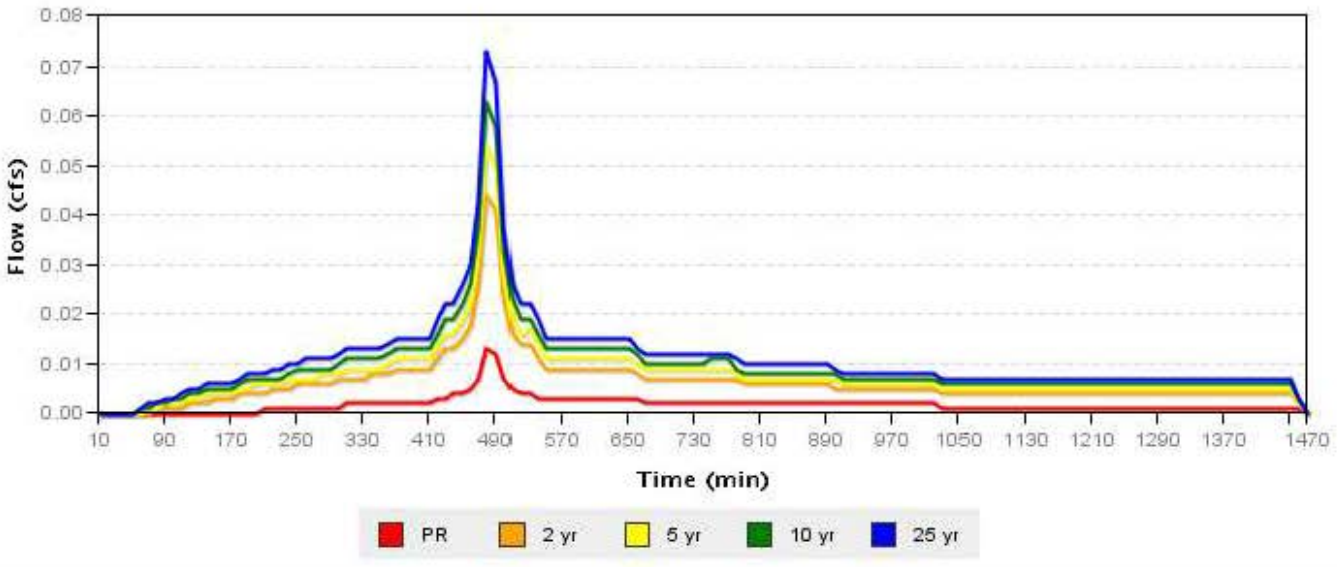
Public Street Improvements for 2-lot partition

Catchment Name	Impervious Area (sq ft)	Native Soil Design Infiltration Rate	Hierarchy Category	Facility Type	Facility Config	Facility Size (sq ft)	Facility Sizing Ratio	PR Results	Flow Control Results
North Planter	3110	7.50	2	Planter (Sloped)	E		4.1%	Pass	Not Used
South Planter	3000	7.50	2	Planter (Sloped)	E		4.4%	Pass	Not Used

Catchment North Planter

Site Soils & Infiltration Testing Data	Infiltration Testing Procedure	**Encased Falling Head**
	Native Soil Infiltration Rate (I_{test})	**7.50**
Correction Factor	CF_{test}	**2**
Design Infiltration Rates	Native Soil (I_{design})	**3.75 in/hr**
	Imported Growing Medium	**2.00 in/hr**
Catchment Information	Hierarchy Category	**2**
	Hierarchy Description	**On-site infiltration through use of approved UIC facility**
	Pollution Reduction Requirement	**Pass**
	10-year Storm Requirement	**Pass or if Fail, disposal through separate approved UIC**
	Flow Control Requirement	**Pass or if Fail, disposal through separate approved UIC**
	Impervious Area	**3110 sq ft 0.071 acre**
	Time of Concentration (Tc)	**5**
	Post-Development Curve Number (CN_{post})	**98**

SBUH Results



	Peak Rate (cfs)	Volume (cf)
PR	0.013	162.506
2 yr	0.044	562.742

5 yr	0.054	691.638
10 yr	0.063	820.727
25 yr	0.073	949.937

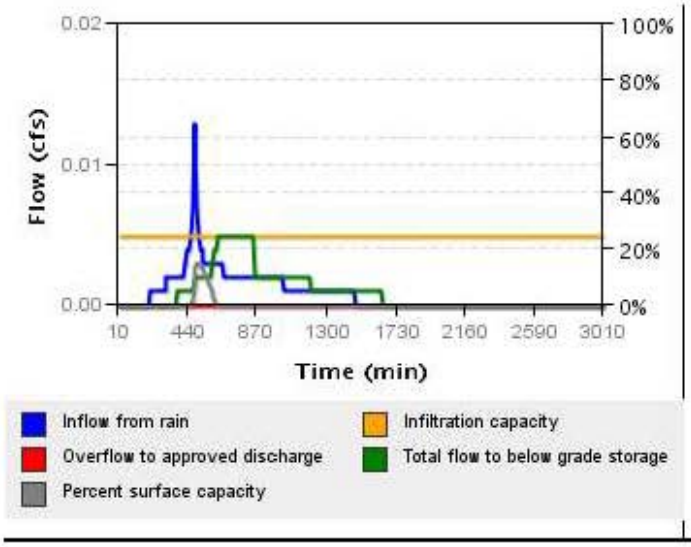
Facility North Planter

Facility Details	Facility Type	**Planter (Sloped)**
	Facility Configuration	**E: Infl. with bypass to RS**
	Facility Shape	**Sloped**
	Above Grade Storage Data	
	Storage Depth 2	**15.0 in**
	Growing Medium Depth	**18 in**
	Surface Capacity at Depth 1	**72.0 cu ft**
	Design Infiltration Rate for Native Soil	**0.012 in/hr**
	Infiltration Capacity	**0.005 cfs**
	Below Grade Storage Data	
	Rock Storage Depth	**48 in**
	Rock Porosity	**0.30 in**
Facility Facts	Total Facility Area Including Freeboard	**140.00 sq ft**
	Sizing Ratio	**4.1%**
Pollution Reduction Results	Pollution Reduction Score	**Pass** ✓
	Overflow Volume	**0.000 cf**
	Surface Capacity Used	**19%**
	Rock Capacity Used	**0%**
10 Year Results	10 Year Score	**Pass** ✓
	Overflow Volume	**0.000 cf**
	Surface Capacity Used	**91%**
	Rock Capacity Used	**99%**

Sloped Facility Worksheet

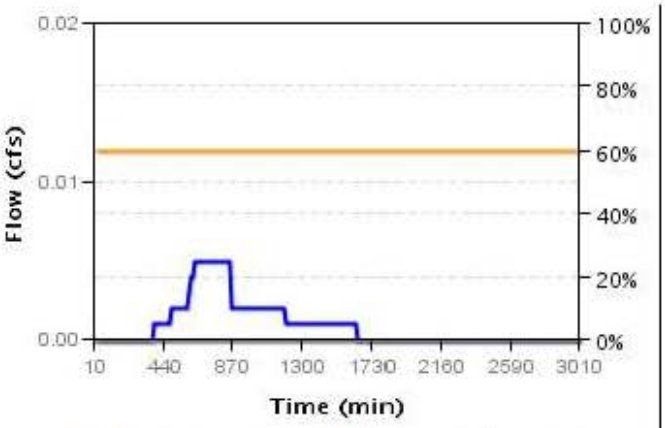
#	Segment Length (ft)	Check Dam Length (ft)	Slope, v/h (ft/ft)	Bottom Width (ft)	Right Side Slope, h/v (ft/ft)	Left Side Slope, h/v (ft/ft)	Downstream Depth (in)	Landscape Width (ft)	Rock Storage Width (ft)
1	16.00	0.50	0.0674	3.50	0.0	0.0	12.0	3.50	3.50
2	16.00	0.50	0.0674	3.50	0.0	0.0	12.0	3.50	3.50
3	8.00	0.50	0.0674	3.50	0.0	0.0	12.0	3.50	3.50

Pollution Reduction Event Surface Facility Modeling



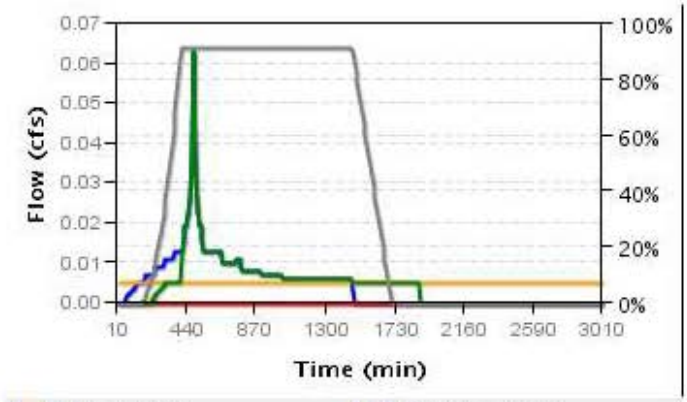
Inflow from rain
Infiltration capacity
Overflow to approved discharge
Total flow to below grade storage
Percent surface capacity

Pollution Reduction Event Below Grade Modeling



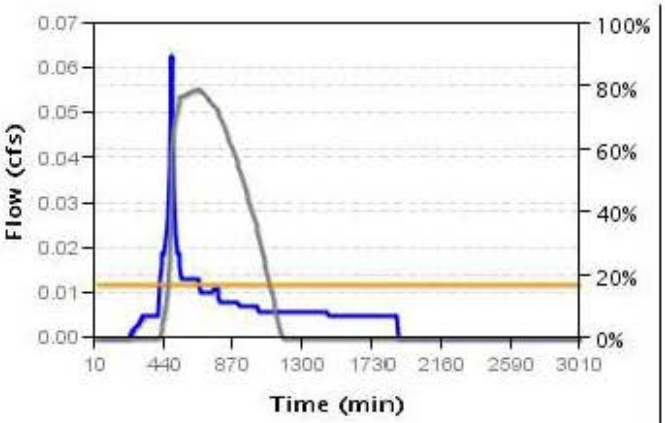
Inflow to rock storage
Infiltration capacity
Percent rock capacity

10 Year Event Surface Facility Modeling



Inflow from rain
Infiltration capacity
Overflow to approved discharge
Total flow to below grade storage
Percent surface capacity

10 Year Event Below Grade Modeling

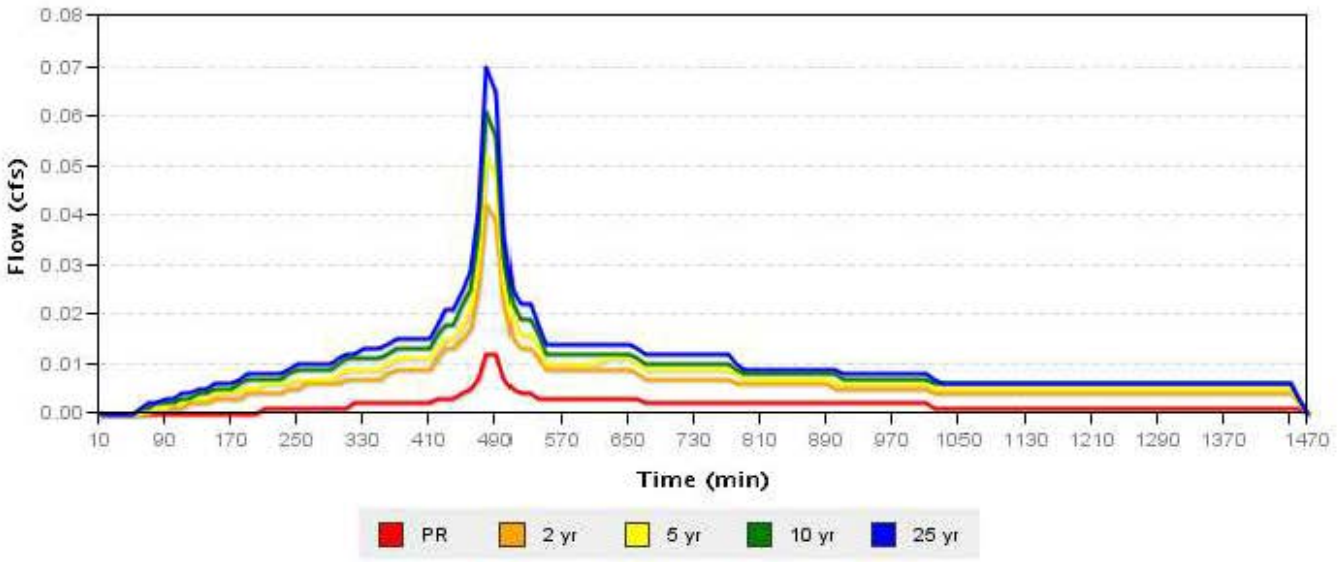


Inflow to rock storage
Infiltration capacity
Percent rock capacity

Catchment South Planter

Site Soils & Infiltration Testing Data	Infiltration Testing Procedure	**Encased Falling Head**
	Native Soil Infiltration Rate (I_{test})	**7.50**
Correction Factor	CF_{test}	**2**
Design Infiltration Rates	Native Soil (I_{design})	**3.75 in/hr**
	Imported Growing Medium	**2.00 in/hr**
Catchment Information	Hierarchy Category	**2**
	Hierarchy Description	**On-site infiltration through use of approved UIC facility**
	Pollution Reduction Requirement	**Pass**
	10-year Storm Requirement	**Pass or if Fail, disposal through separate approved UIC**
	Flow Control Requirement	**Pass or if Fail, disposal through separate approved UIC**
	Impervious Area	**3000 sq ft 0.069 acre**
	Time of Concentration (Tc)	**5**
	Post-Development Curve Number (CN_{post})	**98**

SBUH Results



	Peak Rate (cfs)	Volume (cf)
PR	0.012	156.758
2 yr	0.042	542.838

5 yr	0.052	667.175
10 yr	0.061	791.698
25 yr	0.07	916.338

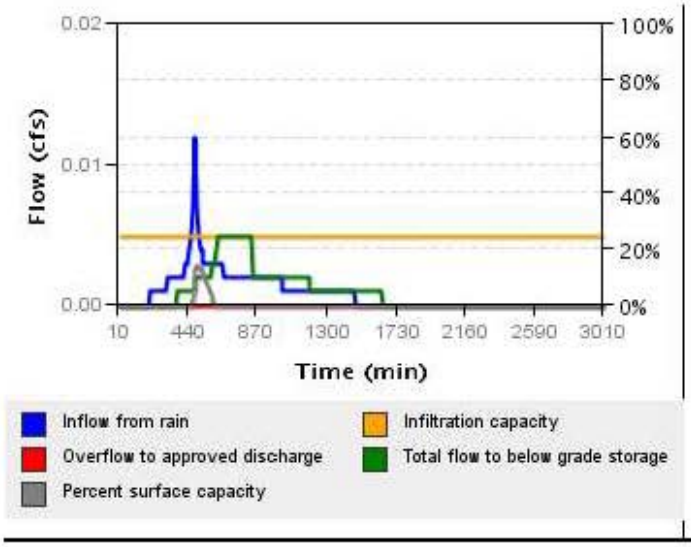
Facility South Planter

Facility Details	Facility Type	**Planter (Sloped)**
	Facility Configuration	**E: Infl. with bypass to RS**
	Facility Shape	**Sloped**
	Above Grade Storage Data	
	Storage Depth 2	**15.0 in**
	Growing Medium Depth	**18 in**
	Surface Capacity at Depth 1	**72.0 cu ft**
	Design Infiltration Rate for Native Soil	**0.013 in/hr**
	Infiltration Capacity	**0.005 cfs**
	Below Grade Storage Data	
	Rock Storage Depth	**48 in**
	Rock Porosity	**0.30 in**
Facility Facts	Total Facility Area Including Freeboard	**154.00 sq ft**
	Sizing Ratio	**4.4%**
Pollution Reduction Results	Pollution Reduction Score	**Pass** ✓
	Overflow Volume	**0.000 cf**
	Surface Capacity Used	**20%**
	Rock Capacity Used	**0%**
10 Year Results	10 Year Score	**Pass** ✓
	Overflow Volume	**0.000 cf**
	Surface Capacity Used	**91%**
	Rock Capacity Used	**85%**

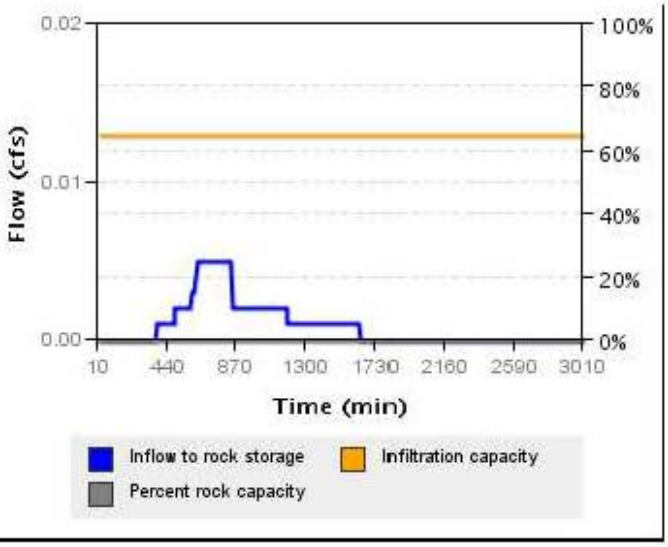
Sloped Facility Worksheet

#	Segment Length (ft)	Check Dam Length (ft)	Slope, v/h (ft/ft)	Bottom Width (ft)	Right Side Slope, h/v (ft/ft)	Left Side Slope, h/v (ft/ft)	Downstream Depth (in)	Landscape Width (ft)	Rock Storage Width (ft)
1	18.00	0.50	0.0674	3.50	0.0	0.0	12.0	3.50	3.50
2	18.00	0.50	0.0674	3.50	0.0	0.0	12.0	3.50	3.50
3	8.00	0.50	0.0674	3.50	0.0	0.0	12.0	3.50	3.50

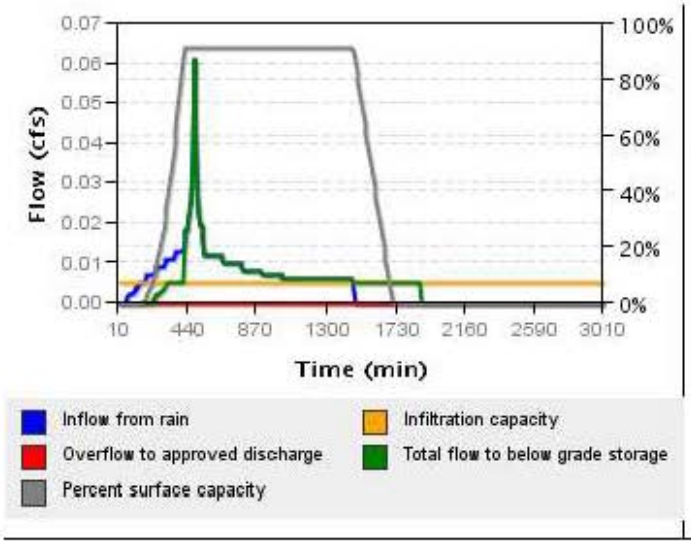
Pollution Reduction Event Surface Facility Modeling



Pollution Reduction Event Below Grade Modeling



10 Year Event Surface Facility Modeling



10 Year Event Below Grade Modeling