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Hillsboro, OR 97124  
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Email steve@nw-eng.com

**Wallblinger M49 Renewal**

December 5, 2019

RE: Wallblinger M49 Renewal – Water Quality Report

This report deals with the proposed residence to be located on Tax Lot 703, Tax Map 2N1W32B. A proposed single family residence with a roof area of approximately 4,305 square feet is proposed to be constructed on the lot. Access to the lot will be via a driveway from NW McNamee Road. The driveway area totals approximately 8,066 Square feet.

All roof and driveway drainage will be piped to two (2) lined storm water planter facilities located on the west and east side of the residence. This lot is in Soils Group 7B, 7C, 7D - Cascade silt loam and 17E Goble silt loam, hydrologic group C as reported in the Soil survey of Multnomah County, Oregon, US Department of Agriculture, Soil Conservation Services (see attached). The Geotechnical Report by Geo Pacific Engineering, Inc. dated April 30, 2019 recommends that the stormwater treatment facilities be lined with an impermeable barrier and stormwater not be discharged directly to slopes.

Based on the above information and recommendations, we have designed two (2) lined storm water planter facilities which will treat the roof and driveway discharges and will limit the discharge rate (under a 25-year storm event) to no more than that which currently occurs from this area. See the attached drawing which shows the following described facilities. The HydroCAD model calculates a pre-developed peak runoff rate of 0.11 cfs for the 25-year return interval storm event (see attached).

Flow from the driveway areas will be collected in a sumped catch basin to limit the amount of oil and floatables reaching the storm water planter facilities. Roof discharge will be directed directly to the storm water planter facilities.

The storm water planter facilities will be lined with an impermeable membrane. The rock storage area under the growing media will store the runoff for discharge through a perforated pipe to the flow dispersion trench located down slope of the storm water planter facilities. The peak flow to the dispersion trench will be limited by a flow control manhole which will include an orifice structure for flow limitation.

Design of the stormwater catch basin and discharge line, roof discharge line, storm water planter facilities, flow control structure and dispersion trench will be included in the final design for this project.

Sincerely  
Steven M. White, P.E.

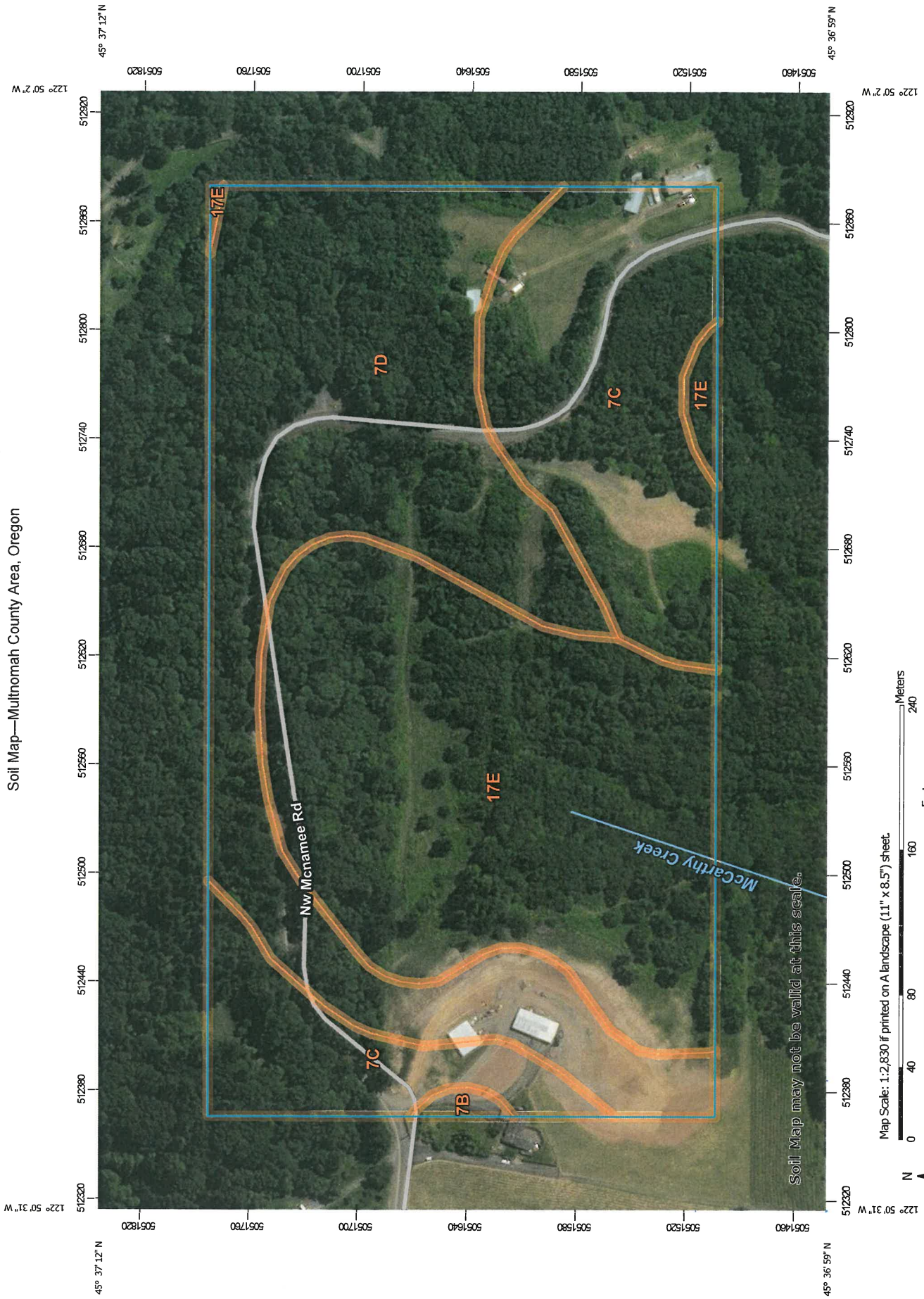
Attachments: Soils Exhibits, Site Plan, Grading Plan, Pre-Developed HydroC



Engineering • Planning  
Managers • Matthew Newman &  
Steve White PE

EXPIRES: 6/30/20

Soil Map—Multnomah County Area, Oregon



Map Scale: 1:2,830 if printed on A landscape (11" x 8.5") sheet.



## MAP LEGEND

- Area of Interest (AOI)
- Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points
- Special Point Features**
  - Blowout
  - Borrow Pit
  - Clay Spot
  - Closed Depression
  - Gravel Pit
  - Gravelly Spot
  - Landfill
  - Lava Flow
  - Marsh or swamp
  - Mine or Quarry
  - Miscellaneous Water
  - Perennial Water
  - Rock Outcrop
  - Saline Spot
  - Sandy Spot
  - Severely Eroded Spot
  - Sinkhole
  - Slide or Slip
  - Sodic Spot
- Water Features**
  - Streams and Canals
- Transportation**
  - Rails
  - Interstate Highways
  - US Routes
  - Major Roads
  - Local Roads
- Background**
  - Aerial Photography
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Multnomah County Area, Oregon  
 Survey Area Data: Version 17, Sep 10, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 29, 2015—Sep 13, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7B	Cascade silt loam, 3 to 8 percent slopes	0.2	0.4%
7C	Cascade silt loam, 8 to 15 percent slopes	9.2	25.8%
7D	Cascade silt loam, 15 to 30 percent slopes	13.3	37.2%
17E	Goble silt loam, 30 to 60 percent slopes	13.0	36.6%
<b>Totals for Area of Interest</b>		<b>35.7</b>	<b>100.0%</b>

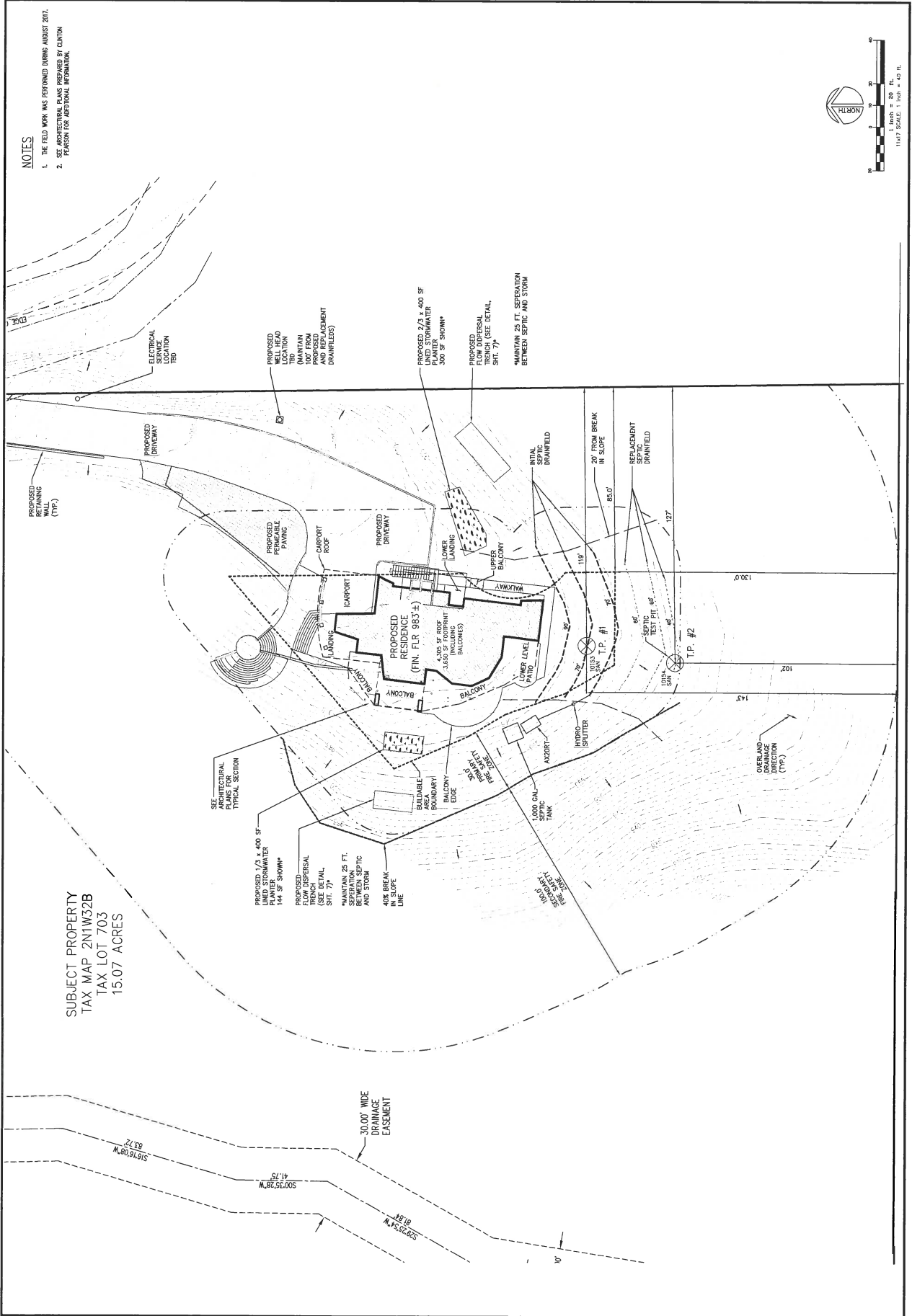
DESIGNED	DRAWN	REVIEWED	SUBMITTAL

REVISION	BY	DATE

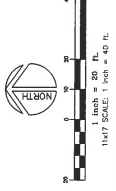
WAIBLINGER M49 RENEWAL  
NO612  
PRELIMINARY SITE PLAN  
WITH FIRE BREAKS

FOR: DIETER WAIBLINGER  
VANCOUVER, WA 98665  
503-730-6433  
TAX LOT 703  
MULNOMAH COUNTY, OREGON

**M ENGINEERS**  
Engineering & Planning  
3000 NE 10th Street  
Portland, OR 97232  
503.401.4801  
503.401.4802 - fax



**NOTES**  
1. THE FIELD WORK WAS PERFORMED DURING AUGUST 2017.  
2. SEE ARCHITECTURAL PLANS PREPARED BY CLINTON PERASON FOR ADDITIONAL INFORMATION.



SUBJECT PROPERTY  
TAX MAP 2N1W32B  
TAX LOT 703  
15.07 ACRES

OVERLAND DRAINAGE DISSEMINATION (TYP.)

PROPOSED 1/4\"/>

PROPOSED 1/4\"/>

PROPOSED 1/4\"/>

PROPOSED 2 1/2\"/>

PROPOSED WELL HEAD LOCATION (SEE DETAIL)

ELECTRICAL SERVICE LOCATION (SEE DETAIL)

PROPOSED TRAINING WALLING (TYP.)

PROPOSED DRIVEWAY

PROPOSED PERMEABLE PAVING

LOWER LAUNDRY

UPPER BALCONY

INITIAL SEPTIC DRAINFIELD

20' FROM BREAK IN SLOPE

REPLACEMENT SEPTIC DRAINFIELD

SEPTIC TEST PIT #1

SEPTIC TEST PIT #2

SEE ARCHITECTURAL PLANS FOR TYPICAL SECTION

SEE DETAIL (SEE DETAIL)

SEE DETAIL (SEE DETAIL)

SEE DETAIL (SEE DETAIL)

SEE DETAIL (SEE DETAIL)

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**M ENGINEERS**  
 Engineering & Planning  
 2009 NE John Day Avenue  
 Hillsboro, OR 97124  
 503.601.4403  
 503.601.4422 fax

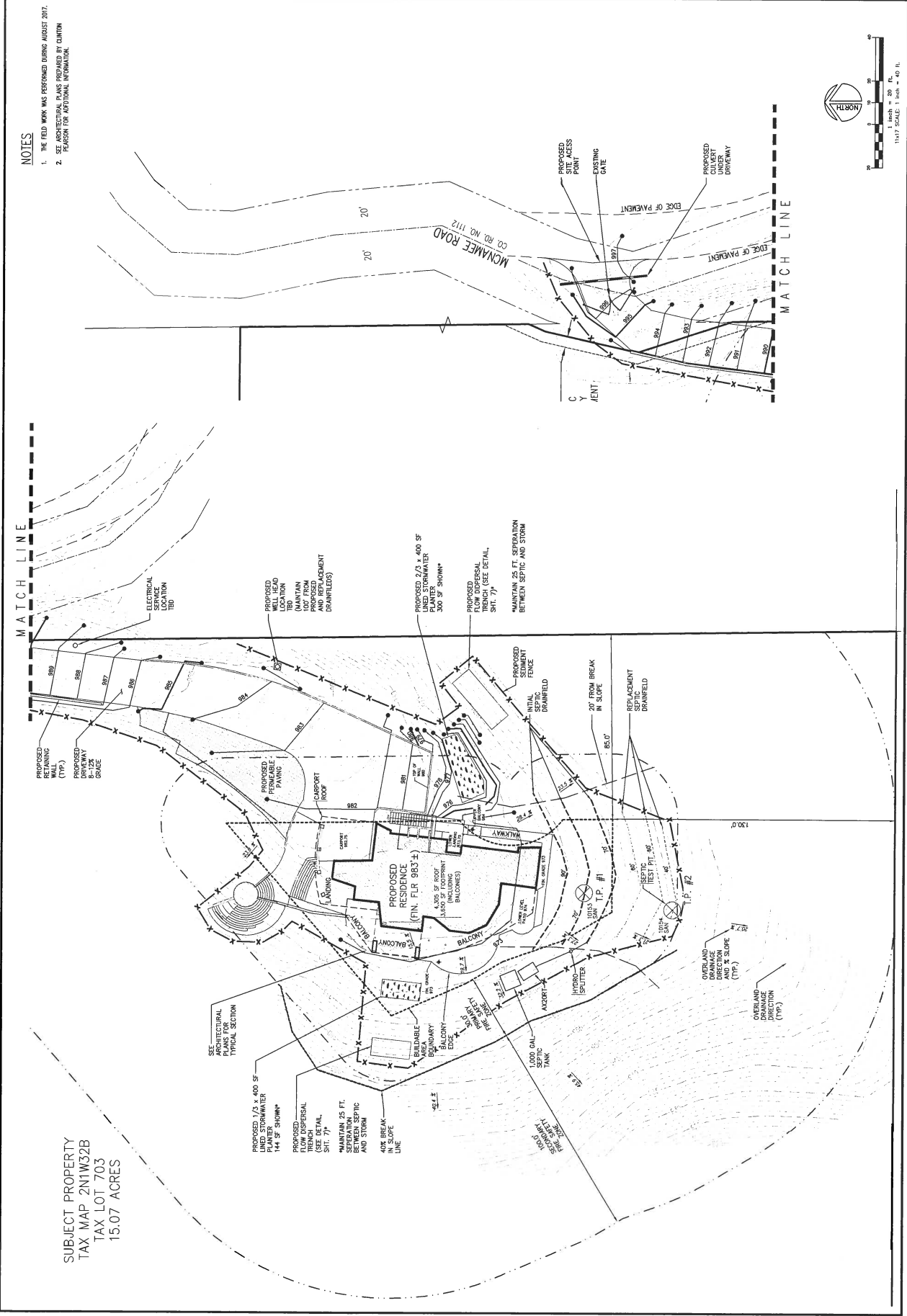
FOR: DIETER WAUBLINGER  
 VANCOUVER, WA 98665  
 503-730-6433  
 SITE: TAX MAP 2N1W32B  
 MULTNOMAH COUNTY, OREGON

**WAUBLINGER M49 RENEWAL  
 PRELIMINARY GRADING &  
 EROSION CONTROL PLAN  
 N0612**

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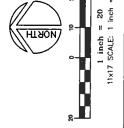
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**NOTES**

1. THE FIELD WORK WAS PERFORMED DURING AUGUST 2017.
2. SEE ARCHITECTURAL PLANS PREPARED BY CLINTON PERSON FOR ADDITIONAL INFORMATION.



SUBJECT PROPERTY  
 TAX MAP 2N1W32B  
 TAX LOT 703  
 15.07 ACRES

SEE ARCHITECTURAL PLANS FOR TYPICAL SECTION

PROPOSED 1/3 x 400 SF LINED STORMWATER TRENCH (SEE DETAIL, SHIT. 7)

PROPOSED 20' FROM BREAK IN SLOPE

PROPOSED 40% BREAK IN SLOPE LINE

PROPOSED 2/3 x 400 SF LINED STORMWATER TRENCH (SEE DETAIL, SHIT. 7)

PROPOSED 20' FROM BREAK IN SLOPE

PROPOSED 20' FROM BREAK IN SLOPE

PROPOSED 20' FROM BREAK IN SLOPE

PROPOSED 20' FROM BREAK IN SLOPE

PROPOSED 20' FROM BREAK IN SLOPE

PROPOSED 20' FROM BREAK IN SLOPE

PROPOSED 20' FROM BREAK IN SLOPE

PROPOSED 20' FROM BREAK IN SLOPE

PROPOSED 20' FROM BREAK IN SLOPE

PROPOSED 20' FROM BREAK IN SLOPE



# Original Lot



Routing Diagram for N06012--TL 703 25 Pre-Developed  
Prepared by Hewlett-Packard Company, Printed 12/6/2019  
HydroCAD® 10.00-19 s/n 02505 © 2016 HydroCAD Software Solutions LLC

**N06012--TL 703 25 Pre-Developed**

Prepared by Hewlett-Packard Company

HydroCAD® 10.00-19 s/n 02505 © 2016 HydroCAD Software Solutions LLC

Printed: 12/6/2019

Page 2

**Area Listing (all nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
0.284	80	Small grain, SR + CR, Good, HSG C (12S)
<b>0.284</b>	<b>80</b>	<b>TOTAL AREA</b>



**N06012--TL 703 25 Pre-Developed**

Prepared by Hewlett-Packard Company

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Printed 12/6/2019

Page 3

**Soil Listing (all nodes)**

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.284	HSG C	12S
0.000	HSG D	
0.000	Other	
<b>0.284</b>		<b>TOTAL AREA</b>

**N06012--TL 703 25 Pre-Developed**

Prepared by Hewlett-Packard Company

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Page 4

**Ground Covers (all nodes)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.284	0.000	0.000	0.284	Small grain, SR + CR, Good	12S
<b>0.000</b>	<b>0.000</b>	<b>0.284</b>	<b>0.000</b>	<b>0.000</b>	<b>0.284</b>	<b>TOTAL AREA</b>	

**N06012--TL 703 25 Pre-Developed**

Prepared by Hewlett-Packard Company

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Type IA 24-hr 25-year Rainfall=3.90"

Printed 12/6/2019

Page 5

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 12S: Original Lot**

Runoff Area=12,371 sf 0.00% Impervious Runoff Depth>1.94"

Tc=15.0 min CN=80/0 Runoff=0.11 cfs 0.046 af

**Total Runoff Area = 0.284 ac Runoff Volume = 0.046 af Average Runoff Depth = 1.94"**

**100.00% Pervious = 0.284 ac 0.00% Impervious = 0.000 ac**

**Summary for Subcatchment 12S: Original Lot**

Runoff = 0.11 cfs @ 8.02 hrs, Volume= 0.046 af, Depth> 1.94"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
 Type IA 24-hr 25-year Rainfall=3.90"

Area (sf)	CN	Description
12,371	80	Small grain, SR + CR, Good, HSG C
12,371		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					Direct Entry,

**Subcatchment 12S: Original Lot**

Hydrograph

