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DESIGN DRIVEN | CLIENT FOCUSED

August 28, 2013

City of West Linn
Attention: Tom Soppe
22500 Salamo Road
West Linn, OR 97068

Re: **Rosemont Subdivision**
Response Letter
Project Number 2130073.00

Dear Mr. Soppe:

In response to your plan review checklist dated July 30, 2013, we have addressed the items below, with our responses following your comments.

General

1. *Submit 11 x 17 size of the "Topographic Survey…" that you submitted in 24 x 36 size, and provide electronic copy. Submit electronic copy of paper neighborhood meeting materials.*

Response: An 11x17 Topo Survey (C2.0 in plan set) has been provided. Kelly Pyrch has provided the electronic copy of the neighborhood meeting materials.

Section 85.160(A):

2. *Provide city-wide map identifying the site.*

Response: The 8.5 x 11 City Map with site identified has been provided.

Section 85.160(B):

3. *Provide engineer or surveyor stamp on tentative site plan.*

Response: A stamped tentative site plan has been provided.

Section 85.160(E)(2):

4. *Provide these contours on tentative subdivision plan.*

Response: Contours are now shown on the tentative plan.

Section 85.160(E)(5):

5. Tell on tentative plan the percentage of land that is significant tree protection area and the percentage of Non-Type I and II lands that are significant tree protection areas.

Response: Percentage of land in significant tree protection area have been added to the tentative plan. No Type-I or Type-II lands on the site.

Section 85.160(E)(8):

6. Show on tentative plan the zoning of this and surrounding properties including county zoning across the street.

Response: Zoning of subject property and surrounding properties are now shown on the tentative plan.

Section 85.160(E)(9):

7. Show on tentative plan the buildings on adjoining property.

Response: Buildings on adjoining property are now shown on the tentative plan.

Section 85.160(F)(7):

8. Show proposed street trees.

Response: Proposed street trees are now shown.

Section 85.200(J)(9):

9. This section addresses significant trees, not just heritage trees. Respond regarding significant trees.

Response: Significant tree information is now shown on tree plan and tentative site plan. A variance regarding the site trees has been provided to the City, but is not expected to be needed.

Section 99.038(E)(1-2):

10. Submit copies of the letters sent to the neighborhood associations and property owners.

Response: Kelly Pyrch has provided copies of these letters to the City.

ENGINEERING COMMENTS

11. Address the following

- *Storm discharge pipe shall be 12" minimum.*
- *Storm report also needs to address downstream conveyance system on Linn Ln for 100 year storm event*
- *Provide improvement plan for downstream system on Linn Ln for 100 year storm event*

Response: The stormwater system has been revised to use smaller facilities on each lot rather than 2 large facilities. These basins have been sized using the City of Portland Simplified Approach. The City has confirmed that piped overflows will no longer be needed with the smaller basins. The discharge pipe to Linn Lane has been removed.

12. Provide street lighting plan

Response: See C10.0 for proposed street lighting plan on Rosemont Road.

13. Provide a cross section for Rosemont Rd improvement

Response: A cross section of Rosemont Road improvements has been added to C6.0.

14. Currently storm drainage facility is proposed to be on top of sanitary sewer main. Provide individual rain garden on each lot will avoid this situation.

Response: The stormwater system has been revised to use smaller facilities on each lot rather than 2 large facilities. There is no longer a stormwater facility over the top of the existing sanitary main.

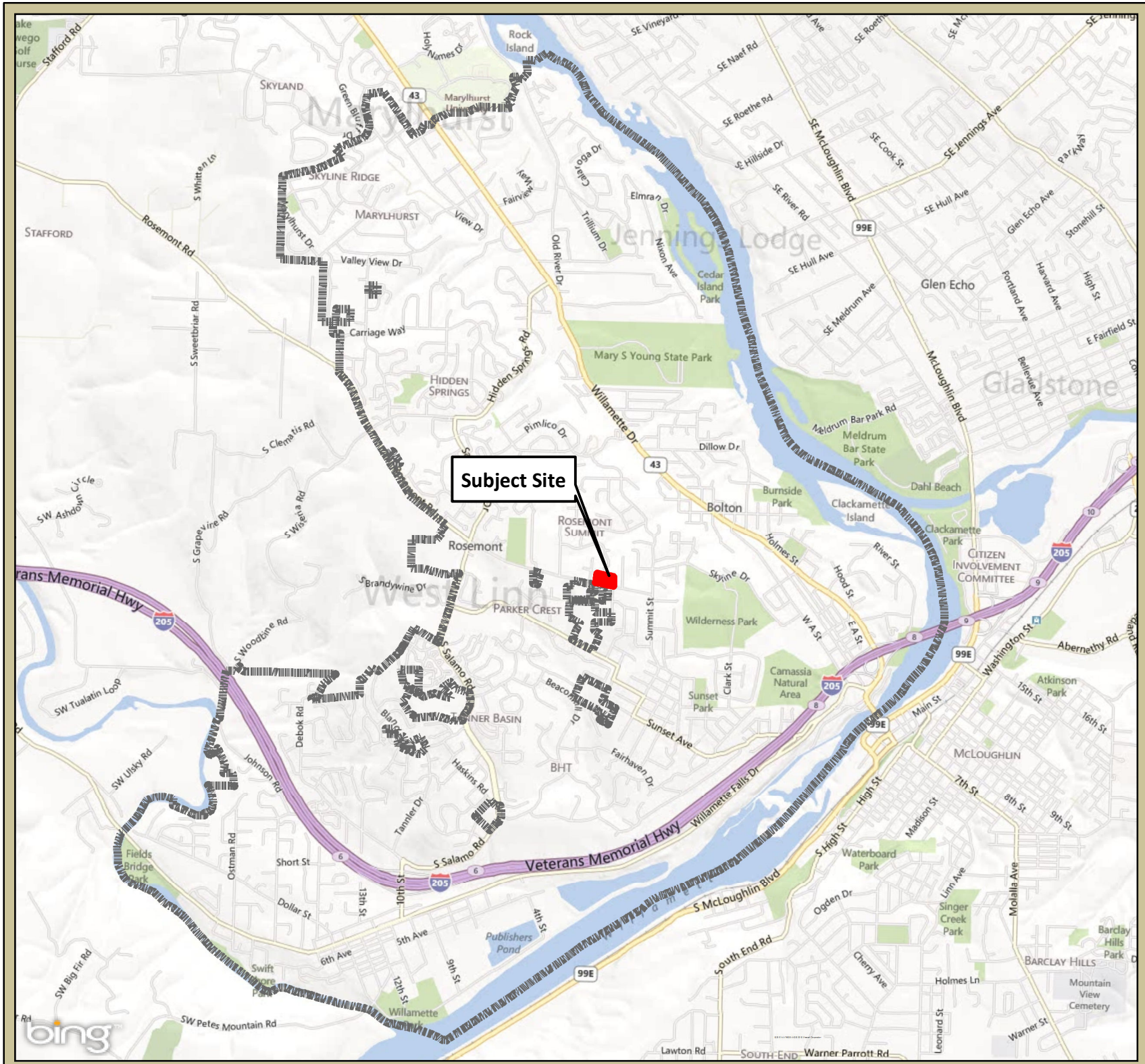
Please contact me if you have any questions.

Sincerely,

Matthew Butts, P.E., LEEP AP

Enclosures: Tentative Subdivision Plans
Storm Report
City Map

c: Ralph Henderson, Megan Goplin - Mackenzie



Rosemont Subdivision
West Linn Oregon

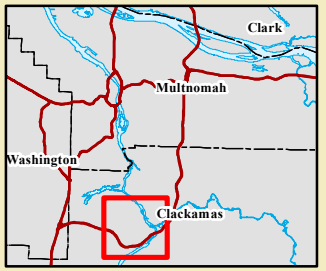
0 1,500 3,000 Feet

SCALE 1 inch = 3,000 feet

Source Data
Metro RLIS Lite Base Data, May 2013

Geographic Projection Information
NAD 83 HARN, Oregon North
Lambert Conformal Conic

Location Map



MACKENZIE.
P 503.224.9560 • F 503.228.1285 • W MCKNZE.COM
RiverEast Center, 1515 SE Water Avenue, #100, Portland, OR 97214
Portland, Oregon • Vancouver, Washington • Seattle, Washington

Date: 7/31/13 | Map Created by: GF
File: RosemontSub_CityExtent.mxd | Project No: 2130073

TOPOGRAPHIC/SITE SURVEY

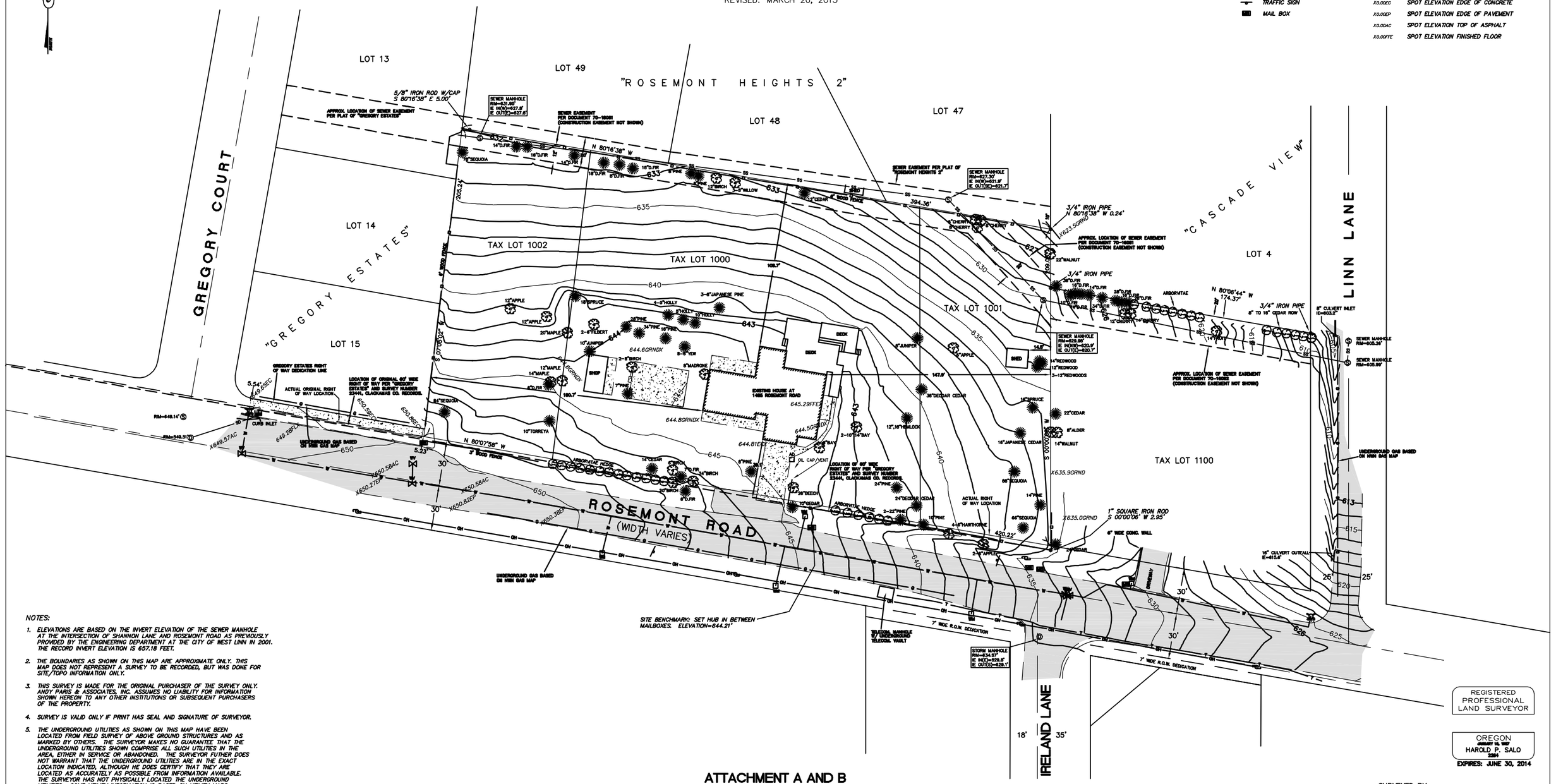
FOR:
MARK PYRCH CONSTRUCTION

BEING TAX LOTS 1000, 1001 & 1002, TAX MAP 2-1E-25BD
IN THE NW 1/4 SECTION 25, T.2S., R.1E., W.M.
CITY OF WEST LINN
CLACKAMAS COUNTY, OREGON

MARCH 4, 2013
REVISED: MARCH 7, 2013
REVISED: MARCH 20, 2013

LEGEND:

●	FOUND MONUMENT AS NOTED	—W—	WATER LINE
WM	WATER METER	—G—	NATURAL GAS LINE
WV	WATER VALVE	—SS—	SANITARY SEWER LINE
FH	FIRE HYDRANT	—SD—	STORM DRAINAGE LINE
SMH	SANITARY SEWER MANHOLE	—OH—	OVERHEAD UTILITY LINES
AD	AREA DRAIN	—T—	UNDERGROUND TELPHONE LINE
UP	UTILITY POLE	X0.0GRND	SPOT ELEVATION GROUND
TS	TRAFFIC SIGN	X0.00EC	SPOT ELEVATION EDGE OF CONCRETE
MB	MAIL BOX	X0.00EP	SPOT ELEVATION EDGE OF PAVEMENT
		X0.00AC	SPOT ELEVATION TOP OF ASPHALT
		X0.00FFE	SPOT ELEVATION FINISHED FLOOR



NOTES:

1. ELEVATIONS ARE BASED ON THE INVERT ELEVATION OF THE SEWER MANHOLE AT THE INTERSECTION OF SHANNON LANE AND ROSEMONT ROAD AS PREVIOUSLY PROVIDED BY THE ENGINEERING DEPARTMENT AT THE CITY OF WEST LINN IN 2001. THE RECORD INVERT ELEVATION IS 657.18 FEET.
2. THE BOUNDARIES AS SHOWN ON THIS MAP ARE APPROXIMATE ONLY. THIS MAP DOES NOT REPRESENT A SURVEY TO BE RECORDED, BUT WAS DONE FOR SITE/TOPO INFORMATION ONLY.
3. THIS SURVEY IS MADE FOR THE ORIGINAL PURCHASER OF THE SURVEY ONLY. ANDY PARIS & ASSOCIATES, INC. ASSUMES NO LIABILITY FOR INFORMATION SHOWN HEREON TO ANY OTHER INSTITUTIONS OR SUBSEQUENT PURCHASERS OF THE PROPERTY.
4. SURVEY IS VALID ONLY IF PRINT HAS SEAL AND SIGNATURE OF SURVEYOR.
5. 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 FUTHER 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. SOME UTILITY INFORMATION IS BASED ON UTILITY MAPS.
6. 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.
7. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY SURVEYOR. THERE MAY EXIST EASEMENTS, CONDITIONS, OR RESTRICTIONS THAT COULD AFFECT THE TITLE OF THIS PROPERTY. NO ATTEMPT HAS BEEN MADE IN THIS SURVEY TO SHOW SUCH MATTERS THAT MAY AFFECT TITLE.

ATTACHMENT A AND B

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

SURVEYED BY:
ANDY PARIS AND ASSOCIATES, INC.
16057 BOONES FERRY ROAD
LAKE OSWEGO, OREGON 97035
PH: 503-636-3341

PROJECT: 13019
DRAWING: 13019TP1.DWG
DRAFTED: A.M. 030413

MACKENZIE.

DESIGN DRIVEN I CLIENT FOCUSED

STORMWATER REPORT

TREATMENT AND DETENTION DESIGN

To
City of West Linn
Department of Engineering

For
Rosemont Subdivision
West Linn, Oregon

Prepared
August 28, 2013

Project Number
2130073.00

MACKENZIE
Since 1960

RiverEast Center | 1515 SE Water Ave, Suite 100, Portland, OR 97214
PO Box 14310, Portland, OR 97293 | T 503.224.9560 | www.mcknze.com

TABLE OF CONTENTS

ATTACHMENTS

STORM PLAN
SECTIONS
PAC OUTPUT
INFILTRATION RESULTS

1. SITE AND SYSTEM DESCRIPTION

The proposed subdivision will divide the existing 1.86 AC property to create 7 residential lots and two access easements for private driveways. The proposed subdivision is located at 1485 Rosemont Road in West Linn, Oregon.

The city of West Linn follows the City of Portland Stormwater Management Manual simplified approach for projects with less than 10,000 SF of new or redeveloped impervious area. Vegetated surface infiltration facilities are allowed on sites with a field infiltration rate of at least 2 in/hr. Infiltration testing was done at the proposed stormwater facility locations to confirm that the infiltration rates are at least 2in/hr. Basins will be used to treat and infiltrate stormwater from impervious area on each residential lot. Swales along the sides of the driveways will manage stormwater from these paved areas.

Water quality swales will be used to treat stormwater from the Rosemont Road half street improvements. The City of Portland's Presumptive Approach Calculator (PAC) was used to size the water quality swales since the impervious area exceeds 10,000 sf. The PAC output is included in this report.

Each new lot will be about 0.23 AC with an assumed impervious area of 4,400 sf per lot. Each access drive will be 16'-wide x 145'-long resulting in 2,000 sf of impervious area each. The half street improvements along Rosemont Road will result in 11,800 sf of impervious area. See the Table 1 below for a summary of the catchments for each stormwater facility.

Table 1: Catchment Summary

Contributing Basin	Stormwater Facility Type	Contributing Impervious Area (SF)	Facility Bottom Area (SF)	Proposed Facility Percentage	Required Facility Percentage
Residential Lot	Basin	4,400	400	9.1%	9%
Access Drive	Swale	2,000	300	15.0%	9%
Rosemont Half Street	Swale	11,800	475	4%	3.8%

2. DESIGN ASSUMPTIONS

Infiltration system:

1) Santa Barbara Unit Hydrograph Method
2) Intensity: 10yr/24hr design storm
3) Infiltration Rate: 2 in/hr

Basins have been sized for each new residential lot using the Simplified Approach. This approach applies a sizing factor of 0.09 to the contributing impervious area to get the facility surface area. The basins will have 18" of growing medium over 12" of drain rock. There will be 12" of storage capacity above ground with 2" of freeboard.

The two 16'-wide driveways will sheet flow to an infiltration swale on one side. The swales have also been designed using the Simplified Approach and a sizing factor of 0.09 has been used. The swales will have 18" of growing medium over 12" of drain rock. The swales will be 6"-deep and slope to match the driveways at no more than 6%.

Runoff from the Rosemont Road half street improvements will drain to 2 swales located between the curb and the sidewalk. Openings in the curb adjacent to the swales will allow water to drain into the swales. Stormwater is treated as it flows through the swales and infiltrates into the ground. Any excess water overflows through the curb breaks and flows to the next downstream inlet. Since the new impervious area along Rosemont exceeds 10,000 SF, the City of Portland PAC calculator was used to size the swales. The swales will have 18" of growing medium over 12" of drain rock. The swales will be 6"-deep and slope to match the roadway.

Refer to Table 1 for a summary of the facility areas. A storm plan, facility sections, and the PAC output are attached.

FUTURE STORMWATER INFILTRATION BASIN SEE DETAIL 4/C6.0 400 SF

SEWER MANHOLE RIM=631.95' IE IN(W)=627.8' IE OUT(E)=627.6'

EXISTING 8" SANITARY SEWER @ 1.8%

SEWER MANHOLE RIM=627.30' IE IN(W)=621.9' IE OUT(SE)=621.7'

FUTURE STORMWATER INFILTRATION BASIN SEE DETAIL 4/C6.0 400 SF

8" CULVERT INLET IE=603.2'

SEWER MANHOLE RIM=605.26'

SEWER MANHOLE RIM=605.99'

EXISTING 8" SANITARY SEWER

LOT 7

LOT 6

LOT 5

FUTURE STORMWATER INFILTRATION BASIN SEE DETAIL 4/C6.0 400 SF

FUTURE STORMWATER INFILTRATION BASIN SEE DETAIL 4/C6.0 400 SF

SEWER MANHOLE RIM=629.96' IE IN(NW)=620.9' IE OUT(E)=620.7'

FUTURE STORMWATER INFILTRATION SWALE 300 SF

FUTURE STORMWATER INFILTRATION SWALE 300 SF

LOT 1

LOT 2

LOT 3

EXISTING HOUSE TO REMAIN

LOT 4

FUTURE STORMWATER INFILTRATION BASIN SEE DETAIL 4/C6.0 400 SF

EXISTING 16" CULVERT OUTFALL

LINN LANE

UNDERGROUND GAS BASED ON NWN GAS MAP

16" CULVERT OUTFALL IE=615.6'

AD OIL CAP/VENT

ROSEMONT ROAD

PUBLIC IMPROVEMENTS WATER QUALITY SWALE 220 SF

PUBLIC IMPROVEMENTS WATER QUALITY SWALE 255 SF

ACCESS EASEMENT 1

ACCESS EASEMENT 2

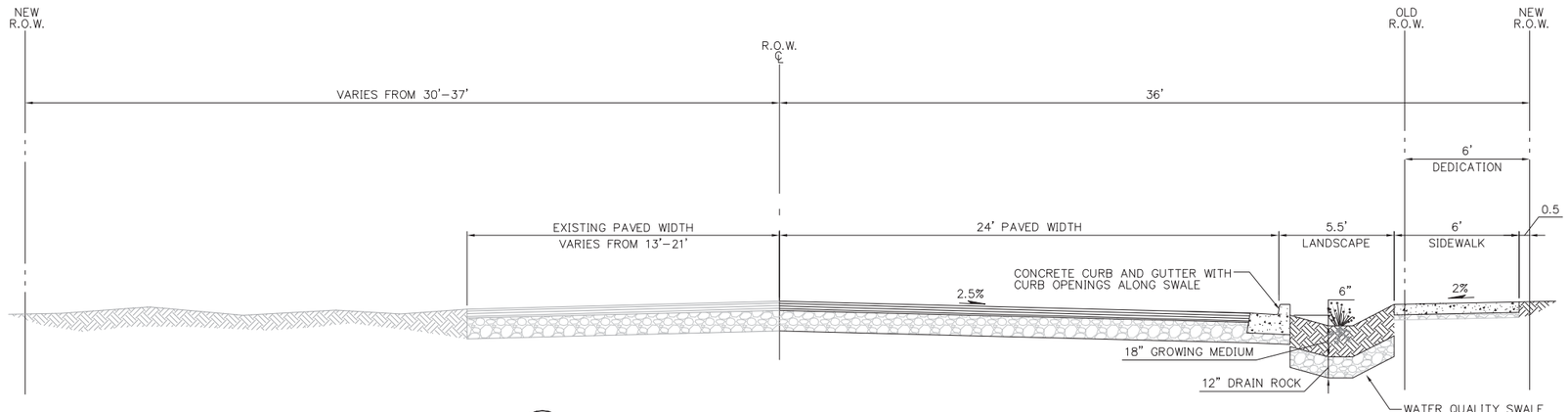
TELECOM. MANHOLE W/ UNDERGROUND TELECOM. VAULT

STORM MANHOLE RIM=634.57' IE IN(E)=629.8' IE OUT(S)=629.1'

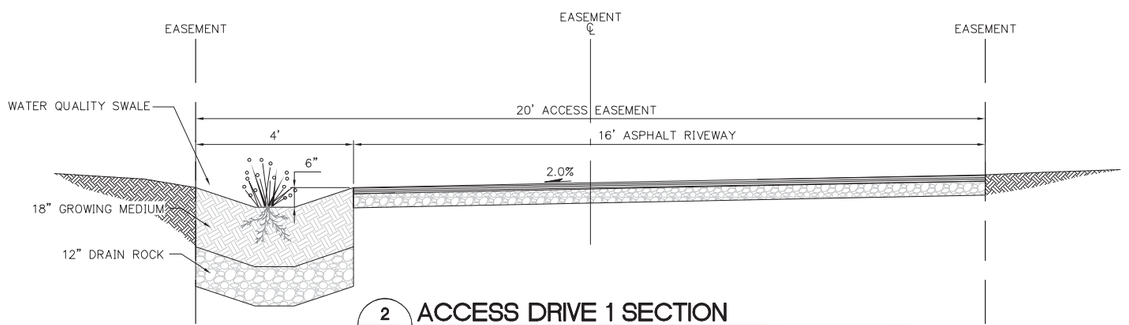
IRELAND LANE

STORM PLAN

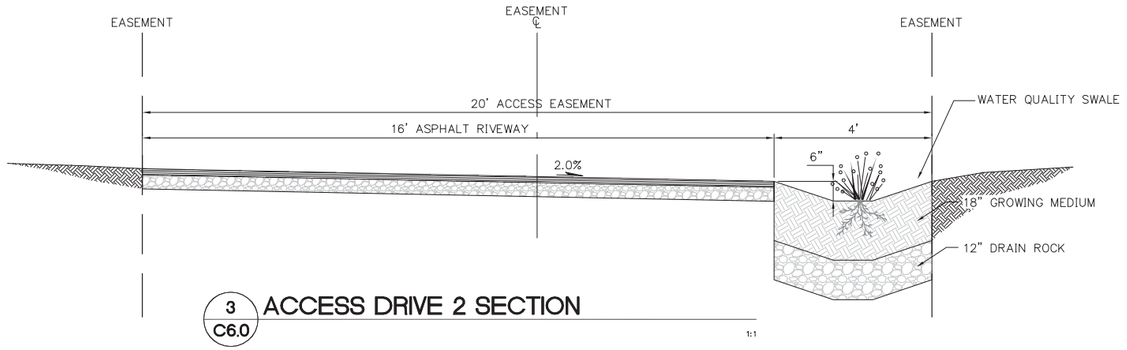
0 20 40 80



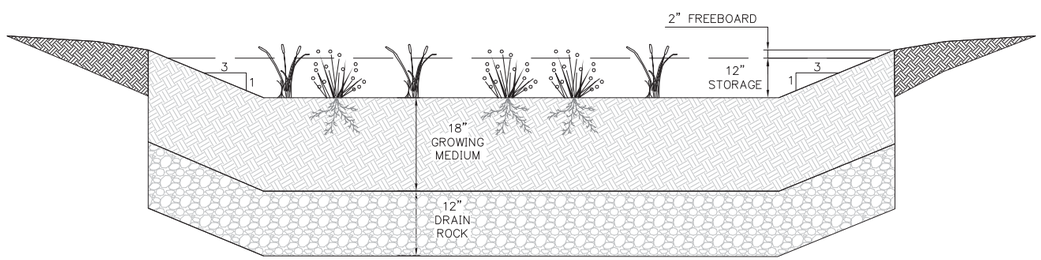
1 C6.0 **PROPOSED ROSEMONT ROAD SECTION**
N.T.S.
1:1



2 C6.0 **ACCESS DRIVE 1 SECTION**
1:1



3 C6.0 **ACCESS DRIVE 2 SECTION**
1:1



4 C6.0 **INFILTRATION BASIN TYPICAL SECTION**
1:1

Presumptive Approach Calculator ver. 1.2

Catchment Data

Catchment ID:	**Street 1**
Project Name:	**Rosemont Subdivision**
Date:	**08/26/13**
Project Address:	**1485 Rosemont Road**
Permit Number:	**0**
	West Linn, OR
Run Time	8/26/2013 9:56:21 AM
Designer:	**Megan Goplin**
Company:	**Mackenzie**

Drainage Catchment Information

Catchment ID	Street 1	
	Catchment Area	
Impervious Area	5,500	SF
Impervious Area	0.13	ac
Impervious Area Curve Number, CN_{imp}	98	
Time of Concentration, Tc, minutes	5	min.

Site Soils & Infiltration Testing Data

Infiltration Testing Procedure:	Open Pit Falling Head	
Native Soil Field Tested Infiltration Rate (I_{test}):	2	in/hr
Bottom of Facility Meets Required Separation From High Groundwater Per BES SWMM Section 1.4:	Yes	

Correction Factor Component

CF_{test} (ranges from 1 to 3)	2	

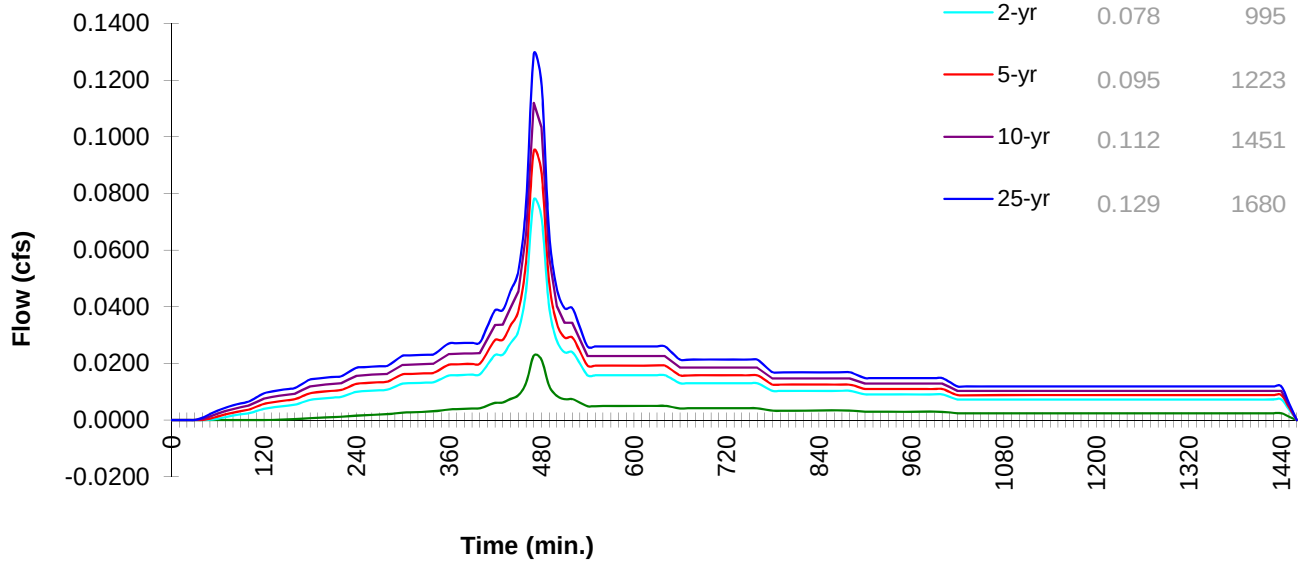
Design Infiltration Rates

I_{dsgn} for Native (I_{test} / CF_{test}):	1.00	in/hr
I_{dsgn} for Imported Growing Medium:	2.00	in/hr

Execute SBUH

SBUH Results

	Peak Rate (cfs)	Volume (cf)
PR	0.023	287
2-yr	0.078	995
5-yr	0.095	1223
10-yr	0.112	1451
25-yr	0.129	1680



Printed: 8/26/2013 9:58 AM

Presumptive Approach Calculator ver. 1.2

Catchment ID: Street 1

Run Time 8/26/2013 10:05:04 AM

Project Name: Rosemont Subdivision **Catchment ID:** Street 1 **Date:** 8/26/2013

Instructions:

1. Identify which Stormwater Hierarchy Category the facility.
2. Select Facility Type.
3. Identify facility shape of surface facility to more accurately estimate surface volume, except for Swales and sloped planters that use the PAC Sloped Facility Worksheet to enter data.
4. Select type of facility configuration.
5. Complete data entry for all highlighted cells.

Catchment facility will meet Hierarchy Category: **3**

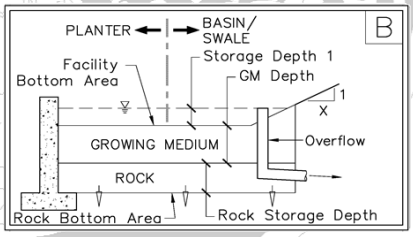
Goal Summary:

Hierarchy Category	SWMM Requirement	RESULTS box below needs to display…	
		Pollution Reduction as a	10-yr (aka disposal) as a
3	Off-site flow to drainageway, river, or storm-only pipe system.	PASS	N/A

Facility Type = Swale

Facility Configuration: B

Refer to Sloped Facility Worksheet and enter Variable Parameters



Calculation Guide
Max. Rock Stor. Bottom Area
Per Swale Dims

DATA FOR ABOVE GRADE STORAGE COMPONENT

Infiltration Area = 115 sf
Surface Capacity Volume = 38.3 cf

BELOW GRADE STORAGE

Rock Storage Bottom Area = 210 sf
Rock Storage Depth = 12 in
Rock Void Ratio = 0.3

Growing Medium Depth = 18 in
Freeboard Depth = N/A in

Surface Capacity at Depth 1 = 38 cf
Infiltration Area at 75% Depth1 = -28 SF
GM Design Infiltration Rate = 2.00 in/hr
Infiltration Capacity = 0.005 cfs

Rock Storage Capacity = 63 cf
Native Design Infiltration Rate = 1.00 in/hr
Infiltration Capacity = 0.005 cfs

RESULTS

Pollution Reduction: **PASS**

Overflow Volume: 0 CF

99% Surf. Cap. Used

26% Rock Cap. Used

Run PAC

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.072	0.090	0.107	0.124

FACILITY FACTS

Total Facility Area Including Freeboard = **210 SF**

Sizing Ratio (Total Facility Area / Catchment Area) = **0.038**

Presumptive Approach Calculator Ver 1.2

Instructions:

1. Refer to facility graphics on the Graphics tab, then fill in all relevant facility parameters in the Data Entry table below. Data entry cells vary based on Facility Configuration selected on Facility Design Data tab.
2. Delete all facility parameters that may have been entered by the previous iteration that are no longer applicable.

Run Time 8/26/2013 10:05:04 AM

Project Name: Rosemont Subdivision **Date:** 8/26/2013 **Catchment ID:** Street 1

Data Entry

Parameters | **Rock Storage Parameters** | **Error Messages**

Facility Segment	Length of facility segment (ft) $L_{segment}$	Downstream Check Dam Length (ft) L_{dam}	Longitudinal Facility Slope (ft/ft) S	Bottom Width (ft) W_{bottom}	Side Slope Right X_{right}:1	Side Slope Left X_{left}:1	Downstream Depth (inches) D_{ds}	Landscape Width (ft) $W_{landscape}$	Rock Storage Width (ft) W_{rock}	Rock Storage Depth (inches) D_{rock}	Rock Void Ratio v
1	10	2.33	0.04	2	3	3	6	5	5	12	0.3
2	10	2.33	0.04	2	3	3	6	5	5		
3	11	2.33	0.04	2	3	3	6	5	5		
4	11	2.33	0.04	2	3	3	6	5	5		
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

Project Name: Depth 2= Depth 3=

Worksheet Calculations

Parameters | **Rock Storage Parameters**

Facility Segment	Adjusted Length of facility segment (ft) L_{adjust}	Adjusted Length if D_{up} = 0 (ft) $L_{adjust2}$	Upstream Depth (inches) D_{up}	Downstream Top Width (ft) $W_{top\text{-}ds}$	Upstream Top Width (ft) $W_{top\text{-}up}$	Downstream Cross-sectional Area (sf) A_{ds}	Upstream Cross-sectional Area (sf) A_{up}	**Surface Capacity Volume** (cf) $V_{surface}$	75% of Max. Downstream Depth (inches) $D_{ds75\%}$	75% of Max. Upstream Depth (inches) $D_{up75\%}$	75% of Max. Adjusted Length if $D_{up75\%}$ = 0 (ft) $L_{adjust3}$	75% of Max. Downstream Top Width (ft) $W_{top\text{-}ds75\%}$	75% of Max. Upstream Top Width (ft) $W_{top\text{-}up75\%}$	**Infiltration Area @ 75% Full** (sf) $A_{75\%}$	Rock Storage Length (ft) L_{rock}	**Rock Storage Bottom Area** (sf) A_{rock}	**Rock Storage Capacity Volume** (cf) V_{rock}
1	8.84	N/A	1.76	5.00	2.88	1.75	0.36	9	4.50	0.26	N/A	4.25	2.13	28	10	50	15
2	8.84	N/A	1.76	5.00	2.88	1.75	0.36	9	4.50	0.26	N/A	4.25	2.13	28	10	50	15
3	9.84	N/A	1.28	5.00	2.64	1.75	0.25	10	4.50	0.00	9.38	4.25	2.00	29	11	55	17
4	9.84	N/A	1.28	5.00	2.64	1.75	0.25	10	4.50	0.00	9.38	4.25	2.00	29	11	55	17
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
								38	$V_{surface}$ @ **Depth1**					**115**		**210**	**63**

Printed: 8/26/2013 10:05 AM

Presumptive Approach Calculator ver. 1.2

Catchment Data

Catchment ID:	**Street 2**
Project Name:	**Rosemont Subdivision**
Date:	**08/26/13**
Project Address:	**1485 Rosemont Road**
Permit Number:	**0**
	West Linn, OR
Run Time	8/26/2013 10:02:01 AM
Designer:	**Megan Goplin**
Company:	**Mackenzie**

Drainage Catchment Information

Catchment ID	Street 2	
	Catchment Area	
Impervious Area	6,300	SF
Impervious Area	0.14	ac
Impervious Area Curve Number, CN_{imp}	98	
Time of Concentration, Tc, minutes	5	min.

Site Soils & Infiltration Testing Data

Infiltration Testing Procedure:	Open Pit Falling Head	
Native Soil Field Tested Infiltration Rate (I_{test}):	2	in/hr
Bottom of Facility Meets Required Separation From High Groundwater Per BES SWMM Section 1.4:	Yes	

Correction Factor Component

CF_{test} (ranges from 1 to 3)	2	

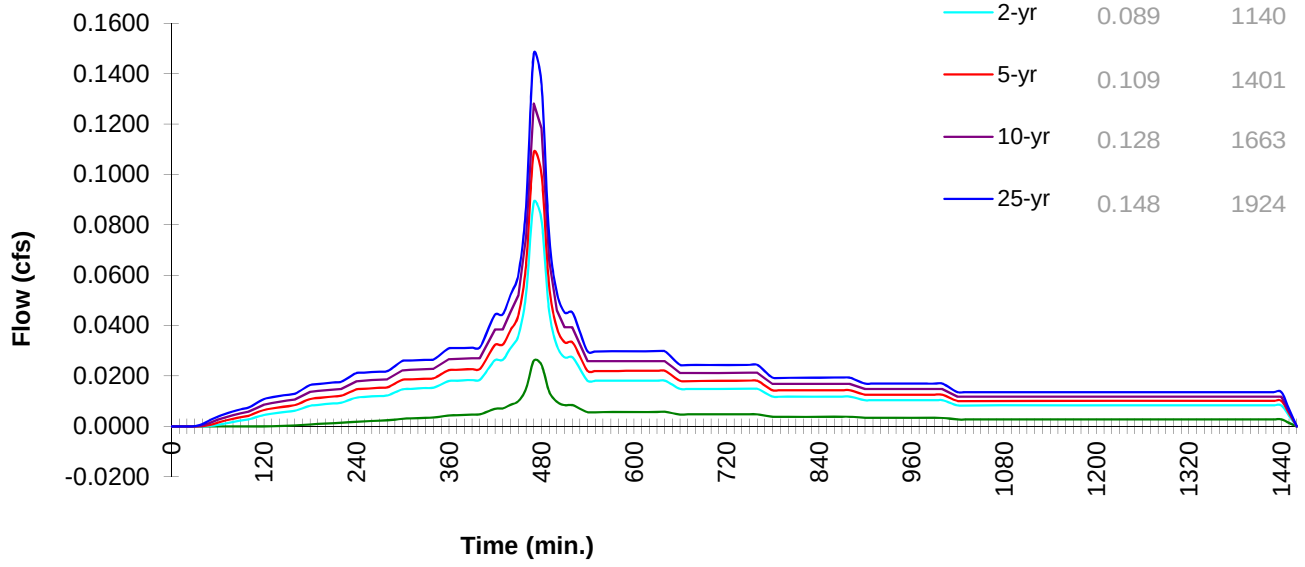
Design Infiltration Rates

I_{dsgn} for Native (I_{test} / CF_{test}):	1.00	in/hr
I_{dsgn} for Imported Growing Medium:	2.00	in/hr

Execute SBUH

SBUH Results

	Peak Rate (cfs)	Volume (cf)
PR	0.026	329
2-yr	0.089	1140
5-yr	0.109	1401
10-yr	0.128	1663
25-yr	0.148	1924



Printed: 8/26/2013 10:02 AM

Presumptive Approach Calculator ver. 1.2

Catchment ID: Street 2

Run Time 8/26/2013 10:02:32 AM

Project Name: Rosemont Subdivision **Catchment ID:** Street 2 **Date:** 8/26/2013

Instructions:

1. Identify which Stormwater Hierarchy Category the facility.
2. Select Facility Type.
3. Identify facility shape of surface facility to more accurately estimate surface volume, except for Swales and sloped planters that use the PAC Sloped Facility Worksheet to enter data.
4. Select type of facility configuration.
5. Complete data entry for all highlighted cells.

Catchment facility will meet Hierarchy Category: **3**

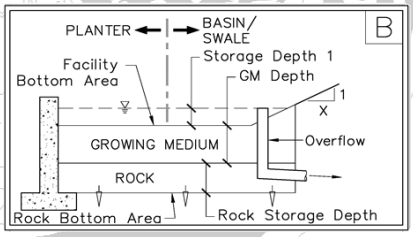
Goal Summary:

Hierarchy Category	SWMM Requirement	RESULTS box below needs to display…	
		Pollution Reduction as a	10-yr (aka disposal) as a
3	Off-site flow to drainageway, river, or storm-only pipe system.	PASS	N/A

Facility Type = Swale

Facility Configuration: B

Refer to Sloped Facility Worksheet and enter Variable Parameters



Calculation Guide
Max. Rock Stor. Bottom Area
Per Swale Dims

DATA FOR ABOVE GRADE STORAGE COMPONENT

Infiltration Area = 131 sf
Surface Capacity Volume = 44.0 cf

BELOW GRADE STORAGE

Rock Storage Bottom Area = 230 sf
Rock Storage Depth = 12 in
Rock Void Ratio = 0.3

Growing Medium Depth = 18 in
Freeboard Depth = N/A in

Surface Capacity at Depth 1 = 44 cf
Infiltration Area at 75% Depth1 = -32 SF
GM Design Infiltration Rate = 2.00 in/hr
Infiltration Capacity = 0.006 cfs

Rock Storage Capacity = 69 cf
Native Design Infiltration Rate = 1.00 in/hr
Infiltration Capacity = 0.005 cfs

RESULTS

Pollution Reduction: **PASS**

Overflow Volume: 0 CF

99% Surf. Cap. Used

40% Rock Cap. Used

Run PAC

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.083	0.103	0.122	0.142

FACILITY FACTS

Total Facility Area Including Freeboard = **230 SF**

Sizing Ratio (Total Facility Area / Catchment Area) = **0.037**

Presumptive Approach Calculator Ver 1.2

Instructions:

1. Refer to facility graphics on the Graphics tab, then fill in all relevant facility parameters in the Data Entry table below. Data entry cells vary based on Facility Configuration selected on Facility Design Data tab.
2. Delete all facility parameters that may have been entered by the previous iteration that are no longer applicable.

Run Time 8/26/2013 10:02:32 AM

Project Name: Rosemont Subdivision **Date:** 8/26/2013 **Catchment ID:** Street 2

Data Entry

Parameters | **Rock Storage Parameters** | **Error Messages**

Facility Segment	Length of facility segment (ft) $L_{segment}$	Downstream Check Dam Length (ft) L_{dam}	Longitudinal Facility Slope (ft/ft) S	Bottom Width (ft) W_{bottom}	Side Slope Right X_{right}:1	Side Slope Left X_{left}:1	Downstream Depth (inches) D_{ds}	Landscape Width (ft) $W_{landscape}$	Rock Storage Width (ft) W_{rock}	Rock Storage Depth (inches) D_{rock}	Rock Void Ratio v
1	10	2.33	0.04	2	3	3	6	5	5	12	0.3
2	10	2.33	0.04	2	3	3	6	5	5		
3	10	2.33	0.04	2	3	3	6	5	5		
4	8	2.33	0.04	2	3	3	6	5	5		
5	8	2.33	0.04	2	3	3	6	5	5		
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

Project Name: Depth 2= Depth 3=

Worksheet Calculations

Parameters | **Rock Storage Parameters**

Facility Segment	Adjusted Length of facility segment (ft) L_{adjust}	Adjusted Length if D_{up} = 0 (ft) $L_{adjust2}$	Upstream Depth (inches) D_{up}	Downstream Top Width (ft) $W_{top\text{-}ds}$	Upstream Top Width (ft) $W_{top\text{-}up}$	Downstream Cross-sectional Area (sf) A_{ds}	Upstream Cross-sectional Area (sf) A_{up}	**Surface Capacity Volume** (cf) $V_{surface}$	75% of Max. Downstream Depth (inches) $D_{ds75\%}$	75% of Max. Upstream Depth (inches) $D_{up75\%}$	75% of Max. Adjusted Length if $D_{up75\%}$ = 0 (ft) $L_{adjust3}$	75% of Max. Downstream Top Width (ft) $W_{top\text{-}ds75\%}$	75% of Max. Upstream Top Width (ft) $W_{top\text{-}up75\%}$	**Infiltration Area @ 75% Full** (sf) $A_{75\%}$	Rock Storage Length (ft) L_{rock}	**Rock Storage Bottom Area** (sf) A_{rock}	**Rock Storage Capacity Volume** (cf) V_{rock}
1	8.84	N/A	1.76	5.00	2.88	1.75	0.36	9	4.50	0.26	N/A	4.25	2.13	28	10	50	15
2	8.84	N/A	1.76	5.00	2.88	1.75	0.36	9	4.50	0.26	N/A	4.25	2.13	28	10	50	15
3	8.84	N/A	1.76	5.00	2.88	1.75	0.36	9	4.50	0.26	N/A	4.25	2.13	28	10	50	15
4	6.84	N/A	2.72	5.00	3.36	1.75	0.61	8	4.50	1.22	N/A	4.25	2.61	23	8	40	12
5	6.84	N/A	2.72	5.00	3.36	1.75	0.61	8	4.50	1.22	N/A	4.25	2.61	23	8	40	12
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
								44	$V_{surface}$ @ **Depth1**					**131**		**230**	**69**

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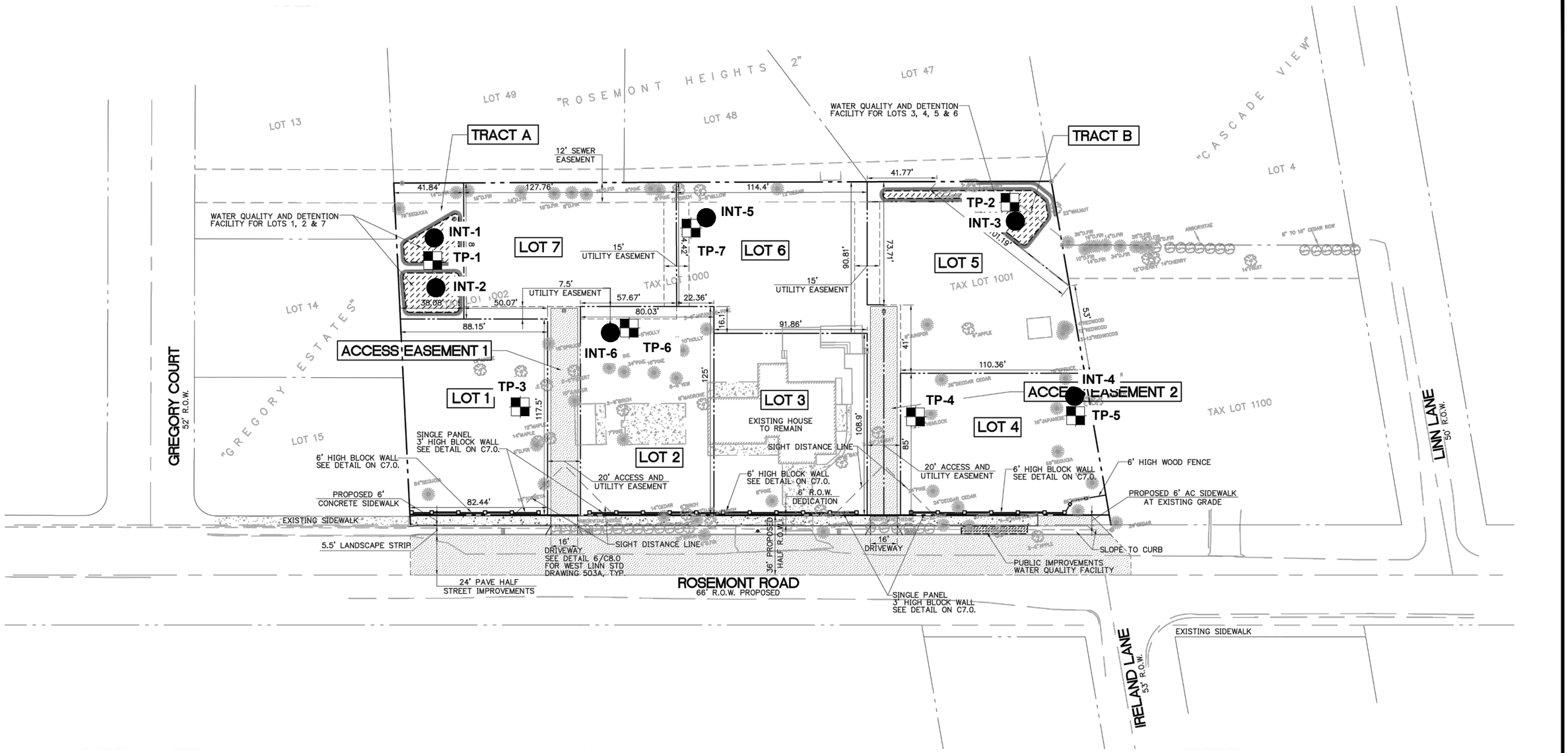


EXPLANATION

INT-1 ● Location and Designation of Infiltration Test

TP-1 ■ Location and Designation of Test Pit

Reference: Base drawing provided by Group Mackenzie, entitled, "Tentative Subdivision Plan," dated May 23, 2013.

0 60 120

Scale in Feet

N

1485 Rosemont Subdivision
West Linn, Oregon

SITE PLAN

August 2013 24-1-03764-001

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 2

File: I:\WIP\Projects\24-1 Portland\3700\03764 1485 Rosemont Subdivision\Graphics\CAD\24-1-03764-001-SP.dwg Date: 08-28-2013 Author: mas

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Location: 1485 Rosemont Road, West Linn, OR	Date: 8/15/2013 Job Number: 24-1-03764-001	Infiltration Test Number: Infiltration Test INT-1
Depth to bottom of hole: 2.5 ft	Dimension of casing: 0.5'	Test Method: Stand Pipe
Tester's Name: AMP Tester's Company: S&W		

Depth (feet):	Soil Texture:
2.5	Silt

Time	Time Interval (minutes)	Measurement (feet)	Head (feet)	Drop in Water Level (feet)	Infiltration rate (inches per hour)	Remarks
1203	--	0.70	1.00	--	--	Trial 1
1211	8	0.72	0.99	0.02	1.8	
1222	11	0.75	0.97	0.03	2.0	
1233	10	0.78	0.94	0.03	2.2	
1244	11	0.81	0.91	0.03	2.0	
1254	10	0.84	0.88	0.03	2.2	
1306	11	0.86	0.85	0.02	1.3	
1332	--	0.70	0.92	--		Trial 2
1405	33	0.78	0.96	0.08	1.7	
1444	39	0.87	0.88	0.09	1.7	
1506	--	0.69	0.92	--		Trial 3
1538	32	0.78	0.97	0.09	2.0	
1608	30	0.86	0.88	0.08	1.9	

Fig. 7

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Location: 1485 Rosemont Road, West Linn, OR	Date: 8/15/2013 Job Number: 24-1-03764-001	Infiltration Test Number: Infiltration Test INT-2
Depth to bottom of hole: 2.8 ft	Dimension of casing: 0.5'	Test Method: Stand Pipe
Tester's Name: AMP Tester's Company: S&W		

Depth (feet):	Soil Texture:
2.8	Silt

Time	Time Interval (minutes)	Measurement (feet)	Head (feet)	Drop in Water Level (feet)	Infiltration rate (inches per hour)	Remarks
1159	--	1.34	1.00	--	--	Trial 1
1210	11	1.41	0.97	0.07	4.6	
1221	11	1.48	0.90	0.07	4.6	
1231	10	1.53	0.84	0.05	3.6	
1242	11	1.59	0.78	0.06	3.9	
1253	10	1.63	0.73	0.04	2.9	
1304	11	1.69	0.68	0.06	3.9	
1329	--	1.34	0.83	--		Trial 2
1401	32	1.50	0.92	0.16	3.6	
1441	40	1.66	0.76	0.16	2.9	
1507	--	1.34	0.84	--		Trial 3
1537	30	1.48	0.93	0.14	3.4	
1607	30	1.60	0.80	0.12	2.9	

Fig. 7

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Location: 1485 Rosemont Road, West Linn, OR	Date: 8/15/2013 Job Number: 24-1-03764-001	Infiltration Test Number: Infiltration Test INT-3
Depth to bottom of hole: 2.7 ft	Dimension of casing: 0.5'	Test Method: Stand Pipe
Tester's Name: AMP Tester's Company: S&W		

Depth (feet):	Soil Texture:
2.7	Silt

Time	Time Interval (minutes)	Measurement (feet)	Head (feet)	Drop in Water Level (feet)	Infiltration rate (inches per hour)	Remarks
1228	--	0.72	1.00	--	--	
1239	11	0.82	0.95	0.10	6.5	
1249	10	0.88	0.87	0.06	4.3	Trial 1
1259	9	0.94	0.81	0.06	4.8	
1309	10	1.00	0.75	0.06	4.3	
1319	11	1.06	0.69	0.06	3.9	
1324	--	0.72	0.83	--	--	
1358	35	0.93	0.90	0.21	4.3	Trial 2
1435	37	1.11	0.70	0.18	3.5	
1455	--	0.71	0.81	--	--	
1534	39	0.90	0.92	0.19	3.5	Trial 3
1605	31	1.02	0.76	0.12	2.8	

Fig. 7

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Location: 1485 Rosemont Road, West Linn, OR	Date: 8/27/2013 Job Number: 24-1-03764-001	Infiltration Test Number: Infiltration Test INT-4
Depth to bottom of hole: 2.8 ft	Dimension of casing: 0.5'	Test Method: Stand Pipe
Tester's Name: AMP Tester's Company: S&W		

Depth (feet):	Soil Texture:
2.8	Silt with sand

Time	Time Interval (minutes)	Measurement (feet)	Head (feet)	Drop in Water Level (feet)	Infiltration rate (inches per hour)	Remarks
1330	--	1.15	0.45	--	--	
1341	11	1.19	0.41	0.04	2.6	
1353	12	1.23	0.37	0.04	2.4	
1359	6	1.24	0.36	0.01	1.2	Trial 1
1409	10	1.28	0.32	0.04	2.9	
1418	9	1.32	0.28	0.04	3.2	
1426	8	1.34	0.26	0.02	1.8	
1428	--	1.14	0.46	--	--	
1440	12	1.19	0.41	0.05	3.0	
1449	9	1.21	0.39	0.02	1.6	Trial 2
1458	9	1.24	0.36	0.03	2.4	
1514	16	1.29	0.31	0.05	2.3	
1529	15	1.34	0.26	0.05	2.4	
1531	--	1.15	0.45	--	--	
1545	14	1.19	0.41	0.04	2.1	Trial 3
1552	15	1.22	0.38	0.03	1.4	
1607	15	1.26	0.34	0.04	1.9	

Fig. 7

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Location: 1485 Rosemont Road, West Linn, OR	Date: 8/27/2013 Job Number: 24-1-03764-001	Infiltration Test Number: Infiltration Test INT-5
Depth to bottom of hole: 2.6 ft	Dimension of casing: 0.5'	Test Method: Stand Pipe
Tester's Name: AMP Tester's Company: S&W		

Depth (feet):	Soil Texture:
2.6	Silt

Time	Time Interval (minutes)	Measurement (feet)	Head (feet)	Drop in Water Level (feet)	Infiltration rate (inches per hour)	Remarks
1335	--	1.85	0.55	--	--	
1345	10	1.88	0.52	0.03	2.2	
1355	10	1.92	0.48	0.04	2.9	
1403	8	1.92	0.48	0.00	0.0	Trial 1
1412	9	1.96	0.44	0.04	3.2	
1422	10	1.99	0.41	0.03	2.2	
1431	9	2.01	0.39	0.02	1.6	
1434	--	1.84	0.56	--	--	
1444	10	1.88	0.52	0.04	2.9	
1452	8	1.90	0.50	0.02	1.8	Trial 2
1503	26	1.93	0.47	0.03	0.8	
1518	15	1.99	0.41	0.06	2.9	
1534	16	2.03	0.37	0.04	1.8	
1536	--	1.82	0.58	--	--	
1548	12	1.85	0.55	0.03	1.8	
1557	9	1.89	0.51	0.04	3.2	Trial 3
1612	20	1.94	0.46	0.05	1.8	
1616	4	1.95	0.45	0.01	1.8	
1636	20	2.00	0.40	0.05	1.8	

Fig. 7

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Location: 1485 Rosemont Road, West Linn, OR	Date: 8/27/2013 Job Number: 24-1-03764-001	Infiltration Test Number: Infiltration Test INT-6
Depth to bottom of hole: 2.8 ft	Dimension of casing: 0.5'	Test Method: Stand Pipe
Tester's Name: AMP Tester's Company: S&W		

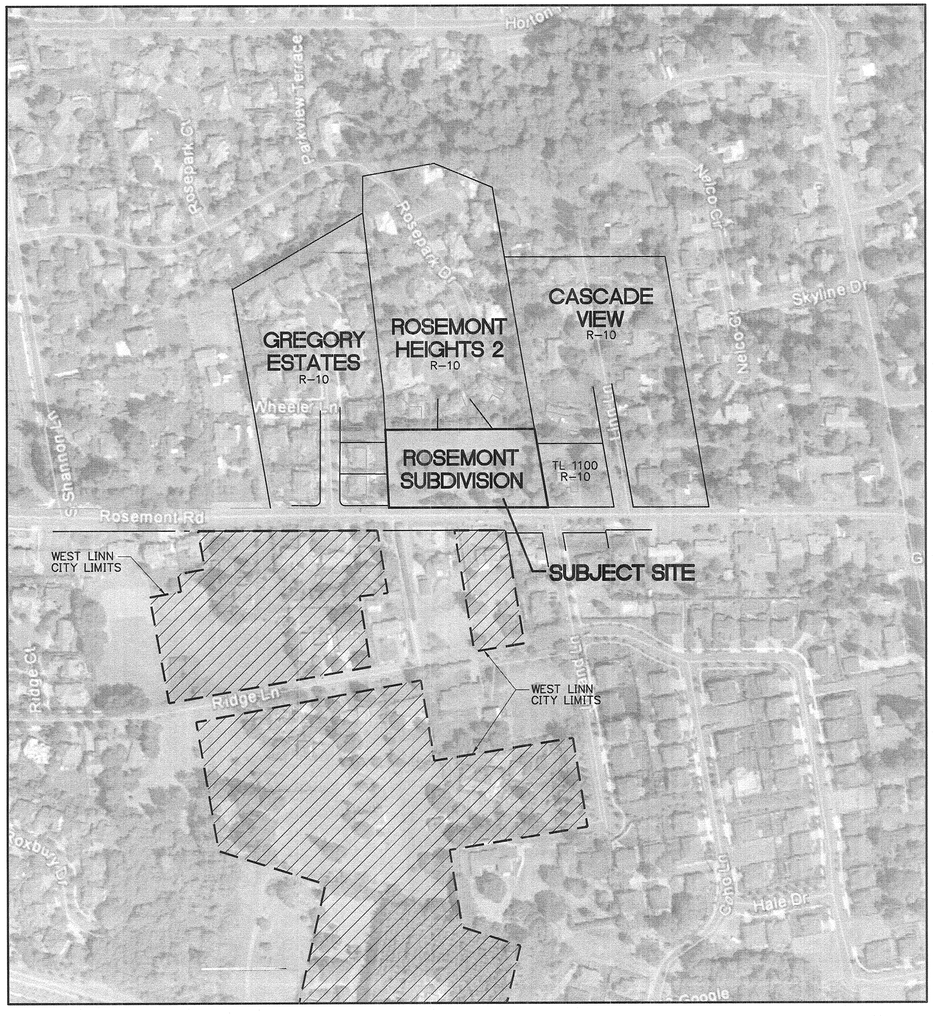
Depth (feet):	Soil Texture:
2.8	Silt

Time	Time Interval (minutes)	Measurement (feet)	Head (feet)	Drop in Water Level (feet)	Infiltration rate (inches per hour)	Remarks
1338	--	1.12	0.53	--	--	
1347	9	1.15	0.50	0.03	2.4	
1357	10	1.21	0.44	0.06	4.3	
1404	7	1.25	0.40	0.04	4.1	Trial 1
1414	10	1.29	0.36	0.04	2.9	
1423	9	1.32	0.33	0.03	2.4	
1436	13	1.37	0.28	0.05	2.8	
1437	--	1.22	0.43	--	--	
1445	8	1.26	0.39	0.04	3.6	
1453	8	1.30	0.35	0.04	3.6	Trial 2
1508	15	1.36	0.29	0.06	2.9	
1524	16	1.42	0.23	0.06	2.7	
1538	14	1.48	0.17	0.06	3.1	
1538	--	1.24	0.41	--	--	
1549	11	1.29	0.36	0.05	3.3	Trial 3
1558	9	1.32	0.33	0.03	2.4	
1619	21	1.41	0.24	0.09	3.1	

Fig. 7

ROSEMONT TENTATIVE SUBDIVISION PLAN

WEST LINN, OREGON



VICINITY MAP

0 100 200 400

THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN ON THIS SHEET IS SHOWN FOR REFERENCE ONLY AND IS BASED ON A SURVEY BY: ANDY PARIS & ASSOCIATES, INC. DATE: 3/20/13

SHEET INDEX

OWNER

KELLY PYRCH
C.O. R&H CONSTRUCTION
1530 SW TAYLOR STREET
PORTLAND, OR 97205
PHONE: 503-228-7177

SURVEYOR

ANDY PARIS AND ASSOCIATES, INC.
CONTACT: HAROLD P. SALO
16057 BOONES FERRY ROAD
LAKE OSWEGO, OR 97035
PHONE: 503-636-3341

CIVIL ENGINEER

GROUP MACKENZIE
CONTACT: RALPH HENDERSON
1515 SE WATER AVE. #100
PORTLAND, OR 97214
PHONE: 503-224-9560

PROPERTY DESCRIPTION

TAX LOTS 1000, 1001 & 1002
TAX MAP 2-1E-25BD
IN NW 1/4 SECTION 25, T.2S, R.1E, W.M.
CITY OF WEST LINN
CLACKAMAS COUNTY, OREGON
ZONING: SINGLE-FAMILY RESIDENTIAL DETACHED, R-10

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
LOT LINE		
EASEMENT		
TREE TO REMAIN		
REMOVE EXISTING TREE		
MAIL BOX	MB	
WATER METER	W	
FIRE HYDRANT		
WATER VALVE	WV	
SANITARY MANHOLE	S	
STORM MANHOLE	D	
CATCH BASIN		
OVERFLOW INLET		
POWER POLE		
STREET TREE		
STREET LIGHT		
DOMESTIC WATERLINE		
FIRE WATERLINE	W	
SANITARY SEWER LINE	SS	
STORM SEWER LINE	SD	
GAS LINE	G	
TELEPHONE LINE	T	
OVERHEAD POWER	OH	
VERTICAL CURB		
STORMWATER FACILITY		
CONCRETE PAVEMENT		
ASPHALT PAVEMENT		

GROUP MACKENZIE
Civil Engineering
Structural Engineering
Transportation Planning
Landscape Architecture
Architecture
Interior Design
Land Use Planning
Portland OR 503.224.9560
Vancouver WA 360.695.7879
Seattle WA 206.749.9993

Client
R+H CONSTRUCTION

Project
ROSEMONT SUBDIVISION

WEST LINN, OREGON

REGISTERED PROFESSIONAL ENGINEER #19432 OREGON SEPT. 16, 1997 MATTHEW W. BUTTS
EXPIRES: 12/31/13

REVISIONS:

REVISION DELTA	REVISIONS THIS SHEET	REVISION DELTA CLOSING DATE

SHEET TITLE:
COVER SHEET

DRAWN BY: MAG

CHECKED BY: RJH

SHEET:
C1.0

JOB NO. 2130073.00

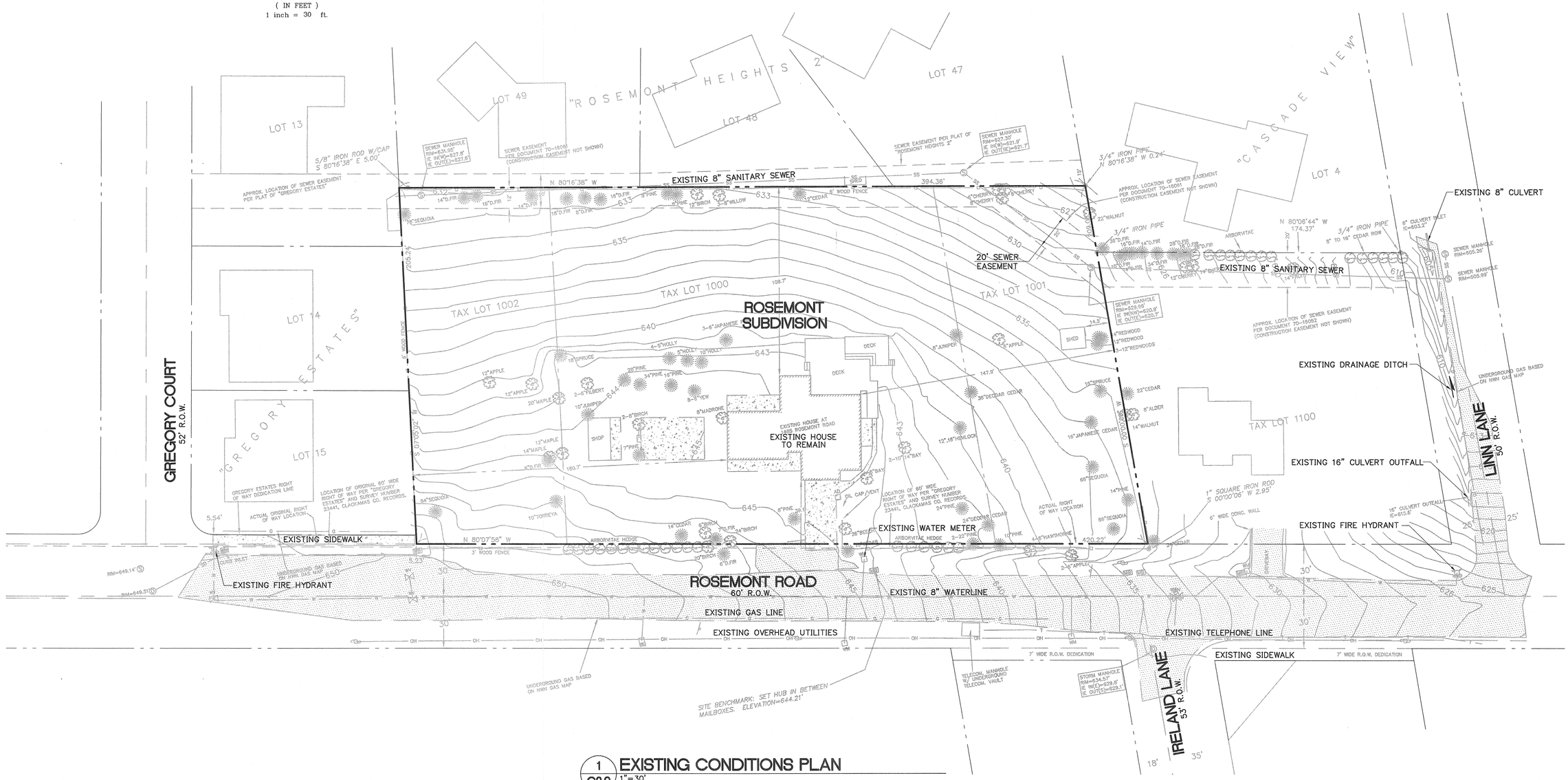
SUBDIVISION RESUBMITTAL - AUGUST 28, 2013

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

LEGEND

SEE SHEET C1.0 FOR LEGEND



1 C2.0 EXISTING CONDITIONS PLAN

1"=30'

1:1

SURVEYED BY:
ANDY PARIS AND ASSOCIATES, INC.
16057 BOONES FERRY ROAD
LAKE OSWEGO, OREGON 97035
PH: 503-636-3341

THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN ON THIS SHEET IS SHOWN FOR REFERENCE ONLY AND IS BASED ON A SURVEY BY: ANDY PARIS & ASSOCIATES, INC. DATE: 3/20/13

SUBDIVISION RESUBMITTAL - AUGUST 28, 2013

2130073.00\CIVIL\073-C2.0.DWG MAG 08/28/13 07:29 1:30

GROUP MACKENZIE
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Transportation Planning
Landscape Architecture
Architecture
Interior Design
Land Use Planning
Portland OR 503.224.9580
Vancouver WA 360.695.7879
Seattle WA 206.749.9993

Client
R+H CONSTRUCTION

Project
ROSEMONT SUBDIVISION

WEST LINN, OREGON

REGISTERED PROFESSIONAL ENGINEER #19932 OREGON SEPT. 16, 1997 MATTHEW W. BUTTS

EXPIRES: 12/31/13

REVISIONS:

REVISION DELTA	REVISIONS THIS SHEET	REVISION DELTA CLOSING DATE

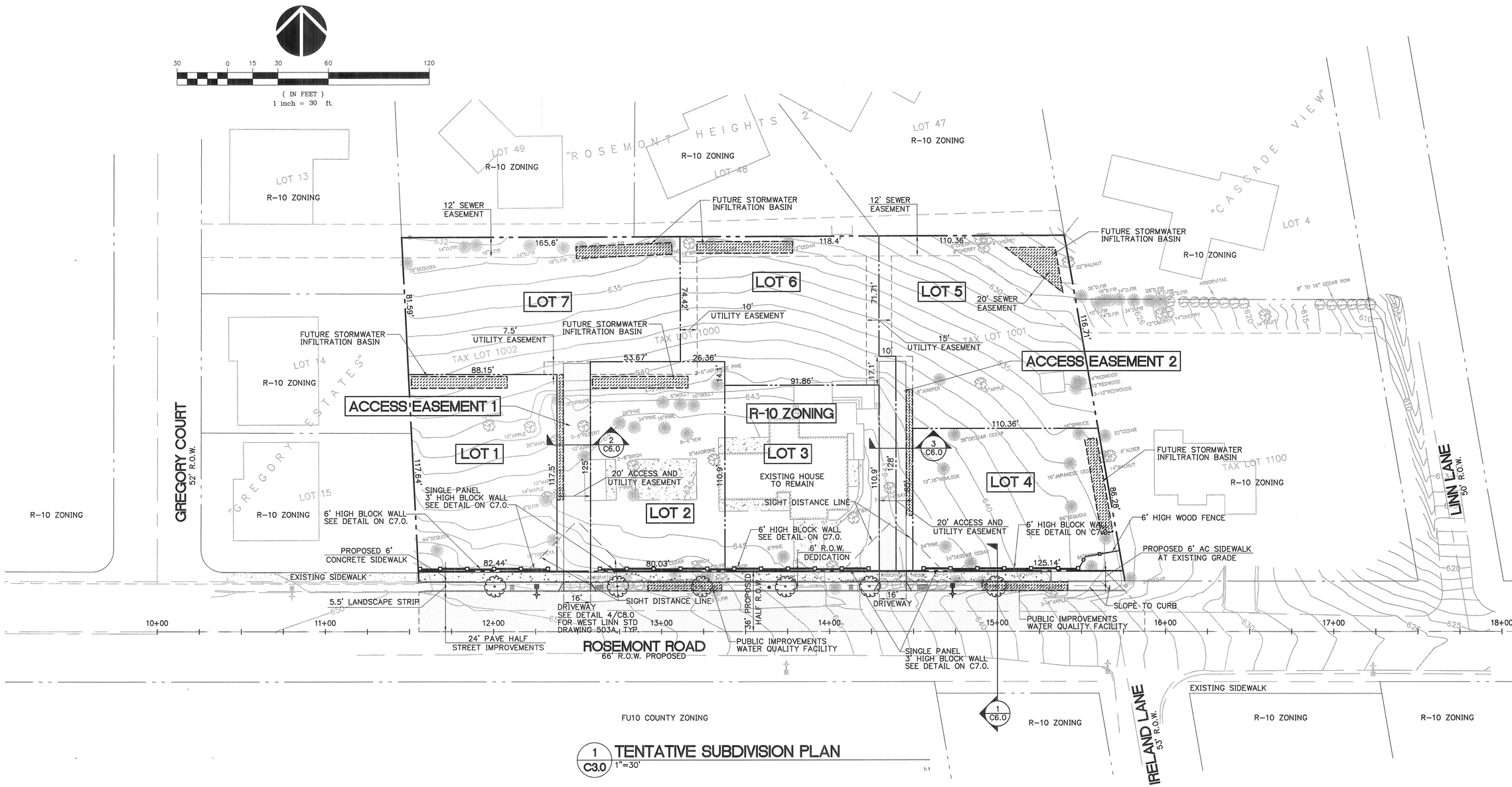
SHEET TITLE:
EXISTING CONDITIONS PLAN

DRAWN BY: MAG

CHECKED BY: RJH

SHEET:
C2.0

JOB NO. 2130073.00



1 C3.0 TENTATIVE SUBDIVISION PLAN
1"=30'

SITE DATA TABLE

LOT 1	10,022 SF (0.23 AC)
LOT 2	10,004 SF (0.23 AC)
LOT 3	10,187 SF (0.23 AC)
LOT 4	10,008 SF (0.23 AC)
LOT 5	13,394 SF (0.31 AC)
LOT 6	10,116 SF (0.23 AC)
LOT 7	12,974 SF (0.30 AC)
ACCESS EASEMENT 1 (FLAG AREA)	2,350 SF (0.05 AC)
ACCESS EASEMENT 2 (FLAG AREA)	2,130 SF (0.05 AC)
TOTAL SITE AREA (AFTER 6' DEDICATION)	81,185 SF (1.86 AC)

NOTE: LOT AREAS FOR LOTS 5, 6, AND 7 DO NOT INCLUDE FLAG AREA.

TREE INFORMATION

PERCENTAGE OF SITE COVERED BY SIGNIFICANT TREE PROTECTION AREA:	15.5%
PERCENTAGE OF NON-TYPE I AND TYPE-II LANDS COVERED BY SIGNIFICANT TREE PROTECTION AREA (NO TYPE I AND TYPE-II LANDS ON SITE):	15.5%

LEGEND

SEE LEGEND ON SHEET C1.0

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ROSEMONT SUBDIVISION

WEST LINN, OREGON

REGISTERED PROFESSIONAL ENGINEER #19432 OREGON SEPT. 16, 1982 MATTHEW W. BUTTS
EXPIRES: 12/31/13

REVISIONS:

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SHEET TITLE:
TENTATIVE SUBDIVISION PLAN

DRAWN BY: MAG

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SHEET:
C3.0

JOB NO. 2130073.00

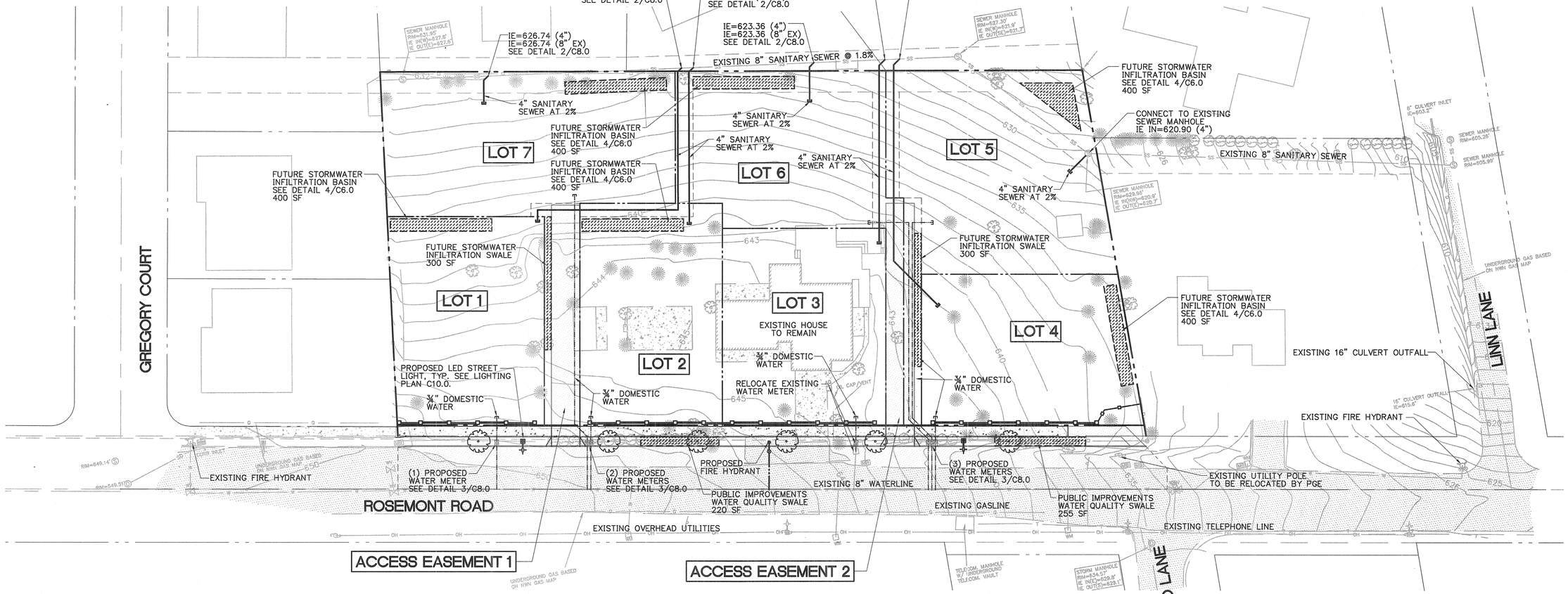
SUBDIVISION RESUBMITTAL - AUGUST 28, 2013

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

LEGEND

SEE LEGEND ON SHEET C1.0



1 / C4.0 TENTATIVE SUBDIVISION GRADING AND UTILITY PLAN
1"=30'

1:1

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2130073\00\CIVIL\073-C4.0.DWG MAG 08/28/13 07:30 1:10

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WEST LINN, OREGON

REGISTERED PROFESSIONAL ENGINEER #19432 OREGON SEPT. 16, 1982 MATTHEW W. BUTTS

EXPIRES: 12/31/13

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SHEET TITLE:
TENTATIVE SUBDIVISION GRADING AND UTILITY PLAN

DRAWN BY: MAG

CHECKED BY: RJH

SHEET:
C4.0

JOB NO. 2130073.00

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

LEGEND

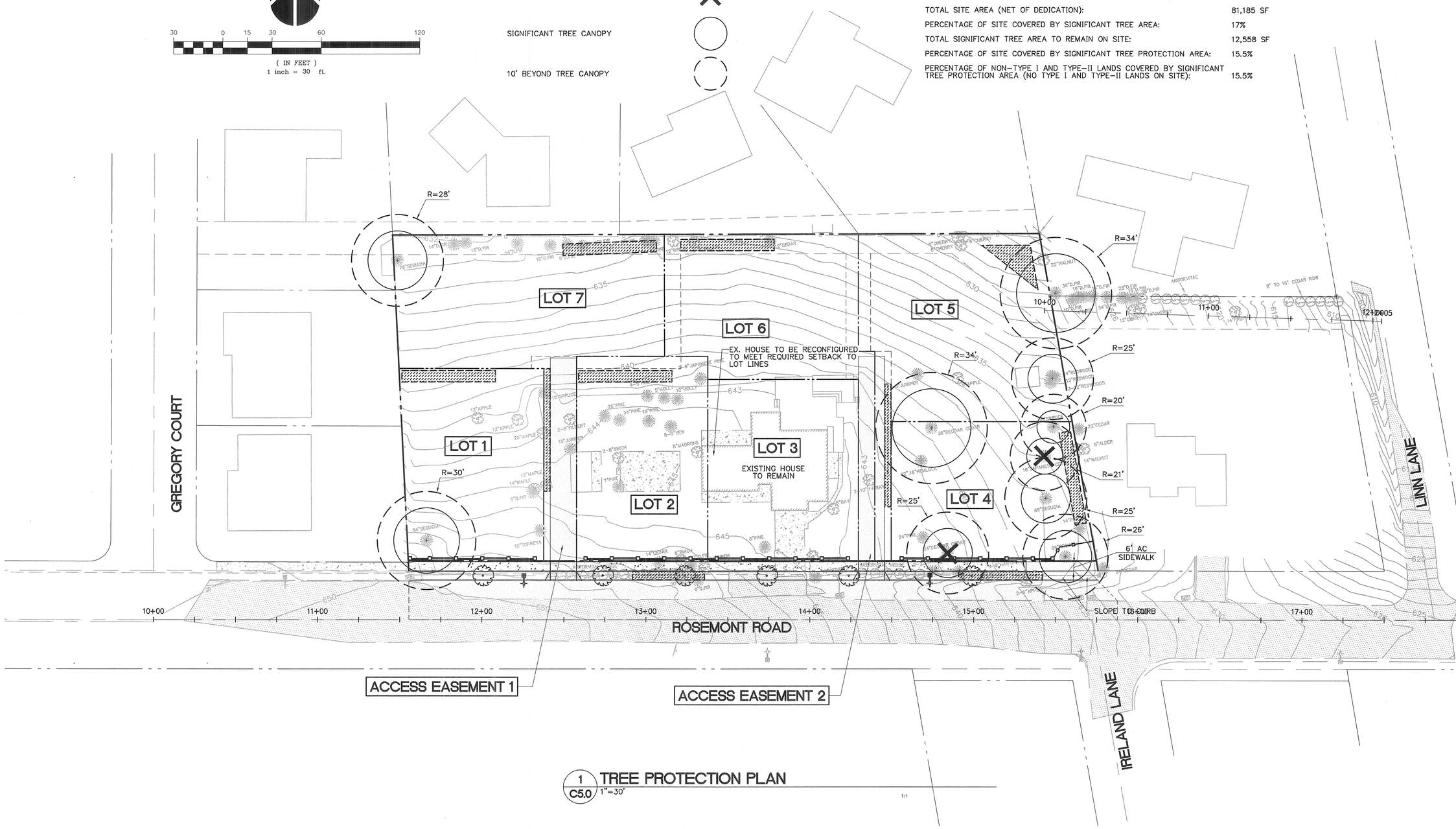
SIGNIFICANT TREE PROPOSED TO BE REMOVED

SIGNIFICANT TREE CANOPY

10' BEYOND TREE CANOPY

TREE INFORMATION

TOTAL SIGNIFICANT TREE AREA ON SITE (CANOPY PLUS 10 FT):	14,049 SF
TOTAL SITE AREA (NET OF DEDICATION):	81,185 SF
PERCENTAGE OF SITE COVERED BY SIGNIFICANT TREE AREA:	17%
TOTAL SIGNIFICANT TREE AREA TO REMAIN ON SITE:	12,558 SF
PERCENTAGE OF SITE COVERED BY SIGNIFICANT TREE PROTECTION AREA:	15.5%
PERCENTAGE OF NON-TYPE I AND TYPE-II LANDS COVERED BY SIGNIFICANT TREE PROTECTION AREA (NO TYPE I AND TYPE-II LANDS ON SITE):	15.5%



1 C5.0 TREE PROTECTION PLAN
1"=30'

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SHEET TITLE:
TREE PROTECTION PLAN

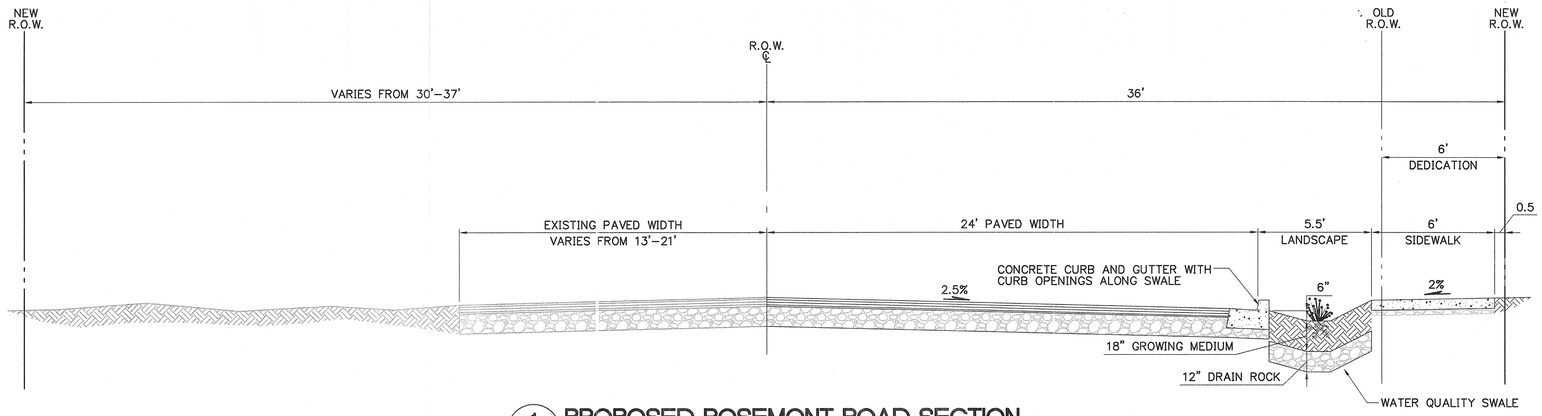
DRAWN BY: MAG

CHECKED BY: RJH

SHEET:

C5.0

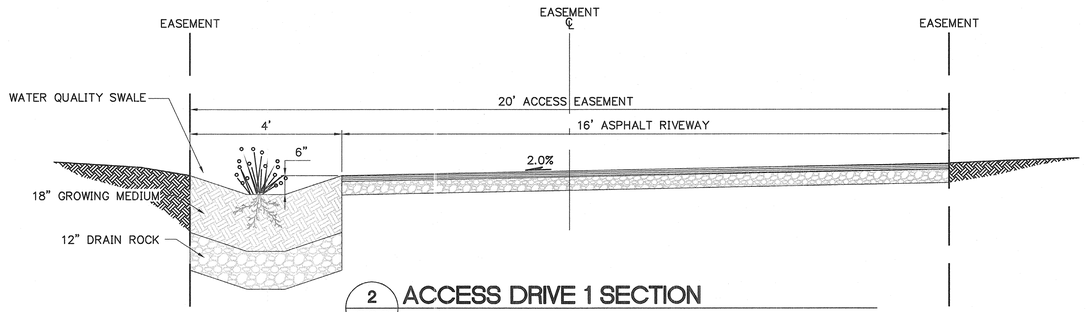
JOB NO. 2130073.00



1 C6.0 PROPOSED ROSEMONT ROAD SECTION

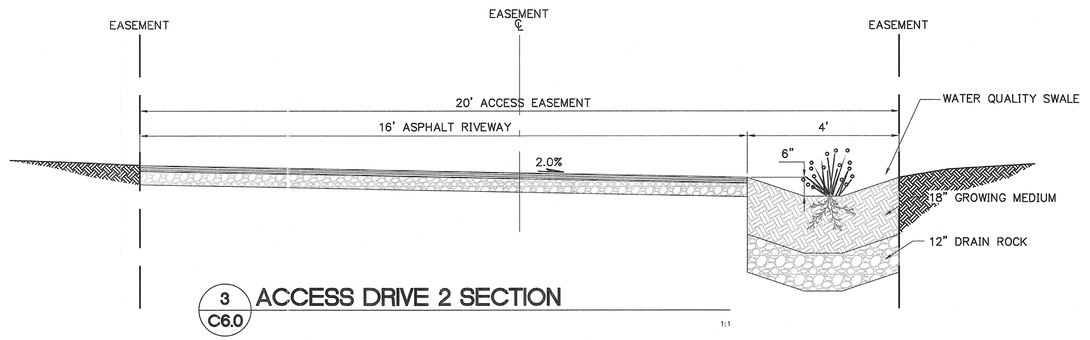
N.T.S.

1:1



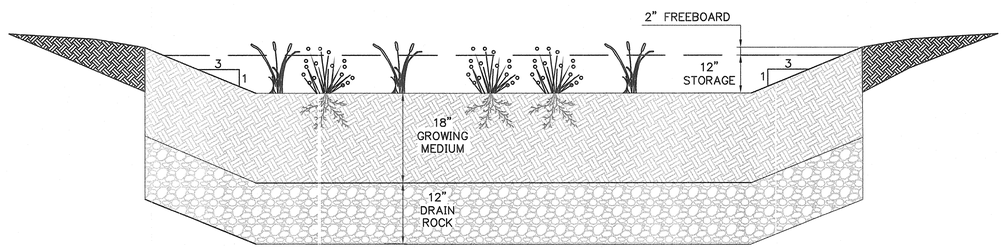
2 C6.0 ACCESS DRIVE 1 SECTION

1:1



3 C6.0 ACCESS DRIVE 2 SECTION

1:1



4 C6.0 INFILTRATION BASIN TYPICAL SECTION

1:1

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213007300\CIVIL\073-C6.0.DWG MAG 08/28/13 07:30 1:30

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ROSEMONT SUBDIVISION

WEST LINN, OREGON

REGISTERED PROFESSIONAL ENGINEER #19432 OREGON SEPT. 16, 1995 MATTHEW W. BUTTS
EXPIRES: 12/31/13

REVISIONS:

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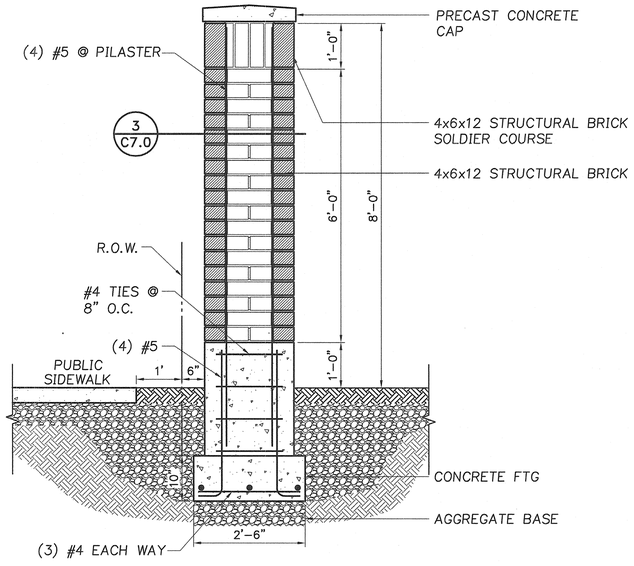
SHEET TITLE:
SECTION DETAILS AND LIGHTING PLAN

DRAWN BY: MAG

CHECKED BY: RJH

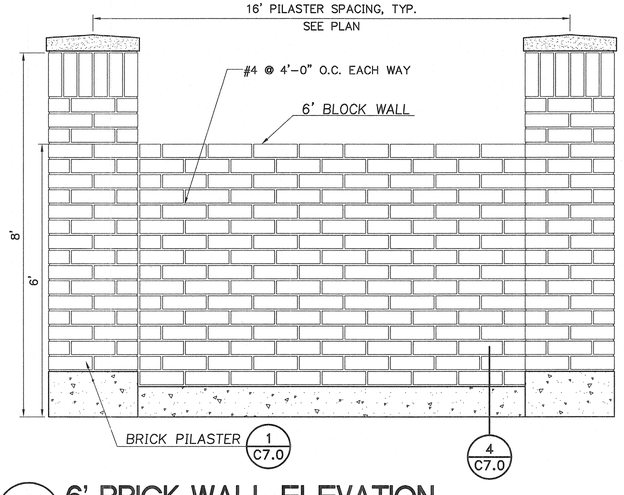
SHEET:
C6.0

JOB NO. 2130073.00



1 C7.0 6' BRICK PILASTER

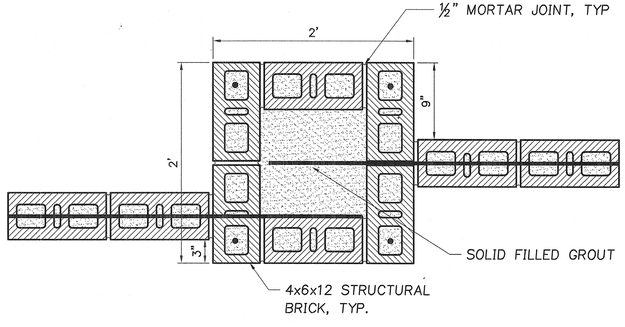
N.T.S.



2 C7.0 6' BRICK WALL ELEVATION

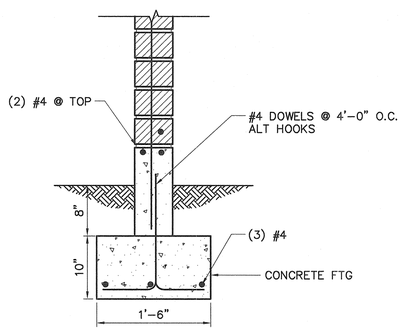
ELEVATION

N.T.S.



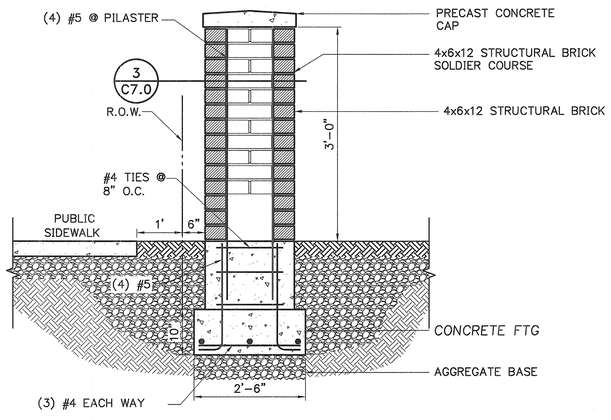
3 C7.0 BRICK PILASTER

N.T.S.



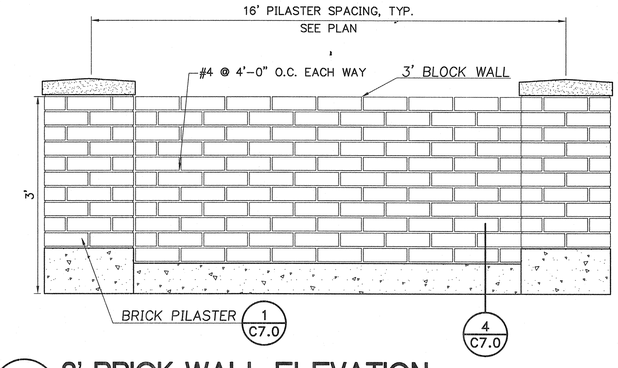
4 C7.0 BLOCK WALL FOOTING

N.T.S.



5 C7.0 3' BRICK PILASTER

N.T.S.



6 C7.0 3' BRICK WALL ELEVATION

ELEVATION

N.T.S.

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DETAIL SHEET

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CHECKED BY: RJH

SHEET:
C7.0

JOB NO. 2130073.00

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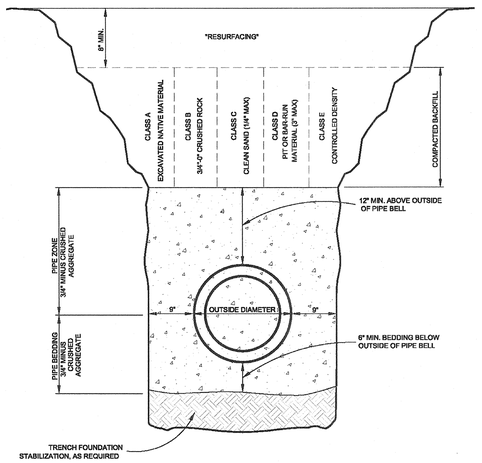
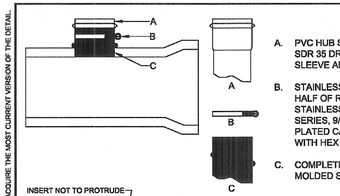


TRENCH BACKFILL BEDDING AND PIPE ZONE

1 / C8.0

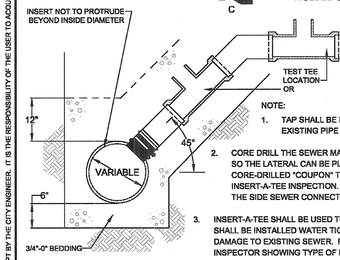
DATE: 2010
DRAWING NO. WL-200
FILE NO.



A. PVC HUB SHALL CONFORM TO ASTM 3034, SDR 35 DRIVE INTO CENTER OF RUBBER SLEEVE AFTER SLEEVE IS PLACED IN HOLE.

B. STAINLESS STEEL BAND SECURES UPPER HALF OF RUBBER SLEEVE TO THE PVC HUB. STAINLESS STEEL BAND SHALL BE 300 SERIES, 9/16" BAND WIDTH, CADMIUM PLATED CARBON STEEL, AND ATTACHED WITH HEX HEAD SLOTTED SCREW.

C. COMPLETE RUBBER SLEEVE INCLUDES A MOLDED SEGMENT THAT HOLDS IT IN PLACE.



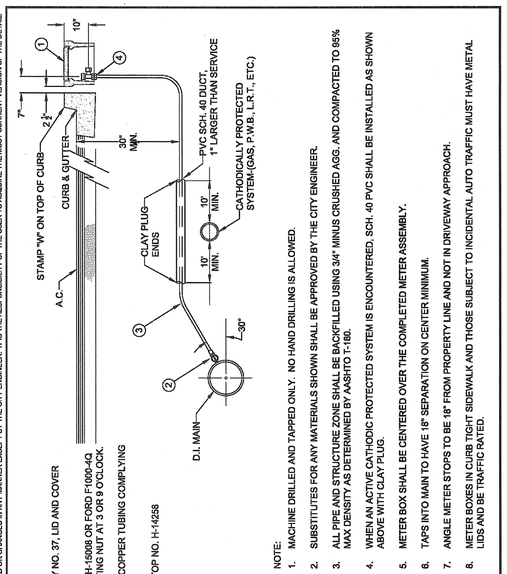
NOTE:

1. TAP SHALL BE LOCATED A MINIMUM OF 12" FROM EXISTING PIPE JOINTS AND 12" FROM OTHER TAPS.
2. CORE DRILL THE SEWER MAIN IN THE UPPER QUARANT OF THE PIPE SO THE LATERAL CAN BE PLACED AT A 45° ANGLE AND PRESENT THE CORE-DRILLED "COUPON" TO THE INSPECTOR AT TIME OF THE INSERT-A-TEE INSPECTION. THE TAP SHALL BE INSPECTED BEFORE THE SIDE SEWER CONNECTION IS MADE.
3. INSERT-A-TEE SHALL BE USED TO CONNECT LATERAL TO MAIN. TAP SHALL BE INSTALLED WATER TIGHT, WITHOUT PROTRUSION INTO OR DAMAGE TO EXISTING SEWER. PROVIDE INSERT-A-TEE PACKAGING TO INSPECTOR SHOWING TYPE OF INSERT-A-TEE INSTALLED.
4. LATERAL SHALL BE 4" (FOR STANDARD SINGLE FAMILY HOMES) GREEN ASTM3034 AND PLACE AT 2% SLOPE TO THE PROPERTY LINE. PLACE A TEST TEE WITHIN 3 FEET OF THE TAP.
5. PLACE GREEN TRACER WIRE OVER CENTERLINE OF SERVICE LATERAL.
6. COMPACT 6" OF 3/4-0" ROCK UNDER THE PIPE. HAUNCH WELL UNDER LATERAL.
7. ONCE APPROVED BY CITY INSPECTOR, PLACE 12" OF 3/4"-ROCK ABOVE THE TOP OF THE PIPE.
8. BACKFILL ABOVE THE PIPE ZONE (ABOVE 12" OF ROCK) SHALL BE CDF (DELIVER CDF RECEIPT TO THE ENGINEERING DEPT). ALTERNATELY, 3/4-0" GRAVEL BACKFILL MAY BE USED. COMPACTION TESTING BY A CERTIFIED TESTING AGENCY MUST OCCUR IN LIFTS AS SPECIFIED BY THE CITY INSPECTOR (DELIVER TEST RESULTS TO THE ENGINEERING DEPT). CITY RESERVES THE RIGHT TO FURTHER SPECIFY BACKFILL BASED ON SITE CONDITIONS.
9. T.V. INSPECTION OF THE LATERAL AND/OR MAIN MAY BE REQUIRED FOLLOWING BACKFILL, PRIOR TO FINAL APPROVAL.
10. 4" MAXIMUM TAP FOR 8" MAIN (CUT IN TEE TO BE USED FOR 6" LATERAL ON 8" MAIN).
11. ALL CONNECTIONS SHALL BE MADE WITH HARD FITTINGS, INCLUDING TRANSITIONS BETWEEN DISSIMILAR MATERIALS.

SEWER SERVICE TAP TO EXISTING SEWER FOR HOUSE LATERALS

2 / C8.0

DATE: 2010
DRAWING NO. WL-303
FILE NO.



MATERIAL:

1. BROOKS METER BOX, BODY NO. 37, LID AND COVER NO.37-S.
2. MUELLER CORP. STOP NO. H-15008 OR FORD F1000-4Q CORP. STOP WITH OPERATING NUT AT 3 OR 9 O'CLOCK.
3. 1" SOFT TEMPER, TYPE "K" COPPER TUBING COMPLYING WITH ASTM B-88.
4. MUELLER ANGLE METER STOP NO. H-14258 (FORD NO. KV43-444W-Q).

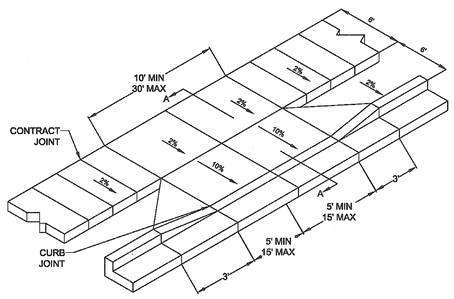
NOTE:

1. MACHINE DRILLED AND TAPPED ONLY. NO HAND DRILLING IS ALLOWED.
2. SUBSTITUTES FOR ANY MATERIALS SHOWN SHALL BE APPROVED BY THE CITY ENGINEER.
3. ALL PIPE AND STRUCTURE ZONE SHALL BE BACKFILLED USING 3/4" MINUS CRUSHED AGG. AND COMPACTED TO 95% MAX DENSITY AS DETERMINED BY AASHTO 1-180.
4. WHEN AN ACTIVE CATHODIC PROTECTED SYSTEM IS ENCOUNTERED, SCH. 40 PVC SHALL BE INSTALLED AS SHOWN ABOVE WITH CLAY PLUG.
5. METER BOX SHALL BE CENTERED OVER THE COMPLETED METER ASSEMBLY.
6. TAPS INTO MAIN TO HAVE 18" SEPARATION ON CENTER MINIMUM.
7. ANGLE METER STOPS TO BE 18" FROM PROPERTY LINE AND NOT IN DRIVEWAY APPROACH.
8. METER BOXES IN CURB TIGHT SIDEWALK AND THOSE SUBJECT TO INCIDENTAL AUTO TRAFFIC MUST HAVE METAL LIDS AND BE TRAFFIC RATED.

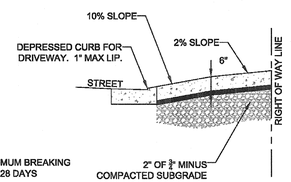
STANDARD 1" WATER SERVICE

3 / C8.0

DATE: 2010
DRAWING NO. WL-402
FILE NO.



SIDEWALK AWAY FROM CURB



SECTION A-A

NOTE:

1. CONCRETE SHALL HAVE A MINIMUM BREAKING STRENGTH OF 3300 PSI AFTER 28 DAYS 6 SACK MIX
2. CURB SHALL BE TROWELED JOINT WITH MIN. 1/2" RADIUS ALONG BACK OF CURB
3. DRIVEWAY SHALL BE A MINIMUM 6" THICK
4. DRIVEWAY CURB CUT SHALL COMPLY WITH THE CONDITIONS OF 5.0070, "WIDTH AND LOCATION OF CURB CUTS"
5. FOR REPLACEMENT OF EXISITNG APPROACH:

A. MUST MEET CURRENT ADA REQUIREMENTS TO GREATEST DEGREE POSSIBLE.
B. DAMAGED ROADWAY MUST BE SAWCUT AND REPAVED WITH CLASS C HOT MIX ASPHALT

RESIDENTIAL DRIVEWAY WITH SIDEWALK AWAY FROM CURB

4 / C8.0

DATE: 2010
DRAWING NO. WL-503A
FILE NO.

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ROSEMONT SUBDIVISION

WEST LINN, OREGON

REGISTERED PROFESSIONAL ENGINEER #10432 OREGON SEPT. 16, 1997 MATTHEW W. BUTTS
EXPIRES: 12/31/13

REVISIONS:

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DRAWN BY: MAG

CHECKED BY: RJH

SHEET:
C8.0

JOB NO. 2130073.00

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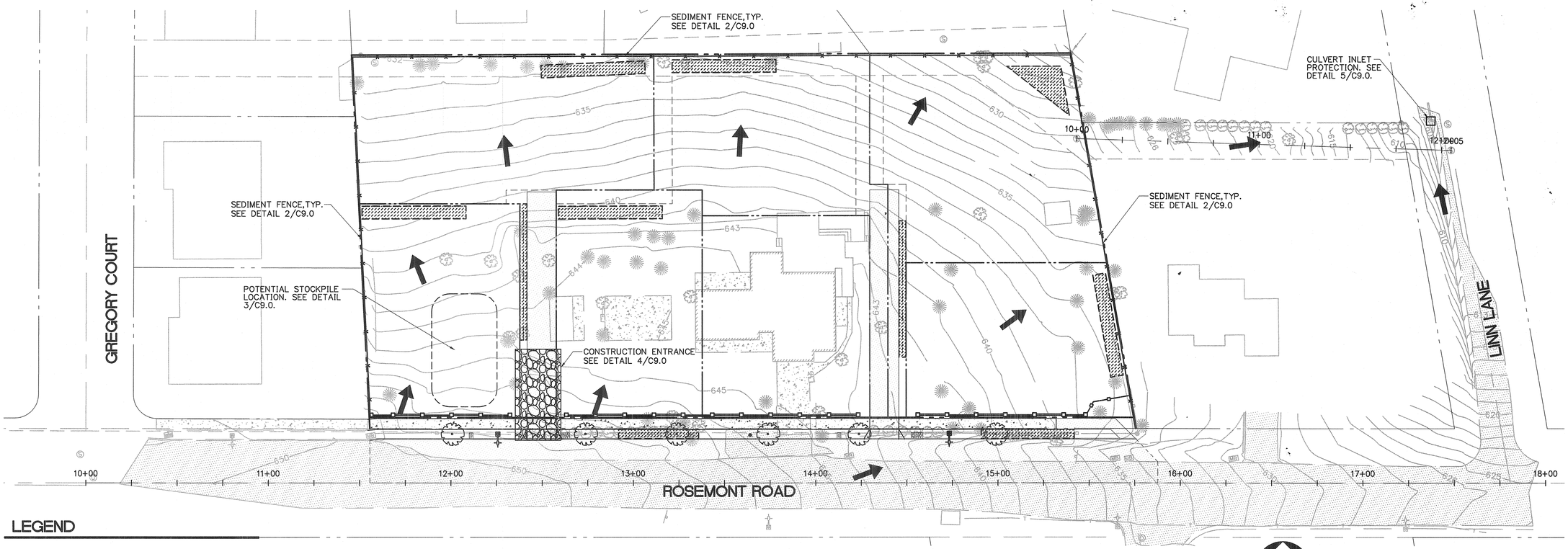


LEGEND

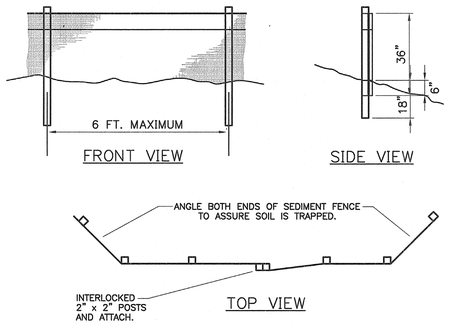
- INLET PROTECTION
- DRAINAGE FLOW DIRECTION
- SEDIMENT FENCE
- CONSTRUCTION ENTRANCE
- POTENTIAL STOCKPILE LOCATION

1 C9.0 EROSION CONTROL PLAN

1"=30'

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

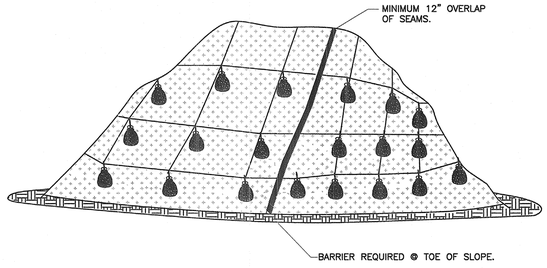


NOTES:

1. BURY BOTTOM OF FILTER FABRIC 6" MIN. VERTICALLY BELOW GRADE.
2. 2" x 2" FIR, PINE, OR STEEL FENCE POSTS.
3. STITCHED LOOPS TO BE INSTALLED UPHILL SIDE OF SLOPE.
4. COMPACT NATIVE FILL IN ALL AREAS OF FILTER FABRIC TRENCH.

2 C9.0 SEDIMENT FENCE

N.T.S.



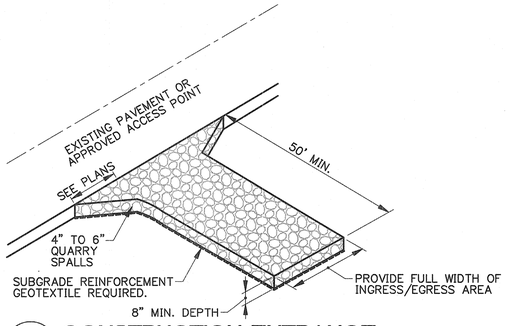
PLASTIC SHEETING

NOTES:

1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. BARRIER REQUIRED @ TOE OF STOCK PILE. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A
3. MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.

3 C9.0 PLASTIC SHEETING

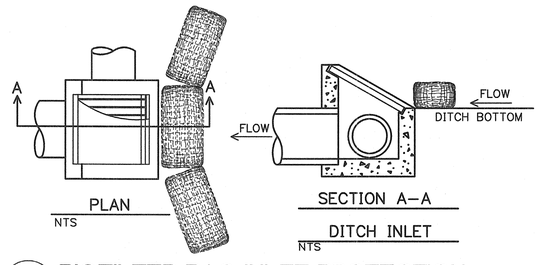
N.T.S.



4 C9.0 CONSTRUCTION ENTRANCE

N.T.S.

E-ENTRY



5 C9.0 BIOFILTER BAG INLET PROTECTION

N.T.S.

E-BIOBAG

THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN ON THIS SHEET IS SHOWN FOR REFERENCE ONLY AND IS BASED ON A SURVEY BY ANDY PARIS & ASSOCIATES, INC. DATE: 3/20/13

GROUP MACKENZIE
Civil Engineering
Structural Engineering
Transportation Planning
Landscape Architecture
Architecture
Interior Design
Land Use Planning
Portland OR 503.224.9580
Vancouver WA 360.695.7879
Seattle WA 208.749.9993

Client
R+H CONSTRUCTION

Project
ROSEMONT SUBDIVISION

WEST LINN, OREGON

REGISTERED PROFESSIONAL ENGINEER #19432 OREGON SEPT. 16, 1997 MATTHEW W. BUTTS
EXPIRES: 12/31/13

REVISIONS:

REVISION DELTA	REVISIONS THIS SHEET	REVISION DELTA CLOSING DATE

SHEET TITLE:
EROSION CONTROL PLAN

DRAWN BY: MAG

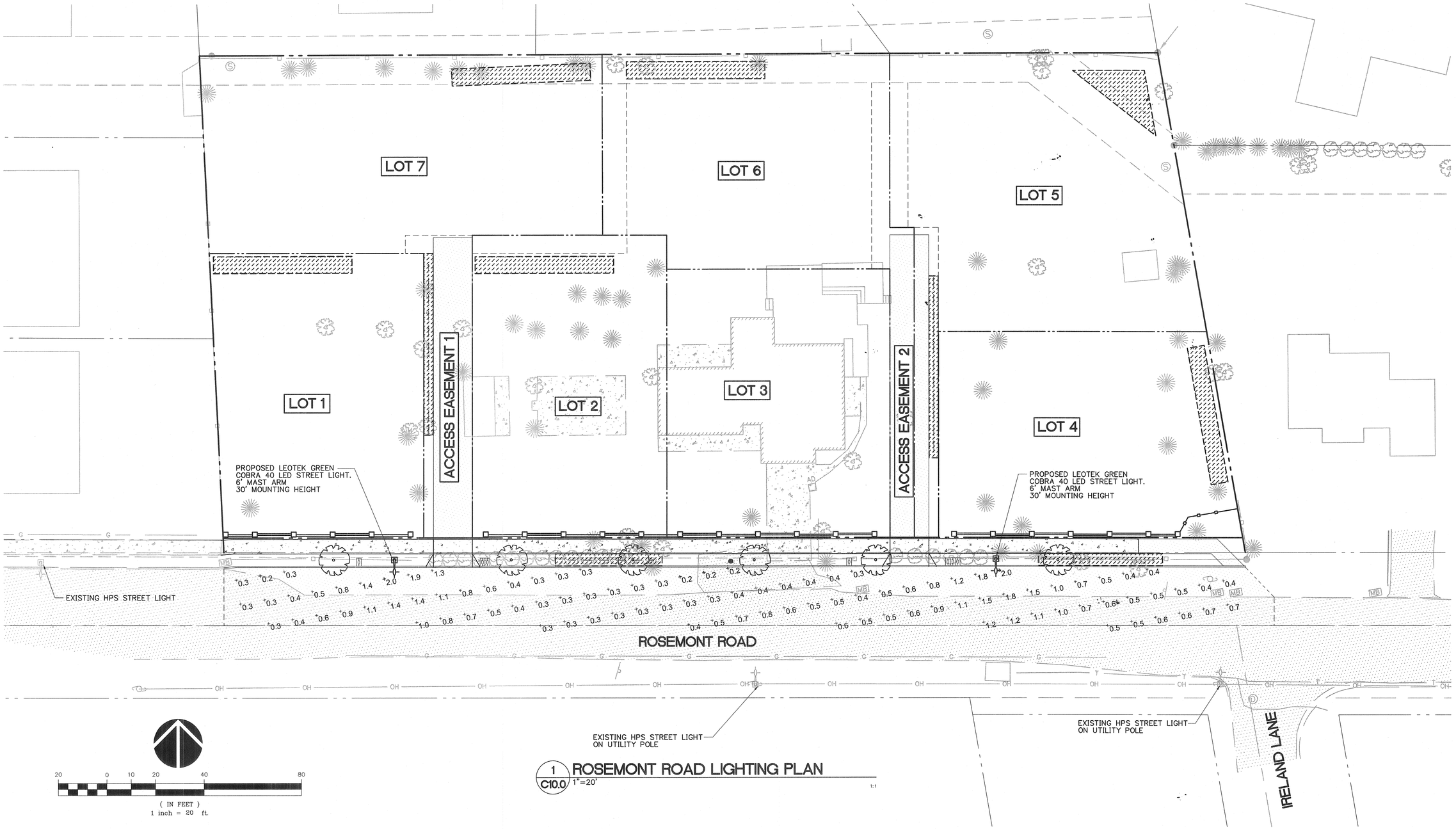
CHECKED BY: RJH

SHEET:
C9.0

JOB NO. 2130073.00

SUBDIVISION RESUBMITTAL - AUGUST 28, 2013

2130073.00\CIVIL\073-C9.0.DWG MAG 08/28/13 07:30 1:30



20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

1 C10.0 ROSEMONT ROAD LIGHTING PLAN

1"=20'

1:1

LEGEND

SEE LEGEND ON SHEET C1.0

ROSEMONT ROAD HALF STREET PHOTOMETRICS SUMMARY

	REQUIRED	PROVIDED
AVERAGE	0.6 fc	0.7 fc
MINIMUM	–	0.2 fc
UNIFORMITY (AVG:MIN)	4:1	3.5:1

* ROSEMONT ROAD IS A COLLECTOR STREET IN RESIDENTIAL AREA

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ROSEMONT ROAD LIGHTING PLAN

DRAWN BY: MAG

CHECKED BY: RJH

SHEET:
C10.0

JOB NO. 2130073.00