PRELIMINARY STORMWATER CONTROL PLAN

FOR

EFFIE ESTATES

City of Sequim PRE21-011

Date: May 3, 2022

Project: Effie Estates Subdivision. A 15 lot subdivision northeast of the intersection of 7th Avenue and West Hemlock Street in Sequim.

Prepared by: Zenovic & Associates, Inc.
301 East 6th Street, #1
Port Angeles, WA 98362



5/3/2022

INTRODUCTION

This Preliminary Stormwater Control Plan has been prepared as part of the City of Sequim's (City) stormwater requirements for application for Major Subdivision approval. The intent of this report is to describe the stormwater management system for the Effie Estates Subdivision and to demonstrate compliance with the *2012 Stormwater Management Manual for Western Washington (amended 2014)* as adopted by the City of Sequim (SMC 13.104.100). The subdivision development includes installing asphalt roadway, sidewalk, storm, water, sewer, and power utilities for a total of 15 lots. This report will address each of the minimum requirements in the *Manual* and provide information on existing conditions of the site, proposed construction, method of stormwater runoff analysis, and stormwater infiltration and treatment design.

This report is primarily intended to address the stormwater from areas within the right-of-way. Runoff from residences will be controlled through the use of dry wells and/or rain gardens installed on each lot during the construction of each residence. Sizing for those facilities will be provided to guide future development of the lots.

The report will address all nine minimum requirements and will include the Preliminary Stormwater Site Plan in Appendix A.

EXISTING CONDITIONS

This project will be located on Parcel 03-30-19-34-9180 which encompass 2.61 acres. The site has been previously cleared and currently contains a single family residence with detached shop/garage. Access onto the site will be from two new entrances located off of 7th Avenue and West Hemlock Street. The site generally slopes downhill from south to north at grades between 2 and 5 percent.

Based on the NRCS soil survey, the onsite soils are classified as Carlsborg gravelly sandy loam. Typical soil profile for these soils is: 0-9" of gravelly sandy loam, 9-20" very gravelly loamy sand, 20-60" extremely gravelly loamy sand". The soil is classified as "Somewhat Excessively Drained" with a depth to water table or restrictive layer of more than 80 inches. There were no defined drainage channels observed onsite.

Onsite test pits completed by this office on January 20th, 2022 confirmed the onsite soil types were consistent with the soils survey data. Onsite investigations performed by this office consisted of excavating 5 test pits throughout the subject parcel. The general soils onsite consisted of minimal topsoil over very gravelly loamy sands. Test pit location and logs can be seen in the attached soils investigation map

Additional testing included collection of four soils samples from the excavated test pits for sieve analysis and infiltration rate correlation for outwash soils per the Soil Grain Size Analysis Method described in section III-3.3.6 of the *Manual*. The sieve analyses confirmed that the onsite soils at the anticipated infiltrating depth were consistent with the mapped soil types and infiltration rates from 11 to 18 inches per hour were calculated based on Ecology guidance (note that this includes reduction factors).

Based on these results a long-term infiltration rate of 5.5 inches per hour (half of lowest calculated rate) was utilized to be conservative. The onsite soils will still be modeled as Type A soils consistent with the mapped and observed soil types.

MINIMUM REQUIREMENTS

The following section will describe how the project will conform to the nine minimum requirements of the Manual.

Minimum Requirement #1 - Preparation of Stormwater Site Plans

Preliminary Stormwater site plans have been prepared and submitted with the Application for Major Subdivision to the City of Sequim. Permanent Stormwater Site Plans will be submitted to the City of Sequim for approval during the Site Construction Permit application process.

Minimum Requirement #2 Construction Stormwater Pollution Prevention (SWPPP)

An erosion and sedimentation control plan and stormwater pollution prevention plan will be produced for this project and will be submitted to the City for approval during the Site Construction Permit process. These plans will include but are not limited to the following Best Management Practices:

1. Marking clearing limits to preserve the existing vegetation and limit land-disturbing activity.
2. Installation of stabilized construction entrances/exits to prevent sediment track-out.
3. Utilizing the temporary settling/infiltration ponds to control flow rates and prevent sediment from leaving the site.
4. Installation of silt fencing to protect adjacent properties from sediment.
5. Installation of inlet protection to protect new and existing drainage structures and systems from sediment.
6. Limitations on the time soils may remain exposed and unworked and requirements for soils stabilization.

As this project will disturb greater than one acre of land, this project is required to obtain coverage under the Construction Stormwater General Permit (CSGP) through the Department of Ecology which will require monthly reporting of discharge to the Department of Ecology and weekly inspections and oversight by a Certified Erosion and Sedimentation Control Lead. Changes will be made to the site and plan as needed to comply with the conditions of the CSGP. This permit will be obtained prior to land-disturbing activity.

Minimum Requirement #3 - Source Control of Pollution

All known, available and reasonable source control BMPs are required for this project. Specific source control BMPs to be employed on this project are:

- Landscaping and Lawn/Vegetation Management
- Maintenance and Repair of Vehicles and Equipment
- Maintenance of Stormwater Drainage and Treatment Systems
- Maintenance of Urban Streets

Minimum Requirement #4 - Preservation of Natural Drainage Systems and Outfalls

There are no clear drainage paths from the site. The intent of this project is to infiltrate all stormwater onsite through the use of infiltration galleries spread throughout the site to infiltrate runoff from the roadways and infiltration trenches/drywells located on each parcel to infiltrate roof and driveway runoff.

Minimum Requirement #5 – On-site Stormwater Management

Minimum requirement #5 is intended to promote the use of low impact development BMPs to infiltrate, disperse, and retain stormwater onsite. The applicant has the choice to either meet the LID Performance Standard and implement BMP T5.13 for onsite soil quality and depth or install LID BMPs per List #2 for all listed surfaces.

This project has been designed to infiltrate the majority of the stormwater from the development and meet the LID performance standard.

Minimum Requirement #6 - Runoff Treatment

The primary method for runoff treatment will be through infiltration into native soils. Permanent inlet filters will be installed in all catch basins to provide pretreatment of stormwater and protect the infiltration trenches from sediment deposition.

Minimum Requirement #7 - Flow Control

The flow control performance standard per the 2012 Manual is to, “match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow.”

This project proposes to utilize infiltration trenches to infiltrate runoff from the improvements within the right-of-way, and runoff from contributing lot areas. Runoff from the residences will be directed to infiltration trenches located on each lot and sized to infiltrate 100% of the roof runoff. Additionally, driveway runoff will be routed to appropriately sized rain gardens on each lot sized to infiltrate 100% of runoff from those areas.

Preliminary modeling of the stormwater facilities was completed using WWHM 2012 and the project area was demonstrated to meet the standard flow control performance standard as well as the LID performance standard. A model residence (3,000 s.f. roof area, and 1,500 s.f. driveway) was included in the calculations to demonstrate the ability of each lot to adequately address stormwater runoff. Final stormwater guidance for lot development will be provided in the site construction permit documents. Calculations can be seen in the appendices.

Minimum Requirement #8 - Wetlands Protection

No known wetlands will be affected by this project.

Minimum Requirement #9 - Operation and Maintenance

An Operation and Maintenance Manual will be produced and submitted to the City for review during the Site Construction Permit application process.

APPENDIX A

STORMWATER SITE PLANS

CITY OF SEQUIM, MAJOR SUBDIVISION: EFFIE ESTATES (PRE21-011) IN SECTION 19, TOWNSHIP 30 NORTH, RANGE 03 WEST, W.M. CITY OF SEQUIM, CLALLAM COUNTY

PROJECT INFORMATION

APPLICANT/OWNER:	GMB USA LIMITED P.O. BOX 2710 SEQUIM, WA. 98382
SITE LOCATION:	NORTHEAST CORNER OF 7TH AVENUE AND WEST HEMLOCK STREET SEQUIM, WA. 98382
PROPOSED PROJECT:	5 LOT SUBDIVISION
ZONING:	S_R4-8
UTILITIES:	SANITARY SEWER, WATER - CITY OF SEQUIM POWER - CLALLAM COUNTY PUD #1 COMMUNICATIONS - CENTURY LINK, WAVE BROADBAND
LEGAL DESCRIPTION:	03-30-19-34-9180 LOT 1 FIR LANE TERRACE SHORT PLAT AS RECORDED IN
PARCEL NO.:	VOLUME 32 OF PLATS, PAGE 100; AFN# 2007-1211230. SEE INSTRUMENT RECORDED UNDER AUDITOR'S FILE NUMBER 2019-1382290, RECORDS OF CLALLAM COUNTY, WA FOR FULL DESCRIPTION.
DATE OF PREPARATION:	APRIL 2022
HORIZONTAL AND VERTICAL DATUM:	WASHINGTON STATE COORDINATE SYSTEM NORTH ZONE NAVD 83/91

MAP LEGEND

- 500' OFFSET FROM PROJECT BOUNDARIES
- PROJECT PROPERTY BOUNDARIES
- EXISTING PARCEL BOUNDARIES
- EXISTING 10' CONTOURS
- PROPOSED ROADWAY

MAPPING NOTES

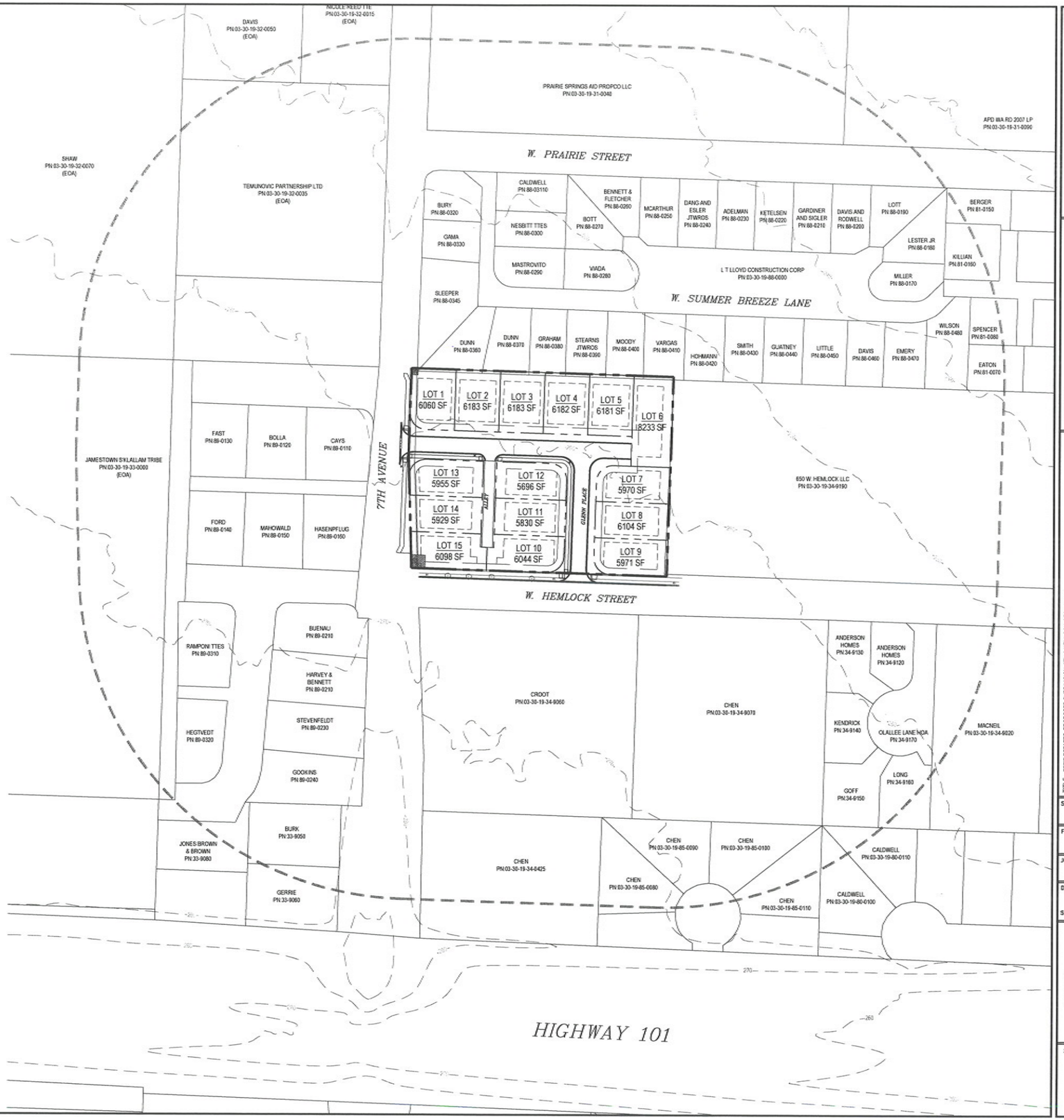
NO CRITICAL AREAS HAVE BEEN MAPPED WITHIN 500 FEET OF THE SUBJECT PARCEL.

PARCEL AND STREAM MAPPING OBTAINED FROM CLALLAM COUNTY GIS MAPPING DATA.
WETLAND MAPPING OBTAINED FROM THE NATIONAL WETLAND INVENTORY COMPILED BY THE U.S. FISH AND WILDLIFE SERVICE.

THIS PLAN IS BASED ON GENERALIZED SOURCES ABOVE AND MAY NOT ACCURATELY REPRESENT THE ACTUAL TYPES AND EXTENTS OF THE CRITICAL AREAS IN THE SITE VICINITY. THIS MAP IS NOT INTENDED TO SUPERSEDE PRIOR OR SUBSEQUENT PROFESSIONAL STUDIES/SURVEYS OF THE ACTUAL CRITICAL AREAS LOCATED NEAR OR WITHIN THE PROJECT SITE.

ZONING NOTES

THE ZONING OF THE ALL PARCELS WITHIN 500 FEET OF THE SUBJECT PARCEL ARE ZONED SINGLE FAMILY RESIDENTIAL (R4-8) OR ECONOMIC OPPORTUNITY AREA (EOA). LABELED LOTS ARE ZONED R4-8 UNLESS OTHERWISE NOTED.



VICINITY MAP
Scale: 1" = 80'
0 80 160 240

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PORT ANGELES, WA 98362
PHONE (360) 417-0501
FAX (360) 417-2514
EMAIL ZENOVIC@ZENOVIC.NET

REVISIONS:

DATE	MARK	NOTE

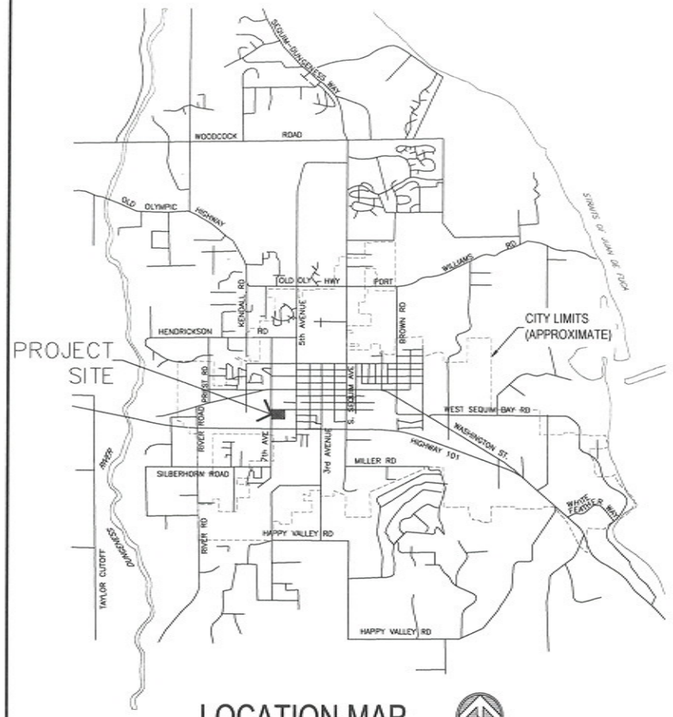
TITLE: EFFIE ESTATES, PROPOSED SUBDIVISION, 7TH & HEMLOCK, SEQUIM WA
VICINITY MAP

CLIENT:
GMB USA LIMITED
PO BOX 2710
SEQUIM, WA 98362

SCALE: 1" = 80'
FILE: 22044-VM
JOB NO: 22044
DATE: May 3, 2022
SET: PRELIMINARY PLAT

SETH J. RODMAN
STATE OF WASHINGTON
53777
REGISTERED
PROFESSIONAL ENGINEER
5/3/2022

SHEET
C000



LOCATION MAP

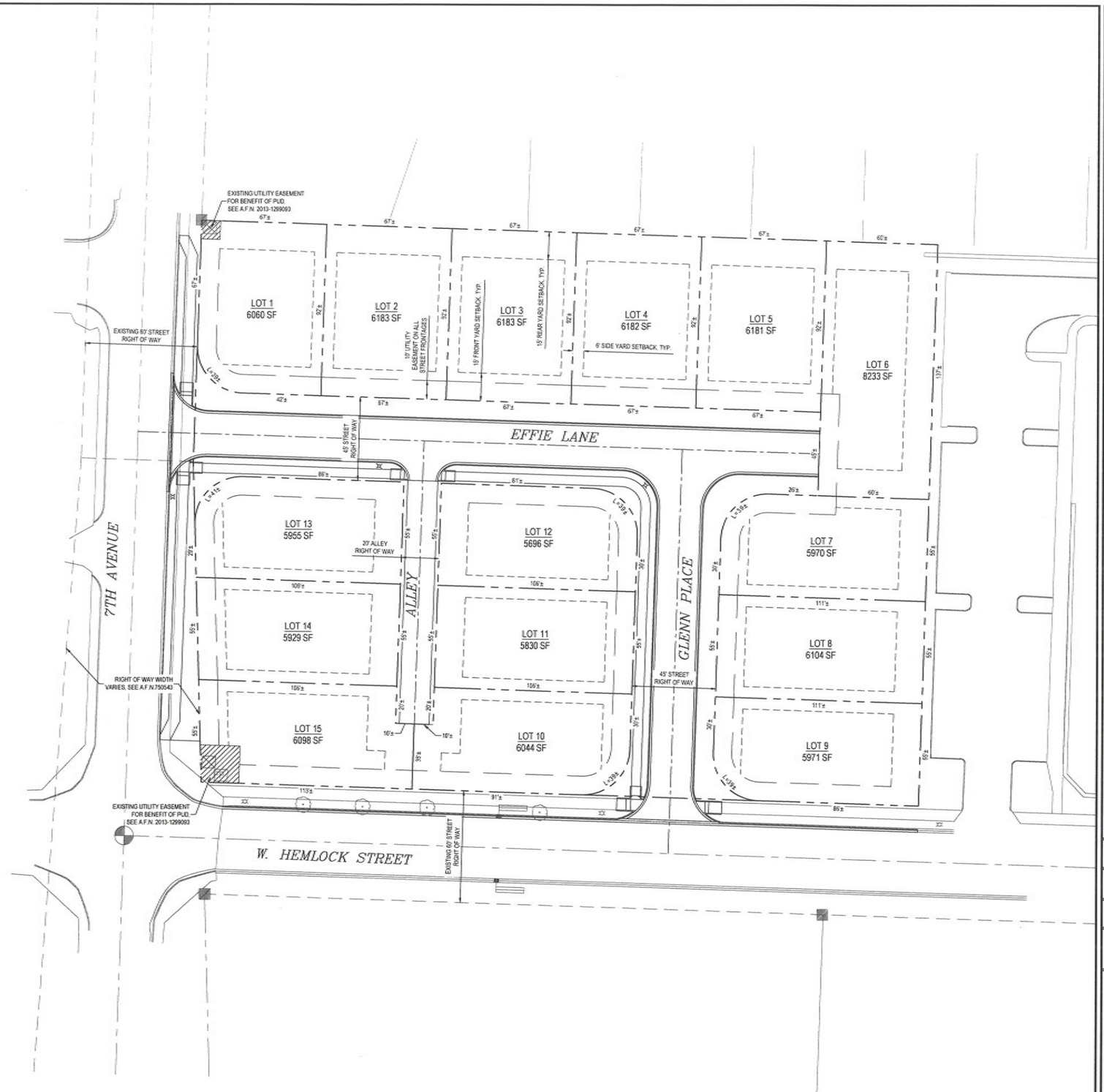
NOT TO SCALE

LEGEND:

_____	..... PROPERTY BOUNDARY
- - - - -	..... BUILDING SETBACK
— — — —	..... EASEMENT BOUNDARY
_____	..... R.O.W. CENTERLINE

SITE LAND USAGE DATA

NUMBER OF NEW RESIDENTIAL LOTS	15 LOTS
GROSS ACREAGE	2.72 AC±
RESIDENTIAL LOT AREA (NEW LOTS)	2.12 AC±
RIGHT-OF-WAY AREA	0.60 AC±
GROSS DENSITY	5.5 UNITS/AC
NET DENSITY	7.1 UNITS/AC



SITE PLAN

Scale: 1" = 30'

0 30 60 90

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REVISIONS:

DATE	MARK	NOTE

TITLE: EFFIE ESTATES, PROPOSED SUBDIVISION, 7TH & HEMLOCK, SEQUIM WA.

PRELIMINARY LOT LAYOUT

CLIENT: GMB USA LIMITED, PO BOX 2710, SEQUIM, WA 98362

SCALE: 1" = 30'

FILE: 22044-P1

JOB NO: 22044

DATE: May 3, 2022

SET: PRELIMINARY PLAT

SETH J. ROOMAN, STATE OF WASHINGTON, 53777, REGISTERED PROFESSIONAL ENGINEER
5/3/2022

SHEET C001

LEGEND:

- PROPERTY BOUNDARY
- BUILDING SETBACK
- EASEMENT BOUNDARY
- TRAVELLED WAY CENTERLINE
- 5' EXISTING MAJOR CONTOUR
- 1' EXISTING MINOR CONTOUR
- 5' PROPOSED MAJOR CONTOUR
- 1' PROPOSED MINOR CONTOUR
- APPROXIMATE EDGE OF GRADING
- PROPOSED DRIVEWAY
- CONCRETE SIDEWALK
- ASPHALT PAVING

GRADING NOTES:

EXISTING GRADES BASED ON TOPOGRAPHIC SURVEY COMPLETED BY THIS OFFICE IN 2004 FOR EXTENDICARE AND WAS COMPLETED PRIOR TO THE CONSTRUCTION OF HEMLOCK STREET. UTILITIES IN 7TH AVENUE WERE MAPPED AS PART OF THE 2004 SURVEY. UTILITY LOCATIONS IN HEMLOCK AVENUE ARE BASED ON AN ALTA SURVEY OF THE EXTENDICARE SITE COMPLETED BY THIS OFFICE AS WELL AS AVAILABLE AS-BUILT DRAWINGS. GRADES AND UTILITY LOCATIONS SHOWN SHOULD BE UNDERSTOOD AS APPROXIMATE. AN UPDATED TOPOGRAPHIC SURVEY WILL BE PERFORMED PRIOR TO SUBMITTAL FOR SITE CONSTRUCTION PERMIT.

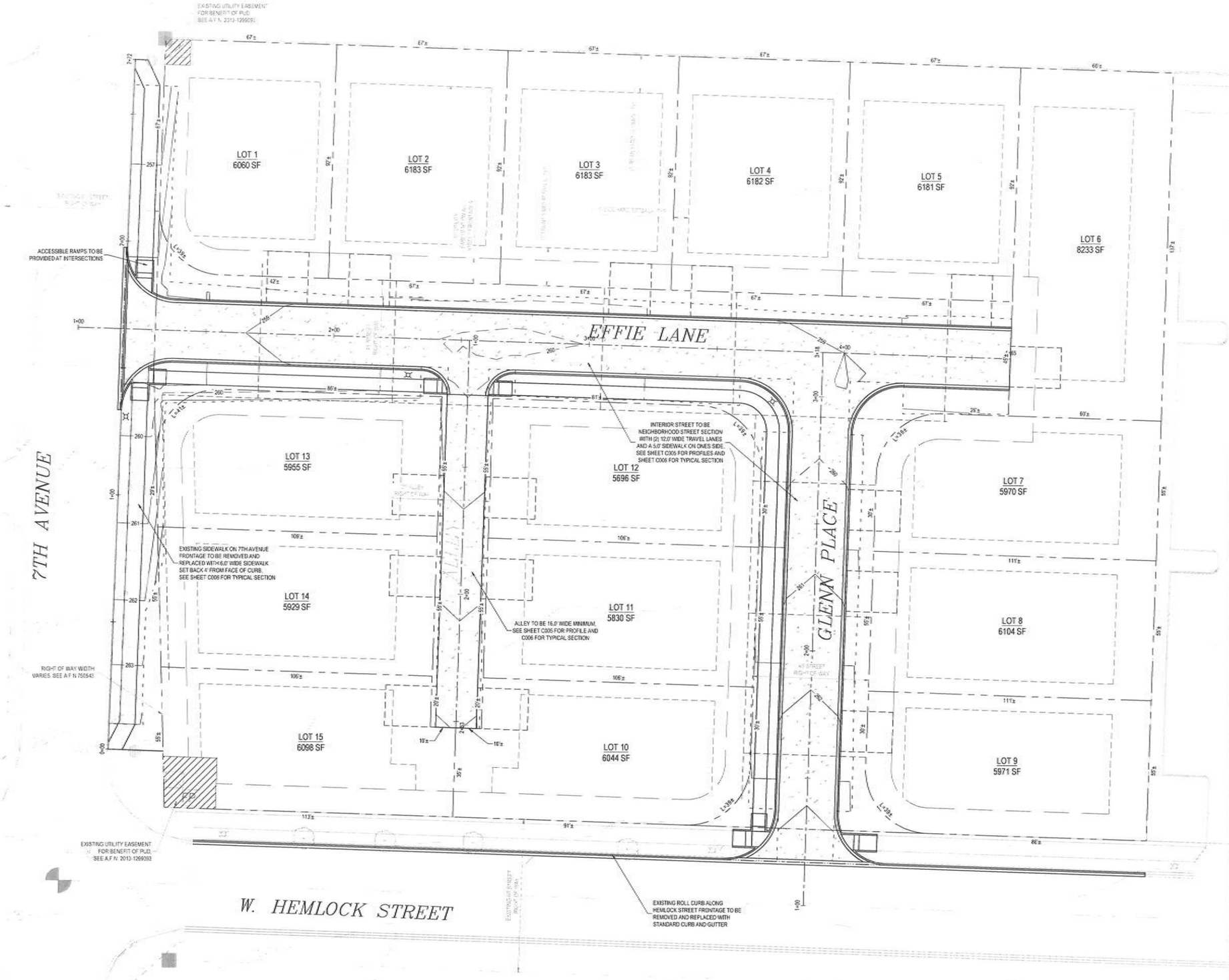
PROPOSED FINISH CONTOURS SHOWN ARE APPROXIMATE AND WILL BE ADJUSTED DURING THE FINAL DESIGN STAGE TO OPTIMIZE CUT/FILL QUANTITIES.

APPROXIMATE CUT AND FILL QUANTITIES:
1,330 C.Y. CUT
858 C.Y. FILL

PARKING NOTES:

PER SEQUIM MUNCIPAL CODE SECTION 18.48.050[B] THE DEVELOPMENT WILL BE REQUIRED TO PROVIDE A MINIMUM OF TWO OFF-STREET PARKING SPACES PER UNIT. TO MEET THIS REQUIREMENT, EACH LOT IN THE SUBDIVISION WILL HAVE A MINIMUM OF TWO OFF-STREET PARKING SPACES.

AS THE THE PROPOSED STREETS HAVE BEEN PRELIMINARILY CLASSIFIED AS "NEIGHBORHOOD" THERE ARE NO ADDITIONAL REQUIREMENTS FOR ON-STREET PARKING.



SITE PLAN

Scale: 1" = 20'

0 20 40 60

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REVISIONS:

DATE	MARK	NOTE

TITLE: EFFIE ESTATES, PROPOSED SUBDIVISION, 7TH & HEMLOCK, SEQUIM WA

PAVING & GRADING PLAN

CLIENT: GMB USA LIMITED
PO BOX 2710
SEQUIM, WA 98362

SCALE: 1" = 20'

FILE: 22044-P1

JOB NO: 22044

DATE: May 3, 2022

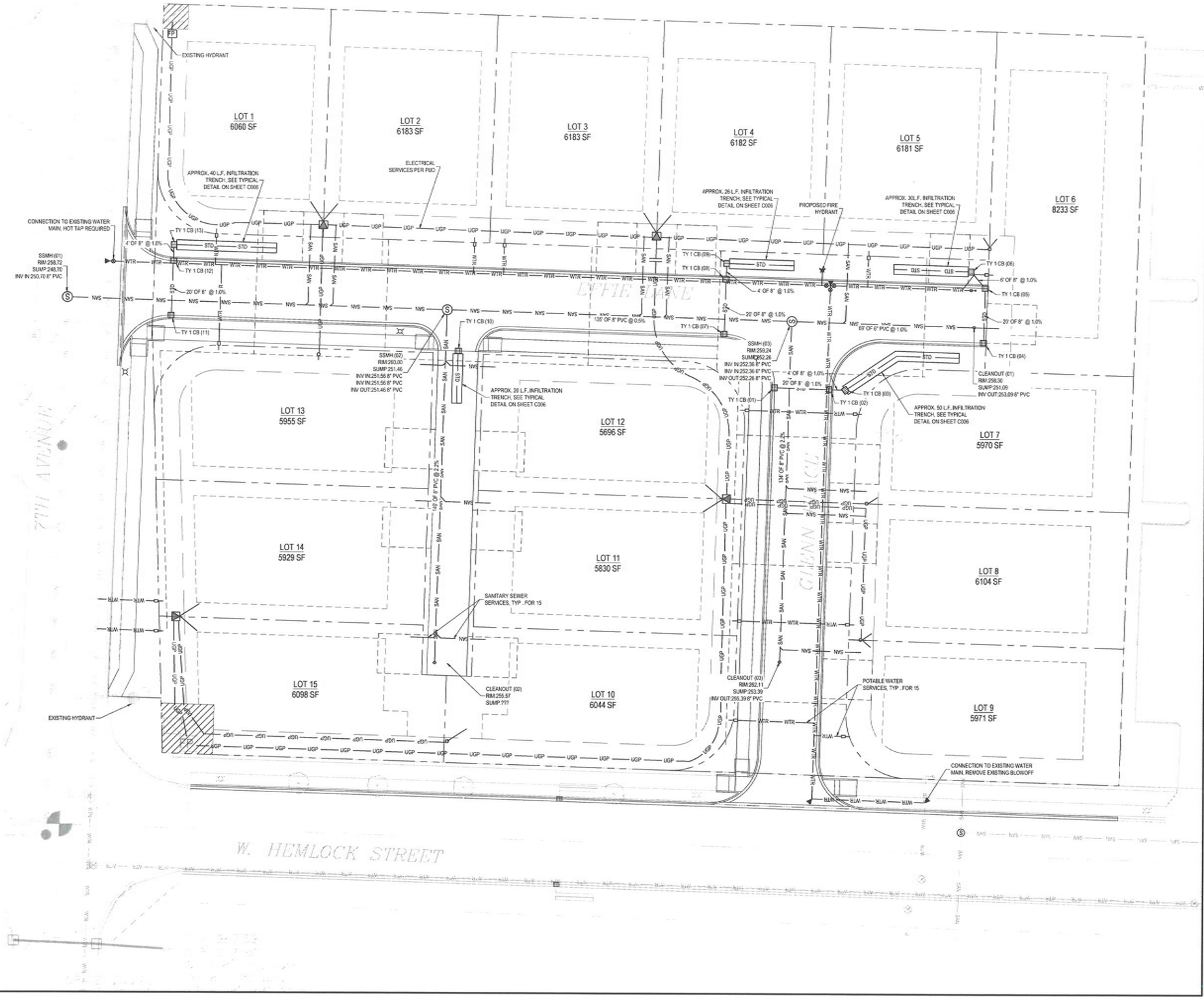
SET: PRELIMINARY PLAT

SETH J. ROOMAN — STATE OF WASHINGTON — 53177 — REGISTERED PROFESSIONAL ENGINEER

SHEET
C002

LEGEND:

- PROPOSED STORM LINE
- PROPOSED WATER LINE
- PROPOSED SEWER LINE
- PROPOSED UTILITY/COMMUNICATION LINES
- PROPOSED IRRIGATION LINES
- PROPOSED SANITARY SEWER SERVICE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER CLEANOUT
- PROPOSED STORM DRAIN CATCH BASIN
- PROPOSED WATER SERVICE CONNECTION
- PROPOSED FIRE HYDRANT
- PROPOSED PEDESTRIAN LUMINARIES



SITE PLAN

Scale: 1" = 20'

0 20' 40' 60

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REVISIONS:

DATE	MARK	NOTE

TITLE: EFFIE ESTATES, PROPOSED SUBDIVISION, 7TH & HEMLOCK, SEQUIM WA

UTILITY PLAN

CLIENT: GMB USA LIMITED
PO BOX 2710
SEQUIM, WA 98362

SCALE: 1" = 20'

FILE: 22044-P1

JOB NO: 22044

DATE: May 3, 2022

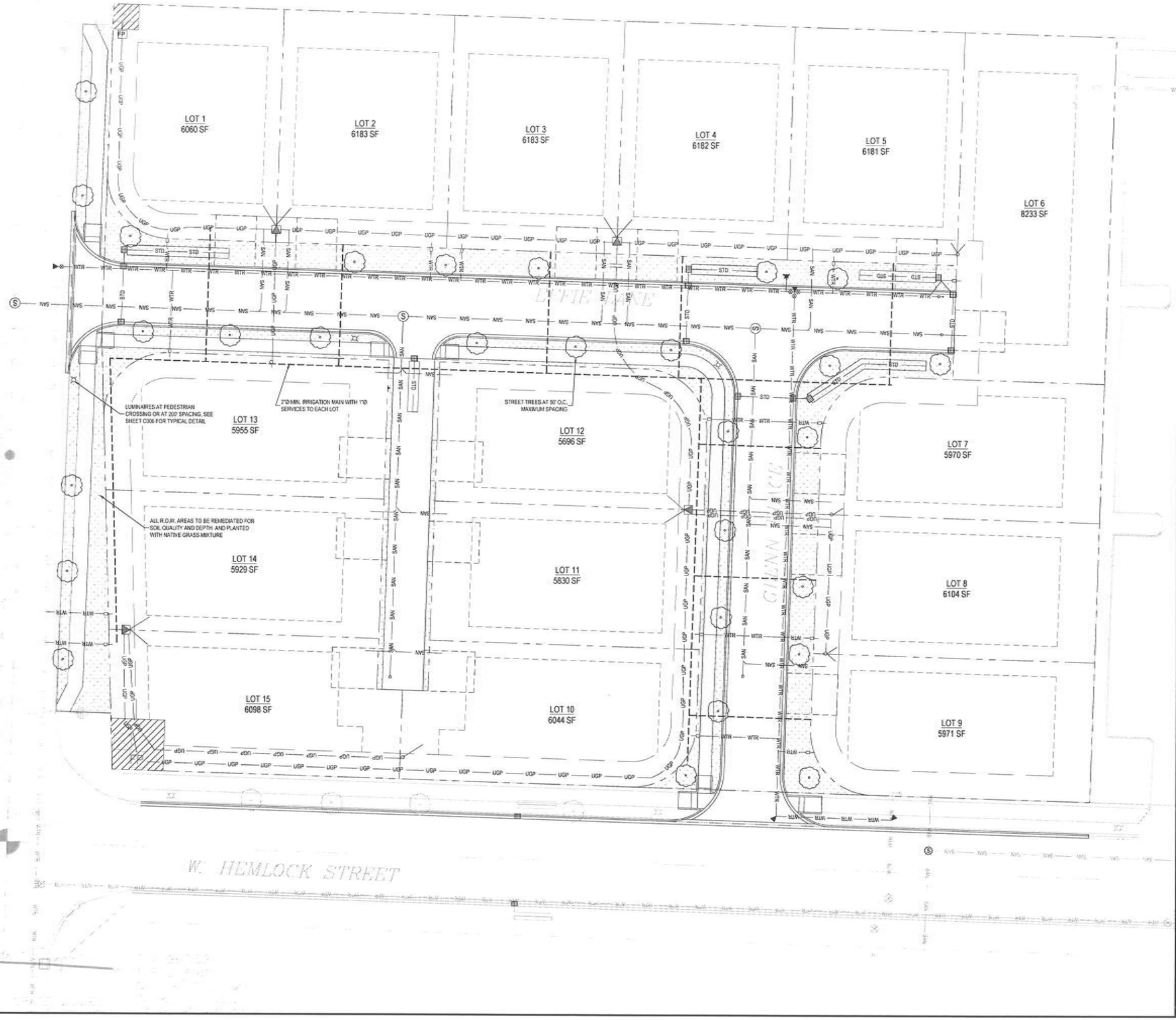
SET: PRELIMINARY PLAT

SETH J. RODMAN
STATE OF WASHINGTON
53772
REGISTERED
PROFESSIONAL ENGINEER
5/3/2022

SHEET
C003

LEGEND:

- PROPERTY BOUNDARY
- BUILDING SETBACK
- EASEMENT BOUNDARY
- PROPOSED STORM LINE
- PROPOSED WATER LINE
- PROPOSED SEWER LINE
- PROPOSED UTILITY/COMMUNICATION LINES
- PROPOSED IRRIGATION LINES
- PROPOSED SANITARY SEWER SERVICE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER CLEANOUT
- PROPOSED STORM DRAIN CATCH BASIN
- PROPOSED WATER SERVICE CONNECTION
- PROPOSED FIRE HYDRANT
- PROPOSED PEDESTRIAN LUMINARIES
- PROPOSED STREET TREES



SITE PLAN

Scale: 1" = 20'

0 20 40 60

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REVISIONS:

DATE	MARK	NOTE

LANDSCAPING & IRRIGATION PLAN

TITLE: EFFIE ESTATES, PROPOSED SUBDIVISION, 7TH & HEMLOCK, SEQUIM WA

CLIENT: GMB USA LIMITED
PO BOX 2710
SEQUIM, WA 98362

SCALE: 1" = 20'

FILE: 22044-P1

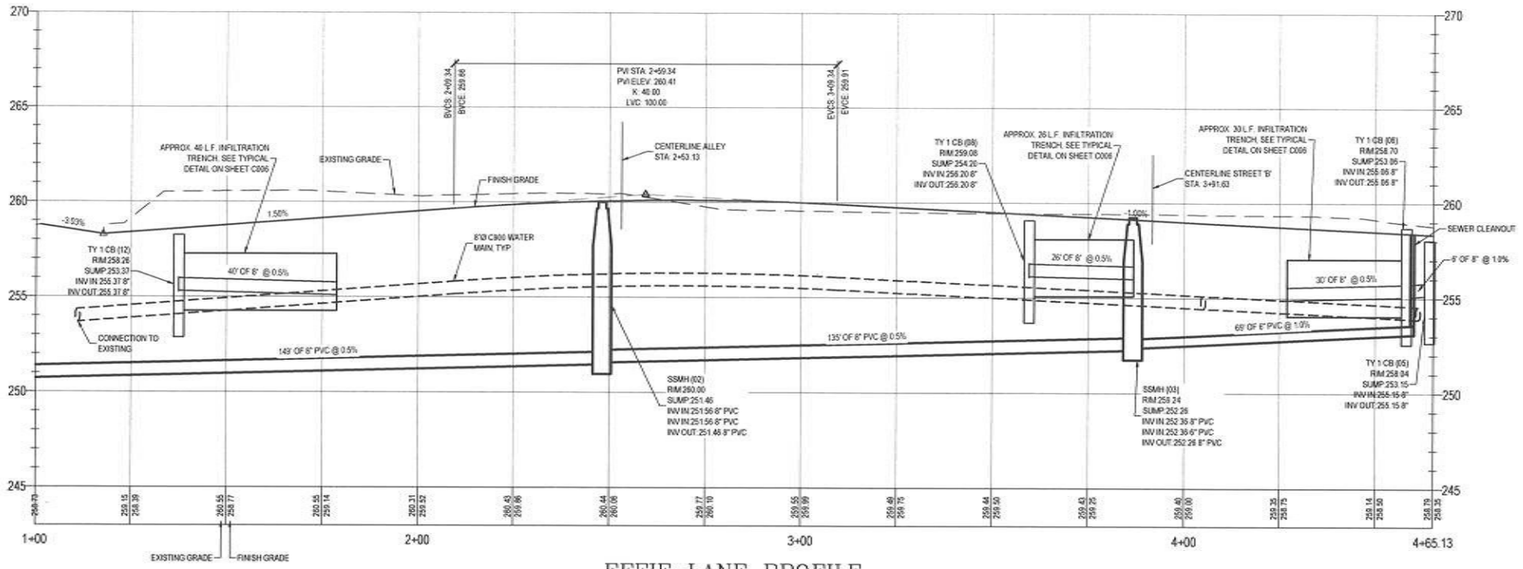
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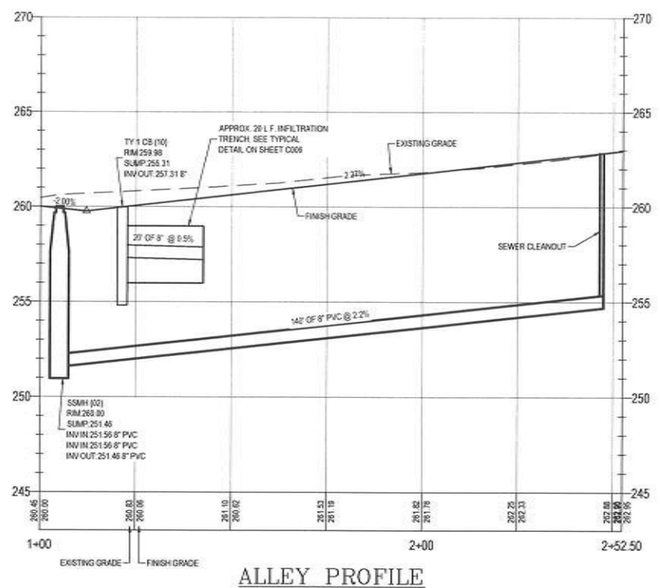
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SETH J. ROEMER
STATE OF WASHINGTON
21577
REGISTERED
PROFESSIONAL ENGINEER
5/3/2022

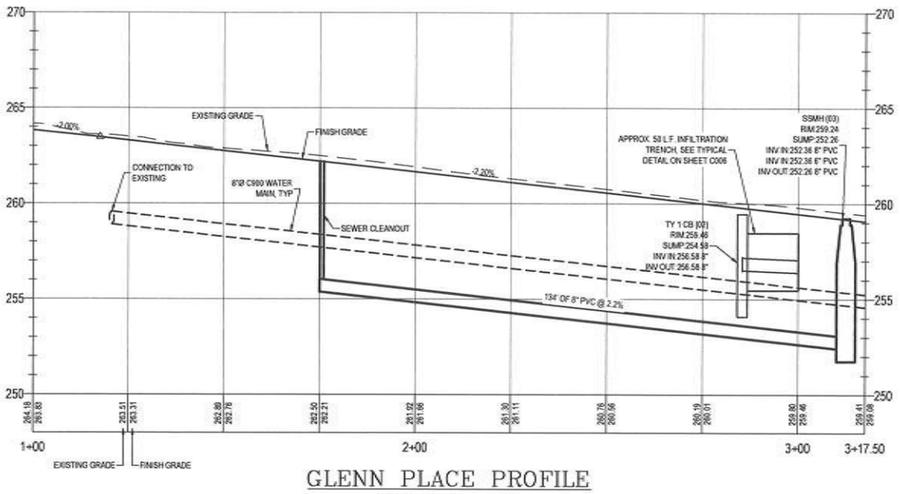
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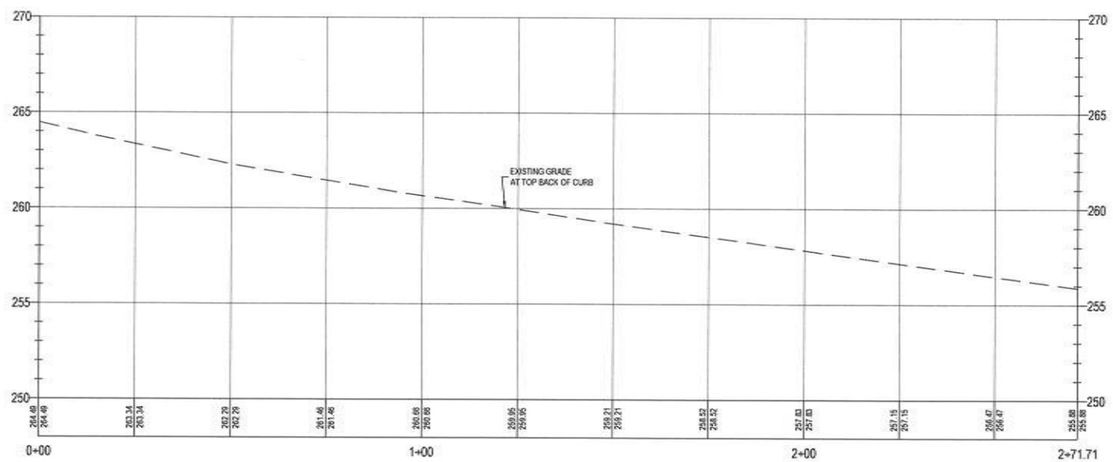
EFFIE LANE PROFILE
SCALE: 20
VERT. EXAGERATION: 5.0



ALLEY PROFILE
SCALE: 20
VERT. EXAGERATION: 5.0



GLENN PLACE PROFILE
SCALE: 20
VERT. EXAGERATION: 5.0



7TH AVENUE – TOP BACK OF CURB PROFILE
SCALE: 20
VERT. EXAGERATION: 5.0

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REVISIONS:

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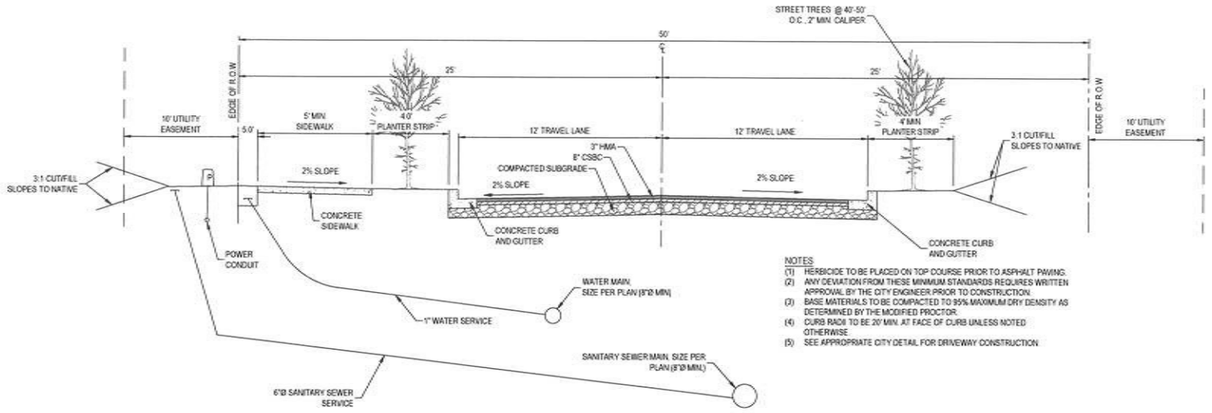
PROFILES

CLIENT:
GMB USA LIMITED
PO BOX 2710
SEQUIM, WA 98362

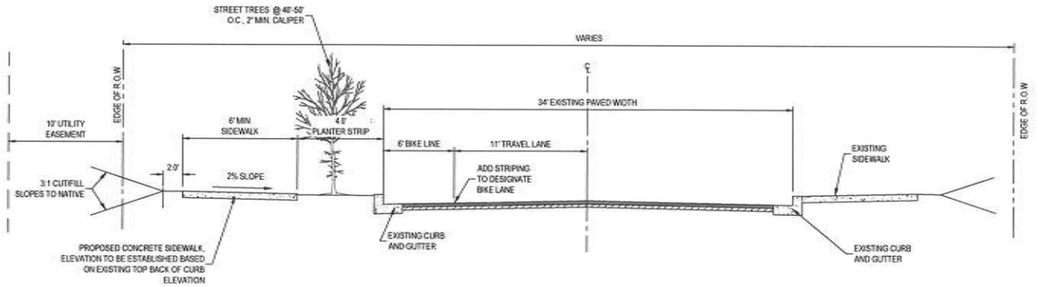
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FILE: 22044-P1
JOB NO: 22044
DATE: May 3, 2022
SET: PRELIMINARY PLAT

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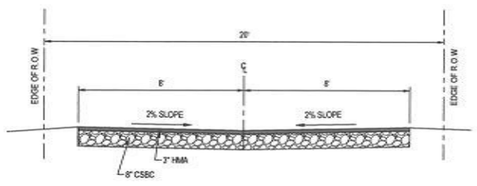
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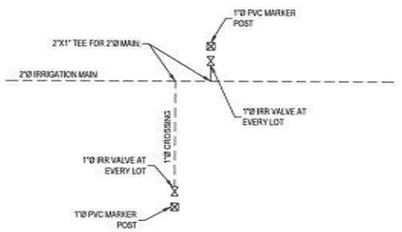
A C003 NEIGHBORHOOD ROADWAY SECTION
Scale: NTS



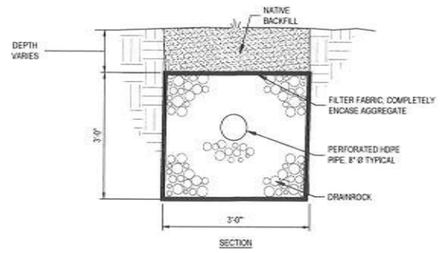
B C003 7TH AVENUE ROADWAY IMPROVEMENTS
Scale: NTS



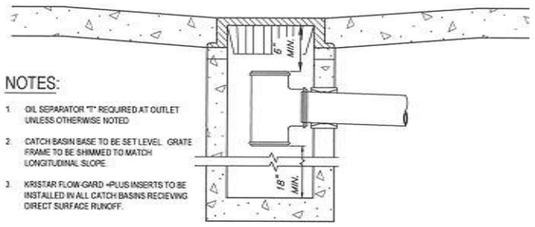
C C003 ALLEY SECTION
Scale: NTS



F C006 TYPICAL IRRIGATION CONNECTION
Scale: NTS

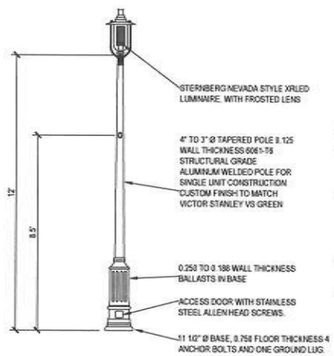


D C006 INFILTRATION TRENCH SECTION
Scale: NTS



NOTES:
1. OIL SEPARATOR "T" REQUIRED AT OUTLET UNLESS OTHERWISE NOTED
2. CATCH BASIN BASE TO BE SET LEVEL. GRATE FRAME TO BE SHIMMED TO MATCH LONGITUDINAL SLOPE.
3. KRISTAR FLOW-GARD +PLUS INSERTS TO BE INSTALLED IN ALL CATCH BASINS RECIEVING DIRECT SURFACE RUNOFF.

E C006 TYPE 1 CATCH BASIN
Scale: NTS



NOTES:
1. LIGHTS TO BE INSTALLED IN PLANTER STRIP 2' FROM BACK OF CURB AND AT LEAST 20' FROM STREET TREES.
2. CONTRACTOR TO COORDINATE WITH THE CITY OF SEQUIM AND THE CALLAM COUNTY PUD #1 FOR PLACEMENT OF METERS AND CONDUIT ROUTING NECESSARY TO PROVIDE A FUNCTIONING LIGHTING SYSTEM.
3. LIGHT POLE BASE MINIMUM DIMENSIONS: 18"Ø x 36" DEEP.
4. LIGHTS SHALL BE INSTALLED WITH A SINGLE PHOTOCELL CONTROLLING EACH LIGHTING CIRCUIT. PHOTOCELL TO BE ATTACHED TO THE LIGHTING BREAKER CABINET.

G C006 LIGHT POLE DETAIL
Scale: NTS

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REVISIONS:

DATE	MARK	NOTE

TITLE: EFFIE ESTATES, PROPOSED SUBDIVISION, 7TH & HEMLOCK, SEQUIM WA

TYPICAL DETAILS

CLIENT: GMB USA LIMITED
PO BOX 2710
SEQUIM, WA 98362

SCALE: NTS
FILE: 22044-P1
JOB NO: 22044
DATE: May 3, 2022
SET: PRELIMINARY PLAT

SETH J. ROMAN
STATE OF WASHINGTON
22177
REGISTERED
PROFESSIONAL ENGINEER

SHEET
C006

TEST PIT #1
0-4" TOPSOIL
4-24" COBBLY LOAMY SAND
24-78" EXTREMELY COBBLY SAND
NO GROUNDWATER OR MOTTLING OBSERVED.
GRAB SAMPLE TAKEN AT 5.0'± (SPIT1)

TEST PIT #2
0-6" TOPSOIL
6-20" COBBLY LOAMY SAND
20-72" EXTREMELY COBBLY SAND
NO GROUNDWATER OR MOTTLING OBSERVED.
GRAB SAMPLE TAKEN AT 5.0'± (SPIT2)

TEST PIT #3
0-6" TOPSOIL
6-16" COBBLY LOAMY SAND
16-72" EXTREMELY COBBLY SAND
NO GROUNDWATER OR MOTTLING OBSERVED.
GRAB SAMPLE TAKEN AT 5.5'± (SPIT3)

TEST PIT #4
0-6" TOPSOIL
6-16" COBBLY LOAMY SAND
16-72" EXTREMELY COBBLY SAND
NO GROUNDWATER OR MOTTLING OBSERVED.
GRAB SAMPLE TAKEN AT 5.5'± (SPIT2)

TEST PIT #5
0-6" EXTREMELY COBBLY LOAMY SAND (FILL)
6-12" TOPSOIL
12-23" EXTREMELY COBBLY LOAMY SAND
20-96" EXTREMELY COBBLY SAND
NO GROUNDWATER OR MOTTLING OBSERVED.

LOT 1
6060 SF

LOT 2
6183 SF

PIT #4

LOT 3
6183 SF

LOT 4
6182 SF

PIT #5

LOT 5
6181 SF

LOT 6
8233 SF

LOT 13
5955 SF

PIT #2

LOT 12
5696 SF

LOT 7
5970 SF

LOT 14
5929 SF

PIT #3

LOT 11
5830 SF

LOT 8
6104 SF

PIT #1

LOT 15
6098 SF

LOT 10
6044 SF

LOT 9
5971 SF

SITE PLAN
Scale: 1" = 20'

ZENOVIC & ASSOCIATES
INCORPORATED
301 E. 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
PHONE (360) 417-0501
FAX (360) 417-0514
EMAIL ZENOVIC@ZENOVIC.NET

REVISIONS:

DATE	MARK	NOTE

TITLE: EFFIE ESTATES, PROPOSED SUBDIVISION, 7TH & HEMLOCK, SEQUIM WA
SOILS INVESTIGATION MAP

CLIENT: GMB USA LIMITED
PO BOX 2710
SEQUIM, WA 98362

SCALE: 1" = 20'

FILE: 22044-P1

JOB NO: 22044

DATE: May 3, 2022

SET: PRELIMINARY PLAT

SETH J. RODMAN
STATE OF WASHINGTON
55777
REGISTERED
PROFESSIONAL ENGINEER
5/3/2022

SHEET
C007

SMALL AREA ALONG 7TH AVENUE WILL NOT BE CONTROLLED. NET INCREASE IN IMPERVIOUS COVERAGE IN 7TH AVENUE WILL BE APPROXIMATELY 400 S.F. ANY IMPACT TO THE EXISTING STORMWATER SYSTEM FROM THIS INCREASE WILL BE NEGLIGIBLE AND SETTING SIDEWALK BACK FROM BACK OF SIDEWALK WILL SERVE TO LOWER RUNOFF RATES THROUGH DISPERSION AND INFILTRATION OF RUNOFF FROM SIDEWALK.

LOT 1
6060 SF

LOT 2
6183 SF

LOT 3
6183 SF

LOT 4
6182 SF

LOT 5
6181 SF

LOT 6
8233 SF

BASIN E

BASIN C

BASIN B

LOT 13
5955 SF

LOT 12
5696 SF

LOT 7
5970 SF

BASIN D

LOT 14
5929 SF

LOT 11
5830 SF

LOT 8
6104 SF

BASIN A

LOT 15
6098 SF

LOT 10
6044 SF

LOT 9
5971 SF

7TH AVENUE

W. HEMLOCK STREET

RIM=260.28
CTR=253.19
OUT: 8" PVC N2E
IN: 8" PVC S2W

SDCB 4B
GRATE=266.21
OUT=263.06

SSMH

SDCB 269.89
GRATE=269.89

SDCB 269.80
GRATE=269.80

RIM=267.52
CTR=256.80
OUT: 8" PVC N2E
IN: 8" PVC W2S

SITE PLAN

Scale: 1" = 20'

0 20' 40' 80'

ZENOVIC & ASSOCIATES
INCORPORATED
3011 E. 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
PHONE (360) 417-0501
FAX (360) 417-0514
EMAIL ZENOVIC@ZENOVIC.NET

REVISIONS:

DATE	MARK	NOTE

TITLE: EFFIE ESTATES, PROPOSED SUBDIVISION; 7TH & HEMLOCK, SEQUIM WA

STORMWATER BASIN MAP

CLIENT: GMB USA LIMITED
PO BOX 2710
SEQUIM, WA 98362

SCALE: 1" = 20'

FILE: 22044-P1

JOB NO: 22044

DATE: May 3, 2022

SET: PRELIMINARY PLAT

SETH J. ROGAN
STATE OF WASHINGTON
53777
REGISTERED
PROFESSIONAL ENGINEER
5/3/2022

SHEET
C008

APPENDIX B

SOIL TEST RESULTS

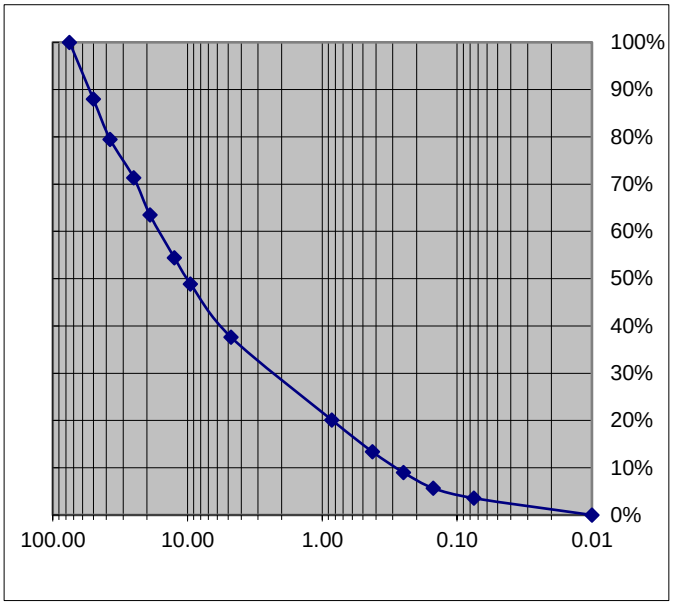
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PO Box 3129 Port Angeles WA 98362
360-809-3329 cis.si@outlook.com

ASTM D2487 CLASSIFICATION OF SOILS

ASTM C136 - SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE

DATE:	2/28/2022
CLIENT:	Zenovic & Associates Inc.
ADDRESS:	301 E 6th, Port Angeles, WA
EMAIL:	seth@zenovic.net
PROJECT:	Parcel# 03-30-19-34-9180
MATERIAL TYPE:	Native onsite soils
MATERIAL SOURCE:	Intersection of NE 7th and Hemlock, Sequim WA
TESTED BY:	Shawn West
SAMPLE ID:	2727-29 / SP#1

DIA -MM	Sieve Size	Wt. (grams)	% Retained	% Passing
75.000	3"	0.0	0.0%	100.0%
50.000	2"	1727.4	12.0%	88.0%
37.500	1 1/2"	1226.0	8.5%	79.5%
25.000	1"	1176.9	8.2%	71.3%
19.000	3/4"	1124.4	7.8%	63.5%
12.500	1/2"	1306.1	9.1%	54.4%
9.500	3/8"	796.3	5.5%	48.9%
4.750	No. 4	1622.6	11.3%	37.6%
0.850	No. 20	2520.0	17.5%	20.1%
0.425	No. 40	966.8	6.7%	13.4%
0.250	No. 60	630.1	4.4%	9.0%
0.150	No. 100	481.6	3.3%	5.7%
0.075	No. 200	301.8	2.1%	3.6%
	Pan	512.8	3.6%	



D10	D30	D60	D90	
0.28	2.4	17.0	53.0	
End Weight:		13880.0	Cu:	60.71
Start Weight:		14392.8	Cc:	1.21
Washed Weight:		512.8	Classification	

REMARKS:

Material sampled by Seth Rodman of Zenovic and Associates Inc. and picked up at the Zenovic office location on 6th st. in Port Angeles. Material was tested using ASTM C 136 Procedure A.

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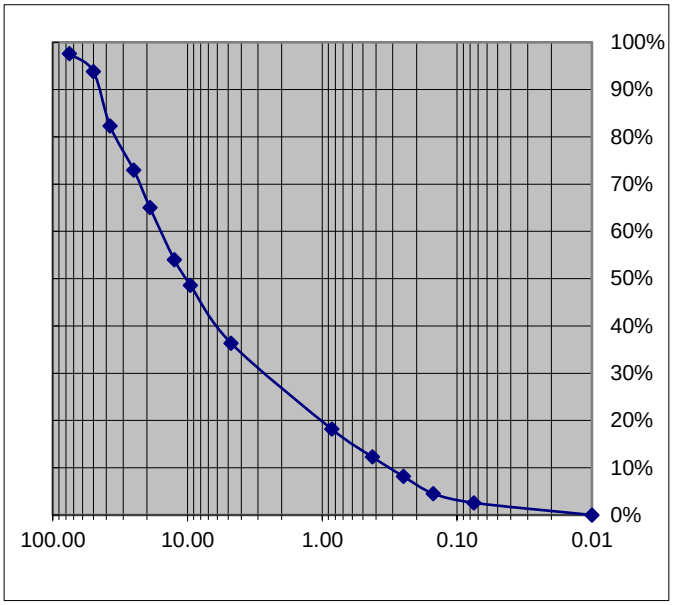
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ASTM D2487 CLASSIFICATION OF SOILS

ASTM C136 - SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE

DATE:	2/28/2022
CLIENT:	Zenovic & Associates Inc.
ADDRESS:	301 E 6th, Port Angeles, WA
EMAIL:	seth@zenovic.net
PROJECT:	Parcel# 03-30-19-34-9180
MATERIAL TYPE:	Native onsite soils
MATERIAL SOURCE:	Intersection of NE 7th and Hemlock, Sequim WA
TESTED BY:	Shawn West
SAMPLE ID:	2728-29 / SP#2

DIA -MM	Sieve Size	Wt. (grams)	% Retained	% Passing
75.000	3"	335.3	2.5%	97.6%
50.000	2"	529.9	3.8%	93.8%
37.500	1 1/2"	1616.6	11.5%	82.3%
25.000	1"	1312.0	9.4%	72.9%
19.000	3/4"	1108.9	7.9%	65.0%
12.500	1/2"	1547.5	11.0%	54.0%
9.500	3/8"	756.4	5.4%	48.6%
4.750	No. 4	1714.7	12.2%	36.3%
0.850	No. 20	2549.1	18.2%	18.2%
0.425	No. 40	824.4	5.9%	12.3%
0.250	No. 60	577.6	4.1%	8.2%
0.150	No. 100	509.7	3.6%	4.5%
0.075	No. 200	272.4	1.9%	2.6%
	Pan	362.2	2.6%	



D10	D30	D60	D90	
0.32	2.8	17.0	45.0	
End Weight:		13654.5	Cu:	53.13
Start Weight:		14016.7	Cc:	1.44
Washed Weight:		362.2	Classification	

REMARKS:

Material sampled by Seth Rodman of Zenovic and Associates Inc. and picked up at the Zenovic office location on 6th st. in Port Angeles. Material was tested using ASTM C 136 Procedure A.

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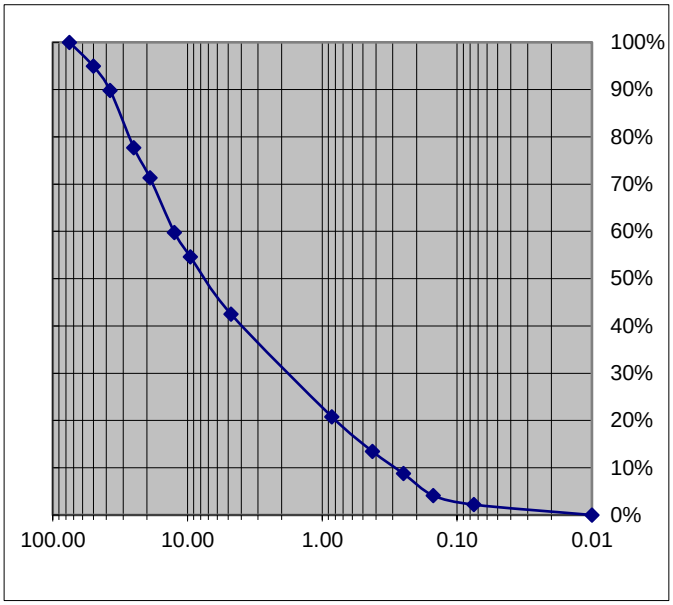
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ASTM D2487 CLASSIFICATION OF SOILS

ASTM C136 - SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE

DATE:	2/28/2022
CLIENT:	Zenovic & Associates Inc.
ADDRESS:	301 E 6th, Port Angeles, WA
EMAIL:	seth@zenovic.net
PROJECT:	Parcel# 03-30-19-34-9180
MATERIAL TYPE:	Native onsite soils
MATERIAL SOURCE:	Intersection of NE 7th and Hemlock, Sequim WA
TESTED BY:	Shawn West
SAMPLE ID:	2729-29 / SP#3

DIA -MM	Sieve Size	Wt. (grams)	% Retained	% Passing
75.000	3"	0.0	0.0%	100.0%
50.000	2"	816.0	5.0%	95.0%
37.500	1 1/2"	831.8	5.1%	89.8%
25.000	1"	1960.9	12.1%	77.7%
19.000	3/4"	1028.9	6.4%	71.3%
12.500	1/2"	1867.5	11.5%	59.8%
9.500	3/8"	838.9	5.2%	54.6%
4.750	No. 4	1959.2	12.1%	42.5%
0.850	No. 20	3507.8	21.7%	20.8%
0.425	No. 40	1184.4	7.3%	13.5%
0.250	No. 60	762.6	4.7%	8.8%
0.150	No. 100	751.9	4.6%	4.1%
0.075	No. 200	309.0	1.9%	2.2%
	Pan	354.6	2.2%	



D10	D30	D60	D90	
0.29	1.8	13.0	38.0	
End Weight:		15818.9	Cu:	44.83
Start Weight:		16173.5	Cc:	0.86
Washed Weight:		354.6	Classification	

REMARKS:

Material sampled by Seth Rodman of Zenovic and Associates Inc. and picked up at the Zenovic office location on 6th st. in Port Angeles. Material was tested using ASTM C 136 Procedure A.

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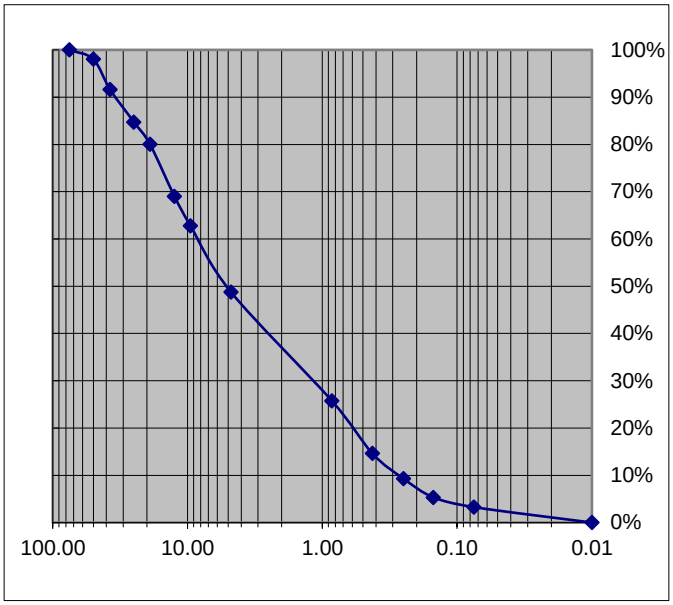
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ASTM D2487 CLASSIFICATION OF SOILS

ASTM C136 - SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE

DATE:	2/28/2022
CLIENT:	Zenovic & Associates Inc.
ADDRESS:	301 E 6th, Port Angeles, WA
EMAIL:	seth@zenovic.net
PROJECT:	Parcel# 03-30-19-34-9180
MATERIAL TYPE:	Native onsite soils
MATERIAL SOURCE:	Intersection of NE 7th and Hemlock, Sequim WA
TESTED BY:	Shawn West
SAMPLE ID:	2730-29 / SP#4

DIA -MM	Sieve Size	Wt. (grams)	% Retained	% Passing
75.000	3"	0.0	0.0%	100.0%
50.000	2"	270.3	2.0%	98.0%
37.500	1 1/2"	875.9	6.4%	91.6%
25.000	1"	932.2	6.8%	84.7%
19.000	3/4"	640.0	4.7%	80.0%
12.500	1/2"	1503.5	11.0%	69.0%
9.500	3/8"	851.2	6.2%	62.8%
4.750	No. 4	1911.1	14.0%	48.7%
0.850	No. 20	3130.0	23.0%	25.8%
0.425	No. 40	1517.7	11.1%	14.6%
0.250	No. 60	724.5	5.3%	9.3%
0.150	No. 100	540.7	4.0%	5.3%
0.075	No. 200	280.8	2.1%	3.3%
	Pan	445.5	3.3%	



D10	D30	D60	D90	
0.28	1.3	8.4	35.0	
End Weight:		13177.9	Cu:	30.00
Start Weight:		13623.4	Cc:	0.72
Washed Weight:		445.5	Classification	

REMARKS:

Material sampled by Seth Rodman of Zenovic and Associates Inc. and picked up at the Zenovic office location on 6th st. in Port Angeles. Material was tested using ASTM C 136 Procedure A.

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INFILTRATION RATE CALCULATION - GRAIN SIZE ANALYSIS

PROJECT: GMB USA Limited - Effie Estates Subdivision
LOCATION: W Hemlock St. & 7th Avenue, Sequim
PARCEL NO: 03-30-19-34-9180

ZENOVIC & ASSOCIATES
301 EAST 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
DATE: 5/3/2022
JOB NO. 22044
AUTHOR: SJR

Location TP #1

D_{10}	0.28
D_{60}	17
D_{90}	53
%Fines	0.036

K_{sat}initial (cm/s)	0.028
CF_v	0.8
CF_t	0.4
CF_m	0.9
K_{sat}design (cm/s)	0.0082
K_{sat}design (in/hr)	11.6

Location TP #2

D_{10}	0.32
D_{60}	17
D_{90}	45
%Fines	0.026

K_{sat}initial (cm/s)	0.045
CF_v	0.8
CF_t	0.4
CF_m	0.9
K_{sat}design (cm/s)	0.0130
K_{sat}design (in/hr)	18.4

Location TP #3

D_{10}	0.29
D_{60}	13
D_{90}	38
%Fines	0.022

K_{sat}initial (cm/s)	0.043
CF_v	0.8
CF_t	0.4
CF_m	0.9
K_{sat}design (cm/s)	0.0125
K_{sat}design (in/hr)	17.7

$$\log_{10}(K_{sat}) = -1.57 + 1.90D_{10} + 0.015D_{60} - 0.013D_{90} - 2.08f_{fines}$$

Total Correction Factor, $CF_T = CF_v \times CF_t \times CF_m$

K_{sat} design = K_{sat} initial X CF_T

Table 3.3.1
Correction Factors to be Used With In-Situ Saturated Hydraulic Conductivity Measurements to Estimate Design Rates.

Issue	Partial Correction Factor
Site variability and number of locations tested	CF_v = 0.33 to 1.0
Test Method Large-scale PIT Small-scale PIT Other small-scale (e.g. Double ring, falling head) Grain Size Method	 CF_t = 0.75 = 0.50 = 0.40 = 0.40
Degree of influent control to prevent siltation and bio-buildup	CF_m = 0.9

INFILTRATION RATE CALCULATION - GRAIN SIZE ANALYSIS

PROJECT: GMB USA Limited - Effie Estates Subdivision
LOCATION: W Hemlock St. & 7th Avenue, Sequim
PARCEL NO: 03-30-19-34-9180

ZENOVIC & ASSOCIATES
301 EAST 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
DATE: 5/3/2022
JOB NO. 22044
AUTHOR: SJR

Location TP #4

D_{10}	0.28
D_{60}	8.4
D_{90}	35
%Fines	0.033

K_{sat}initial (cm/s)	0.037
CF_v	0.8
CF_t	0.4
CF_m	0.9
K_{sat}design (cm/s)	0.0106
K_{sat}design (in/hr)	15.0

Location

D_{10}	
D_{60}	
D_{90}	
%Fines	

K_{sat}initial (cm/s)	
CF_v	
CF_t	
CF_m	
K_{sat}design (cm/s)	
K_{sat}design (in/hr)	

Location

D_{10}	
D_{60}	
D_{90}	
%Fines	

K_{sat}initial (cm/s)	
CF_v	
CF_t	
CF_m	
K_{sat}design (cm/s)	
K_{sat}design (in/hr)	

$$\log_{10}(K_{sat}) = -1.57 + 1.90D_{10} + 0.015D_{60} - 0.013D_{90} - 2.08f_{fines}$$

Total Correction Factor, $CF_T = CF_v \times CF_t \times CF_m$

$K_{sat\ design} = K_{sat\ initial} \times CF_T$

Table 3.3.1
Correction Factors to be Used With In-Situ Saturated Hydraulic Conductivity Measurements to Estimate Design Rates.

Issue	Partial Correction Factor
Site variability and number of locations tested	CF_v = 0.33 to 1.0
Test Method Large-scale PIT Small-scale PIT Other small-scale (e.g. Double ring, falling head) Grain Size Method	 CF_t = 0.75 = 0.50 = 0.40 = 0.40
Degree of influent control to prevent siltation and bio-buildup	CF_m = 0.9

APPENDIX C

WWHM CALCULATIONS

WWHM2012

PROJECT REPORT

General Model Information

Project Name:	22044 - INFILTRATION TRENCHES
Site Name:	Effie Estates
Site Address:	Hemlock Street
City:	Sequim
Report Date:	5/2/2022
Gage:	Port Angelis
Data Start:	1948/10/01
Data End:	2009/09/30
Timestep:	15 Minute
Precip Scale:	0.800
Version Date:	2018/10/10
Version:	4.2.16

POC Thresholds

Low Flow Threshold for POC1:	50 Percent of the 2 Year
High Flow Threshold for POC1:	50 Year
Low Flow Threshold for POC2:	50 Percent of the 2 Year
High Flow Threshold for POC2:	50 Year
Low Flow Threshold for POC3:	50 Percent of the 2 Year
High Flow Threshold for POC3:	50 Year

Landuse Basin Data

Predeveloped Land Use

ROW Areas

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
A B, Forest, Flat	0.5996
Pervious Total	0.5996
Impervious Land Use	acre
Impervious Total	0
Basin Total	0.5996

Element Flows To:

Surface	Interflow	Groundwater

Model Lot

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
A B, Forest, Flat	0.1377
Pervious Total	0.1377
Impervious Land Use	acre
Impervious Total	0
Basin Total	0.1377

Element Flows To:

Surface	Interflow	Groundwater

Mitigated Land Use

Basin A

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Pasture, Flat	0.0502
Pervious Total	0.0502

Impervious Land Use	acre
ROADS FLAT	0.0972
DRIVEWAYS FLAT	0.0147
SIDEWALKS FLAT	0.0205
Impervious Total	0.1324
Basin Total	0.1826

Element Flows To:

Surface	Interflow	Groundwater
Gravel Trench Bed A	Gravel Trench Bed A	

Basin B

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Pasture, Flat	0.0416
Pervious Total	0.0416

Impervious Land Use	acre
ROADS FLAT	0.0755
DRIVEWAYS FLAT	0.0037
SIDEWALKS FLAT	0.0024
Impervious Total	0.0816
Basin Total	0.1232

Element Flows To:

Surface	Interflow	Groundwater
Gravel Trench Bed B	Gravel Trench Bed B	

Basin C

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Pasture, Flat	0.024
Pervious Total	0.024

Impervious Land Use	acre
ROADS FLAT	0.0512
DRIVEWAYS FLAT	0.0073
SIDEWALKS FLAT	0.0102
Impervious Total	0.0687
Basin Total	0.0927

Element Flows To:

Surface	Interflow	Groundwater
Gravel Trench Bed C	Gravel Trench Bed C	

Basin D

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Pasture, Flat	0.0076
Pervious Total	0.0076

Impervious Land Use	acre
ROADS FLAT	0.0483
DRIVEWAYS FLAT	0.0044
Impervious Total	0.0527
Basin Total	0.0603

Element Flows To:

Surface	Interflow	Groundwater
Gravel Trench Bed D	Gravel Trench Bed D	

Basin E

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Pasture, Flat	0.0381
Pervious Total	0.0381

Impervious Land Use	acre
ROADS FLAT	0.082
DRIVEWAYS FLAT	0.0073
SIDEWALKS FLAT	0.0134
Impervious Total	0.1027
Basin Total	0.1408

Element Flows To:

Surface	Interflow	Groundwater
Gravel Trench Bed E	Gravel Trench Bed E	

Model Lot - Roof

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
Pervious Total	0
Impervious Land Use	acre
ROOF TOPS FLAT	0.0689
Impervious Total	0.0689
Basin Total	0.0689

Element Flows To:

Surface	Interflow	Groundwater
Residence Drywell	Residence Drywell	

Model Lot - Driveway

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
Pervious Total	0
Impervious Land Use	acre
DRIVEWAYS FLAT	0.0344
Impervious Total	0.0344
Basin Total	0.0344

Element Flows To:

Surface	Interflow	Groundwater
Surface Residence RG	Surface Residence RG	

Lot Remainder

Bypass:	Yes
GroundWater:	No
Pervious Land Use	acre
A B, Pasture, Flat	0.0344
Pervious Total	0.0344
Impervious Land Use	acre
Impervious Total	0
Basin Total	0.0344

Element Flows To:

Surface	Interflow	Groundwater

Routing Elements
Predeveloped Routing

Mitigated Routing

Gravel Trench Bed A

Bottom Length:	50.00 ft.
Bottom Width:	4.00 ft.
Trench bottom slope 1:	0.01 To 1
Trench Left side slope 0:	0.01 To 1
Trench right side slope 2:	0.01 To 1
Material thickness of first layer:	3
Pour Space of material for first layer:	0.33
Material thickness of second layer:	0
Pour Space of material for second layer:	0
Material thickness of third layer:	0
Pour Space of material for third layer:	0
Infiltration On	
Infiltration rate:	5.5
Infiltration safety factor:	1
Wetted surface area On	
Total Volume Infiltrated (ac-ft.):	9.339
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	9.339
Percent Infiltrated:	100
Total Precip Applied to Facility:	0
Total Evap From Facility:	0
Discharge Structure	
Riser Height:	3 ft.
Riser Diameter:	10 in.
Element Flows To:	
Outlet 1	Outlet 2

Gravel Trench Bed Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.004	0.000	0.000	0.000
0.0444	0.004	0.000	0.000	0.025
0.0889	0.004	0.000	0.000	0.025
0.1333	0.004	0.000	0.000	0.025
0.1778	0.004	0.000	0.000	0.025
0.2222	0.004	0.000	0.000	0.025
0.2667	0.004	0.000	0.000	0.025
0.3111	0.004	0.000	0.000	0.025
0.3556	0.004	0.000	0.000	0.025
0.4000	0.004	0.000	0.000	0.025
0.4444	0.004	0.000	0.000	0.025
0.4889	0.004	0.000	0.000	0.025
0.5333	0.004	0.000	0.000	0.025
0.5778	0.004	0.000	0.000	0.025
0.6222	0.004	0.000	0.000	0.025
0.6667	0.004	0.001	0.000	0.025
0.7111	0.004	0.001	0.000	0.025
0.7556	0.004	0.001	0.000	0.025
0.8000	0.004	0.001	0.000	0.025
0.8444	0.004	0.001	0.000	0.025
0.8889	0.004	0.001	0.000	0.025
0.9333	0.004	0.001	0.000	0.025
0.9778	0.004	0.001	0.000	0.025

1.0222	0.004	0.001	0.000	0.025
1.0667	0.004	0.001	0.000	0.025
1.1111	0.004	0.001	0.000	0.025
1.1556	0.004	0.001	0.000	0.025
1.2000	0.004	0.001	0.000	0.025
1.2444	0.004	0.001	0.000	0.025
1.2889	0.004	0.002	0.000	0.025
1.3333	0.004	0.002	0.000	0.025
1.3778	0.004	0.002	0.000	0.025
1.4222	0.004	0.002	0.000	0.025
1.4667	0.004	0.002	0.000	0.025
1.5111	0.004	0.002	0.000	0.025
1.5556	0.004	0.002	0.000	0.025
1.6000	0.004	0.002	0.000	0.025
1.6444	0.004	0.002	0.000	0.025
1.6889	0.004	0.002	0.000	0.025
1.7333	0.004	0.002	0.000	0.025
1.7778	0.004	0.002	0.000	0.025
1.8222	0.004	0.002	0.000	0.025
1.8667	0.004	0.002	0.000	0.025
1.9111	0.004	0.002	0.000	0.025
1.9556	0.004	0.003	0.000	0.025
2.0000	0.004	0.003	0.000	0.025
2.0444	0.004	0.003	0.000	0.025
2.0889	0.004	0.003	0.000	0.025
2.1333	0.004	0.003	0.000	0.025
2.1778	0.004	0.003	0.000	0.025
2.2222	0.004	0.003	0.000	0.025
2.2667	0.004	0.003	0.000	0.025
2.3111	0.004	0.003	0.000	0.025
2.3556	0.004	0.003	0.000	0.025
2.4000	0.004	0.003	0.000	0.025
2.4444	0.004	0.003	0.000	0.025
2.4889	0.004	0.003	0.000	0.025
2.5333	0.004	0.003	0.000	0.025
2.5778	0.004	0.003	0.000	0.025
2.6222	0.004	0.004	0.000	0.025
2.6667	0.004	0.004	0.000	0.025
2.7111	0.004	0.004	0.000	0.025
2.7556	0.004	0.004	0.000	0.025
2.8000	0.004	0.004	0.000	0.025
2.8444	0.004	0.004	0.000	0.025
2.8889	0.004	0.004	0.000	0.025
2.9333	0.004	0.004	0.000	0.025
2.9778	0.004	0.004	0.000	0.025
3.0222	0.004	0.004	0.029	0.025
3.0667	0.004	0.005	0.151	0.025
3.1111	0.004	0.005	0.323	0.025
3.1556	0.004	0.005	0.523	0.025
3.2000	0.004	0.005	0.733	0.025
3.2444	0.004	0.005	0.933	0.025
3.2889	0.004	0.006	1.107	0.025
3.3333	0.004	0.006	1.242	0.025
3.3778	0.004	0.006	1.337	0.025
3.4222	0.004	0.006	1.421	0.025
3.4667	0.004	0.006	1.494	0.025
3.5111	0.004	0.007	1.563	0.025
3.5556	0.004	0.007	1.630	0.026

3.6000	0.004	0.007	1.694	0.026
3.6444	0.004	0.007	1.755	0.026
3.6889	0.004	0.007	1.815	0.026
3.7333	0.004	0.008	1.873	0.026
3.7778	0.004	0.008	1.929	0.026
3.8222	0.004	0.008	1.983	0.026
3.8667	0.004	0.008	2.036	0.026
3.9111	0.004	0.008	2.087	0.026
3.9556	0.004	0.009	2.138	0.026
4.0000	0.004	0.009	2.187	0.026

Gravel Trench Bed B

Bottom Length:	35.00 ft.
Bottom Width:	4.00 ft.
Trench bottom slope 1:	0.01 To 1
Trench Left side slope 0:	0.01 To 1
Trench right side slope 2:	0.01 To 1
Material thickness of first layer:	3
Pour Space of material for first layer:	0.33
Material thickness of second layer:	0
Pour Space of material for second layer:	0
Material thickness of third layer:	0
Pour Space of material for third layer:	0
Infiltration On	
Infiltration rate:	5.5
Infiltration safety factor:	1
Wetted surface area On	
Total Volume Infiltrated (ac-ft.):	5.714
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	5.714
Percent Infiltrated:	100
Total Precip Applied to Facility:	0
Total Evap From Facility:	0
Discharge Structure	
Riser Height:	3 ft.
Riser Diameter:	10 in.
Element Flows To:	
Outlet 1	Outlet 2

Gravel Trench Bed Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.003	0.000	0.000	0.000
0.0444	0.003	0.000	0.000	0.017
0.0889	0.003	0.000	0.000	0.017
0.1333	0.003	0.000	0.000	0.017
0.1778	0.003	0.000	0.000	0.017
0.2222	0.003	0.000	0.000	0.017
0.2667	0.003	0.000	0.000	0.017
0.3111	0.003	0.000	0.000	0.017
0.3556	0.003	0.000	0.000	0.017
0.4000	0.003	0.000	0.000	0.017
0.4444	0.003	0.000	0.000	0.017
0.4889	0.003	0.000	0.000	0.017
0.5333	0.003	0.000	0.000	0.017
0.5778	0.003	0.000	0.000	0.017
0.6222	0.003	0.000	0.000	0.017
0.6667	0.003	0.000	0.000	0.017
0.7111	0.003	0.000	0.000	0.017
0.7556	0.003	0.000	0.000	0.017
0.8000	0.003	0.000	0.000	0.017
0.8444	0.003	0.000	0.000	0.017
0.8889	0.003	0.000	0.000	0.017
0.9333	0.003	0.001	0.000	0.017
0.9778	0.003	0.001	0.000	0.017
1.0222	0.003	0.001	0.000	0.017
1.0667	0.003	0.001	0.000	0.017

1.1111	0.003	0.001	0.000	0.017
1.1556	0.003	0.001	0.000	0.017
1.2000	0.003	0.001	0.000	0.017
1.2444	0.003	0.001	0.000	0.017
1.2889	0.003	0.001	0.000	0.018
1.3333	0.003	0.001	0.000	0.018
1.3778	0.003	0.001	0.000	0.018
1.4222	0.003	0.001	0.000	0.018
1.4667	0.003	0.001	0.000	0.018
1.5111	0.003	0.001	0.000	0.018
1.5556	0.003	0.001	0.000	0.018
1.6000	0.003	0.001	0.000	0.018
1.6444	0.003	0.001	0.000	0.018
1.6889	0.003	0.001	0.000	0.018
1.7333	0.003	0.001	0.000	0.018
1.7778	0.003	0.001	0.000	0.018
1.8222	0.003	0.001	0.000	0.018
1.8667	0.003	0.002	0.000	0.018
1.9111	0.003	0.002	0.000	0.018
1.9556	0.003	0.002	0.000	0.018
2.0000	0.003	0.002	0.000	0.018
2.0444	0.003	0.002	0.000	0.018
2.0889	0.003	0.002	0.000	0.018
2.1333	0.003	0.002	0.000	0.018
2.1778	0.003	0.002	0.000	0.018
2.2222	0.003	0.002	0.000	0.018
2.2667	0.003	0.002	0.000	0.018
2.3111	0.003	0.002	0.000	0.018
2.3556	0.003	0.002	0.000	0.018
2.4000	0.003	0.002	0.000	0.018
2.4444	0.003	0.002	0.000	0.018
2.4889	0.003	0.002	0.000	0.018
2.5333	0.003	0.002	0.000	0.018
2.5778	0.003	0.002	0.000	0.018
2.6222	0.003	0.002	0.000	0.018
2.6667	0.003	0.002	0.000	0.018
2.7111	0.003	0.002	0.000	0.018
2.7556	0.003	0.002	0.000	0.018
2.8000	0.003	0.003	0.000	0.018
2.8444	0.003	0.003	0.000	0.018
2.8889	0.003	0.003	0.000	0.018
2.9333	0.003	0.003	0.000	0.018
2.9778	0.003	0.003	0.000	0.018
3.0222	0.003	0.003	0.029	0.018
3.0667	0.003	0.003	0.151	0.018
3.1111	0.003	0.003	0.323	0.018
3.1556	0.003	0.003	0.523	0.018
3.2000	0.003	0.003	0.733	0.018
3.2444	0.003	0.004	0.933	0.018
3.2889	0.003	0.004	1.107	0.018
3.3333	0.003	0.004	1.242	0.018
3.3778	0.003	0.004	1.337	0.018
3.4222	0.003	0.004	1.421	0.018
3.4667	0.003	0.004	1.494	0.018
3.5111	0.003	0.004	1.563	0.018
3.5556	0.003	0.005	1.630	0.018
3.6000	0.003	0.005	1.694	0.018
3.6444	0.003	0.005	1.755	0.018

3.6889	0.003	0.005	1.815	0.018
3.7333	0.003	0.005	1.873	0.018
3.7778	0.003	0.005	1.929	0.018
3.8222	0.003	0.005	1.983	0.018
3.8667	0.003	0.006	2.036	0.018
3.9111	0.003	0.006	2.087	0.018
3.9556	0.003	0.006	2.138	0.018
4.0000	0.003	0.006	2.187	0.018

Gravel Trench Bed C

Bottom Length:	26.00 ft.
Bottom Width:	4.00 ft.
Trench bottom slope 1:	0.01 To 1
Trench Left side slope 0:	0.01 To 1
Trench right side slope 2:	0.01 To 1
Material thickness of first layer:	3
Pour Space of material for first layer:	0.33
Material thickness of second layer:	0
Pour Space of material for second layer:	0
Material thickness of third layer:	0
Pour Space of material for third layer:	0
Infiltration On	
Infiltration rate:	5.5
Infiltration safety factor:	1
Wetted surface area On	
Total Volume Infiltrated (ac-ft.):	4.794
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	4.794
Percent Infiltrated:	100
Total Precip Applied to Facility:	0
Total Evap From Facility:	0
Discharge Structure	
Riser Height:	3 ft.
Riser Diameter:	10 in.
Element Flows To:	
Outlet 1	Outlet 2

Gravel Trench Bed Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.002	0.000	0.000	0.000
0.0444	0.002	0.000	0.000	0.013
0.0889	0.002	0.000	0.000	0.013
0.1333	0.002	0.000	0.000	0.013
0.1778	0.002	0.000	0.000	0.013
0.2222	0.002	0.000	0.000	0.013
0.2667	0.002	0.000	0.000	0.013
0.3111	0.002	0.000	0.000	0.013
0.3556	0.002	0.000	0.000	0.013
0.4000	0.002	0.000	0.000	0.013
0.4444	0.002	0.000	0.000	0.013
0.4889	0.002	0.000	0.000	0.013
0.5333	0.002	0.000	0.000	0.013
0.5778	0.002	0.000	0.000	0.013
0.6222	0.002	0.000	0.000	0.013
0.6667	0.002	0.000	0.000	0.013
0.7111	0.002	0.000	0.000	0.013
0.7556	0.002	0.000	0.000	0.013
0.8000	0.002	0.000	0.000	0.013
0.8444	0.002	0.000	0.000	0.013
0.8889	0.002	0.000	0.000	0.013
0.9333	0.002	0.000	0.000	0.013
0.9778	0.002	0.000	0.000	0.013
1.0222	0.002	0.000	0.000	0.013
1.0667	0.002	0.000	0.000	0.013

1.1111	0.002	0.000	0.000	0.013
1.1556	0.002	0.000	0.000	0.013
1.2000	0.002	0.000	0.000	0.013
1.2444	0.002	0.001	0.000	0.013
1.2889	0.002	0.001	0.000	0.013
1.3333	0.002	0.001	0.000	0.013
1.3778	0.002	0.001	0.000	0.013
1.4222	0.002	0.001	0.000	0.013
1.4667	0.002	0.001	0.000	0.013
1.5111	0.002	0.001	0.000	0.013
1.5556	0.002	0.001	0.000	0.013
1.6000	0.002	0.001	0.000	0.013
1.6444	0.002	0.001	0.000	0.013
1.6889	0.002	0.001	0.000	0.013
1.7333	0.002	0.001	0.000	0.013
1.7778	0.002	0.001	0.000	0.013
1.8222	0.002	0.001	0.000	0.013
1.8667	0.002	0.001	0.000	0.013
1.9111	0.002	0.001	0.000	0.013
1.9556	0.002	0.001	0.000	0.013
2.0000	0.002	0.001	0.000	0.013
2.0444	0.002	0.001	0.000	0.013
2.0889	0.002	0.001	0.000	0.013
2.1333	0.002	0.001	0.000	0.013
2.1778	0.002	0.001	0.000	0.013
2.2222	0.002	0.001	0.000	0.013
2.2667	0.002	0.001	0.000	0.013
2.3111	0.002	0.001	0.000	0.013
2.3556	0.002	0.001	0.000	0.013
2.4000	0.002	0.001	0.000	0.013
2.4444	0.002	0.001	0.000	0.013
2.4889	0.002	0.002	0.000	0.013
2.5333	0.002	0.002	0.000	0.013
2.5778	0.002	0.002	0.000	0.013
2.6222	0.002	0.002	0.000	0.013
2.6667	0.002	0.002	0.000	0.013
2.7111	0.002	0.002	0.000	0.013
2.7556	0.002	0.002	0.000	0.013
2.8000	0.002	0.002	0.000	0.013
2.8444	0.002	0.002	0.000	0.013
2.8889	0.002	0.002	0.000	0.013
2.9333	0.002	0.002	0.000	0.013
2.9778	0.002	0.002	0.000	0.013
3.0222	0.002	0.002	0.029	0.013
3.0667	0.002	0.002	0.151	0.013
3.1111	0.002	0.002	0.323	0.013
3.1556	0.002	0.002	0.523	0.013
3.2000	0.002	0.002	0.733	0.013
3.2444	0.002	0.003	0.933	0.013
3.2889	0.002	0.003	1.107	0.013
3.3333	0.002	0.003	1.242	0.013
3.3778	0.002	0.003	1.337	0.013
3.4222	0.002	0.003	1.421	0.013
3.4667	0.002	0.003	1.494	0.013
3.5111	0.002	0.003	1.563	0.013
3.5556	0.002	0.003	1.630	0.013
3.6000	0.002	0.003	1.694	0.013
3.6444	0.002	0.004	1.755	0.013

3.6889	0.002	0.004	1.815	0.013
3.7333	0.002	0.004	1.873	0.013
3.7778	0.002	0.004	1.929	0.013
3.8222	0.002	0.004	1.983	0.013
3.8667	0.002	0.004	2.036	0.013
3.9111	0.002	0.004	2.087	0.013
3.9556	0.002	0.004	2.138	0.013
4.0000	0.002	0.004	2.187	0.013

Gravel Trench Bed D

Bottom Length:	20.00 ft.
Bottom Width:	4.00 ft.
Trench bottom slope 1:	0.01 To 1
Trench Left side slope 0:	0.01 To 1
Trench right side slope 2:	0.01 To 1
Material thickness of first layer:	3
Pour Space of material for first layer:	0.33
Material thickness of second layer:	0
Pour Space of material for second layer:	0
Material thickness of third layer:	0
Pour Space of material for third layer:	0
Infiltration On	
Infiltration rate:	5.5
Infiltration safety factor:	1
Wetted surface area On	
Total Volume Infiltrated (ac-ft.):	3.651
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	3.651
Percent Infiltrated:	100
Total Precip Applied to Facility:	0
Total Evap From Facility:	0
Discharge Structure	
Riser Height:	3 ft.
Riser Diameter:	10 in.
Element Flows To:	
Outlet 1	Outlet 2

Gravel Trench Bed Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.001837	0.000000	0.000	0.000
0.0444	0.001837	0.000027	0.000	0.010
0.0889	0.001838	0.000054	0.000	0.010
0.1333	0.001838	0.000081	0.000	0.010
0.1778	0.001839	0.000108	0.000	0.010
0.2222	0.001839	0.000135	0.000	0.010
0.2667	0.001839	0.000162	0.000	0.010
0.3111	0.001840	0.000189	0.000	0.010
0.3556	0.001840	0.000216	0.000	0.010
0.4000	0.001841	0.000243	0.000	0.010
0.4444	0.001841	0.000270	0.000	0.010
0.4889	0.001842	0.000297	0.000	0.010
0.5333	0.001842	0.000324	0.000	0.010
0.5778	0.001843	0.000351	0.000	0.010
0.6222	0.001843	0.000378	0.000	0.010
0.6667	0.001844	0.000405	0.000	0.010
0.7111	0.001844	0.000432	0.000	0.010
0.7556	0.001845	0.000459	0.000	0.010
0.8000	0.001845	0.000486	0.000	0.010
0.8444	0.001846	0.000513	0.000	0.010
0.8889	0.001846	0.000540	0.000	0.010
0.9333	0.001847	0.000567	0.000	0.010
0.9778	0.001847	0.000594	0.000	0.010
1.0222	0.001848	0.000621	0.000	0.010
1.0667	0.001848	0.000649	0.000	0.010

1.1111	0.001849	0.000676	0.000	0.010
1.1556	0.001849	0.000703	0.000	0.010
1.2000	0.001850	0.000730	0.000	0.010
1.2444	0.001850	0.000757	0.000	0.010
1.2889	0.001851	0.000784	0.000	0.010
1.3333	0.001851	0.000811	0.000	0.010
1.3778	0.001852	0.000838	0.000	0.010
1.4222	0.001852	0.000866	0.000	0.010
1.4667	0.001853	0.000893	0.000	0.010
1.5111	0.001853	0.000920	0.000	0.010
1.5556	0.001854	0.000947	0.000	0.010
1.6000	0.001854	0.000974	0.000	0.010
1.6444	0.001855	0.001002	0.000	0.010
1.6889	0.001855	0.001029	0.000	0.010
1.7333	0.001856	0.001056	0.000	0.010
1.7778	0.001856	0.001083	0.000	0.010
1.8222	0.001857	0.001110	0.000	0.010
1.8667	0.001857	0.001138	0.000	0.010
1.9111	0.001858	0.001165	0.000	0.010
1.9556	0.001858	0.001192	0.000	0.010
2.0000	0.001859	0.001219	0.000	0.010
2.0444	0.001859	0.001247	0.000	0.010
2.0889	0.001860	0.001274	0.000	0.010
2.1333	0.001860	0.001301	0.000	0.010
2.1778	0.001861	0.001328	0.000	0.010
2.2222	0.001861	0.001356	0.000	0.010
2.2667	0.001862	0.001383	0.000	0.010
2.3111	0.001862	0.001410	0.000	0.010
2.3556	0.001863	0.001438	0.000	0.010
2.4000	0.001863	0.001465	0.000	0.010
2.4444	0.001864	0.001492	0.000	0.010
2.4889	0.001864	0.001520	0.000	0.010
2.5333	0.001865	0.001547	0.000	0.010
2.5778	0.001865	0.001574	0.000	0.010
2.6222	0.001866	0.001602	0.000	0.010
2.6667	0.001866	0.001629	0.000	0.010
2.7111	0.001866	0.001656	0.000	0.010
2.7556	0.001867	0.001684	0.000	0.010
2.8000	0.001867	0.001711	0.000	0.010
2.8444	0.001868	0.001739	0.000	0.010
2.8889	0.001868	0.001766	0.000	0.010
2.9333	0.001869	0.001793	0.000	0.010
2.9778	0.001869	0.001821	0.000	0.010
3.0222	0.001870	0.001904	0.029	0.010
3.0667	0.001870	0.001987	0.151	0.010
3.1111	0.001871	0.002070	0.323	0.010
3.1556	0.001871	0.002153	0.523	0.010
3.2000	0.001872	0.002237	0.733	0.010
3.2444	0.001872	0.002320	0.933	0.010
3.2889	0.001873	0.002403	1.107	0.010
3.3333	0.001873	0.002486	1.242	0.010
3.3778	0.001874	0.002570	1.337	0.010
3.4222	0.001874	0.002653	1.421	0.010
3.4667	0.001875	0.002736	1.494	0.010
3.5111	0.001875	0.002819	1.563	0.010
3.5556	0.001876	0.002903	1.630	0.010
3.6000	0.001876	0.002986	1.694	0.010
3.6444	0.001877	0.003070	1.755	0.010

3.6889	0.001877	0.003153	1.815	0.010
3.7333	0.001878	0.003236	1.873	0.010
3.7778	0.001878	0.003320	1.929	0.010
3.8222	0.001879	0.003403	1.983	0.010
3.8667	0.001879	0.003487	2.036	0.010
3.9111	0.001880	0.003571	2.087	0.010
3.9556	0.001880	0.003654	2.138	0.010
4.0000	0.001881	0.003738	2.187	0.010

Gravel Trench Bed E

Bottom Length:	40.00 ft.
Bottom Width:	4.00 ft.
Trench bottom slope 1:	0.01 To 1
Trench Left side slope 0:	0.01 To 1
Trench right side slope 2:	0.01 To 1
Material thickness of first layer:	3
Pour Space of material for first layer:	0.33
Material thickness of second layer:	0
Pour Space of material for second layer:	0
Material thickness of third layer:	0
Pour Space of material for third layer:	0
Infiltration On	
Infiltration rate:	5.5
Infiltration safety factor:	1
Wetted surface area On	
Total Volume Infiltrated (ac-ft.):	7.22
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	7.22
Percent Infiltrated:	100
Total Precip Applied to Facility:	0
Total Evap From Facility:	0
Discharge Structure	
Riser Height:	3 ft.
Riser Diameter:	10 in.
Element Flows To:	
Outlet 1	Outlet 2

Gravel Trench Bed Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.003	0.000	0.000	0.000
0.0444	0.003	0.000	0.000	0.020
0.0889	0.003	0.000	0.000	0.020
0.1333	0.003	0.000	0.000	0.020
0.1778	0.003	0.000	0.000	0.020
0.2222	0.003	0.000	0.000	0.020
0.2667	0.003	0.000	0.000	0.020
0.3111	0.003	0.000	0.000	0.020
0.3556	0.003	0.000	0.000	0.020
0.4000	0.003	0.000	0.000	0.020
0.4444	0.003	0.000	0.000	0.020
0.4889	0.003	0.000	0.000	0.020
0.5333	0.003	0.000	0.000	0.020
0.5778	0.003	0.000	0.000	0.020
0.6222	0.003	0.000	0.000	0.020
0.6667	0.003	0.000	0.000	0.020
0.7111	0.003	0.000	0.000	0.020
0.7556	0.003	0.000	0.000	0.020
0.8000	0.003	0.001	0.000	0.020
0.8444	0.003	0.001	0.000	0.020
0.8889	0.003	0.001	0.000	0.020
0.9333	0.003	0.001	0.000	0.020
0.9778	0.003	0.001	0.000	0.020
1.0222	0.003	0.001	0.000	0.020
1.0667	0.003	0.001	0.000	0.020

1.1111	0.003	0.001	0.000	0.020
1.1556	0.003	0.001	0.000	0.020
1.2000	0.003	0.001	0.000	0.020
1.2444	0.003	0.001	0.000	0.020
1.2889	0.003	0.001	0.000	0.020
1.3333	0.003	0.001	0.000	0.020
1.3778	0.003	0.001	0.000	0.020
1.4222	0.003	0.001	0.000	0.020
1.4667	0.003	0.001	0.000	0.020
1.5111	0.003	0.001	0.000	0.020
1.5556	0.003	0.001	0.000	0.020
1.6000	0.003	0.001	0.000	0.020
1.6444	0.003	0.002	0.000	0.020
1.6889	0.003	0.002	0.000	0.020
1.7333	0.003	0.002	0.000	0.020
1.7778	0.003	0.002	0.000	0.020
1.8222	0.003	0.002	0.000	0.020
1.8667	0.003	0.002	0.000	0.020
1.9111	0.003	0.002	0.000	0.020
1.9556	0.003	0.002	0.000	0.020
2.0000	0.003	0.002	0.000	0.020
2.0444	0.003	0.002	0.000	0.020
2.0889	0.003	0.002	0.000	0.020
2.1333	0.003	0.002	0.000	0.020
2.1778	0.003	0.002	0.000	0.020
2.2222	0.003	0.002	0.000	0.020
2.2667	0.003	0.002	0.000	0.020
2.3111	0.003	0.002	0.000	0.020
2.3556	0.003	0.002	0.000	0.020
2.4000	0.003	0.002	0.000	0.020
2.4444	0.003	0.003	0.000	0.020
2.4889	0.003	0.003	0.000	0.020
2.5333	0.003	0.003	0.000	0.020
2.5778	0.003	0.003	0.000	0.020
2.6222	0.003	0.003	0.000	0.020
2.6667	0.003	0.003	0.000	0.020
2.7111	0.003	0.003	0.000	0.020
2.7556	0.003	0.003	0.000	0.020
2.8000	0.003	0.003	0.000	0.020
2.8444	0.003	0.003	0.000	0.020
2.8889	0.003	0.003	0.000	0.020
2.9333	0.003	0.003	0.000	0.020
2.9778	0.003	0.003	0.000	0.020
3.0222	0.003	0.003	0.029	0.020
3.0667	0.003	0.004	0.151	0.020
3.1111	0.003	0.004	0.323	0.020
3.1556	0.003	0.004	0.523	0.020
3.2000	0.003	0.004	0.733	0.020
3.2444	0.003	0.004	0.933	0.020
3.2889	0.003	0.004	1.107	0.020
3.3333	0.003	0.005	1.242	0.020
3.3778	0.003	0.005	1.337	0.020
3.4222	0.003	0.005	1.421	0.020
3.4667	0.003	0.005	1.494	0.020
3.5111	0.003	0.005	1.563	0.020
3.5556	0.003	0.005	1.630	0.020
3.6000	0.003	0.006	1.694	0.020
3.6444	0.003	0.006	1.755	0.020

3.6889	0.003	0.006	1.815	0.020
3.7333	0.003	0.006	1.873	0.020
3.7778	0.003	0.006	1.929	0.020
3.8222	0.003	0.006	1.983	0.020
3.8667	0.003	0.007	2.036	0.020
3.9111	0.003	0.007	2.087	0.020
3.9556	0.003	0.007	2.138	0.020
4.0000	0.003	0.007	2.187	0.020

Residence RG

Bottom Length:	10.00 ft.
Bottom Width:	3.00 ft.
Material thickness of first layer:	1
Material type for first layer:	SMMWW
Material thickness of second layer:	0
Material type for second layer:	Sand
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	5.5
Infiltration safety factor:	1
Wetted surface area On	
Total Volume Infiltrated (ac-ft.):	2.52
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	2.52
Percent Infiltrated:	100
Total Precip Applied to Facility:	0.102
Total Evap From Facility:	0.045
Underdrain not used	
Discharge Structure	
Riser Height:	0.5 ft.
Riser Diameter:	10 in.
Element Flows To:	
Outlet 1	Outlet 2

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0033	0.0000	0.0000	0.0000
0.0201	0.0033	0.0000	0.0000	0.0000
0.0402	0.0032	0.0000	0.0000	0.0000
0.0603	0.0031	0.0000	0.0000	0.0000
0.0804	0.0031	0.0000	0.0000	0.0000
0.1005	0.0030	0.0000	0.0000	0.0000
0.1207	0.0029	0.0000	0.0000	0.0000
0.1408	0.0029	0.0000	0.0000	0.0000
0.1609	0.0028	0.0001	0.0001	0.0001
0.1810	0.0027	0.0001	0.0001	0.0001
0.2011	0.0027	0.0001	0.0001	0.0001
0.2212	0.0026	0.0001	0.0002	0.0002
0.2413	0.0025	0.0001	0.0002	0.0002
0.2614	0.0025	0.0001	0.0003	0.0003
0.2815	0.0024	0.0001	0.0004	0.0004
0.3016	0.0024	0.0001	0.0004	0.0004
0.3218	0.0023	0.0001	0.0005	0.0005
0.3419	0.0022	0.0001	0.0007	0.0007
0.3620	0.0022	0.0001	0.0008	0.0008
0.3821	0.0021	0.0002	0.0010	0.0010
0.4022	0.0021	0.0002	0.0012	0.0012
0.4223	0.0020	0.0002	0.0014	0.0014
0.4424	0.0020	0.0002	0.0016	0.0016
0.4625	0.0019	0.0002	0.0019	0.0019
0.4826	0.0019	0.0002	0.0022	0.0022
0.5027	0.0018	0.0002	0.0026	0.0026
0.5229	0.0017	0.0003	0.0030	0.0030

0.5430	0.0017	0.0003	0.0034	0.0034
0.5631	0.0016	0.0003	0.0039	0.0039
0.5832	0.0016	0.0003	0.0044	0.0044
0.6033	0.0015	0.0003	0.0050	0.0050
0.6234	0.0015	0.0003	0.0057	0.0057
0.6435	0.0014	0.0004	0.0064	0.0064
0.6636	0.0014	0.0004	0.0072	0.0072
0.6837	0.0014	0.0004	0.0081	0.0081
0.7038	0.0013	0.0004	0.0090	0.0090
0.7240	0.0013	0.0004	0.0100	0.0100
0.7441	0.0012	0.0004	0.0112	0.0112
0.7642	0.0012	0.0005	0.0124	0.0124
0.7843	0.0011	0.0005	0.0137	0.0137
0.8044	0.0011	0.0005	0.0148	0.0148
0.8245	0.0010	0.0005	0.0151	0.0151
0.8446	0.0010	0.0005	0.0155	0.0155
0.8647	0.0010	0.0006	0.0158	0.0158
0.8848	0.0009	0.0006	0.0162	0.0162
0.9049	0.0009	0.0006	0.0166	0.0166
0.9251	0.0008	0.0006	0.0169	0.0169
0.9452	0.0008	0.0007	0.0173	0.0173
0.9653	0.0008	0.0007	0.0177	0.0177
0.9854	0.0007	0.0007	0.0181	0.0181
1.0000	0.0007	0.0007	0.0183	0.0183

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
1.0000	0.003306	0.000735	0.0000	0.0042	0.0004
1.0201	0.003375	0.000802	0.0000	0.0042	0.0008
1.0402	0.003446	0.000870	0.0000	0.0043	0.0012
1.0603	0.003517	0.000940	0.0000	0.0044	0.0016
1.0804	0.003588	0.001012	0.0000	0.0045	0.0020
1.1005	0.003660	0.001085	0.0000	0.0046	0.0024
1.1207	0.003733	0.001159	0.0000	0.0047	0.0028
1.1408	0.003807	0.001235	0.0000	0.0048	0.0032
1.1609	0.003881	0.001312	0.0000	0.0048	0.0036
1.1810	0.003956	0.001391	0.0000	0.0049	0.0040
1.2011	0.004032	0.001471	0.0000	0.0050	0.0044
1.2212	0.004108	0.001553	0.0000	0.0051	0.0049
1.2413	0.004185	0.001636	0.0000	0.0052	0.0053
1.2614	0.004263	0.001721	0.0000	0.0053	0.0057
1.2815	0.004341	0.001808	0.0000	0.0053	0.0062
1.3016	0.004420	0.001896	0.0000	0.0054	0.0066
1.3218	0.004499	0.001986	0.0000	0.0055	0.0071
1.3419	0.004580	0.002077	0.0000	0.0056	0.0075
1.3620	0.004661	0.002170	0.0000	0.0057	0.0080
1.3821	0.004742	0.002264	0.0000	0.0058	0.0084
1.4022	0.004824	0.002361	0.0000	0.0058	0.0089
1.4223	0.004907	0.002458	0.0000	0.0059	0.0093
1.4424	0.004991	0.002558	0.0000	0.0060	0.0098
1.4625	0.005075	0.002659	0.0000	0.0061	0.0103
1.4826	0.005160	0.002762	0.0000	0.0062	0.0108
1.5027	0.005246	0.002867	0.0000	0.0063	0.0112
1.5229	0.005332	0.002973	0.0000	0.0063	0.0117
1.5430	0.005419	0.003081	0.0000	0.0064	0.0122
1.5631	0.005507	0.003191	0.0000	0.0065	0.0127
1.5832	0.005595	0.003303	0.0000	0.0066	0.0132
1.6033	0.005684	0.003416	0.0000	0.0067	0.0137

1.6234	0.005774	0.003531	0.0000	0.0068	0.0142
1.6435	0.005864	0.003648	0.0000	0.0068	0.0147
1.6636	0.005955	0.003767	0.0000	0.0069	0.0152
1.6837	0.006047	0.003888	0.0000	0.0070	0.0157
1.7038	0.006139	0.004010	0.0000	0.0071	0.0162
1.7240	0.006232	0.004135	0.0000	0.0072	0.0167
1.7441	0.006326	0.004261	0.0000	0.0073	0.0173
1.7642	0.006420	0.004389	0.0000	0.0074	0.0178
1.7843	0.006515	0.004519	0.0000	0.0074	0.0183
1.8044	0.006610	0.004651	0.0000	0.0075	0.0189
1.8245	0.006707	0.004785	0.0000	0.0076	0.0190
1.8300	0.006733	0.004822	0.0000	0.0076	0.0000

Surface Residence RG

Element Flows To:

Outlet 1	Outlet 2
	Residence RG

Residence Drywell

Bottom Length:	28.00 ft.
Bottom Width:	4.00 ft.
Trench bottom slope 1:	0.01 To 1
Trench Left side slope 0:	0.01 To 1
Trench right side slope 2:	0.01 To 1
Material thickness of first layer:	3
Pour Space of material for first layer:	0.33
Material thickness of second layer:	0
Pour Space of material for second layer:	0
Material thickness of third layer:	0
Pour Space of material for third layer:	0
Infiltration On	
Infiltration rate:	5.5
Infiltration safety factor:	1
Wetted surface area On	
Total Volume Infiltrated (ac-ft.):	4.808
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	4.808
Percent Infiltrated:	100
Total Precip Applied to Facility:	0
Total Evap From Facility:	0
Discharge Structure	
Riser Height:	3 ft.
Riser Diameter:	10 in.
Element Flows To:	
Outlet 1	Outlet 2

Gravel Trench Bed Hydraulic Table

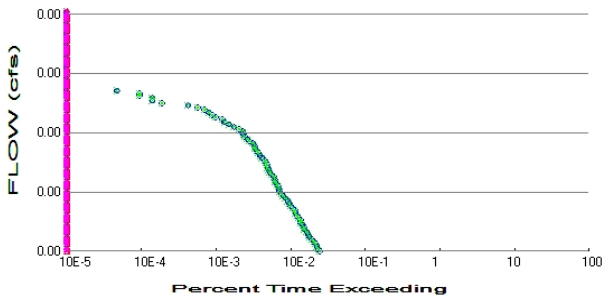
Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.002	0.000	0.000	0.000
0.0444	0.002	0.000	0.000	0.014
0.0889	0.002	0.000	0.000	0.014
0.1333	0.002	0.000	0.000	0.014
0.1778	0.002	0.000	0.000	0.014
0.2222	0.002	0.000	0.000	0.014
0.2667	0.002	0.000	0.000	0.014
0.3111	0.002	0.000	0.000	0.014
0.3556	0.002	0.000	0.000	0.014
0.4000	0.002	0.000	0.000	0.014
0.4444	0.002	0.000	0.000	0.014
0.4889	0.002	0.000	0.000	0.014
0.5333	0.002	0.000	0.000	0.014
0.5778	0.002	0.000	0.000	0.014
0.6222	0.002	0.000	0.000	0.014
0.6667	0.002	0.000	0.000	0.014
0.7111	0.002	0.000	0.000	0.014
0.7556	0.002	0.000	0.000	0.014
0.8000	0.002	0.000	0.000	0.014
0.8444	0.002	0.000	0.000	0.014
0.8889	0.002	0.000	0.000	0.014
0.9333	0.002	0.000	0.000	0.014
0.9778	0.002	0.000	0.000	0.014
1.0222	0.002	0.000	0.000	0.014
1.0667	0.002	0.000	0.000	0.014

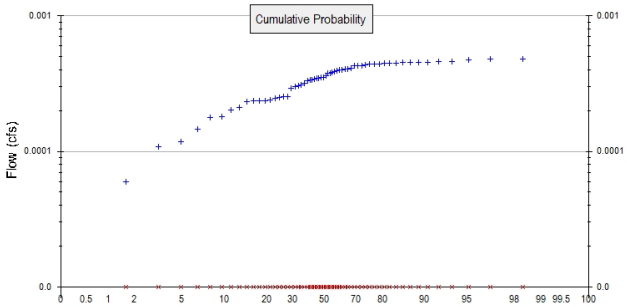
1.1111	0.002	0.000	0.000	0.014
1.1556	0.002	0.001	0.000	0.014
1.2000	0.002	0.001	0.000	0.014
1.2444	0.002	0.001	0.000	0.014
1.2889	0.002	0.001	0.000	0.014
1.3333	0.002	0.001	0.000	0.014
1.3778	0.002	0.001	0.000	0.014
1.4222	0.002	0.001	0.000	0.014
1.4667	0.002	0.001	0.000	0.014
1.5111	0.002	0.001	0.000	0.014
1.5556	0.002	0.001	0.000	0.014
1.6000	0.002	0.001	0.000	0.014
1.6444	0.002	0.001	0.000	0.014
1.6889	0.002	0.001	0.000	0.014
1.7333	0.002	0.001	0.000	0.014
1.7778	0.002	0.001	0.000	0.014
1.8222	0.002	0.001	0.000	0.014
1.8667	0.002	0.001	0.000	0.014
1.9111	0.002	0.001	0.000	0.014
1.9556	0.002	0.001	0.000	0.014
2.0000	0.002	0.001	0.000	0.014
2.0444	0.002	0.001	0.000	0.014
2.0889	0.002	0.001	0.000	0.014
2.1333	0.002	0.001	0.000	0.014
2.1778	0.002	0.001	0.000	0.014
2.2222	0.002	0.001	0.000	0.014
2.2667	0.002	0.001	0.000	0.014
2.3111	0.002	0.002	0.000	0.014
2.3556	0.002	0.002	0.000	0.014
2.4000	0.002	0.002	0.000	0.014
2.4444	0.002	0.002	0.000	0.014
2.4889	0.002	0.002	0.000	0.014
2.5333	0.002	0.002	0.000	0.014
2.5778	0.002	0.002	0.000	0.014
2.6222	0.002	0.002	0.000	0.014
2.6667	0.002	0.002	0.000	0.014
2.7111	0.002	0.002	0.000	0.014
2.7556	0.002	0.002	0.000	0.014
2.8000	0.002	0.002	0.000	0.014
2.8444	0.002	0.002	0.000	0.014
2.8889	0.002	0.002	0.000	0.014
2.9333	0.002	0.002	0.000	0.014
2.9778	0.002	0.002	0.000	0.014
3.0222	0.002	0.002	0.029	0.014
3.0667	0.002	0.002	0.151	0.014
3.1111	0.002	0.002	0.323	0.014
3.1556	0.002	0.003	0.523	0.014
3.2000	0.002	0.003	0.733	0.014
3.2444	0.002	0.003	0.933	0.014
3.2889	0.002	0.003	1.107	0.014
3.3333	0.002	0.003	1.242	0.014
3.3778	0.002	0.003	1.337	0.014
3.4222	0.002	0.003	1.421	0.014
3.4667	0.002	0.003	1.494	0.014
3.5111	0.002	0.003	1.563	0.014
3.5556	0.002	0.004	1.630	0.014
3.6000	0.002	0.004	1.694	0.014
3.6444	0.002	0.004	1.755	0.014

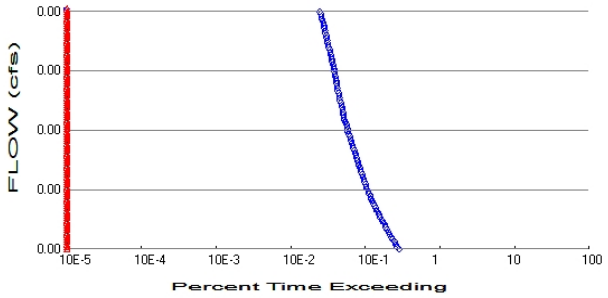
3.6889	0.002	0.004	1.815	0.014
3.7333	0.002	0.004	1.873	0.014
3.7778	0.002	0.004	1.929	0.014
3.8222	0.002	0.004	1.983	0.014
3.8667	0.002	0.004	2.036	0.014
3.9111	0.002	0.005	2.087	0.014
3.9556	0.002	0.005	2.138	0.014
4.0000	0.002	0.005	2.187	0.014

Analysis Results

POC 1







\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #1
Total Pervious Area: 0.5996
Total Impervious Area: 0

Mitigated Landuse Totals for POC #1
Total Pervious Area: 0.1539
Total Impervious Area: 0.3854

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	**Flow(cfs)**
2 year	0.000334
5 year	0.000465
10 year	0.000531
25 year	0.000595
50 year	0.000632
100 year	0.000662

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	**Flow(cfs)**
2 year	0
5 year	0
10 year	0
25 year	0
50 year	0
100 year	0

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #1

Year	Predeveloped	Mitigated
1949	0.000	0.000
1950	0.000	0.000
1951	0.000	0.000
1952	0.000	0.000
1953	0.000	0.000
1954	0.000	0.000
1955	0.000	0.000
1956	0.000	0.000
1957	0.000	0.000
1958	0.000	0.000
1959	0.000	0.000
1960	0.000	0.000
1961	0.000	0.000
1962	0.000	0.000
1963	0.000	0.000
1964	0.000	0.000
1965	0.000	0.000
1966	0.000	0.000
1967	0.000	0.000
1968	0.000	0.000
1969	0.000	0.000
1970	0.000	0.000
1971	0.000	0.000
1972	0.000	0.000
1973	0.000	0.000
1974	0.000	0.000
1975	0.000	0.000
1976	0.000	0.000
1977	0.000	0.000
1978	0.000	0.000
1979	0.000	0.000
1980	0.000	0.000
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.000	0.000
1986	0.000	0.000
1987	0.000	0.000
1988	0.000	0.000
1989	0.000	0.000
1990	0.000	0.000
1991	0.000	0.000
1992	0.000	0.000
1993	0.000	0.000
1994	0.000	0.000
1995	0.000	0.000
1996	0.000	0.000
1997	0.000	0.000
1998	0.000	0.000
1999	0.000	0.000
2000	0.000	0.000
2001	0.000	0.000
2002	0.000	0.000
2003	0.000	0.000
2004	0.000	0.000

2005	0.000	0.000
2006	0.000	0.000
2007	0.000	0.000
2008	0.000	0.000
2009	0.000	0.000

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #1

Rank	Predeveloped	Mitigated
1	0.0005	0.0000
2	0.0005	0.0000
3	0.0005	0.0000
4	0.0005	0.0000
5	0.0005	0.0000
6	0.0005	0.0000
7	0.0005	0.0000
8	0.0005	0.0000
9	0.0005	0.0000
10	0.0004	0.0000
11	0.0004	0.0000
12	0.0004	0.0000
13	0.0004	0.0000
14	0.0004	0.0000
15	0.0004	0.0000
16	0.0004	0.0000
17	0.0004	0.0000
18	0.0004	0.0000
19	0.0004	0.0000
20	0.0004	0.0000
21	0.0004	0.0000
22	0.0004	0.0000
23	0.0004	0.0000
24	0.0004	0.0000
25	0.0004	0.0000
26	0.0004	0.0000
27	0.0004	0.0000
28	0.0004	0.0000
29	0.0004	0.0000
30	0.0004	0.0000
31	0.0004	0.0000
32	0.0003	0.0000
33	0.0003	0.0000
34	0.0003	0.0000
35	0.0003	0.0000
36	0.0003	0.0000
37	0.0003	0.0000
38	0.0003	0.0000
39	0.0003	0.0000
40	0.0003	0.0000
41	0.0003	0.0000
42	0.0003	0.0000
43	0.0003	0.0000
44	0.0003	0.0000
45	0.0003	0.0000
46	0.0003	0.0000
47	0.0002	0.0000
48	0.0002	0.0000
49	0.0002	0.0000

50	0.0002	0.0000
51	0.0002	0.0000
52	0.0002	0.0000
53	0.0002	0.0000
54	0.0002	0.0000
55	0.0002	0.0000
56	0.0002	0.0000
57	0.0001	0.0000
58	0.0001	0.0000
59	0.0001	0.0000
60	0.0001	0.0000
61	0.0000	0.0000

LID Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.0000	6008	0	0	Pass
0.0000	5619	0	0	Pass
0.0000	5433	0	0	Pass
0.0000	5262	0	0	Pass
0.0000	4919	0	0	Pass
0.0000	4776	0	0	Pass
0.0000	4513	0	0	Pass
0.0000	4383	0	0	Pass
0.0000	4143	0	0	Pass
0.0000	4036	0	0	Pass
0.0000	3931	0	0	Pass
0.0000	3707	0	0	Pass
0.0000	3591	0	0	Pass
0.0000	3409	0	0	Pass
0.0000	3298	0	0	Pass
0.0000	3204	0	0	Pass
0.0000	3029	0	0	Pass
0.0001	2958	0	0	Pass
0.0001	2819	0	0	Pass
0.0001	2757	0	0	Pass
0.0001	2639	0	0	Pass
0.0001	2584	0	0	Pass
0.0001	2522	0	0	Pass
0.0001	2408	0	0	Pass
0.0001	2357	0	0	Pass
0.0001	2248	0	0	Pass
0.0001	2192	0	0	Pass
0.0001	2150	0	0	Pass
0.0001	2071	0	0	Pass
0.0001	2036	0	0	Pass
0.0001	1962	0	0	Pass
0.0001	1926	0	0	Pass
0.0001	1857	0	0	Pass
0.0001	1837	0	0	Pass
0.0001	1808	0	0	Pass
0.0001	1751	0	0	Pass
0.0001	1723	0	0	Pass
0.0001	1661	0	0	Pass
0.0001	1634	0	0	Pass
0.0001	1606	0	0	Pass
0.0001	1561	0	0	Pass
0.0001	1531	0	0	Pass
0.0001	1470	0	0	Pass
0.0001	1449	0	0	Pass
0.0001	1398	0	0	Pass
0.0001	1370	0	0	Pass
0.0001	1354	0	0	Pass
0.0001	1312	0	0	Pass
0.0001	1290	0	0	Pass
0.0001	1250	0	0	Pass
0.0001	1234	0	0	Pass
0.0001	1216	0	0	Pass
0.0001	1184	0	0	Pass

0.0001	1160	0	0	Pass
0.0001	1122	0	0	Pass
0.0001	1102	0	0	Pass
0.0001	1084	0	0	Pass
0.0001	1075	0	0	Pass
0.0001	1062	0	0	Pass
0.0001	1039	0	0	Pass
0.0001	1028	0	0	Pass
0.0001	1001	0	0	Pass
0.0001	981	0	0	Pass
0.0001	970	0	0	Pass
0.0001	953	0	0	Pass
0.0001	941	0	0	Pass
0.0001	914	0	0	Pass
0.0001	902	0	0	Pass
0.0001	890	0	0	Pass
0.0001	883	0	0	Pass
0.0001	875	0	0	Pass
0.0001	861	0	0	Pass
0.0001	848	0	0	Pass
0.0001	834	0	0	Pass
0.0001	827	0	0	Pass
0.0001	817	0	0	Pass
0.0001	801	0	0	Pass
0.0001	788	0	0	Pass
0.0001	772	0	0	Pass
0.0001	764	0	0	Pass
0.0001	750	0	0	Pass
0.0001	740	0	0	Pass
0.0001	726	0	0	Pass
0.0001	706	0	0	Pass
0.0001	694	0	0	Pass
0.0001	674	0	0	Pass
0.0001	668	0	0	Pass
0.0001	659	0	0	Pass
0.0002	644	0	0	Pass
0.0002	639	0	0	Pass
0.0002	624	0	0	Pass
0.0002	620	0	0	Pass
0.0002	603	0	0	Pass
0.0002	598	0	0	Pass
0.0002	588	0	0	Pass
0.0002	570	0	0	Pass
0.0002	560	0	0	Pass
0.0002	547	0	0	Pass
0.0002	536	0	0	Pass
0.0002	523	0	0	Pass

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.0002	523	0	0	Pass
0.0002	503	0	0	Pass
0.0002	479	0	0	Pass
0.0002	454	0	0	Pass
0.0002	437	0	0	Pass
0.0002	410	0	0	Pass
0.0002	384	0	0	Pass
0.0002	369	0	0	Pass
0.0002	350	0	0	Pass
0.0002	329	0	0	Pass
0.0002	320	0	0	Pass
0.0002	309	0	0	Pass
0.0002	293	0	0	Pass
0.0002	287	0	0	Pass
0.0002	273	0	0	Pass
0.0002	259	0	0	Pass
0.0002	249	0	0	Pass
0.0002	242	0	0	Pass
0.0003	227	0	0	Pass
0.0003	213	0	0	Pass
0.0003	206	0	0	Pass
0.0003	194	0	0	Pass
0.0003	182	0	0	Pass
0.0003	169	0	0	Pass
0.0003	161	0	0	Pass
0.0003	152	0	0	Pass
0.0003	149	0	0	Pass
0.0003	144	0	0	Pass
0.0003	139	0	0	Pass
0.0003	134	0	0	Pass
0.0003	132	0	0	Pass
0.0003	126	0	0	Pass
0.0003	118	0	0	Pass
0.0003	112	0	0	Pass
0.0003	109	0	0	Pass
0.0003	105	0	0	Pass
0.0003	102	0	0	Pass
0.0003	99	0	0	Pass
0.0003	97	0	0	Pass
0.0004	88	0	0	Pass
0.0004	84	0	0	Pass
0.0004	79	0	0	Pass
0.0004	75	0	0	Pass
0.0004	72	0	0	Pass
0.0004	71	0	0	Pass
0.0004	67	0	0	Pass
0.0004	59	0	0	Pass
0.0004	56	0	0	Pass
0.0004	52	0	0	Pass
0.0004	50	0	0	Pass
0.0004	49	0	0	Pass
0.0004	43	0	0	Pass
0.0004	37	0	0	Pass

0.0004	32	0	0	Pass
0.0004	28	0	0	Pass
0.0004	26	0	0	Pass
0.0004	21	0	0	Pass
0.0004	19	0	0	Pass
0.0004	17	0	0	Pass
0.0004	15	0	0	Pass
0.0004	12	0	0	Pass
0.0005	9	0	0	Pass
0.0005	4	0	0	Pass
0.0005	3	0	0	Pass
0.0005	3	0	0	Pass
0.0005	2	0	0	Pass
0.0005	2	0	0	Pass
0.0005	1	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0005	0	0	0	Pass
0.0006	0	0	0	Pass
0.0006	0	0	0	Pass
0.0006

Water Quality

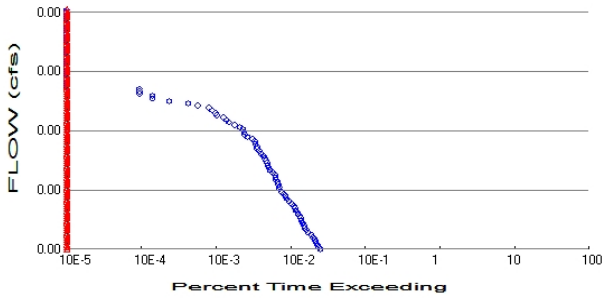
Water Quality BMP Flow and Volume for POC #1

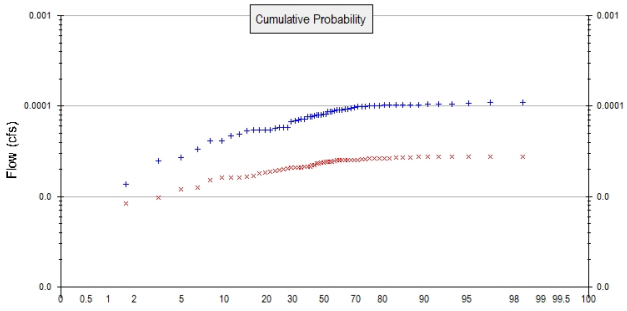
On-line facility volume:	0 acre-feet
On-line facility target flow:	0 cfs.
Adjusted for 15 min:	0 cfs.
Off-line facility target flow:	0 cfs.
Adjusted for 15 min:	0 cfs.

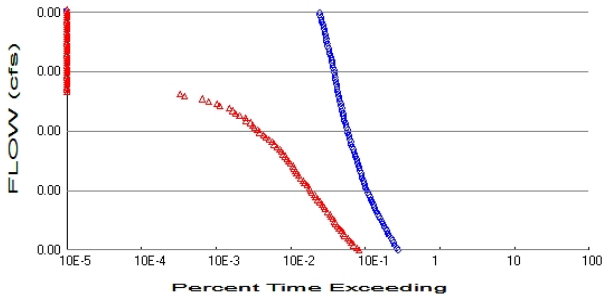
LID Report

LID Technique	Used for Treatment ?	Total Volume Needs Treatment (ac-ft)	Volume Through Facility (ac-ft)	Infiltration Volume (ac-ft)	Cumulative Volume Infiltration Credit	Percent Volume Infiltrated	Water Quality	Percent Water Quality Treated	Comment
Gravel Trench Bed A POC	☐	8.50			☐	100.00			
Gravel Trench Bed B POC	☐	5.20			☐	100.00			
Gravel Trench Bed C POC	☐	4.36			☐	100.00			
Gravel Trench Bed E POC	☐	6.57			☐	100.00			
Total Volume Infiltrated		24.63	0.00	0.00		100.00	0.00	0%	No Treat. Credit
Compliance with LID Standard 8% of 2-yr to 50% of 2-yr									Duration Analysis Result = Passed

POC 2







\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #2
Total Pervious Area: 0.1377
Total Impervious Area: 0

Mitigated Landuse Totals for POC #2
Total Pervious Area: 0.0344
Total Impervious Area: 0.1033

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #2

Return Period	**Flow(cfs)**
2 year	0.000077
5 year	0.000107
10 year	0.000122
25 year	0.000137
50 year	0.000145
100 year	0.000152

Flow Frequency Return Periods for Mitigated. POC #2

Return Period	**Flow(cfs)**
2 year	0.000022
5 year	0.000028
10 year	0.000031
25 year	0.000033
50 year	0.000035
100 year	0.000036

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #2

Year	**Predeveloped**	**Mitigated**

1949	0.000	0.000
1950	0.000	0.000
1951	0.000	0.000
1952	0.000	0.000
1953	0.000	0.000
1954	0.000	0.000
1955	0.000	0.000
1956	0.000	0.000
1957	0.000	0.000
1958	0.000	0.000
1959	0.000	0.000
1960	0.000	0.000
1961	0.000	0.000
1962	0.000	0.000
1963	0.000	0.000
1964	0.000	0.000
1965	0.000	0.000
1966	0.000	0.000
1967	0.000	0.000
1968	0.000	0.000
1969	0.000	0.000
1970	0.000	0.000
1971	0.000	0.000
1972	0.000	0.000
1973	0.000	0.000
1974	0.000	0.000
1975	0.000	0.000
1976	0.000	0.000
1977	0.000	0.000
1978	0.000	0.000
1979	0.000	0.000
1980	0.000	0.000
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.000	0.000
1986	0.000	0.000
1987	0.000	0.000
1988	0.000	0.000
1989	0.000	0.000
1990	0.000	0.000
1991	0.000	0.000
1992	0.000	0.000
1993	0.000	0.000
1994	0.000	0.000
1995	0.000	0.000
1996	0.000	0.000
1997	0.000	0.000
1998	0.000	0.000
1999	0.000	0.000
2000	0.000	0.000
2001	0.000	0.000
2002	0.000	0.000
2003	0.000	0.000
2004	0.000	0.000
2005	0.000	0.000
2006	0.000	0.000

2007	0.000	0.000
2008	0.000	0.000
2009	0.000	0.000

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #2

Rank	Predeveloped	Mitigated
1	0.0001	0.0000
2	0.0001	0.0000
3	0.0001	0.0000
4	0.0001	0.0000
5	0.0001	0.0000
6	0.0001	0.0000
7	0.0001	0.0000
8	0.0001	0.0000
9	0.0001	0.0000
10	0.0001	0.0000
11	0.0001	0.0000
12	0.0001	0.0000
13	0.0001	0.0000
14	0.0001	0.0000
15	0.0001	0.0000
16	0.0001	0.0000
17	0.0001	0.0000
18	0.0001	0.0000
19	0.0001	0.0000
20	0.0001	0.0000
21	0.0001	0.0000
22	0.0001	0.0000
23	0.0001	0.0000
24	0.0001	0.0000
25	0.0001	0.0000
26	0.0001	0.0000
27	0.0001	0.0000
28	0.0001	0.0000
29	0.0001	0.0000
30	0.0001	0.0000
31	0.0001	0.0000
32	0.0001	0.0000
33	0.0001	0.0000
34	0.0001	0.0000
35	0.0001	0.0000
36	0.0001	0.0000
37	0.0001	0.0000
38	0.0001	0.0000
39	0.0001	0.0000
40	0.0001	0.0000
41	0.0001	0.0000
42	0.0001	0.0000
43	0.0001	0.0000
44	0.0001	0.0000
45	0.0001	0.0000
46	0.0001	0.0000
47	0.0001	0.0000
48	0.0001	0.0000
49	0.0001	0.0000
50	0.0001	0.0000
51	0.0001	0.0000

52	0.0001	0.0000
53	0.0000	0.0000
54	0.0000	0.0000
55	0.0000	0.0000
56	0.0000	0.0000
57	0.0000	0.0000
58	0.0000	0.0000
59	0.0000	0.0000
60	0.0000	0.0000
61	0.0000	0.0000

LID Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.0000	5897	1755	29	Pass
0.0000	5653	1644	29	Pass
0.0000	5330	1496	28	Pass
0.0000	5099	1403	27	Pass
0.0000	4889	1315	26	Pass
0.0000	4712	1246	26	Pass
0.0000	4481	1134	25	Pass
0.0000	4316	1081	25	Pass
0.0000	4149	1029	24	Pass
0.0000	3972	953	23	Pass
0.0000	3811	898	23	Pass
0.0000	3672	861	23	Pass
0.0000	3538	835	23	Pass
0.0000	3377	784	23	Pass
0.0000	3249	744	22	Pass
0.0000	3127	714	22	Pass
0.0000	3012	664	22	Pass
0.0000	2896	620	21	Pass
0.0000	2800	594	21	Pass
0.0000	2729	560	20	Pass
0.0000	2650	525	19	Pass
0.0000	2547	489	19	Pass
0.0000	2462	460	18	Pass
0.0000	2393	445	18	Pass
0.0000	2297	407	17	Pass
0.0000	2235	394	17	Pass
0.0000	2160	380	17	Pass
0.0000	2111	355	16	Pass
0.0000	2053	328	15	Pass
0.0000	1998	314	15	Pass
0.0000	1956	290	14	Pass
0.0000	1900	272	14	Pass
0.0000	1853	257	13	Pass
0.0000	1816	249	13	Pass
0.0000	1784	236	13	Pass
0.0000	1744	230	13	Pass
0.0000	1698	211	12	Pass
0.0000	1651	200	12	Pass
0.0000	1618	191	11	Pass
0.0000	1571	179	11	Pass
0.0000	1544	168	10	Pass
0.0000	1503	161	10	Pass
0.0000	1463	153	10	Pass
0.0000	1425	140	9	Pass
0.0000	1388	129	9	Pass
0.0000	1363	120	8	Pass
0.0000	1338	110	8	Pass
0.0000	1297	99	7	Pass
0.0000	1274	92	7	Pass
0.0000	1245	82	6	Pass
0.0000	1225	77	6	Pass
0.0000	1195	70	5	Pass
0.0000	1174	66	5	Pass

0.0000	1147	62	5	Pass
0.0000	1108	54	4	Pass
0.0000	1093	53	4	Pass
0.0000	1082	44	4	Pass
0.0000	1068	39	3	Pass
0.0000	1049	36	3	Pass
0.0000	1032	32	3	Pass
0.0000	1015	24	2	Pass
0.0000	995	22	2	Pass
0.0000	971	17	1	Pass
0.0000	957	14	1	Pass
0.0000	947	8	0	Pass
0.0000	928	7	0	Pass
0.0000	907	0	0	Pass
0.0000	895	0	0	Pass
0.0000	889	0	0	Pass
0.0000	876	0	0	Pass
0.0000	864	0	0	Pass
0.0000	853	0	0	Pass
0.0000	844	0	0	Pass
0.0000	830	0	0	Pass
0.0000	817	0	0	Pass
0.0000	810	0	0	Pass
0.0000	795	0	0	Pass
0.0000	778	0	0	Pass
0.0000	768	0	0	Pass
0.0000	757	0	0	Pass
0.0000	747	0	0	Pass
0.0000	726	0	0	Pass
0.0000	714	0	0	Pass
0.0000	700	0	0	Pass
0.0000	682	0	0	Pass
0.0000	670	0	0	Pass
0.0000	661	0	0	Pass
0.0000	649	0	0	Pass
0.0000	639	0	0	Pass
0.0000	629	0	0	Pass
0.0000	621	0	0	Pass
0.0000	611	0	0	Pass
0.0000	602	0	0	Pass
0.0000	588	0	0	Pass
0.0000	577	0	0	Pass
0.0000	564	0	0	Pass
0.0000	551	0	0	Pass
0.0000	542	0	0	Pass
0.0000	528	0	0	Pass
0.0000	520	0	0	Pass

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.0000	533	0	0	Pass
0.0000	507	0	0	Pass
0.0000	491	0	0	Pass
0.0000	464	0	0	Pass
0.0000	445	0	0	Pass
0.0000	424	0	0	Pass
0.0000	401	0	0	Pass
0.0000	363	0	0	Pass
0.0000	348	0	0	Pass
0.0000	329	0	0	Pass
0.0000	320	0	0	Pass
0.0001	310	0	0	Pass
0.0001	294	0	0	Pass
0.0001	288	0	0	Pass
0.0001	280	0	0	Pass
0.0001	266	0	0	Pass
0.0001	254	0	0	Pass
0.0001	244	0	0	Pass
0.0001	235	0	0	Pass
0.0001	222	0	0	Pass
0.0001	201	0	0	Pass
0.0001	191	0	0	Pass
0.0001	182	0	0	Pass
0.0001	172	0	0	Pass
0.0001	161	0	0	Pass
0.0001	152	0	0	Pass
0.0001	150	0	0	Pass
0.0001	145	0	0	Pass
0.0001	143	0	0	Pass
0.0001	137	0	0	Pass
0.0001	133	0	0	Pass
0.0001	132	0	0	Pass
0.0001	123	0	0	Pass
0.0001	112	0	0	Pass
0.0001	109	0	0	Pass
0.0001	105	0	0	Pass
0.0001	102	0	0	Pass
0.0001	99	0	0	Pass
0.0001	97	0	0	Pass
0.0001	93	0	0	Pass
0.0001	85	0	0	Pass
0.0001	80	0	0	Pass
0.0001	76	0	0	Pass
0.0001	75	0	0	Pass
0.0001	72	0	0	Pass
0.0001	70	0	0	Pass
0.0001	66	0	0	Pass
0.0001	56	0	0	Pass
0.0001	52	0	0	Pass
0.0001	51	0	0	Pass
0.0001	49	0	0	Pass
0.0001	44	0	0	Pass
0.0001	38	0	0	Pass

0.0001	32	0	0	Pass
0.0001	30	0	0	Pass
0.0001	27	0	0	Pass
0.0001	22	0	0	Pass
0.0001	21	0	0	Pass
0.0001	19	0	0	Pass
0.0001	17	0	0	Pass
0.0001	12	0	0	Pass
0.0001	9	0	0	Pass
0.0001	5	0	0	Pass
0.0001	3	0	0	Pass
0.0001	3	0	0	Pass
0.0001	2	0	0	Pass
0.0001	2	0	0	Pass
0.0001	2	0	0	Pass
0.0001	0	0	0	Pass
0.0001	0	0	0	Pass
0.0001	0

Water Quality

Water Quality BMP Flow and Volume for POC #2

On-line facility volume:	0 acre-feet
On-line facility target flow:	0 cfs.
Adjusted for 15 min:	0 cfs.
Off-line facility target flow:	0 cfs.
Adjusted for 15 min:	0 cfs.

LID Report

LID Technique	Used for Treatment ?	Total Volume Needs Treatment (ac-ft)	Volume Through Facility (ac-ft)	Infiltration Volume (ac-ft)	Cumulative Volume Infiltration Credit	Percent Volume Infiltrated	Water Quality	Percent Water Quality Treated	Comment
Residence RG POC	☐	2.29			☐	100.00			
Residence Drywell POC	☐	4.38			☐	100.00			
Total Volume Infiltrated		6.67	0.00	0.00		100.00	0.00	0%	No Treat. Credit
Compliance with LID Standard 8% of 2-yr to 50% of 2-yr									Duration Analysis Result = Passed

POC 3

POC #3 was not reported because POC must exist in both scenarios and both scenarios must have been run.

Model Default Modifications

Total of 0 changes have been made.

PERLND Changes

No PERLND changes have been made.

IMPLND Changes

No IMPLND changes have been made.

Appendix

Predeveloped Schematic



Mitigated Schematic



Predeveloped UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1948 10 01        END    2009 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                   UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM         26   22044 - INFILTRATION TRENCHES.wdm
MESSU       25   Pre22044 - INFILTRATION TRENCHES.MES
            27   Pre22044 - INFILTRATION TRENCHES.L61
            28   Pre22044 - INFILTRATION TRENCHES.L62
            30   POC22044 - INFILTRATION TRENCHES1.dat
            31   POC22044 - INFILTRATION TRENCHES2.dat
END FILES

OPN SEQUENCE
    INGRP              INDELT 00:15
      PERLND       1
      COPY       501
      COPY       502
      DISPLY       1
      DISPLY       2
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title----------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    1        ROW Areas                  MAX                    1    2   30    9
    2        Model Lot                  MAX                    1    2   31    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
  501         1    1
  502         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
  END OPCODE
  PARM
    #    #         K ***
  END PARM
END GENER
PERLND
  GEN-INFO
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                          User  t-series Engl Metr ***
                                          in  out           ***
    1     A/B, Forest, Flat       1    1    1    1   27    0
  END GEN-INFO
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
    1         0    0    1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
```

```
    <PLS > ***************** Print-flags ***************************** PIVL  PYR
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
    1         0    0    4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
    1         0    0    0    0    0    0    0    0    0    0    0
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2         ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
    1              0         5         2       400      0.05       0.3     0.996
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
    1              0         0         2         2         0         0         0
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                                 ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
    1          0.2       0.5      0.35         0       0.7       0.7
  END PWAT-PARM4

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
             ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS      IFWS       LZS      AGWS      GWVS
    1              0         0         0         0         3         1         0
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
    # -  #                     User  t-series Engl Metr ***
                                    in  out           ***
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************* Active Sections ****************************
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL   ***
  END ACTIVITY

  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
  END PRINT-INFO

  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
  END IWAT-PARM2

  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
  END IWAT-PARM3
```

```
  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
  END IWAT-STATE1

END IMPLND

SCHEMATIC
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
ROW Areas***
PERLND   1                      0.5996     COPY   501     12
PERLND   1                      0.5996     COPY   501     13
Model Lot***
PERLND   1                      0.1377     COPY   502     12
PERLND   1                      0.1377     COPY   502     13

******Routing******
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   501 OUTPUT MEAN   1 1   48.4        DISPLY   1     INPUT  TIMSER 1
COPY   502 OUTPUT MEAN   1 1   48.4        DISPLY   2     INPUT  TIMSER 1



<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                ***
    # -  #<------------------><---> User T-series  Engl Metr LKFG           ***
                                       in  out                              ***
  END GEN-INFO
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************ Active Sections ****************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ******************* PIVL  PYR
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                  ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
            FG FG FG FG  possible  exit  *** possible  exit      possible  exit
             *  *  *  *    *  *  *  *  *       *  *  *  *  *        ***
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN     DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><-------->       ***
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                     ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
          *** ac-ft     for each possible exit        for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><
```

```
END SPEC-ACTIONS
FTABLES
END FTABLES

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL    0.8            PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL    0.8            IMPLND   1 999 EXTNL  PREC
WDM      1 EVAP     ENGL    0.76           PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL    0.76           IMPLND   1 999 EXTNL  PETINP

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
COPY   501 OUTPUT MEAN   1 1     48.4      WDM    501 FLOW     ENGL      REPL
COPY   502 OUTPUT MEAN   1 1     48.4      WDM    502 FLOW     ENGL      REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
<Name>            <Name> # #<-factor->     <Name>                <Name> # #***
  MASS-LINK       12
PERLND     PWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   12

  MASS-LINK       13
PERLND     PWATER IFWO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   13


END MASS-LINK

END RUN
```

Mitigated UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1948 10 01        END    2009 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                    UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM         26   22044 - INFILTRATION TRENCHES.wdm
MESSU       25   Mit22044 - INFILTRATION TRENCHES.MES
            27   Mit22044 - INFILTRATION TRENCHES.L61
            28   Mit22044 - INFILTRATION TRENCHES.L62
            30   POC22044 - INFILTRATION TRENCHES1.dat
            31   POC22044 - INFILTRATION TRENCHES2.dat
END FILES

OPN SEQUENCE
    INGRP              INDELT 00:15
      PERLND       4
      IMPLND       1
      IMPLND       5
      IMPLND       8
      IMPLND       4
      RCHRES       1
      RCHRES       2
      RCHRES       3
      RCHRES       4
      RCHRES       5
      RCHRES       6
      RCHRES       7
      RCHRES       8
      COPY         1
      COPY       501
      COPY       601
      COPY         2
      COPY       502
      COPY       602
      DISPLY       1
      DISPLY       2
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title---------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    1        Gravel Trench Bed A         MAX                   1    2   30    9
    2        Surface Residence RG        MAX                   1    2   31    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
  501         1    1
  601         1    1
    2         1    1
  502         1    1
  602         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
  END OPCODE
  PARM
```

```
    #    #         K ***
  END PARM
END GENER
PERLND
  GEN-INFO
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                          User  t-series Engl Metr ***
                                        in  out           ***
    4     A/B, Pasture, Flat      1    1    1    1   27    0
  END GEN-INFO
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ****************************
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
    4         0    0    1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags **************************** PIVL  PYR
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
    4         0    0    4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
    4         0    0    0    0    0    0    0    0    0    0    0
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2         ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
    4             0         5       1.5       400      0.05       0.3     0.996
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
    4             0         0         2         2         0         0         0
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                              ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
    4          0.15       0.5       0.3         0       0.7       0.4
  END PWAT-PARM4

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
               ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS      IFWS       LZS      AGWS      GWVS
    4             0         0         0         0         3         1         0
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
    # -  #                     User  t-series Engl Metr ***
                                    in  out           ***
    1      ROADS/FLAT             1    1    1   27    0
    5      DRIVEWAYS/FLAT         1    1    1   27    0
    8      SIDEWALKS/FLAT         1    1    1   27    0
    4      ROOF TOPS/FLAT         1    1    1   27    0
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************ Active Sections ****************************
```

```
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL   ***
    1         0    0    1    0    0    0
    5         0    0    1    0    0    0
    8         0    0    1    0    0    0
    4         0    0    1    0    0    0
  END ACTIVITY

  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
    1         0    0    4    0    0    0    1    9
    5         0    0    4    0    0    0    1    9
    8         0    0    4    0    0    0    1    9
    4         0    0    4    0    0    0    1    9
  END PRINT-INFO

  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
    1         0    0    0    0    0
    5         0    0    0    0    0
    8         0    0    0    0    0
    4         0    0    0    0    0
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
    1            400      0.01       0.1       0.1
    5            400      0.01       0.1       0.1
    8            400      0.01       0.1       0.1
    4            400      0.01       0.1       0.1
  END IWAT-PARM2

  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
    1              0         0
    5              0         0
    8              0         0
    4              0         0
  END IWAT-PARM3

  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
    1             0         0
    5             0         0
    8             0         0
    4             0         0
  END IWAT-STATE1

END IMPLND

SCHEMATIC
<-Source->                <--Area-->     <-Target->   MBLK   ***
<Name>   #                <-factor->     <Name>   #   Tbl#   ***
Basin  A***
PERLND   4                    0.0502     RCHRES   1      2
PERLND   4                    0.0502     RCHRES   1      3
IMPLND   1                    0.0972     RCHRES   1      5
IMPLND   5                    0.0147     RCHRES   1      5
IMPLND   8                    0.0205     RCHRES   1      5
Basin  B***
PERLND   4                    0.0416     RCHRES   2      2
PERLND   4                    0.0416     RCHRES   2      3
IMPLND   1                    0.0755     RCHRES   2      5
IMPLND   5                    0.0037     RCHRES   2      5
IMPLND   8                    0.0024     RCHRES   2      5
Basin  C***
```

```
PERLND   4                        0.024     RCHRES   3      2
PERLND   4                        0.024     RCHRES   3      3
IMPLND   1                       0.0512     RCHRES   3      5
IMPLND   5                       0.0073     RCHRES   3      5
IMPLND   8                       0.0102     RCHRES   3      5
Basin  D***
PERLND   4                       0.0076     RCHRES   4      2
PERLND   4                       0.0076     RCHRES   4      3
IMPLND   1                       0.0483     RCHRES   4      5
IMPLND   5                       0.0044     RCHRES   4      5
Basin  E***
PERLND   4                       0.0381     RCHRES   5      2
PERLND   4                       0.0381     RCHRES   5      3
IMPLND   1                        0.082     RCHRES   5      5
IMPLND   5                       0.0073     RCHRES   5      5
IMPLND   8                       0.0134     RCHRES   5      5
Model Lot - Roof ***
IMPLND   4                       0.0689     RCHRES   8      5
Model Lot - Driveway***
IMPLND   5                       0.0344     RCHRES   6      5
Lot Remainder***
PERLND   4                       0.0344     COPY   502     12
PERLND   4                       0.0344     COPY   602     12
PERLND   4                       0.0344     COPY   502     13
PERLND   4                       0.0344     COPY   602     13

******Routing******
PERLND   4                       0.0502     COPY     1     12
IMPLND   1                       0.0972     COPY     1     15
IMPLND   5                       0.0147     COPY     1     15
IMPLND   8                       0.0205     COPY     1     15
PERLND   4                       0.0502     COPY     1     13
PERLND   4                       0.0416     COPY     1     12
IMPLND   1                       0.0755     COPY     1     15
IMPLND   5                       0.0037     COPY     1     15
IMPLND   8                       0.0024     COPY     1     15
PERLND   4                       0.0416     COPY     1     13
PERLND   4                        0.024     COPY     1     12
IMPLND   1                       0.0512     COPY     1     15
IMPLND   5                       0.0073     COPY     1     15
IMPLND   8                       0.0102     COPY     1     15
PERLND   4                        0.024     COPY     1     13
PERLND   4                       0.0076     COPY     1     12
IMPLND   1                       0.0483     COPY     1     15
IMPLND   5                       0.0044     COPY     1     15
PERLND   4                       0.0076     COPY     1     13
PERLND   4                       0.0381     COPY     1     12
IMPLND   1                        0.082     COPY     1     15
IMPLND   5                       0.0073     COPY     1     15
IMPLND   8                       0.0134     COPY     1     15
PERLND   4                       0.0381     COPY     1     13
IMPLND   4                       0.0689     COPY     2     15
IMPLND   5                       0.0344     COPY     2     15
RCHRES   6                            1     RCHRES   7      8
RCHRES   1                            1     COPY   501     17
RCHRES   2                            1     COPY   501     17
RCHRES   3                            1     COPY   501     17
RCHRES   4                            1     COPY   501     17
RCHRES   5                            1     COPY   501     17
RCHRES   7                            1     COPY   502     17
RCHRES   6                            1     COPY   502     17
RCHRES   8                            1     COPY   502     17
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   501 OUTPUT MEAN   1 1   48.4        DISPLY   1     INPUT  TIMSER 1
COPY   502 OUTPUT MEAN   1 1   48.4        DISPLY   2     INPUT  TIMSER 1
```

```
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                ***
    # -  #<-----------------><---> User T-series  Engl Metr LKFG            ***
                                        in  out                             ***
    1     Gravel Trench Be-005    2    1    1    1   28    0    1
    2     Gravel Trench Be-009    2    1    1    1   28    0    1
    3     Gravel Trench Be-010    2    1    1    1   28    0    1
    4     Gravel Trench Be-011    2    1    1    1   28    0    1
    5     Gravel Trench Be-013    2    1    1    1   28    0    1
    6     Surface Residenc-018    3    1    1    1   28    0    1
    7     Residence RG            2    1    1    1   28    0    1
    8     Residence Drywel-019    2    1    1    1   28    0    1
  END GEN-INFO
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
    1         1    0    0    0    0    0    0    0    0    0
    2         1    0    0    0    0    0    0    0    0    0
    3         1    0    0    0    0    0    0    0    0    0
    4         1    0    0    0    0    0    0    0    0    0
    5         1    0    0    0    0    0    0    0    0    0
    6         1    0    0    0    0    0    0    0    0    0
    7         1    0    0    0    0    0    0    0    0    0
    8         1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ******************* PIVL  PYR
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
    1         4    0    0    0    0    0    0    0    0    0    1    9
    2         4    0    0    0    0    0    0    0    0    0    1    9
    3         4    0    0    0    0    0    0    0    0    0    1    9
    4         4    0    0    0    0    0    0    0    0    0    1    9
    5         4    0    0    0    0    0    0    0    0    0    1    9
    6         4    0    0    0    0    0    0    0    0    0    1    9
    7         4    0    0    0    0    0    0    0    0    0    1    9
    8         4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                  ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
           FG FG FG FG  possible  exit  *** possible  exit      possible  exit
            *  *  *  *    *  *  *  *  *      *  *  *  *  *        ***
    1       0  1  0  0    4  5  0  0  0       0  0  0  0  0       2  2  2  2  2
    2       0  1  0  0    4  5  0  0  0       0  0  0  0  0       2  2  2  2  2
    3       0  1  0  0    4  5  0  0  0       0  0  0  0  0       2  2  2  2  2
    4       0  1  0  0    4  5  0  0  0       0  0  0  0  0       2  2  2  2  2
    5       0  1  0  0    4  5  0  0  0       0  0  0  0  0       2  2  2  2  2
    6       0  1  0  0    4  5  6  0  0       0  0  0  0  0       2  2  2  2  2
    7       0  1  0  0    4  5  0  0  0       0  0  0  0  0       2  2  2  2  2
    8       0  1  0  0    4  5  0  0  0       0  0  0  0  0       2  2  2  2  2
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN      DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><--------><       ***
    1              1      0.01       0.0       0.0       0.5       0.0
    2              2      0.01       0.0       0.0       0.5       0.0
    3              3      0.01       0.0       0.0       0.5       0.0
    4              4      0.01       0.0       0.0       0.5       0.0
```

```
    5             5      0.01       0.0       0.0       0.5       0.0
    6             6      0.01       0.0       0.0       0.0       0.0
    7             7      0.01       0.0       0.0       0.5       0.0
    8             8      0.01       0.0       0.0       0.5       0.0
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                    ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
          *** ac-ft     for each possible exit        for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><--->
    1             0        4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    2             0        4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    3             0        4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    4             0        4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    5             0        4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    6             0        4.0  5.0  6.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    7             0        4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    8             0        4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
  END HYDR-INIT
END RCHRES

SPEC-ACTIONS
END SPEC-ACTIONS
FTABLES
  FTABLE      1
   92    5
     Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
      (ft)   (acres) (acre-ft)   (cfs)     (cfs)   (ft/sec)    (Minutes)***
  0.000000  0.004591  0.000000  0.000000  0.000000
  0.044444  0.004592  0.000067  0.000000  0.025469
  0.088889  0.004594  0.000135  0.000000  0.025475
  0.133333  0.004595  0.000202  0.000000  0.025481
  0.177778  0.004596  0.000269  0.000000  0.025487
  0.222222  0.004597  0.000337  0.000000  0.025494
  0.266667  0.004598  0.000404  0.000000  0.025500
  0.311111  0.004599  0.000472  0.000000  0.025506
  0.355556  0.004600  0.000539  0.000000  0.025512
  0.400000  0.004601  0.000607  0.000000  0.025518
  0.444444  0.004602  0.000674  0.000000  0.025524
  0.488889  0.004603  0.000742  0.000000  0.025530
  0.533333  0.004605  0.000809  0.000000  0.025536
  0.577778  0.004606  0.000877  0.000000  0.025542
  0.622222  0.004607  0.000944  0.000000  0.025549
  0.666667  0.004608  0.001012  0.000000  0.025555
  0.711111  0.004609  0.001080  0.000000  0.025561
  0.755556  0.004610  0.001147  0.000000  0.025567
  0.800000  0.004611  0.001215  0.000000  0.025573
  0.844444  0.004612  0.001282  0.000000  0.025579
  0.888889  0.004613  0.001350  0.000000  0.025585
  0.933333  0.004615  0.001418  0.000000  0.025591
  0.977778  0.004616  0.001485  0.000000  0.025597
  1.022222  0.004617  0.001553  0.000000  0.025604
  1.066667  0.004618  0.001621  0.000000  0.025610
  1.111111  0.004619  0.001689  0.000000  0.025616
  1.155556  0.004620  0.001756  0.000000  0.025622
  1.200000  0.004621  0.001824  0.000000  0.025628
  1.244444  0.004622  0.001892  0.000000  0.025634
  1.288889  0.004623  0.001960  0.000000  0.025640
  1.333333  0.004624  0.002027  0.000000  0.025646
  1.377778  0.004626  0.002095  0.000000  0.025653
  1.422222  0.004627  0.002163  0.000000  0.025659
  1.466667  0.004628  0.002231  0.000000  0.025665
  1.511111  0.004629  0.002299  0.000000  0.025671
  1.555556  0.004630  0.002367  0.000000  0.025677
  1.600000  0.004631  0.002435  0.000000  0.025683
  1.644444  0.004632  0.002503  0.000000  0.025689
  1.688889  0.004633  0.002571  0.000000  0.025695
  1.733333  0.004634  0.002639  0.000000  0.025701
  1.777778  0.004635  0.002707  0.000000  0.025708
  1.822222  0.004637  0.002775  0.000000  0.025714
```

```
1.866667  0.004638  0.002843  0.000000  0.025720
1.911111  0.004639  0.002911  0.000000  0.025726
1.955556  0.004640  0.002979  0.000000  0.025732
2.000000  0.004641  0.003047  0.000000  0.025738
2.044444  0.004642  0.003115  0.000000  0.025744
2.088889  0.004643  0.003183  0.000000  0.025750
2.133333  0.004644  0.003251  0.000000  0.025757
2.177778  0.004645  0.003319  0.000000  0.025763
2.222222  0.004647  0.003387  0.000000  0.025769
2.266667  0.004648  0.003455  0.000000  0.025775
2.311111  0.004649  0.003524  0.000000  0.025781
2.355556  0.004650  0.003592  0.000000  0.025787
2.400000  0.004651  0.003660  0.000000  0.025793
2.444444  0.004652  0.003728  0.000000  0.025799
2.488889  0.004653  0.003796  0.000000  0.025806
2.533333  0.004654  0.003865  0.000000  0.025812
2.577778  0.004655  0.003933  0.000000  0.025818
2.622222  0.004656  0.004001  0.000000  0.025824
2.666667  0.004658  0.004070  0.000000  0.025830
2.711111  0.004659  0.004138  0.000000  0.025836
2.755556  0.004660  0.004206  0.000000  0.025842
2.800000  0.004661  0.004275  0.000000  0.025848
2.844444  0.004662  0.004343  0.000000  0.025854
2.888889  0.004663  0.004411  0.000000  0.025861
2.933333  0.004664  0.004480  0.000000  0.025867
2.977778  0.004665  0.004548  0.000000  0.025873
3.022222  0.004666  0.004755  0.029284  0.025879
3.066667  0.004667  0.004963  0.151685  0.025885
3.111111  0.004669  0.005170  0.323094  0.025891
3.155556  0.004670  0.005378  0.523118  0.025897
3.200000  0.004671  0.005585  0.732975  0.025903
3.244444  0.004672  0.005793  0.933531  0.025910
3.288889  0.004673  0.006001  1.107385  0.025916
3.333333  0.004674  0.006208  1.242541  0.025922
3.377778  0.004675  0.006416  1.337097  0.025928
3.422222  0.004676  0.006624  1.421241  0.025934
3.466667  0.004677  0.006832  1.494171  0.025940
3.511111  0.004679  0.007040  1.563705  0.025946
3.555556  0.004680  0.007248  1.630275  0.025952
3.600000  0.004681  0.007456  1.694231  0.025959
3.644444  0.004682  0.007664  1.755860  0.025965
3.688889  0.004683  0.007872  1.815397  0.025971
3.733333  0.004684  0.008080  1.873043  0.025977
3.777778  0.004685  0.008288  1.928967  0.025983
3.822222  0.004686  0.008497  1.983315  0.025989
3.866667  0.004687  0.008705  2.036212  0.025995
3.911111  0.004688  0.008913  2.087770  0.026002
3.955556  0.004690  0.009122  2.138085  0.026008
4.000000  0.004691  0.009330  2.187243  0.026014
4.044444  0.004692  0.009539  2.235320  0.026020
END FTABLE  1
FTABLE      2
 92    5
   Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
    (ft)   (acres) (acre-ft)   (cfs)      (cfs)   (ft/sec)    (Minutes)***
0.000000  0.003214  0.000000  0.000000  0.000000
0.044444  0.003215  0.000047  0.000000  0.017828
0.088889  0.003216  0.000094  0.000000  0.017833
0.133333  0.003216  0.000141  0.000000  0.017837
0.177778  0.003217  0.000189  0.000000  0.017842
0.222222  0.003218  0.000236  0.000000  0.017846
0.266667  0.003219  0.000283  0.000000  0.017851
0.311111  0.003220  0.000330  0.000000  0.017855
0.355556  0.003220  0.000377  0.000000  0.017859
0.400000  0.003221  0.000425  0.000000  0.017864
0.444444  0.003222  0.000472  0.000000  0.017868
0.488889  0.003223  0.000519  0.000000  0.017873
0.533333  0.003224  0.000566  0.000000  0.017877
0.577778  0.003224  0.000614  0.000000  0.017881
0.622222  0.003225  0.000661  0.000000  0.017886
```

0.666667	0.003226	0.000708	0.000000	0.017890
0.711111	0.003227	0.000756	0.000000	0.017895
0.755556	0.003227	0.000803	0.000000	0.017899
0.800000	0.003228	0.000850	0.000000	0.017904
0.844444	0.003229	0.000898	0.000000	0.017908
0.888889	0.003230	0.000945	0.000000	0.017912
0.933333	0.003231	0.000992	0.000000	0.017917
0.977778	0.003231	0.001040	0.000000	0.017921
1.022222	0.003232	0.001087	0.000000	0.017926
1.066667	0.003233	0.001135	0.000000	0.017930
1.111111	0.003234	0.001182	0.000000	0.017934
1.155556	0.003235	0.001230	0.000000	0.017939
1.200000	0.003235	0.001277	0.000000	0.017943
1.244444	0.003236	0.001324	0.000000	0.017948
1.288889	0.003237	0.001372	0.000000	0.017952
1.333333	0.003238	0.001419	0.000000	0.017957
1.377778	0.003239	0.001467	0.000000	0.017961
1.422222	0.003239	0.001514	0.000000	0.017965
1.466667	0.003240	0.001562	0.000000	0.017970
1.511111	0.003241	0.001609	0.000000	0.017974
1.555556	0.003242	0.001657	0.000000	0.017979
1.600000	0.003243	0.001705	0.000000	0.017983
1.644444	0.003243	0.001752	0.000000	0.017988
1.688889	0.003244	0.001800	0.000000	0.017992
1.733333	0.003245	0.001847	0.000000	0.017996
1.777778	0.003246	0.001895	0.000000	0.018001
1.822222	0.003247	0.001942	0.000000	0.018005
1.866667	0.003247	0.001990	0.000000	0.018010
1.911111	0.003248	0.002038	0.000000	0.018014
1.955556	0.003249	0.002085	0.000000	0.018018
2.000000	0.003250	0.002133	0.000000	0.018023
2.044444	0.003251	0.002181	0.000000	0.018027
2.088889	0.003251	0.002228	0.000000	0.018032
2.133333	0.003252	0.002276	0.000000	0.018036
2.177778	0.003253	0.002324	0.000000	0.018041
2.222222	0.003254	0.002372	0.000000	0.018045
2.266667	0.003255	0.002419	0.000000	0.018049
2.311111	0.003255	0.002467	0.000000	0.018054
2.355556	0.003256	0.002515	0.000000	0.018058
2.400000	0.003257	0.002562	0.000000	0.018063
2.444444	0.003258	0.002610	0.000000	0.018067
2.488889	0.003259	0.002658	0.000000	0.018072
2.533333	0.003259	0.002706	0.000000	0.018076
2.577778	0.003260	0.002754	0.000000	0.018080
2.622222	0.003261	0.002801	0.000000	0.018085
2.666667	0.003262	0.002849	0.000000	0.018089
2.711111	0.003263	0.002897	0.000000	0.018094
2.755556	0.003263	0.002945	0.000000	0.018098
2.800000	0.003264	0.002993	0.000000	0.018103
2.844444	0.003265	0.003041	0.000000	0.018107
2.888889	0.003266	0.003089	0.000000	0.018111
2.933333	0.003267	0.003137	0.000000	0.018116
2.977778	0.003267	0.003184	0.000000	0.018120
3.022222	0.003268	0.003330	0.029284	0.018125
3.066667	0.003269	0.003475	0.151685	0.018129
3.111111	0.003270	0.003620	0.323094	0.018134
3.155556	0.003271	0.003766	0.523118	0.018138
3.200000	0.003271	0.003911	0.732975	0.018142
3.244444	0.003272	0.004056	0.933531	0.018147
3.288889	0.003273	0.004202	1.107385	0.018151
3.333333	0.003274	0.004347	1.242541	0.018156
3.377778	0.003275	0.004493	1.337097	0.018160
3.422222	0.003275	0.004638	1.421241	0.018165
3.466667	0.003276	0.004784	1.494171	0.018169
3.511111	0.003277	0.004930	1.563705	0.018173
3.555556	0.003278	0.005075	1.630275	0.018178
3.600000	0.003279	0.005221	1.694231	0.018182
3.644444	0.003279	0.005367	1.755860	0.018187
3.688889	0.003280	0.005512	1.815397	0.018191
3.733333	0.003281	0.005658	1.873043	0.018196

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3.777778  0.003282  0.005804  1.928967  0.018200
3.822222  0.003283  0.005950  1.983315  0.018204
3.866667  0.003283  0.006096  2.036212  0.018209
3.911111  0.003284  0.006242  2.087770  0.018213
3.955556  0.003285  0.006388  2.138085  0.018218
4.000000  0.003286  0.006534  2.187243  0.018222
4.044444  0.003287  0.006680  2.235320  0.018227
END FTABLE  2
FTABLE      3
 92    5
   Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
    (ft)   (acres) (acre-ft)   (cfs)     (cfs)   (ft/sec)    (Minutes)***
0.000000  0.002388  0.000000  0.000000  0.000000
0.044444  0.002388  0.000035  0.000000  0.013244
0.088889  0.002389  0.000070  0.000000  0.013248
0.133333  0.002389  0.000105  0.000000  0.013251
0.177778  0.002390  0.000140  0.000000  0.013254
0.222222  0.002391  0.000175  0.000000  0.013258
0.266667  0.002391  0.000210  0.000000  0.013261
0.311111  0.002392  0.000245  0.000000  0.013265
0.355556  0.002392  0.000280  0.000000  0.013268
0.400000  0.002393  0.000316  0.000000  0.013271
0.444444  0.002394  0.000351  0.000000  0.013275
0.488889  0.002394  0.000386  0.000000  0.013278
0.533333  0.002395  0.000421  0.000000  0.013281
0.577778  0.002395  0.000456  0.000000  0.013285
0.622222  0.002396  0.000491  0.000000  0.013288
0.666667  0.002397  0.000526  0.000000  0.013292
0.711111  0.002397  0.000561  0.000000  0.013295
0.755556  0.002398  0.000597  0.000000  0.013298
0.800000  0.002399  0.000632  0.000000  0.013302
0.844444  0.002399  0.000667  0.000000  0.013305
0.888889  0.002400  0.000702  0.000000  0.013309
0.933333  0.002400  0.000737  0.000000  0.013312
0.977778  0.002401  0.000773  0.000000  0.013315
1.022222  0.002402  0.000808  0.000000  0.013319
1.066667  0.002402  0.000843  0.000000  0.013322
1.111111  0.002403  0.000878  0.000000  0.013326
1.155556  0.002403  0.000913  0.000000  0.013329
1.200000  0.002404  0.000949  0.000000  0.013332
1.244444  0.002405  0.000984  0.000000  0.013336
1.288889  0.002405  0.001019  0.000000  0.013339
1.333333  0.002406  0.001055  0.000000  0.013343
1.377778  0.002407  0.001090  0.000000  0.013346
1.422222  0.002407  0.001125  0.000000  0.013349
1.466667  0.002408  0.001160  0.000000  0.013353
1.511111  0.002408  0.001196  0.000000  0.013356
1.555556  0.002409  0.001231  0.000000  0.013360
1.600000  0.002410  0.001266  0.000000  0.013363
1.644444  0.002410  0.001302  0.000000  0.013366
1.688889  0.002411  0.001337  0.000000  0.013370
1.733333  0.002411  0.001372  0.000000  0.013373
1.777778  0.002412  0.001408  0.000000  0.013377
1.822222  0.002413  0.001443  0.000000  0.013380
1.866667  0.002413  0.001479  0.000000  0.013384
1.911111  0.002414  0.001514  0.000000  0.013387
1.955556  0.002414  0.001549  0.000000  0.013390
2.000000  0.002415  0.001585  0.000000  0.013394
2.044444  0.002416  0.001620  0.000000  0.013397
2.088889  0.002416  0.001656  0.000000  0.013401
2.133333  0.002417  0.001691  0.000000  0.013404
2.177778  0.002418  0.001727  0.000000  0.013407
2.222222  0.002418  0.001762  0.000000  0.013411
2.266667  0.002419  0.001798  0.000000  0.013414
2.311111  0.002419  0.001833  0.000000  0.013418
2.355556  0.002420  0.001869  0.000000  0.013421
2.400000  0.002421  0.001904  0.000000  0.013424
2.444444  0.002421  0.001940  0.000000  0.013428
2.488889  0.002422  0.001975  0.000000  0.013431
2.533333  0.002422  0.002011  0.000000  0.013435
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2.577778  0.002423  0.002046  0.000000  0.013438
2.622222  0.002424  0.002082  0.000000  0.013441
2.666667  0.002424  0.002117  0.000000  0.013445
2.711111  0.002425  0.002153  0.000000  0.013448
2.755556  0.002426  0.002188  0.000000  0.013452
2.800000  0.002426  0.002224  0.000000  0.013455
2.844444  0.002427  0.002259  0.000000  0.013458
2.888889  0.002427  0.002295  0.000000  0.013462
2.933333  0.002428  0.002331  0.000000  0.013465
2.977778  0.002429  0.002366  0.000000  0.013469
3.022222  0.002429  0.002474  0.029284  0.013472
3.066667  0.002430  0.002582  0.151685  0.013475
3.111111  0.002430  0.002690  0.323094  0.013479
3.155556  0.002431  0.002798  0.523118  0.013482
3.200000  0.002432  0.002906  0.732975  0.013486
3.244444  0.002432  0.003014  0.933531  0.013489
3.288889  0.002433  0.003123  1.107385  0.013493
3.333333  0.002434  0.003231  1.242541  0.013496
3.377778  0.002434  0.003339  1.337097  0.013499
3.422222  0.002435  0.003447  1.421241  0.013503
3.466667  0.002435  0.003555  1.494171  0.013506
3.511111  0.002436  0.003664  1.563705  0.013510
3.555556  0.002437  0.003772  1.630275  0.013513
3.600000  0.002437  0.003880  1.694231  0.013516
3.644444  0.002438  0.003988  1.755860  0.013520
3.688889  0.002438  0.004097  1.815397  0.013523
3.733333  0.002439  0.004205  1.873043  0.013527
3.777778  0.002440  0.004314  1.928967  0.013530
3.822222  0.002440  0.004422  1.983315  0.013533
3.866667  0.002441  0.004531  2.036212  0.013537
3.911111  0.002442  0.004639  2.087770  0.013540
3.955556  0.002442  0.004748  2.138085  0.013544
4.000000  0.002443  0.004856  2.187243  0.013547
4.044444  0.002443  0.004965  2.235320  0.013551
END FTABLE  3
FTABLE      4
 92    5
   Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
    (ft)   (acres) (acre-ft)   (cfs)      (cfs)   (ft/sec)    (Minutes)***
0.000000  0.001837  0.000000  0.000000  0.000000
0.044444  0.001837  0.000027  0.000000  0.010188
0.088889  0.001838  0.000054  0.000000  0.010191
0.133333  0.001838  0.000081  0.000000  0.010193
0.177778  0.001839  0.000108  0.000000  0.010196
0.222222  0.001839  0.000135  0.000000  0.010199
0.266667  0.001839  0.000162  0.000000  0.010201
0.311111  0.001840  0.000189  0.000000  0.010204
0.355556  0.001840  0.000216  0.000000  0.010207
0.400000  0.001841  0.000243  0.000000  0.010210
0.444444  0.001841  0.000270  0.000000  0.010212
0.488889  0.001842  0.000297  0.000000  0.010215
0.533333  0.001842  0.000324  0.000000  0.010218
0.577778  0.001843  0.000351  0.000000  0.010221
0.622222  0.001843  0.000378  0.000000  0.010223
0.666667  0.001844  0.000405  0.000000  0.010226
0.711111  0.001844  0.000432  0.000000  0.010229
0.755556  0.001845  0.000459  0.000000  0.010231
0.800000  0.001845  0.000486  0.000000  0.010234
0.844444  0.001846  0.000513  0.000000  0.010237
0.888889  0.001846  0.000540  0.000000  0.010240
0.933333  0.001847  0.000567  0.000000  0.010242
0.977778  0.001847  0.000594  0.000000  0.010245
1.022222  0.001848  0.000621  0.000000  0.010248
1.066667  0.001848  0.000649  0.000000  0.010250
1.111111  0.001849  0.000676  0.000000  0.010253
1.155556  0.001849  0.000703  0.000000  0.010256
1.200000  0.001850  0.000730  0.000000  0.010259
1.244444  0.001850  0.000757  0.000000  0.010261
1.288889  0.001851  0.000784  0.000000  0.010264
1.333333  0.001851  0.000811  0.000000  0.010267
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1.377778  0.001852  0.000838  0.000000  0.010269
1.422222  0.001852  0.000866  0.000000  0.010272
1.466667  0.001853  0.000893  0.000000  0.010275
1.511111  0.001853  0.000920  0.000000  0.010278
1.555556  0.001854  0.000947  0.000000  0.010280
1.600000  0.001854  0.000974  0.000000  0.010283
1.644444  0.001855  0.001002  0.000000  0.010286
1.688889  0.001855  0.001029  0.000000  0.010289
1.733333  0.001856  0.001056  0.000000  0.010291
1.777778  0.001856  0.001083  0.000000  0.010294
1.822222  0.001857  0.001110  0.000000  0.010297
1.866667  0.001857  0.001138  0.000000  0.010299
1.911111  0.001858  0.001165  0.000000  0.010302
1.955556  0.001858  0.001192  0.000000  0.010305
2.000000  0.001859  0.001219  0.000000  0.010308
2.044444  0.001859  0.001247  0.000000  0.010310
2.088889  0.001860  0.001274  0.000000  0.010313
2.133333  0.001860  0.001301  0.000000  0.010316
2.177778  0.001861  0.001328  0.000000  0.010319
2.222222  0.001861  0.001356  0.000000  0.010321
2.266667  0.001862  0.001383  0.000000  0.010324
2.311111  0.001862  0.001410  0.000000  0.010327
2.355556  0.001863  0.001438  0.000000  0.010329
2.400000  0.001863  0.001465  0.000000  0.010332
2.444444  0.001864  0.001492  0.000000  0.010335
2.488889  0.001864  0.001520  0.000000  0.010338
2.533333  0.001865  0.001547  0.000000  0.010340
2.577778  0.001865  0.001574  0.000000  0.010343
2.622222  0.001866  0.001602  0.000000  0.010346
2.666667  0.001866  0.001629  0.000000  0.010349
2.711111  0.001866  0.001656  0.000000  0.010351
2.755556  0.001867  0.001684  0.000000  0.010354
2.800000  0.001867  0.001711  0.000000  0.010357
2.844444  0.001868  0.001739  0.000000  0.010359
2.888889  0.001868  0.001766  0.000000  0.010362
2.933333  0.001869  0.001793  0.000000  0.010365
2.977778  0.001869  0.001821  0.000000  0.010368
3.022222  0.001870  0.001904  0.029284  0.010370
3.066667  0.001870  0.001987  0.151685  0.010373
3.111111  0.001871  0.002070  0.323094  0.010376
3.155556  0.001871  0.002153  0.523118  0.010379
3.200000  0.001872  0.002237  0.732975  0.010381
3.244444  0.001872  0.002320  0.933531  0.010384
3.288889  0.001873  0.002403  1.107385  0.010387
3.333333  0.001873  0.002486  1.242541  0.010389
3.377778  0.001874  0.002570  1.337097  0.010392
3.422222  0.001874  0.002653  1.421241  0.010395
3.466667  0.001875  0.002736  1.494171  0.010398
3.511111  0.001875  0.002819  1.563705  0.010400
3.555556  0.001876  0.002903  1.630275  0.010403
3.600000  0.001876  0.002986  1.694231  0.010406
3.644444  0.001877  0.003070  1.755860  0.010409
3.688889  0.001877  0.003153  1.815397  0.010411
3.733333  0.001878  0.003236  1.873043  0.010414
3.777778  0.001878  0.003320  1.928967  0.010417
3.822222  0.001879  0.003403  1.983315  0.010420
3.866667  0.001879  0.003487  2.036212  0.010422
3.911111  0.001880  0.003571  2.087770  0.010425
3.955556  0.001880  0.003654  2.138085  0.010428
4.000000  0.001881  0.003738  2.187243  0.010430
4.044444  0.001881  0.003821  2.235320  0.010433
END FTABLE  4
FTABLE      5
 92    5
   Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
    (ft)   (acres) (acre-ft)   (cfs)      (cfs)   (ft/sec)    (Minutes)***
0.000000  0.003673  0.000000  0.000000  0.000000
0.044444  0.003674  0.000054  0.000000  0.020375
0.088889  0.003675  0.000108  0.000000  0.020380
0.133333  0.003676  0.000162  0.000000  0.020385
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0.177778	0.003677	0.000216	0.000000	0.020390
0.222222	0.003678	0.000270	0.000000	0.020395
0.266667	0.003678	0.000323	0.000000	0.020400
0.311111	0.003679	0.000377	0.000000	0.020405
0.355556	0.003680	0.000431	0.000000	0.020410
0.400000	0.003681	0.000485	0.000000	0.020415
0.444444	0.003682	0.000539	0.000000	0.020420
0.488889	0.003683	0.000593	0.000000	0.020425
0.533333	0.003684	0.000647	0.000000	0.020430
0.577778	0.003685	0.000701	0.000000	0.020435
0.622222	0.003686	0.000755	0.000000	0.020440
0.666667	0.003687	0.000810	0.000000	0.020445
0.711111	0.003687	0.000864	0.000000	0.020450
0.755556	0.003688	0.000918	0.000000	0.020455
0.800000	0.003689	0.000972	0.000000	0.020460
0.844444	0.003690	0.001026	0.000000	0.020465
0.888889	0.003691	0.001080	0.000000	0.020470
0.933333	0.003692	0.001134	0.000000	0.020475
0.977778	0.003693	0.001188	0.000000	0.020480
1.022222	0.003694	0.001243	0.000000	0.020485
1.066667	0.003695	0.001297	0.000000	0.020490
1.111111	0.003696	0.001351	0.000000	0.020495
1.155556	0.003696	0.001405	0.000000	0.020500
1.200000	0.003697	0.001459	0.000000	0.020505
1.244444	0.003698	0.001514	0.000000	0.020510
1.288889	0.003699	0.001568	0.000000	0.020515
1.333333	0.003700	0.001622	0.000000	0.020520
1.377778	0.003701	0.001676	0.000000	0.020525
1.422222	0.003702	0.001731	0.000000	0.020530
1.466667	0.003703	0.001785	0.000000	0.020535
1.511111	0.003704	0.001839	0.000000	0.020540
1.555556	0.003705	0.001894	0.000000	0.020545
1.600000	0.003705	0.001948	0.000000	0.020550
1.644444	0.003706	0.002002	0.000000	0.020555
1.688889	0.003707	0.002057	0.000000	0.020560
1.733333	0.003708	0.002111	0.000000	0.020565
1.777778	0.003709	0.002165	0.000000	0.020570
1.822222	0.003710	0.002220	0.000000	0.020575
1.866667	0.003711	0.002274	0.000000	0.020580
1.911111	0.003712	0.002329	0.000000	0.020585
1.955556	0.003713	0.002383	0.000000	0.020590
2.000000	0.003714	0.002438	0.000000	0.020595
2.044444	0.003714	0.002492	0.000000	0.020600
2.088889	0.003715	0.002547	0.000000	0.020605
2.133333	0.003716	0.002601	0.000000	0.020610
2.177778	0.003717	0.002656	0.000000	0.020615
2.222222	0.003718	0.002710	0.000000	0.020620
2.266667	0.003719	0.002765	0.000000	0.020625
2.311111	0.003720	0.002819	0.000000	0.020630
2.355556	0.003721	0.002874	0.000000	0.020635
2.400000	0.003722	0.002928	0.000000	0.020640
2.444444	0.003723	0.002983	0.000000	0.020645
2.488889	0.003723	0.003037	0.000000	0.020650
2.533333	0.003724	0.003092	0.000000	0.020655
2.577778	0.003725	0.003147	0.000000	0.020660
2.622222	0.003726	0.003201	0.000000	0.020665
2.666667	0.003727	0.003256	0.000000	0.020669
2.711111	0.003728	0.003311	0.000000	0.020674
2.755556	0.003729	0.003365	0.000000	0.020679
2.800000	0.003730	0.003420	0.000000	0.020684
2.844444	0.003731	0.003475	0.000000	0.020689
2.888889	0.003732	0.003530	0.000000	0.020694
2.933333	0.003732	0.003584	0.000000	0.020699
2.977778	0.003733	0.003639	0.000000	0.020704
3.022222	0.003734	0.003805	0.029284	0.020709
3.066667	0.003735	0.003971	0.151685	0.020714
3.111111	0.003736	0.004137	0.323094	0.020719
3.155556	0.003737	0.004303	0.523118	0.020724
3.200000	0.003738	0.004469	0.732975	0.020729
3.244444	0.003739	0.004635	0.933531	0.020734

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3.288889  0.003740  0.004801  1.107385  0.020739
3.333333  0.003741  0.004968  1.242541  0.020744
3.377778  0.003741  0.005134  1.337097  0.020749
3.422222  0.003742  0.005300  1.421241  0.020754
3.466667  0.003743  0.005467  1.494171  0.020759
3.511111  0.003744  0.005633  1.563705  0.020764
3.555556  0.003745  0.005799  1.630275  0.020769
3.600000  0.003746  0.005966  1.694231  0.020774
3.644444  0.003747  0.006132  1.755860  0.020779
3.688889  0.003748  0.006299  1.815397  0.020784
3.733333  0.003749  0.006466  1.873043  0.020789
3.777778  0.003750  0.006632  1.928967  0.020794
3.822222  0.003750  0.006799  1.983315  0.020799
3.866667  0.003751  0.006966  2.036212  0.020804
3.911111  0.003752  0.007132  2.087770  0.020809
3.955556  0.003753  0.007299  2.138085  0.020814
4.000000  0.003754  0.007466  2.187243  0.020819
4.044444  0.003755  0.007633  2.235320  0.020824
END FTABLE  5
FTABLE      7
 51    5
   Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
    (ft)   (acres) (acre-ft)   (cfs)      (cfs)   (ft/sec)    (Minutes)***
0.000000  0.003306  0.000000  0.000000  0.000000
0.020110  0.003256  0.000006  0.000000  0.000000
0.040220  0.003187  0.000012  0.000000  0.000002
0.060330  0.003119  0.000018  0.000000  0.000004
0.080440  0.003052  0.000024  0.000000  0.000008
0.100549  0.002986  0.000031  0.000000  0.000016
0.120659  0.002920  0.000038  0.000000  0.000027
0.140769  0.002855  0.000046  0.000000  0.000041
0.160879  0.002791  0.000053  0.000000  0.000062
0.180989  0.002727  0.000061  0.000000  0.000088
0.201099  0.002664  0.000070  0.000000  0.000121
0.221209  0.002601  0.000079  0.000000  0.000163
0.241319  0.002540  0.000088  0.000000  0.000215
0.261429  0.002479  0.000097  0.000000  0.000277
0.281538  0.002418  0.000107  0.000000  0.000352
0.301648  0.002358  0.000117  0.000000  0.000442
0.321758  0.002299  0.000128  0.000000  0.000547
0.341868  0.002241  0.000139  0.000000  0.000670
0.361978  0.002183  0.000150  0.000000  0.000813
0.382088  0.002126  0.000162  0.000000  0.000978
0.402198  0.002070  0.000174  0.000000  0.001167
0.422308  0.002014  0.000186  0.000000  0.001384
0.442418  0.001959  0.000199  0.000000  0.001629
0.462527  0.001905  0.000212  0.000000  0.001907
0.482637  0.001851  0.000226  0.000000  0.002220
0.502747  0.001798  0.000240  0.000000  0.002571
0.522857  0.001745  0.000254  0.000000  0.002963
0.542967  0.001694  0.000269  0.000000  0.003401
0.563077  0.001643  0.000285  0.000000  0.003887
0.583187  0.001592  0.000301  0.000000  0.004426
0.603297  0.001543  0.000317  0.000000  0.005021
0.623407  0.001494  0.000333  0.000000  0.005678
0.643516  0.001445  0.000351  0.000000  0.006399
0.663626  0.001397  0.000368  0.000000  0.007191
0.683736  0.001350  0.000386  0.000000  0.008057
0.703846  0.001304  0.000405  0.000000  0.009003
0.723956  0.001258  0.000424  0.000000  0.010035
0.744066  0.001213  0.000443  0.000000  0.011158
0.764176  0.001169  0.000463  0.000000  0.012378
0.784286  0.001125  0.000483  0.000000  0.013700
0.804396  0.001082  0.000504  0.000000  0.014773
0.824505  0.001040  0.000526  0.000000  0.015123
0.844615  0.000998  0.000548  0.000000  0.015477
0.864725  0.000957  0.000570  0.000000  0.015834
0.884835  0.000917  0.000593  0.000000  0.016195
0.904945  0.000877  0.000616  0.000000  0.016559
0.925055  0.000838  0.000640  0.000000  0.016928
```

```
  0.945165  0.000800  0.000665  0.000000  0.017300
  0.965275  0.000762  0.000690  0.000000  0.017676
  0.985385  0.000725  0.000716  0.000000  0.018055
  1.000000  0.000689  0.001113  0.000000  0.018333
  END FTABLE  7
  FTABLE      6
   43    6
     Depth      Area    Volume  Outflow1  Outflow2  outflow 3 Velocity  Travel
Time***
      (ft)   (acres) (acre-ft)   (cfs)      (cfs)     (cfs)   (ft/sec)
(Minutes)***
  0.000000  0.000689  0.000000  0.000000  0.000000  0.000386
  0.020110  0.003375  0.000067  0.000000  0.004167  0.000386
  0.040220  0.003446  0.000136  0.000000  0.004334  0.000776
  0.060330  0.003517  0.000206  0.000000  0.004418  0.001169
  0.080440  0.003588  0.000277  0.000000  0.004502  0.001566
  0.100549  0.003660  0.000350  0.000000  0.004586  0.001967
  0.120659  0.003733  0.000424  0.000000  0.004669  0.002371
  0.140769  0.003807  0.000500  0.000000  0.004753  0.002779
  0.160879  0.003881  0.000578  0.000000  0.004837  0.003191
  0.180989  0.003956  0.000656  0.000000  0.004921  0.003607
  0.201099  0.004032  0.000737  0.000000  0.005005  0.004026
  0.221209  0.004108  0.000819  0.000000  0.005088  0.004449
  0.241319  0.004185  0.000902  0.000000  0.005172  0.004875
  0.261429  0.004263  0.000987  0.000000  0.005256  0.005306
  0.281538  0.004341  0.001073  0.000000  0.005340  0.005740
  0.301648  0.004420  0.001161  0.000000  0.005424  0.006178
  0.321758  0.004499  0.001251  0.000000  0.005507  0.006619
  0.341868  0.004580  0.001342  0.000000  0.005591  0.007064
  0.361978  0.004661  0.001435  0.000000  0.005675  0.007513
  0.382088  0.004742  0.001530  0.000000  0.005759  0.007966
  0.402198  0.004824  0.001626  0.000000  0.005842  0.008422
  0.422308  0.004907  0.001724  0.000000  0.005926  0.008882
  0.442418  0.004991  0.001823  0.000000  0.006010  0.009346
  0.462527  0.005075  0.001925  0.000000  0.006094  0.009814
  0.482637  0.005160  0.002028  0.000000  0.006178  0.010285
  0.502747  0.005246  0.002132  0.001274  0.006261  0.010760
  0.522857  0.005332  0.002239  0.030547  0.006345  0.011238
  0.542967  0.005419  0.002347  0.078648  0.006429  0.011720
  0.563077  0.005507  0.002457  0.139658  0.006513  0.012206
  0.583187  0.005595  0.002568  0.210880  0.006597  0.012696
  0.603297  0.005684  0.002682  0.290358  0.006680  0.013189
  0.623407  0.005774  0.002797  0.376355  0.006764  0.013687
  0.643516  0.005864  0.002914  0.467166  0.006848  0.014187
  0.663626  0.005955  0.003033  0.561058  0.006932  0.014692
  0.683736  0.006047  0.003153  0.656257  0.007016  0.015200
  0.703846  0.006139  0.003276  0.750968  0.007099  0.015712
  0.723956  0.006232  0.003400  0.843420  0.007183  0.016228
  0.744066  0.006326  0.003526  0.931914  0.007267  0.016747
  0.764176  0.006420  0.003655  1.014897  0.007351  0.017270
  0.784286  0.006515  0.003785  1.091035  0.007435  0.017797
  0.804396  0.006610  0.003917  1.159298  0.007518  0.018327
  0.824505  0.006707  0.004051  1.219052  0.007602  0.018862
  0.830000  0.006733  0.004087  1.270162  0.007625  0.019008
  END FTABLE  6
  FTABLE      8
   92    5
     Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
      (ft)   (acres) (acre-ft)   (cfs)      (cfs)   (ft/sec)    (Minutes)***
  0.000000  0.002571  0.000000  0.000000  0.000000
  0.044444  0.002572  0.000038  0.000000  0.014263
  0.088889  0.002572  0.000075  0.000000  0.014267
  0.133333  0.002573  0.000113  0.000000  0.014270
  0.177778  0.002574  0.000151  0.000000  0.014274
  0.222222  0.002574  0.000189  0.000000  0.014277
  0.266667  0.002575  0.000226  0.000000  0.014281
  0.311111  0.002576  0.000264  0.000000  0.014285
  0.355556  0.002576  0.000302  0.000000  0.014288
  0.400000  0.002577  0.000340  0.000000  0.014292
  0.444444  0.002578  0.000378  0.000000  0.014295
```

0.488889	0.002578	0.000415	0.000000	0.014299
0.533333	0.002579	0.000453	0.000000	0.014303
0.577778	0.002580	0.000491	0.000000	0.014306
0.622222	0.002580	0.000529	0.000000	0.014310
0.666667	0.002581	0.000567	0.000000	0.014314
0.711111	0.002582	0.000605	0.000000	0.014317
0.755556	0.002582	0.000642	0.000000	0.014321
0.800000	0.002583	0.000680	0.000000	0.014324
0.844444	0.002584	0.000718	0.000000	0.014328
0.888889	0.002584	0.000756	0.000000	0.014332
0.933333	0.002585	0.000794	0.000000	0.014335
0.977778	0.002586	0.000832	0.000000	0.014339
1.022222	0.002586	0.000870	0.000000	0.014343
1.066667	0.002587	0.000908	0.000000	0.014346
1.111111	0.002588	0.000946	0.000000	0.014350
1.155556	0.002588	0.000984	0.000000	0.014353
1.200000	0.002589	0.001022	0.000000	0.014357
1.244444	0.002589	0.001060	0.000000	0.014361
1.288889	0.002590	0.001098	0.000000	0.014364
1.333333	0.002591	0.001136	0.000000	0.014368
1.377778	0.002591	0.001174	0.000000	0.014372
1.422222	0.002592	0.001212	0.000000	0.014375
1.466667	0.002593	0.001250	0.000000	0.014379
1.511111	0.002593	0.001288	0.000000	0.014383
1.555556	0.002594	0.001326	0.000000	0.014386
1.600000	0.002595	0.001364	0.000000	0.014390
1.644444	0.002595	0.001402	0.000000	0.014393
1.688889	0.002596	0.001440	0.000000	0.014397
1.733333	0.002597	0.001478	0.000000	0.014401
1.777778	0.002597	0.001516	0.000000	0.014404
1.822222	0.002598	0.001554	0.000000	0.014408
1.866667	0.002599	0.001592	0.000000	0.014412
1.911111	0.002599	0.001630	0.000000	0.014415
1.955556	0.002600	0.001669	0.000000	0.014419
2.000000	0.002601	0.001707	0.000000	0.014422
2.044444	0.002601	0.001745	0.000000	0.014426
2.088889	0.002602	0.001783	0.000000	0.014430
2.133333	0.002603	0.001821	0.000000	0.014433
2.177778	0.002603	0.001859	0.000000	0.014437
2.222222	0.002604	0.001898	0.000000	0.014441
2.266667	0.002605	0.001936	0.000000	0.014444
2.311111	0.002605	0.001974	0.000000	0.014448
2.355556	0.002606	0.002012	0.000000	0.014451
2.400000	0.002606	0.002050	0.000000	0.014455
2.444444	0.002607	0.002089	0.000000	0.014459
2.488889	0.002608	0.002127	0.000000	0.014462
2.533333	0.002608	0.002165	0.000000	0.014466
2.577778	0.002609	0.002203	0.000000	0.014470
2.622222	0.002610	0.002242	0.000000	0.014473
2.666667	0.002610	0.002280	0.000000	0.014477
2.711111	0.002611	0.002318	0.000000	0.014481
2.755556	0.002612	0.002356	0.000000	0.014484
2.800000	0.002612	0.002395	0.000000	0.014488
2.844444	0.002613	0.002433	0.000000	0.014491
2.888889	0.002614	0.002471	0.000000	0.014495
2.933333	0.002614	0.002510	0.000000	0.014499
2.977778	0.002615	0.002548	0.000000	0.014502
3.022222	0.002616	0.002664	0.029284	0.014506
3.066667	0.002616	0.002781	0.151685	0.014510
3.111111	0.002617	0.002897	0.323094	0.014513
3.155556	0.002618	0.003013	0.523118	0.014517
3.200000	0.002618	0.003130	0.732975	0.014521
3.244444	0.002619	0.003246	0.933531	0.014524
3.288889	0.002620	0.003362	1.107385	0.014528
3.333333	0.002620	0.003479	1.242541	0.014531
3.377778	0.002621	0.003595	1.337097	0.014535
3.422222	0.002622	0.003712	1.421241	0.014539
3.466667	0.002622	0.003828	1.494171	0.014542
3.511111	0.002623	0.003945	1.563705	0.014546
3.555556	0.002624	0.004061	1.630275	0.014550

```
  3.600000  0.002624  0.004178  1.694231  0.014553
  3.644444  0.002625  0.004295  1.755860  0.014557
  3.688889  0.002625  0.004411  1.815397  0.014561
  3.733333  0.002626  0.004528  1.873043  0.014564
  3.777778  0.002627  0.004645  1.928967  0.014568
  3.822222  0.002627  0.004762  1.983315  0.014571
  3.866667  0.002628  0.004878  2.036212  0.014575
  3.911111  0.002629  0.004995  2.087770  0.014579
  3.955556  0.002629  0.005112  2.138085  0.014582
  4.000000  0.002630  0.005229  2.187243  0.014586
  4.044444  0.002631  0.005346  2.235320  0.014590
  END FTABLE  8
END FTABLES

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL    0.8            PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL    0.8            IMPLND   1 999 EXTNL  PREC
WDM      1 EVAP     ENGL    0.76           PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL    0.76           IMPLND   1 999 EXTNL  PETINP
WDM      2 PREC     ENGL    0.8            RCHRES   6     EXTNL  PREC
WDM      1 EVAP     ENGL    0.5            RCHRES   6     EXTNL  POTEV
WDM      1 EVAP     ENGL    0.76           RCHRES   7     EXTNL  POTEV

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
RCHRES   1 HYDR   RO     1 1         1      WDM   1000 FLOW     ENGL       REPL
RCHRES   1 HYDR   O      1 1         1      WDM   1001 FLOW     ENGL       REPL
RCHRES   1 HYDR   O      2 1         1      WDM   1002 FLOW     ENGL       REPL
RCHRES   1 HYDR   STAGE  1 1         1      WDM   1003 STAG     ENGL       REPL
COPY     1 OUTPUT MEAN   1 1      48.4      WDM    701 FLOW     ENGL       REPL
COPY   501 OUTPUT MEAN   1 1      48.4      WDM    801 FLOW     ENGL       REPL
COPY   601 OUTPUT MEAN   1 1      48.4      WDM    901 FLOW     ENGL       REPL
RCHRES   2 HYDR   RO     1 1         1      WDM   1004 FLOW     ENGL       REPL
RCHRES   2 HYDR   O      1 1         1      WDM   1005 FLOW     ENGL       REPL
RCHRES   2 HYDR   O      2 1         1      WDM   1006 FLOW     ENGL       REPL
RCHRES   2 HYDR   STAGE  1 1         1      WDM   1007 STAG     ENGL       REPL
RCHRES   3 HYDR   RO     1 1         1      WDM   1008 FLOW     ENGL       REPL
RCHRES   3 HYDR   O      1 1         1      WDM   1009 FLOW     ENGL       REPL
RCHRES   3 HYDR   O      2 1         1      WDM   1010 FLOW     ENGL       REPL
RCHRES   3 HYDR   STAGE  1 1         1      WDM   1011 STAG     ENGL       REPL
RCHRES   4 HYDR   RO     1 1         1      WDM   1012 FLOW     ENGL       REPL
RCHRES   4 HYDR   O      1 1         1      WDM   1013 FLOW     ENGL       REPL
RCHRES   4 HYDR   O      2 1         1      WDM   1014 FLOW     ENGL       REPL
RCHRES   4 HYDR   STAGE  1 1         1      WDM   1015 STAG     ENGL       REPL
RCHRES   5 HYDR   RO     1 1         1      WDM   1016 FLOW     ENGL       REPL
RCHRES   5 HYDR   O      1 1         1      WDM   1017 FLOW     ENGL       REPL
RCHRES   5 HYDR   O      2 1         1      WDM   1018 FLOW     ENGL       REPL
RCHRES   5 HYDR   STAGE  1 1         1      WDM   1019 STAG     ENGL       REPL
RCHRES   7 HYDR   RO     1 1         1      WDM   1020 FLOW     ENGL       REPL
RCHRES   7 HYDR   O      1 1         1      WDM   1021 FLOW     ENGL       REPL
RCHRES   7 HYDR   O      2 1         1      WDM   1022 FLOW     ENGL       REPL
RCHRES   7 HYDR   STAGE  1 1         1      WDM   1023 STAG     ENGL       REPL
RCHRES   6 HYDR   STAGE  1 1         1      WDM   1024 STAG     ENGL       REPL
RCHRES   6 HYDR   O      1 1         1      WDM   1025 FLOW     ENGL       REPL
COPY     2 OUTPUT MEAN   1 1      48.4      WDM    702 FLOW     ENGL       REPL
COPY   502 OUTPUT MEAN   1 1      48.4      WDM    802 FLOW     ENGL       REPL
COPY   602 OUTPUT MEAN   1 1      48.4      WDM    902 FLOW     ENGL       REPL
RCHRES   8 HYDR   RO     1 1         1      WDM   1026 FLOW     ENGL       REPL
RCHRES   8 HYDR   O      1 1         1      WDM   1027 FLOW     ENGL       REPL
RCHRES   8 HYDR   O      2 1         1      WDM   1028 FLOW     ENGL       REPL
RCHRES   8 HYDR   STAGE  1 1         1      WDM   1029 STAG     ENGL       REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
```

```
<Name>            <Name> # #<-factor->     <Name>               <Name> # #***
  MASS-LINK        2
PERLND     PWATER SURO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    2

  MASS-LINK        3
PERLND     PWATER IFWO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    3

  MASS-LINK        5
IMPLND     IWATER SURO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    5

  MASS-LINK        8
RCHRES     OFLOW  OVOL   2                 RCHRES         INFLOW IVOL
  END MASS-LINK    8

  MASS-LINK       12
PERLND     PWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   12

  MASS-LINK       13
PERLND     PWATER IFWO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   13

  MASS-LINK       15
IMPLND     IWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   15

  MASS-LINK       17
RCHRES     OFLOW  OVOL   1                 COPY           INPUT  MEAN
  END MASS-LINK   17


END MASS-LINK

END RUN
```

Predeveloped HSPF Message File

Mitigated HSPF Message File

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