A STORMWATER MANAGMENT ANALYSIS

OF THE PROPOSED DEVELOPMENT OF

SOMMERSET ESTATES

IN THE

CITY OF O'FALLON, MISSOURI

FOR

KAPB, L.L.C
410 CRESTVIEW DRIVE
O'FALLON, MO 63366

BAX PROJECT NO. 21-18318

July 26, 2021

Prepared by:
Bax Engineering Co., INC.
221 Point West Blvd.
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APPROVED
SEPTEMBER 21, 2021

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Civil Engineer
2005000982

Bax Engineering Co, Inc.
Missouri State
Certificate of Authority
Engineering Authority No. 000655

INTRODUCTION:

The currently undeveloped site is located in the City of O'Fallon, Missouri and is comprised of 7.71 acres of land. The site shall be analyzed for the construction of the proposed residential development disturbing approximately 6.92 acres of land. A wet pond is proposed to provide the Stormwater Attenuation required by the City of O'Fallon Design Standards for the proposed development. The storage volume and outflow rates shall be proportioned to ensure that the peak rate of runoff leaving the tract under Postdeveloped conditions is less than or equal to the peak rate of runoff under Predeveloped conditions for the 2, 15, 25, and 100 Year 20 Minute Design Storms. The safe passage of the 100 Year 20 Minute Design Storm will also be analyzed assuming the low flow slot is blocked.

Water Quality for this site is provided by the use of a Wet Pond. The proposed Wet Pond will provide the storage needed to capture and treat the runoff from ninety percent of the recorded daily rainfall events.

GENERAL SITE DATA AND RUNOFF CALCULATIONS

The Predeveloped Runoff Factors used for the analysis are:

Land Use	Percent Impervious	PI Factors (cfs/ac)			
		2 year	15 year	25 year	100 year
Onsite Greenspace	0-5%	1.15	1.70	2.00	2.29
Offsite Greenspace	0-5%	1.15	1.70	2.00	2.29
Offsite Pavement	100%	2.39	3.54	4.16	4.77

The Postdeveloped Runoff Factors used for the analysis are:

Land Use	Percent Impervious	PI Factors (cfs/ac)			
		2 year	15 year	25 year	100 year
Onsite Greenspace	0-5%	1.15	1.70	2.00	2.29
Residential 6700ft^2 Lots	50%	1.74	2.58	3.02	3.47
Onsite Wet Pond	100%	2.39	3.54	4.16	4.77
Offsite Greenspace	0-5%	1.15	1.70	2.00	2.29
Offsite Pavement	100%	2.39	3.54	4.16	4.77

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WATER QUALITY

To ensure that sedimentation and pollution in receiving streams due to development of this site is minimized, our design will consider the Water Quality Volume requirement as described in the "Georgia Stormwater Management Manual Volumes 1, 2". Water quality volume is defined as "The storage needed to capture and treat the runoff from 90% of the recorded daily rainfall events." Water Quality treatment will be provided by a wet detention pond.

Area Treated

		Impervious Area	Pervious Area
Residential 6700ft^2 Lots	50% Impervious	3.20 ac	3.19 ac
Onsite Wet Pond	100% Impervious	0.55 ac	-
Offsite Pavement		0.06 ac	
Offsite Greenspace	0% Impervious	-	0.32 ac
Total		3.81 ac	3.51 ac

WATER QUALITY VOLUME

$WQ_v = PR_vA/12$ Where: P = 1.14"

$R_v = 0.05 + 0.009(I)$

I = % Impervious

A = Watershed Area = 7.32 ac

A_I = Impervious Area = 3.81 ac

$I = A_I/A$

I = 3.81 ac / 7.32 ac = 0.5205= 52.05%

$R_v = 0.05 + 0.009(52.05) = 0.5185$

$WQ_v = 1.14(0.5185)(7.32)/12 = 0.3606$ ac-ft = 15,708 ft^3

The total water quality volume for this watershed is 15,708 ft^3.

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Basin Storage Volume

Contour Elevation	Contour Area	Incremental Volume	Total Volume
(Ft)	(Ft^2)	(Ft^3)	(Ft^3)
583.9	2,471	0	0
584	2,565	252	252
586	4,563	7,033	7,324
588	6,792	11,281	18,606
590	9,256	15,985	34,591
592	11,954	21,153	55,743
594	14,887	26,788	82,531
594.7	15,977	10,800	93,331

Water Quality treatment

The water quality volume will be treated by providing the equivalent volume or more in the wet pool of the lake.

$WQ_v = 15{,}708\ ft^3$

Volume of Wet pool provided in the lake = $V_{\text{Wet Pond @ 594.7}} - V_{\text{Wet Pond @ 583.9}}$

Volume of Wet pool provided in main lake = $93{,}331 - 0 = 93{,}331\ ft^3$

Total Volume provided = $93{,}331\ ft^3 > 15{,}708\ ft^3$ ✓

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Pretreatment Forebay

The forebay shall be sized to contain a runoff volume of 0.1 inches per impervious acre in the watershed. The volume of the pretreatment provided by the forebay is the volume between the riprap elevation and the top of the rock filtration berm elevation.

Forebay

A_I = Impervious Area = 3.70 acres → 161,172 ft^2

$V_{forebay} = A_I * 0.1$ in*/12 in/foot= 159,430 ft^2 * 0.1/12 = 1,343 ft^3

Elev.	Area ft^2	Incremental Volume ft^3	Total Volume ft^3
594.7	275	0	0
595	413	103	103
596	684	543	646
597	998	836	1,482

$V_{forebay}$ = 1,482 ft^3 >1,343 ft^3 ✓

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DETENTION CALCULATIONS

PREDEVELOPED CONDITIONS:

The Predeveloped site has one discharge points to be analyzed for the total runoff from the watershed. Using the rational method, the Predeveloped Peak Runoff rate can be determined for each watershed. For this analysis, the Predeveloped Runoff for the 2, 15, 25, and 100 year 20 minute design storms will be calculated for comparison to the Postdeveloped Runoff to determine the quantity of detention that will be required.

Watershed A

Stormwater Runoff in Watershed A flows overland and discharges into the western area of the site.

2 Year					
Onsite Greenspace	7.73 ac	x	1.15 cfs/ac	=	8.89 cfs
Offsite Greenspace	0.43 ac	x	1.15 cfs/ac	=	0.49 cfs
Offsite Pavement	0.06 ac	x	2.39 cfs/ac	=	0.14 cfs
Total =	8.22 ac		Total	=	9.52 cfs
15 Year					
Onsite Greenspace	7.73 ac	x	1.70 cfs/ac	=	13.14 cfs
Offsite Greenspace	0.43 ac	x	1.70 cfs/ac	=	0.73 cfs
Offsite Pavement	0.06 ac	x	3.54 cfs/ac	=	0.21 cfs
Total =	8.22 ac		Total	=	14.08 cfs
25 Year					
Onsite Greenspace	7.73 ac	x	2.00 cfs/ac	=	15.46 cfs
Offsite Greenspace	0.43 ac	x	2.00 cfs/ac	=	0.86 cfs
Offsite Pavement	0.06 ac	x	4.16 cfs/ac	=	0.25 cfs
Total =	8.22 ac		Total	=	16.57 cfs
100 Year					
Onsite Greenspace	7.73 ac	x	2.29 cfs/ac	=	17.70 cfs
Offsite Greenspace	0.43 ac	x	2.29 cfs/ac	=	0.98 cfs
Offsite Pavement	0.06 ac	x	4.77 cfs/ac	=	0.29 cfs
Total =	8.22 ac		Total	=	18.97 cfs

2 year-20 minute storm:	9.52 cfs
15 year-20 minute storm:	14.08 cfs
25 year-20 minute storm:	16.57 cfs
100 year-20 minute storm:	18.97 cfs

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POSTDEVELOPED CONDITIONS:

The Postdeveloped site maintains the same discharge point. The total runoff from the watersheds will be calculated using the rational method to determine the Postdeveloped Peak Runoff rates for each watershed. For this analysis, the Postdeveloped runoff for the 2, 15, 25, and 100 year 20 minute design storms will be calculated for comparison to the previously calculated Predeveloped Runoff to determine the quantity of detention that will be required.

Watershed A

2 Year				
Onsite Greenspace		0.79 ac x	1.15 cfs/ac =	0.91 cfs
Residential 6700ft^2 Lots		6.39 ac x	1.74 cfs/ac =	11.12 cfs
Onsite Wet Pond		0.55 ac x	2.39 cfs/ac =	1.31 cfs
Offsite Greenspace		0.43 ac x	1.15 cfs/ac =	0.49 cfs
Offsite Pavement		0.06 ac x	3.54 cfs/ac =	0.21 cfs
	Total =	8.22 ac	Total =	14.04 cfs
15 Year				
Onsite Greenspace		0.79 ac x	1.70 cfs/ac =	1.34 cfs
Residential 6700ft^2 Lots		6.39 ac x	2.58 cfs/ac =	16.49 cfs
Onsite Wet Pond		0.55 ac x	3.54 cfs/ac =	1.95 cfs
Offsite Greenspace		0.43 ac x	1.70 cfs/ac =	0.73 cfs
Offsite Pavement		0.06 ac x	3.54 cfs/ac =	0.21 cfs
	Total =	8.22 ac	Total =	20.72 cfs
25 Year				
Onsite Greenspace		0.79 ac x	2.00 cfs/ac =	1.58 cfs
Residential 6700ft^2 Lots		6.39 ac x	3.02 cfs/ac =	19.30 cfs
Onsite Wet Pond		0.55 ac x	4.16 cfs/ac =	2.29 cfs
Offsite Greenspace		0.43 ac x	2.00 cfs/ac =	0.86 cfs
Offsite Pavement		0.06 ac x	4.16 cfs/ac =	0.25 cfs
	Total =	8.22 ac	Total =	24.28 cfs
100 Year				
Onsite Greenspace		0.79 ac x	2.29 cfs/ac =	1.81 cfs
Residential 6700ft^2 Lots		6.39 ac x	3.47 cfs/ac =	22.17 cfs
Onsite Wet Pond		0.55 ac x	4.77 cfs/ac =	2.62 cfs
Offsite Greenspace		0.43 ac x	2.29 cfs/ac =	0.98 cfs
Offsite Pavement		0.06 ac x	4.77 cfs/ac =	0.29 cfs
	Total =	8.22 ac	Total =	27.87 cfs

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2 year-20 minute storm:	14.04 cfs
15 year-20 minute storm:	20.72 cfs
25 year-20 minute storm:	24.28 cfs
100 year-20 minute storm:	27.87 cfs

DIFFERENTIAL RUNOFF

The differential runoff for each discharge point is determined by subtracting the Predeveloped Runoff rate from the Postdeveloped Runoff rate. A differential runoff of more than 0 cfs requires the need for stormwater detention within that watershed.

Watershed A

Design Storm	Postdeveloped Runoff (cfs)	Predeveloped Runoff (cfs)	Differential Runoff (cfs)
2 Year 20 minute	14.04	9.52	4.52
15 Year 20 minute	20.72	14.08	6.64
25 Year 20 minute	24.28	16.57	7.71
100 Year 20 minute	27.87	18.97	8.90

Detention is required in Watershed A.

DISCHARGE POINT A – BASIN ROUTING

TIME OF CONCENTRATION:

Time of concentration is defined as the time needed for stormwater to flow from the most remote point in the watershed to the proposed detention basin. The most remote point of flow on this site tributary to the detention basin lies near the southern corner of the watershed. Flow travels overland for 386 feet until it reaches the storm sewer. Then flow travels for 878 feet until it enters the detention basin. Time of Concentration is calculated as follows:

Watershed A

$T_{overland}$: L = 386 feet
Elevation difference = 12.3 feet
Surface Coefficient = 1.0 (greenspace)
$T_{overland}$ = 2.9 min*1.0 = 2.9 minutes

$T_{storm\ sewer}$: L = 878 feet
Average Velocity = 7 ft/s
$T_{storm\ sewer}$ = 878 feet/7 ft/s/60 sec/min = 2.09 min

Total time = 2.90 + 2.09 = 4.99 min => **use 5 minute**

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Basin Peak Inflow

Watershed A

2 Year					
Residential 6700 ft^2 Lots	6.39 ac	x	1.74 cfs/ac	=	11.12 cfs
Wet Pond	0.55 ac	x	2.39 cfs/ac	=	1.31 cfs
Offsite GreenSpace	0.32 ac	x	1.15 cfs/ac	=	0.37 cfs
Offsite Pavement	0.06 ac	x	2.39 cfs/ac	=	0.14 cfs
Total =	7.32 ac		Total	=	12.94 cfs
15 Year					
Residential 6700 ft^2 Lots	6.39 ac	x	2.58 cfs/ac	=	16.49 cfs
Wet Pond	0.55 ac	x	3.54 cfs/ac	=	1.95 cfs
Offsite GreenSpace	0.32 ac	x	1.70 cfs/ac	=	0.54 cfs
Offsite Pavement	0.06 ac	x	3.54 cfs/ac	=	0.21 cfs
Total =	7.32 ac		Total	=	19.19 cfs
25 Year					
Residential 6700 ft^2 Lots	6.39 ac	x	3.02 cfs/ac	=	19.30 cfs
Wet Pond	0.55 ac	x	4.16 cfs/ac	=	2.29 cfs
Offsite GreenSpace	0.32 ac	x	2.00 cfs/ac	=	0.64 cfs
Offsite Pavement	0.06 ac	x	4.16 cfs/ac	=	0.25 cfs
Total =	7.32 ac		Total	=	22.48 cfs
100 Year					
Residential 6700 ft^2 Lots	6.39 ac	x	3.47 cfs/ac	=	22.17 cfs
Wet Pond	0.55 ac	x	4.77 cfs/ac	=	2.62 cfs
Offsite GreenSpace	0.32 ac	x	2.29 cfs/ac	=	0.73 cfs
Offsite Pavement	0.06 ac	x	4.77 cfs/ac	=	0.29 cfs
Total =	7.32 ac		Total	=	25.81 cfs

2 year-20 minute storm:	12.94 cfs
15 year-20 minute storm:	19.19 cfs
25 year-20 minute storm:	22.48 cfs
100 year-20 minute storm:	25.81 cfs

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ALLOWABLE RELEASE RATE

Allowable Release Rate is defined as the maximum amount of stormwater that can be released from the proposed basin in any given storm duration. This is determined by taking the Basin Inflow and subtracting the Differential Runoff Rate for each design storm. The following table shows the calculated Allowable Release Rate for this site:

STORM FREQUENCY (20 MINUTE DURATION)	BASIN INFLOW (cfs)	DIFFERENTIAL RUNOFF RATE (cfs)	ALLOWABLE RELEASE RATE (cfs)
2 YEAR	12.94	4.52	8.42
15 YEAR	19.19	6.64	12.55
25 YEAR	22.48	7.71	14.77
100 YEAR	25.81	8.90	16.91

STORM ROUTING CALCULATIONS AND RESULTS

The computer program PONDPACK was used in routing the 2, 15, 25 and 100 year storms through the wet detention basin required for this site. The routing calculations can be found in Appendix B for the 2, 15, 25 and 100 year storms for the watershed and also the calculations for safe passage of the 100 year storms with the low flow blocked (LFB) and the basin ponded full to the top of the outfall structure. As found in the routing calculations, the results are as follows:

STORM FREQUENCY (20 MINUTE DURATION)	PEAK INFLOW (cfs)	ALLOWABLE RELEASE RATE (cfs)	CALCULATED RELEASE RATE (cfs)	PEAK ELEVATION (ft)
2 Year	12.94	8.42	3.49	595.40
15 Year	19.19	12.55	5.80	595.68
25 Year	22.48	14.77	7.08	595.82
100 Year	25.81	16.91	8.41	595.95
100 Year LFB	25.81	NA	22.00	596.53

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Direct Runoff
Watershed A

2 Year

Onsite GreenSpace	0.79 ac	x	1.15 cfs/ac =	0.91 cfs
Offsite GreenSpace	0.11 ac	x	1.15 cfs/ac =	0.13 cfs
Total =	0.93 ac		Total =	1.04 cfs

15 Year

Onsite GreenSpace	0.79 ac	x	1.70 cfs/ac =	1.34 cfs
Offsite GreenSpace	0.11 ac	x	1.70 cfs/ac =	0.19 cfs
Total =	0.93 ac		Total =	1.53 cfs

25 Year

Onsite GreenSpace	0.79 ac	x	2.00 cfs/ac =	1.58 cfs
Offsite GreenSpace	0.11 ac	x	2.00 cfs/ac =	0.22 cfs
Total =	0.93 ac		Total =	1.80 cfs

100 Year

Onsite GreenSpace	0.79 ac	x	2.29 cfs/ac =	1.81 cfs
Offsite GreenSpace	0.11 ac	x	2.29 cfs/ac =	0.25 cfs
Total =	0.93 ac		Total =	2.06 cfs

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Outfall Point Peak Postdeveloped Flows

Postdeveloped Peak Runoff consists of both runoff routed through the Wet Pond and Direct Runoff routed to the discharge point.

The 2 year 20 minute peak stormwater runoff.

Direct Runoff	+	Wet Pond Release Rate	=	Postdeveloped Runoff
1.04 cfs	+	3.49 cfs	=	4.53 cfs

The 15 year 20 minute peak stormwater runoff.

Direct Runoff	+	Wet Pond Release Rate	=	Postdeveloped Runoff
1.53 cfs	+	5.79 cfs	=	7.32 cfs

The 25 year 20 minute peak stormwater runoff.

Direct Runoff	+	Wet Pond Release Rate	=	Postdeveloped Runoff
1.80 cfs	+	7.08 cfs	=	8.88 cfs

The 100 year 20 minute peak stormwater runoff.

Direct Runoff	+	Wet Pond Release Rate	=	Postdeveloped Runoff
2.06 cfs	+	8.41 cfs	=	10.47 cfs

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SEDIMENT STORAGE CALCULATIONS

The City of O'Fallon design standards require that all detention facilities are designed to accommodate two years of sediment storage. Using the annual sediment storage nomograph included in Appendix A, the volume of sediment delivered to the detention facility over a two year period is calculated.

Wet Pond A

To account for the additional storage for sediment within the lake the depth from the normal pool to the 2 year sediment volume elevation must maintain a minimum of 10 feet.
Bottom of Lake Elevation = 583.90 ft
2 Year Sediment Storage Volume = 2,269 ft^3
2 Year Sediment Storage Elevation = 584.64 ft
Normal Pool Elevation = 594.70 ft
Depth to Sediment Storage Volume = 10.06 ft

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SUMMARY
SUMMARY FOR DISCHARGE POINT #1

2 Year, 20-Minute Predeveloped Discharge	**9.52 cfs**
2 Year, 20-Minute Postdeveloped Discharge	**4.53 cfs √**
15 Year, 20-Minute Predeveloped Discharge	**14.08 cfs**
15 Year, 20-Minute Postdeveloped Discharge	**7.32 cfs √**
25 Year, 20-Minute Predeveloped Discharge	**16.57 cfs**
25 Year, 20-Minute Postdeveloped Discharge	**8.88 cfs √**
100 Year, 20-Minute Predeveloped Discharge	**18.97 cfs**
100 Year, 20- Minute Postdeveloped Discharge	**10.47 cfs √**

Detention Requirement is met at the Outfall Point

Postdeveloped Wet Detention Basin

	Outflow Rate	High Water
2 Year 20 Minute	3.49 cfs	595.40 ft
15 Year 20 Minute	5.80 cfs	595.68 ft
25 Year 20 Minute	7.08 cfs	595.82 ft
100 Year 20 Minute	8.41 cfs	595.95 ft
100 Year 20 Minute LFB	22.00 cfs	596.53 ft
Low Flow Slot		2.0’ W x 1.5’ H
Flow Line		594.70 ft
Top of Structure		596.20 ft
Top of Berm		598.00 ft
Freeboard		1.47 ft

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Appendix A

-Riprap Analysis
-Structure Details
-Time of Concentration
-Misc Figures

Hydraulic Channel & Riprap Analysis Report
Project Data
Project Title:
Designer:
Project Date: Wednesday, July 21, 2021
Project Units: U.S. Customary Units
Notes:

Channel Analysis: Channel Analysis

Notes:

Input Parameters

Channel Type: Circular

Pipe Diameter: 2.0000 ft

Longitudinal Slope: 0.0375 ft/ft

Manning's n: 0.0130

Flow: 22.0000 cfs

Result Parameters

Depth: 1.0026 ft

Area of Flow: 1.5760 ft^2

Wetted Perimeter: 3.1468 ft

Hydraulic Radius: 0.5008 ft

Average Velocity: 13.9592 ft/s

Top Width: 2.0000 ft

Froude Number: 2.7712

Critical Depth: 1.6748 ft

Critical Velocity: 7.8306 ft/s

Critical Slope: 0.0091 ft/ft

Critical Top Width: 1.48 ft

Calculated Max Shear Stress: 2.3461 lb/ft^2

Calculated Avg Shear Stress: 1.1719 lb/ft^2

Riprap Analysis: Riprap Analysis

Notes:

Input Parameters

Riprap Type: Culvert Outlet Protection

Flow: 22 cfs

Culvert Diameter: 2 ft

Normal Depth in Culvert: 1 ft

Tailwater Depth: 0.4 ft

If tailwater is unknown, use 0.4D

flow is supercritical

Result Parameters

Tailwater Depth Used in Computations: 0.6 ft

Culvert Diameter Used in Computations: 1.5 ft

Computed D50: 14.196 in

Layout Recommendations

Apron Length: 12 ft

Apron Depth: 2.842 ft

Apron Width (at end): 12.50 ft

Name of Selected Channel: FE 1

Layout Proposed

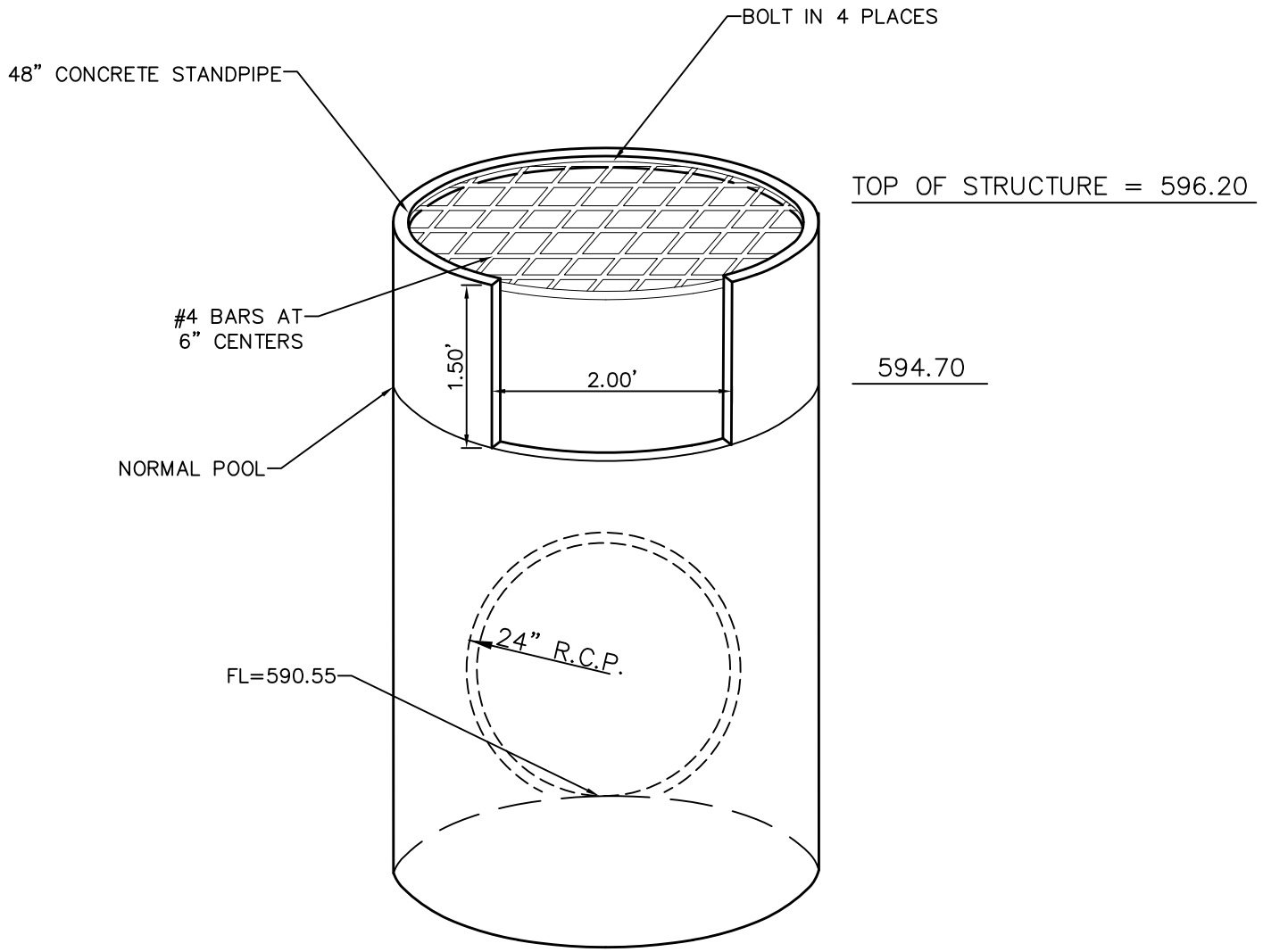
Apron Length: 13 ft

Apron Depth: 3.00 ft

Apron Width (at end): 13 ft

D50: 15 in

Name of Selected Channel: FE 1



2 YR 20 MIN HW = 595.40
15 YR 20 MIN HW = 595.68
25 YR 20 MIN HW = 595.82
100 YR 20 MIN HW = 595.95
100 YR 20 MIN, LFB HW = 596.53

OVERFLOW STRUCTURE WET POND OS 2

N.T.S.

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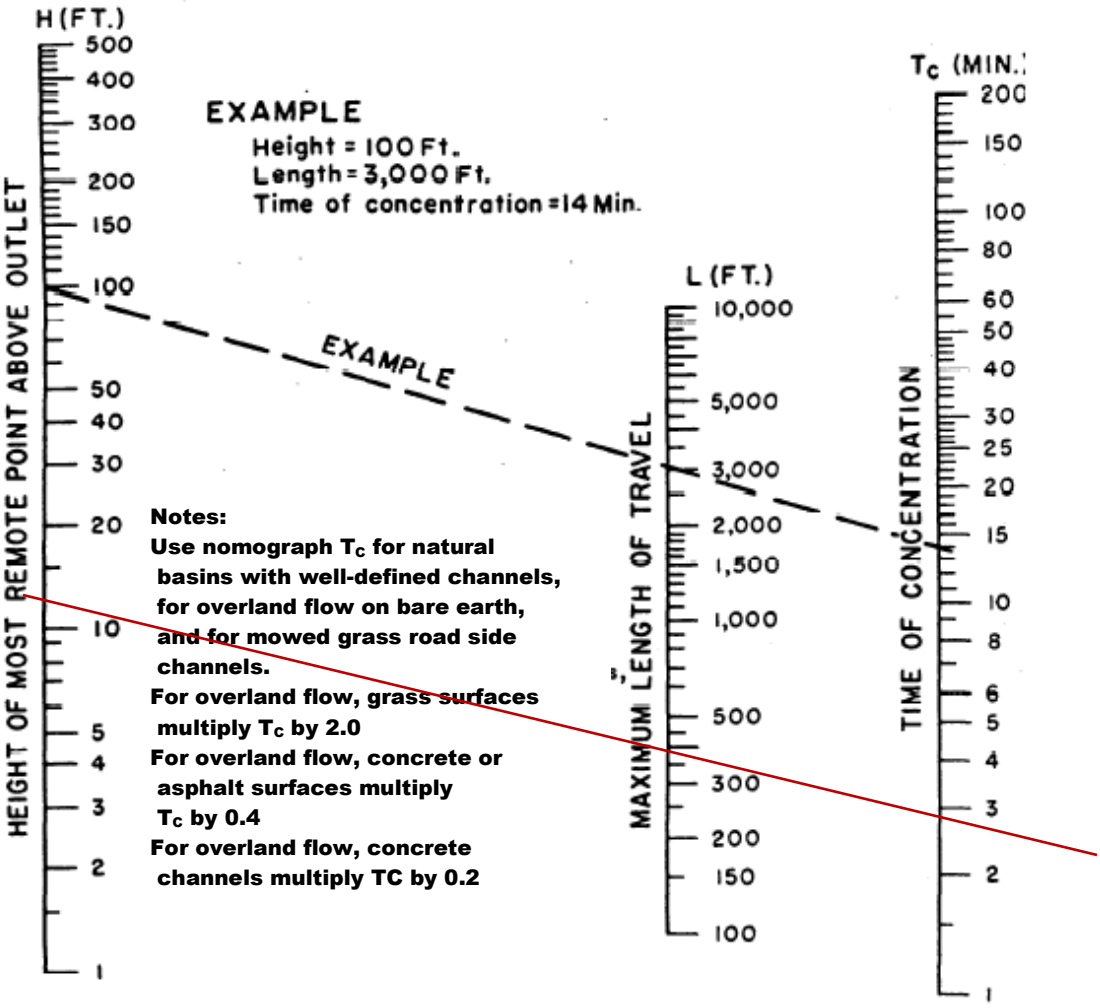
Project: Sommers Road
Date: 07/16/2021 Project No: 20-18318
Designer: MDF Checked:

TIME OF CONCENTRATION FOR SMALL DRAINAGE BASINS



OVERLAND FLOW

Δ Height = 12.3 ft

Length = 386 ft

$T_{Overland}$ = 2.9 min

STORM SEWER TRAVEL TIME

T_{storm}=Pipe Length (L) * Assumed Velocity (V)

L = 878 ft

V = 7 ft/s

T_{storm} = 878 ft / 7 ft/s / 60 sec/min =2.10 min

Total Time of Concentration = $T_{Overland}$ + T_{storm} = 2.90*1.0 + 2.09 = 4.99 →USE 5 min.

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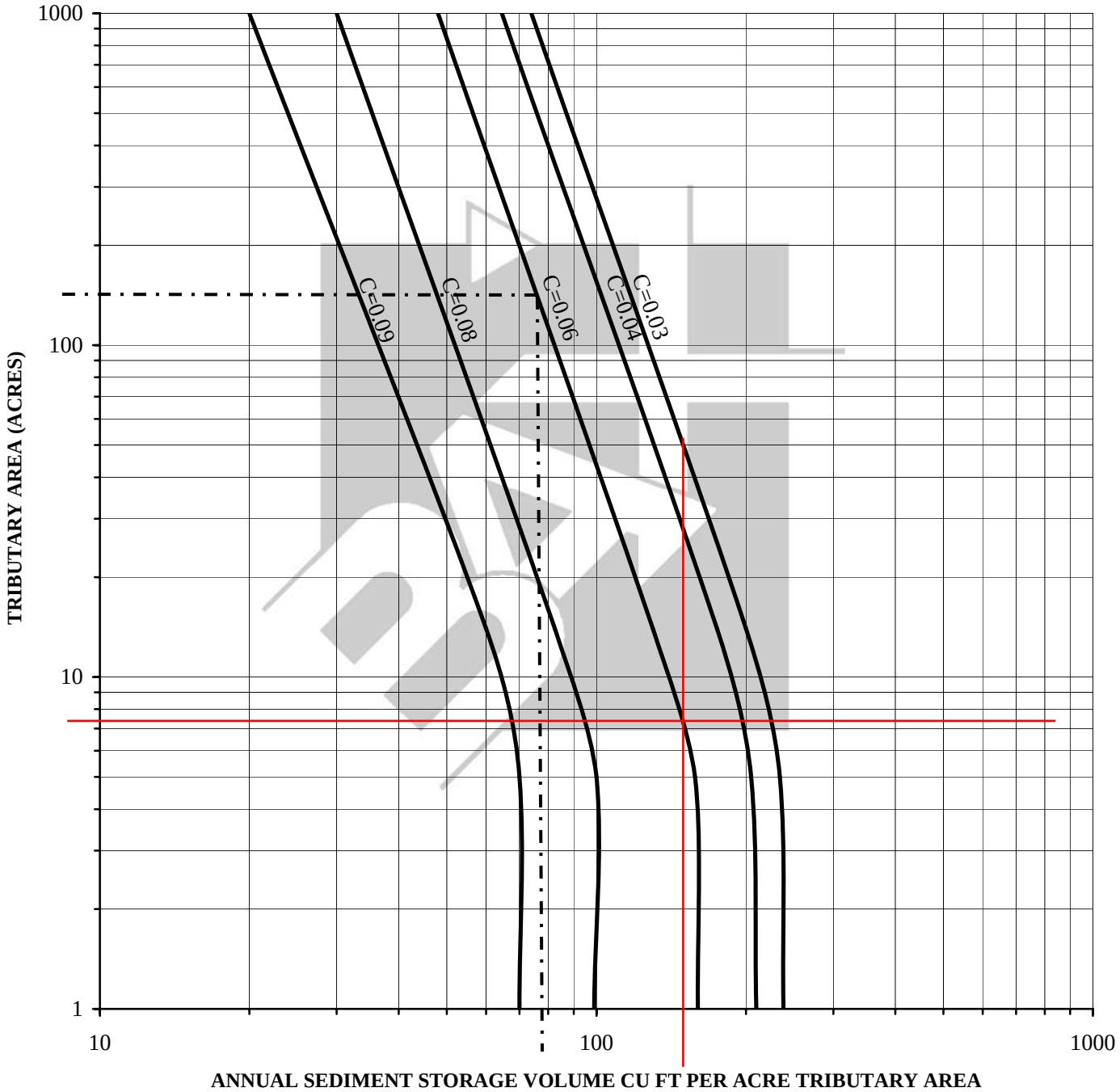
Project: SOMMERSET ESTATES
Date: 07/16/2021 Project: 21-18318
Designer: MDF Checked: MDF

ANNUAL SEDIMENT STORAGE



Storage Required = Years of Storage * Annual Sediment * Drainage Area

RUNOFF C VALUE = 0.06
DRAINAGE AREA = 7.32 acres
ANNUAL SEDIMENT = 155 CU FT per acre

YEARS OF STORAGE = 2 years
STORAGE REQUIRED = 2*155*7.32=2,269 CU FT

Appendix B

Basin Routing

-2 year Detention Routing
-15 year Detention Routing
-25 year Detention Routing
-100 year Detention Routing
-100 year Detention Routing LFB

Table of Contents

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft³/s)
Watershed A	Post-Development 2 year	0	0.356	5.000	12.94
Watershed A	Post-Development 15 year	0	0.529	5.000	19.19
Watershed A	Post-Development 25 year	0	0.619	5.000	22.48
Watershed A	Post- Development 100 year	0	0.711	5.000	25.81
Watershed A	100 year LFB	0	0.711	5.000	25.81

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft³/s)
O-1	Post-Development 2 year	0	0.356	24.000	3.49
O-1	Post-Development 15 year	0	0.528	23.000	5.80
O-1	Post-Development 25 year	0	0.619	23.000	7.08
O-1	Post- Development 100 year	0	0.711	23.000	8.41
O-1	100 year LFB	0	1.422	21.000	22.00

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Detention Basin (IN)	Post-Development 2 year	0	0.356	5.000	12.94	(N/A)	(N/A)
Detention Basin (OUT)	Post-Development 2 year	0	0.356	24.000	3.49	595.40	2.457
Detention Basin (IN)	Post-Development 15 year	0	0.529	5.000	19.19	(N/A)	(N/A)
Detention Basin (OUT)	Post-Development 15 year	0	0.528	23.000	5.80	595.68	2.593
Detention Basin (IN)	Post-Development 25 year	0	0.619	5.000	22.48	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Detention Basin (OUT)	Post-Development 25 year	0	0.619	23.000	7.08	595.82	2.663
Detention Basin (IN)	Post-Development 100 year	0	0.711	5.000	25.81	(N/A)	(N/A)
Detention Basin (OUT)	Post-Development 100 year	0	0.711	23.000	8.41	595.95	2.734
Detention Basin (IN)	100 year LFB	0	0.711	5.000	25.81	(N/A)	(N/A)
Detention Basin (OUT)	100 year LFB	0	1.422	21.000	22.00	596.53	3.043

Subsection: Read Hydrograph
Label: Watershed A
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Peak Discharge	12.94 ft³/s
Time to Peak	13.000 min
Hydrograph Volume	0.356 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 1.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	2.59	5.18	7.76	10.35
5.000	12.94	12.94	12.94	12.94	12.94
10.000	12.94	12.94	12.94	12.94	12.94
15.000	12.94	12.94	12.94	12.94	12.94
20.000	12.94	10.35	7.76	5.18	2.59
25.000	0.00	0.00	0.00	0.00	0.00
30.000	0.00	0.00	0.00	0.00	0.00
35.000	0.00	0.00	0.00	0.00	0.00
40.000	0.00	0.00	0.00	0.00	0.00
45.000	0.00	0.00	0.00	0.00	0.00
50.000	0.00	0.00	0.00	0.00	0.00
55.000	0.00	0.00	0.00	0.00	0.00
60.000	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Read Hydrograph
Label: Watershed A
Scenario: Post-Development 15 year

Return Event: 15 years
Storm Event:

Peak Discharge	19.19 ft³/s
Time to Peak	13.000 min
Hydrograph Volume	0.529 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 1.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	3.84	7.68	11.51	15.35
5.000	19.19	19.19	19.19	19.19	19.19
10.000	19.19	19.19	19.19	19.19	19.19
15.000	19.19	19.19	19.19	19.19	19.19
20.000	19.19	15.35	11.51	7.68	3.84
25.000	0.00	0.00	0.00	0.00	0.00
30.000	0.00	0.00	0.00	0.00	0.00
35.000	0.00	0.00	0.00	0.00	0.00
40.000	0.00	0.00	0.00	0.00	0.00
45.000	0.00	0.00	0.00	0.00	0.00
50.000	0.00	0.00	0.00	0.00	0.00
55.000	0.00	0.00	0.00	0.00	0.00
60.000	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Read Hydrograph
Label: Watershed A
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event:

Peak Discharge	22.48 ft³/s
Time to Peak	13.000 min
Hydrograph Volume	0.619 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 1.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	4.50	8.99	13.49	17.98
5.000	22.48	22.48	22.48	22.48	22.48
10.000	22.48	22.48	22.48	22.48	22.48
15.000	22.48	22.48	22.48	22.48	22.48
20.000	22.48	17.98	13.49	8.99	4.50
25.000	0.00	0.00	0.00	0.00	0.00
30.000	0.00	0.00	0.00	0.00	0.00
35.000	0.00	0.00	0.00	0.00	0.00
40.000	0.00	0.00	0.00	0.00	0.00
45.000	0.00	0.00	0.00	0.00	0.00
50.000	0.00	0.00	0.00	0.00	0.00
55.000	0.00	0.00	0.00	0.00	0.00
60.000	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Read Hydrograph
Label: Watershed A
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Peak Discharge	25.81 ft³/s
Time to Peak	13.000 min
Hydrograph Volume	0.711 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 1.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	5.16	10.32	15.49	20.65
5.000	25.81	25.81	25.81	25.81	25.81
10.000	25.81	25.81	25.81	25.81	25.81
15.000	25.81	25.81	25.81	25.81	25.81
20.000	25.81	20.65	15.49	10.32	5.16
25.000	0.00	0.00	0.00	0.00	0.00
30.000	0.00	0.00	0.00	0.00	0.00
35.000	0.00	0.00	0.00	0.00	0.00
40.000	0.00	0.00	0.00	0.00	0.00
45.000	0.00	0.00	0.00	0.00	0.00
50.000	0.00	0.00	0.00	0.00	0.00
55.000	0.00	0.00	0.00	0.00	0.00
60.000	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Read Hydrograph
Label: Watershed A
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Peak Discharge	25.81 ft³/s
Time to Peak	13.000 min
Hydrograph Volume	0.711 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 1.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	5.16	10.32	15.49	20.65
5.000	25.81	25.81	25.81	25.81	25.81
10.000	25.81	25.81	25.81	25.81	25.81
15.000	25.81	25.81	25.81	25.81	25.81
20.000	25.81	20.65	15.49	10.32	5.16
25.000	0.00	0.00	0.00	0.00	0.00
30.000	0.00	0.00	0.00	0.00	0.00
35.000	0.00	0.00	0.00	0.00	0.00
40.000	0.00	0.00	0.00	0.00	0.00
45.000	0.00	0.00	0.00	0.00	0.00
50.000	0.00	0.00	0.00	0.00	0.00
55.000	0.00	0.00	0.00	0.00	0.00
60.000	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Elevation-Area Volume Curve
Return Event: 100 years
Label: Detention Basin
Storm Event:
Scenario: Post- Development 100 year

Elevation (ft)	Planimeter (ft²)	Area (ft²)	A1+A2+sqr(A1*A2) (ft²)	Volume (ac-ft)	Volume (Total) (ac-ft)
583.90	0.000	2,471.370	0.000	0.000	0.000
584.00	0.000	2,565.150	7,554.343	0.006	0.006
586.00	0.000	4,562.790	10,549.086	0.161	0.167
588.00	0.000	6,792.380	16,922.234	0.259	0.426
590.00	0.000	9,255.950	23,977.386	0.367	0.793
592.00	0.000	11,954.030	31,728.816	0.486	1.279
594.00	0.000	14,887.240	40,181.529	0.615	1.894
596.00	0.000	23,088.890	56,516.083	0.865	2.759
598.00	0.000	26,811.420	74,780.944	1.144	3.903

Pond Volume Equations
*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

Volume = (1/3) * (EL2 - El1) * (Area1 + Area2 + sqr(Area1 * Area2))

where:	EL1, EL2	Lower and upper elevations of the increment
	Area1, Area2	Areas computed for EL1, EL2, respectively
	Volume	Incremental volume between EL1 and EL2

Subsection: Outlet Input Data
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Requested Pond Water Surface Elevations	
Minimum (Headwater)	583.90 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	598.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	Culvert - 1	594.70	596.20
Stand Pipe	Riser - 1	Forward	Culvert - 1	596.20	598.00
Orifice-Area	Orifice - 1	Forward	Culvert - 1	596.20	598.00
Culvert-Circular	Culvert - 1	Forward	TW	590.55	598.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Riser - 1 Structure Type: Stand Pipe	
Number of Openings	1
Elevation	596.20 ft
Diameter	48.0 in
Orifice Area	12.566 ft²
Orifice Coefficient	0.600
Weir Length	12.57 ft
Weir Coefficient	3.00 (ft^0.5)/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	False

Subsection: Outlet Input Data
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Structure ID: Culvert - 1 Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	24.0 in
Length	74.58 ft
Length (Computed Barrel)	74.88 ft
Slope (Computed)	0.090 ft/ft

Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.012
Kr	0.000
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.050
T2 ratio (HW/D)	1.152
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	592.65 ft	T1 Flow	15.55 ft³/s
T2 Elevation	592.85 ft	T2 Flow	17.77 ft³/s

Structure ID: Weir - 1 Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	594.70 ft
Weir Length	2.00 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: Orifice - 1 Structure Type: Orifice-Area	
Number of Openings	1
Elevation	594.70 ft
Orifice Area	3.000 ft²
Top Elevation	596.20 ft
Datum Elevation	595.45 ft
Orifice Coefficient	0.600

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
583.90	0.00	(N/A)	0.00
583.95	0.00	(N/A)	0.00
584.00	0.00	(N/A)	0.00
584.05	0.00	(N/A)	0.00
584.10	0.00	(N/A)	0.00
584.15	0.00	(N/A)	0.00
584.20	0.00	(N/A)	0.00
584.25	0.00	(N/A)	0.00
584.30	0.00	(N/A)	0.00
584.35	0.00	(N/A)	0.00
584.40	0.00	(N/A)	0.00
584.45	0.00	(N/A)	0.00
584.50	0.00	(N/A)	0.00
584.55	0.00	(N/A)	0.00
584.60	0.00	(N/A)	0.00
584.65	0.00	(N/A)	0.00
584.70	0.00	(N/A)	0.00
584.75	0.00	(N/A)	0.00
584.80	0.00	(N/A)	0.00
584.85	0.00	(N/A)	0.00
584.90	0.00	(N/A)	0.00
584.95	0.00	(N/A)	0.00
585.00	0.00	(N/A)	0.00
585.05	0.00	(N/A)	0.00
585.10	0.00	(N/A)	0.00
585.15	0.00	(N/A)	0.00
585.20	0.00	(N/A)	0.00
585.25	0.00	(N/A)	0.00
585.30	0.00	(N/A)	0.00
585.35	0.00	(N/A)	0.00
585.40	0.00	(N/A)	0.00
585.45	0.00	(N/A)	0.00
585.50	0.00	(N/A)	0.00
585.55	0.00	(N/A)	0.00
585.60	0.00	(N/A)	0.00
585.65	0.00	(N/A)	0.00
585.70	0.00	(N/A)	0.00
585.75	0.00	(N/A)	0.00
585.80	0.00	(N/A)	0.00
585.85	0.00	(N/A)	0.00
585.90	0.00	(N/A)	0.00
585.95	0.00	(N/A)	0.00
586.00	0.00	(N/A)	0.00
586.05	0.00	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
586.10	0.00	(N/A)	0.00
586.15	0.00	(N/A)	0.00
586.20	0.00	(N/A)	0.00
586.25	0.00	(N/A)	0.00
586.30	0.00	(N/A)	0.00
586.35	0.00	(N/A)	0.00
586.40	0.00	(N/A)	0.00
586.45	0.00	(N/A)	0.00
586.50	0.00	(N/A)	0.00
586.55	0.00	(N/A)	0.00
586.60	0.00	(N/A)	0.00
586.65	0.00	(N/A)	0.00
586.70	0.00	(N/A)	0.00
586.75	0.00	(N/A)	0.00
586.80	0.00	(N/A)	0.00
586.85	0.00	(N/A)	0.00
586.90	0.00	(N/A)	0.00
586.95	0.00	(N/A)	0.00
587.00	0.00	(N/A)	0.00
587.05	0.00	(N/A)	0.00
587.10	0.00	(N/A)	0.00
587.15	0.00	(N/A)	0.00
587.20	0.00	(N/A)	0.00
587.25	0.00	(N/A)	0.00
587.30	0.00	(N/A)	0.00
587.35	0.00	(N/A)	0.00
587.40	0.00	(N/A)	0.00
587.45	0.00	(N/A)	0.00
587.50	0.00	(N/A)	0.00
587.55	0.00	(N/A)	0.00
587.60	0.00	(N/A)	0.00
587.65	0.00	(N/A)	0.00
587.70	0.00	(N/A)	0.00
587.75	0.00	(N/A)	0.00
587.80	0.00	(N/A)	0.00
587.85	0.00	(N/A)	0.00
587.90	0.00	(N/A)	0.00
587.95	0.00	(N/A)	0.00
588.00	0.00	(N/A)	0.00
588.05	0.00	(N/A)	0.00
588.10	0.00	(N/A)	0.00
588.15	0.00	(N/A)	0.00
588.20	0.00	(N/A)	0.00
588.25	0.00	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
588.30	0.00	(N/A)	0.00
588.35	0.00	(N/A)	0.00
588.40	0.00	(N/A)	0.00
588.45	0.00	(N/A)	0.00
588.50	0.00	(N/A)	0.00
588.55	0.00	(N/A)	0.00
588.60	0.00	(N/A)	0.00
588.65	0.00	(N/A)	0.00
588.70	0.00	(N/A)	0.00
588.75	0.00	(N/A)	0.00
588.80	0.00	(N/A)	0.00
588.85	0.00	(N/A)	0.00
588.90	0.00	(N/A)	0.00
588.95	0.00	(N/A)	0.00
589.00	0.00	(N/A)	0.00
589.05	0.00	(N/A)	0.00
589.10	0.00	(N/A)	0.00
589.15	0.00	(N/A)	0.00
589.20	0.00	(N/A)	0.00
589.25	0.00	(N/A)	0.00
589.30	0.00	(N/A)	0.00
589.35	0.00	(N/A)	0.00
589.40	0.00	(N/A)	0.00
589.45	0.00	(N/A)	0.00
589.50	0.00	(N/A)	0.00
589.55	0.00	(N/A)	0.00
589.60	0.00	(N/A)	0.00
589.65	0.00	(N/A)	0.00
589.70	0.00	(N/A)	0.00
589.75	0.00	(N/A)	0.00
589.80	0.00	(N/A)	0.00
589.85	0.00	(N/A)	0.00
589.90	0.00	(N/A)	0.00
589.95	0.00	(N/A)	0.00
590.00	0.00	(N/A)	0.00
590.05	0.00	(N/A)	0.00
590.10	0.00	(N/A)	0.00
590.15	0.00	(N/A)	0.00
590.20	0.00	(N/A)	0.00
590.25	0.00	(N/A)	0.00
590.30	0.00	(N/A)	0.00
590.35	0.00	(N/A)	0.00
590.40	0.00	(N/A)	0.00
590.45	0.00	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
590.50	0.00	(N/A)	0.00
590.55	0.00	(N/A)	0.00
590.60	0.00	(N/A)	0.00
590.65	0.00	(N/A)	0.00
590.70	0.00	(N/A)	0.00
590.75	0.00	(N/A)	0.00
590.80	0.00	(N/A)	0.00
590.85	0.00	(N/A)	0.00
590.90	0.00	(N/A)	0.00
590.95	0.00	(N/A)	0.00
591.00	0.00	(N/A)	0.00
591.05	0.00	(N/A)	0.00
591.10	0.00	(N/A)	0.00
591.15	0.00	(N/A)	0.00
591.20	0.00	(N/A)	0.00
591.25	0.00	(N/A)	0.00
591.30	0.00	(N/A)	0.00
591.35	0.00	(N/A)	0.00
591.40	0.00	(N/A)	0.00
591.45	0.00	(N/A)	0.00
591.50	0.00	(N/A)	0.00
591.55	0.00	(N/A)	0.00
591.60	0.00	(N/A)	0.00
591.65	0.00	(N/A)	0.00
591.70	0.00	(N/A)	0.00
591.75	0.00	(N/A)	0.00
591.80	0.00	(N/A)	0.00
591.85	0.00	(N/A)	0.00
591.90	0.00	(N/A)	0.00
591.95	0.00	(N/A)	0.00
592.00	0.00	(N/A)	0.00
592.05	0.00	(N/A)	0.00
592.10	0.00	(N/A)	0.00
592.15	0.00	(N/A)	0.00
592.20	0.00	(N/A)	0.00
592.25	0.00	(N/A)	0.00
592.30	0.00	(N/A)	0.00
592.35	0.00	(N/A)	0.00
592.40	0.00	(N/A)	0.00
592.45	0.00	(N/A)	0.00
592.50	0.00	(N/A)	0.00
592.55	0.00	(N/A)	0.00
592.60	0.00	(N/A)	0.00
592.65	0.00	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
592.70	0.00	(N/A)	0.00
592.75	0.00	(N/A)	0.00
592.80	0.00	(N/A)	0.00
592.85	0.00	(N/A)	0.00
592.90	0.00	(N/A)	0.00
592.95	0.00	(N/A)	0.00
593.00	0.00	(N/A)	0.00
593.05	0.00	(N/A)	0.00
593.10	0.00	(N/A)	0.00
593.15	0.00	(N/A)	0.00
593.20	0.00	(N/A)	0.00
593.25	0.00	(N/A)	0.00
593.30	0.00	(N/A)	0.00
593.35	0.00	(N/A)	0.00
593.40	0.00	(N/A)	0.00
593.45	0.00	(N/A)	0.00
593.50	0.00	(N/A)	0.00
593.55	0.00	(N/A)	0.00
593.60	0.00	(N/A)	0.00
593.65	0.00	(N/A)	0.00
593.70	0.00	(N/A)	0.00
593.75	0.00	(N/A)	0.00
593.80	0.00	(N/A)	0.00
593.85	0.00	(N/A)	0.00
593.90	0.00	(N/A)	0.00
593.95	0.00	(N/A)	0.00
594.00	0.00	(N/A)	0.00
594.05	0.00	(N/A)	0.00
594.10	0.00	(N/A)	0.00
594.15	0.00	(N/A)	0.00
594.20	0.00	(N/A)	0.00
594.25	0.00	(N/A)	0.00
594.30	0.00	(N/A)	0.00
594.35	0.00	(N/A)	0.00
594.40	0.00	(N/A)	0.00
594.45	0.00	(N/A)	0.00
594.50	0.00	(N/A)	0.00
594.55	0.00	(N/A)	0.00
594.60	0.00	(N/A)	0.00
594.65	0.00	(N/A)	0.00
594.70	0.00	(N/A)	0.00
594.75	0.07	(N/A)	0.00
594.80	0.19	(N/A)	0.00
594.85	0.35	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
594.90	0.54	(N/A)	0.00
594.95	0.75	(N/A)	0.00
595.00	0.99	(N/A)	0.00
595.05	1.24	(N/A)	0.00
595.10	1.52	(N/A)	0.00
595.15	1.81	(N/A)	0.00
595.20	2.12	(N/A)	0.00
595.25	2.45	(N/A)	0.00
595.30	2.79	(N/A)	0.00
595.35	3.14	(N/A)	0.00
595.40	3.51	(N/A)	0.00
595.45	3.90	(N/A)	0.00
595.50	4.29	(N/A)	0.00
595.55	4.70	(N/A)	0.00
595.60	5.12	(N/A)	0.00
595.65	5.56	(N/A)	0.00
595.70	6.00	(N/A)	0.00
595.75	6.46	(N/A)	0.00
595.80	6.92	(N/A)	0.00
595.85	7.40	(N/A)	0.00
595.90	7.89	(N/A)	0.00
595.95	8.38	(N/A)	0.00
596.00	8.89	(N/A)	0.00
596.05	9.41	(N/A)	0.00
596.10	9.93	(N/A)	0.00
596.15	10.49	(N/A)	0.00
596.20	12.51	(N/A)	0.00
596.25	13.34	(N/A)	0.00
596.30	14.50	(N/A)	0.00
596.35	15.88	(N/A)	0.00
596.40	17.45	(N/A)	0.00
596.45	19.16	(N/A)	0.00
596.50	21.00	(N/A)	0.00
596.55	22.95	(N/A)	0.00
596.60	25.02	(N/A)	0.00
596.65	27.20	(N/A)	0.00
596.70	29.47	(N/A)	0.00
596.75	31.84	(N/A)	0.00
596.80	33.86	(N/A)	0.00
596.85	34.88	(N/A)	0.00
596.90	35.91	(N/A)	0.00
596.95	36.87	(N/A)	0.00
597.00	37.83	(N/A)	0.00
597.05	38.70	(N/A)	0.00

Subsection: Composite Rating Curve | Return Event: 100 years
Label: OS2 | Storm Event:
Scenario: 100 year LFB

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
597.10	39.47	(N/A)	0.00
597.15	40.16	(N/A)	0.00
597.20	40.69	(N/A)	0.00
597.25	41.04	(N/A)	0.00
597.30	41.23	(N/A)	0.00
597.35	41.42	(N/A)	0.00
597.40	41.60	(N/A)	0.00
597.45	41.79	(N/A)	0.00
597.50	41.98	(N/A)	0.00
597.55	42.16	(N/A)	0.00
597.60	42.35	(N/A)	0.00
597.65	42.53	(N/A)	0.00
597.70	42.71	(N/A)	0.00
597.75	42.90	(N/A)	0.00
597.80	43.08	(N/A)	0.00
597.85	43.26	(N/A)	0.00
597.90	43.44	(N/A)	0.00
597.95	43.62	(N/A)	0.00
598.00	43.79	(N/A)	0.00

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
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(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
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(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
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(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
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(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
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(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)

Subsection: Composite Rating Curve | Return Event: 100 years
Label: OS2 | Storm Event:
Scenario: 100 year LFB

Composite Outflow Summary

Contributing Structures
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Orifice - 1,Culvert - 1 (no Q: Weir - 1,Riser - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)

Subsection: Composite Rating Curve
Label: OS2
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)

Subsection: Composite Rating Curve | Return Event: 100 years
Label: OS2 | Storm Event:
Scenario: 100 year LFB

Composite Outflow Summary

Contributing Structures
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)

Subsection: Outlet Input Data
Label: OS2
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Requested Pond Water Surface Elevations	
Minimum (Headwater)	583.90 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	598.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	Culvert - 1	594.70	596.20
Stand Pipe	Riser - 1	Forward	Culvert - 1	596.20	598.00
Orifice-Area	Orifice - 1	Forward	Culvert - 1	596.20	598.00
Culvert-Circular	Culvert - 1	Forward	TW	590.55	598.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Riser - 1 Structure Type: Stand Pipe	
Number of Openings	1
Elevation	596.20 ft
Diameter	48.0 in
Orifice Area	12.566 ft²
Orifice Coefficient	0.600
Weir Length	12.57 ft
Weir Coefficient	3.00 (ft^0.5)/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	False

Subsection: Outlet Input Data
Label: OS2
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Structure ID: Culvert - 1 Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	24.0 in
Length	74.58 ft
Length (Computed Barrel)	74.88 ft
Slope (Computed)	0.090 ft/ft

Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.012
Kr	0.000
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.050
T2 ratio (HW/D)	1.152
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	592.65 ft	T1 Flow	15.55 ft³/s
T2 Elevation	592.85 ft	T2 Flow	17.77 ft³/s

Structure ID: Weir - 1 Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	594.70 ft
Weir Length	2.00 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: Orifice - 1 Structure Type: Orifice-Area	
Number of Openings	1
Elevation	594.70 ft
Orifice Area	3.000 ft²
Top Elevation	596.20 ft
Datum Elevation	595.45 ft
Orifice Coefficient	0.600

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

Subsection: Composite Rating Curve
Label: OS2
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
583.90	0.00	(N/A)	0.00
583.95	0.00	(N/A)	0.00
584.00	0.00	(N/A)	0.00
584.05	0.00	(N/A)	0.00
584.10	0.00	(N/A)	0.00
584.15	0.00	(N/A)	0.00
584.20	0.00	(N/A)	0.00
584.25	0.00	(N/A)	0.00
584.30	0.00	(N/A)	0.00
584.35	0.00	(N/A)	0.00
584.40	0.00	(N/A)	0.00
584.45	0.00	(N/A)	0.00
584.50	0.00	(N/A)	0.00
584.55	0.00	(N/A)	0.00
584.60	0.00	(N/A)	0.00
584.65	0.00	(N/A)	0.00
584.70	0.00	(N/A)	0.00
584.75	0.00	(N/A)	0.00
584.80	0.00	(N/A)	0.00
584.85	0.00	(N/A)	0.00
584.90	0.00	(N/A)	0.00
584.95	0.00	(N/A)	0.00
585.00	0.00	(N/A)	0.00
585.05	0.00	(N/A)	0.00
585.10	0.00	(N/A)	0.00
585.15	0.00	(N/A)	0.00
585.20	0.00	(N/A)	0.00
585.25	0.00	(N/A)	0.00
585.30	0.00	(N/A)	0.00
585.35	0.00	(N/A)	0.00
585.40	0.00	(N/A)	0.00
585.45	0.00	(N/A)	0.00
585.50	0.00	(N/A)	0.00
585.55	0.00	(N/A)	0.00
585.60	0.00	(N/A)	0.00
585.65	0.00	(N/A)	0.00
585.70	0.00	(N/A)	0.00
585.75	0.00	(N/A)	0.00
585.80	0.00	(N/A)	0.00
585.85	0.00	(N/A)	0.00
585.90	0.00	(N/A)	0.00
585.95	0.00	(N/A)	0.00
586.00	0.00	(N/A)	0.00
586.05	0.00	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS2
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
586.10	0.00	(N/A)	0.00
586.15	0.00	(N/A)	0.00
586.20	0.00	(N/A)	0.00
586.25	0.00	(N/A)	0.00
586.30	0.00	(N/A)	0.00
586.35	0.00	(N/A)	0.00
586.40	0.00	(N/A)	0.00
586.45	0.00	(N/A)	0.00
586.50	0.00	(N/A)	0.00
586.55	0.00	(N/A)	0.00
586.60	0.00	(N/A)	0.00
586.65	0.00	(N/A)	0.00
586.70	0.00	(N/A)	0.00
586.75	0.00	(N/A)	0.00
586.80	0.00	(N/A)	0.00
586.85	0.00	(N/A)	0.00
586.90	0.00	(N/A)	0.00
586.95	0.00	(N/A)	0.00
587.00	0.00	(N/A)	0.00
587.05	0.00	(N/A)	0.00
587.10	0.00	(N/A)	0.00
587.15	0.00	(N/A)	0.00
587.20	0.00	(N/A)	0.00
587.25	0.00	(N/A)	0.00
587.30	0.00	(N/A)	0.00
587.35	0.00	(N/A)	0.00
587.40	0.00	(N/A)	0.00
587.45	0.00	(N/A)	0.00
587.50	0.00	(N/A)	0.00
587.55	0.00	(N/A)	0.00
587.60	0.00	(N/A)	0.00
587.65	0.00	(N/A)	0.00
587.70	0.00	(N/A)	0.00
587.75	0.00	(N/A)	0.00
587.80	0.00	(N/A)	0.00
587.85	0.00	(N/A)	0.00
587.90	0.00	(N/A)	0.00
587.95	0.00	(N/A)	0.00
588.00	0.00	(N/A)	0.00
588.05	0.00	(N/A)	0.00
588.10	0.00	(N/A)	0.00
588.15	0.00	(N/A)	0.00
588.20	0.00	(N/A)	0.00
588.25	0.00	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS2
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
588.30	0.00	(N/A)	0.00
588.35	0.00	(N/A)	0.00
588.40	0.00	(N/A)	0.00
588.45	0.00	(N/A)	0.00
588.50	0.00	(N/A)	0.00
588.55	0.00	(N/A)	0.00
588.60	0.00	(N/A)	0.00
588.65	0.00	(N/A)	0.00
588.70	0.00	(N/A)	0.00
588.75	0.00	(N/A)	0.00
588.80	0.00	(N/A)	0.00
588.85	0.00	(N/A)	0.00
588.90	0.00	(N/A)	0.00
588.95	0.00	(N/A)	0.00
589.00	0.00	(N/A)	0.00
589.05	0.00	(N/A)	0.00
589.10	0.00	(N/A)	0.00
589.15	0.00	(N/A)	0.00
589.20	0.00	(N/A)	0.00
589.25	0.00	(N/A)	0.00
589.30	0.00	(N/A)	0.00
589.35	0.00	(N/A)	0.00
589.40	0.00	(N/A)	0.00
589.45	0.00	(N/A)	0.00
589.50	0.00	(N/A)	0.00
589.55	0.00	(N/A)	0.00
589.60	0.00	(N/A)	0.00
589.65	0.00	(N/A)	0.00
589.70	0.00	(N/A)	0.00
589.75	0.00	(N/A)	0.00
589.80	0.00	(N/A)	0.00
589.85	0.00	(N/A)	0.00
589.90	0.00	(N/A)	0.00
589.95	0.00	(N/A)	0.00
590.00	0.00	(N/A)	0.00
590.05	0.00	(N/A)	0.00
590.10	0.00	(N/A)	0.00
590.15	0.00	(N/A)	0.00
590.20	0.00	(N/A)	0.00
590.25	0.00	(N/A)	0.00
590.30	0.00	(N/A)	0.00
590.35	0.00	(N/A)	0.00
590.40	0.00	(N/A)	0.00
590.45	0.00	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS2
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
590.50	0.00	(N/A)	0.00
590.55	0.00	(N/A)	0.00
590.60	0.00	(N/A)	0.00
590.65	0.00	(N/A)	0.00
590.70	0.00	(N/A)	0.00
590.75	0.00	(N/A)	0.00
590.80	0.00	(N/A)	0.00
590.85	0.00	(N/A)	0.00
590.90	0.00	(N/A)	0.00
590.95	0.00	(N/A)	0.00
591.00	0.00	(N/A)	0.00
591.05	0.00	(N/A)	0.00
591.10	0.00	(N/A)	0.00
591.15	0.00	(N/A)	0.00
591.20	0.00	(N/A)	0.00
591.25	0.00	(N/A)	0.00
591.30	0.00	(N/A)	0.00
591.35	0.00	(N/A)	0.00
591.40	0.00	(N/A)	0.00
591.45	0.00	(N/A)	0.00
591.50	0.00	(N/A)	0.00
591.55	0.00	(N/A)	0.00
591.60	0.00	(N/A)	0.00
591.65	0.00	(N/A)	0.00
591.70	0.00	(N/A)	0.00
591.75	0.00	(N/A)	0.00
591.80	0.00	(N/A)	0.00
591.85	0.00	(N/A)	0.00
591.90	0.00	(N/A)	0.00
591.95	0.00	(N/A)	0.00
592.00	0.00	(N/A)	0.00
592.05	0.00	(N/A)	0.00
592.10	0.00	(N/A)	0.00
592.15	0.00	(N/A)	0.00
592.20	0.00	(N/A)	0.00
592.25	0.00	(N/A)	0.00
592.30	0.00	(N/A)	0.00
592.35	0.00	(N/A)	0.00
592.40	0.00	(N/A)	0.00
592.45	0.00	(N/A)	0.00
592.50	0.00	(N/A)	0.00
592.55	0.00	(N/A)	0.00
592.60	0.00	(N/A)	0.00
592.65	0.00	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS2
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
592.70	0.00	(N/A)	0.00
592.75	0.00	(N/A)	0.00
592.80	0.00	(N/A)	0.00
592.85	0.00	(N/A)	0.00
592.90	0.00	(N/A)	0.00
592.95	0.00	(N/A)	0.00
593.00	0.00	(N/A)	0.00
593.05	0.00	(N/A)	0.00
593.10	0.00	(N/A)	0.00
593.15	0.00	(N/A)	0.00
593.20	0.00	(N/A)	0.00
593.25	0.00	(N/A)	0.00
593.30	0.00	(N/A)	0.00
593.35	0.00	(N/A)	0.00
593.40	0.00	(N/A)	0.00
593.45	0.00	(N/A)	0.00
593.50	0.00	(N/A)	0.00
593.55	0.00	(N/A)	0.00
593.60	0.00	(N/A)	0.00
593.65	0.00	(N/A)	0.00
593.70	0.00	(N/A)	0.00
593.75	0.00	(N/A)	0.00
593.80	0.00	(N/A)	0.00
593.85	0.00	(N/A)	0.00
593.90	0.00	(N/A)	0.00
593.95	0.00	(N/A)	0.00
594.00	0.00	(N/A)	0.00
594.05	0.00	(N/A)	0.00
594.10	0.00	(N/A)	0.00
594.15	0.00	(N/A)	0.00
594.20	0.00	(N/A)	0.00
594.25	0.00	(N/A)	0.00
594.30	0.00	(N/A)	0.00
594.35	0.00	(N/A)	0.00
594.40	0.00	(N/A)	0.00
594.45	0.00	(N/A)	0.00
594.50	0.00	(N/A)	0.00
594.55	0.00	(N/A)	0.00
594.60	0.00	(N/A)	0.00
594.65	0.00	(N/A)	0.00
594.70	0.00	(N/A)	0.00
594.75	0.07	(N/A)	0.00
594.80	0.19	(N/A)	0.00
594.85	0.35	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS2
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
594.90	0.54	(N/A)	0.00
594.95	0.75	(N/A)	0.00
595.00	0.99	(N/A)	0.00
595.05	1.24	(N/A)	0.00
595.10	1.52	(N/A)	0.00
595.15	1.81	(N/A)	0.00
595.20	2.12	(N/A)	0.00
595.25	2.45	(N/A)	0.00
595.30	2.79	(N/A)	0.00
595.35	3.14	(N/A)	0.00
595.40	3.51	(N/A)	0.00
595.45	3.90	(N/A)	0.00
595.50	4.29	(N/A)	0.00
595.55	4.70	(N/A)	0.00
595.60	5.12	(N/A)	0.00
595.65	5.56	(N/A)	0.00
595.70	6.00	(N/A)	0.00
595.75	6.46	(N/A)	0.00
595.80	6.92	(N/A)	0.00
595.85	7.40	(N/A)	0.00
595.90	7.89	(N/A)	0.00
595.95	8.38	(N/A)	0.00
596.00	8.89	(N/A)	0.00
596.05	9.41	(N/A)	0.00
596.10	9.93	(N/A)	0.00
596.15	10.49	(N/A)	0.00
596.20	12.51	(N/A)	0.00
596.25	13.34	(N/A)	0.00
596.30	14.51	(N/A)	0.00
596.35	15.89	(N/A)	0.00
596.40	17.45	(N/A)	0.00
596.45	19.16	(N/A)	0.00
596.50	21.00	(N/A)	0.00
596.55	22.95	(N/A)	0.00
596.60	25.02	(N/A)	0.00
596.65	27.20	(N/A)	0.00
596.70	29.47	(N/A)	0.00
596.75	31.84	(N/A)	0.00
596.80	33.86	(N/A)	0.00
596.85	34.88	(N/A)	0.00
596.90	35.91	(N/A)	0.00
596.95	36.87	(N/A)	0.00
597.00	37.83	(N/A)	0.00
597.05	38.70	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS2
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
597.10	39.47	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.15	40.16	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.20	40.69	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.25	41.04	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.30	41.23	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.35	41.42	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.40	41.60	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.45	41.79	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.50	41.98	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.55	42.16	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.60	42.35	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.65	42.53	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.70	42.71	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.75	42.90	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.80	43.08	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.85	43.26	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.90	43.44	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
597.95	43.62	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
598.00	43.79	(N/A)	0.00	(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve | Return Event: 100 years
Label: OS2 | Storm Event:
Scenario: Post- Development 100 year

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve | Return Event: 100 years
Label: OS2 | Storm Event:
Scenario: Post- Development 100 year

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve
Label: OS2
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve
Label: OS2
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve | Return Event: 100 years
Label: OS2 | Storm Event:
Scenario: Post- Development 100 year

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)

Subsection: Composite Rating Curve | Return Event: 100 years
Label: OS2 | Storm Event:
Scenario: Post- Development 100 year

Composite Outflow Summary

Contributing Structures
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
(no Q: Weir - 1,Riser - 1,Orifice - 1,Culvert - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)

Composite Outflow Summary

Contributing Structures
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Weir - 1,Culvert - 1 (no Q: Riser - 1,Orifice - 1)
Orifice - 1,Culvert - 1 (no Q: Weir - 1,Riser - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)

Composite Outflow Summary

Contributing Structures
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)

Subsection: Composite Rating Curve
Label: OS2
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Orifice - 1,Culvert - 1 (no Q: Weir - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)
Riser - 1,Culvert - 1 (no Q: Weir - 1,Orifice - 1)

Subsection: Level Pool Pond Routing Summary
Label: Detention Basin (IN)
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	594.70 ft
Volume (Initial)	2.154 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	1.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	12.94 ft³/s	Time to Peak (Flow, In)	5.000 min
Flow (Peak Outlet)	3.49 ft³/s	Time to Peak (Flow, Outlet)	24.000 min

Elevation (Water Surface, Peak)	595.40 ft
Volume (Peak)	2.457 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	2.154 ac-ft
Volume (Total Inflow)	0.356 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.356 ac-ft
Volume (Retained)	2.154 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Subsection: Level Pool Pond Routing Summary
Label: Detention Basin (IN)
Scenario: Post-Development 15 year

Return Event: 15 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	594.70 ft
Volume (Initial)	2.154 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	1.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	19.19 ft³/s	Time to Peak (Flow, In)	5.000 min
Flow (Peak Outlet)	5.80 ft³/s	Time to Peak (Flow, Outlet)	23.000 min

Elevation (Water Surface, Peak)	595.68 ft
Volume (Peak)	2.593 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	2.154 ac-ft
Volume (Total Inflow)	0.529 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.528 ac-ft
Volume (Retained)	2.154 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Subsection: Level Pool Pond Routing Summary
Label: Detention Basin (IN)
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	594.70 ft
Volume (Initial)	2.154 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	1.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	22.48 ft³/s	Time to Peak (Flow, In)	5.000 min
Flow (Peak Outlet)	7.08 ft³/s	Time to Peak (Flow, Outlet)	23.000 min

Elevation (Water Surface, Peak)	595.82 ft
Volume (Peak)	2.663 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	2.154 ac-ft
Volume (Total Inflow)	0.619 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.619 ac-ft
Volume (Retained)	2.154 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Subsection: Level Pool Pond Routing Summary
Label: Detention Basin (IN)
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	596.20 ft
Volume (Initial)	2.866 ac-ft
Flow (Initial Outlet)	12.51 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	12.51 ft³/s
Time Increment	1.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	25.81 ft³/s	Time to Peak (Flow, In)	5.000 min
Flow (Peak Outlet)	22.00 ft³/s	Time to Peak (Flow, Outlet)	21.000 min

Elevation (Water Surface, Peak)	596.53 ft
Volume (Peak)	3.043 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	2.866 ac-ft
Volume (Total Inflow)	0.711 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	1.422 ac-ft
Volume (Retained)	2.154 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Subsection: Level Pool Pond Routing Summary
Label: Detention Basin (IN)
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	594.70 ft
Volume (Initial)	2.154 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	1.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	25.81 ft³/s	Time to Peak (Flow, In)	5.000 min
Flow (Peak Outlet)	8.41 ft³/s	Time to Peak (Flow, Outlet)	23.000 min

Elevation (Water Surface, Peak)	595.95 ft
Volume (Peak)	2.734 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	2.154 ac-ft
Volume (Total Inflow)	0.711 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.711 ac-ft
Volume (Retained)	2.154 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Summary for Hydrograph Addition at 'Detention Basin'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Watershed A

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft³/s)
Flow (From)	Watershed A	0.356	5.000	12.94
Flow (In)	Detention Basin	0.356	5.000	12.94

Summary for Hydrograph Addition at 'Detention Basin'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Watershed A

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft³/s)
Flow (From)	Watershed A	0.529	5.000	19.19
Flow (In)	Detention Basin	0.529	5.000	19.19

Summary for Hydrograph Addition at 'Detention Basin'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Watershed A

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft³/s)
Flow (From)	Watershed A	0.619	5.000	22.48
Flow (In)	Detention Basin	0.619	5.000	22.48

Summary for Hydrograph Addition at 'Detention Basin'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Watershed A

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft³/s)
Flow (From)	Watershed A	0.711	5.000	25.81
Flow (In)	Detention Basin	0.711	5.000	25.81

Subsection: Pond Inflow Summary
Label: Detention Basin (IN)
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Summary for Hydrograph Addition at 'Detention Basin'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Watershed A

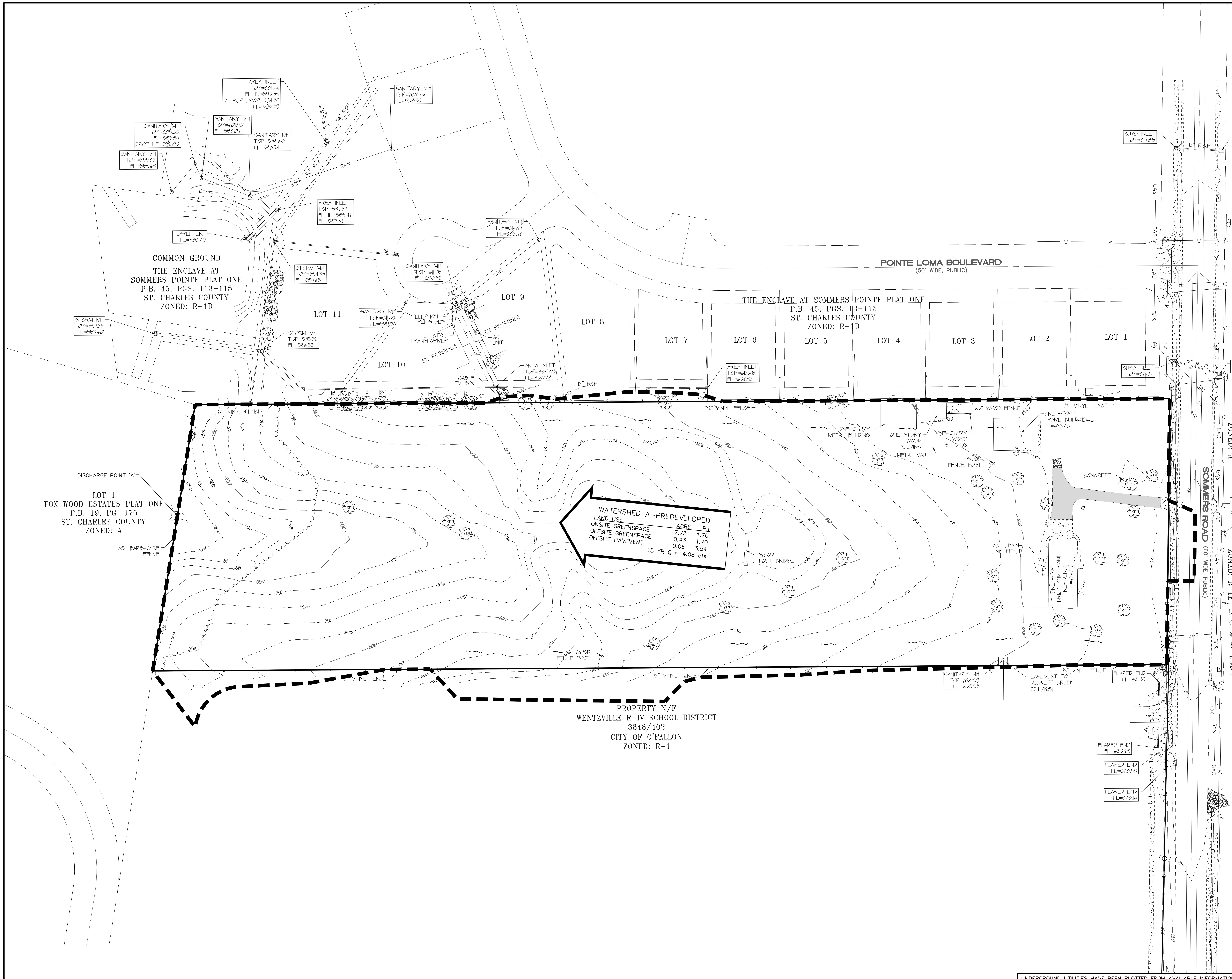
Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft³/s)
Flow (From)	Watershed A	0.711	5.000	25.81
Flow (In)	Detention Basin	0.711	5.000	25.81

Index

Appendix C
Drainage Maps

Exhibit A
Predeveloped Drainage Map
SOMMERSET ESTATES
20-18318



GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

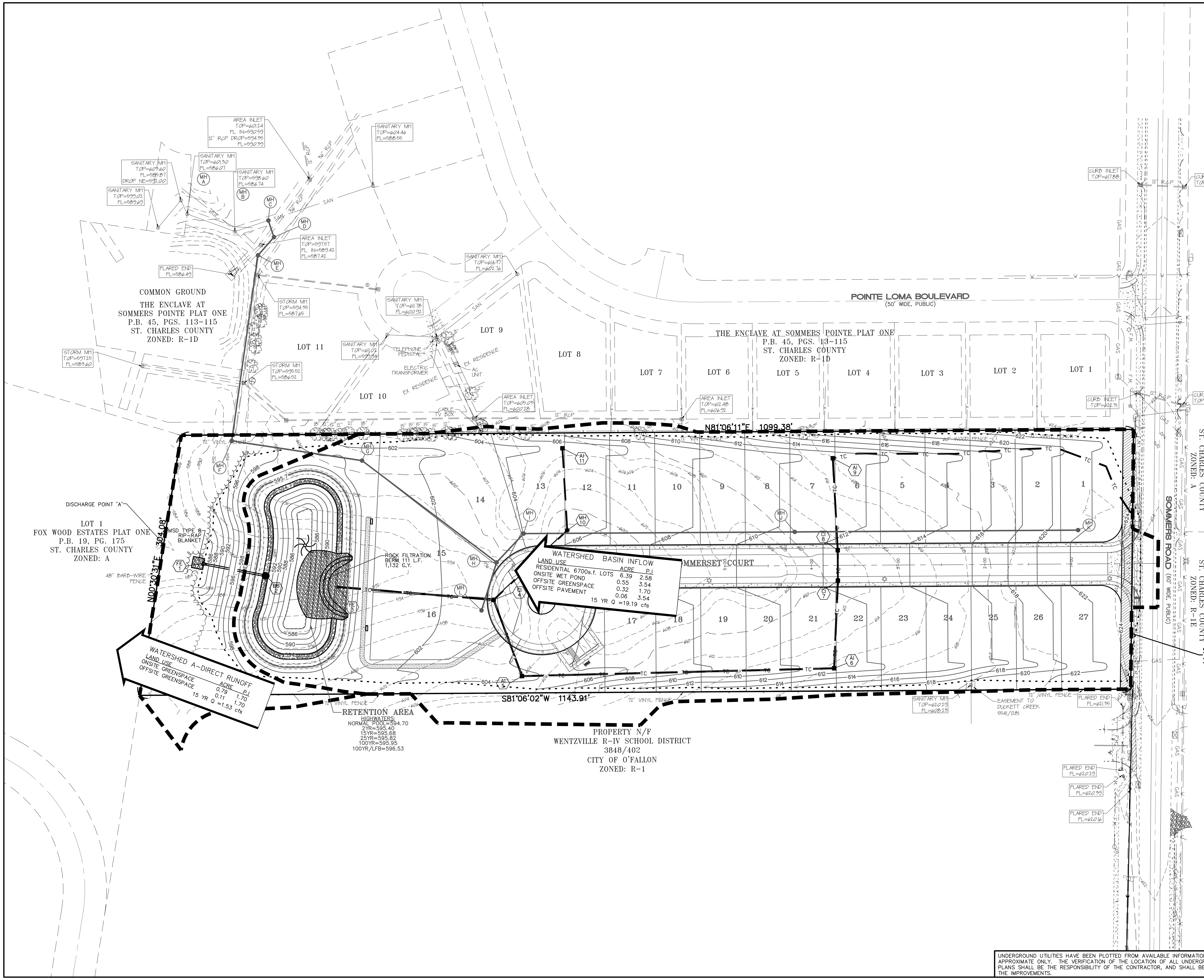
ENGINEERING
PLANNING
SURVEYING

221 Point West Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.

Todd C. Flauous
Civil Engineer
2005000982
2021

Exhibit B
Postdeveloped Drainage Map
SOMMERSET ESTATES
20-18318



GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
POINTE LOMA BOULEVARD
(50' WIDE, PUBLIC)
THE ENCLAVE AT SOMMERS POINTE PLAT ONE
P.B. 45, PGS. 13-115
ST. CHARLES COUNTY
ZONED: R-1D
COMMON GROUND
THE ENCLAVE AT
SOMMERS POINTE PLAT ONE
P.B. 45, PGS. 113-115
ST. CHARLES COUNTY
ZONED: R-1D
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
N81°06'11"E 1099.38'
S81°06'02"W 1143.91'
N00°30'31"E 304.08'
S07°54'39"E
299.99'
DISCHARGE POINT 'A'
LOT 1
FOX WOOD ESTATES PLAT ONE
P.B. 19, PG. 175
ST. CHARLES COUNTY
ZONED: A
MSD TYPE B
RIP-RAP
BLANKET
ROCK FILTRATION
BERM 111 L.F.
1,132 C.Y.
WATERSHED BASIN INFLOW
LAND USE ACRE P.I.
RESIDENTIAL 6700s.f. LOTS 6.39 2.58
ONSITE WET POND 0.55 3.54
OFFSITE GREENSPACE 0.32 1.70
OFFSITE PAVEMENT 0.06 3.54
15 YR Q =19.19 cfs
WATERSHED A-DIRECT RUNOFF
LAND USE ACRE P.I.
ONSITE GREENSPACE 0.79 1.70
OFFSITE GREENSPACE 0.11 1.70
15 YR Q =1.53 cfs
SOMMERSET COURT
RETENTION AREA
HIGHWATERS:
NORMAL POOL=594.70
2YR=595.40
15YR=595.68
25YR=595.82
100YR=595.95
100YR/LFB=596.53
PROPERTY N/F
WENTZVILLE R-IV SCHOOL DISTRICT
3848/402
CITY OF O'FALLON
ZONED: R-1
SOMMERS ROAD
(60' WIDE, PUBLIC)
PROPERTY N/F
RUCKMAN FAMILY TRUST
2020/90796
ST. CHARLES COUNTY
ZONED: A
PROPERTY N/F
JOSHUA & RAUCHEL
KOEHNEMANN
7030/1176
ST. CHARLES COUNTY
ZONED: R-1E
EASEMENT TO
DUCKETT CREEK
5541/1281
72" VINYL FENCE

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