

Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected

Worksheet Protected

Stormwater Facility Name: Riverbend Crossing Extended Detention Basin

Facility Location & Jurisdiction: Tract F Riverbend Crossing Filing No. 1/Joint El Paso County and City of Fountain

User (Input) Watershed Characteristics

Watershed Slope =	0.027	ft/ft
Watershed Length-to-Width Ratio =	1.25	L:W
Watershed Area =	54.90	acres
Watershed Imperviousness =	65.4%	percent
Percentage Hydrologic Soil Group A =	24.3%	percent
Percentage Hydrologic Soil Group B =	0.0%	percent
Percentage Hydrologic Soil Groups C/D =	75.7%	percent

Location for 1-hr Rainfall Depths (use dropdown):

User Input ▼

User Input: Detention Basin Characteristics

WQCV Design Drain Time = hours

User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	120	0.00	0.14
2.87	41,382	2.87	0.54
4.62	57,064	4.62	1.34
4.95	59,677	4.95	1.24
5.41	61,855	5.41	4.24
5.82	64,033	5.82	12.30
6.30	66,211	6.30	28.20
6.63	67,954	6.63	42.80
6.98	69,260	6.98	61.80
8.02	74,923	8.02	70.50

After completing and printing this worksheet to a pdf, go to:
<https://maperture.digitaldataservices.com/gvh/?viewer=cswdif>
 create a new stormwater facility, and
 attach the pdf of this worksheet to that record.

Routed Hydrograph Results

	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
Design Storm Return Period =							
One-Hour Rainfall Depth =	0.53	1.19	1.50	1.75	2.25	2.52	in
Calculated Runoff Volume =	1.157	3.334	4.674	5.829	8.513	9.949	acre-ft
OPTIONAL Override Runoff Volume =	1.17	3.25	4.50	5.53	8.20	9.69	acre-ft
Inflow Hydrograph Volume =	1.169	3.254	4.503	5.527	8.196	9.688	acre-ft
Time to Drain 97% of Inflow Volume =	37.2	64.4	71.4	71.2	68.4	66.8	hours
Time to Drain 99% of Inflow Volume =	38.7	67.9	75.9	76.6	75.7	75.1	hours
Maximum Ponding Depth =	2.58	4.44	5.27	5.73	6.64	7.06	ft
Maximum Ponded Area =	0.851	1.271	1.404	1.458	1.561	1.599	acres
Maximum Volume Stored =	1.101	3.105	4.229	4.885	6.258	6.916	acre-ft

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