

ACCEPTED for FILE Engineering Review 04/14/2022 2:36:04 PM dsdnijkamp EPC Planning & Community Development Department

## El Paso County MS4 Post Construction Detention / Water Quality Facility Documentation Form

This document **must be completed and submitted** with required attachments to the County for projects requiring a detention and/or a water quality facility. A separate completed form must be submitted for each facility.

Project name: Homestead @ Sterling Ranch Filing No.	o. 2 (Sand Filter Addendum)
Owner name: SR Land, LLC	
Location Address:	
Niarada Way & Cut Bank Drive	
Latitude and Longitude:	
38.9662, -104.669	
Assessor's Parcel #: 5233301001 Section: 33	Township: 12S Range: 65W
Expected Completion date: March, 2022	
Project acreage: O.78  Design Ponding Acres: 0.06	Design Storm: 100
Design Engineer Email Address: rburns@jrengineering.com	
To ensure compliance with C.R.S. 37-92-602(8), the completed Stormwat Detention and Infiltration Design Data Sheet <b>must be attached</b> . The form <a href="https://maperture.digitaldataservices.com/gvh/?viewer=cswdiff">https://maperture.digitaldataservices.com/gvh/?viewer=cswdiff</a> (click o	can be found here:
List all permanent water quality control measure(s) (EDBs, rain gardens, e	etc):
2-sand filters (Basin X1, and Basins Y1, W1,	& X2)
For all projects for which the constrained redevelopment sites standard is	s applied, provide an explanation of why it is
	s applicat, promac an expansion of man, the
not practicable to meet the full design standards.	
Attach Operations and Maintenance (O&M) Plan describing the operation	·
long-term observation, maintenance, and operation of control measure(s	
maintenance activities. If multiple, different water quality control measu	res are used at the same location, a separate O
& M Plan must be provided for each facility.	
Attach Private Detention Basin / Stormwater Quality Best Management	
<b>Easement</b> addressing maintenance of BMPs that shall be binding on all su	ubsequent owners of the permanent BMPs.
Attachments:	Review Engineer JR /CP
Champion Detection and Infiltration Device Detection	Review Engineer JR /CP  EPC Project File No. CDR-20-012
O & M Plan	EPC Project File No.
Maintenance and Access Agreement	

## **Stormwater Detention and Infiltration Design Data Sheet**

Workbook Protected

Worksheet Protected

Stormwater Facility Name: Sand Filter Basin (X1)

Facility Location & Jurisdiction: El Paso County - Homestead @ Sterling Ranch Filing No. 2

## **User Input: Watershed Characteristics**

Watershed Slope =	0.020	ft/ft
Watershed Length =	450	ft
Watershed Area =	0.78	acres
Watershed Imperviousness =	25.0%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	100.0%	percent
Percentage Hydrologic Soil Groups C/D =	0.0%	percent
		-

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

User Input

WQCV Treatment Method = Sand Filter

Stage [ft]         Area [ft^2]         Stage [ft]         Discharge [cfs]           0.00         1,780         0.00         0.00           1.00         2,572         1.00         0.71           2.00         3,463         2.00         0.85           2.50         3,947         2.50         0.85	User Defined	User Defined	User Defined	User Defined
1.00     2,572     1.00     0.71       2.00     3,463     2.00     0.81	Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
2.00 3,463 2.00 0.81	0.00	1,780	0.00	0.00
	1.00	2,572	1.00	0.71
2.50 3,947 2.50 0.85	2.00	3,463	2.00	0.81
	2.50	3,947	2.50	0.85

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

**Routed Hydrograph Results** 

	Routea Hyaro	graph Results					_
Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.53	1.19	1.50	1.75	2.25	2.52	in
Calculated Runoff Volume =	0.007	0.015	0.021	0.034	0.080	0.103	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.007	0.015	0.021	0.034	0.080	0.102	acre-ft
Time to Drain 97% of Inflow Volume =	6.4	6.4	6.5	6.7	6.9	7.0	hours
Time to Drain 99% of Inflow Volume =	8.1	8.1	8.2	8.2	8.5	8.6	hours
Maximum Ponding Depth =	0.09	0.19	0.27	0.42	0.93	1.15	ft
Maximum Ponded Area =	0.04	0.04	0.05	0.05	0.06	0.06	acres
Maximum Volume Stored =	0.004	0.008	0.012	0.019	0.046	0.060	acre-ft

## **Stormwater Detention and Infiltration Design Data Sheet**

