EL PASO COUNTY
COLORADO

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 NORTH AT STERLING RANCH (POND B)
Owner name: SR LAND, LLC
Location Address:APPOX. 1000 FT NORTHEAST OF INT. OF BRIARGATE PARKWAY AND WHEATLAND DR
Latitude and Longitude:
38deg58min13sec N, 104deg40min03sec W

Assessor's Parcel #: 5228000030 Section: 28 & 33 Township: 12S Range: 65w

Expected Completion date: 12/2021

Project acreage: 27.87 Design Ponding Acres: 1.42 Design Storm: 100 YEAR

Design Engineer Email Address: MBRAMLETT@JRENGINEERING.COM

To ensure compliance with C.R.S. 37-92-602(8), the completed Stormwater Detention and Infiltration Design Data Sheet **must be attached**. The form can be found here: https://maperture.digitaldataservices.com/gvh/?viewer=cswdif# (click on Download SDI Design Data Sheet)

List all permanent water quality control measure(s) (EDBs, rain gardens, etc):
EXTENDED DETENTION BASIN

For all projects for which the constrained redevelopment sites standard is applied, provide an explanation of why it is not practicable to meet the full design standards.

Attach Operations and Maintenance (O&M) Plan describing the operation and maintenance procedures that ensure the long-term observation, maintenance, and operation of control measure(s), including routine inspection frequencies and maintenance activities. If multiple, different water quality control measures 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 Practice Maintenance Agreement and Easement addressing maintenance of BMPs that shall be binding on all subsequent owners of the permanent BMPs.

Attachments:

Stormwater Detention and Infiltration Design Data Sheet
O & M Plan
Maintenance and Access Agreement

Review Engineer JDR / GR

EPC Project File No. SP208

Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

Stormwater Facility Name: Homestead North at Sterling Ranch

Facility Location & Jurisdiction: Pond B

User Input: Watershed Characteristics

Watershed Slope =	0.020	ft/ft
Watershed Length =	1290	ft
Watershed Area =	27.87	acres
Watershed Imperviousness =	50.0%	percent
Percentage Hydrologic Soil Group A =		percent
Percentage Hydrologic Soil Group B =	100.0%	percent
Percentage Hydrologic Soil Groups C/D =		percent

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

WQCV Treatment Method = Extended Detention

User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	125	0.00	0.00
0.50	125	0.50	0.00
1.00	125	1.00	0.05
1.50	2,287	1.50	0.10
2.00	7,048	2.00	0.14
2.50	14,410	2.50	0.18
3.00	24,371	3.00	0.20
3.50	36,933	3.50	0.35
4.00	52,095	4.00	0.50
4.50	59,197	4.50	6.50
5.00	61,276	5.00	23.00
5.50	63,387	5.50	49.20
6.00	65,531	6.00	73.00

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

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 =	0.479	1.201	1.641	2.219	3.700	4.495	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.479	1.200	1.640	2.219	3.699	4.495	acre-ft
Time to Drain 97% of Inflow Volume =	32.9	55.3	**59.2**	58.6	55.6	53.9	hours
Time to Drain 99% of Inflow Volume =	34.4	58.1	62.7	63.0	61.9	**61.3**	hours
Maximum Ponding Depth =	3.06	3.88	4.16	4.44	4.95	5.17	ft
Maximum Ponded Area =	0.59	1.11	1.25	1.34	1.40	**1.42**	acres
Maximum Volume Stored =	0.447	1.139	1.468	1.832	2.537	2.841	acre-ft

Stormwater Detention and Infiltration Design Data Sheet