EL PASO COUNTY
COLORADO

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Engineering Review
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dsdnijkamp
EPC Planning & Community Development Department

El Paso County MS4 Post Construction Detention Facility Documentation Form

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

Project name: **RETREAT AT TIMBERRIDGE FILING 1 (Pond 1)**
Owner name: TIMBERRIDGE DEVELOPMENT GROUP LLC
Location (Address and Latitude and Longitude): APPROX. 1000' EAST OF INT. OF VOLLMER ROAD AND POCO ROAD
38.976968, 104.664491
Assessor's Parcel #: 52280-00-019

Expected Completion Date: FALL 2020

Project Acreage: 72.42 AC. 29.4 Ac. Contributing

Design Ponding Acres: ~~29.4 AC~~. 0.463 Ac.

Design Engineer Email Address: MWHORTON@CLASSICCONSULTING.NET

Design Storm: circle one below:

- Water Quality
- Excess Urban Runoff
- 2-year
- 5-year
- 10-year
- 25-year
- 50-year
- 100-year (circled)
- Other

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 (EDB)

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 and 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 and M Plan
Maintenance and Access Agreement

Review Engineer: JDR
SF-19-009

Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

Stormwater Facility Name: Retreat at TimberRidge Filing No. 1 - Pond 1

Facility Location & Jurisdiction: Approx. 1000' east of int. of Vollmer Rd. and Poco Rd., El Paso County

User (Input) Watershed Characteristics

Watershed Slope =	0.020	ft/ft
Watershed Length-to-Width Ratio =	2.00	L:W
Watershed Area =	29.40	acres
Watershed Imperviousness =	13.8%	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

User Input: Detention Basin Characteristics

WQCV Design Drain Time =	40.00	hours

User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	50	0.00	0.00
1.00	3,443	1.00	0.04
2.00	6,871	2.00	0.10
3.00	9,740	3.00	0.16
4.00	12,575	4.00	3.73
5.00	15,295	5.00	22.10
6.00	18,016	6.00	23.69
7.00	22,223	7.00	80.83
8.00	26,430	8.00	253.19

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	25 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.53	1.19	1.50	1.75	2.00	2.25	2.52	in
Calculated Runoff Volume =	0.212	0.288	0.777	1.313	2.269	2.961	3.774	acre-ft
OPTIONAL Override Runoff Volume =								acre-ft
Inflow Hydrograph Volume =	0.211	0.287	0.777	1.312	2.269	2.960	3.773	acre-ft
Time to Drain 97% of Inflow Volume =	42	47	**48**	43	36	32	29	hours
Time to Drain 99% of Inflow Volume =	46	52	56	53	49	47	**44**	hours
Maximum Ponding Depth =	2.23	2.62	3.91	4.48	5.44	6.17	6.52	ft
Maximum Ponded Area =	0.173	0.198	0.282	0.318	0.378	0.429	0.463	acres
Maximum Volume Stored =	0.196	0.268	0.577	0.749	1.082	1.378	1.533	acre-ft

Stormwater Detention and Infiltration Design Data Sheet