4420 Green Mountain Drive

Final Drainage Report

PCD File No: CDR2612

All Terrain Engineering Project No: 26011

September 2026

Prepared for:

Matt Dunston

4420 Green Mountain Drive

Contact: (719) 559-2229

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Prepared by:

All Terrain Engineering LLC

Contact: Nicholas Q. Jokerst

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(530) 391-7635

ENGINEER'S STATEMENT

The attached drainage plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said drainage report has been prepared according to the criteria established by the County for drainage reports and said report is in conformity with the applicable master plan of the drainage basin. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparing this report.



09/29/2026

Nicholas Q. Jokerst, PE Date

State of Colorado No. 59273

For and on behalf of All Terrain Engineering LLC

DEVELOPER'S STATEMENT

I, the owner/developer, have read and will comply with all of the requirements specified in this drainage report and plan.

9/21/2026

Matt Dunston Date

EL PASO COUNTY ONLY

Filed in accordance with the requirements of the Drainage Criteria Manual, Volumes 1 and 2, El Paso County Engineering Criteria Manual and Land Development Code as amended.

Joshua J. Palmer, P.E. Date
County Engineer/ECM Administrator

Conditions:

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I. General Purpose, Location & Description

a. Purpose & Project Description

The purpose of the Final Drainage Report (FDR) for 4420 Green Mountain Drive is to describe the site's existing drainage patterns and proposed conditions associated with the proposed grading activities. The site received a Stop Work Order (SWO) from El Paso County for unpermitted grading operations. This FDR addresses the impacts of the proposed disturbances to support an ESQCP application.

b. Location

4420 Green Mountain Drive, referred to as 'the site' herein, is an unplatted parcel located in the Southeast Quarter of Section 32, Township 11 South, Range 67 West of the 6th P.M. The site is bound by unplatted land to the north, south and west as well as Smith Subdivision and Green Mountain Ranch to the east. A vicinity map is presented in Appendix A.

c. Description of Property

The site is an approximately 70.01 acre parcel Colorado Springs, CO. The project will disturb approximately 3 acres. However, no impervious surfaces will be added to the site. The current property includes a single residence, associated structures and a pond.

In general, the site slopes north and east towards Hay Creek. Onsite elevations range from 7140' – 7450' with slopes ranging approximately 1 – 60%. Per an NRCS soil survey, the site is made up of Type B Jarre-Tecolote complex and Peyton-Pring complex. Per a site survey, existing utilities include water, sewer and electric.

The ultimate receiving waters for the site are Hay Creek.

d. Floodplain Statement

Based on FEMA Firm map 08041C0266G dated December 7, 2018, the site is Zone X and Zone A. Zone X are areas determined to be outside the 0.2% annual chance flood. Zone A (no base flood elevations determined) areas are determined to be within the 1% annual chance of flooding zone. There is no development or disturbance proposed in Zone A portions of the site.

II. Drainage Basins

a. Major Basin Description

The site is located within the Hay Creek Valley which is within the Beaver Creek Major Drainage Basin. There is no current DBPS for the site. Hay Creek discharges to Beaver Creek approximately two miles downstream of the site.

b. Existing Subbasin Description

Basin EXA is 1.52 acres of undeveloped area. Basin EXA stormwater (Q_5 = 0.8 cfs Q_{100} = 4.2 cfs) flows overland across the site to DP1 (Q_5 = 0.8 cfs Q_{100} = 4.2 cfs). DP1 continues overland to the existing pond located at DP3 (Q_5 = 1.8 cfs Q_{100} = 10.3 cfs) and combines with Basin EXB flow.
Basin EXB is 2.33 acres of undeveloped area. Basin EXA stormwater (Q_5 = 1.0 cfs Q_{100} = 6.2 cfs) flows overland across the site to DP2 (Q_5 = 0.8 cfs Q_{100} = 4.2 cfs) and is captured by the Moonshine Ditch. Moonshine Ditch discharges to the existing pond located at DP3 (Q_5 = 1.8 cfs Q_{100} = 10.3 cfs) and combines with Basin EXA flow.

c. Proposed Subbasin Description

Basin A is 1.36 acres of disturbed area to remain undeveloped. Basin A stormwater (Q_5 = 0.6 cfs Q_{100} = 3.1 cfs) flows overland and is captured by a proposed swale that conveys the flow to DP1 (Q_5 = 0.6 cfs Q_{100} = 3.1 cfs). DP1 continues to the temporary sediment basin at DP2 (Q_5 = 1.3 cfs Q_{100} = 7.3 cfs).

Basin B is 1.89 acres of disturbed area to remain undeveloped. Basin B stormwater (Q_5 = 1.0 cfs Q_{100} = 5.7 cfs) flows overland and is captured by a proposed swale that conveys the flow to the temporary sediment basin at DP2 (Q_5 = 1.3 cfs Q_{100} = 7.3 cfs). The temporary sediment basin discharges to the basin's historic outfall of Moonshine Ditch. Moonshine Ditch continues to DP3 (Q_5 = 1.5 cfs Q_{100} = 8.3 cfs).

Basin C is 0.44 acres of disturbed area to remain undeveloped. Basin C stormwater (Q_5 = 0.2 cfs Q_{100} = 1.0 cfs) follows historic drainage patterns to Moonshine Ditch at DP3 (Q_5 = 1.5 cfs Q_{100} = 8.3 cfs). DP3 discharges to the existing pond at DP4 (Q_5 = 1.5 cfs Q_{100} = 8.6 cfs).

Basin D is 0.16 acres of disturbed area to remain undeveloped. Basin D stormwater (Q_5 = 0.1 cfs Q_{100} = 0.5 cfs) follows historic drainage patterns to the existing pond at DP4 (Q_5 = 1.5 cfs Q_{100} = 8.6 cfs).

The site's existing and proposed composite impervious is 5%. See below for a comparison of the site's stormwater discharge in the existing and proposed conditions.

EXISTING V. PROPOSED FLOW COMPARISON				
LOCATION	**Ex $Q_{5\text{-YR}}$**	**Ex $Q_{100\text{-YR}}$**	**Pr $Q_{5\text{-YR}}$**	**Pr $Q_{100\text{-YR}}$**
Ex. DP3/Pr DP4	1.8	10.3	1.5	8.6

The decrease in flow at the site's ultimate outfall (Ex. Dp3/Pr. DP4) is a result of the increased time of concentration for the proposed condition Basin A. In the existing condition, Basin A sheet flows across the basin directly to the existing pond. In the proposed condition, a swale intercepts the flow prior to the existing pond and is routed to a temporary sediment basin. Due to this increase in time of concentration, the peak flow from Basin A decreases.

Drainage Design Criteria

a. Development Criteria Reference

The drainage analysis follows the criteria from the "Drainage Criteria Manual County of El Paso, Colorado" Volumes 1 and 2," as amended.

b. Hydrologic Criteria

Onsite drainage analysis included the 5-year storm (minor event) and 100-year storm (major event). Runoff is calculated per EPCDCM Chapter 5 – Storm Runoff Method of Analysis.

c.

d. Hydraulic Criteria

Hydraulic criteria for channel analysis are obtained from EPCDCM Chapter 10 - Open Channels and Structures.

III. Drainage Facility Design

a. General Concept

The site received a Stop Work Order (SWO) from El Paso County for unpermitted grading operations. This FDR addresses the impacts of the proposed disturbances to support an ESQCP application. The proposed disturbance area for the site is approximately 3 acres. If disturbances exceed this value during construction, the associated GEC plan shall be amended to address the additional area. No additional impervious will be added to the site and existing drainage patterns to the existing pond shall be maintained.

b. Water Quality & Detention

Water quality and detention for the site is not required. Refer to the PCM Applicability form in Appendix D.

c. Inspections & Maintenance

An Inspection and Maintenance Manual is not applicable as no permanent facilities are proposed.

d. Grading & Erosion Control Plan

A Grading & Erosion Control Plan has been submitted in conjunction with this FDR.

e. Four Step Method

Step 1 – Employ Runoff Reduction Practices: Existing roof drains discharge to landscaped areas. Implementation of landscaping and open space throughout the site slows runoff and increase infiltration.

Step 2 – Stabilize Drainageways: All new and re-development projects are required to construct or participate in the funding of channel stabilization measures. Drainage basin fees paid, at the time of platting, go towards channel stabilization with the drainage basin. Refer to Section F below.

Step 3 – Provide WQCV: Water quality treatment is not required for the site. Disturbed areas are excluded per Appendix I.6.1.B.7.

Step 4 – Consider the need for source controls: No industrial uses are proposed within this development and therefore no source controls are proposed.

f. Drainage Basin & Bridge Fees

The site is within the Beaver Creek Drainage Basin. The site is not being platted and therefore basin and bridge fees are not applicable.

g. Engineer's Opinion of Probable Cost

An El Paso County 2026 Financial Assurance estimate is included in Appendix E.

IV. Summary

4420 Green Mountain Drive remains consistent with pre-development drainage conditions. The proposed development will not adversely affect downstream stormwater infrastructure or surrounding developments. This report is in accordance with the latest El Paso County Drainage criteria.

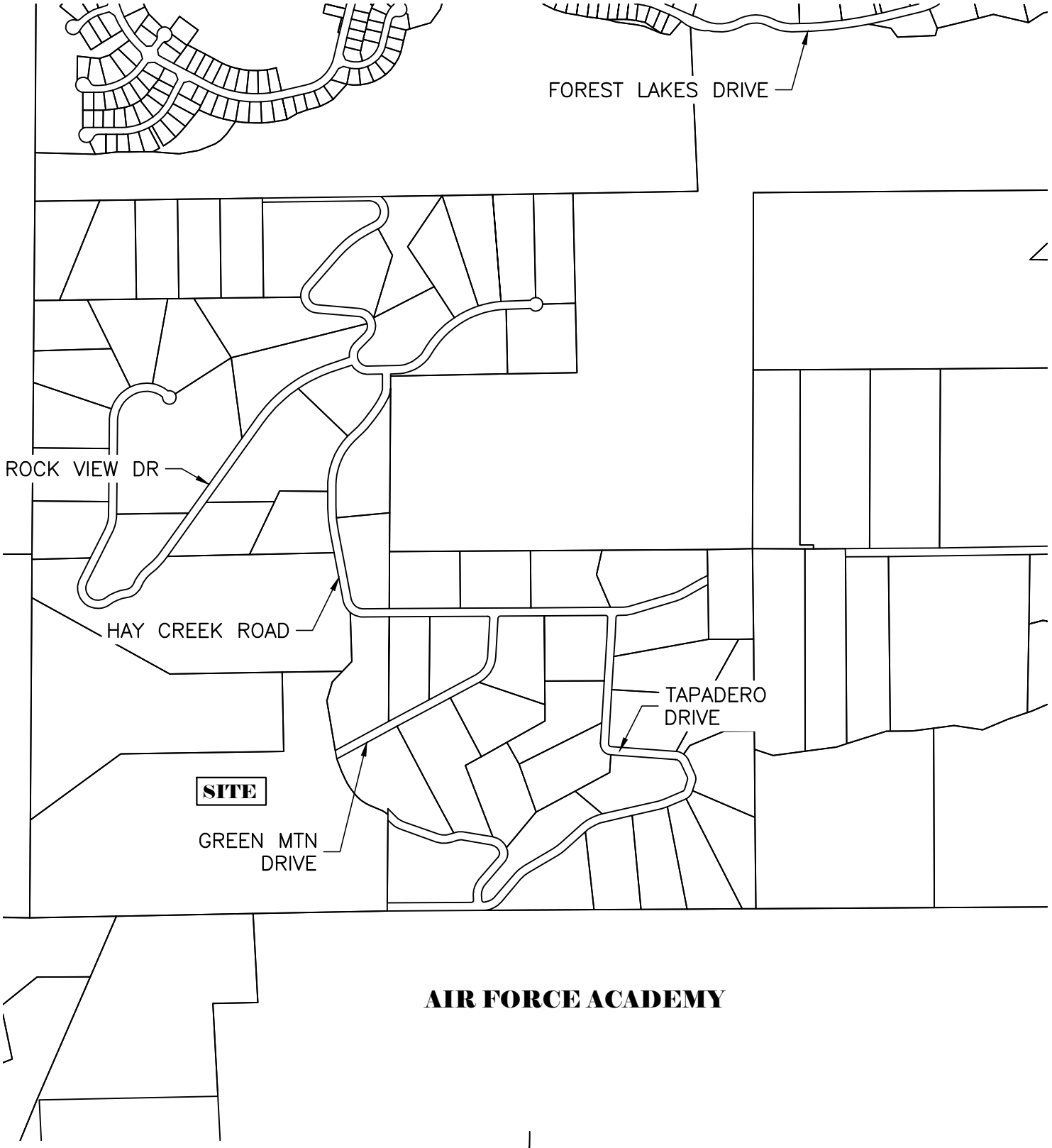
V. References

1. El Paso County – Drainage Criteria Manual, 2018 as amended.
2. Urban Storm Drainage Criteria Manual, Mile High Flood District, March 2024.
3. Federal Emergency Management Agency, Flood Map Service Center - https://msc.fema.gov/portal/home, September 2024.
4. Web Soil Survey, Natural Resources Conservation Service - https://websoilsurvey.nrcs.usda.gov/app/, September 2024.

APPENDIX A – VICINITY MAP, FEMA MAP, NRCS WEB SOIL SURVEY

4420 GREEN MTN DRIVE

VICINITY MAP

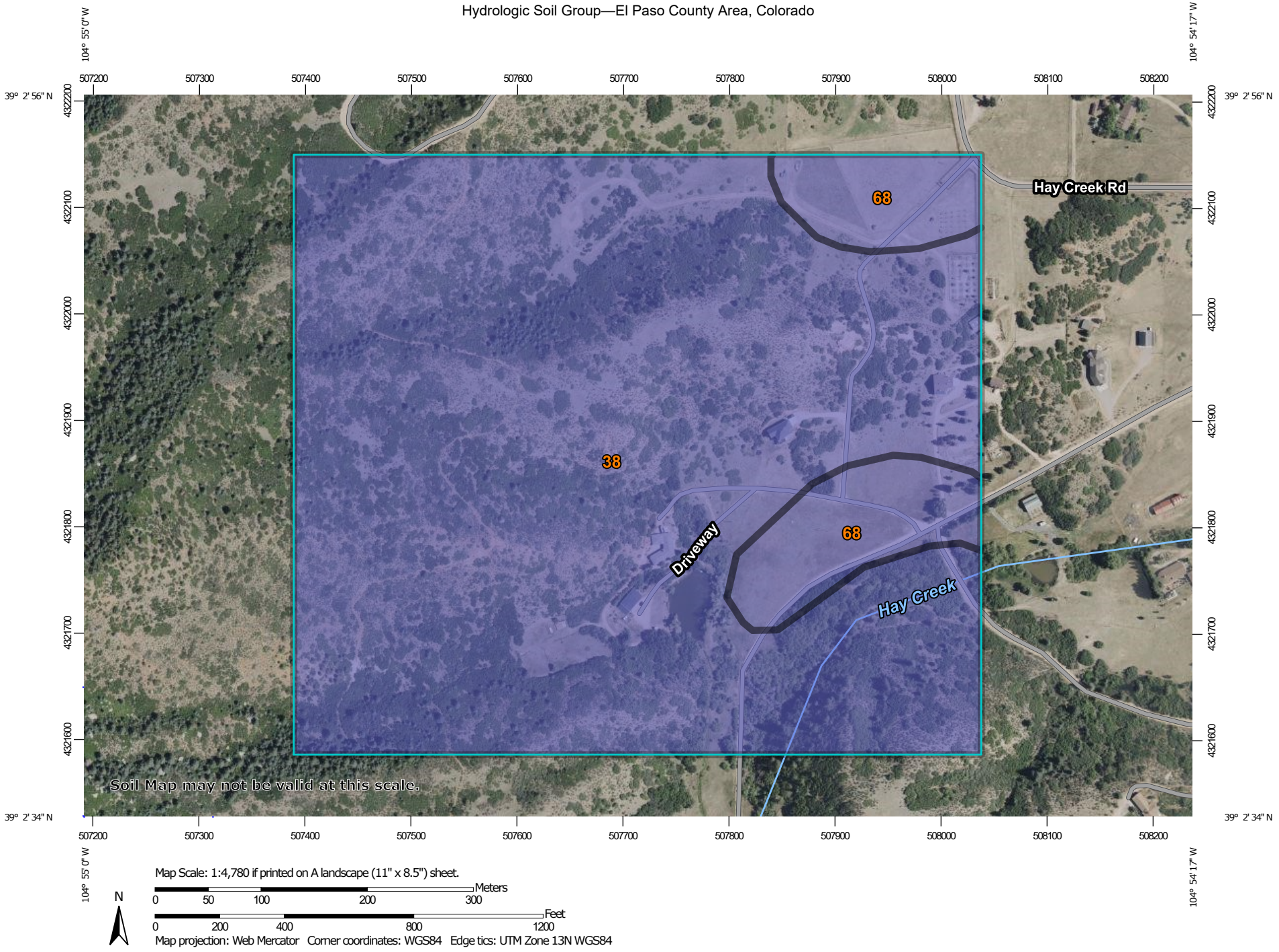


1000 500 0 1000 2000

ORIGINAL SCALE: 1" = 1000'

VICINITY MAP	
4420 GREEN MTN DRIVE	
JOB NO. 26011	
LOCATION: EPC	SHEET 1
09/11/2026	

ALL TERRAIN ENGINEERING
1004 WEST VAN BUREN STREET
COLORADO SPRINGS, CO 80907


104° 55' 0" W
104° 54' 17" W
39° 2' 56" N
39° 2' 34" N
507200
507300
507400
507500
507600
507700
507800
507900
508000
508100
508200
4322200
4322100
4322000
4321900
4321800
4321700
4321600
68
38
68
Hay Creek Rd
Driveway
Hay Creek
Soil Map may not be valid at this scale.
Map Scale: 1:4,780 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 50 100 200 300
Feet
0 200 400 800 1200
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Paso County Area, Colorado
Survey Area Data: Version 23, Aug 29, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 23, 2024—Aug 4, 2024

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
38	Jarre-Tecolote complex, 8 to 65 percent slopes	B	81.5	89.8%
68	Peyton-Pring complex, 3 to 8 percent slopes	B	9.3	10.2%
Totals for Area of Interest			**90.7**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

National Flood Hazard Layer FIRMette

FEMA

104°54'58"W 39°2'55"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

104°54'21"W 39°2'27"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/11/2026 at 8:27 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX B – HYDROLOGIC ANALYSIS

Subdivision:	4420 Green Mountain
Location:	El Paso County
Project Name:	4420 Green Mountain
Project Number:	26011
Calculated By:	NQJ
Checked By:	REB
Date:	9/29/2026

BASIN SUMMARY TABLE

Basin	Area (ac)	Impervious	C_5	C_{100}	t_c (min)	$Q_{5\text{-YR}}$ (cfs)	$Q_{100\text{-YR}}$ (cfs)
EX-A	1.52	6%	0.12	0.38	10.0	0.7	4.0
EX-B	2.33	4%	0.11	0.37	10.0	1.0	6.0

DESIGN POINT SUMMARY TABLE

DP#	$Q_{5\text{-YR}}$	$Q_{100\text{-YR}}$
1	0.7	4.0
2	1.0	6.0
3	1.7	10.0

COMPOSITE % IMPERVIOUS CALCULATIONS - EXISTING CONDITIONS

Subdivision: 4420 Green Mountain
Location: El Paso County

Project Name: 4420 Green Mountain
Project No.: 26011.00
Calculated By: NQJ
Checked By: REB
Date: 9/29/26

		Gravel				Paved				Roofs				Undeveloped				Weighted C_5 & C_{100}		Basins Total Weighted % Imp.
Basin ID	Total Area (ac)	C_5	C_{100}	Area (ac)	% Imp.	C_5	C_{100}	Area (ac)	% Imp.	C_5	C_{100}	Area (ac)	% Imp.	C_5	C_{100}	Area (ac)	% Imp.	C_5	C_{100}	
EX-A	1.52	0.59	0.70	0.08	80.0%	0.90	0.96	0.00	100.0%	0.73	0.81	0.00	90.0%	0.09	0.36	1.44	2.0%	0.12	0.38	6.1%
EX-B	2.33	0.59	0.70	0.07	80.0%	0.90	0.96	0.00	100.0%	0.73	0.81	0.00	90.0%	0.09	0.36	2.26	2.0%	0.11	0.37	4.3%
Total	**3.85**																			**5.0%**

STANDARD FORM SF-2 - EXISTING CONDITIONS
TIME OF CONCENTRATION

Subdivision: 4420 Green Mountain
Location: El Paso County

Project Name: 4420 Green Mountain
Project No.: 26011.00
Calculated By: NQJ
Checked By: REB
Date: 9/29/26

SUB-BASIN DATA						INITIAL/OVERLAND (T_i)			TRAVEL TIME (T_t)					*tc* CHECK (URBANIZED BASINS)			FINAL
BASIN ID	D.A. (ac)	Hydrologic Soils Group	Weighted C_5	Weighted C_{100}	Impervious (%)	L (ft)	S_o (%)	t_i (min)	L_t (ft)	S_t (%)	K	VEL. (ft/s)	t_t (min)	COMP. t_c (min)	TOTAL LENGTH (ft)	Urbanized t_c (min)	t_c (min)
EX-A	1.52	B	0.12	0.38	6.1%	115	14.8%	7.8	211	25.0%	10.0	5.0	0.7	8.5	326.0	25.7	10.0
EX-B	2.33	B	0.11	0.37	4.3%	91	33.0%	5.4	730	11.0%	10.0	3.3	3.7	9.1	821.0	29.1	10.0

NOTES:

$$t_c = t_i + t_t$$

Where:

t_c = computed time of concentration (minutes)

t_i = overland (initial) flow time (minutes)

t_t = channelized flow time (minutes).

Eq

$$t_i = \frac{0.395(1.1 - C_5)\sqrt{L_i}}{S_o^{0.33}}$$

Where:

t_i = overland (initial) flow time (minutes)
C_5 = runoff coefficient for 5-year frequency (from Table 6-4)
L_i = length of overland flow (ft)
S_o = average slope along the overland flow path (ft/ft).

Equation 6-3

Table 6-2. NRCS Conveyance factors, K

Type of Land Surface	Conveyance Factor, K
Heavy meadow	2.5
Tillage/field	5
Short pasture and lawns	7
Nearly bare ground	10
Grassed waterway	15
Paved areas and shallow paved swales	20

$$t_t = \frac{L_t}{60K\sqrt{S_o}} = \frac{L_t}{60V_t}$$

Where:

t_t = channelized flow time (travel time, min)
L_t = waterway length (ft)
S_o = waterway slope (ft/ft)
V_t = travel time velocity (ft/sec) = $K\sqrt{S_o}$
K = NRCS conveyance factor (see Table 6-2).

Equation 6-4

$$t_c = \frac{(26 - 17i) + L_t}{60(14i + 9)\sqrt{S_t}}$$

Where:

t_c = minimum time of concentration for first design point when less than t_c from Equation 6-1.
L_t = length of channelized flow path (ft)
i = imperviousness (expressed as a decimal)
S_t = slope of the channelized flow path (ft/ft).

Equation 6-5

Use a minimum t_c value of 5 minutes for urbanized areas and a minimum t_c value of 10 minutes for areas that are not considered urban. Use minimum values even when calculations result in a lesser time of concentration.

STANDARD FORM SF-3 - EXISTING CONDITIONS

STORM DRAINAGE SYSTEM DESIGN

(RATIONAL METHOD PROCEDURE)

Subdivision: 4420 Green Mountain
Location: El Paso County
Design Storm: 5-Year

Project Name: 4420 Green Mountain
Project No.: 26011.00
Calculated By: NQJ
Checked By: REB
Date: 9/29/26

		DIRECT RUNOFF							TOTAL RUNOFF				OVERLAND			PIPE				TRAVEL TIME			
DESCRIPTION	Design Point	Basin ID	Area (Ac)	Runoff Coeff.	t_c (min)	C* A (Ac)	I (in/hr)	Q (cfs)	tc (min)	C* A (ac)	I (in/hr)	Q (cfs)	$Q_{overland}$ (cfs)	C* A (ac)	Slope (%)	Q_{pipe} (cfs)	C* A (ac)	Slope (%)	Pipe Size (inches)	Length (ft)	Velocity (fps)	t_t (min)	REMARKS
	1	EX-A	1.52	0.12	10.0	0.18	4.13	0.7															BASIN A EXISTING CONDITIONS @ DP1
	2	EX-B	2.33	0.11	10.0	0.24	4.13	1.0															BASIN B EXISTING CONDITIONS @ DP2
	3								10.0	0.42	4.13	1.7											COMBINED DP1 & DP2 @ DP3, TOTAL FLOW ENTERING EX POND

Notes:
Street and Pipe C*A values are determined by Q/i using the catchment's intensity value.

STANDARD FORM SF-3 - EXISTING CONDITIONS

STORM DRAINAGE SYSTEM DESIGN

(RATIONAL METHOD PROCEDURE)

Subdivision: 4420 Green Mountain
Location: El Paso County
Design Storm: 100-Year

Project Name: 4420 Green Mountain
Project No.: 26011.00
Calculated By: NQJ
Checked By: REB
Date: 9/29/26

STREET	Design Point	DIRECT RUNOFF							TOTAL RUNOFF				OVERLAND			PIPE				TRAVEL TIME			REMARKS
		Basin ID	Area (ac)	Runoff Coeff.	t_c (min)	C*A (ac)	I (in/hr)	Q (cfs)	t_c (min)	C*A (ac)	I (in/hr)	Q (cfs)	$Q_{OVERLAND}$ (cfs)	C*A (ac)	Slope (%)	Q_{pipe} (cfs)	C*A (ac)	Slope (%)	Pipe Size (inches)	Length (ft)	Velocity (fps)	t_t (min)	
	1	EX-A	1.52	0.38	10.0	0.57	6.93	4.0															BASIN A EXISTING CONDITIONS @ DP1
	2	EX-B	2.33	0.37	10.0	0.86	6.93	6.0															BASIN B EXISTING CONDITIONS @ DP2
	3								10.0	1.44	6.93	10.0											COMBINED DP1 & DP2 @ DP3, TOTAL FLOW ENTERING EX POND

Notes:
Street and Pipe C*A values are determined by Q/i using the catchment's intensity value.

Subdivision:	4420 Green Mountain
Location:	El Paso County
Project Name:	4420 Green Mountain
Project Number:	26011
Calculated By:	NQJ
Checked By:	REB
Date:	9/29/2026

PROPOSED CONDITIONS - BASIN SUMMARY TABLE

Basin	Area (ac)	Impervious	C_5	C_{100}	t_c (min)	$Q_{5\text{-YR}}$ (cfs)	$Q_{100\text{-YR}}$ (cfs)
A	1.44	6%	0.12	0.38	14.5	0.6	3.3
B	1.81	5%	0.11	0.37	6.4	1.0	5.5
C	0.44	2%	0.09	0.36	11.6	0.2	1.0
D	0.16	2%	0.09	0.36	10.0	0.1	0.4

PROPOSED CONDITIONS - DESIGN POINT SUMMARY TABLE

DP#	$Q_{5\text{-YR}}$	$Q_{100\text{-YR}}$
1	0.6	3.3
2	1.3	7.3
3	1.5	8.3
4	1.5	8.6

COMPOSITE % IMPERVIOUS CALCULATIONS - PROPOSED CONDITIONS

Subdivision: 4420 Green Mountain
Location: El Paso County

Project Name: 4420 Green Mountain
Project No.: 26011.00
Calculated By: NQJ
Checked By: REB
Date: 9/29/26

		Gravel				Paved				Roofs				Undeveloped				Weighted C_5 & C_{100}		Basins Total Weighted % Imp.
Basin ID	Total Area (ac)	C_5	C_{100}	Area (ac)	% Imp.	C_5	C_{100}	Area (ac)	% Imp.	C_5	C_{100}	Area (ac)	% Imp.	C_5	C_{100}	Area (ac)	% Imp.	C_5	C_{100}	
A	1.44	0.59	0.70	0.08	80.0%	0.90	0.96	0.00	100.0%	0.73	0.81	0.00	90.0%	0.09	0.36	1.36	2.0%	0.12	0.38	6.3%
B	1.81	0.59	0.70	0.07	80.0%	0.90	0.96	0.00	100.0%	0.73	0.81	0.00	90.0%	0.09	0.36	1.74	2.0%	0.11	0.37	5.0%
C	0.44	0.59	0.70	0.00	80.0%	0.90	0.96	0.00	100.0%	0.73	0.81	0.00	90.0%	0.09	0.36	0.44	2.0%	0.09	0.36	2.0%
D	0.16	0.59	0.70	0.00	80.0%	0.90	0.96	0.00	100.0%	0.73	0.81	0.00	90.0%	0.09	0.36	0.16	2.0%	0.09	0.36	2.0%
Total	**3.85**																			**5.0%**

STANDARD FORM SF-2 - PROPOSED CONDITIONS
TIME OF CONCENTRATION

Subdivision: 4420 Green Mountain
Location: El Paso County

Project Name: 4420 Green Mountain
Project No.: 26011.00
Calculated By: NQJ
Checked By: REB
Date: 9/29/26

SUB-BASIN DATA						INITIAL/OVERLAND (T_i)			TRAVEL TIME (T_t)					*tc* CHECK (URBANIZED BASINS)			FINAL
BASIN ID	D.A. (ac)	Hydrologic Soils Group	Weighted C_5	Weighted C_{100}	Impervious (%)	L (ft)	S_o (%)	t_i (min)	L_t (ft)	S_t (%)	K	VEL. (ft/s)	t_t (min)	COMP. t_c (min)	TOTAL LENGTH (ft)	Urbanized t_c (min)	t_c (min)
A	1.44	B	0.12	0.38	6.3%	240	25.0%	9.5	250	0.7%	10.0	0.8	5.0	14.5	490.0	30.0	14.5
B	1.81	B	0.11	0.37	5.0%	89	35.0%	5.2	305	20.0%	10.0	4.5	1.1	6.4	394.0	26.3	6.4
C	0.44	B	0.09	0.36	2.0%	76	25.0%	5.5	260	0.5%	10.0	0.7	6.1	11.6	336.0	32.3	11.6
D	0.16	B	0.09	0.36	2.0%	25	50.0%	2.5	25	50.0%	10.0	7.1	0.1	2.6	50.0	25.7	10.0

NOTES:

$$t_c = t_i + t_t$$

Where:

t_c = computed time of concentration (minutes)

t_i = overland (initial) flow time (minutes)

t_t = channelized flow time (minutes).

Eq

$$t_i = \frac{0.395(1.1 - C_5)\sqrt{L_i}}{S_o^{0.33}}$$

Where:

t_i = overland (initial) flow time (minutes)
C_5 = runoff coefficient for 5-year frequency (from Table 6-4)
L_i = length of overland flow (ft)
S_o = average slope along the overland flow path (ft/ft).

Equation 6-3

Table 6-2. NRCS Conveyance factors, K

Type of Land Surface	Conveyance Factor, K
Heavy meadow	2.5
Tillage/field	5
Short pasture and lawns	7
Nearly bare ground	10
Grassed waterway	15
Paved areas and shallow paved swales	20

$$t_t = \frac{L_t}{60K\sqrt{S_o}} = \frac{L_t}{60V_t}$$

Where:

t_t = channelized flow time (travel time, min)
L_t = waterway length (ft)
S_o = waterway slope (ft/ft)
V_t = travel time velocity (ft/sec) = $K\sqrt{S_o}$
K = NRCS conveyance factor (see Table 6-2).

Equation 6-4 $t_c = \frac{(26 - 17i) + L_t}{60(14i + 9)\sqrt{S_t}}$

Where:

t_c = minimum time of concentration for first design point when less than t_c from Equation 6-1.
L_t = length of channelized flow path (ft)
i = imperviousness (expressed as a decimal)
S_t = slope of the channelized flow path (ft/ft).

Equation 6-5

Use a minimum t_c value of 5 minutes for urbanized areas and a minimum t_c value of 10 minutes for areas that are not considered urban. Use minimum values even when calculations result in a lesser time of concentration.

STANDARD FORM SF-3 - PROPOSED CONDITIONS

STORM DRAINAGE SYSTEM DESIGN

(RATIONAL METHOD PROCEDURE)

Subdivision: 4420 Green Mountain
Location: El Paso County
Design Storm: 5-Year

Project Name: 4420 Green Mountain
Project No.: 26011.00
Calculated By: NQJ
Checked By: REB
Date: 9/29/26

		DIRECT RUNOFF							TOTAL RUNOFF				OVERLAND			PIPE				TRAVEL TIME			
DESCRIPTION	Design Point	Basin ID	Area (Ac)	Runoff Coeff.	t_c (min)	C* A (Ac)	I (in/hr)	Q (cfs)	tc (min)	C* A (ac)	I (in/hr)	Q (cfs)	$Q_{overland}$ (cfs)	C* A (ac)	Slope (%)	Q_{pipe} (cfs)	C* A (ac)	Slope (%)	Pipe Size (inches)	Length (ft)	Velocity (fps)	t_t (min)	REMARKS
	1	A	1.44	0.12	14.5	0.17	3.57	0.6															BASIN A @ DP1, SWALE TO DP2
		B	1.81	0.11	6.4	0.20	4.81	1.0															BASIN B @ DP2
	2								14.5	0.37	3.57	1.3											COMBINED DP1 & DPB @ DP2
		C	0.44	0.09	11.6	0.04	3.90	0.2															BASIN C @ DP3
	3								14.5	0.41	3.57	1.5											COMBINED DP2 & BASIN C @ DP3
		D	0.16	0.09	10.0	0.01	4.13	0.1															BASIN D @ DP4
	4								14.5	0.42	3.57	1.5											COMBINED DP3 & BASIN D @ DP4

Notes:
Street and Pipe C*A values are determined by Q/i using the catchment's intensity value.

STANDARD FORM SF-3 - PROPOSED CONDITIONS

STORM DRAINAGE SYSTEM DESIGN

(RATIONAL METHOD PROCEDURE)

Subdivision: 4420 Green Mountain
Location: El Paso County
Design Storm: 100-Year

Project Name: 4420 Green Mountain
Project No.: 26011.00
Calculated By: NQJ
Checked By: REB
Date: 9/29/26

STREET	Design Point	DIRECT RUNOFF							TOTAL RUNOFF				OVERLAND			PIPE				TRAVEL TIME			REMARKS
		Basin ID	Area (ac)	Runoff Coeff.	t_c (min)	C*A (ac)	I (in/hr)	Q (cfs)	t_c (min)	C*A (ac)	I (in/hr)	Q (cfs)	$Q_{OVERLAND}$ (cfs)	C*A (ac)	Slope (%)	Q_{pipe} (cfs)	C*A (ac)	Slope (%)	Pipe Size (inches)	Length (ft)	Velocity (fps)	t_t (min)	
	1	A	1.44	0.38	14.5	0.55	6.00	3.3															BASIN A @ DP1, SWALE TO DP2
		B	1.81	0.37	6.4	0.68	8.07	5.5															BASIN B @ DP2
	2								14.5	1.22	6.00	7.3											COMBINED DP1 & DPB @ DP2
		C	0.44	0.36	11.6	0.16	6.55	1.0															BASIN C @ DP3
	3								14.5	1.38	6.00	8.3											COMBINED DP2 & BASIN C @ DP3
		D	0.16	0.36	10.0	0.06	6.93	0.4															BASIN D @ DP4
	4								14.5	1.44	6.00	8.6											COMBINED DP3 & BASIN D @ DP4

Notes:
Street and Pipe C*A values are determined by Q/i using the catchment's intensity value.

APPENDIX C – HYDRAULIC ANALYSIS

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Tuesday, Sep 29 2026

Pr Swale Q100 = DP2 = 7.3 cfs

Triangular

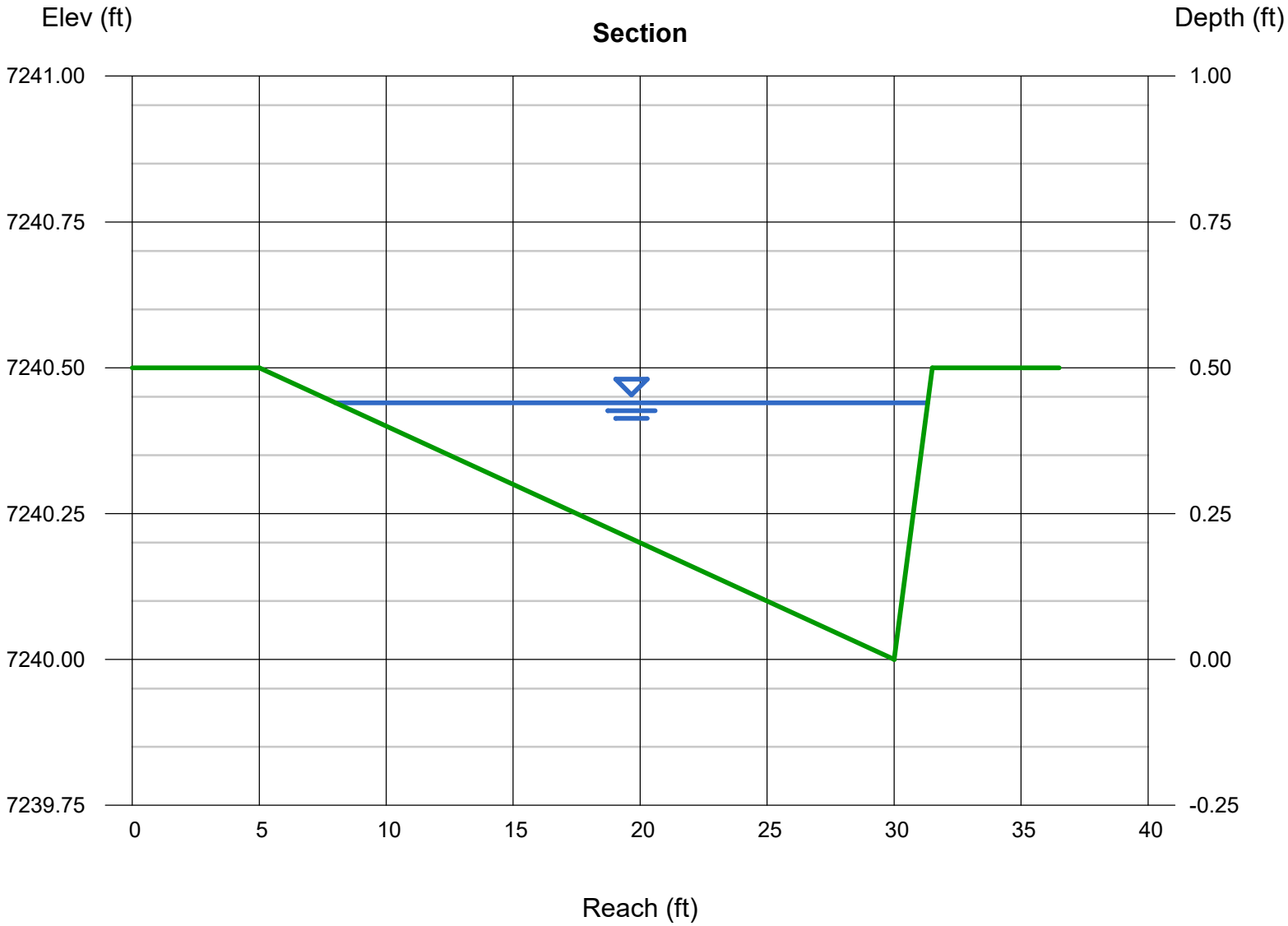
Side Slopes (z:1)	= 50.00, 3.00
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 7240.00
Slope (%)	= 0.70
N-Value	= 0.030

Calculations

Compute by:	Known Q
Known Q (cfs)	= 7.30

Highlighted

Depth (ft)	= 0.44
Q (cfs)	= 7.300
Area (sqft)	= 5.13
Velocity (ft/s)	= 1.42
Wetted Perim (ft)	= 23.40
Crit Depth, Yc (ft)	= 0.35
Top Width (ft)	= 23.32
EGL (ft)	= 0.47
Froude	=0.38



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Oct 30 2026

Pr Swale Q5 = DP2 = 1.3 cfs

Triangular

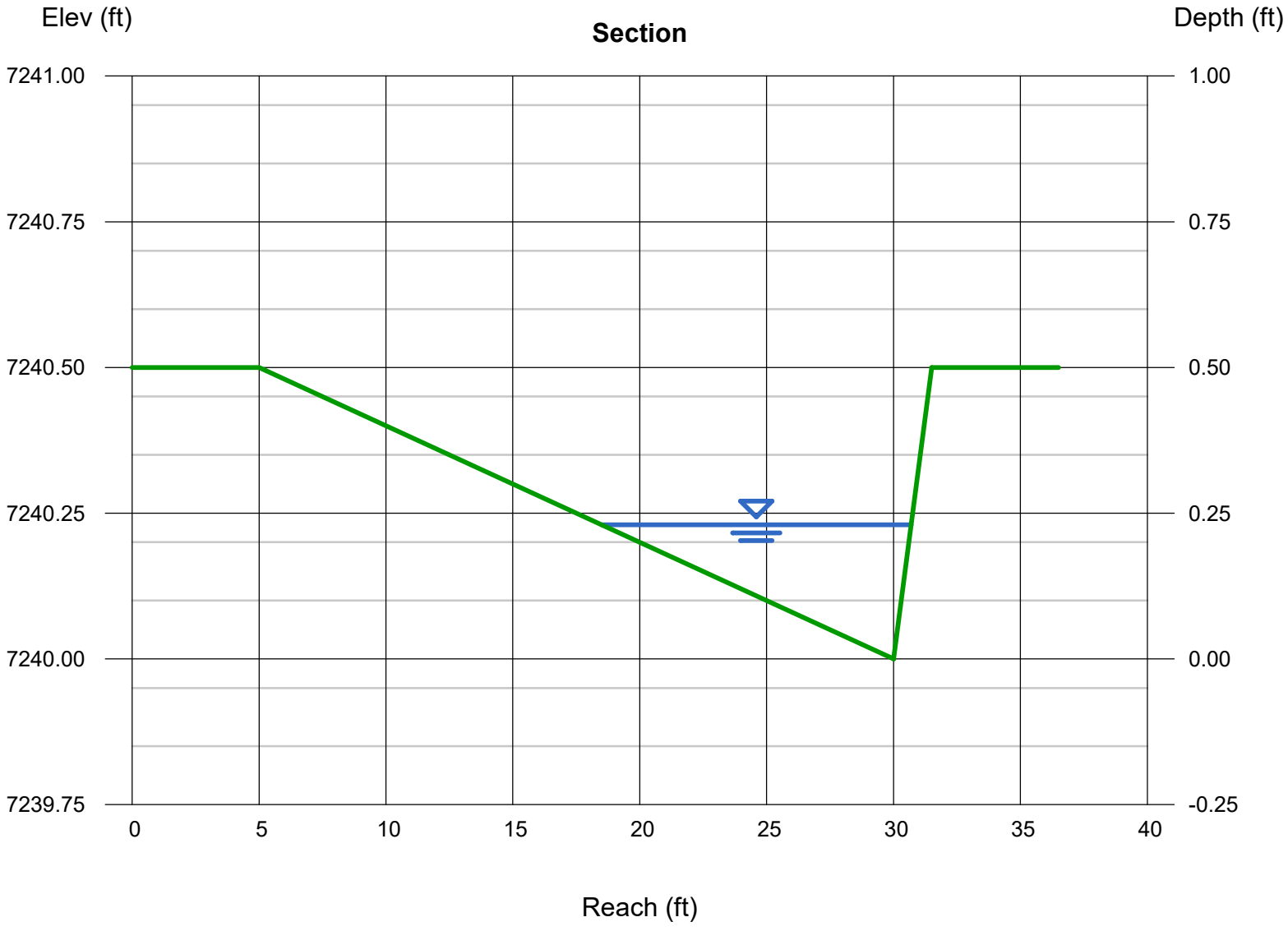
Side Slopes (z:1)	= 50.00, 3.00
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 7240.00
Slope (%)	= 0.70
N-Value	= 0.030

Calculations

Compute by:	Known Q
Known Q (cfs)	= 1.30

Highlighted

Depth (ft)	= 0.23
Q (cfs)	= 1.300
Area (sqft)	= 1.40
Velocity (ft/s)	= 0.93
Wetted Perim (ft)	= 12.23
Crit Depth, Yc (ft)	= 0.18
Top Width (ft)	= 12.19
EGL (ft)	= 0.24
Froude	=0.34



APPENDIX D - WATER QUALITY & DETENTION

2880 International Circle, Suite 110
Colorado Springs, CO 80910
Phone: 719-520-6300
Email: Stormwater@elpasoco.com
publicworks.elpasoco.com/stormwater/

EL PASO COUNTY
PCM APPLICABILITY FORM

EPC Project Number: CDR2612

This form is to be used by the Engineer of Record to determine if the proposed construction activities are eligible for an exclusion to stormwater quality permanent control measure (PCM) requirements. All "applicable construction activity" within El Paso County (EPC) must comply with the post-construction stormwater management criteria. Reference ECM Appendix I for information about PCMs.

Note that this form only addresses stormwater quality for the site. Even if the site is fully excluded from needing a stormwater quality PCM, the site may still need to address stormwater detention (per DCMv1 Chap 1.5 and ECM Chap 3.2.8.B). However, if the site requires stormwater detention, then it must also address stormwater quality (per DCMv2 Chap 4.1 and ECM Appendix I.7.3). Refer to the Reference Information pages below for more guidance.

Part I. Project Summary			
Project Name:	4420 Green Mountain Drive		
Is Stormwater Detention Required?	☐ Yes ☒ No	**Is Water Quality Treatment Required? (i.e.: non-excluded disturbance >1ac)**	☐ Yes ☒ No
Is an ESQCP Required? If "No," Check Applicable Reason	☒ Yes ☐ No	☐ Not an Applicable Construction Activity ☐ Oil & Gas ☐ R-Factor	
Engineer of Record Email Address:	NJOKERST@ALLTERRAINENG.COM		

Part II. PCM Exclusions

Note: Questions A through K directly correlate to Part I.E.4.a.i (A) to (K) on page 27 of the 2016 CDPS Statewide Standard MS4 General Permit COR090000 (i.e.: the MS4 Permit), as amended. Document exclusions that apply to the whole project or parts of it.

Questions	Excluded Acreage	Yes	No	Notes
A. Is this project a "Pavement Management Site?"			✘	This exclusion applies to the maintenance, rehabilitation, and reconstruction of pavement on existing roads, bridges, bike lanes, and parking along roads. Areas used primarily for parking (i.e.: separate lots not along roadway) or access to parking are not included. No increase in impervious area is allowable.
B. Review two options below to see if project is an "Excluded Roadway Development."				Does not include sidewalks. Does include curb & gutter.
• Does the project include improvements to an existing roadway that adds < 1 acre of paved or gravel area per mile of roadway?			✘	If selected, list the proposed additional acreage per mile in Part IV Notes below.
• Does the project include improvements to an existing roadway that adds ≤ 8.25 ft of paved width at any location?			✘	If selected, list the proposed additional width in Part IV Notes below.

2880 International Circle, Suite 110
Colorado Springs, CO 80910
Phone: 719-520-6300
Email: Stormwater@elpasoco.com
publicworks.elpasoco.com/stormwater/

EL PASO COUNTY
PCM APPLICABILITY FORM

EPC Project Number: CDR2612

Part II. PCM Exclusions (continued)				
Questions	**Excluded Acreage**	**Yes**	**No**	**Notes**
C. Does the project include "Excluded Existing Roadway Areas?"			X	For redevelopment of existing roadways. This exclusion only excludes the original roadway area, it does NOT apply to the entire project. This exclusion applies only when the proposed project will expand the existing roadway width by <2x on average. If selected, list the proposed expanded width in Part IV Notes below.
D. Is the project considered an Aboveground or Underground Utilities activity?			X	Activity can not permanently alter the terrain, ground cover, or drainage patterns from existing conditions.
E. Is the project considered a "Large Lot Single-Family Site"? *This exclusion only pertains to the lots and does not include roadways.*			X	Must be a single-family residential lot or agricultural zoned land with ≥ 2.5 acres per dwelling and total lot impervious area < 10%. If "Yes," notate the percent impervious below in Part IV: Notes.
F. Do Non-Residential or Non-Commercial Infiltration Conditions exist? *Post-development surface conditions do not result in concentrated stormwater flow or surface water discharge during an 80th percentile stormwater runoff event, and the 80th percentile event must be infiltrated.*			X	Exclusion does not apply to residential or commercial sites for buildings. A site-specific study is required and must show rainfall and soil conditions, allowable slopes, surface conditions, and ratios of imperviousness area to pervious area.
G. Is the project land disturbance to Undeveloped Land where undeveloped land remains undeveloped following the activity?	3	X		Project must be on land with no human made structures such as buildings or pavement. The proposed development must return the disturbed area to its historical condition. See CDPHE's "Standard MS4 Permit FAQ" for more detail on how this exclusion applies.
H. Is the project a Stream Stabilization Site?			X	
I. Is the project a Bike or Pedestrian Trail?			X	Bike lanes for roadways are not included in this exclusion but may qualify if attached to a larger roadway activity that is excluded in A, B or C above. Pedestrian trails (e.g. sidewalks) that are attached to a roadway do not apply.
J. Is the project Oil and Gas Exploration?			X	Activities and facilities associated with oil and gas exploration are excluded.
K. Is the project in a County Growth Area?				El Paso County does not apply this exclusion.

If any exclusions above apply (via a "Yes" for any row), runoff from those areas is excluded from stormwater quality treatment requirements. All runoff from remaining non-excluded disturbed areas will need to be treated by a stormwater quality PCM, unless remaining area is <1ac. If remaining area is >1ac, select at least one Design Standard on the next page.

2880 International Circle, Suite 110
Colorado Springs, CO 80910
Phone: 719-520-6300
Email: Stormwater@elpasoco.com
publicworks.elpasoco.com/stormwater/

EL PASO COUNTY
PCM APPLICABILITY FORM

EPC Project Number: CDR2612

Part III: PCM Information		
Questions	**Yes**	**No**
1. Which of the following Design Standard(s) will the project utilize? *(If a PCM is required, you must select at least one. See Control Measure Requirements identified in MS4 Permit Part I.E.4.a.iv on page 29.)*		
A. Water Quality Capture Volume (WQCV) Standard		
B. Pollutant Removal Standard - 80% Total Suspended Solids Removal (TSS) *(must treat runoff to <30mg/L of TSS)*		
C. Runoff Reduction Standard		
D. Applicable Development Site Draining to a Regional WQCV Control Measure *(no conveyance via "Waters of the State")*		
E. Applicable Development Site Draining to a Regional WQCV Facility *(conveyance allowable via "Waters of the State," if the 8 conditions in the MS4 permit are met and documented in the drainage report)*		
F. Constrained Redevelopment Sites Standard *(must be pre-approved by ECM Administrator)*		
G. Previous Permit Term Standard		
2. Will any of the PCMs be located within any other jurisdiction besides EPC?		

Part IV: Notes

Provide info regarding all applicable PCM(s) and PCM Exclusion(s) including location, PCM name(s)/number(s), and additional relevant filings or reports or maintenance agreements, etc. Attach an additional sheet if you need more space. Attaching a detailed summary table would replace the need for any notes here.

Total site disturbance is approximately 3 acres. There will be no added impervious to the site. All disturbed areas will be returned to a stabilized, vegetated condition.

APPENDIX E – REFENCE MATERIAL

Drainage Basins

El Paso County
Colorado

Legend

- Drainage Basins Source: Muller Engineering Company (1988)
- US Interstate Highways
- US Highways
- Colorado State Highways
- Major Roadways
- Local Streets & Roads

Creeks

- Perennial
- Intermittent
- Lakes & Reservoirs
- Summits
- Unincorporated Urban Areas
- Incorporated Cities
- Military
- Forest
- County Lines

N W E S

Miles

0 0.5 1 2 3 4 5

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Douglas County
Elbert County
Teller County
Lincoln County
Fremont County
Pueblo County

APPROX SITE LOCATION

Upper Monument Creek FOMO5800
Monument Rock FOMO5000
Dirty Woman Creek FOMO5200
West Cherry Creek CYCY0400
East Cherry Creek CYCY0200
Jackson Creek FOMO4400
Black Forest FOMO4200
Beaver Creek FOMO4600
Monument Branch FOMO3800
Black Squirrel Creek FOMO3600
Pike National Forest
Air Force Academy FOMO3200
USAF Academy
Kettle Creek FOMO3000
Pine Creek FOMO2800
Cystola
Upper Fountain FOFO7600
Dry Creek FOMO2400
South Pine Creek FOMO2600
Cottonwood Creek FOMO2200
Cheyenne Park
Cascade
Camp Creek FOFO5800
Douglas Creek FOMO1000
Templeton Gap FOMO1200
Williams Canyon FOFO7200
Manitou Reservoir FOFO7400
MANITOU SPRINGS
COLORADO SPRINGS
Shooks Run FOFO4400
Sand Creek FOFO4000
Ruxton Creek FOFO7000
Sutherland Creek FOFO6400
Upper Beaver Creek BEBE0400
Bear Creek FOFO4800
Spring Creek FOFO4200
Peterson AFB
Peterson Field FOFO3400
Jimmy Camp Creek FOFO2000
Windmill Gulch FOFO3000
Fishers Canyon FOFO3600
Southwest Area FOFO4600
Pike National Forest
Big Johnson Reservoir
Big Johnson FOFO2600
Fort Carson FOFO2200
Little Fountain Creek FOFO1800
Fort Carson
Calhan Reservoir FOFO1400
FOUNTAIN
Sand Canyon FOFO1600
Turkey Creek TUTU0200
Sand Creek FOFO0600
Red Creek BEBE0200
Young Hollow FOFO0200
Midway Ranch FOFO2800
Williams Ranch FOFO0400
Upper Williams Creek FOWI0600
Upper Williams Tributary FOWI0400
Lower Williams Creek FOFO1000
Lower Williams Tributary FOWI0200
West Chico Tributary CHCH1200
Upper Chico Creek CHCH1600
Upper East Chico CHEC0400
Middle East Chico CHEC0200
Lower East Chico CHCH0800
Chico Creek CHCH1400
Hammer Ranch CHCH0600
West Chico Creek CHCH0600
Finch Ranch CHCH0400
Windmill CHCH0200
Bijou Creek BIBI0200
West Kiowa Creek KIKI0200
East Kiowa Creek KIKI0400
Upper Big Sandy Creek BGBG1400
Upper Black Squirrel CHBS2000
Upper Bracket Creek CHBR0600
Peyton
Bennett Ranch CHWS1200
Geick Ranch CHMS0400
La Vega Ranch CHBR0400
Falcon CHWS1400
Falcon
Hook And Line Ranch CHBS1800
Baggett CHBR0200
Solbers Ranch CHWS0800
Curtis Ranch CHWS1000
Haegler Ranch CHMS0200
Livestock Company CHWS0400
Telephone Exchange CHWS0200
Ellicott Consolidated CHBS1200
Ellicott CHBS1600
Lower Big Springs Creek CHBS1400
Upper Big Springs Creek CHBG0400
West Big Springs Creek CHBG0200
Schriever AFB
Drennan CHBS0400
Crows Roost CHBS1000
Lower Black Squirrel CHBS0600
Squirrel Creek CHBS0200
Lower Dry Squirrel CHBS0400
Upper Dry Squirrel CHDS0200
Haynes Creek HAHA0600
East Haynes HAHA0400
West Haynes HAHA0200
Calhan BGBG1000
Lenard BGBG1200
Antelope Creek BGBG0800
Ramah BGBG0600
Simla BGBG0400
Mustang Creek BGBG0200
North Fork HOHO0400
Horse Creek HOHO0600
Little Horse Creek HOHO0200
Steels Fork HOPO1000
Rush HOPO0800
Upper Pond Creek HOPO0600
Lower Pond Creek HOPO0400
St.Jukes HOPO0200
East Kramer KRKR0600
Kramer Creek KRKR0400
West Kramer KRKR0200
Ramah
Yoder
Rush
Ellicott
Truckton

2026 Financial Assurance Estimate Form
(with pre-plat construction)

Updated: 2/2026

PROJECT INFORMATION

Project Name: 4420 Green Mountain Drive	Date: 09/29/2026	PCD File No. CDR2612

Description	Quantity	Units	Unit Cost		Total	(with Pre-Plat Construction) % Complete	Remaining	
SECTION 1 - GRADING AND EROSION CONTROL (Construction and Permanent BMPs)								
Earthwork								
less than 5,000; $8,000 min		CY	$ 7.50	=	$ -		$ -	*
5,001-20,000; $30,000 min	15000.	CY	$ 6.50	=	$ 97,500.00		$ 97,500.00	*
20,001-50,000; $100,000 min		CY	$ 4.50	=	$ -		$ -	*
50,001-200,000; $175,000 min		CY	$ 3.00	=	$ -		$ -	*
greater than 200,000; $500,000 min		CY	$ 2.50	=	$ -		$ -	*
Erosion Control Blanket	14000.	SY	$ 6.00	=	$ 84,000.00		$ 84,000.00	*
Seeding (inc. noxious weed mgmnt.) & Mulching	3.	AC	$ 2,037.00	=	$ 6,111.00		$ 6,111.00	*
Permanent Pond/PCM (provide engineer's estimate)		EA		=	$ -		$ -	*
					$ -		$ -	*
					$ -		$ -	*
[insert items not listed but part of construction plans]					$ -		$ -	*
Safety Fence		LF	$ 5.00	=	$ -		$ -	
Inlet Protection		EA	$ 322.00	=	$ -		$ -	
Rock Check Dam		EA	$ 908.00	=	$ -		$ -	
Concrete Washout Basin		EA	$ 1,790.00	=	$ -		$ -	
Sediment Basin	1.	EA	$ 3,483.00	=	$ 3,483.00		$ 3,483.00	
Sediment Trap		EA	$ 877.00	=	$ -		$ -	
Silt Fence	1000.	LF	$ 3.00	=	$ 3,000.00		$ 3,000.00	
Slope Drain	65.	LF	$ 30.00	=	$ 1,950.00		$ 1,950.00	
Straw Bale		EA	$ 56.00	=	$ -		$ -	
Straw Wattle/Rock Sock		LF	$ 11.00	=	$ -		$ -	
Surface Roughening		AC	$ 507.00	=	$ -		$ -	
Vehicle Tracking Control	1.	EA	$ 3,840.00	=	$ 3,840.00		$ 3,840.00	
Slope Tracking	3.	AC	$ 507.00	=	$ 1,521.00		$ 1,521.00	
Rip Rap, d50 size from 6" to 24"	2.	Tons	$ 102.00	=	$ 204.00		$ 204.00	
				=	$ -		$ -	
[insert items not listed but part of construction plans]				=	$ -		$ -	
MAINTENANCE (35% of Construction BMPs)				=	$ 4,899.30		$ 4,899.30	
* - Subject to defect warranty financial assurance. A minimum of 20% shall be retained until final acceptance (MAXIMUM OF 80% COMPLETE ALLOWED)		**Section 1 Subtotal**		**=**	**$ 206,508.30**		**$ 206,508.30**	
SECTION 2 - PUBLIC IMPROVEMENTS *								
ROADWAY IMPROVEMENTS								*
Construction Traffic Control		LS		=	$ -		$ -	*
Aggregate Base Course (135 lbs/cf)		Tons	$ 42.00	=	$ -		$ -	*
Aggregate Base Course (135 lbs/cf)		CY	$ 81.00	=	$ -		$ -	*
Asphalt Pavement (3" thick)		SY	$ 22.00	=	$ -		$ -	*
Asphalt Pavement (4" thick)		SY	$ 31.00	=	$ -		$ -	*
Asphalt Pavement (6" thick)		SY	$ 47.00	=	$ -		$ -	*
Asphalt Pavement (147 lbs/cf) __" thick		Tons	$ 140.00	=	$ -		$ -	*
Raised Median, Paved		SF	$ 15.00	=	$ -		$ -	*
Signs (regulatory/advisory/guide/street)		EA	$ 293.00	=	$ -		$ -	*
Epoxy Pavement Marking		SF	$ 19.00	=	$ -		$ -	*
Thermoplastic Pavement Marking		SF	$ 29.00	=	$ -		$ -	*
Barricade - Type 3		EA	$ 380.00	=	$ -		$ -	*
Delineator - Type I		EA	$ 38.00	=	$ -		$ -	*
Curb and Gutter, Type A (6" Vertical)		LF	$ 49.00	=	$ -		$ -	*
Curb and Gutter, Type B (Median)		LF	$ 50.00	=	$ -		$ -	*
Curb and Gutter, Type C (Ramp)		LF	$ 51.00	=	$ -		$ -	*
4" Sidewalk (common areas only)		SY	$ 69.00	=	$ -		$ -	*
5" Sidewalk		SY	$ 85.00	=	$ -		$ -	*
6" Sidewalk		SY	$ 113.00	=	$ -		$ -	*
8" Sidewalk		SY	$ 141.00	=	$ -		$ -	*
Pedestrian Ramp		EA	$ 1,961.00	=	$ -		$ -	*
Cross Pan, local (8" thick, 6' wide to include return)		LF	$ 87.00	=	$ -		$ -	*
Cross Pan, collector (9" thick, 8' wide to include return)		LF	$ 131.00	=	$ -		$ -	*
Curb Opening with Drainage Chase		EA	$ 2,341.00	=	$ -		$ -	*
Guardrail Type 3 (W-Beam)		LF	$ 87.00	=	$ -		$ -	*
Guardrail Type 7 (Concrete)		LF	$ 104.00	=	$ -		$ -	*
Guardrail End Anchorage		EA	$ 2,485.00	=	$ -		$ -	*
Guardrail Impact Attenuator		EA	$ 22,568.00	=	$ -		$ -	*
Sound Barrier Fence (CMU block, 6' high)		LF	$ 113.00	=	$ -		$ -	*
Sound Barrier Fence (panels, 6' high)		LF	$ 115.00	=	$ -		$ -	*
Electrical Conduit, Size =		LF	$ 33.00	=	$ -		$ -	*
Traffic Signal, (provide engineer's estimate)		EA		=	$ -		$ -	*
Survey Monumentation		EA	$ 638.00	=	$ -		$ -	*
				=	$ -		$ -	*

PROJECT INFORMATION		
Project Name: 4420 Green Mountain Drive	**Date: 09/29/2026**	**PCD File No. CDR2612**

Description	Quantity	Units	Unit Cost		Total	(with Pre-Plat Construction) % Complete	Remaining	
				=	$ -		$ -	*
				=	$ -		$ -	*
[insert items not listed but part of construction plans]				=	$ -		$ -	*
STORM DRAIN IMPROVEMENTS								*
Concrete Box Culvert (M Standard), Size (W x H)		LF		=	$ -		$ -	*
18" Reinforced Concrete Pipe		LF	$ 111.00	=	$ -		$ -	*
24" Reinforced Concrete Pipe		LF	$ 161.00	=	$ -		$ -	*
30" Reinforced Concrete Pipe		LF	$ 167.00	=	$ -		$ -	*
36" Reinforced Concrete Pipe		LF	$ 191.00	=	$ -		$ -	*
42" Reinforced Concrete Pipe		LF	$ 275.00	=	$ -		$ -	*
48" Reinforced Concrete Pipe		LF	$ 349.00	=	$ -		$ -	*
54" Reinforced Concrete Pipe		LF	$ 465.00	=	$ -		$ -	*
60" Reinforced Concrete Pipe		LF	$ 476.00	=	$ -		$ -	*
66" Reinforced Concrete Pipe		LF	$ 550.00	=	$ -		$ -	*
72" Reinforced Concrete Pipe		LF	$ 616.00	=	$ -		$ -	*
18" Corrugated Steel Pipe		LF	$ 136.00	=	$ -		$ -	*
24" Corrugated Steel Pipe		LF	$ 229.00	=	$ -		$ -	*
30" Corrugated Steel Pipe		LF	$ 244.00	=	$ -		$ -	*
36" Corrugated Steel Pipe		LF	$ 244.00	=	$ -		$ -	*
42" Corrugated Steel Pipe		LF	$ 226.00	=	$ -		$ -	*
48" Corrugated Steel Pipe		LF	$ 465.00	=	$ -		$ -	*
54" Corrugated Steel Pipe		LF	$ 459.00	=	$ -		$ -	*
60" Corrugated Steel Pipe		LF	$ 501.00	=	$ -		$ -	*
66" Corrugated Steel Pipe		LF	$ 580.00	=	$ -		$ -	*
72" Corrugated Steel Pipe		LF	$ 654.00	=	$ -		$ -	*
78" Corrugated Steel Pipe		LF	$ 728.00	=	$ -		$ -	*
84" Corrugated Steel Pipe		LF	$ 901.00	=	$ -		$ -	*
Flared End Section (FES) RCP Size = (unit cost = 6x pipe unit cost)		EA		=	$ -		$ -	*
Flared End Section (FES) CSP Size = (unit cost = 6x pipe unit cost)		EA		=	$ -		$ -	*
				=	$ -		$ -	*
[insert items not listed but part of construction plans]				=	$ -		$ -	*
End Treatment- Headwall		EA		=	$ -		$ -	*
End Treatment- Wingwall		EA		=	$ -		$ -	*
End Treatment - Cutoff Wall		EA		=	$ -		$ -	*
Curb Inlet (Type R) L=5', Depth < 5'		EA	$ 8,814.00	=	$ -		$ -	*
Curb Inlet (Type R) L=5', 5' ≤ Depth < 10'		EA	$ 10,835.00	=	$ -		$ -	*
Curb Inlet (Type R) L =5', 10' ≤ Depth < 15'		EA	$ 12,206.00	=	$ -		$ -	*
Curb Inlet (Type R) L =10', Depth < 5'		EA	$ 11,438.00	=	$ -		$ -	*
Curb Inlet (Type R) L =10', 5' ≤ Depth < 10'		EA	$ 12,689.00	=	$ -		$ -	*
Curb Inlet (Type R) L =10', 10' ≤ Depth < 15'		EA	$ 16,174.00	=	$ -		$ -	*
Curb Inlet (Type R) L =15', Depth < 5'		EA	$ 14,452.00	=	$ -		$ -	*
Curb Inlet (Type R) L =15', 5' ≤ Depth < 10'		EA	$ 17,237.00	=	$ -		$ -	*
Curb Inlet (Type R) L =15', 10' ≤ Depth < 15'		EA	$ 21,610.00	=	$ -		$ -	*
Curb Inlet (Type R) L =20', Depth < 5'		EA	$ 16,499.00	=	$ -		$ -	*
Curb Inlet (Type R) L =20', 5' ≤ Depth < 10'		EA	$ 20,012.00	=	$ -		$ -	*
Grated Inlet (Type C), Depth < 5'		EA	$ 8,156.00	=	$ -		$ -	*
Grated Inlet (Type D), Depth < 5'		EA	$ 11,435.00	=	$ -		$ -	*
Storm Sewer Manhole, Box Base		EA	$ 18,950.00	=	$ -		$ -	*
Storm Sewer Manhole, Slab Base		EA	$ 9,314.00	=	$ -		$ -	*
Geotextile (Erosion Control)		SY	$ 6.00	=	$ -		$ -	*
Rip Rap, d50 size from 6" to 24"		Tons	$ 102.00	=	$ -		$ -	*
Rip Rap, Grouted		Tons	$ 136.00	=	$ -		$ -	*
Drainage Channel Construction, Size (W x H)		LF		=	$ -		$ -	*
Drainage Channel Lining, Concrete		CY	$ 815.00	=	$ -		$ -	*
Drainage Channel Lining, Rip Rap		CY	$ 234.00	=	$ -		$ -	*
Drainage Channel Lining, Grass		AC	$ 2,100.00	=	$ -		$ -	*
Permanent Drainage Channel Lining or Roadside Ditch TRM		SY	$ 13.00	=	$ -		$ -	*
				=	$ -		$ -	*
				=	$ -		$ -	*
				=	$ -		$ -	*
[insert items not listed but part of construction plans]				=	$ -		$ -	*
* - Subject to defect warranty financial assurance. A minimum of 20% shall be retained until final acceptance (MAXIMUM OF 80% COMPLETE ALLOWED)		**Section 2 Subtotal**		**=**	**$ -**		**$ -**	*

PROJECT INFORMATION		
Project Name: 4420 Green Mountain Drive	**Date: 09/29/2026**	**PCD File No. CDR2612**

Description	Quantity	Units	Unit Cost		Total	(with Pre-Plat Construction) % Complete	Remaining
SECTION 3 - COMMON DEVELOPMENT IMPROVEMENTS (Private or District and NOT Maintained by EPC)**							
ROADWAY IMPROVEMENTS							
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
STORM DRAIN IMPROVEMENTS (Exception: Permanent Pond/BMP shall be itemized under Section 1)							
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
				=	$ -		$ -
WATER SYSTEM IMPROVEMENTS							
Water Main Pipe (PVC), Size 8"		LF	$ 90.00	=	$ -		$ -
Water Main Pipe (Ductile Iron), Size 8"		LF	$ 105.00	=	$ -		$ -
Gate Valves, 8"		EA	$ 2,599.00	=	$ -		$ -
Fire Hydrant Assembly, w/ all valves		EA	$ 9,228.00	=	$ -		$ -
Water Service Line Installation, inc. tap and valves		EA	$ 1,852.00	=	$ -		$ -
Fire Cistern Installation, complete		EA		=	$ -		$ -
				=	$ -		$ -
[insert items not listed but part of construction plans]				=	$ -		$ -
SANITARY SEWER IMPROVEMENTS							
Sewer Main Pipe (PVC), Size 8"		LF	$ 90.00	=	$ -		$ -
Sanitary Sewer Manhole, Depth < 15 feet		EA	$ 6,136.00	=	$ -		$ -
Sanitary Service Line Installation, complete		EA	$ 1,962.00	=	$ -		$ -
Sanitary Sewer Lift Station, complete		EA		=	$ -		$ -
				=	$ -		$ -
[insert items not listed but part of construction plans]				=	$ -		$ -
LANDSCAPING IMPROVEMENTS (For subdivision specific condition of approval, or PUD)							
		EA		=	$ -		$ -
		EA		=	$ -		$ -
		EA		=	$ -		$ -
		EA		=	$ -		$ -
		EA		=	$ -		$ -
** - Section 3 is not subject to defect warranty requirements		**Section 3 Subtotal**		**=**	**$ -**		**$ -**
AS-BUILT PLANS (Public Improvements inc. Permanent WQCV BMPs)		LS		=	$ -		$ -
POND/BMP CERTIFICATION (inc. elevations and volume calculations)		LS		=	$ -		$ -

Total Construction Financial Assurance **$ 206,508.30**
(Sum of all section subtotals plus as-builts and pond/BMP certification)

Total Remaining Construction Financial Assurance (with Pre-Plat Construction) **$ 206,508.30**
(Sum of all section totals less credit for items complete plus as-builts and pond/BMP certification)

Total Defect Warranty Financial Assurance **$ 37,522.20**
(20% of all items identified as (*). To be collateralized at time of preliminary acceptance)

Approvals

I hereby certify that this is an accurate and complete estimate of costs for the work as shown on the Grading and Erosion Control Plan and Construction Drawings associated with the Project.



09/29/2026

Nicholas Q. Jokerst, PE — Date

Engineer **(P.E. Seal Required)**

Approved by Owner / Applicant — 09/29/2026

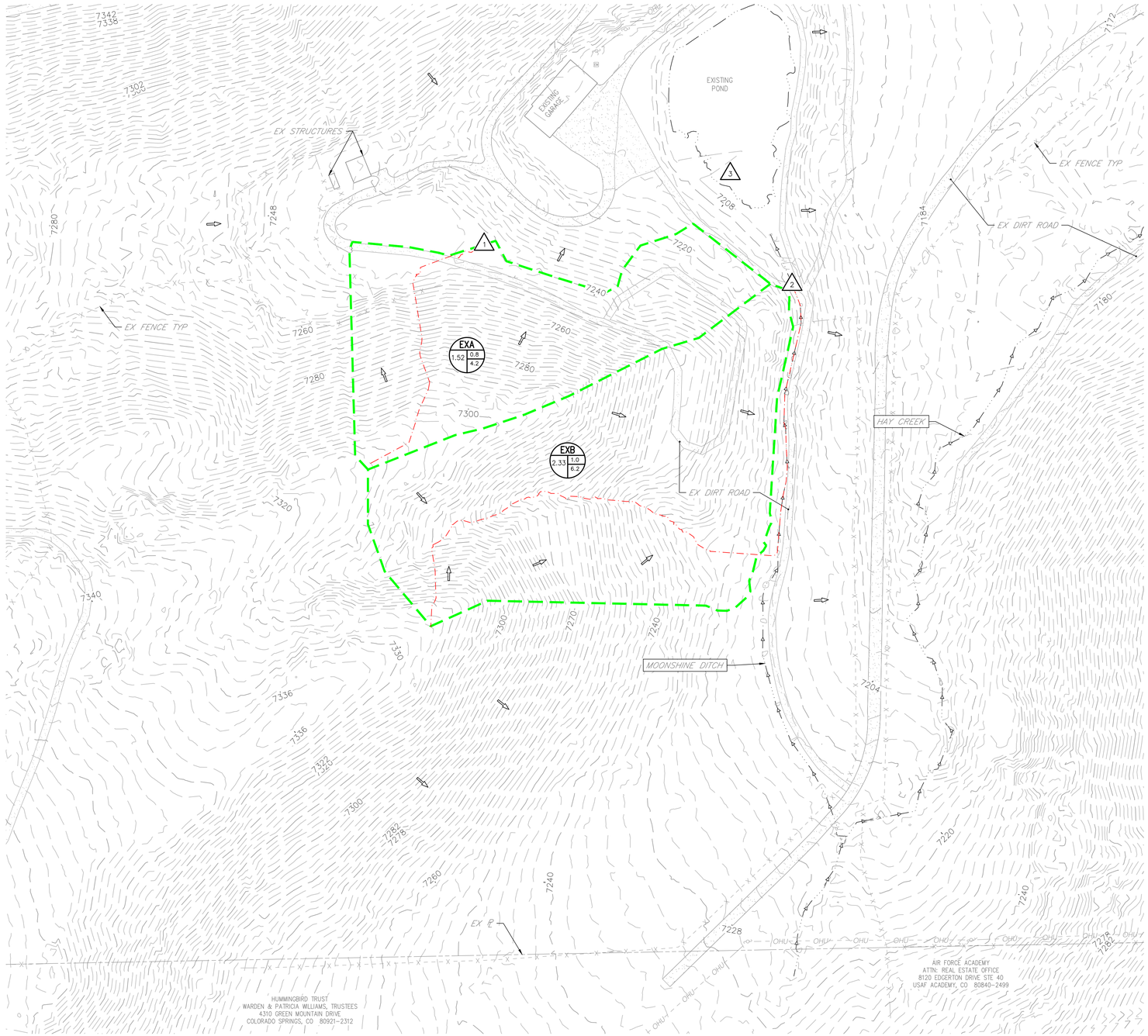
Date

Approved by El Paso County Engineer / ECM Administrator — Date

APPENDIX F – DRAINAGE MAPS

4420 GREEN MOUNTAIN

EXISTING DRAINAGE MAP



LEGEND

	EXISTING	PROPOSED
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
STORM SEWER		
SWALE/WATERWAY FLOWLINE		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
FLOW DIRECTION		

BASIN ID — ID / AC / Q5 / Q100

DESIGN POINT DESIGNATION — 1

DRAINAGE BASIN

TC PATH

BASIN SUMMARY TABLE

Basin	Area (ac)	Impervious	C_5	C_{100}	t_c (min)	$Q_{5\text{-YR}}$ (cfs)	$Q_{100\text{-YR}}$ (cfs)
EX-A	1.52	6%	0.12	0.38	10.0	0.7	4.0
EX-B	2.33	4%	0.11	0.37	10.0	1.0	6.0

DESIGN POINT SUMMARY TABLE

DP#	$Q_{5\text{-YR}}$	$Q_{100\text{-YR}}$
1	0.7	4.0
2	1.0	6.0
3	1.7	10.0

N

60 30 0 60 120

ORIGINAL SCALE: 1" = 60'

EXISTING DRAINAGE MAP

4420 GREEN MOUNTAIN

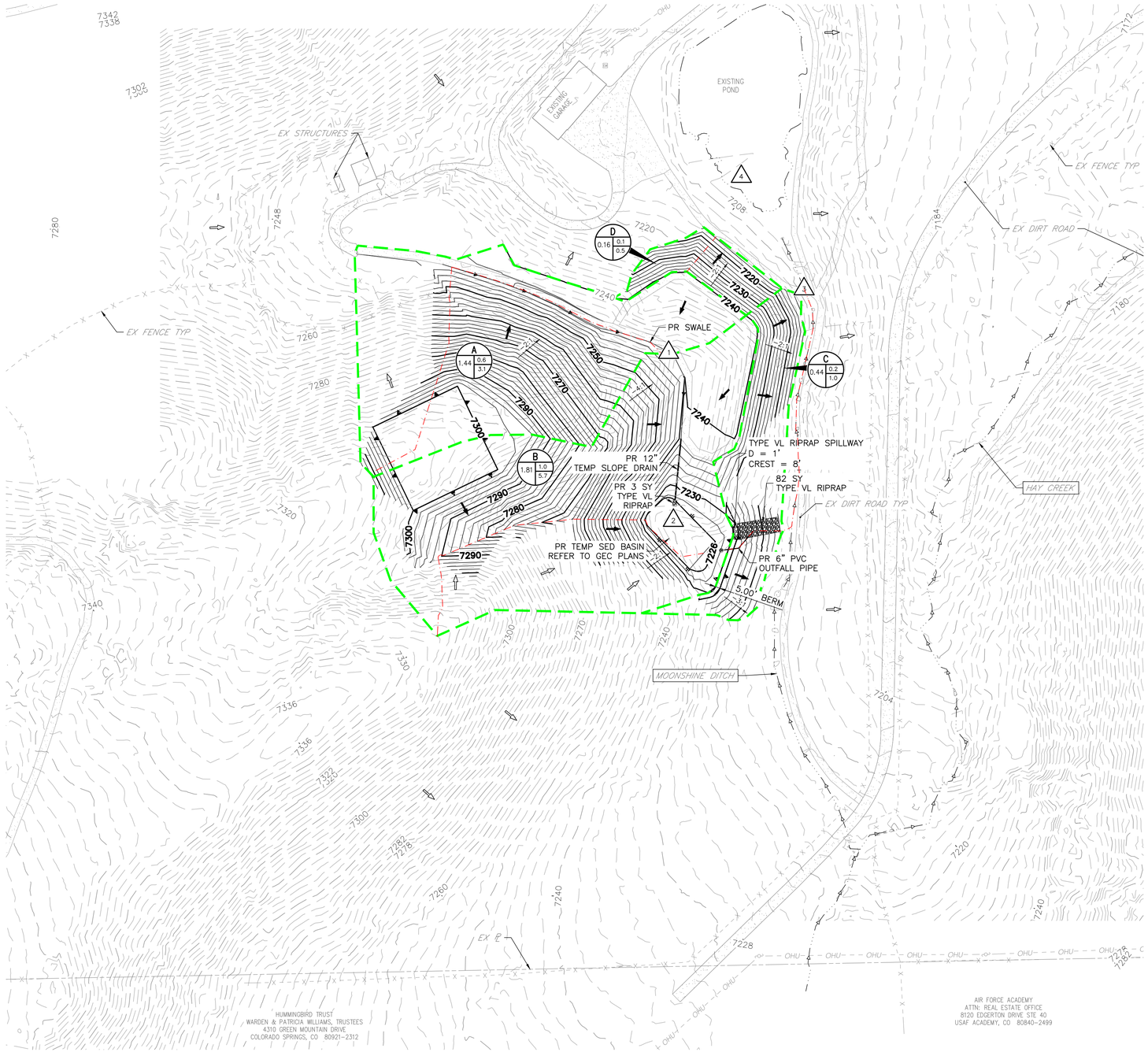
JOB NO. 26011 | SHEET 1

LOCATION: CS

09/29/2026

ALL TERRAIN ENGINEERING

4420 GREEN MOUNTAIN
PROPOSED DRAINAGE MAP



LEGEND

	EXISTING	PROPOSED
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
STORM SEWER		
SWALE/WATERWAY FLOWLINE		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
FLOW DIRECTION		
BASIN ID	ID / AC / Q5 / Q100	
DESIGN POINT DESIGNATION		1
DRAINAGE BASIN		
TC PATH		

PROPOSED CONDITIONS - BASIN SUMMARY TABLE

Basin	Area (ac)	Impervious	C_5	C_{100}	t_c (min)	$Q_{5\text{-YR}}$ (cfs)	$Q_{100\text{-YR}}$ (cfs)
A	1.44	6%	0.12	0.38	14.5	0.6	3.3
B	1.81	5%	0.11	0.37	6.4	1.0	5.5
C	0.44	2%	0.09	0.36	11.6	0.2	1.0
D	0.16	2%	0.09	0.36	10.0	0.1	0.4

PROPOSED CONDITIONS - DESIGN POINT SUMMARY TABLE

DP#	$Q_{5\text{-YR}}$	$Q_{100\text{-YR}}$
1	0.6	3.1
2	1.3	7.3
3	1.5	8.3
4	1.5	8.6

N

60 30 0 60 120

ORIGINAL SCALE: 1" = 60'

PROPOSED DRAINAGE MAP

4420 GREEN MOUNTAIN

JOB NO. 26011 | SHEET 1

LOCATION: CS

09/29/2026

ALL TERRAIN ENGINEERING