FINAL DRAINAGE LETTER FOR
CALM BREEZE FILING NO. 1
EL PASO COUNTY, COLORADO

MAY 2026

Prepared for:

Kramer and Callie Ammons
12650 Calm Breeze Point
Colorado Springs, CO 80908
719-985-1593

Prepared by:

CIVIL CONSULTANTS,INC.

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Project #08-101

FINAL DRAINAGE LETTER FOR
CALM BREEZE FILING NO. 1
EL PASO COUNTY, COLORADO

DRAINAGE PLAN STATEMENTS

ENGINEERS STATEMENT

The attached drainage plan and report was 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 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.

_____
Virgil A. Sanchez, P.E. #37160
For and on Behalf of M&S Civil Consultants, Inc

DEVELOPER'S STATEMENT

I, the developer(s) have read and will comply with all the requirements specified in this drainage report and plan.

BY:_____

TITLE: Owner_____ DATE:_____

ADDRESS: Kramer and Callie Ammons
12650 Calm Breeze Point
Colorado Springs, CO 80908

EL PASO COUNTY'S STATEMENT

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

BY:_____ DATE:_____
Joshua Palmer, P.E.
County Engineer / ECM Administrator

CONDITIONS:

CIVIL CONSULTANTS,INC.

FINAL DRAINAGE LETTER FOR CALM BREEZE FILING NO. 1
EL PASO COUNTY, COLORADO

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CIVIL CONSULTANTS, INC.

FINAL DRAINAGE LETTER FOR CALM BREEZE FILING NO. 1
EL PASO COUNTY, COLORADO

Purpose

This Final Drainage Letter for Calm Breeze Filing No. 1 is in support of the proposed Calm Breeze Filing No. 1 subdivision plat covering a 42.219-acre parcel. Owners intend to subdivide the property into four ~ 10-acre residential lots. This letter functions to identify the existing and proposed runoff patterns and recommend proposed drainage improvements which are intended to safely convey runoff through the proposed subdivision, while minimizing impacts to downstream facilities and adjacent properties. The analysis has been prepared in accordance with the requirements set forth by El Paso County.

General Location and Description

Calm Breeze Filing No. 1 Lots 1 through 4 are located in the Southeast Quarter (SE 1/4) of Section 11 and the Northeast Quarter (NE 1/4) of Section 14, both in Township 12 South, Range 65 West of the 6th P.M., El Paso County, Colorado. The site is bordered to the East by Porcupine Subdivision and to the Southeast by Black Squirrel Creek Park. See Vicinity Map in Appendix for details.

The current lot is approximately 42.22 acres and is proposed to be subdivided into 4 lots. Proposed along with the subdivision of the vacant property, the construction of an asphalt turnaround is proposed in the southeast corner of the property. Existing ditches on the north and south of Shoup Road shall be extended to subvert stormwater runoff around the proposed impervious area. The current parcel is zoned RR-5 and the proposed principal use for this site will be rural residential.

Soils

The Natural Resources Conservation Service, United States Department of Agriculture, Web Soil Survey, indicates that the soils for this project are: Elbeth sandy loam (26) and Kettle gravelly loamy sand (41). These soils have been characterized as having Hydrologic Soil Type "B". The soils classification used for this study is “B”. Refer to the Soils Map located in the Appendix of this report

Drainage Criteria

As required by El Paso County, Colorado, this report has been prepared in accordance to the criteria set forth in the El Paso County Drainage Criteria Manual Volume 1 & 2 (DCM) and the El Paso County Engineering Criteria Manual (ECM).

Design Event Frequency

The 100-year storm event was used as the major storm for the project, and the 5-year storm event was used as the minor storm.

Method of Analysis

The rational method was used to calculate peak flows as the tributary areas are less than 100 acres.

Where: Q=C*i*A

Q = Maximum runoff rate in cubic feet per second (cfs)

C = Runoff coefficient

i = Average rainfall intensity (inches per hour)

A = Area of drainage sub-basin (acres)

Runoff Coefficient

Rational Method coefficients from Table 6-6 of the Drainage Criteria Manual for developed land were utilized in the Rational Method calculations. Composite percent impervious and C values were calculated using gravel streets, paved drives, and landscaped areas found within the aforementioned table.

Time of Concentration

The time of concentration consists of the initial time of overland flow and the travel time (street or channel, etc) to a downstream structure or point of interest. A minimum time of concentrations of 5 minutes is utilized for urban areas.

Rainfall Intensity

The hypothetical rainfall depths for the 1-hour storm duration were taken from Table 6-2 of the Drainage Criteria Manual.

Project 1-Hour Rainfall Depth Storm Recurrence Interval Rainfall Depth (inches)
5-year 1.50” 100-year 2.52”

The rainfall intensity equation for the Rational Method was taken from Drainage Criteria Manual Volume 1 Figure 6-5.

Floodplain Statement

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel No. 08041C0320G, revised December 7, 2018 has been examined as it relates to the property being platted. Most of the site is located within Zone X, which includes areas determined to be outside the 0.2% annual chance floodplain.

A portion of the southern end of the site lies within a section of the Black Squirrel Creek, which flows eastward. This area has been designated as Zone A, indicating a 1% annual chance of flooding; however, no base flood elevation is determined. The Zone AE floodplain limits and base flood elevations, as shown on the Calm Breeze Filing No. 1 plat, are per the interpolated BFE extents provided by Keith Curtis (Pikes Peak Regional Building Department, Floodplain Division). The FIRM is included in the appendix of this report.

Existing Drainage Conditions

As the site is primarily undeveloped, vegetation throughout largely resembles historic conditions; however, a private drive traverses the property from the southwest corner to the northeast. The private drive shall be considered a gravel surface for the purpose of this analysis. Existing site terrain generally slopes from northwest to southeast at grade rates that vary from 8% to 40% slopes. Existing infrastructure exists to convey stormwater runoff under the existing private drive, including three (3) 18" corrugated plastic stormwater pipes, one (1) 24" CMP, and one (1) 14' x 6' RCBC.

Existing Conditions Detailed Drainage Discussion

Design Point 1 (Q5 = 196.2 cfs, Q100 = 455.5 cfs) consists of runoff from undeveloped **Basin A** and **Basin OS1. Basin A** is 23.10 acres of undeveloped land located within the subject site. **Basin OS1** is 777.05 acres of low density residential and undeveloped land located to the northeast of the subject site. Runoff from the two basins is conveyed to an existing 14'x6' Box Culvert located under Calm Breeze Point on the southwest side of the site. The existing box culvert will outfall the captured flows into **Basin F,** ultimately out falling into the existing Black Squirrel Creek, running along the south side of the site.

Design Point 2 (Q5 = 1.3 cfs, Q100 = 3.0 cfs) consists of runoff from undeveloped **Basin D**. **Basin D** is 1.30 acres of existing undeveloped land within the subject site. Runoff from this basin flows into an existing 18" corrugated plastic storm drain under the existing Calm Breeze Point**.** Runoff will be routed via overland flow into the existing Black Squirrel Creek, running along the south side of the site.

Design Point 3 (Q5 = 2.5 cfs, Q100 = 5.8 cfs) consists of runoff from undeveloped **Basin C. Basin C** is 2.78 acres of undeveloped land located within the subject site. Runoff from the basin is conveyed to an existing 18" corrugated plastic storm drain under the existing Calm Breeze Point. Runoff will be routed via overland flow into the existing Black Squirrel Creek, running along the south side of the site.

Design Point 4 (Q5 = 3.0 cfs, Q100 = 7.2 cfs) consists of runoff from undeveloped **Basin B** and **Basin OS2. Basin B** is 1.54 acres of undeveloped land located within the subject site. **Basin OS2** is 1.84 acres of undeveloped land located to the north of the subject site. Runoff from the two basins is conveyed to an existing 24" CMP located under Calm Breeze Point on the site. Runoff will join **Basin E** to be conveyed off-site, ultimately joining Black Squirrel Creek to the East of the subject site.

Design Point 5 (Q5 = 15.0 cfs, Q100 = 34.1 cfs) consists of runoff from **Basin OS3. Basin OS3** is 16.77 acres of low density residential and undeveloped land located to the north the subject site. Runoff from the basin is conveyed to an existing 18" corrugate plastic storm drain located under Calm Breeze Point. The pipe inlet is located to the North of the subject site, while the outlet is located on the subject site. Current Infrastructure at DP5 is currently undersized, as the maximum flow through an 18" corrugated plastic pipe at 0.7% slope is approximately 8.5 cfs. The overflow runoff from DP5 will be conveyed over Calm Breeze Point. Runoff from the 18" pipe and the overflow will join **Basin E** to be conveyed off-site, ultimately joining Black Squirrel Creek to the East of the subject site.

Design Point 6 (Q5 = 18.9 cfs, Q100 = 43.0 cfs) consists of runoff from undeveloped **Basin E, DP4** and **DP5. Basin E** is 3.94 acres of undeveloped land and existing gravel road (Calm Breeze Point) located within the subject site. Runoff from the basins will be conveyed off-site, ultimately joining Black Squirrel Creek to the East of the subject site.

Design Point 7 (Q5 = 197.4 cfs, Q100 = 458.2 cfs) consists of runoff from **Basin F, DP1, DP2** and **DP3. Basin F** is 9.56 acres of undeveloped land and existing gravel road (Calm Breeze Point) located within the subject site. Runoff from the basins will be conveyed into Black Squirrel Creek.

Proposed Drainage Characteristics

General Concept Drainage Discussion

The only proposed construction associated with Calm Breeze Filing No. 1 includes a public, paved traffic turnaround on the southwest corner of the site. Along with the construction of the turnaround, a swale will be constructed to subvert flows around the added impervious area and safely convey the flows into the existing natural channels on-site. The proposed increase in impervious area covers such a small percentage of the effected drainage basins that the increase in C values is negligible to the nearest hundredth; therefore, the proposed drainage patterns show negligible difference when compared to the existing drainage conditions.

A proposed conditions drainage map is included in the Appendix of this report to accompany the following discussion.

As this drainage report serves only the construction of the public turnaround, additional analysis may be required at the time of future construction within Lots 1-4.

Proposed Conditions Detailed Drainage Discussion

Design Point 1 (Q5 = 196.2 cfs, Q100 = 455.6 cfs) consists of runoff from undeveloped **Basin A** and **Basin OS1. Basin A** is 23.10 acres of undeveloped land and a portion of the proposed, impervious surface located within the subject site. **Basin OS1** is 777.05 acres of low density residential and undeveloped land located to the northeast of the subject site. Runoff from the two basins is conveyed to an existing 14'x6' Box Culvert located under Calm Breeze Point on the southwest side of the site. The existing box culvert will outfall the captured flows into **Basin F,** ultimately out falling into the existing Black Squirrel Creek, running along the south side of the site.

Design Point 2 (Q5 = 1.3 cfs, Q100 = 3.0 cfs) consists of runoff from undeveloped **Basin D**. **Basin D** is 1.30 acres of existing undeveloped land within the subject site. Runoff from this basin flows into an existing 18" corrugated plastic storm drain under the existing Calm Breeze Point**.** Runoff will be routed via overland flow into the existing Black Squirrel Creek, running along the south side of the site.

Design Point 3 (Q5 = 2.5 cfs, Q100 = 5.8 cfs) consists of runoff from undeveloped **Basin C. Basin C** is 2.78 acres of undeveloped land located within the subject site. Runoff from the basin is conveyed to an existing 18" corrugated plastic storm drain under the existing Calm Breeze Point. Runoff will be routed via overland flow into the existing Black Squirrel Creek, running along the south side of the site.

Design Point 4 (Q5 = 3.0 cfs, Q100 = 7.2 cfs) consists of runoff from undeveloped **Basin B** and **Basin OS2. Basin B** is 1.54 acres of undeveloped land located within the subject site. **Basin OS2** is 1.84 acres of undeveloped land located to the north of the subject site. Runoff from the two basins is conveyed to an existing 24" CMP located under Calm Breeze Point on the site. Runoff will join **Basin E** to be conveyed off-site, ultimately joining Black Squirrel Creek to the East of the subject site.

Design Point 5 (Q5 = 15.0 cfs, Q100 = 34.1 cfs) consists of runoff from **Basin OS3. Basin OS3** is 16.77 acres of low density residential and undeveloped land located to the north the subject site. Runoff from the basin is conveyed to an existing 18" corrugate plastic storm drain located under Calm Breeze Point. The pipe inlet is located to the North of the subject site, while the outlet is located on the subject site. Current Infrastructure at DP5 is currently undersized, as the maximum flow through an 18" corrugated plastic pipe at 0.7% slope is approximately 8.5 cfs. The overflow runoff from DP5 will be conveyed over Calm Breeze Point. Runoff from the existing 18" pipe and overflow will join **Basin E** to be conveyed off-site, ultimately joining Black Squirrel Creek to the East of the subject site.

Design Point 6 (Q5 = 18.9 cfs, Q100 = 43.0 cfs) consists of runoff from undeveloped **Basin E, DP4** and **DP5. Basin E** is 3.94 acres of undeveloped land and existing gravel road (Calm Breeze Point) located within the subject site. Runoff from the basins will be conveyed off-site, ultimately joining Black Squirrel Creek to the East of the subject site.

Design Point 7 (Q5 = 197.5 cfs, Q100 = 458.4 cfs) consists of runoff from **Basin F, DP1, DP2** and **DP3. Basin F** is 9.56 acres of undeveloped land, existing gravel road (Calm Breeze Point), and a portion of the proposed, impervious surface associated with the public turnaround located within the subject site. Runoff from the basins will be conveyed into Black Squirrel Creek.

Water Quality Provision and Maintenance

No water quality facilities are proposed with the proposed development on site. As this drainage report is only serving the construction of the public turnaround, further analysis may be required with future development of Lots 1-4.

Erosion Control

It is the policy of the El Paso County that a grading and erosion control plan (GEC) be provided with the drainage report. The GEC incorporates silt fence, vehicle traffic control, inlet and outlet controls, rock check dams and other best management practices (BMP's) as identified in the DCM Volume 2.

Drainage and Bridge Fees

This site is located in the Upper Black Squirrel Drainage Basin. Per the El Paso County Drainage Basin Fees Resolution No. 25-302, there are no drainage basin fees associated with the Upper Black Squirrel Drainage Basin; therefore, no drainage fees are due with Clam Breeze Filing No. 1.

Summary

The proposed design associated with Calm Breeze Filing No. 1 shows negligible difference in stormwater runoff when comparing the existing and proposed conditions. The current infrastructure on site sufficiently conveys existing and proposed stormwater runoff for the 5-yr and 100-yr storm events, with the exception of an 18" corrugated plastic pipe located at DP5. The construction of the turnaround on the southwest portion of the property will not negatively impact existing drainage patterns currently experienced on site, on adjacent properties, and/or within existing channels and floodplains.

References

1. "El Paso County and City of Colorado Springs Drainage Criteria Manual".

2. "Urban Storm Drainage Criteria Manual"

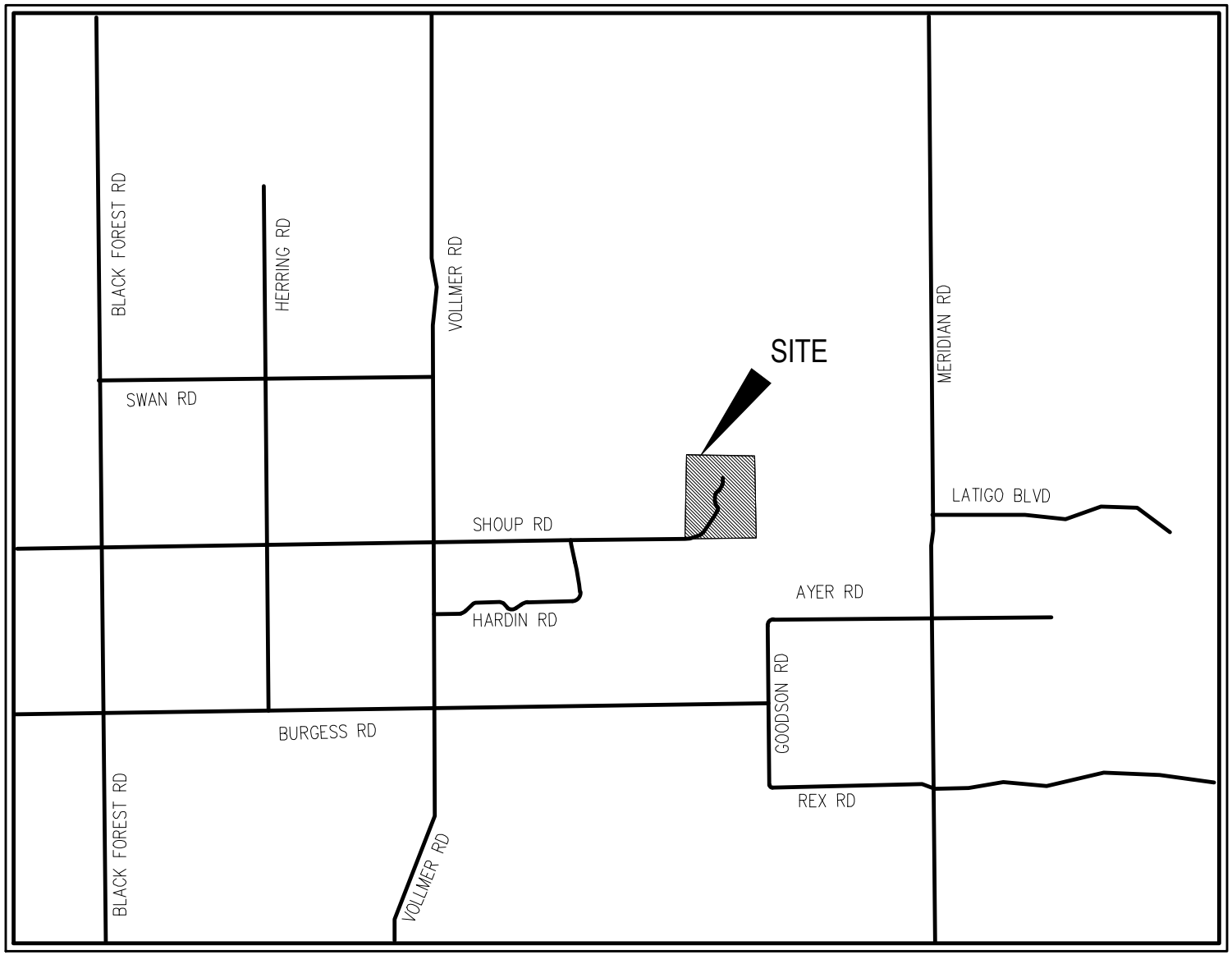
3. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: *http://websoilsurvey.sc.egov.usda.gov/*. Accessed: February 02, 2023.

4. Flood Insurance Rate Map (FIRM), Federal Emergency Management Agency, Effective dated December 7, 2018.

5. 2026 Drainage, Bridge, and Pond Fees, City of Colorado Springs, Effective January 1st, 2026.

Appendix

Vicinity Map

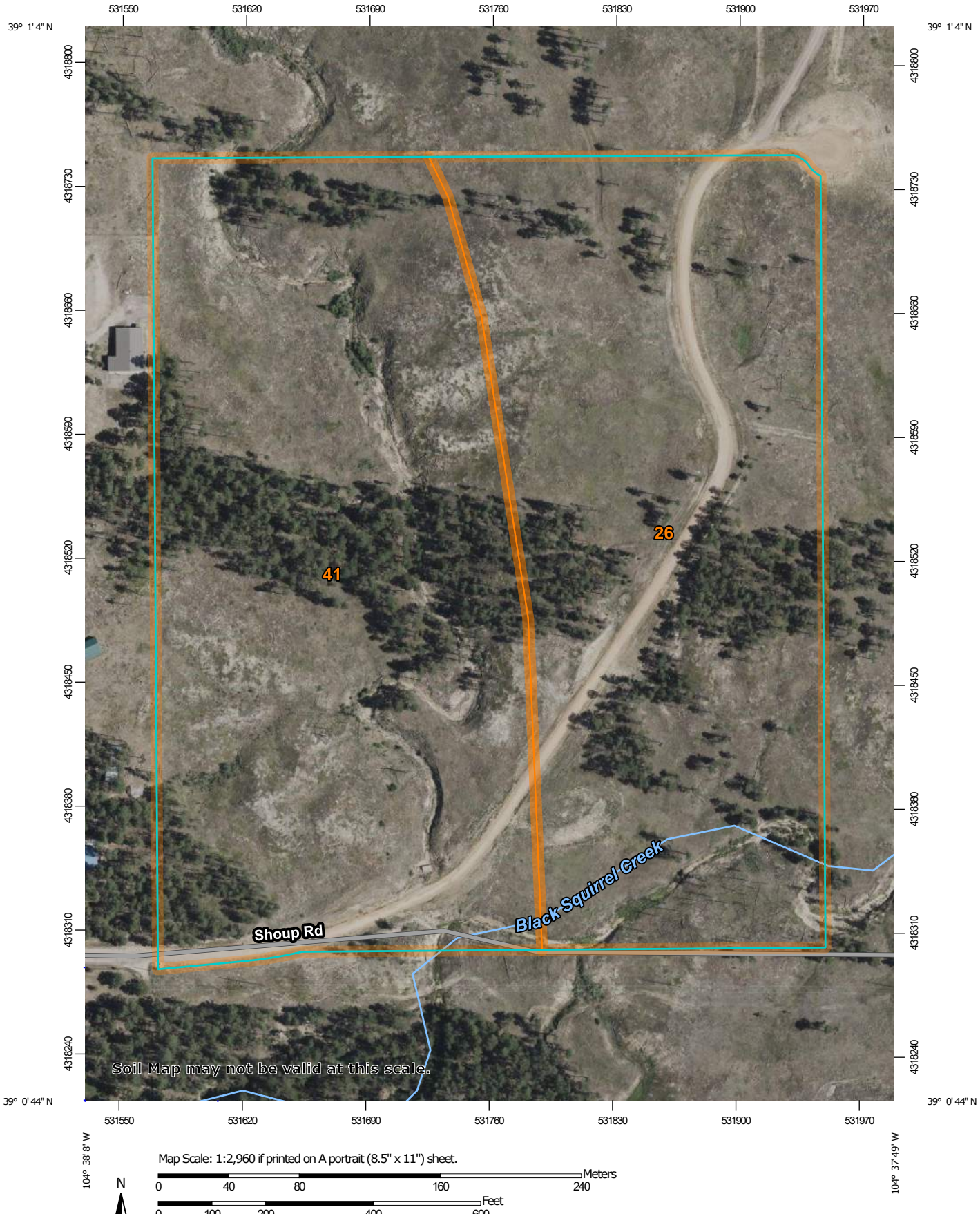


VICINITY MAP

N.T.S.

Soils Map

Soil Map—El Paso County Area, Colorado
(Calm Breeze Point)



Map Scale: 1:2,960 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

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 Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
26	Elbeth sandy loam, 8 to 15 percent slopes	19.8	47.0%
41	Kettle gravelly loamy sand, 8 to 40 percent slopes	22.4	53.0%
Totals for Area of Interest		**42.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

El Paso County Area, Colorado

26—Elbeth sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 367y
Landscape: Uplands
Elevation: 7,300 to 7,600 feet
Farmland classification: Not prime farmland

Map Unit Composition

Elbeth and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elbeth

Setting

Landscape: Uplands
Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from arkose

Typical profile

A - 0 to 3 inches: sandy loam
E - 3 to 23 inches: loamy sand
Bt - 23 to 68 inches: sandy clay loam
C - 68 to 74 inches: sandy clay loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F048AY908CO - Mixed Conifer
Hydric soil rating: No

Minor Components

Other soils

Percent of map unit: 10 percent
Hydric soil rating: No

Pleasant

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

41—Kettle gravelly loamy sand, 8 to 40 percent slopes

Map Unit Setting

National map unit symbol: 368h
Landscape: Uplands
Elevation: 7,000 to 7,700 feet
Farmland classification: Not prime farmland

Map Unit Composition

Kettle and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kettle

Setting

Landscape: Uplands
Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy alluvium derived from arkose

Typical profile

E - 0 to 16 inches: gravelly loamy sand
Bt - 16 to 40 inches: gravelly sandy loam
C - 40 to 60 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 8 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F048AY908CO - Mixed Conifer

Hydric soil rating: No

Minor Components

Other soils

Percent of map unit: 10 percent
Hydric soil rating: No

Pleasant

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

FEMA FIRM Panel

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DQ DXWKRULWDWLYH SURSHU

7KLV PDS FRPSOLHV ZLWK)(0$ V VWDQ
GLJLWDO IORRG PDSV LI LW LV QRW YR
7KH EDVHPDS VKRZQ FRPSOLHV ZLWK)(
DFFXUDF\ VWDQGDUGV

7KH IORRG KD]DUG LQIRUPDWLRQ LV GH
DXWKRULWDWLYH 1)+/ ZHE VHUYLFHV S
ZDV H[SRUWHG RQ DW DQG GRHV QRW
UHIOHFW FKDQJHV RU DPHQGPHQWV VX
WLPH 7KH 1)+/ DQG HIIHFWLYH LQIRUP
EHFRPH VXSHUVHGHG E\ QHZ GDWD RYH

7KLV PDS LPDJH LV YRLG LI WKH RQH R
HOHPHQWV GR QRW DSSHDU, EDVHPDS
OHJHQG VFDOH EDU PDS FUHDWLRQ G
),50 SDQHO QXPEHU DQG),50 HIIHFWLY
XQPDSSHG DQG XQPRGHUQL]HG DUHDV
UHJXODWRU\ SXUSRVHV

%DVHPDS ,PDJHU\ 6RXUFH, 86*6 1DWLRQDO 0DS

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the **North American Vertical Datum of 1988 (NAVD88)**. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at http://www.ngs.noaa.gov/.

Base Map information shown on this FIRM was provided in digital format by El Paso County, Colorado Springs Utilities, City of Fountain, Bureau of Land Management, National Oceanic and Atmospheric Administration, United States Geological Survey, and Anderson Consulting Engineers, Inc. These data are current as of 2006.

This map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. The profile baselines depicted on this map represent the hydraulic modeling baselines that match the flood profiles and Floodway Data Tables if applicable, in the FIS report. As a result, the profile baselines may deviate significantly from the new base map channel representation and may appear outside of the floodplain.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact **FEMA Map Service Center** (MSC) via the FEMA Map Information eXchange (FMIX) 1-877-336-2627 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. The MSC may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

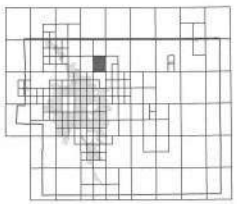
If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

El Paso County Vertical Datum Offset Table

Flooding Source	Vertical Datum Offset (ft)

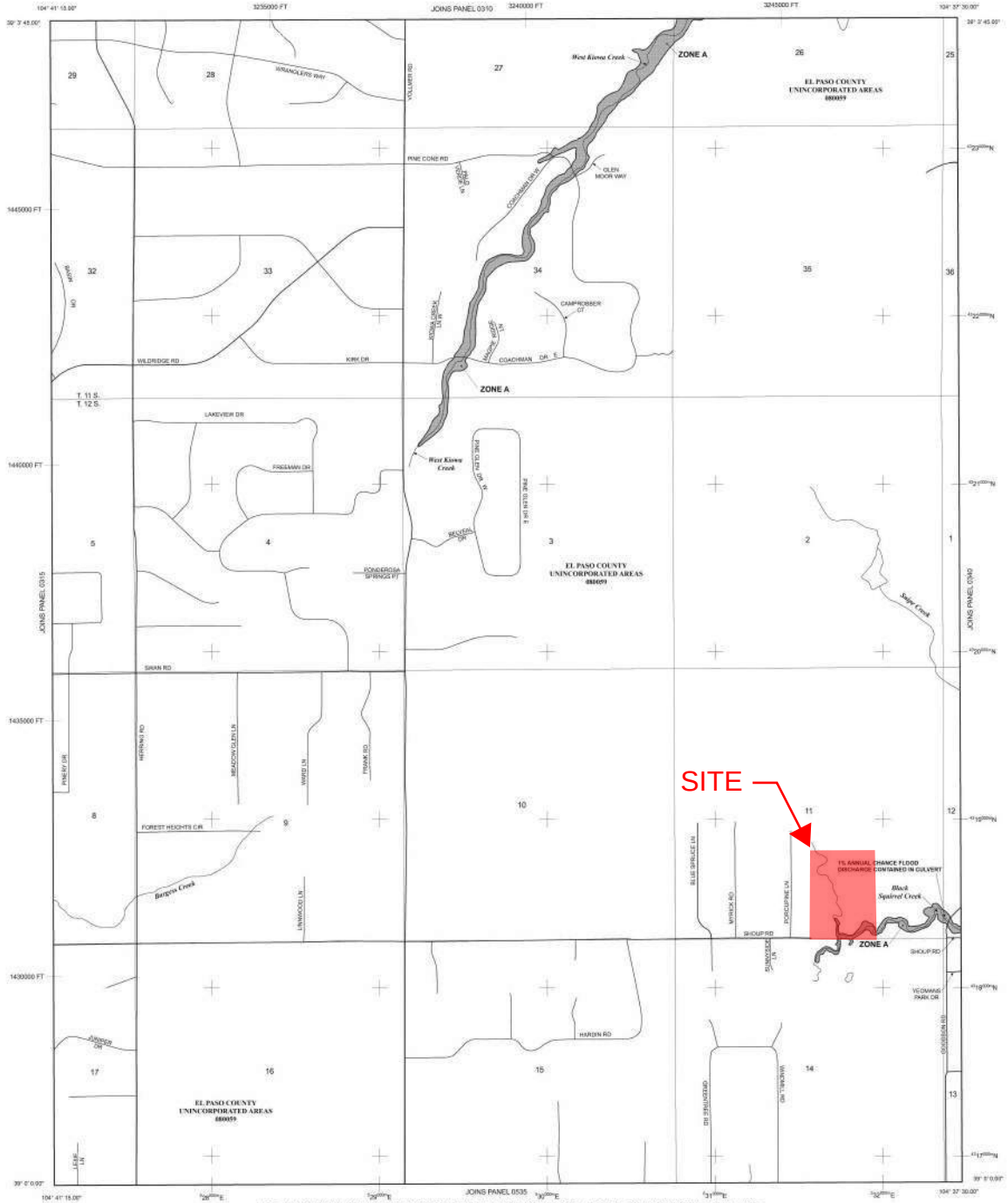
REFER TO SECTION 3.3 OF THE EL PASO COUNTY FLOOD INSURANCE STUDY FOR STREAM BY STREAM VERTICAL DATUM CONVERSION INFORMATION.

Panel Location Map



This Digital Flood Insurance Rate Map (DFIRM) was produced through a Cooperating Technical Partner (CTP) agreement between the State of Colorado Water Conservation Board (CWCB) and the Federal Emergency Management Agency (FEMA).

Additional Flood Hazard information and resources are available from local communities and the Colorado Water Conservation Board.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary
Floodway boundary
Zone D Boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513 (EL 987) Base Flood Elevation line and value; elevation in feet*
Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

(A) (A) Cross section line
23 23 Transect line
97° 07' 30.00" 32° 22' 30.00" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4275000 mN 3000-meter Universal Transverse Mercator grid ticks, zone 13
6000000 FT 5000-foot grid ticks: Colorado State Plane coordinate system, central zone (FIPSZONE 0502), Lambert Conformal Conic Projection
DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
MARCH 17, 1997

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
DECEMBER 7, 2018 - to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to update map format, to add roads and road names, and to incorporate previously issued Letters of Map Revision

For community map revision history prior to countywide mapping, refer to the Community Map History Table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0320G

FIRM
FLOOD INSURANCE RATE MAP
EL PASO COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 320 OF 1300
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
EL PASO COUNTY	080059	0320	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
08041C0320G

MAP REVISED
DECEMBER 7, 2018

Federal Emergency Management Agency

HYDROLOGIC CALCULATIONS

CALM BREEZE FILING NO. 1
EXISTING CONDITIONS
(Area Runoff Coefficient Summary)

			STREETS / GRAVEL ROADS			*1 ACRE RESIDENTIAL*			*OPEN SPACE / LANDSCAPING*				
BASIN	**TOTAL AREA** *(SF)*	**TOTAL AREA** *(Acres)*	**AREA** *(Acres)*	**C_5**	**C_{100}**	**AREA** *(Acres)*	**C_5**	**C_{100}**	**AREA** *(Acres)*	**C_5**	**C_{100}**	**C_5**	**C_{100}**
A	**1006236.151**	23.10	0.00	0.90	0.95	0.00	0.30	0.40	23.10	0.25	0.35	**0.25**	**0.35**
B	**66927.470**	1.54	0.00	0.90	0.95	0.00	0.30	0.40	1.54	0.25	0.35	**0.25**	**0.35**
C	**120881.214**	2.78	0.00	0.90	0.95	0.00	0.30	0.40	2.78	0.25	0.35	**0.25**	**0.35**
D	**56842.138**	1.30	0.00	0.90	0.95	0.00	0.30	0.40	1.30	0.25	0.35	**0.25**	**0.35**
E	**171546.419**	3.94	0.35	0.80	0.85	0.00	0.30	0.40	3.59	0.25	0.35	**0.30**	**0.39**
F	**416249.294**	9.56	0.61	0.80	0.85	0.00	0.30	0.40	8.95	0.25	0.35	**0.29**	**0.38**
OS1	**33848146.660**	777.05	0.00	0.90	0.95	145.94	0.30	0.40	631.11	0.25	0.35	**0.26**	**0.36**
OS2	**80255.120**	1.84	0.00	0.90	0.95	0.00	0.30	0.40	1.84	0.25	0.35	**0.25**	**0.35**
OS3	**730553.828**	16.77	0.00	0.90	0.95	10.08	0.30	0.40	6.69	0.25	0.35	**0.28**	**0.38**

Calculated by: CR
Date: 4/21/2026
Checked by: VAS

CALM BREEZE FILING NO. 1
EXISTING CONDITIONS
(Area Drainage Summary)

From Area Runoff Coefficient Summary				*OVERLAND*				*STREET / CHANNEL FLOW*				*Time of Travel (T_t)*		*INTENSITY **		*TOTAL FLOWS*	
BASIN	**AREA TOTAL** *(Acres)*	**C_5** *From DCM Table 5-1*	**C_{100}** *From DCM Table 5-1*	**C_5**	**Length** *(ft)*	**Height** *(ft)*	**T_C** *(min)*	**Length** *(ft)*	**Slope** *(%)*	**Velocity** *(fps)*	**T_t** *(min)*	**TOTAL** *(min)*	**CHECK** *(min)*	**I_5** *(in/hr)*	**I_{100}** *(in/hr)*	**Q_5** *(c.f.s.)*	**Q_{100}** *(c.f.s.)*
A	23.10	0.25	0.35	0.25	100	11	7.0	1694	3.1%	2.6	10.8	17.7	20.0	3.3	5.5	***18.9***	***44.4***
B	1.54	0.25	0.35	0.25	100	2.0	12.2	202	4.0%	3.0	1.1	13.3	11.7	3.9	6.5	***1.5***	***3.5***
C	2.78	0.25	0.35	0.25	100	2.5	11.3	626	4.2%	3.1	3.4	14.8	14.0	3.6	6.1	***2.5***	***5.9***
D	1.30	0.25	0.35	0.25	100	5.0	9.0	528	5.6%	3.6	2.5	11.5	13.5	3.9	6.6	***1.3***	***3.0***
E	3.94	0.30	0.39	0.30	100	5.0	8.5	745	2.8%	2.5	4.9	13.4	14.7	3.6	6.0	***4.2***	***9.3***
F	9.56	0.29	0.38	0.29	100	3.0	10.2	755	6.4%	3.8	3.3	13.6	14.8	3.5	6.0	***9.7***	***21.7***
OS1	777.05	0.26	0.36	0.26	100	3.0	10.6	9187.5	2.8%	2.5	61.0	71.6	61.6	1.2	2.0	***237.2***	***551.0***
OS2	1.84	0.25	0.35	0.25	100	2.0	12.2	301.5	3.3%	2.7	1.8	14.1	12.2	3.8	6.4	***1.8***	***4.1***
OS3	16.77	0.28	0.38	0.28	100	6.0	8.2	1944.7	4.2%	3.1	10.5	18.7	21.4	3.0	5.0	***14.0***	***32.0***

* Intensity equations assume a minimum travel time of 5 minutes.

Calculated by: CR
Date: 4/21/2026
Checked by: VAS

CALM BREEZE FILING NO. 1
EXISTING CONDITIONS
(Surface Routing Summary)

From Area Runoff Coefficient Summary				*OVERLAND*				*PIPE / CHANNEL FLOW*				*Time of Travel (T_t)*	*INTENSITY **		*TOTAL FLOWS*		
DESIGN POINT	**CONTRIBUTING BASINS**	**CA_5**	**CA_{100}**	**C_5**	**Length** *(ft)*	**Height** *(ft)*	**T_C** *(min)*	**Length** *(ft)*	**Slope** *(%)*	**Velocity** *(fps)*	**T_t** *(min)*	**TOTAL** *(min)*	**I_5** *(in/hr)*	**I_{100}** *(in/hr)*	**Q_5** *(c.f.s.)*	**Q_{100}** *(c.f.s.)*	COMMENTS
1	**Basin A**	5.78	8.09	0.26	100.00	3.00	10.6	10981	2.8%	2.5	72.9	83.5	0.9	1.6	***196.2***	***455.5***	EX 14' X 5' RCBC
	Basin OS1	201.56	279.26														
	Total	207.33	287.35														
2	**Basin D**	0.33	0.46	0.25	100.00	5.00	9.02	528	5.6%	3.6	2.5	11.5	3.9	6.6	***1.3***	***3.0***	EX 18" HDPE
	Total	0.33	0.46														
3	**Basin C**	0.69	0.97	0.25	100.00	2.50	11.34	626	4.2%	3.1	3.4	14.8	3.5	6.0	***2.5***	***5.8***	EX 18" HDPE
	Total	0.69	0.97														
4	**Basin B**	0.38	0.54	0.25	100.00	2.00	10.6	603.5	3.4%	2.8	3.6	14.2	3.6	6.0	***3.0***	***7.2***	EX 24" CMP
	BASIN OS2	0.46	0.64														
	Total	0.84	1.18														
5	**Basin OS3**	4.70	6.37	0.28	100.00	6.00	8.2	1944.7	4.2%	3.1	10.5	18.7	3.2	5.3	***15.0***	***34.1***	EX 18" HDPE
	Total	4.70	6.37														
6	**Basin E**	1.18	1.55	0.28	100.00	6.00	8.2	2789	3.8%	2.9	15.9	24.1	2.8	4.7	***18.9***	***43.0***	Offsite to adjacent property, then to Black Squirell Creek
	DP4	0.84	1.18														
	DP5	4.70	6.37														
	Total	6.72	9.11														
7	**Basin F**	2.72	3.65	0.26	100.00	3.00	10.6	11836	3.2%	2.7	73.5	84.1	0.9	1.6	***197.4***	***458.2***	Black Squirrel Creek
	DP1	207.33	287.35														
	DP 2	0.33	0.46														
	DP 3	0.69	0.97														
	Total	211.08	292.43														

* Intensity equations assume a minimum travel time of 5 minutes.

Calculated by: CR
Date: 4/21/2026
Checked by: VAS

CALM BREEZE FILING NO. 1
PROPOSED CONDITIONS
(Area Runoff Coefficient Summary)

			STREETS / GRAVEL ROADS			*1 ACRE RESIDENTIAL*			*OPEN SPACE / LANDSCAPING*				
BASIN	**TOTAL AREA** *(SF)*	**TOTAL AREA** *(Acres)*	**AREA** *(Acres)*	**C_5**	**C_{100}**	**AREA** *(Acres)*	**C_5**	**C_{100}**	**AREA** *(Acres)*	**C_5**	**C_{100}**	**C_5**	**C_{100}**
A	**1006236.151**	23.10	0.10	0.90	0.95	0.00	0.30	0.40	23.00	0.25	0.35	**0.25**	**0.35**
B	**66927.470**	1.54	0.00	0.90	0.95	0.00	0.30	0.40	1.54	0.25	0.35	**0.25**	**0.35**
C	**120881.214**	2.78	0.00	0.90	0.95	0.00	0.30	0.40	2.78	0.25	0.35	**0.25**	**0.35**
D	**56842.138**	1.30	0.00	0.90	0.95	0.00	0.30	0.40	1.30	0.25	0.35	**0.25**	**0.35**
E	**171546.419**	3.94	0.35	0.80	0.85	0.00	0.30	0.40	3.59	0.25	0.35	**0.30**	**0.39**
F	**416249.294**	9.56	0.65	0.80	0.85	0.00	0.30	0.40	8.91	0.25	0.35	**0.29**	**0.38**
OS1	**33848146.660**	777.05	0.00	0.90	0.95	145.94	0.30	0.40	631.11	0.25	0.35	**0.26**	**0.36**
OS2	**80255.120**	1.84	0.00	0.90	0.95	0.00	0.30	0.40	1.84	0.25	0.35	**0.25**	**0.35**
OS3	**730553.828**	16.77	0.00	0.90	0.95	10.08	0.30	0.40	6.69	0.25	0.35	**0.28**	**0.38**

Calculated by: CR
Date: 4/21/2026
Checked by: VAS

CALM BREEZE FILING NO. 1
PROPOSED CONDITIONS
(Area Drainage Summary)

From Area Runoff Coefficient Summary				*OVERLAND*				*STREET / CHANNEL FLOW*				*Time of Travel (T_t)*		*INTENSITY **		*TOTAL FLOWS*	
BASIN	**AREA TOTAL** *(Acres)*	**C_5** *From DCM Table 5-1*	**C_{100}** *From DCM Table 5-1*	**C_5**	**Length** *(ft)*	**Height** *(ft)*	**T_C** *(min)*	**Length** *(ft)*	**Slope** *(%)*	**Velocity** *(fps)*	**T_t** *(min)*	**TOTAL** *(min)*	**CHECK** *(min)*	**I_5** *(in/hr)*	**I_{100}** *(in/hr)*	**Q_5** *(c.f.s.)*	**Q_{100}** *(c.f.s.)*
A	23.10	0.25	0.35	0.25	100	11	6.9	1694	3.1%	2.6	10.8	17.7	20.0	3.3	5.5	***19.1***	***44.7***
B	1.54	0.25	0.35	0.25	100	2.0	12.2	202	4.0%	3.0	1.1	13.3	11.7	3.9	6.5	***1.5***	***3.5***
C	2.78	0.25	0.35	0.25	100	2.5	11.3	626	4.2%	3.1	3.4	14.8	14.0	3.6	6.1	***2.5***	***5.9***
D	1.30	0.25	0.35	0.25	100	5.0	9.0	528	5.6%	3.6	2.5	11.5	13.5	3.9	6.6	***1.3***	***3.0***
E	3.94	0.30	0.39	0.30	100	5.0	8.5	745	2.8%	2.5	4.9	13.4	14.7	3.6	6.0	***4.2***	***9.3***
F	9.56	0.29	0.38	0.29	100	3.0	10.2	755	6.4%	3.8	3.3	13.5	14.8	3.5	6.0	***9.7***	***21.8***
OS1	777.05	0.26	0.36	0.26	100	3.0	10.6	9187.5	2.8%	2.5	61.0	71.6	61.6	1.2	2.0	***237.2***	***551.0***
OS2	1.84	0.25	0.35	0.25	100	2.0	12.2	301.5	3.3%	2.7	1.8	14.1	12.2	3.8	6.4	***1.8***	***4.1***
OS3	16.77	0.28	0.38	0.28	100	6.0	8.2	1944.7	4.2%	3.1	10.5	18.7	21.4	3.0	5.0	***14.0***	***32.0***

* Intensity equations assume a minimum travel time of 5 minutes.

Calculated by: CR
Date: 4/21/2026
Checked by: VAS

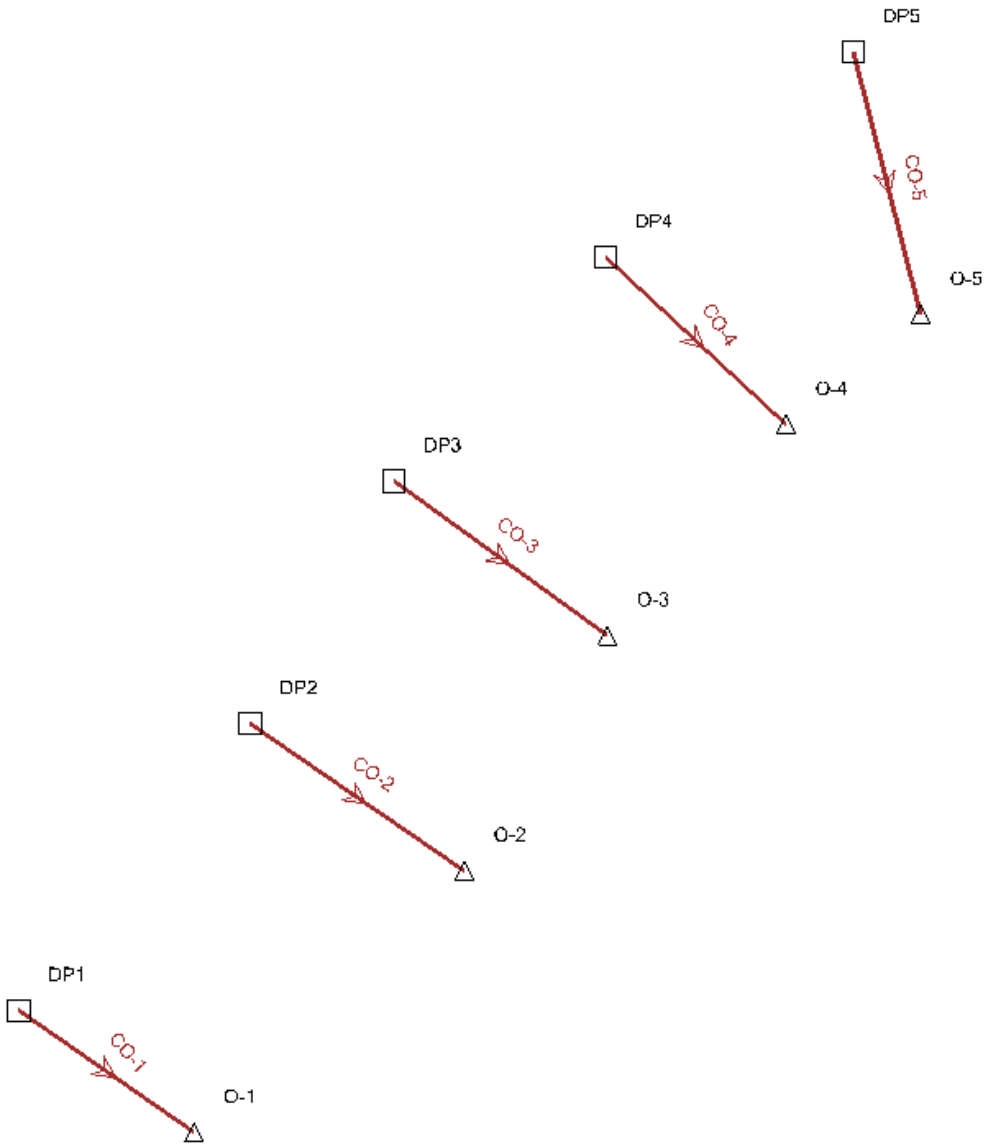
CALM BREEZE FILING NO. 1
PROPOSED CONDITIONS
(Surface Routing Summary)

From Area Runoff Coefficient Summary				*OVERLAND*				*PIPE / CHANNEL FLOW*				*Time of Travel (T_t)*	*INTENSITY **		*TOTAL FLOWS*		
DESIGN POINT	**CONTRIBUTING BASINS**	**CA_5**	**CA_{100}**	**C_5**	**Length** *(ft)*	**Height** *(ft)*	**T_C** *(min)*	**Length** *(ft)*	**Slope** *(%)*	**Velocity** *(fps)*	**T_t** *(min)*	**TOTAL** *(min)*	**I_5** *(in/hr)*	**I_{100}** *(in/hr)*	**Q_5** *(c.f.s.)*	**Q_{100}** *(c.f.s.)*	COMMENTS
1	**Basin A**	5.84	8.15	0.26	100.00	3.00	10.6	10981	2.8%	2.5	72.9	83.5	0.9	1.6	***196.2***	***455.6***	EX 14' X 5' RCBC
	Basin OS1	201.56	279.26														
	Total	207.40	287.41														
2	**Basin D**	0.33	0.46	0.25	100.00	5.00	9.02	528	5.6%	3.6	2.5	11.5	3.9	6.6	***1.3***	***3.0***	EX 18" HDPE
	Total	0.33	0.46														
3	**Basin C**	0.69	0.97	0.25	100.00	2.50	11.34	626	4.2%	3.1	3.4	14.8	3.5	6.0	***2.5***	***5.8***	EX 18" HDPE
	Total	0.69	0.97														
4	**Basin B**	0.38	0.54	0.25	100.00	2.00	10.6	603.5	3.4%	2.8	3.6	14.2	3.6	6.0	***3.0***	***7.2***	EX 24" CMP
	BASIN OS2	0.46	0.64														
	Total	0.84	1.18														
5	**Basin OS3**	4.70	6.37	0.28	100.00	6.00	8.2	1944.7	4.2%	3.1	10.5	18.7	3.2	5.3	***15.0***	***34.1***	EX 18" HDPE
	Total	4.70	6.37														
6	**Basin E**	1.18	1.55	0.28	100.00	6.00	8.2	2789	3.8%	2.9	15.9	24.1	2.8	4.7	***18.9***	***43.0***	Offsite to adjacent property, then to Black Squirell Creek
	DP4	0.84	1.18														
	DP5	4.70	6.37														
	Total	6.72	9.11														
7	**Basin F**	2.75	3.67	0.26	100.00	3.00	10.6	11836	3.2%	2.7	73.5	84.1	0.9	1.6	***197.5***	***458.4***	Black Squirrel Creek
	DP1	207.40	287.41														
	DP 2	0.33	0.46														
	DP 3	0.69	0.97														
	Total	211.17	292.51														

* Intensity equations assume a minimum travel time of 5 minutes.

Calculated by: CR
Date: 4/21/2026
Checked by: VAS

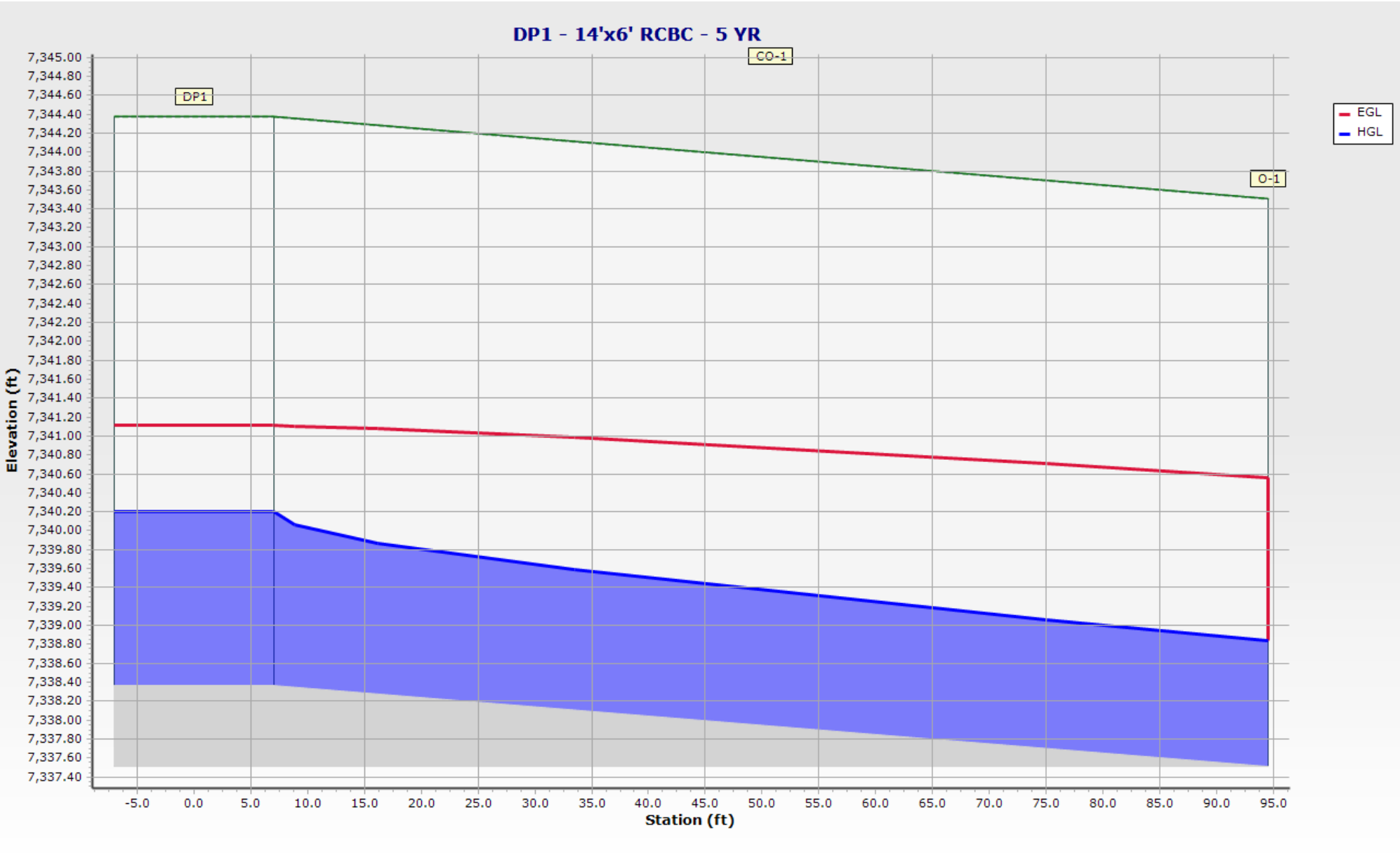
HYDRAULIC CALCULATIONS / SFB WQCV CALCULATIONS

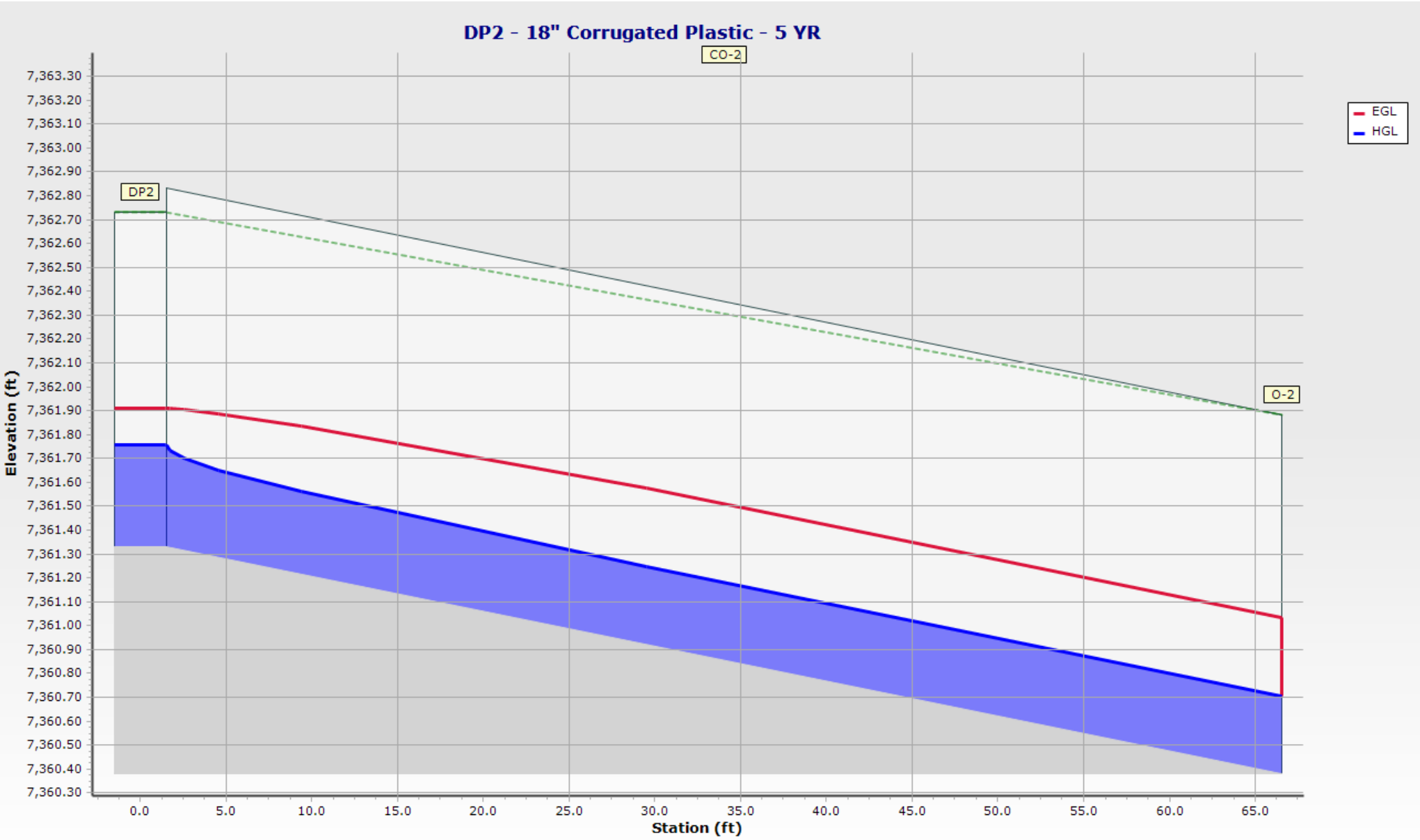

DP5
CO-5
DP4
O-5
CO-4
O-4
DP3
CO-3
O-3
DP2
CO-2
O-2
DP1
CO-1
O-1

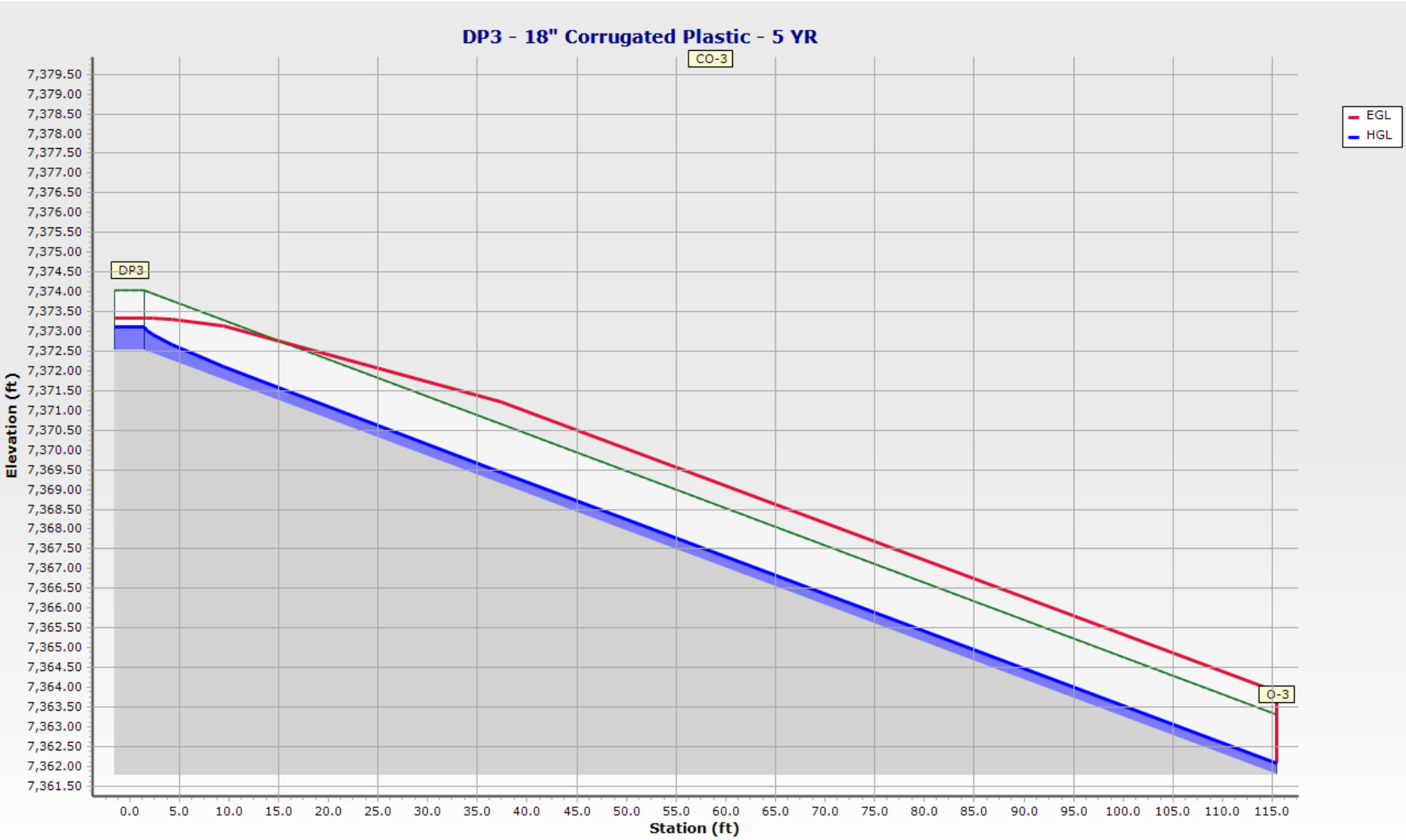
Existing Conduit Table - 5 YR

Label	ID	Upstream Structure	Flow (cfs)	Flow / Capacity (Design) (%)	Length (Unified) (ft)	Velocity (ft/s)	Depth (Normal) (ft)	Depth (Critical) (ft)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Headloss (ft)	Upstream Structure Hydraulic Grade Line (In) (ft)
CO-1	285	O-1	196.20	13.1	94.5	11.29	1.24	1.83	7,341.11	7,340.56	7,338.84	7,340.20	1.36	7,340.20
CO-2	295	O-2	1.30	10.4	66.5	4.59	0.33	0.43	7,361.91	7,361.03	7,360.71	7,361.76	1.05	7,361.76
CO-3	299	O-3	2.50	7.8	115.4	10.78	0.28	0.60	7,373.34	7,363.89	7,362.08	7,373.12	11.04	7,373.12
CO-4	303	O-4	3.00	17.4	60.1	4.12	0.56	0.60	7,388.89	7,388.55	7,388.28	7,388.67	0.39	7,388.67
CO-5	307	O-5	15.00	172.3	78.6	8.49	(N/A)	1.41	7,394.40	7,392.81	7,391.63	7,393.29	1.66	7,392.26

Upstream Structure Velocity (In-Governing) (ft/s)	Upstream Structure Headloss Coefficient	Upstream Structure Headloss (ft)	Elevation Ground (Start) (ft)	Elevation Ground (Stop) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Conduit Description
7.67	1.000	0.00	7,344.37	7,343.51	7,338.37	7,337.51	Box - 14.0 x 6.0 ft
3.14	1.000	0.00	7,362.73	7,361.88	7,361.33	7,360.38	Circle - 18.0 in
3.80	1.000	0.00	7,374.02	7,363.30	7,372.52	7,361.80	Circle - 18.0 in
3.75	1.000	0.00	7,390.07	7,389.72	7,388.07	7,387.72	Circle - 24.0 in
8.49	1.000	0.00	7,392.26	7,391.72	7,390.76	7,390.22	Circle - 18.0 in


DP1 - 14'x6' RCBC - 5 YR
CO-1
DP1
O-1
EGL
HGL
Elevation (ft)
Station (ft)
7,345.00
7,344.80
7,344.60
7,344.40
7,344.20
7,344.00
7,343.80
7,343.60
7,343.40
7,343.20
7,343.00
7,342.80
7,342.60
7,342.40
7,342.20
7,342.00
7,341.80
7,341.60
7,341.40
7,341.20
7,341.00
7,340.80
7,340.60
7,340.40
7,340.20
7,340.00
7,339.80
7,339.60
7,339.40
7,339.20
7,339.00
7,338.80
7,338.60
7,338.40
7,338.20
7,338.00
7,337.80
7,337.60
7,337.40
-5.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
65.0
70.0
75.0
80.0
85.0
90.0
95.0


DP2 - 18" Corrugated Plastic - 5 YR
CO-2
DP2
O-2
EGL
HGL
Elevation (ft)
7,363.30
7,363.20
7,363.10
7,363.00
7,362.90
7,362.80
7,362.70
7,362.60
7,362.50
7,362.40
7,362.30
7,362.20
7,362.10
7,362.00
7,361.90
7,361.80
7,361.70
7,361.60
7,361.50
7,361.40
7,361.30
7,361.20
7,361.10
7,361.00
7,360.90
7,360.80
7,360.70
7,360.60
7,360.50
7,360.40
7,360.30
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
65.0
Station (ft)


DP3 - 18" Corrugated Plastic - 5 YR
CO-3
DP3
O-3
EGL
HGL
Elevation (ft)
Station (ft)
7,379.50
7,379.00
7,378.50
7,378.00
7,377.50
7,377.00
7,376.50
7,376.00
7,375.50
7,375.00
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7,372.00
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7,370.00
7,369.50
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7,368.50
7,368.00
7,367.50
7,367.00
7,366.50
7,366.00
7,365.50
7,365.00
7,364.50
7,364.00
7,363.50
7,363.00
7,362.50
7,362.00
7,361.50
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
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90.0
95.0
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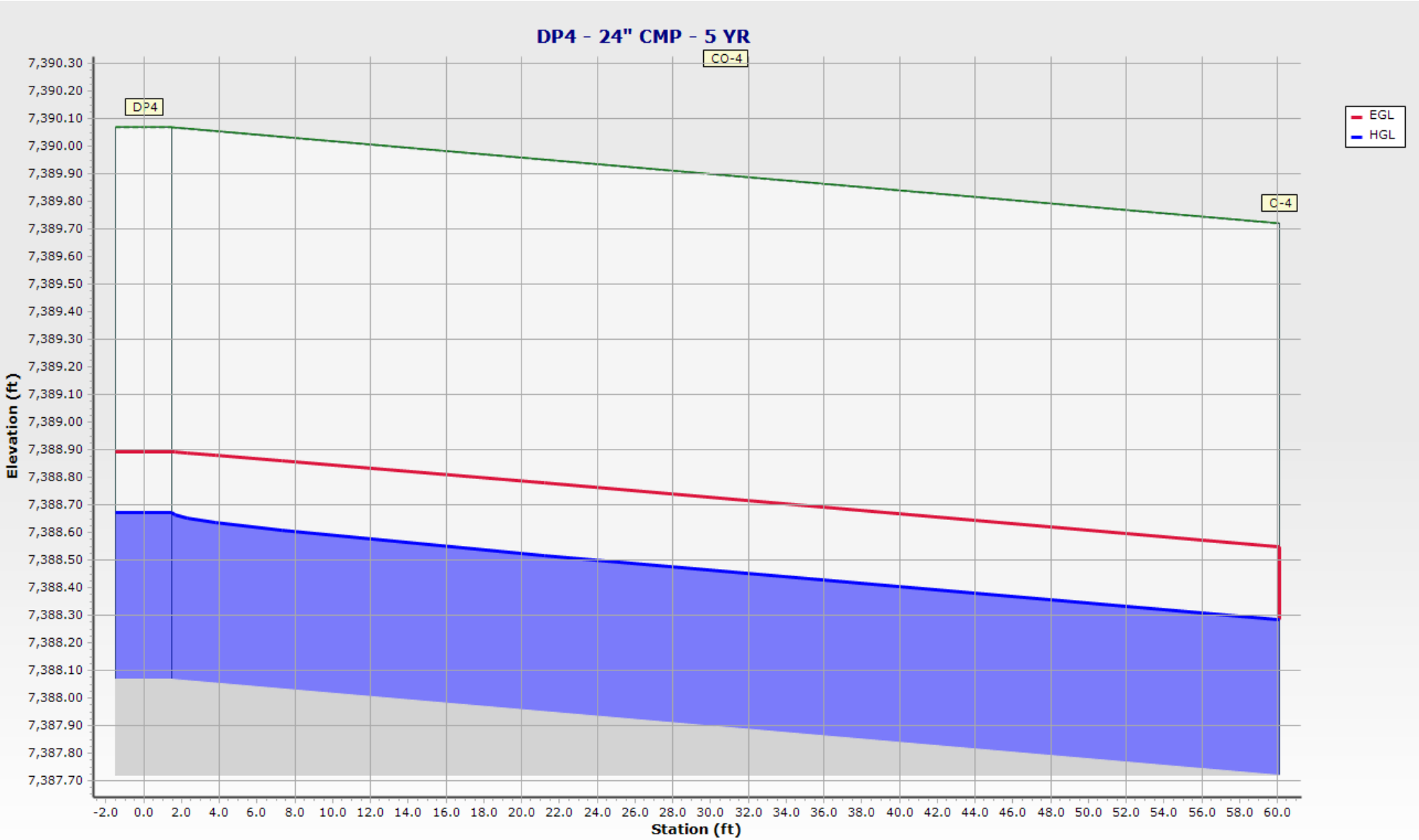
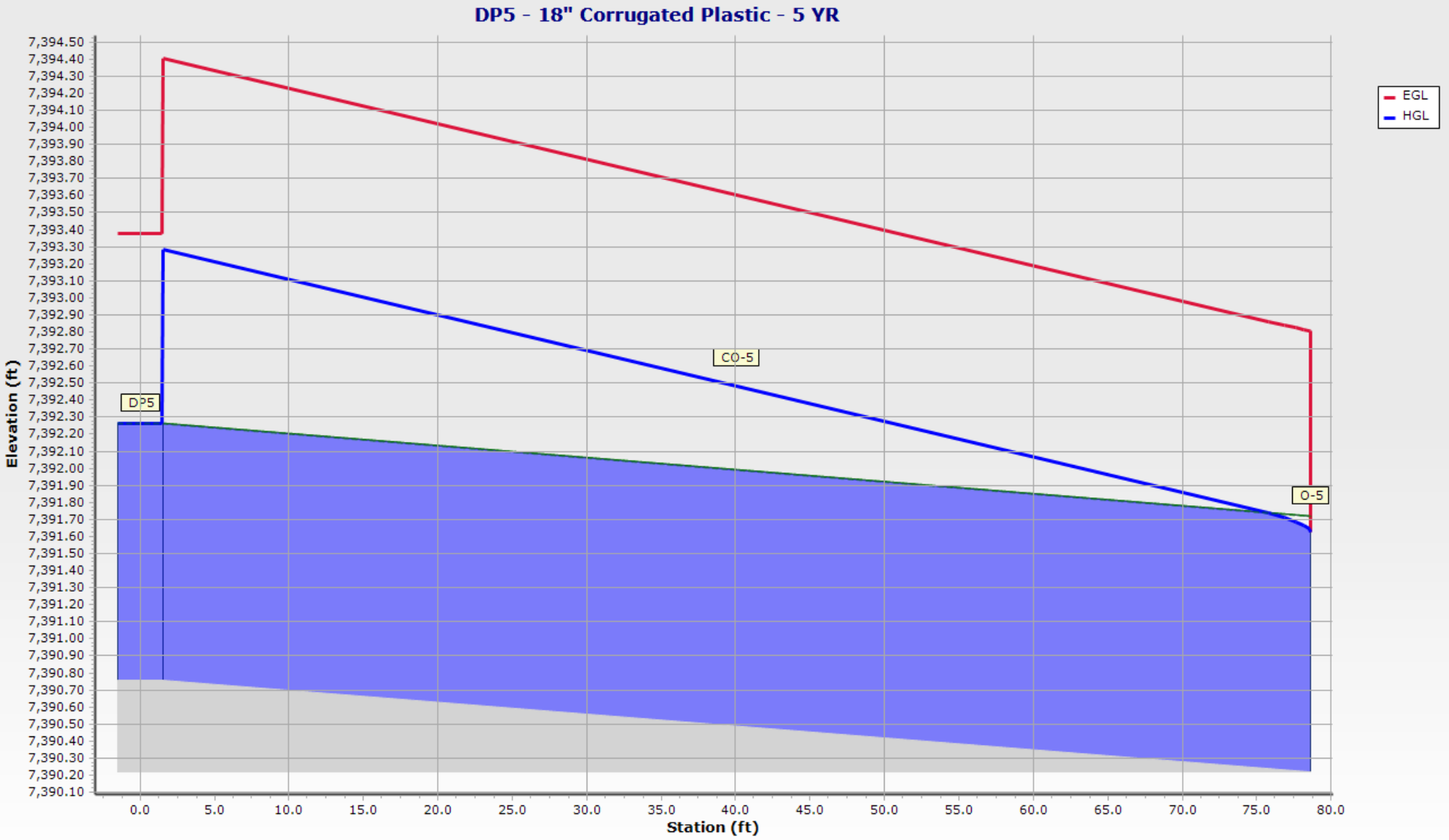
110.0
115.0

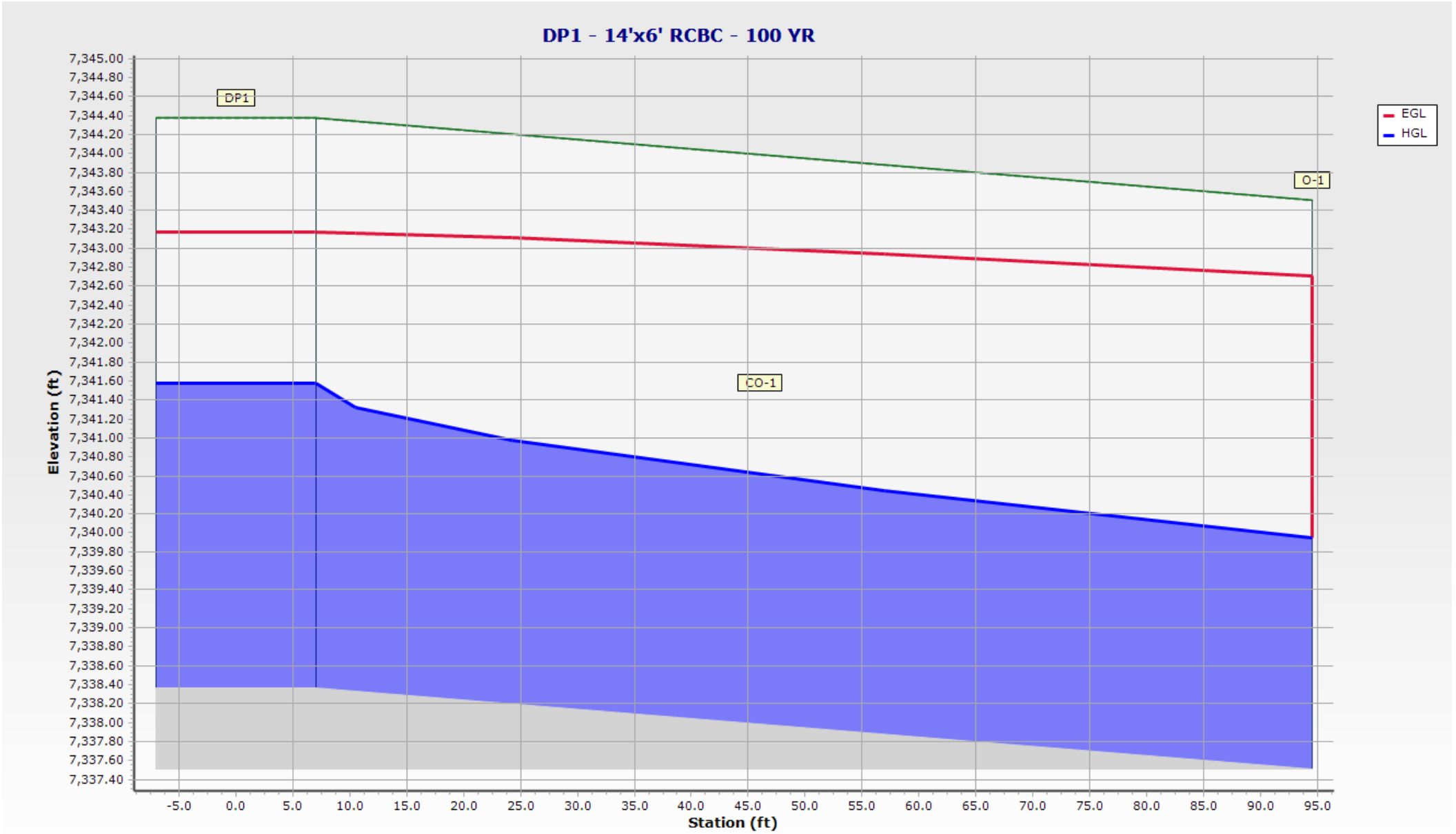

DP4 - 24" CMP - 5 YR
CO-4
DP4
C-4
EGL
HGL
Elevation (ft)
7,390.30
7,390.20
7,390.10
7,390.00
7,389.90
7,389.80
7,389.70
7,389.60
7,389.50
7,389.40
7,389.30
7,389.20
7,389.10
7,389.00
7,388.90
7,388.80
7,388.70
7,388.60
7,388.50
7,388.40
7,388.30
7,388.20
7,388.10
7,388.00
7,387.90
7,387.80
7,387.70
-2.0 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 42.0 44.0 46.0 48.0 50.0 52.0 54.0 56.0 58.0 60.0
Station (ft)


DP5 - 18" Corrugated Plastic - 5 YR
EGL
HGL
Elevation (ft)
Station (ft)
DP5
C0-5
O-5
7,394.50
7,394.40
7,394.30
7,394.20
7,394.10
7,394.00
7,393.90
7,393.80
7,393.70
7,393.60
7,393.50
7,393.40
7,393.30
7,393.20
7,393.10
7,393.00
7,392.90
7,392.80
7,392.70
7,392.60
7,392.50
7,392.40
7,392.30
7,392.20
7,392.10
7,392.00
7,391.90
7,391.80
7,391.70
7,391.60
7,391.50
7,391.40
7,391.30
7,391.20
7,391.10
7,391.00
7,390.90
7,390.80
7,390.70
7,390.60
7,390.50
7,390.40
7,390.30
7,390.20
7,390.10
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
65.0
70.0
75.0
80.0

Existing Conduit Table - 100 YR

Label	ID	Upstream Structure	Flow (cfs)	Flow / Capacity (Design) (%)	Length (Unified) (ft)	Velocity (ft/s)	Depth (Normal) (ft)	Depth (Critical) (ft)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Headloss (ft)	Upstream Structure Hydraulic Grade Line (In) (ft)
CO-1	285	O-1	455.50	30.3	94.5	15.17	2.14	3.20	7,343.18	7,342.71	7,339.95	7,341.57	1.62	7,341.57
CO-2	295	O-2	3.00	23.9	66.5	5.83	0.50	0.66	7,362.24	7,361.41	7,360.88	7,361.99	1.11	7,361.99
CO-3	299	O-3	5.80	18.1	115.4	13.75	0.43	0.93	7,373.84	7,365.17	7,362.23	7,373.45	11.22	7,373.45
CO-4	303	O-4	7.20	41.7	60.1	5.25	0.90	0.95	7,389.39	7,389.05	7,388.62	7,389.02	0.40	7,389.02
CO-5	307	O-5	34.10	391.7	78.6	19.30	(N/A)	1.50	7,405.79	7,397.51	7,391.72	7,400.00	8.29	7,392.26

Upstream Structure Velocity (In-Governing) (ft/s)	Upstream Structure Headloss Coefficient	Upstream Structure Headloss (ft)	Elevation Ground (Start) (ft)	Elevation Ground (Stop) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Conduit Description
10.15	1.000	0.00	7,344.37	7,343.51	7,338.37	7,337.51	Box - 14.0 x 6.0 ft
4.02	1.000	0.00	7,362.73	7,361.88	7,361.33	7,360.38	Circle - 18.0 in
5.04	1.000	0.00	7,374.02	7,363.30	7,372.52	7,361.80	Circle - 18.0 in
4.88	1.000	0.00	7,390.07	7,389.72	7,388.07	7,387.72	Circle - 24.0 in
19.30	1.000	0.00	7,392.26	7,391.72	7,390.76	7,390.22	Circle - 18.0 in


DP1 - 14'x6' RCBC - 100 YR
DP1
O-1
CO-1
EGL
HGL
Elevation (ft)
Station (ft)
7,345.00
7,344.80
7,344.60
7,344.40
7,344.20
7,344.00
7,343.80
7,343.60
7,343.40
7,343.20
7,343.00
7,342.80
7,342.60
7,342.40
7,342.20
7,342.00
7,341.80
7,341.60
7,341.40
7,341.20
7,341.00
7,340.80
7,340.60
7,340.40
7,340.20
7,340.00
7,339.80
7,339.60
7,339.40
7,339.20
7,339.00
7,338.80
7,338.60
7,338.40
7,338.20
7,338.00
7,337.80
7,337.60
7,337.40
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0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
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75.0
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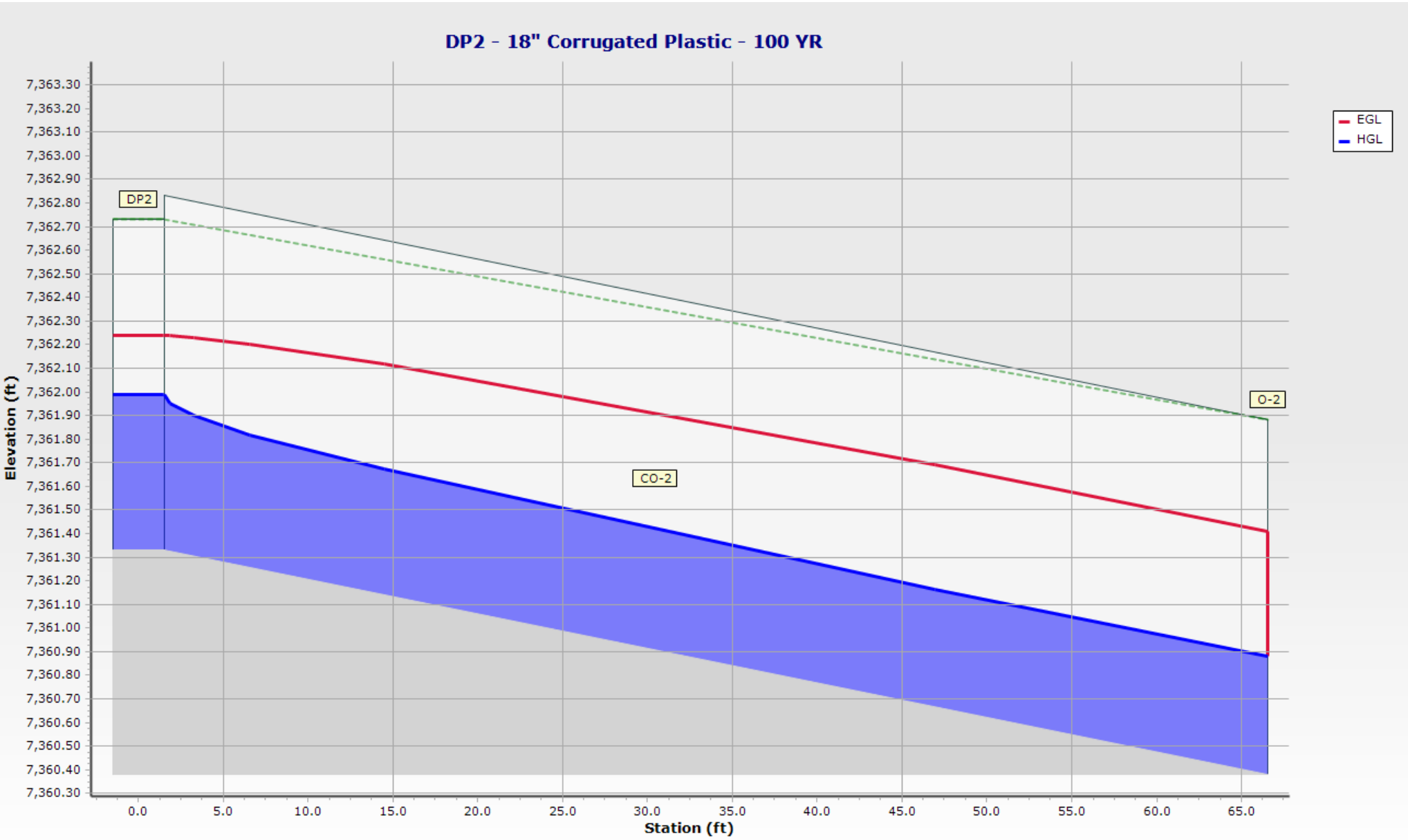
85.0
90.0
95.0


DP2 - 18" Corrugated Plastic - 100 YR
EGL
HGL
DP2
O-2
CO-2
Elevation (ft)
Station (ft)
7,363.30
7,363.20
7,363.10
7,363.00
7,362.90
7,362.80
7,362.70
7,362.60
7,362.50
7,362.40
7,362.30
7,362.20
7,362.10
7,362.00
7,361.90
7,361.80
7,361.70
7,361.60
7,361.50
7,361.40
7,361.30
7,361.20
7,361.10
7,361.00
7,360.90
7,360.80
7,360.70
7,360.60
7,360.50
7,360.40
7,360.30
0.0
5.0
10.0
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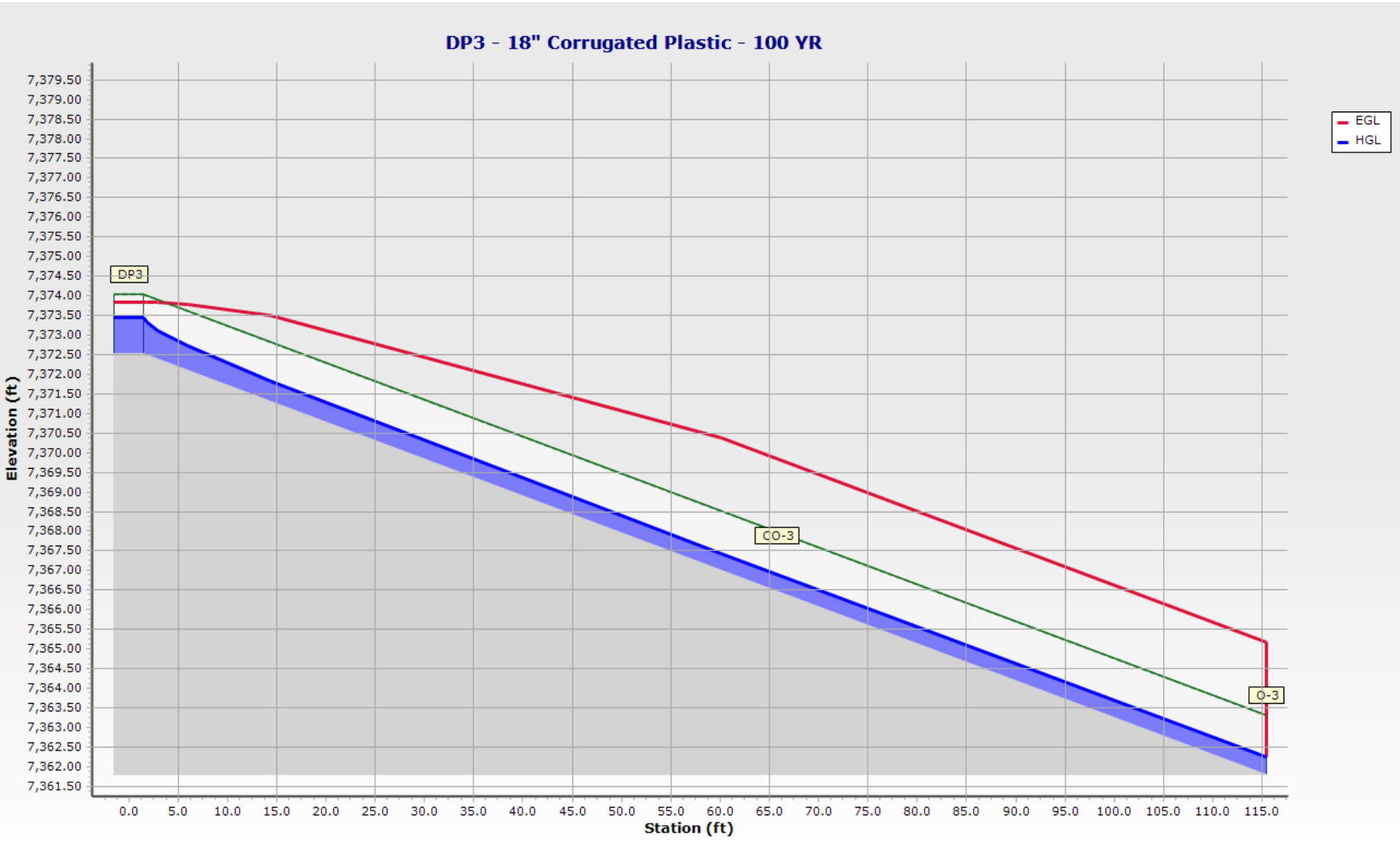
40.0
45.0
50.0
55.0
60.0
65.0


DP3 - 18" Corrugated Plastic - 100 YR
EGL
HGL
DP3
CO-3
O-3
Elevation (ft)
Station (ft)
7,379.50
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7,378.50
7,378.00
7,377.50
7,377.00
7,376.50
7,376.00
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7,365.00
7,364.50
7,364.00
7,363.50
7,363.00
7,362.50
7,362.00
7,361.50
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
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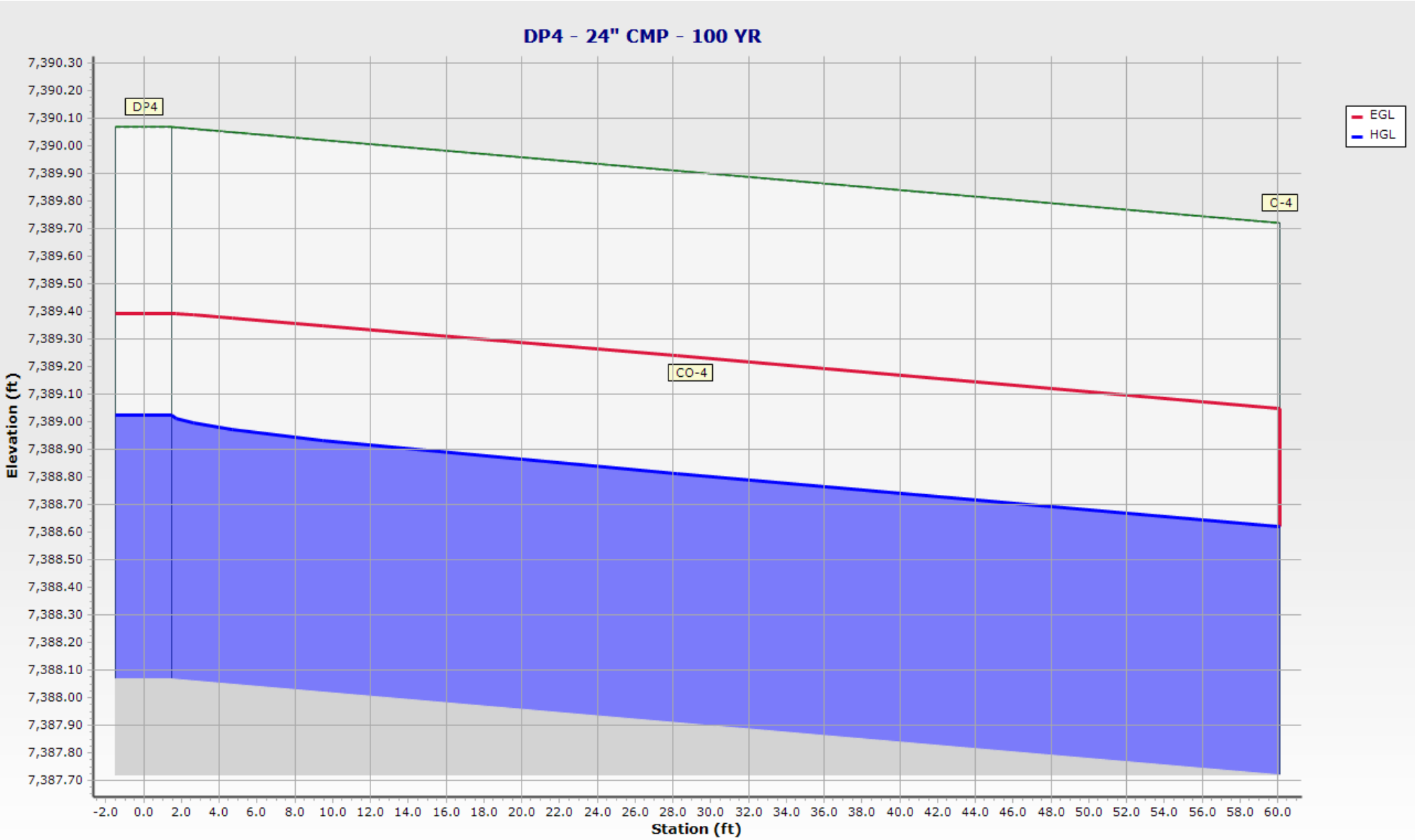
110.0
115.0


DP4 - 24" CMP - 100 YR
Elevation (ft)
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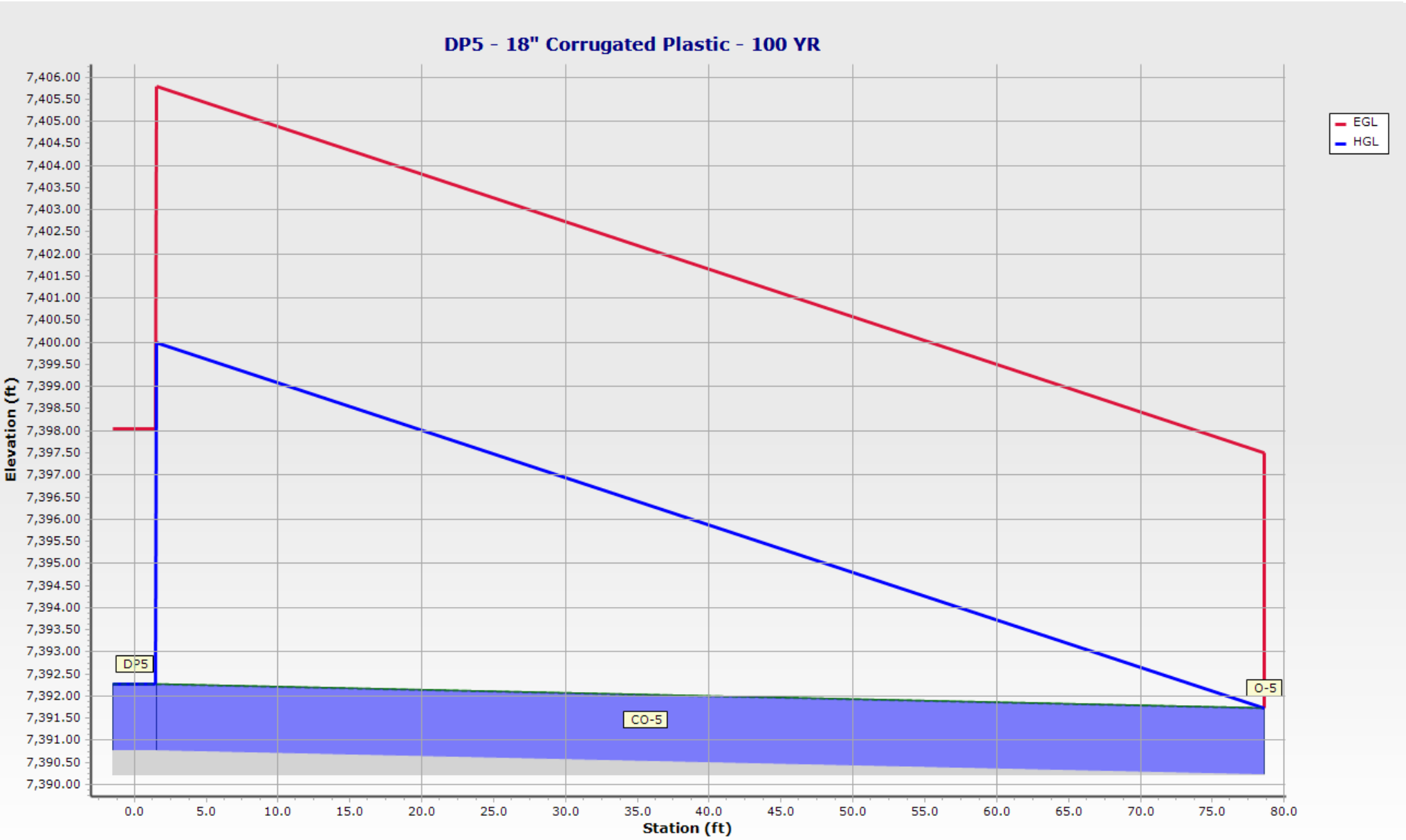
7,390.20
7,390.10
7,390.00
7,389.90
7,389.80
7,389.70
7,389.60
7,389.50
7,389.40
7,389.30
7,389.20
7,389.10
7,389.00
7,388.90
7,388.80
7,388.70
7,388.60
7,388.50
7,388.40
7,388.30
7,388.20
7,388.10
7,388.00
7,387.90
7,387.80
7,387.70
-2.0 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 42.0 44.0 46.0 48.0 50.0 52.0 54.0 56.0 58.0 60.0
Station (ft)
DP4
CO-4
O-4
EGL
HGL


DP5 - 18" Corrugated Plastic - 100 YR
EGL
HGL
Elevation (ft)
7,406.00
7,405.50
7,405.00
7,404.50
7,404.00
7,403.50
7,403.00
7,402.50
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7,392.50
7,392.00
7,391.50
7,391.00
7,390.50
7,390.00
DP5
CO-5
O-5
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
65.0
70.0
75.0
80.0
Station (ft)

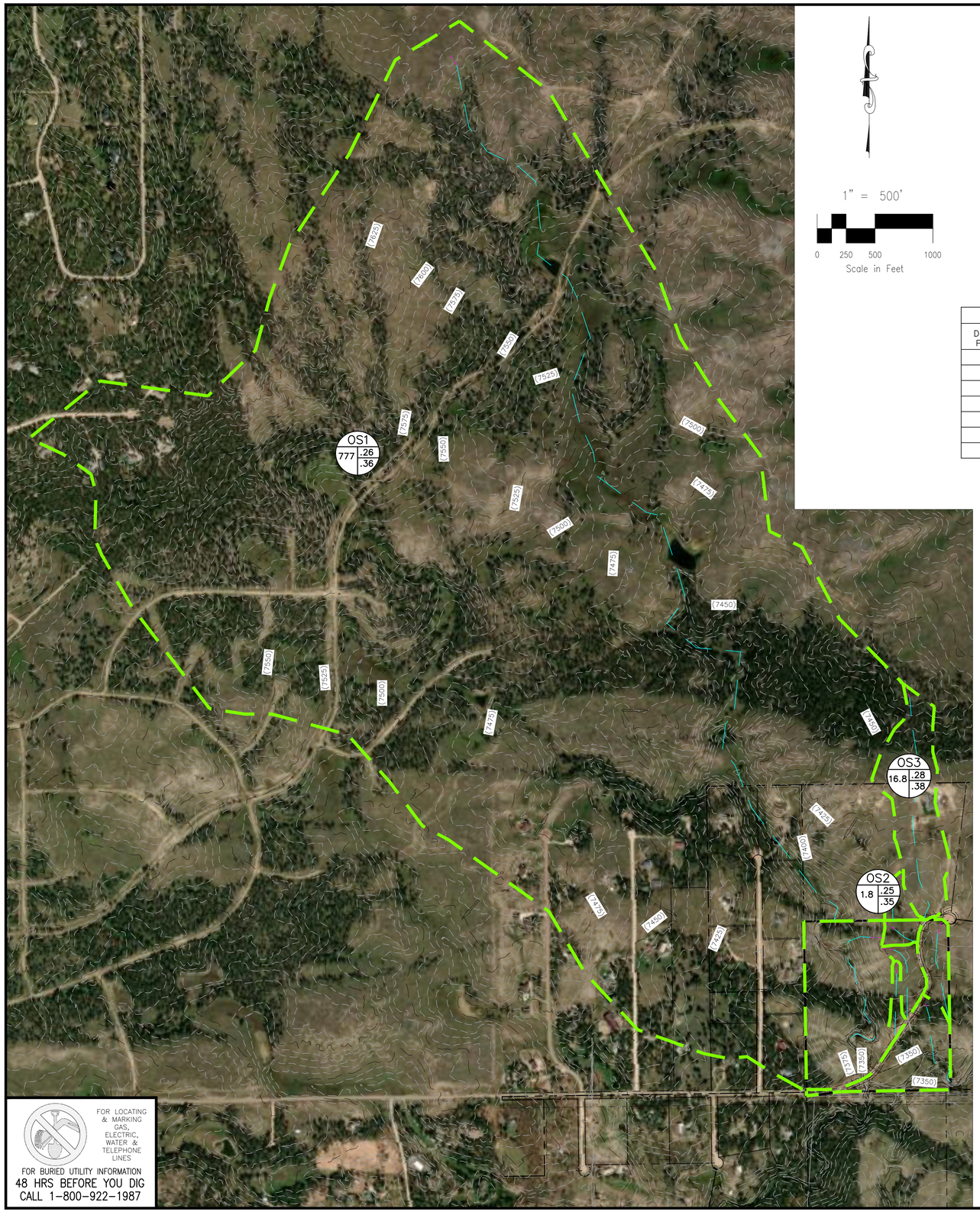
EXISTING DRAINAGE MAP

CALM BREEZE FILING NO. 1

COUNTY OF EL PASO, STATE OF COLORADO

EXISTING DRAINAGE MAP

APRIL 2026



1" = 500'

0 250 500 1000

Scale in Feet

BASIN SUMMARY			
BASIN	AREA (ACRES)	Q_5	Q_{100}
A	23.10	18.9	44.4
B	1.54	1.5	3.5
C	2.78	2.5	5.9
D	1.30	1.3	3.0
E	3.94	4.2	9.3
F	9.56	9.7	21.7
OS1	777.05	237.2	551.0
OS2	1.84	1.8	4.1
OS3	16.77	14.0	32.0

DESIGN POINT SUMMARY				
DESIGN POINT	Q_5	Q_{100}	CONTRIBUTING BASINS AND DP	OUTFALL
1	196.2	455.5	A, OS1	14' X 6' RCBC
2	1.3	3.0	D	18" HDPE
3	2.5	5.8	C	18" HDPE
4	3.0	7.2	B, OS2	24" CMP
5	15.0	34.1	OS3	18" HDPE
6	18.9	43.0	E, DP4, DP5	ADJCENT PROPERTY TO BLACK SQUIRREL CREEK
7	197.4	458.2	F, DP1, DP2, DP3	BLACK SQUIRREL CREEK

LEGEND

BASIN DESIGNATION — Z; 25 | .25 | .35; ACRES; C5; C100

4 — PIPE RUN REFERENCE LABEL

6 — SURFACE DESIGN POINT

BASIN BOUNDARY

SITE BOUNDARY

OVERLAND FLOW PATH

CONCENTRATED FLOW PATH

(6900) — EXISTING MAJOR CONTOUR

(6899) — EXISTING MINOR CONTOUR

6900 — PROPOSED MAJOR CONTOUR

6899 — PROPOSED MINOR CONTOUR

LOT LINE

FILING BOUNDARY

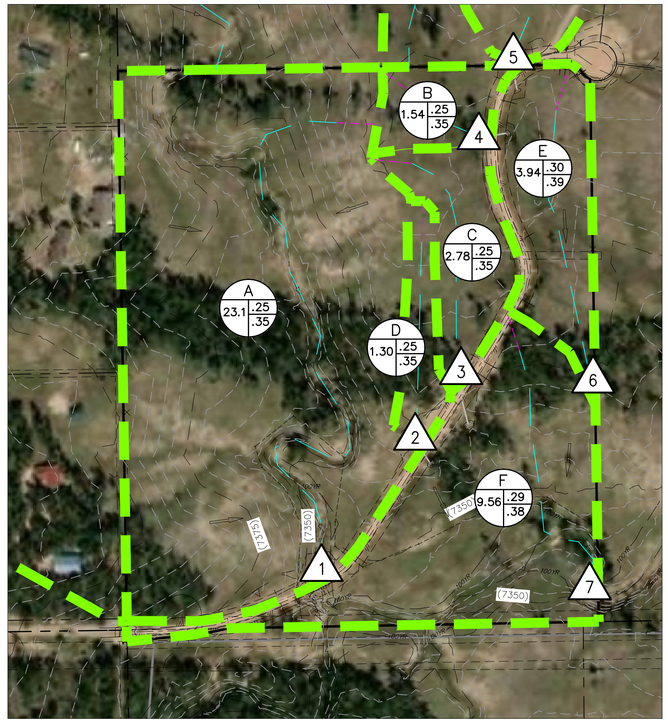
EXISTING EASEMENT

L.P./H.P. — LOW POINT/HIGH POINT

2.1% — FLOW DIRECTION & SLOPE

FLOW DIRECTION ARROW

EXISTING FLOW DIRECTION ARROW



1" = 200'

0 50 100 200 400

Scale in Feet

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

FOR BURIED UTILITY INFORMATION
48 HRS BEFORE YOU DIG
CALL 1-800-922-1987

CIVIL CONSULTANTS, INC.

212 N. WAHSATCH AVE., STE 305
COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

CALM BREEZE FILING NO. 1

EXISTING DRAINAGE MAP

PROJECT NO. 08-101	SCALE: HORIZONTAL:	DATE: 04/21/2026	
DESIGNED BY: CGR			
DRAWN BY: CGR	VERTICAL:	SHEET 1 OF 1	EDM01
CHECKED BY: VAS			

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PROPOSED DRAINAGE MAP

CALM BREEZE FILING NO. 1

COUNTY OF EL PASO, STATE OF COLORADO

PROPOSED DRAINAGE MAP

APRIL 2026

1" = 500'

0 250 500 1000

Scale in Feet

BASIN SUMMARY			
BASIN	AREA (ACRES)	Q_5	Q_{100}
A	23.10	19.1	44.7
B	1.54	1.5	3.5
C	2.78	2.5	5.9
D	1.30	1.3	3.0
E	3.94	4.2	9.3
F	9.56	9.7	21.8
OS1	777.05	237.2	551.0
OS2	1.84	1.8	4.1
OS3	16.77	14.0	32.0

DESIGN POINT SUMMARY				
DESIGN POINT	Q_5	Q_{100}	CONTRIBUTING BASINS AND DP	OUTFALL
1	196.2	455.6	A, OS1	14' X 6' RCBC
2	1.3	3.0	D	18" HDPE
3	2.5	5.8	C	18" HDPE
4	3.0	7.2	B, OS2	24" CMP
5	15.0	34.1	OS3	18" HDPE
6	18.9	43.0	E, DP4, DP5	ADJCENT PROPERTY TO BLACK SQUIRREL CREEK
7	197.5	458.4	F, DP1, DP2, DP3	BLACK SQUIRREL CREEK

LEGEND

BASIN DESIGNATION — Z | 25 | .25 | .35 | C5 | C100 | ACRES

4 / 6 — PIPE RUN REFERENCE LABEL / SURFACE DESIGN POINT

BASIN BOUNDARY

SITE BOUNDARY

OVERLAND FLOW PATH

CONCENTRATED FLOW PATH

(6900) EXISTING MAJOR CONTOUR

(6899) EXISTING MINOR CONTOUR

6900 PROPOSED MAJOR CONTOUR

6899 PROPOSED MINOR CONTOUR

LOT LINE

FILING BOUNDARY

EXISTING EASEMENT

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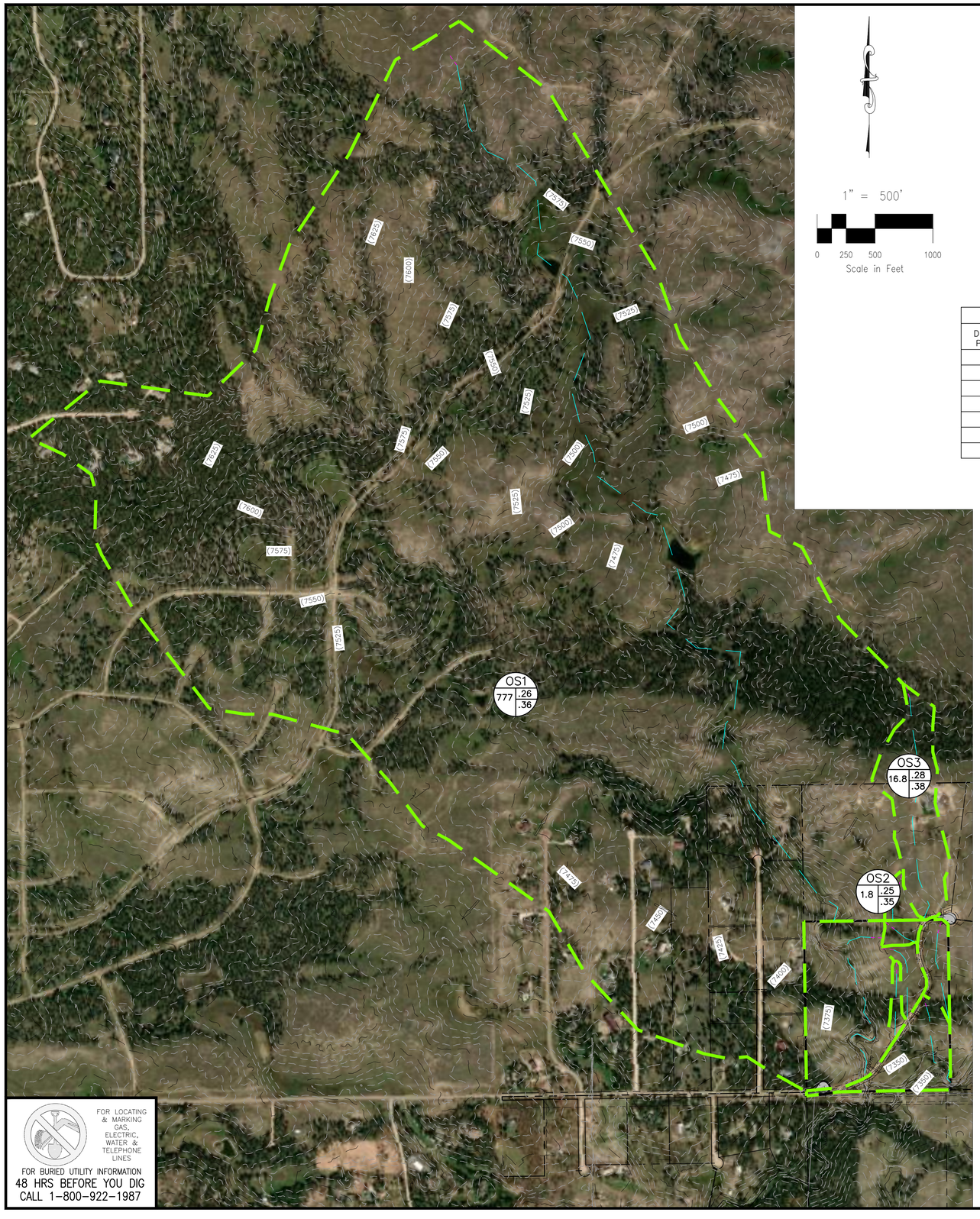
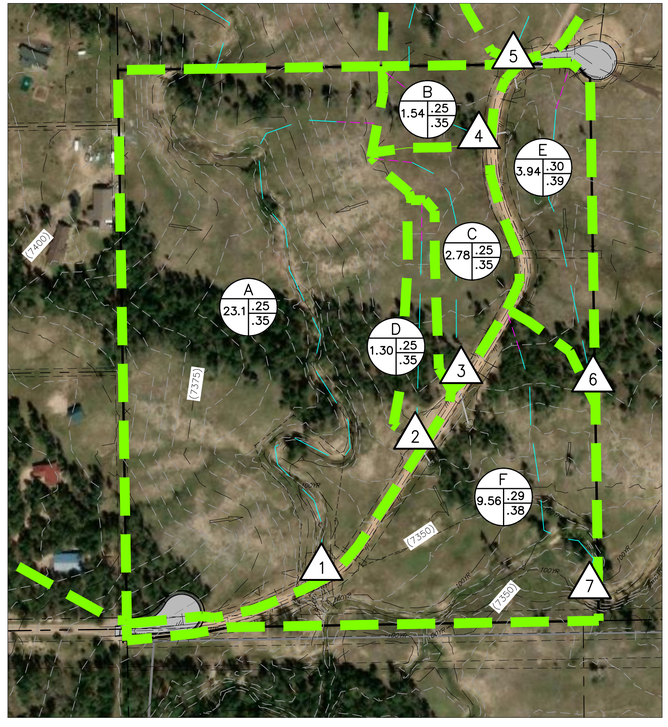
FLOW DIRECTION ARROW

EXISTING FLOW DIRECTION ARROW





1" = 200'

0 50 100 200 400

Scale in Feet

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CALM BREEZE FILING NO. 1

PROPOSED DRAINAGE MAP

PROJECT NO. 08-101	SCALE: HORIZONTAL:	DATE: 04/21/2026	
DESIGNED BY: CGR			
DRAWN BY: CGR	VERTICAL:	SHEET 1 OF 1	PDM01
CHECKED BY: VAS			

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