PRELIMINARY DRAINAGE REPORT FOR CREEKRIDGE AT FLYING HORSE FILING NO. 2

Prepared for:
Pulpit Rock Investments LLC
2138 Flying Horse Club Drive
Colorado Springs, CO 80921

Prepared by:
Classic Consulting Engineers & Surveyors, LLC
619 N. Cascade Ave. Suite 200
Colorado Springs, CO 80903
719-785-0790

Date prepared 05//26
STM-MP26-0197
STM-REV26-0502

Job no. 1171.79

PRELIMINARY DRAINAGE REPORT FOR CREEKRIDGE AT FLYING HORSE FILING NO. 2

Engineer's Statement

This report and plan for the drainage design of **Creekridge at Flying Horse Filing No. 2** was prepared by me (or under my direct supervision) and is correct to the best of my knowledge and belief. Said report has been prepared in accordance with the City of Colorado Springs Drainage Criteria Manual and is in conformity with the master plan of the drainage basin. I understand that the City of Colorado Springs does not and will not assume liability for drainage facilities designed by others. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparing this report.

SIGNATURE (Affix Seal): ____
David L. Gibson, Colorado P.E. No. 46477 Date:

Developer's Statement

Pulpit Rock Investments LLC hereby certifies that the drainage facilities for **Creekridge at Flying Horse No. 2** shall be constructed according to the design presented in this report. I understand that the City of Colorado Springs does not and will not assume liability for the drainage facilities designed and/or certified by my engineer and that are submitted to the City of Colorado Springs pursuant to section 7.4.701 of the City Code; and cannot, on behalf of **Creekridge at Flying Horse Filing No. 2,** guarantee that final drainage design review will absolve **Pulpit Rock Investments LLC** and/or their successors and/or assigns of future liability for improper design. I further understand that approval of the final plat does not imply approval of my engineer's drainage design.

Pulpit Rock Investments LLC
Name of Developer

____
Authorized Signature Date

Adam Doyle
Printed Name

Land Development Manager
Title

2138 Flying Horse Club Drive Colorado Springs CO 80921
Address:

City of Colorado Springs Statement:

Filed in accordance with Section 7.4.701 of the Code of the City of Colorado Springs, 2023, as amended.

____ ________________________
For SWENT Manager Date

Conditions:

PRELIMINARY DRAINAGE REPORT FOR
CREEKRIDGE AT FLYING HORSE FILING NO. 2

TABLE OF CONTENTS:

INTRODUCTION / SITE DESCRIPTION

This document is the Preliminary Drainage Report for Creekridge at Flying Horse Filing No. 2. The current site is undeveloped. The purpose of this report is to evaluate existing drainage conditions and proposed developed conditions in accordance with the requirements of the Colorado Springs Drainage Criteria Manual. Proposed land use will include single family detached dwellings.

Estates at Wolf Ranch

TOTAL SITE (PLATTED) AREA: 8.165 AC – Residential lots, tracts and ROW.

TOTAL SITE DISTURBANCE AREA: 8.79 AC

Creekridge at Flying Horse Filing No. 2 is a tract of land located in a portion of the south half of section 16 and the north half of section 21, Township 12 South, Range 66 West of the 6th P.M., in the City of Colorado Springs, El Paso County, Colorado.

Adjacent Sites:

North: Creekridge at Flying Horse Filing No. 1 single family residential
South: Existing Interquest Parkway public roadway
West: Unplatted Future Creekridge Filing No. 3 single family residential
East: Unplatted future Powers Blvd.

This drainage report is in conformance with the City of Colorado Springs Drainage Criteria Manual Volume 1 dated May 2014 (and updated January 2021) and Volume 2 dated May 2014 (and updated December 2020) as included in the reference section of this report. Rainfall depths are taken from NOAA Atlas 14, Volume 8, Version 2 for the 2, 5, and 100 year events. All hydrologic and hydraulic calculations are completed using the current DCM and conform to the criteria, charts, and requirements for City of Colorado Springs using the rational method and excel spreadsheets including MHFD-Inlet and MHFD-BMP spreadsheets. See appendix.

No portions of the site are within a Streamside Overlay Zone.

This site is vacant with native grasses. The on-site soils are of Hydrologic Group "B" (Tomah-Crowfoot complex & Stapleton Sandy Loam) as determined by the "Web Soil Survey National Cooperative Soil Survey", prepared by the Natural Resources Conservation Service (see map in Appendix).

Proposed street classifications used within project:

30' Public ROW Residential roadways

A vicinity map is included in the Appendix of the report.

PREVIOUS STUDIES

This site, or a portion of the site, was previously analyzed in the following reports as further described in the existing Drainage Conditions section below.

1. "Final Drainage Report Downtown Flying Horse Filing No. 1 Preliminary Drainage Report for Downtown Flying Horse Future Filings" by Classic Consulting dated January 2023

2. "Amendment #1 to Final Drainage Report Downtown Flying Horse Filing No. 1, Preliminary Drainage Report for Downtown Flying Horse Future Filings" by Classic Consulting dated August 2025.

3. "Preliminary Drainage Report for Creekridge at Flying Horse No. 1" by Classic Consulting dated May 2026

The Creekridge Filing No. 2 development was previously part of the Downtown Flying Horse proposed development and is portions of the previously shown future filings of Downtown Flying Horse.

EXISTING DRAINAGE CONDITIONS

The site drainage was partially analyzed in the reports listed above. Overall, the site drains to the south towards Skipping Rock Avenue and north towards Somerstone Drive. Currently there is an existing 24" public RCP Storm sewer stub located in Skipping Rock Avenue that was constructed with Creekside at Flying Horse Filing No. 1. There is also an existing 10' Type 2 public inlet in the north curb line of Skipping Rock Avenue. The property was evaluated with a residential land use assumed for the property in all prior approved reports listed above. The site is located within the Elkhorn Drainage Basin.

Refer to Historic Drainage Plan included in the Appendix of the report for a summary of historic runoff for the basins depicted on the historic plan.

Offsite Drainage conditions affecting the site include various offsite basins from future Creekridge Filings OS-1 thru OS-12.

BASIN	AREA (AC)	Q_5 (cfs)	Q_{100} (cfs)	Land Use Description	Routing	Ownership	Discussion	Cardinal Direction	Emergency Overflow
EX-1	5.31	1.1	7.9	HISTORIC	N/A	N/A	SHEET FLOW TO EXISTING DOUBLE TYPE C AREA INLET	SOUTH	N/A
EX-2	52.70	10.7	78.4	HISTORIC	N/A	N/A	SHEET FLOW TO EXISTING 48" STORM STUB	SOUTH	N/A
EX-3	5.62	1.7	12.5	HISTORIC	N/A	N/A	SHEET FLOW TO EXISTING 48" STORM STUB	SOUTH	N/A
EX-4	3.85	1.2	8.6	HISTORIC	N/A	N/A	SOUTH	SOUTH	N/A

Existing basin analysis done with Downtown at Flying Horse Filing No. 1 and contains areas outside of proposed Creekridge filings. Total area will be larger than proposed analysis.

PROPOSED DRAINAGE DISCUSSION

On-site flows are described as follows:

Refer to Proposed Drainage Map for Developed Conditions included in the Appendix of the report.

NOTE: Per the drainage map, all proposed inlets are sump unless otherwise specified. All manholes, inlets, pipes and appurtenances are per City of Colorado Springs standard details and conform to the current Drainage Criteria manual (DCM). All facilities are public within ROW or Easement. All proposed pipes to be RCP. An HGL analysis for all storm pipes will be provided with the Final Drainage Report.

BASIN	AREA (AC)	Q_5 (cfs)	Q_{100} (cfs)	Land Use Description	Routing	Ownership	Discussion	Cardinal Direction	Emergency Overflow
A	1.72	3.9	7.8	RES 1/16	EX. 15' TYPE 2 AT GRADE INLET	PUBLIC	SURFACE ROUTING OVER LANDSCAPE AND PAVED AREA TO INLET	SOUTH	N/A
B	3.19	5.8	11.8	RES 1/16	10' TYPE 2 SUMP INLET	PUBLIC	SURFACE ROUTING OVER LANDSCAPE AND PAVED AREA TO INLET	WEST	OVERTOP CURB TO SKIPPING ROCK AVENUE
C	2.58	4.8	9.6	RES 1/16	EX 10' TYPE 2 SUMP INLET	PUBLIC	SURFACE ROUTING OVER LANDSCAPE AND PAVED AREA TO INLET	SOUTH	OVERTOP HIGH POINT IN ROAD TO NEXT INLET
D	0.68	0.2	1.4	RES 1/16	EX ROADSIDE DITCH	PUBLIC	SURFACE ROUTING OVER LANDSCAPE TO DITCH	EAST	N/A

Compliance with other drainage studies:

Creekridge at Flying Horse was accounted for with the development of Creekridge at Flying Horse Filing No. 1. Developed flows are routed to an existing private Full Spectrum Detention (FSD) as shown in the Final Drainage Report Downtown Flying Horse Filing No. 1. Creekridge at Flying Horse Filing No. 2 is depicted as Basin OS-1, OS-2, & OS-3 in the Final Drainage Report for Creekridge at Flying Horse Filing No. 1. With the construction of Creekridge at Flying Horse Filing No 1 a public 24" RCP storm pipe was stubbed north of Skipping Stone Avenue in anticipation of the development of Creekridge Filing No. 2. Per the Creekridge at Flying Horse Filing No. 1 report, this 24" RCP pipe was shown as Pipe 13 and anticipated flow of **Q_5 = 5.8 cfs, Q_{100} = 11.8 cfs**. This compares to this reports developed flows shown as Pipe 1 **Q_5 = 5.8 cfs, Q_{100} = 11.8 cfs.** Anticipated flows and developed flows are equivalent.

With the construction of Creekridge at Flying Horse Filing No 1 a public 15" Type 2 at grade inlet has been constructed in Somerstone Drive and shown as design point 8 in that report to intercept developed flows. Anticipated flow from Creekridge Filing No. 2 are shown as Basin OS-1 **Q_5 = 3.9 cfs, Q_{100} = 7.8 cfs** in the Filing 1 report. Compared to this report as Basin A **Q_5 = 3.9 cfs, Q_{100} = 7.8 cfs.** Anticipated flows and developed flows are equivalent.

With the construction of Creekridge at Flying Horse Filing No 1 a public 10" Type 2 sump inlet has been constructed in Skipping Stone Avenue and shown as design point 6 in that report to intercept developed flows. Anticipated flow from Creekridge Filing No. 2 are shown as Basin OS-3 **Q_5 = 4.8 cfs, Q_{100} = 9.6 cfs** in the Filing 1 report. Compared to this report as Basin C **Q_5 = 4.8 cfs, Q_{100} = 9.6 cfs.** Anticipated flows and developed flows are equivalent.

All storm pipes, inlets, and manhole systems within Creekridge Filing No. 1 are public. An HGL analysis for all storm pipes will be provided with the Final Drainage Report.

FOUR STEP PROCESS/DETENTION

Total disturbance area is 8.79 acres and the 4-step process and detention criteria will apply.

Per the approved Final Drainage Report Downtown Flying Horse Filing No. 1 Preliminary Drainage Report for Downtown Flying Horse Future Filings detention for Creekridge Filing No. 1 will be provided in an existing private full spectrum extended detention permanent control measure located in Tract A of Downtown Flying Horse Filing No. 1.

The exclusions for this development include Urban Trail construction

Total disturbance with exclusions is 8.17 acres

The site adheres to this Four Step Process as follows:

1. **VOLUME REDUCTION:**

   All developed runoff from the proposed site will be collected in a proposed public or private on-site storm system. This site is in compliance with the Green Infrastructure Manual and Policy Clarification for WQCV Reduction, see Appendix for calculations and exhibit. A planned infiltration area will be located in the existing private permanent control measure located in Downtown Flying Horse Filing No. 1 Tract A in the wetted area during the water quality event. Review of the design reports for this pond by Classic Consulting, the wetted area during the water quality event is calculated as 54,014 sf. RPA used by Creekridge Filing 2 is 7,600 sf. The water quality volume reduction for Creekridge Filing No. 2 is 10% and Green Infrastructure Criteria of 10% reduction in WQCV will be met. RPA used by Creekridge Filing 1 is 19,830 sf. The previously approved Lot 1 Downtown Flying Horse Filing No. 1 will utilize 5,227 sf, with a total RPA being utilized by the 3 subdivisions of 32,657 sf. The combined volume reduction for Creekridge at Flying Horse Filing No.1, Creekridge at Flying Horse Filing No. 2 and Lot 1 Downtown Flying Horse Filing No. 1 is 10% and Green Infrastructure Criteria will be met. The remaining 21,357 sf of wetted area during the water quality event will be utilized for future Creekridge at Flying Horse and Downtown Flying Horse development tributary to the private pond in Tract A. The design report for this pond lists the total anticipated area tributary area as 63.02 acres with a weighed impervious acreage of 57.80%. This site shown as Basin OS-5 & OS-11. The disturbance associated with Creekridge Filing No. 1 tributary to the pond 1 is 8.17 acres of that 63.02 acres assumed to be treated by the pond. Effective imperviousness of Creekridge Filing No. 2 is calculated as 75%. All planned infiltration areas (PIA's) shall be clearly depicted and labeled on the Grading and Erosion Control plans.

2. **WQCV:**

STEP 2 SUMMARY TABLE

AREA ID	Associated Disturbance Area (ac)	Treatment Method	Ownership/Maintenance
BASIN A, B, C	7.49	Extended Detention Basin	Private Metro District
TRAIL	0.62	Trail Exclusion	Private
BASIN D	0.68	at least 75% infiltraction (SPA)	Private
TOTAL DISTURBANCE	**8.79**		
TOTAL DISTURBANCE WITH EXCLUSIONS	**8.17**	**355,885**	**(SF)**
TOTAL TREATED AREA	**8.17**	TOTAL DISTURBANCE WITH EXCLUSIONS MINUS ANY NOT TREATED AREA	
% TREATED	**100.00%**		

3. **STABILIZE STREAM CHANNELS:**

This site will utilize an existing storm sewer south of the site along with proposed storm systems within the development. These facilities will intercept and direct the on-site development flows directly to the existing pond. The existing drainageways will generally see a reduction in flows based on much of the tributary areas being captured on-site and routed to the pond. 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 within the drainage basin.

4. **SOURCE CONTROL** – All new and redevelopment that includes outdoor storage or the potential for the introduction of contaminants to the City's MS4 shall be required to implement site specific and/or source control measure to protect receiving waters. The subject site will be required to

implement Source Control CCMs applicable to residential activities as recommended in MHFD Volume 3 Chapter 5 listed as:

a. Disposal of Household Waste
b. Illicit Discharge Controls
c. Good Housekeeping

d. Use of Pesticides, Herbicides, and Fertilizers
e. Landscape Maintenance.

The site development includes a final landscape plan (provided by others) that will provide for final site stabilization of all disturbed areas within the development.

FLOODPLAIN STATEMENT

No portion of the platted site with the development, Creekridge at Flying Horse Filing No. 2, is located within a floodplain as determined by the Flood Insurance Rate Maps (F.I.R.M.) Map Number 08041C 0506G effective date, December 7, 2018 (See Appendix).

DRAINAGE AND BRIDGE FEES

ELKHORN BASIN & BLACK SQUIRREL BASIN

The total platted area of Filing No. 1 is 8.165 acres. This subdivision is located within the Elkhorn Basin

Elkhorn Basin:	8.165 acres

Elkhorn Drainage Basin

8.165 acres of Filing 2 is included in the Elkhorn Drainage Basin which is a closed basin per the annexation agreements for the area. No fees will be paid.

VARIANCES

No variances are proposed at this time.

SUMMARY

The proposed Creekridge at Flying Horse Filing No. 2 development will continue to direct drainage flows as previously approved in prior reports. The current proposal will not adversely affect any downstream or surrounding developments or drainage patterns. This report is in conformance with the previously approved Final Drainage Report(s) for this area and site. The rational method was used to perform calculations for this project, as included in the Appendix of this report utilizing table 6-6 of the DCM Volume 1. All calculations provided in the Appendix of this report are referenced from DCM and/or MHFD required charts, tables, and graphs. All hydrologic and hydraulic criteria have been met and conform with the requirements of the current City of Colorado Springs DCM.

PREPARED BY:
Classic Consulting Engineers & Surveyors, LLC

David L Gibson, P.E.
Project Manager

REFERENCES

1. City of Colorado Springs Drainage Criteria Manual Volume 1, dated May 2014, revised January 2021.

2. City of Colorado Springs Drainage Criteria Manual Volume 2, dated May 2014, revised December 2020

3. Mile High Flood Control District Urban Storm Drainage Criteria Manual Volume 3 dated December 2010 with March 2024 revisions.

4. "Web Soil Survey National Cooperative Soil Survey", by Natural Resources Conservation Service.

5. "Flood Insurance Rate Maps", dated December 7, 2018.

4. "Final Drainage Report for Reserve at Northcreek and Addendum to the Master Development Drainage Plan for Marketplace at Interquest and Final Drainage Report for Marketplace at Interquest Filing No. 1 and Filing No. 2" by Catamount Engineering dated June, 2017

5. "Master Drainage Plan for Marketplace at Interquest and Final Drainage Report for Marketplace at Interquest Filing No. 1 and Filing No. 2" by Classic Consulting Engineers & Surveyors dated September 2016.

6. "Master Development Drainage Plan Update for Fairlane Technological Park Interquest South (Lot 4, Fairlane Technology Parking Filing No. 2) and Final Drainage Report for Lots 1 & 2 Interquest Filing No. 6" by Classic Consulting Engineers & Surveyors dated April 2007.

7. "Preliminary/Final Drainage Report for Wildwood at Northgate Filing No. 1 & 2" by JR Engineering dated June 2004

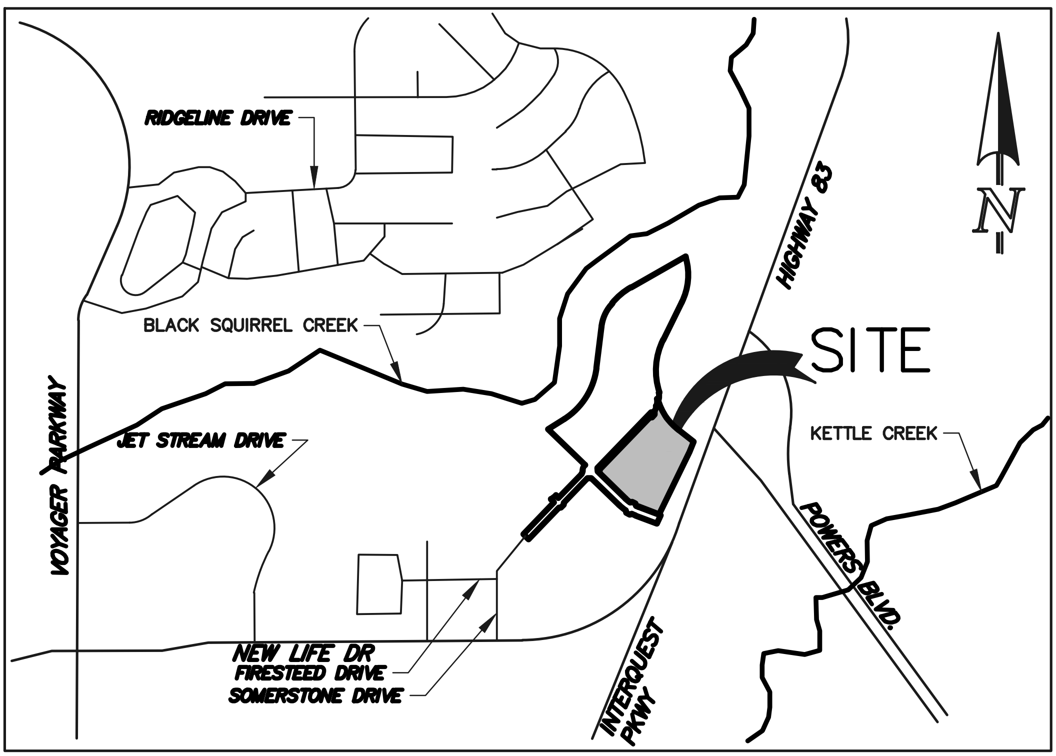
8. "Final Drainage Report Downtown Flying Horse Filing No. 1 Preliminary Drainage Report for Downtown Flying Horse Future Filings" by Classic Consulting dated January 2023

9. "Amendment #1 to Final Drainage Report Downtown Flying Horse Filing No. 1, Preliminary Drainage Report for Downtown Flying Horse Future Filings" by Classic Consulting dated August 2025.

APPENDIX

VICINITY MAP

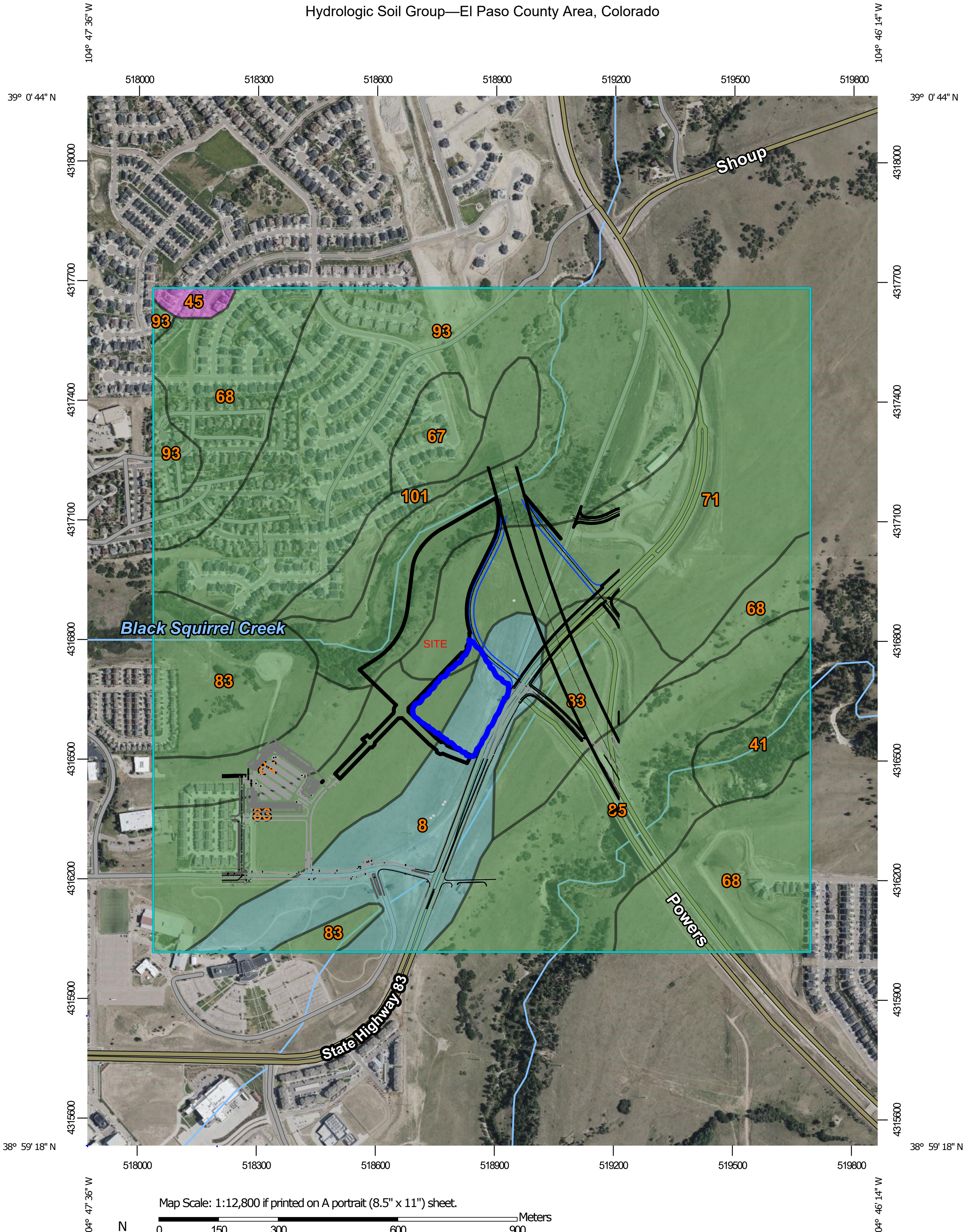
CLASSIC
CONSULTING
ENGINEERS & SURVEYORS



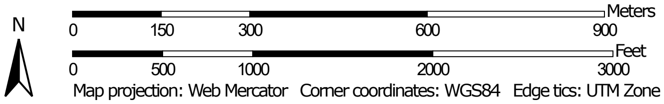
VICINITY MAP

N.T.S.

SOILS MAP (S.C.S SURVEY)



Map Scale: 1:12,800 if printed on A portrait (8.5" x 11") sheet.



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.

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
8	Blakeland loamy sand, 1 to 9 percent slopes	A	60.0	8.8%
41	Kettle gravelly loamy sand, 8 to 40 percent slopes	B	14.8	2.2%
45	Kutch clay loam, 5 to 20 percent slopes	C	3.2	0.5%
67	Peyton sandy loam, 5 to 9 percent slopes	B	11.4	1.7%
68	Peyton-Pring complex, 3 to 8 percent slopes	B	85.8	12.5%
71	Pring coarse sandy loam, 3 to 8 percent slopes	B	100.9	14.7%
83	Stapleton sandy loam, 3 to 8 percent slopes	B	120.6	17.6%
84	Stapleton sandy loam, 8 to 15 percent slopes	B	17.8	2.6%
85	Stapleton-Bernal sandy loams, 3 to 20 percent slopes	B	72.1	10.5%
93	Tomah-Crowfoot complex, 8 to 15 percent slopes	B	179.4	26.2%
101	Ustic Torrifluvents, loamy	B	18.0	2.6%
Totals for Area of Interest			**684.0**	**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

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

F.E.M.A. MAP

National Flood Hazard Layer FIRMette

FEMA

104°47'20"W 39°0'8"N

Feet

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

1:6,000

104°46'43"W 38°59'40"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
- B 20.2 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 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 4/29/2026 at 4:04 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.

DRAINAGE CALCULATIONS

CLASSIC
CONSULTING
ENGINEERS & SURVEYORS

JOB NAME: *CREEKRIDGE AT FLYING HORSE FILING NO. 2*
JOB NUMBER: *1171.78*
DATE: *05/18/26*
CALCULATED BY: *DLG*

BASIN RUNOFF COEFFICIENT SUMMARY

		C VALUE DCM TABLE 6-6						C VALUE DCM TABLE 6-6						WEIGHTED "C" VALUE			WEIGHTED CA			WEIGHTED IMP.
BASIN	TOTAL AREA (AC)	LAND USE	PERCENT IMP.	AREA (AC)	C(2)	C(5)	C(100)	LAND USE	PERCENT IMP.	AREA (AC)	C(2)	C(5)	C(100)	C(2)	C(5)	C(100)	CA(2)	CA(5)	CA(100)	PERCENT
A	1.72	RES 1/16	75.0%	1.72	0.51	0.54	0.65	LANDSCAPE	7.0%	0.00	0.02	0.08	0.35	0.51	0.54	0.65	0.88	0.93	1.12	75.0%
B	3.19	RES 1/16	75.0%	3.19	0.51	0.54	0.65	LANDSCAPE	7.0%	0.00	0.02	0.08	0.35	0.51	0.54	0.65	1.63	1.72	2.07	75.0%
C	2.58	RES 1/16	75.0%	2.58	0.51	0.54	0.65	LANDSCAPE	7.0%	0.00	0.02	0.08	0.35	0.51	0.54	0.65	1.32	1.39	1.68	75.0%
D	0.68	RES 1/16	75.0%	0.00	0.51	0.54	0.65	LANDSCAPE	7.0%	0.68	0.02	0.08	0.35	0.02	0.08	0.35	0.01	0.05	0.24	7.0%
EX-1	5.31	HISTORIC	100.0%	0.00	0.89	0.90	0.96	UNDEVELOPED	2.0%	5.31	0.02	0.08	0.35	0.02	0.08	0.35	0.11	0.42	1.86	2.0%
EX-2	52.70	HISTORIC	100.0%	0.00	0.89	0.90	0.96	UNDEVELOPED	2.0%	52.70	0.02	0.08	0.35	0.02	0.08	0.35	1.05	4.22	18.45	2.0%
EX-3	5.62	HISTORIC	100.0%	0.00	0.89	0.90	0.96	UNDEVELOPED	2.0%	5.62	0.02	0.08	0.35	0.02	0.08	0.35	0.11	0.45	1.97	2.0%
EX-4	3.85	HISTORIC	100.0%	0.00	0.89	0.90	0.96	UNDEVELOPED	2.0%	3.85	0.02	0.08	0.35	0.02	0.08	0.35	0.08	0.31	1.35	2.0%

JOB NAME:	*CREEKRIDGE AT FLYING HORSE FILING NO. 2*
JOB NUMBER:	*1171.78*
DATE:	*05/18/26*
CALC'D BY:	*DLG*

Return Period	1-Hour Depth
2	1.19
5	1.50
10	1.75
25	2.00
50	2.25
100	2.52

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

$$V = C_v S_w^{0.5}$$

Tc=L/V

Table 6-7. Conveyance Coefficient, C_v

Type of Land Surface	C_v
Heavy meadow	2.5
Tillage/field	5
Riprap (not buried)*	6.5
Short pasture and lawns	7
Nearly bare ground	10
Grassed waterway	15
Paved areas and shallow paved swales	20

$$t_c = \frac{L}{180} + 10$$

* For buried riprap, select C_v value based on type of vegetative cover.

BASIN RUNOFF SUMMARY

Intensity calculated using DCM vol 1 Chapter 6 figure 6.5

BASIN	WEIGHTED CA(2)	CA(5)	CA(100)	OVERLAND C(5)	Length (ft)	Height (ft)	Tc (min)	STREET / CHANNEL FLOW Length (ft)	Slope (%)	Velocity (fps)	Tc (min)	Tc TOTAL (min)	INTENSITY I(2) (in/hr)	I(5) (in/hr)	I(100) (in/hr)	TOTAL FLOWS Q(2) (cfs)	Q(5) (cfs)	Q(100) (cfs)
A	0.88	0.93	1.12	0.08	50	2	8.2	300	3.0%	3.5	1.4	9.7	3.33	4.18	7.01	2.9	**3.9**	**7.8**
B	1.63	1.72	2.07	0.08	100	2	14.7	300	2.0%	2.8	1.8	16.4	2.70	3.39	5.68	4.4	**5.8**	**11.8**
C	1.32	1.39	1.68	0.08	100	2	14.7	300	3.0%	3.5	1.4	16.1	2.73	3.42	5.73	3.6	**4.8**	**9.6**
D	0.01	0.05	0.24	0.08	100	2	14.7	300	2.0%	2.8	1.8	16.4	2.70	3.39	5.68	0.0	**0.2**	**1.4**
EX-1	0.11	0.42	1.86	0.08	300	8	23.1	1000	2.0%	2.8	5.9	29.0	2.03	2.53	4.25	0.2	**1.1**	**7.9**
EX-2	1.05	4.22	18.45	0.08	300	8	23.1	1000	2.0%	2.8	5.9	29.0	2.03	2.53	4.25	2.1	**10.7**	**78.4**
EX-3	0.11	0.45	1.97	0.08	300	50	12.6	0	0.0%	0.0	0.0	12.6	3.02	3.78	6.35	0.3	**1.7**	**12.5**
EX-4	0.08	0.31	1.35	0.08	300	50	12.6	0	0.0%	0.0	0.0	12.6	3.02	3.78	6.35	0.2	**1.2**	**8.6**

JOB NAME: *CREEKRIDGE AT FLYING HORSE FILING NO. 2*
JOB NUMBER: *1171.78*
DATE: *05/18/26*
CALCULATED BY: *DLG*

Intensity calculated using DCM vol 1 Chapter 6 figure 6.5

*ALL STORM SEWER TO BE PRIVATE UNLESS OTHERWISE NOTED

SURFACE ROUTING SUMMARY

Design Point(s)	Contributing Basins / Design Point	Equivalent CA(5)	Equivalent CA(100)	Maximum Tc	Intensity		Flow		Facility/ Inlet Size*
					I(5)	I(100)	Q(5)	Q(100)	
1	BASIN B	1.72	2.07	16.4	3.39	5.68	5.8	11.8	10' TYPE 2 PUBLIC
EX1	BASIN EX-1	0.42	1.86	29.0	2.53	4.25	1.1	7.9	N/A
EX2	BASIN EX-2	4.22	18.45	29.0	2.53	4.25	10.7	78.4	N/A
EX3	BASIN EX-3	0.45	1.97	12.6	3.78	6.35	1.7	12.5	N/A
EX4	BASIN EX-4	0.31	1.35	12.6	3.78	6.35	1.2	8.6	N/A

MHFD-Inlet, Version 6.00 (August 2025)

INLET MANAGEMENT

Project: CREEKRIDGE AT FLYING HORSE FILING NO. 2
Minor: 5-year
Major: 100-year

Worksheet Protected

INLET NAME	DP-1 INLET
Inlet Application (Street or Area)	STREET
Hydraulic Condition	In Sump
Inlet Type	CDOT Type R Curb Opening
Number of Inlet Units	1

USER-DEFINED INPUT

User-Defined Peak Flows

Minor Peak Flow, Q (cfs)	5.80
Major Peak Flow, Q (cfs)	11.80

Bypass (Carry-Over) Flow from Upstream Inlets must be organized from upstream (left) t

Receive Bypass Flow from:	
Bypass Flow Description (Optional):	
Minor Bypass Flow Received, Q_b (cfs)	
Major Bypass Flow Received, Q_b (cfs)	

CALCULATED OUTPUT

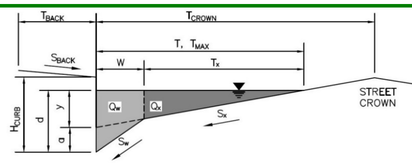
Minor Total Design Peak Flow, Q (cfs)	5.80
Major Total Design Peak Flow, Q (cfs)	11.80
Minor Inlet Interception Capacity, Q_a (cfs)	7.10
Major Inlet Interception Capacity, Q_a (cfs)	12.66
Minor Flow Bypassed Downstream, Qb (cfs)	N/A
Major Flow Bypassed Downstream, Qb (cfs)	N/A
Minor Flow Capture Percentage, C%	100%
Major Flow Capture Percentage, C%	100%

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: CREEKRIDGE AT FLYING HORSE FILING NO. 2

Inlet ID: DP-1 INLET



Gutter Geometry:

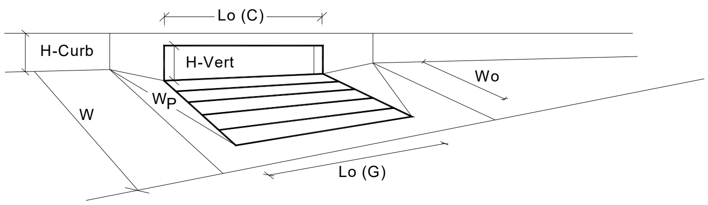
Maximum Allowable Width for Spread Behind Curb	T_{BACK} =	7.5	ft
Side Slope Behind Curb (leave blank for no conveyance credit behind curb)	S_{BACK} =	0.020	ft/ft
Manning's Roughness Behind Curb (typically between 0.012 and 0.020)	n_{BACK} =	0.020	
Height of Curb at Gutter Flow Line	H_{CURB} =	11.00	inches
Distance from Curb Face to Street Crown	T_{CROWN} =	13.0	ft
Gutter Width	W =	2.00	ft
Street Transverse Slope	S_X =	0.020	ft/ft
Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)	S_W =	0.065	ft/ft
Street Longitudinal Slope - Enter 0 for sump condition	S_O =	0.000	ft/ft
Manning's Roughness for Street Section (typically between 0.012 and 0.020)	n_{STREET} =	0.016	

		Minor Storm	Major Storm	
Max. Allowable Spread for Minor & Major Storm	T_{MAX} =	11.0	11.0	ft
Max. Allowable Depth at Gutter Flowline for Minor & Major Storm	d_{MAX} =	6.0	7.8	inches
Check boxes are not applicable in SUMP conditions		☐	☐	

		Minor Storm	Major Storm	
MINOR STORM Allowable Capacity is not applicable to Sump Condition MAJOR STORM Allowable Capacity is not applicable to Sump Condition	**Q_{allow} =**	**SUMP**	**SUMP**	**cfs**

INLET IN A SUMP OR SAG LOCATION

MHFD-Inlet, Version 6.00 (August 2025)



		MINOR	MAJOR	
Design Information (Input)	CDOT Type R Curb Opening			
Type of Inlet	Type =	CDOT Type R Curb Opening		
Local Depression (additional to continuous gutter depression 'a' from above)	a_{local} =	0.00	0.00	inches
Number of Unit Inlets (Grate or Curb Opening)	No =	1	1	
Water Depth at Flowline (outside of local depression)	Ponding Depth =	6.0	7.8	inches
Grate Information		MINOR	MAJOR	☑ Override Depths
Length of a Unit Grate	L_o (G) =	N/A	N/A	feet
Width of a Unit Grate	W_o =	N/A	N/A	feet
Open Area Ratio for a Grate (typical values 0.15-0.90)	A_{ratio} =	N/A	N/A	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)	C_f (G) =	N/A	N/A	
Grate Weir Coefficient (typical value 2.15 - 3.60)	C_w (G) =	N/A	N/A	
Grate Orifice Coefficient (typical value 0.60 - 0.80)	C_o (G) =	N/A	N/A	
Curb Opening Information		MINOR	MAJOR	
Length of a Unit Curb Opening	L_o (C) =	10.00	10.00	feet
Height of Vertical Curb Opening in Inches	H_{vert} =	6.00	6.00	inches
Height of Curb Orifice Throat in Inches	H_{throat} =	6.00	6.00	inches
Angle of Throat	Theta =	63.40	63.40	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)	W_p =	2.00	2.00	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)	C_f (C) =	0.10	0.10	
Curb Opening Weir Coefficient (typical value 2.3-3.7)	C_w (C) =	3.60	3.60	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)	C_o (C) =	0.67	0.67	
Low Head Performance Reduction (Calculated)		MINOR	MAJOR	
Depth for Grate Midwidth	d_{Grate} =	N/A	N/A	ft
Depth for Curb Opening Weir Equation	d_{Curb} =	0.37	0.52	ft
Grated Inlet Performance Reduction Factor for Long Inlets	RF_{Grate} =	N/A	N/A	
Curb Opening Performance Reduction Factor for Long Inlets	RF_{Curb} =	0.93	1.00	
Combination Inlet Performance Reduction Factor for Long Inlets	$RF_{Combination}$ =	N/A	N/A	
		MINOR	MAJOR	
Total Inlet Interception Capacity (assumes clogged condition)	**Q_a =**	**7.1**	**12.7**	**cfs**
Inlet Capacity IS GOOD for Minor and Major Storms (>Q Peak)	$Q_{PEAK\ REQUIRED}$ =	5.8	11.8	cfs

JOB NAME: *CREEKRIDGE AT FLYING HORSE FILING NO. 2*
JOB NUMBER: *1171.78*
DATE: *05/18/26*
CALCULATED BY: *DLG*

Intensity calculated using DCM vol 1 Chapter 6 figure 6.5

* PIPES ARE LISTED AT MAXIMUM SIZE REQUIRED TO ACCOMMODATE Q100 FLOWS AT MINIMUM SLOPE.
REFER TO INDIVIDUAL PIPE SHEETS FOR HYDRAULIC INFORMATION.
PIPES ARE TO BE PRIVATE UNLESS OTHERWISE NOTED.
PRIVATE STORM MATERIALS TO BE RCP OR DOUBLE WALL POLYPROPYLENE (DWPP) TO BE SELECTED BY CONTRACTOR

PIPE ROUTING SUMMARY

Pipe Run	Contributing Basins / Design Point/Pipe Run	Equivalent CA(5)	Equivalent CA(100)	Maximum Tc	Intensity		Flow		Pipe Size*
					I(5)	I(100)	Q(5)	Q(100)	
1	DP 1	1.72	2.07	16.4	3.39	5.68	5.8	11.8	24" PUBLIC RCP

GREEN INFRASTRUCTURE EXHIBIT

CLASSIC
CONSULTING
ENGINEERS & SURVEYORS

Design Procedure Form: Runoff Reduction

UD-BMP (Version 3.07, March 2018)

Designer:	**DLG**
Company:	**CLASSIC CONSULTING**
Date:	**May 18, 2026**
Project:	**CREEKRIDGE AT FLYING HORSE FILING NO. 2**
Location:	**CREEKRIDGE FILING NO. 2 ONLY**

SITE INFORMATION (User Input in Blue Cells)

WQCV Rainfall Depth	0.60	inches
Depth of Average Runoff Producing Storm, d_6 =	0.43	inches (for Watersheds Outside of the Denver Region, Figure 3-1 in USDCM Vol. 3)

Area Type	UIA:RPA										DCIA	SPA
Area ID	1										DCIA RES FIL 2	SPA RES FIL 2
Downstream Design Point ID	POND										POND	POND
Downstream BMP Type	EDB										EDB	EDB
DCIA (ft^2)	--										175,898	--
UIA (ft^2)	62,927										--	--
RPA (ft^2)	7,600										--	--
SPA (ft^2)	--										--	109,460
HSG A (%)	0%										--	
HSG B (%)	100%										--	
HSG C/D (%)	0%										--	
Average Slope of RPA (ft/ft)	0.010										--	--
UIA:RPA Interface Width (ft)	70.00										--	--

CALCULATED RUNOFF RESULTS

Area ID	1										DCIA RES FIL 2	SPA RES FIL 2
UIA:RPA Area (ft^2)	70,527										--	--
L / W Ratio	14.39										--	--
UIA / Area	0.8922										--	--
Runoff (in)	0.28										0.50	0.00
Runoff (ft^3)	1672										7329	0
Runoff Reduction (ft^3)	950										0	5473

CALCULATED WQCV RESULTS

Area ID	1										DCIA RES FIL 2	SPA RES FIL 2
WQCV (ft^3)	2622										7329	0
WQCV Reduction (ft^3)	950										0	0
WQCV Reduction (%)	36%										0%	0%
Untreated WQCV (ft^3)	1672										7329	0

CALCULATED DESIGN POINT RESULTS (sums results from all columns with the same Downstream Design Point ID)

Downstream Design Point ID	POND											
DCIA (ft^2)	175,898											
UIA (ft^2)	62,927											
RPA (ft^2)	7,600											
SPA (ft^2)	109,460											
Total Area (ft^2)	355,885											
Total Impervious Area (ft^2)	238,825											
WQCV (ft^3)	9,951											
WQCV Reduction (ft^3)	950											
WQCV Reduction (%)	10%											
Untreated WQCV (ft^3)	9,001											

CALCULATED SITE RESULTS (sums results from all columns in worksheet)

Total Area (ft^2)	355,885
Total Impervious Area (ft^2)	238,825
WQCV (ft^3)	9,951
WQCV Reduction (ft^3)	950
WQCV Reduction (%)	10%
Untreated WQCV (ft^3)	9,001

Design Procedure Form: Runoff Reduction

UD-BMP (Version 3.07, March 2018)

Designer: DLG
Company: CLASSIC CONSULTING
Date: May 18, 2026
Project: CREEKRIDGE AT FLYING HORSE FILING NO. 2
Location: CREEKRIDGE FILING NO. 2, FILING NO. 1, AND DOWTOWN FLYING HORSE FILING NO. 1 COMBO

SITE INFORMATION (User Input in Blue Cells)

WQCV Rainfall Depth: 0.60 inches
Depth of Average Runoff Producing Storm, d_6 = 0.43 inches (for Watersheds Outside of the Denver Region, Figure 3-1 in USDCM Vol. 3)

Area Type	UIA:RPA	UIA:RPA	UIA:RPA	UIA:RPA	UIA:RPA		DCIA	SPA	SPA	DCIA	DCIA	SPA
Area ID	1-1	1-2	1-3	DTFH	FIL 1		DCIA RES FIL 2	SPA RES FIL 2	SPA APT	APT	DCIA RES FIL 1	SPA RES FIL 1
Downstream Design Point ID	POND	POND	POND	POND	POND		POND	POND	POND	POND	POND	POND
Downstream BMP Type	EDB	EDB	EDB	EDB	EDB		EDB	EDB	EDB	EDB	EDB	EDB
DCIA (ft^2)	--	--	--	--	--		175,898	--	--	269,941	294,365	--
UIA (ft^2)	65,045	65,045	65,045	54,014	62,927		--	--	--	--	--	--
RPA (ft^2)	6,610	6,610	6,610	5,227	7,600		--	--	--	--	--	--
SPA (ft^2)	--	--	--	--	--		--	109,460	10,401	--	--	118,170
HSG A (%)	0%	0%	0%	0%	0%		--		0%	--	--	0%
HSG B (%)	100%	100%	100%	100%	100%		--		100%	--	--	100%
HSG C/D (%)	0%	0%	0%	0%	0%		--		0%	--	--	0%
Average Slope of RPA (ft/ft)	0.010	0.010	0.010	0.010	0.010		--	--	--	--	--	--
UIA:RPA Interface Width (ft)	70.00	70.00	70.00	70.00	70.00		--	--	--	--	--	--

CALCULATED RUNOFF RESULTS

Area ID	1-1	1-2	1-3	DTFH	FIL 1		DCIA RES FIL 2	SPA RES FIL 2	SPA APT	APT	DCIA RES FIL 1	SPA RES FIL 1
UIA:RPA Area (ft^2)	71,655	71,655	71,655	59,241	70,527		--	--	--	--	--	--
L / W Ratio	14.62	14.62	14.62	12.09	14.39		--	--	--	--	--	--
UIA / Area	0.9078	0.9078	0.9078	0.9118	0.8922		--	--	--	--	--	--
Runoff (in)	0.31	0.31	0.31	0.32	0.28		0.50	0.00	0.00	0.50	0.50	0.00
Runoff (ft^3)	1848	1848	1848	1594	1672		7329	0	0	11248	12265	0
Runoff Reduction (ft^3)	862	862	862	656	950		0	5473	520	0	0	5909

CALCULATED WQCV RESULTS

Area ID	1-1	1-2	1-3	DTFH	FIL 1		DCIA RES FIL 2	SPA RES FIL 2	SPA APT	APT	DCIA RES FIL 1	SPA RES FIL 1
WQCV (ft^3)	2710	2710	2710	2251	2622		7329	0	0	11248	12265	0
WQCV Reduction (ft^3)	862	862	862	656	950		0	0	0	0	0	0
WQCV Reduction (%)	32%	32%	32%	29%	36%		0%	0%	0%	0%	0%	0%
Untreated WQCV (ft^3)	1848	1848	1848	1594	1672		7329	0	0	11248	12265	0

CALCULATED DESIGN POINT RESULTS (sums results from all columns with the same Downstream Design Point ID)

Downstream Design Point ID	POND											
DCIA (ft^2)	740,204											
UIA (ft^2)	312,076											
RPA (ft^2)	32,657											
SPA (ft^2)	238,031											
Total Area (ft^2)	1,322,968											
Total Impervious Area (ft^2)	1,052,280											
WQCV (ft^3)	43,845											
WQCV Reduction (ft^3)	4,192											
WQCV Reduction (%)	10%											
Untreated WQCV (ft^3)	39,653											

CALCULATED SITE RESULTS (sums results from all columns in worksheet)

Total Area (ft^2)	1,322,968
Total Impervious Area (ft^2)	1,052,280
WQCV (ft^3)	43,845
WQCV Reduction (ft^3)	4,192
WQCV Reduction (%)	10%
Untreated WQCV (ft^3)	39,653

Design Procedure Form: Runoff Reduction

UD-BMP (Version 3.07, March 2018)

Designer: DLG
Company: CLASSIC CONSULTING
Date: May 19, 2026
Project: CREEKRIDGE AT FLYING HORSE FILING NO. 2
Location: CREEKRIDGE FILING NO. 2 BASIN D

SITE INFORMATION (User Input in Blue Cells)

WQCV Rainfall Depth: 0.60 inches
Depth of Average Runoff Producing Storm, d_6 = 0.43 inches (for Watersheds Outside of the Denver Region, Figure 3-1 in USDCM Vol. 3)

Area Type	SPA
Area ID	BASIN D
Downstream Design Point ID	ROAD
Downstream BMP Type	None
DCIA (ft^2)	--
UIA (ft^2)	--
RPA (ft^2)	--
SPA (ft^2)	29,620
HSG A (%)	0%
HSG B (%)	100%
HSG C/D (%)	0%
Average Slope of RPA (ft/ft)	--
UIA:RPA Interface Width (ft)	--

CALCULATED RUNOFF RESULTS

Area ID	BASIN D
UIA:RPA Area (ft^2)	--
L / W Ratio	--
UIA / Area	--
Runoff (in)	0.00
Runoff (ft^3)	0
Runoff Reduction (ft^3)	1481

CALCULATED WQCV RESULTS

Area ID	BASIN D
WQCV (ft^3)	0
WQCV Reduction (ft^3)	0
WQCV Reduction (%)	0%
Untreated WQCV (ft^3)	0

CALCULATED DESIGN POINT RESULTS (sums results from all columns with the same Downstream Design Point ID)

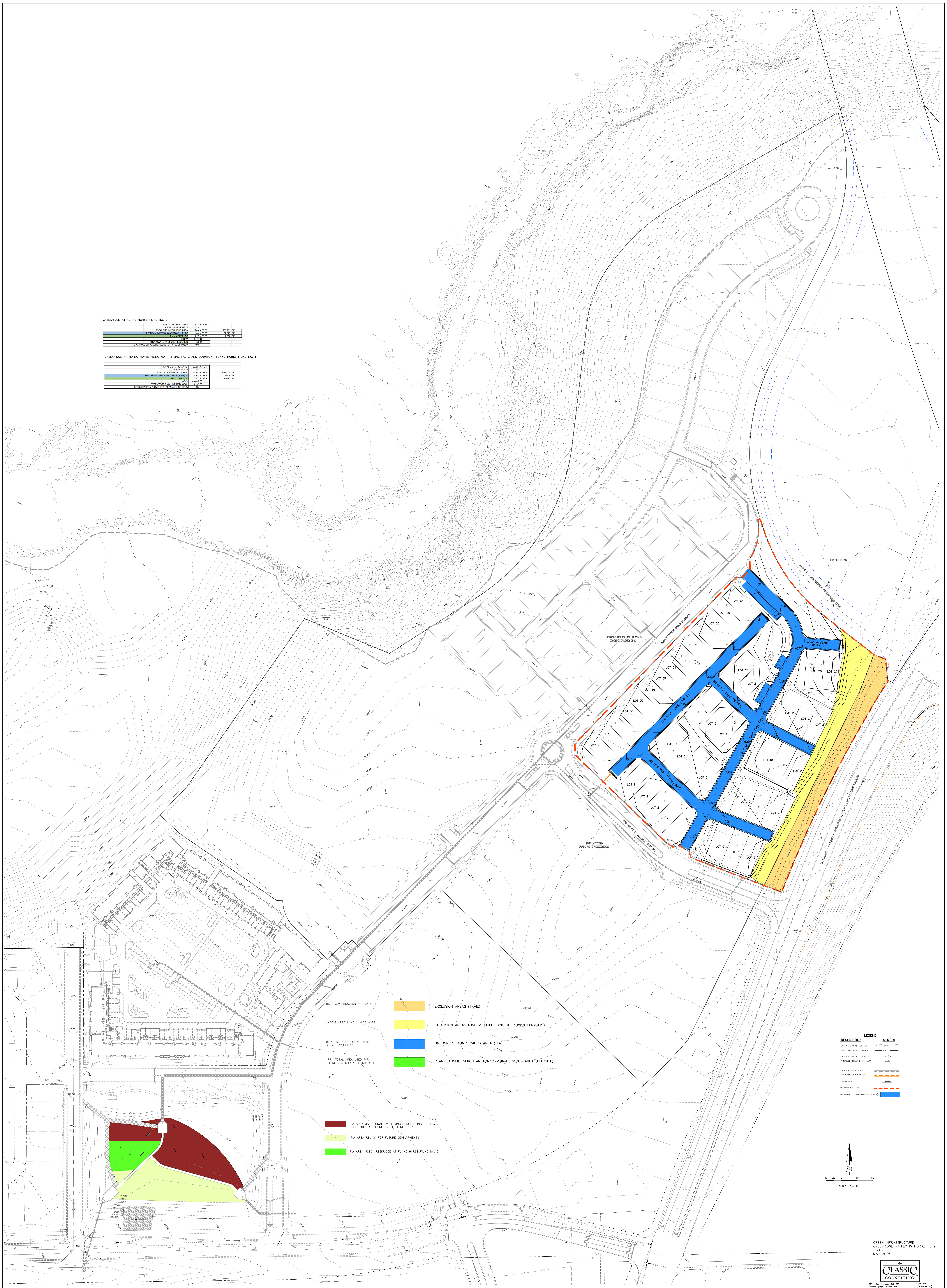
Downstream Design Point ID	ROAD
DCIA (ft^2)	0
UIA (ft^2)	0
RPA (ft^2)	0
SPA (ft^2)	29,620
Total Area (ft^2)	29,620
Total Impervious Area (ft^2)	0
WQCV (ft^3)	0
WQCV Reduction (ft^3)	0
WQCV Reduction (%)	0%
Untreated WQCV (ft^3)	0

CALCULATED SITE RESULTS (sums results from all columns in worksheet)

Total Area (ft^2)	29,620
Total Impervious Area (ft^2)	0
WQCV (ft^3)	0
WQCV Reduction (ft^3)	0
WQCV Reduction (%)	0%
Untreated WQCV (ft^3)	0

THIS BASIN REMAINS PERVIOUS AFTER DEVELOPMENT. THIS MEETS THE INTENT OF MINIMUM 75% WQCV REDUCTION/INFILTRATION CRITERIA AND ARE THEREBY CONSIDERED TO BE TREATED FOR STEP 2

SEE GI MAP FOR TOTAL COMBINED REDUCTION



CREEKRIDGE AT FLYING HORSE FILING NO. 2

TOTAL DISTURBED AREA	8.17	ACRES		
TOTAL IMPERVIOUS %	67%			
TOTAL SITE IMPERVIOUS AREA	5.48	ACRES	238,709	SF
UPSTREAM IMERVIOUS AREAS (BLUE) AC	1.44	ACRES	62,927	SF
PIA (IN GREE) AC	0.17	ACRES	7,600	SF
WQCV	9,951	CF		
STORMWATER VOLUME REDUCTION	950	CF		
STORMWATER VOLUME REDUCTION AT % OF WQCV	10%			

CREEKRIDGE AT FLYING HORSE FILING NO. 1, FILING NO. 2 AND DOWNTOWN FLYING HORSE FILING NO. 1

TOTAL DISTURBED AREA	30.37	ACRES		
TOTAL IMPERVIOUS %	79%			
TOTAL SITE IMPERVIOUS AREA	24.16	ACRES	1,052,410	SF
UPSTREAM IMERVIOUS AREAS (BLUE) AC	7.16	ACRES	312,076	SF
PIA (IN GREE) AC	0.75	ACRES	32,657	SF
WQCV	43,845	CF		
STORMWATER VOLUME REDUCTION	4,192	CF		
STORMWATER VOLUME REDUCTION AT % OF WQCV	10%			

GREEN INFRASTRUCTURE
CREEKRIDGE AT FLYING HORSE FIL 2
1171.79
MAY 2026

CLASSIC CONSULTING
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799 (Fax)

EXISTING CONDITIONS DRAINAGE MAPS:

FINAL DRAINAGE REPORT ~ BASIN RUNOFF COEFFICIENT SUMMARY

BASIN	TOTAL AREA (AC)	DEVELOPED AREA/IMPERVIOUS AREA				LANDSCAPE/UNDEVELOPED AREAS				WEIGHTED			WEIGHTED CA		
		AREA (AC)	C(2)	C(5)	C(100)	AREA (AC)	C(2)	C(5)	C(100)	C(2)	C(5)	C(100)	**CA(2)**	**CA(5)**	**CA(100)**
EX-1	5.31	0.00	0.89	0.90	0.96	5.31	0.02	0.08	0.35	0.02	0.08	0.35	**0.11**	**0.42**	**1.86**
EX-2	52.70	0.00	0.89	0.90	0.96	52.70	0.02	0.08	0.35	0.02	0.08	0.35	**1.05**	**4.22**	**18.45**
EX-3	5.62	0.00	0.89	0.90	0.96	5.62	0.02	0.08	0.35	0.02	0.08	0.35	**0.11**	**0.45**	**1.97**
EX-4	3.85	0.00	0.89	0.90	0.96	3.85	0.02	0.08	0.35	0.02	0.08	0.35	**0.08**	**0.31**	**1.35**

FINAL DRAINAGE REPORT ~ BASIN RUNOFF SUMMARY

BASIN	WEIGHTED			OVERLAND				STREET / CHANNEL FLOW				Tc	INTENSITY			TOTAL FLOWS		
	CA(2)	CA(5)	CA(100)	C(5)	Length (ft)	Height (ft)	Tc (min)	Length (ft)	Slope (%)	Velocity (fps)	Tc (min)	TOTAL (min)	I(2) (in/hr)	I(5) (in/hr)	I(100) (in/hr)	Q(2) (cfs)	Q(5) (cfs)	Q(100) (cfs)
EX-1	0.11	0.42	1.86	0.08	300	8	23.1	1000	2.0%	2.8	5.9	29.0	2.03	2.53	4.25	0.2	**1.1**	**7.9**
EX-2	1.05	4.22	18.45	0.08	300	8	23.1	1000	4.0%	4.0	4.2	27.2	2.10	2.63	4.41	2.2	**11.1**	**81.3**
EX-3	0.11	0.45	1.97	0.08	300	50	12.6	0	0.0%	0.0	0.0	12.6	3.02	3.78	6.35	0.3	**1.7**	**12.5**
EX-4	0.08	0.31	1.35	0.08	300	50	12.6	0	0.0%	0.0	0.0	12.6	3.02	3.78	6.35	0.2	**1.2**	**8.6**

FINAL DRAINAGE REPORT ~ SURFACE ROUTING SUMMARY

Design Point(s)	Contributing Basins	Equivalent CA(5)	Equivalent CA(100)	Maximum Tc	Intensity		Flow		
					I(5)	I(100)	Q(5)	Q(100)	Inlet Size
E-1	BASIN EX-1	0.42	1.86	29.0	2.53	4.25	1.1	7.9	RUNNING WATER DRIVE CURB
E-2	BASIN EX-2	4.22	18.45	27.2	2.63	4.41	11.1	81.3	EXISTING PUBLIC 24" RCP CULVERT
E-3	BASIN EX-3	0.45	1.97	12.6	3.78	6.35	1.7	12.5	OVERLAND SLOPE
E-4	BASIN EX-4	0.31	1.35	12.6	3.78	6.35	1.2	8.6	OVERLAND SLOPE

CLASSIC CONSULTING

619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799 (Fax)

DOWNTOWN FLYING HORSE
EXISTING CONDITIONS MAP

DESIGNED BY	DLG	SCALE	DATE
DRAWN BY	DLG	(H) 1"=	SHEET 1 OF 1
CHECKED BY		(V) 1"=	JOB NO. 2573.40

REFERENCE REPORTS & MAPS

BASIN RUNOFF SUMMARY

Intensity calculated using DCM vol 1 Chapter 6 figure 6.5

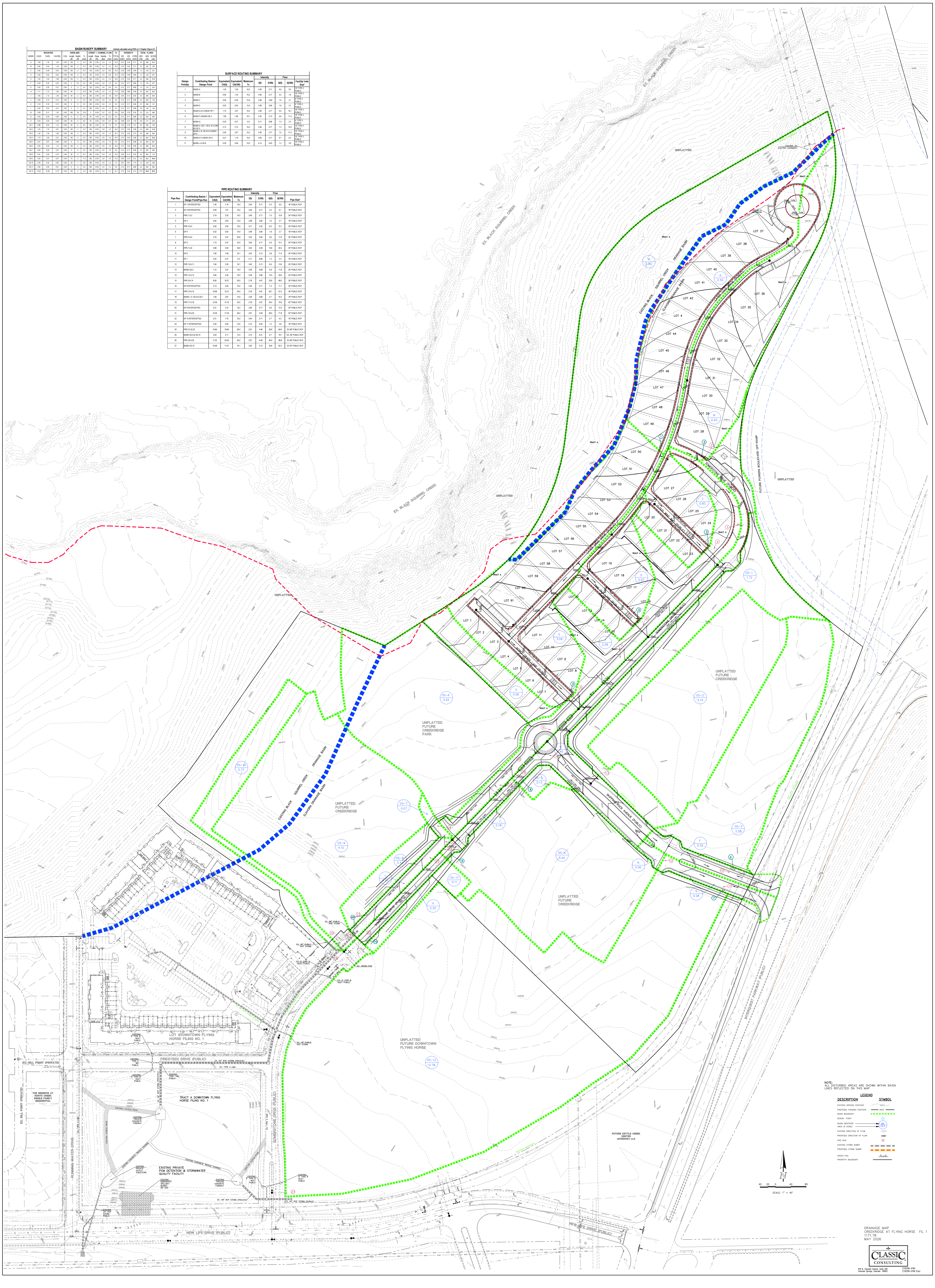
BASIN	WEIGHTED CA(2)	WEIGHTED CA(5)	WEIGHTED CA(100)	OVERLAND C(5)	OVERLAND Length (ft)	OVERLAND Height (ft)	OVERLAND Tc (min)	STREET / CHANNEL FLOW Length (ft)	STREET / CHANNEL FLOW Slope (%)	STREET / CHANNEL FLOW Velocity (fps)	STREET / CHANNEL FLOW Tc (min)	Tc TOTAL (min)	INTENSITY I(2) (in/hr)	INTENSITY I(5) (in/hr)	INTENSITY I(100) (in/hr)	TOTAL FLOWS Q(2) (cfs)	TOTAL FLOWS Q(5) (cfs)	TOTAL FLOWS Q(100) (cfs)
A	1.28	1.35	1.63	0.08	100	2	14.7	300	2.5%	3.2	1.6	16.2	2.72	3.40	5.71	3.5	**4.6**	**9.3**
B	0.84	0.94	1.33	0.08	100	2	14.7	300	2.5%	3.2	1.6	16.2	2.72	3.40	5.71	2.3	**3.2**	**7.6**
C	0.42	0.45	0.54	0.08	100	2	14.7	150	2.5%	3.2	0.8	15.4	2.78	3.48	5.84	1.2	**1.6**	**3.1**
D	0.49	0.52	0.63	0.08	100	2	14.7	150	2.5%	3.2	0.8	15.4	2.78	3.48	5.84	1.4	**1.8**	**3.7**
E	1.55	1.64	1.98	0.08	100	2	14.7	300	2.5%	3.2	1.6	16.2	2.72	3.40	5.71	4.2	**5.6**	**11.3**
F	0.29	0.30	0.32	0.08	0	0.5	0.0	300	2.0%	2.8	1.8	5.0	4.12	5.17	8.68	1.2	**1.5**	**2.7**
G	0.25	0.25	0.27	0.08	0	0	0.0	100	2.0%	2.8	0.6	5.0	4.12	5.17	8.68	1.0	**1.3**	**2.3**
H	1.11	1.13	1.26	0.08	50	1	10.4	300	2.5%	3.2	1.6	11.9	3.08	3.86	6.49	3.4	**4.4**	**8.2**
I	1.06	1.12	1.35	0.08	50	2	8.2	300	2.0%	2.8	1.8	10.0	3.29	4.13	6.93	3.5	**4.6**	**9.4**
J	0.09	0.10	0.12	0.08	0	0	0.0	200	2.0%	2.8	1.2	5.0	4.12	5.17	8.68	0.4	**0.5**	**1.0**
K	0.18	0.18	0.19	0.08	0	0	0.0	200	2.0%	2.8	1.2	5.0	4.12	5.17	8.68	0.7	**0.9**	**1.7**
L	0.20	0.20	0.21	0.08	0	0	0.0	200	2.0%	2.8	1.2	5.0	4.12	5.17	8.68	0.8	**1.0**	**1.8**
M	0.08	0.31	1.35	0.08	300	50	12.6	0	0.0%	0.0	0.0	12.6	3.02	3.78	6.35	0.2	**1.2**	**8.6**
N	0.05	0.05	0.06	0.08	0	0	0.0	50	1.0%	2.0	0.4	5.0	4.12	5.17	8.68	0.2	**0.3**	**0.5**
O	0.23	0.25	0.33	0.08	50	2	8.2	50	2.0%	2.8	0.3	8.5	3.48	4.37	7.33	0.8	**1.1**	**2.4**
OS-1	0.88	0.93	1.12	0.08	50	2	8.2	300	3.0%	3.5	1.4	9.7	3.33	4.18	7.01	2.9	**3.9**	**7.8**
OS-2	1.63	1.72	2.07	0.08	100	2	14.7	300	2.0%	2.8	1.8	16.4	2.70	3.39	5.68	4.4	**5.8**	**11.8**
OS-3	1.32	1.39	1.68	0.08	100	2	14.7	300	3.0%	3.5	1.4	16.1	2.73	3.42	5.73	3.6	**4.8**	**9.6**
OS-4	1.73	1.84	2.21	0.08	100	2	14.7	300	2.0%	2.8	1.8	16.4	2.70	3.39	5.68	4.7	**6.2**	**12.6**
OS-5	0.07	0.07	0.08	0.08	0	0	0.0	300	3.0%	3.5	1.4	5.0	4.12	5.17	8.68	0.3	**0.4**	**0.7**
OS-6	0.06	0.26	1.12	0.08	100	2	14.7	300	2.0%	2.8	1.8	16.4	2.70	3.39	5.68	0.2	**0.9**	**6.4**
OS-7	0.06	0.06	0.07	0.08	0	0	0.0	300	2.0%	2.8	1.8	5.0	4.12	5.17	8.68	0.3	**0.3**	**0.6**
OS-8	0.07	0.09	0.19	0.08	50	2	8.2	300	2.0%	2.8	1.8	10.0	3.29	4.13	6.93	0.2	**0.4**	**1.3**
OS-9	2.09	2.21	2.67	0.08	75	2	11.5	300	2.0%	2.8	1.8	13.3	2.95	3.70	6.21	6.2	**8.2**	**16.6**
OS-10	0.39	0.42	0.50	0.08	25	1	5.8	300	3.0%	3.5	1.4	7.3	3.67	4.61	7.74	1.4	**1.9**	**3.9**
OS-11	0.06	0.06	0.07	0.08	0	0	0.0	300	3.0%	3.5	1.4	5.0	4.12	5.17	8.68	0.2	**0.3**	**0.6**
OS-12	10.22	10.48	11.37	0.08	100	2	14.7	300	3.0%	3.5	1.4	16.1	2.73	3.42	5.73	27.9	**35.8**	**65.2**

SURFACE ROUTING SUMMARY

Design Point(s)	Contributing Basins / Design Point	Equivalent CA(5)	Equivalent CA(100)	Maximum Tc	Intensity I(5)	Intensity I(100)	Flow Q(5)	Flow Q(100)	Facility/ Inlet Size*
1	BASIN A	1.35	1.63	16.2	3.40	5.71	4.6	9.3	10' TYPE 2 PUBLIC
2	BASIN B	0.94	1.33	16.2	3.40	5.71	3.2	7.6	10' TYPE 2 PUBLIC
3	BASIN C	0.45	0.54	15.4	3.48	5.84	1.6	3.1	5' TYPE 2 PUBLIC
4	BASIN D	0.52	0.63	15.4	3.48	5.84	1.8	3.7	5' TYPE 2 PUBLIC
5	BASIN E & FLOW-BY DP 1	1.73	2.47	16.2	3.40	5.71	5.9	14.1	10' TYPE 2 PUBLIC
6	BASIN F & BASIN OS-3	1.69	1.99	16.1	3.42	5.73	5.8	11.4	10' TYPE 2 PUBLIC
7	BASIN G	0.25	0.27	5.0	5.17	8.68	1.3	2.3	5' TYPE 2 PUBLIC
8	BASIN H, OS-1, OS-5 & FLOW-BY DP 2	2.13	2.73	16.2	3.40	5.71	7.3	15.6	15' TYPE 2 PUBLIC
9	BASIN J, N, OS-4 & FLOW-BY DP 8	2.05	3.07	16.2	3.40	5.71	7.0	17.5	15' TYPE 2 PUBLIC
10	BASIN K FLOW-BY DP 9	0.21	1.10	16.2	3.40	5.71	0.7	6.3	15' TYPE 2 PUBLIC
11	BASIN L & OS-8	0.29	0.40	10.0	4.13	6.93	1.2	2.8	10' TYPE 2 PUBLIC

PIPE ROUTING SUMMARY

Pipe Run	Contributing Basins / Design Point/Pipe Run	Equivalent CA(5)	Equivalent CA(100)	Maximum Tc	Intensity I(5)	Intensity I(100)	Flow Q(5)	Flow Q(100)	Pipe Size*
1	DP 1 INTERCEPTED	1.26	1.14	16.2	3.40	5.71	4.3	6.5	18" PUBLIC RCP
2	DP 2 INTERCEPTED	0.94	1.07	16.2	3.40	5.71	3.2	6.1	18" PUBLIC RCP
3	PIPE 1 & 2	2.19	2.20	16.2	3.40	5.71	7.5	12.6	24" PUBLIC RCP
4	DP 3	0.45	0.63	15.4	3.48	5.84	1.6	3.7	18" PUBLIC RCP
5	PIPE 3 & 4	2.64	2.83	19.0	3.17	5.32	8.4	15.1	24" PUBLIC RCP
6	DP 4	0.52	0.63	15.4	3.48	5.84	1.8	3.7	18" PUBLIC RCP
7	PIPE 5 & 6	3.16	3.47	20.8	3.03	5.09	9.6	17.6	24" PUBLIC RCP
8	DP 5	1.73	2.47	16.2	3.40	5.71	5.9	14.1	24" PUBLIC RCP
9	PIPE 7 & 8	4.89	5.93	20.8	3.03	5.09	14.8	30.2	30" PUBLIC RCP
10	DP 6	1.69	1.99	16.1	3.42	5.73	5.8	11.4	24" PUBLIC RCP
11	DP 7	0.25	0.27	5.0	5.17	8.68	1.3	2.3	18" PUBLIC RCP
12	PIPE 10 & 11	1.94	2.26	16.1	3.42	5.73	6.6	13.0	24" PUBLIC RCP
13	BASIN OS-2	1.72	2.07	16.4	3.39	5.68	5.8	11.8	24" PUBLIC RCP
14	PIPE 12 & 13	3.66	4.34	16.4	3.39	5.68	12.4	24.6	24" PUBLIC RCP
15	PIPE 9 & 14	8.56	10.27	24.5	2.78	4.67	23.8	48.0	36" PUBLIC RCP
16	DP 8 INTERCEPTED	2.13	2.05	16.2	3.40	5.71	7.3	11.7	24" PUBLIC RCP
17	PIPE 15 & 16	10.69	12.31	24.5	2.78	4.67	29.7	57.5	36" PUBLIC RCP
18	BASIN I, O, OS-6 & OS-7	1.69	2.87	16.4	3.39	5.68	5.7	16.3	18" PUBLIC RCP
19	PIPE 17 & 18	12.38	15.19	24.5	2.78	4.67	34.5	70.9	42" PUBLIC RCP
20	DP 9 INTERCEPTED	2.01	2.15	16.2	3.40	5.71	6.8	12.3	24" PUBLIC RCP
21	PIPE 19 & 20	14.39	17.34	26.4	2.67	4.49	38.5	77.8	42" PUBLIC RCP
22	DP 10 INTERCEPTED	0.21	1.10	16.2	3.40	5.71	0.7	6.3	18" PUBLIC RCP
23	DP 11 INTERCEPTED	0.29	0.40	10.0	4.13	6.93	1.2	2.8	18" PUBLIC RCP
24	PIPE 21,22,23	14.89	18.84	26.4	2.67	4.49	39.8	84.6	EX 48" PUBLIC RCP
25	BASIN OS-9 & OS-10	2.63	3.17	13.3	3.70	6.21	9.7	19.7	EX. 36" PUBLIC RCP
26	PIPE 24 & 25	17.52	22.00	26.4	2.67	4.49	46.9	98.8	EX 48" PUBLIC RCP
27	BASIN OS-12	10.48	11.37	16.1	3.42	5.73	35.8	65.2	EX 42" PUBLIC RCP



DRAINAGE MAP
CREEKRIDGE AT FLYING HORSE FIL 1
1171.78
MAY 2026

CLASSIC CONSULTING

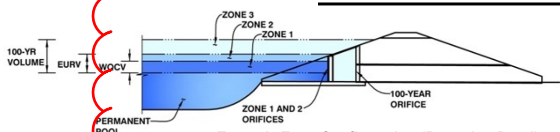
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799 (Fax)

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)

Project: DOWNTOWN FLYING HORSE FILING NO. 1 AMENDMENT # 1

Basin ID: POND 1



Example Zone Configuration (Retention Pond)

	Estimated Stage (ft)	Estimated Volume (ac-ft)	Outlet Type
Zone 1 (WQCV)	3.83	1.203	Orifice Plate
Zone 2 (EURV)	5.79	2.737	Orifice Plate
Zone 3 (100-year)	7.45	3.275	Weir&Pipe (Restrict)
	Total (all zones)	7.215	

User Input: Orifice at Underdrain Outlet (typically used to drain WQCV in a Filtration BMP)

Underdrain Orifice Invert Depth =	N/A	ft (distance below the filtration media surface)
Underdrain Orifice Diameter =	N/A	inches

Calculated Parameters for Underdrain

Underdrain Orifice Area =	N/A	ft^2
Underdrain Orifice Centroid =	N/A	feet

User Input: Orifice Plate with one or more orifices or Elliptical Slot Weir (typically used to drain WQCV and/or EURV in a sedimentation BMP)

Centroid of Lowest Orifice =	0.00	ft (relative to basin bottom at Stage = 0 ft)
Depth at top of Zone using Orifice Plate =	7.00	ft (relative to basin bottom at Stage = 0 ft)
Orifice Plate: Orifice Vertical Spacing =	21.00	inches
Orifice Plate: Orifice Area per Row =	N/A	sq. inches

Calculated Parameters for Plate

WQ Orifice Area per Row =	N/A	ft^2
Elliptical Half-Width =	N/A	feet
Elliptical Slot Centroid =	N/A	feet
Elliptical Slot Area =	N/A	ft^2

User Input: Stage and Total Area of Each Orifice Row (numbered from lowest to highest)

	Row 1 (required)	Row 2 (optional)	Row 3 (optional)	Row 4 (optional)	Row 5 (optional)	Row 6 (optional)	Row 7 (optional)	Row 8 (optional)
Stage of Orifice Centroid (ft)	0.00	1.80	3.60	5.40				
Orifice Area (sq. inches)	4.00	4.50	14.00	14.00				

	Row 9 (optional)	Row 10 (optional)	Row 11 (optional)	Row 12 (optional)	Row 13 (optional)	Row 14 (optional)	Row 15 (optional)	Row 16 (optional)
Stage of Orifice Centroid (ft)								
Orifice Area (sq. inches)								

User Input: Vertical Orifice (Circular or Rectangular)

	Not Selected	Not Selected	
Invert of Vertical Orifice =	N/A	N/A	ft (relative to basin bottom at Stage = 0 ft)
Depth at top of Zone using Vertical Orifice =	N/A	N/A	ft (relative to basin bottom at Stage = 0 ft)
Vertical Orifice Diameter =	N/A	N/A	inches

Calculated Parameters for Vertical Orifice

	Not Selected	Not Selected	
Vertical Orifice Area =	N/A	N/A	ft^2
Vertical Orifice Centroid =	N/A	N/A	feet

User Input: Overflow Weir (Dropbox with Flat or Sloped Grate and Outlet Pipe OR Rectangular/Trapezoidal Weir and No Outlet Pipe)

	Zone 3 Weir	Not Selected	
Overflow Weir Front Edge Height, Ho =	7.00	N/A	ft (relative to basin bottom at Stage = 0 ft)
Overflow Weir Front Edge Length =	8.00	N/A	feet
Overflow Weir Grate Slope =	0.00	N/A	H:V
Horiz. Length of Weir Sides =	4.00	N/A	feet
Overflow Grate Type =	Type C Grate	N/A	
Debris Clogging % =	50%	N/A	%

Calculated Parameters for Overflow Weir

	Zone 3 Weir	Not Selected	
Height of Grate Upper Edge, H_t =	7.00	N/A	feet
Overflow Weir Slope Length =	4.00	N/A	feet
Grate Open Area / 100-yr Orifice Area =	8.81	N/A	
Overflow Grate Open Area w/o Debris =	22.27	N/A	ft^2
Overflow Grate Open Area w/ Debris =	22.27	N/A	ft^2

User Input: Outlet Pipe w/ Flow Restriction Plate (Circular Orifice, Restrictor Plate, or Rectangular Orifice)

	Zone 3 Restrictor	Not Selected	
Depth to Invert of Outlet Pipe =	0.25	N/A	ft (distance below basin bottom at Stage = 0 ft)
Outlet Pipe Diameter =	24.00	N/A	inches
Restrictor Plate Height Above Pipe Invert =	18.00		inches

Calculated Parameters for Outlet Pipe w/ Flow Restriction Plate

	Zone 3 Restrictor	Not Selected	
Outlet Orifice Area =	2.53	N/A	ft^2
Outlet Orifice Centroid =	0.83	N/A	feet
Half-Central Angle of Restrictor Plate on Pipe =	2.09	N/A	radians

User Input: Emergency Spillway (Rectangular or Trapezoidal)

Spillway Invert Stage=	9.25	ft (relative to basin bottom at Stage = 0 ft)
Spillway Crest Length =	75.00	feet
Spillway End Slopes =	4.00	H:V
Freeboard above Max Water Surface =	1.00	feet

Calculated Parameters for Spillway

Spillway Design Flow Depth=	0.91	feet
Stage at Top of Freeboard =	11.16	feet
Basin Area at Top of Freeboard =	2.81	acres
Basin Volume at Top of Freeboard =	16.23	acre-ft

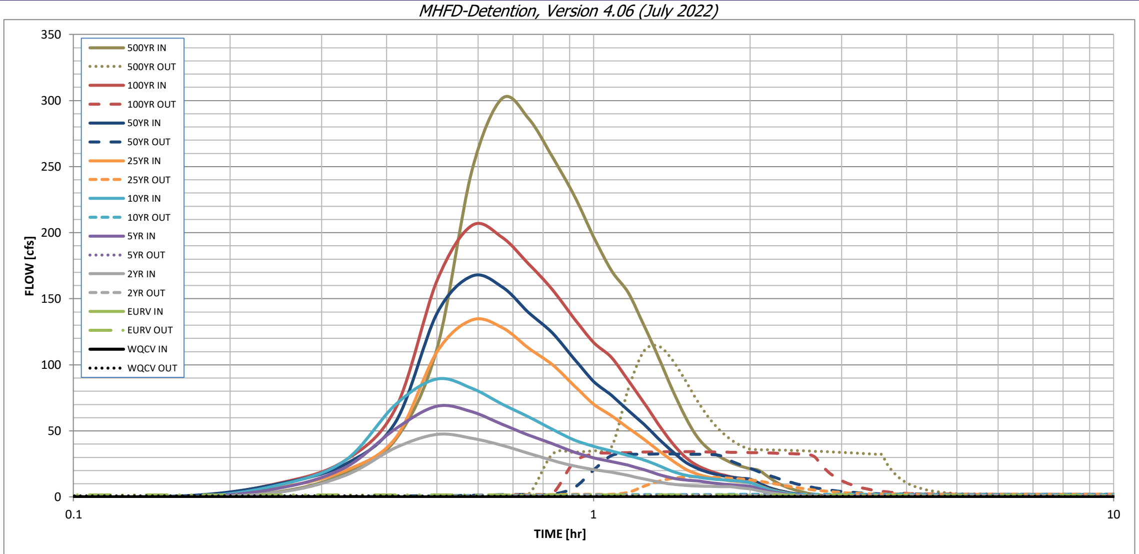
Routed Hydrograph Results

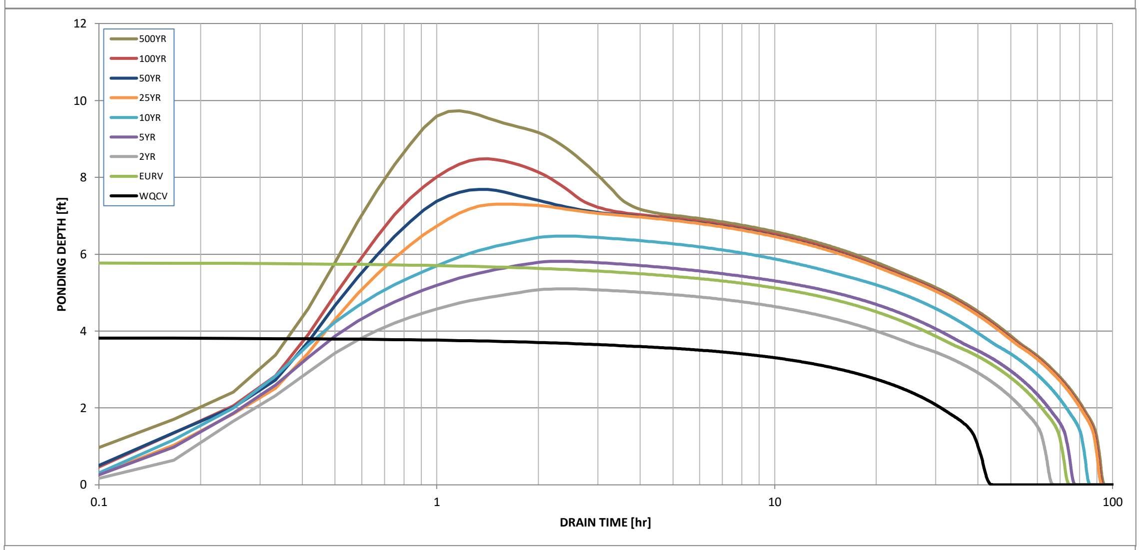
The user can override the default CUHP hydrographs and runoff volumes by entering new values in the Inflow Hydrographs table (Columns W through AF).

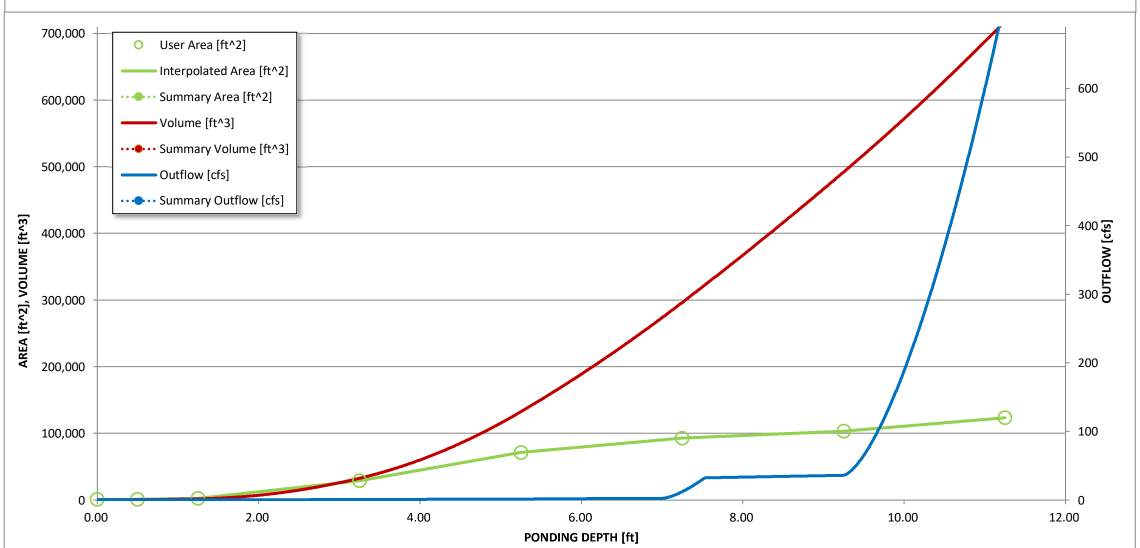
Design Storm Return Period =	WQCV	EURV	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	500 Year
One-Hour Rainfall Depth (in) =	N/A	N/A	1.03	1.32	1.59	2.01	2.38	2.77	3.84
CUHP Runoff Volume (acre-ft) =	1.203	3.939	2.978	4.241	5.518	8.012	9.997	12.312	18.279
Inflow Hydrograph Volume (acre-ft) =	N/A	N/A	2.978	4.241	5.518	8.012	9.997	12.312	18.279
CUHP Predevelopment Peak Q (cfs) =	N/A	N/A	0.9	10.4	20.7	50.9	69.8	93.1	149.6
OPTIONAL Override Predevelopment Peak Q (cfs) =	N/A	N/A							
Predevelopment Unit Peak Flow, q (cfs/acre) =	N/A	N/A	0.01	0.17	0.33	0.81	1.11	1.48	2.37
Peak Inflow Q (cfs) =	N/A	N/A	47.4	68.7	89.3	133.9	167.2	205.4	301.3
Peak Outflow Q (cfs) =	0.7	1.6	1.1	1.6	1.9	15.2	32.4	34.2	114.2
Ratio Peak Outflow to Predevelopment Q =	N/A	N/A	N/A	0.2	0.1	0.3	0.5	0.4	0.8
Structure Controlling Flow =	Plate	Plate	Plate	Plate	Plate	Overflow Weir 1	Outlet Plate 1	Outlet Plate 1	Spillway
Max Velocity through Grate 1 (fps) =	N/A	N/A	N/A	N/A	N/A	0.6	1.3	1.4	1.5
Max Velocity through Grate 2 (fps) =	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Time to Drain 97% of Inflow Volume (hours) =	39	64	58	66	73	77	75	73	68
Time to Drain 99% of Inflow Volume (hours) =	**41**	69	62	72	80	85	84	83	81
Maximum Ponding Depth (ft) =	3.83	5.79	5.10	5.82	6.47	7.30	7.69	8.48	9.73
Area at Maximum Ponding Depth (acres) =	0.94	1.77	1.56	1.77	1.94	2.13	2.18	2.27	2.48
Maximum Volume Stored (acre-ft) =	1.208	3.955	2.781	3.990	5.214	6.906	7.726	9.508	12.456

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)







S-A-V-D Chart Axis Override	X-axis	Left Y-Axis	Right Y-Axis
minimum bound			
maximum bound			

DETENTION BASIN OUTLET STRUCTURE DESIGN

Outflow Hydrograph Workbook Filename:

Inflow Hydrographs

The user can override the calculated inflow hydrographs from this workbook with inflow hydrographs developed in a separate program.

	SOURCE	CUHP	CUHP	CUHP	CUHP	CUHP	CUHP	CUHP	CUHP	CUHP
Time Interval	TIME	WQCV [cfs]	EURV [cfs]	2 Year [cfs]	5 Year [cfs]	10 Year [cfs]	25 Year [cfs]	50 Year [cfs]	100 Year [cfs]	500 Year [cfs]
5.00 min	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0:10:00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	0.83	4.14
	0:15:00	0.00	0.00	3.65	6.85	9.23	7.43	10.27	10.66	17.91
	0:20:00	0.00	0.00	16.25	22.47	27.78	20.02	24.89	27.81	43.71
	0:25:00	0.00	0.00	37.30	51.78	70.16	44.93	57.14	67.36	111.90
	0:30:00	0.00	0.00	47.44	68.71	89.26	109.63	138.61	163.34	246.35
	0:35:00	0.00	0.00	44.50	64.49	82.22	133.89	167.18	205.40	301.34
	0:40:00	0.00	0.00	39.04	55.12	70.34	128.40	159.18	196.54	286.55
	0:45:00	0.00	0.00	33.05	46.91	60.60	112.73	139.68	176.58	257.37
	0:50:00	0.00	0.00	27.69	40.28	51.28	100.16	124.12	157.00	228.56
	0:55:00	0.00	0.00	23.50	34.08	43.29	84.47	104.81	135.42	197.21
	1:00:00	0.00	0.00	20.79	29.74	38.34	70.40	87.66	117.08	171.23
	1:05:00	0.00	0.00	18.82	26.72	34.75	61.44	76.79	105.54	154.60
	1:10:00	0.00	0.00	16.22	23.97	31.36	52.22	65.48	88.25	129.93
	1:15:00	0.00	0.00	13.65	20.59	28.05	43.74	55.05	71.44	106.01
	1:20:00	0.00	0.00	11.37	17.11	23.87	35.16	44.21	55.12	81.79
	1:25:00	0.00	0.00	9.66	14.40	19.42	27.70	34.73	41.01	60.87
	1:30:00	0.00	0.00	8.73	12.90	16.64	21.27	26.60	30.31	45.43
	1:35:00	0.00	0.00	8.28	12.16	15.01	17.37	21.64	23.93	36.11
	1:40:00	0.00	0.00	8.04	10.97	13.87	14.96	18.52	20.02	30.30
	1:45:00	0.00	0.00	7.90	9.94	13.05	13.38	16.46	17.28	26.22
	1:50:00	0.00	0.00	7.78	9.19	12.49	12.30	15.04	15.42	23.44
	1:55:00	0.00	0.00	6.92	8.65	11.84	11.60	14.10	14.09	21.43
	2:00:00	0.00	0.00	6.05	8.02	10.76	11.11	13.44	13.18	20.04
	2:05:00	0.00	0.00	4.66	6.20	8.24	8.63	10.40	10.09	15.34
	2:10:00	0.00	0.00	3.42	4.49	5.93	6.21	7.46	7.25	10.99
	2:15:00	0.00	0.00	2.49	3.26	4.28	4.49	5.38	5.26	7.96
	2:20:00	0.00	0.00	1.80	2.35	3.09	3.26	3.89	3.85	5.81
	2:25:00	0.00	0.00	1.28	1.64	2.19	2.30	2.74	2.72	4.11
	2:30:00	0.00	0.00	0.88	1.12	1.53	1.60	1.91	1.90	2.86
	2:35:00	0.00	0.00	0.59	0.77	1.06	1.13	1.35	1.34	2.01
	2:40:00	0.00	0.00	0.37	0.50	0.67	0.74	0.88	0.87	1.31
	2:45:00	0.00	0.00	0.20	0.29	0.38	0.43	0.51	0.51	0.76
	2:50:00	0.00	0.00	0.08	0.14	0.17	0.21	0.24	0.24	0.36
	2:55:00	0.00	0.00	0.03	0.04	0.05	0.06	0.07	0.07	0.10
	3:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:15:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:25:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:30:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:35:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:40:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:50:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:15:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:25:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:30:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:35:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:40:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:50:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:15:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:25:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:30:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:35:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:40:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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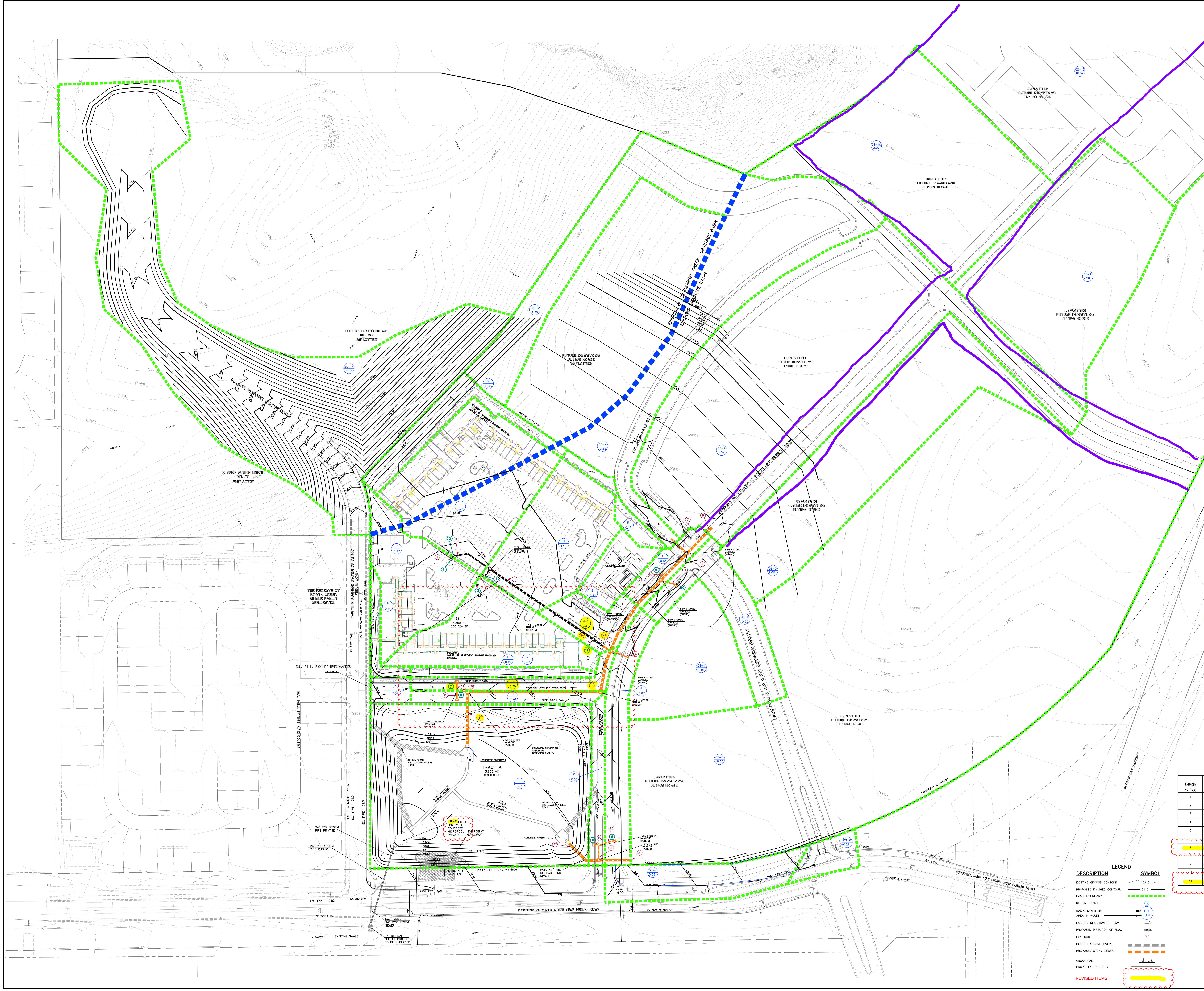


FINAL DRAINAGE REPORT ~ PIPE ROUTING SUMMARY

Pipe Run	Contributing Basins	Equivalent CA(5)	Equivalent CA(100)	Maximum Tc	Intensity I(5)	Intensity I(100)	Flow Q(5)	Flow Q(100)	Pipe Size*
1	DP 1	0.68	0.78	5.00	5.17	8.68	3.5	6.7	18" PRIVATE RCP
2	DP 2 & PIPE 1	2.16	2.38	7.00	4.66	7.83	10.1	18.6	24" PRIVATE RCP
3	DP 3	0.86	0.94	5.00	5.17	8.68	4.5	8.2	18" PRIVATE RCP
4	DP 4 & PIPE 3	1.84	2.02	7.0	4.66	7.83	8.6	15.8	24" PRIVATE RCP
5	PIPE 2 & PIPE 4	4.00	4.39	7.0	4.66	7.83	18.6	34.4	36" PUBLIC RCP / PRIVATE OUTSIDE ROW
5A	DP 11	0.31	0.33	5.0	5.17	8.68	1.6	2.8	12" PRIVATE PVC
5B	PIPE 5 & 5A	4.30	4.72	7.0	4.66	7.83	20.1	36.9	36" PRIVATE RCP
6	BASIN OS-1	0.71	0.86	9.3	4.23	7.11	3.0	6.1	18" PUBLIC RCP / PRIVATE OUTSIDE ROW
7	BASIN R,BASIN OS-4, BASIN OS-9	4.73	6.69	16.4	3.39	5.68	16.0	38.0	36" PUBLIC RCP / PRIVATE OUTSIDE ROW
8	BASIN OS-3,OS-10, 0S-11, OS-12	9.91	13.00	20.9	3.02	5.07	29.9	66.0	48" PUBLIC RCP
9	PIPE 7 & PIPE 8	14.63	19.69	20.9	3.02	5.07	44.2	99.9	48" PUBLIC RCP
10	DP 9	0.14	0.15	5.0	5.17	8.68	0.7	1.3	18" PUBLIC RCP
11	DP 10	0.39	0.48	5.0	5.17	8.68	2.0	4.1	18" PUBLIC RCP
12	PIPE 9, 10, 11 & BASIN E	15.45	20.63	20.9	3.02	5.07	46.7	104.7	48" PUBLIC RCP
13	PIPE 5B, PIPE 6 & PIPE 10	20.47	26.21	20.9	3.02	5.07	61.9	133.0	54" PUBLIC RCP
14	DP 10	0.20	0.29	5.0	5.17	8.68	1.1	2.5	18" PUBLIC RCP
15	DP 11	0.22	0.24	5.0	5.17	8.68	1.1	2.1	18" PUBLIC RCP
16	PIPE 15 & PIPE 16	0.42	0.53	5.0	5.17	8.68	2.2	4.6	18" PUBLIC RCP
17	PIPE 14 & PIPE 17	20.89	26.74	20.9	3.02	5.07	63.1	135.7	54" PUBLIC RCP / PRIVATE OUTSIDE ROW
18	DP 8	0.62	0.86	10.0	4.13	6.93	2.6	5.9	18" PUBLIC RCP
19	DP 9	0.23	0.24	10.0	4.13	6.93	0.9	1.7	18" PUBLIC RCP
20	PIPE 16 & PIPE 17	0.85	1.10	10.0	4.13	6.93	3.5	7.6	18" PUBLIC RCP
21	BASIN OS-5 & OS-6	12.68	14.81	18.8	3.18	5.34	40.3	79.1	42" PUBLIC RCP
22	PIPE 19 & 20	13.53	15.91	18.8	3.18	5.34	43.0	84.9	48" PUBLIC RCP / PRIVATE OUTSIDE ROW

FINAL DRAINAGE REPORT ~ SURFACE ROUTING SUMMARY

Design Point(s)	Contributing Basins	Equivalent CA(5)	Equivalent CA(100)	Maximum Tc	Intensity I(5)	Intensity I(100)	Flow Q(5)	Flow Q(100)	Inlet Size
1	BASIN C	0.68	0.78	5.0	5.17	8.68	3.5	6.7	2.5'X5' D-9 INLET PRIVATE
2	BASIN A	1.48	1.60	7.0	4.66	7.83	6.9	12.5	10' TYPE R INLET PRIVATE
3	BASIN D	0.86	0.94	5.0	5.17	8.68	4.5	8.2	5' TYPE R INLET PRIVATE
4	BASIN B	0.98	1.07	7.0	4.66	7.83	4.6	8.4	10' TYPE R INLET PRIVATE
5	BASIN J & OS-7	0.62	0.86	10.0	4.13	6.93	2.6	5.9	5' TYPE R INLET PUBLIC
6	BASIN K	0.23	0.24	5.0	5.17	8.68	1.2	2.1	5' TYPE R INLET PUBLIC
7	BASIN L, BASIN M	0.20	0.29	5.0	5.17	8.68	1.1	2.5	5' TYPE R INLET PUBLIC
8	BASIN N	0.22	0.24	5.0	5.17	8.68	1.1	2.1	5' TYPE R INLET PUBLIC
9	BASIN F	0.14	0.15	5.0	5.17	8.68	0.7	1.3	5' TYPE R INLET PUBLIC
10	BASIN OS-2	0.39	0.48	5.0	5.17	8.68	2.0	4.1	5' TYPE R INLET PUBLIC
11	BASIN M-1	0.31	0.33	5.0	5.17	8.68	1.6	2.8	2.5'X5' D-9 INLET PRIVATE

LEGEND

DESCRIPTION	SYMBOL
EXISTING GROUND CONTOUR	6910
PROPOSED FINISHED CONTOUR	6910
BASIN BOUNDARY	
DESIGN POINT	3
BASIN IDENTIFIER / AREA IN ACRES	BB / 10.0
EXISTING DIRECTION OF FLOW	
PROPOSED DIRECTION OF FLOW	
PIPE RUN	4
EXISTING STORM SEWER	
PROPOSED STORM SEWER	
CROSS PAN	
PROPERTY BOUNDARY	
REVISED ITEMS	

N

50 25 0 50 100

SCALE: 1" = 50'

DOWNTOWN FLYING HORSE
FIL NO. 1
DRAINAGE MAP
JOB NO. 2573.40

CLASSIC CONSULTING
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799 (Fax)

PROPOSED CONDITIONS DRAINAGE MAP

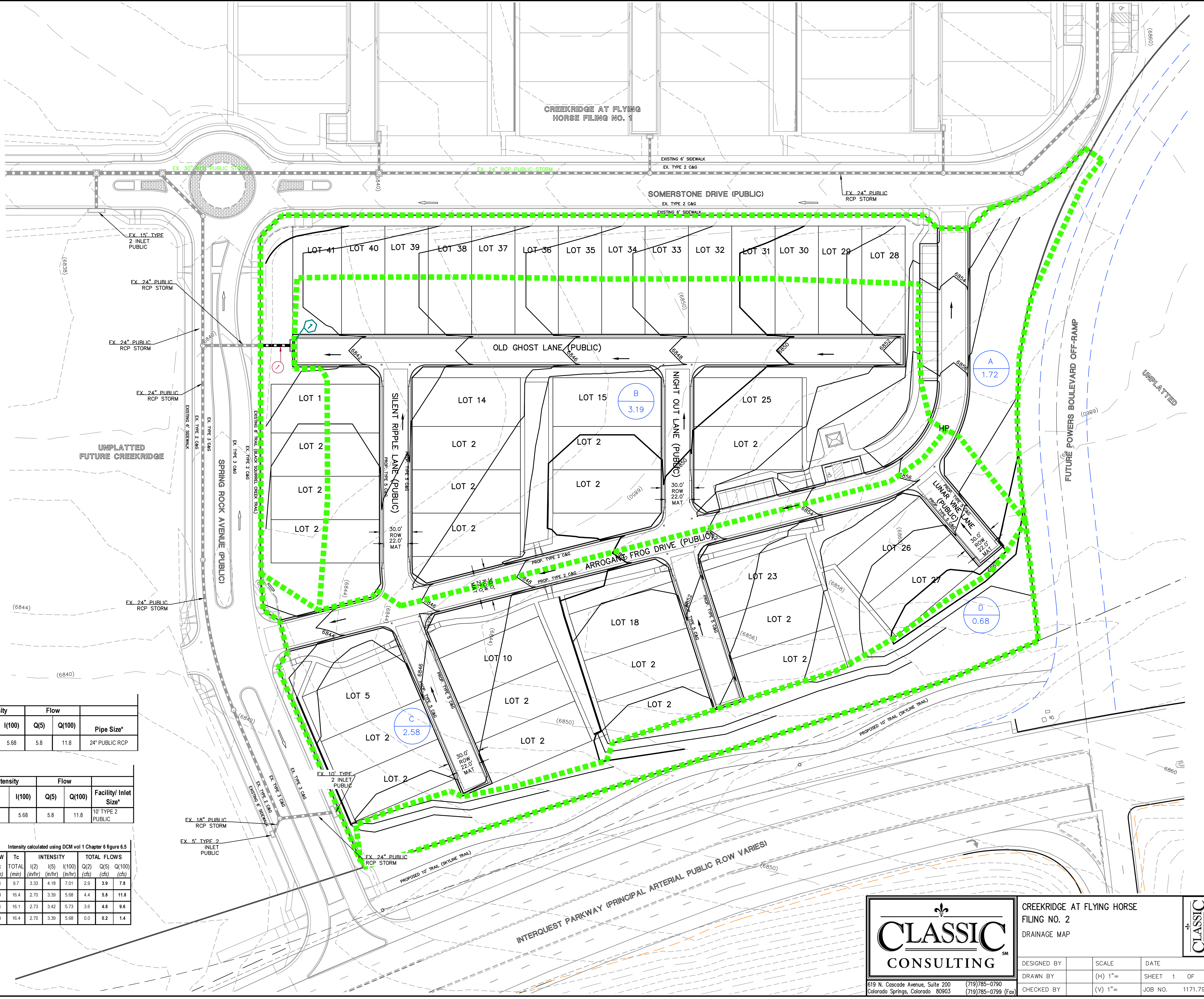
SCALE: 1" = 40'

40 20 0 40 80

NOTE:
ALL DISTURBED AREAS ARE SHOWN WITHIN BASIN LINES REFLECTED ON THIS MAP

LEGEND

DESCRIPTION	SYMBOL
EXISTING GROUND CONTOUR	6910
PROPOSED FINISHED CONTOUR	6910
BASIN BOUNDARY	
DESIGN POINT	3
BASIN IDENTIFIER / AREA IN ACRES	BB / 10.0
EXISTING DIRECTION OF FLOW	
PROPOSED DIRECTION OF FLOW	
PIPE RUN	4
EXISTING STORM SEWER	
PROPOSED STORM SEWER	
CROSS PAN	
PROPERTY BOUNDARY	



PIPE ROUTING SUMMARY

Pipe Run	Contributing Basins / Design Point/Pipe Run	Equivalent CA(5)	Equivalent CA(100)	Maximum Tc	Intensity I(5)	Intensity I(100)	Flow Q(5)	Flow Q(100)	Pipe Size*
1	DP 1	1.72	2.07	16.4	3.39	5.68	5.8	11.8	24" PUBLIC RCP

SURFACE ROUTING SUMMARY

Design Point(s)	Contributing Basins / Design Point	Equivalent CA(5)	Equivalent CA(100)	Maximum Tc	Intensity I(5)	Intensity I(100)	Flow Q(5)	Flow Q(100)	Facility/ Inlet Size*
1	BASIN B	1.72	2.07	16.4	3.39	5.68	5.8	11.8	10' TYPE 2 PUBLIC

BASIN RUNOFF SUMMARY

Intensity calculated using DCM vol 1 Chapter 6 figure 6.5

BASIN	WEIGHTED CA(2)	WEIGHTED CA(5)	WEIGHTED CA(100)	OVERLAND C(5)	OVERLAND Length (ft)	OVERLAND Height (ft)	OVERLAND Tc (min)	STREET / CHANNEL FLOW Length (ft)	STREET / CHANNEL FLOW Slope (%)	STREET / CHANNEL FLOW Velocity (fps)	STREET / CHANNEL FLOW Tc (min)	Tc TOTAL (min)	INTENSITY I(2) (in/hr)	INTENSITY I(5) (in/hr)	INTENSITY I(100) (in/hr)	TOTAL FLOWS Q(2) (cfs)	TOTAL FLOWS Q(5) (cfs)	TOTAL FLOWS Q(100) (cfs)
A	0.88	0.93	1.12	0.08	50	2	8.2	300	3.0%	3.5	1.4	9.7	3.33	4.18	7.01	2.9	**3.9**	**7.8**
B	1.63	1.72	2.07	0.08	100	2	14.7	300	2.0%	2.8	1.8	16.4	2.70	3.39	5.68	4.4	**5.8**	**11.8**
C	1.32	1.39	1.68	0.08	100	2	14.7	300	3.0%	3.5	1.4	16.1	2.73	3.42	5.73	3.6	**4.8**	**9.6**
D	0.01	0.05	0.24	0.08	100	2	14.7	300	2.0%	2.8	1.8	16.4	2.70	3.39	5.68	0.0	**0.2**	**1.4**

CLASSIC CONSULTING
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799 (Fax)

CREEKRIDGE AT FLYING HORSE FILING NO. 2
DRAINAGE MAP

DESIGNED BY		SCALE	DATE
DRAWN BY		(H) 1"=	SHEET 1 OF 1
CHECKED BY		(V) 1"=	JOB NO. 1171.79