

Drainage Conformance Letter

Academy Charter School Shade Structure/Playground Improvements (JN: 25031) Castle Rock, CO

June 18, 2026

Prepared for:

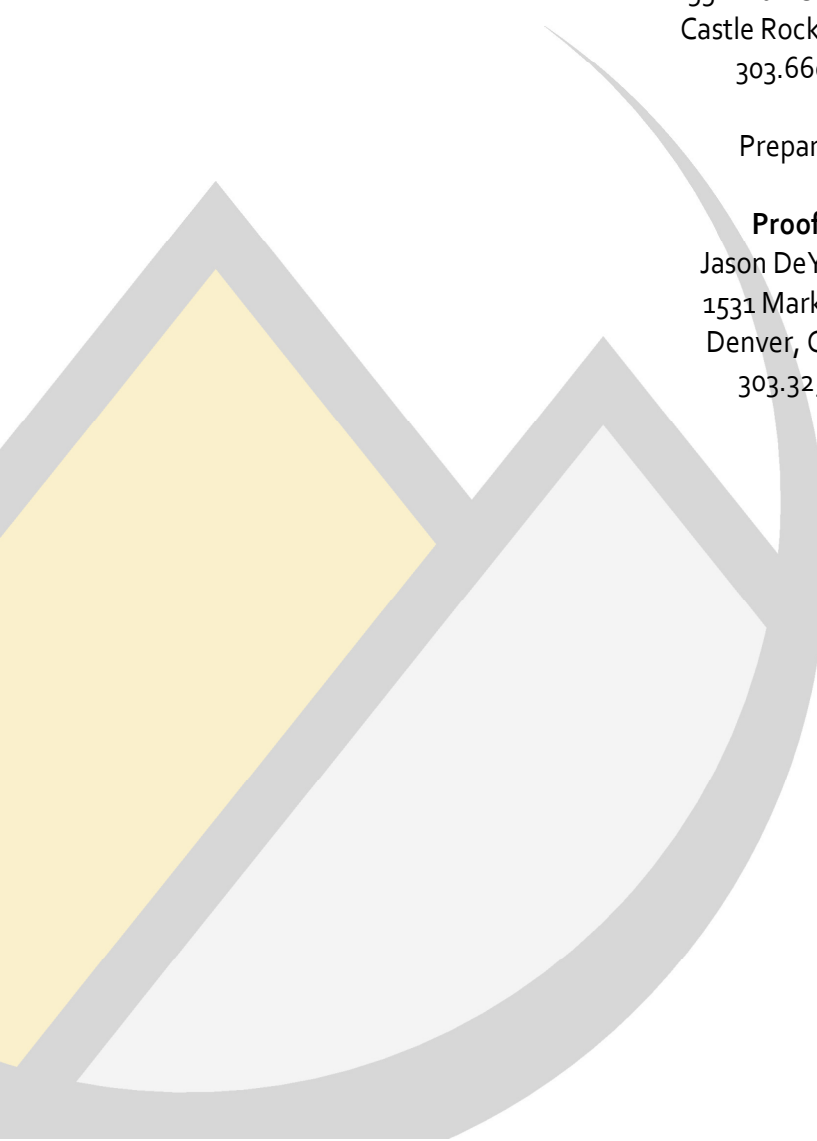
Academy Charter School

Attn: Erin McMilon
1551 Prairie Hawk Drive
Castle Rock, CO 80109
303.660.4881

Prepared by:

Proof Civil

Jason DeYoung, PE
1531 Market Street
Denver, CO 80202
303.325.5709



Certification Page

Engineer's Statement

"I affirm that this Drainage Conformance Letter and plan for the final drainage design of Academy Charter School was prepared by me (or under my direct supervision) in accordance with the provisions of Town of Castle Rock Drainage Design and Technical Criteria for the owners thereof. I understand that the Town of Castle Rock does not and will not assume liability for drainage facilities designed by others."

Jason DeYoung, PE
State of Colorado No. 45332
For and on behalf of Proof Civil Co.

Owner/Developer's Statement:

Academy Charter School hereby certifies that the drainage facilities for the Academy Charter School Campus shall be constructed according to the design presented in this report. I understand that the Town of Castle Rock does not and will not assume liability for the drainage facilities designed and/or certified by my engineer and that the Town of Castle Rock reviews drainage plans pursuant to the Municipal Code; but cannot, on behalf of Academy Charter School, guarantee that final drainage design review will absolve Academy Charter School and/or their successors and/or assigns of future liability for improper design."

Name of Developer

Authorized Signature

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June 18, 2026

Town of Castle Rock
100 N. Wilcox Street
Castle Rock, CO 80104

This Drainage Conformance Letter for Academy Charter School will address the on-site stormwater conveyance and treatment for the development in accordance with criteria set forth by applicable governing agencies and demonstrate general conformance to the approved *Academy Charter School Castle Rock Lifelong Learning Center Phase III Drainage Study* prepared by Martin & Martin Inc., approved February 9, 2001, hereafter referred to as the Report and *Addendum No. 1 Academy Charter School Castle Rock Lifelong Learning Center Phase III Drainage Study (Parking Lot Expansion)* by Martin & Martin Inc, approved June 30, 2002 hereafter referred to as the Addendum.

I. Site Location and Description

Academy Charter School is located in Lot 1 of the Red Hawk Subdivision filing No. 1, in the southeast quarter of Section 3, Township 8 South, Range 67 West of the 6th Principal Meridian.

The site is 5.00 acres currently consisting of the existing Academy Charter School with associated parking, landscaping, and school playground programming. The proposed construction effort consists of installation of an underdrain for a proposed playground and the installation of a proposed shade structure over the existing asphalt play area.

Drainage patterns throughout the site will be effectively unaltered as site flows will be directed to the same design points as originally intended. Runoff from the proposed shade structure will be directed to the asphalt that it covers via downspouts and the playground will feature an underdrain system to slowly drain nuisance flows within the playground.

According to FEMA Flood Insurance Rate Map Panel #08035C0188G, effective March 16, 2016, the development portion of the subject site is located within flood hazard area Zone X. Zone X is defined as an area of minimal flood hazard. Refer to Appendix A for the applicable FEMA flood map.

According to the United States Department of Agriculture Natural Resources Conservation Service (NRCS) National Cooperative Soil Survey, onsite soils are identified as Hydrologic Soil Group B. A copy of the NRCS Soil Resource Report is included in Appendix A.

There are no known or identified existing irrigation ditches or canals within the project site. There are no other known significant geological features within the project site.

II. Drainage Basins and Sub-Basins

A. Major Drainage Basins

The subject property is tributary to the Tributary B (Omni Drainageway Tributary) of East Plum Creek via the existing regional water quality and detention facilities 'Detention Pond 2' and 'Detention Pond 3' within the Red Hawk residential development. The site is split between basins that are tributary to each detention facility, with a majority of the site tributary to Detention Pond 2 and one basin (Basin M1 from the Addendum) tributary to Detention Pond 3. This existing basin configuration will be maintained in the proposed condition.

B. Minor Drainage Basins

No drainage basins will be materially altered as a part of this project. The proposed shade structure will be located on existing asphalt and will drain via downspouts to the existing asphalt and will then follow existing drainage patterns. The proposed playground underdrain will adhere to the original drainage design of the school property by draining to the underlying storm within the playground area.

III. Proposed Drainage Design

Proposed on-site drainage will follow historical drainage patterns, and no significant impacts are anticipated as a result of the proposed development.

IV. Storage and Water Quality Design

The subject site is tributary to downstream regional ponds that provided stormwater detention volume, along with water quality treatment via water quality capture volume (WQCV). This arrangement will be maintained in the proposed condition.

V. Conclusion

This Drainage Conformance Letter presents the description and calculations for the drainage analysis and design of the Academy Charter School Shade Structure/ Improvements project. The drainage system has been designed in accordance with the Town of Castle Rock Storm Drainage Design and Technical Criteria Manual. The site complies with the previously approved master drainage report for the overall development and subsequent addendum.

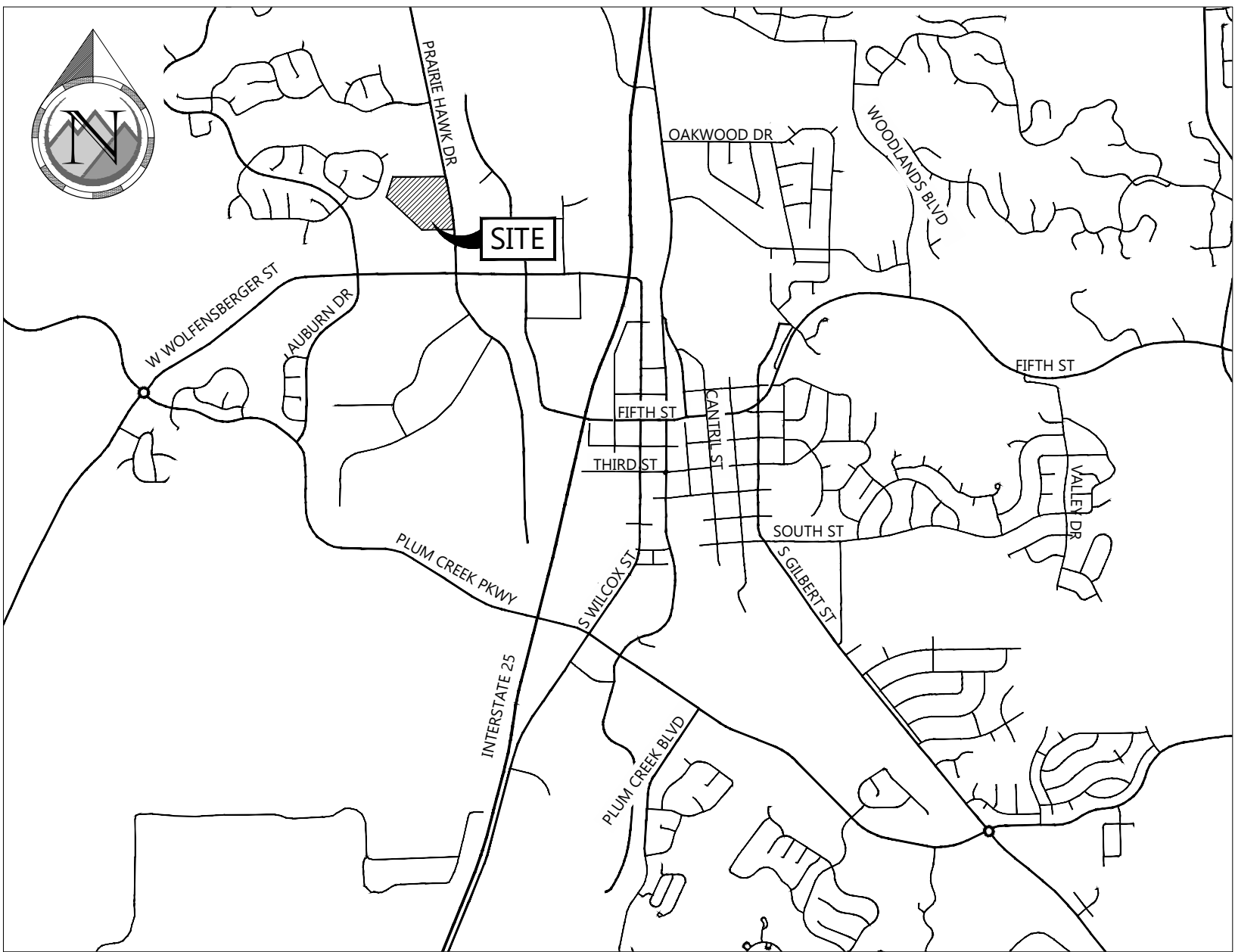
VI. References

1. *Urban Storm Drainage Criteria Manual Volumes 1, 2, and 3*, Urban Flood Control District, June, 2016.
2. *Storm Drainage Design and Technical Criteria Manual*, Town of Castle Rock, June, 2019.
3. *Phase III Drainage Report for the Meadows Filing No. 17, Lots 5 and 6*, CVL Consultants, Feb. 22, 2005
4. *Academy Charter School Castle Rock Lifelong Learning Center Phase III Drainage Study*, Martin & Martin Inc., approved February 9, 2001
5. *Addendum No. 1 Academy Charter School Castle Rock Lifelong Learning Center Phase III Drainage Study (Parking Lot Expansion)*, Martin & Martin Inc, approved June 30, 2002



APPENDIX A

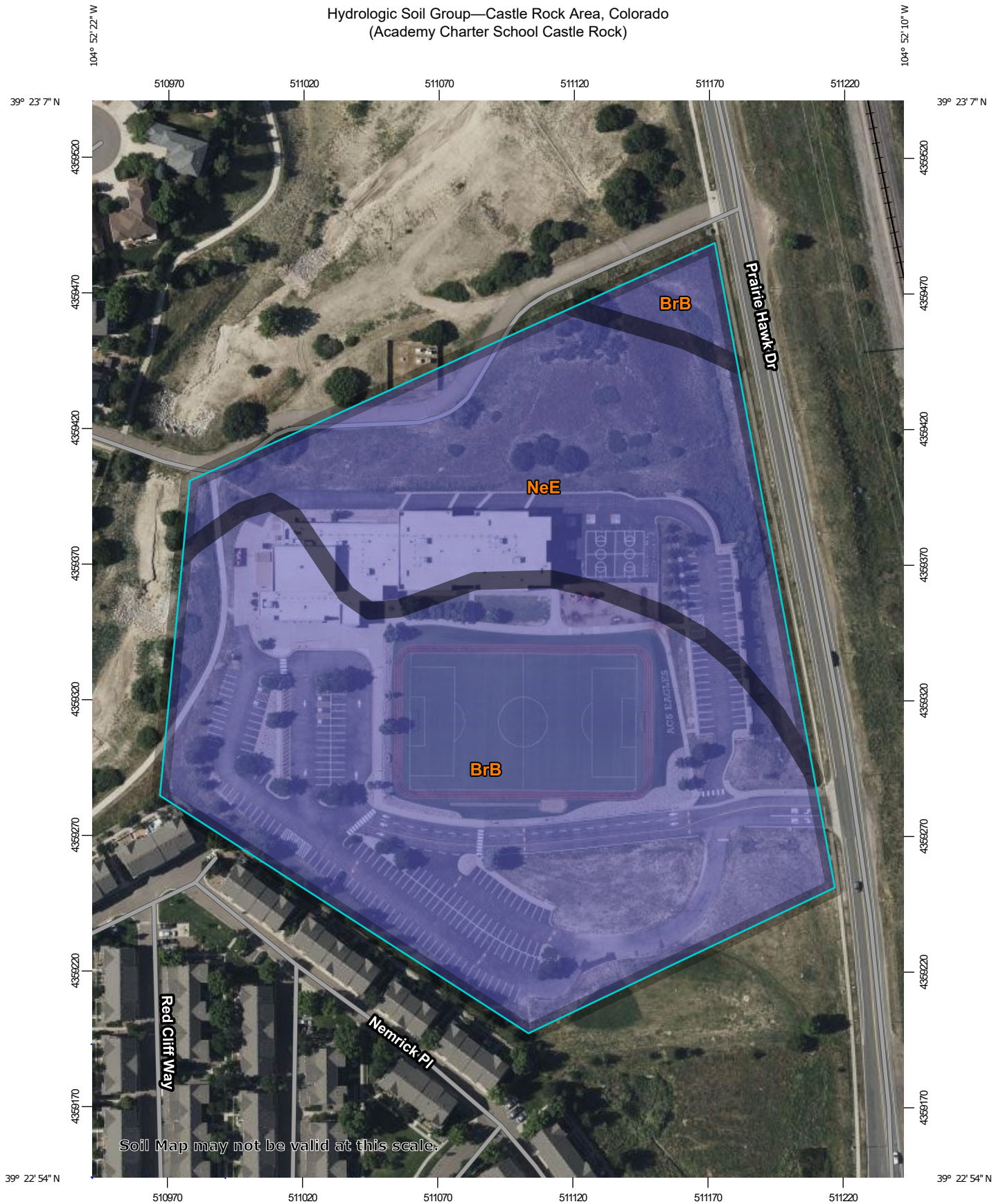
- VICINITY MAP
- FEMA FIRM MAPS
- WEB SOIL SURVEY RESULTS
- NOAA PRECIPITATION RESULTS



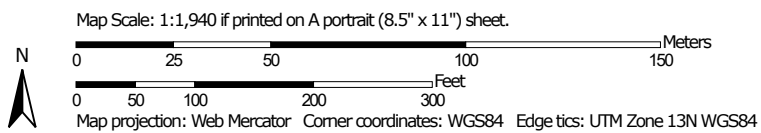
VICINITY MAP

SCALE: 1" = 2,000'

Hydrologic Soil Group—Castle Rock Area, Colorado (Academy Charter School Castle Rock)



Soil Map may not be valid at this scale.



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

7/29/2025
Page 1 of 4

Hydrologic Soil Group—Castle Rock Area, Colorado (Academy Charter School Castle Rock)

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 1:20,000.

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: Castle Rock Area, Colorado
 Survey Area Data: Version 17, Aug 29, 2024

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

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

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
BrB	Bresser sandy loam, cool, 1 to 3 percent slopes	B	7.8	65.0%
NeE	Newlin gravelly sandy loam, 8 to 30 percent slopes	B	4.2	35.0%
Totals for Area of Interest			12.0	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



APPENDIX B

- TOWN WORKSHEETS

Permanent Water Quality Determination Worksheet (Taken from 2019 SDDTCM Sections 13.1.4 and 13.1.5)

Project:

Project #:

Applicant:

[illegible]

Section	Question	Response	Instructions
3	Applicable Sites with Other Exclusions by Variance		
3.1	Category 1: Roadways, bridges and trails only		
3.1.1	Is the project a bike or pedestrian trail?	Yes No	Proceed to next line. Proceed to 3.1.2.
	Is the trail for a roadway?	Yes No	Proceed to 3.1.2. Project is excluded. Submit variance for <u>Trails Excluded from Permanent Water Quality Requirements</u> .
3.1.2	Is the project primarily used for parking or access to parking?	Yes No	This exclusion does not apply. Permanent water quality is required. Proceed to 3.1.3.
3.1.3	Does the project add impervious area?	No Yes	Project is excluded. Submit variance for <u>Pavement Management Sites Excluded from Permanent Water Quality Requirements</u> . Proceed to 3.1.4.
3.1.4	Does the project add more than 8.25 feet of paved width at any location to the existing roadway?	No Yes	Project is excluded. Submit variance for <u>Roadway Redevelopment Sites Excluded from Permanent Water Quality Requirements</u> . Proceed to next line.
	Does the project add more than one acre of paved area per mile to an existing roadway?	No Yes	Project is excluded. Submit variance for <u>Roadway Redevelopment Sites Excluded from Permanent Water Quality Requirements</u> . Proceed to next line.
	Does the project increase the width by two times or more, on average, of the original roadway area?	No Yes	Existing areas of site are excluded only. Submit variance for <u>Existing Roadway Surfaces Only Excluded from Permanent Water Quality Requirements</u> . This exclusion does not apply. Permanent water quality is required.
3.2	Category 2: Non-residential and non-commercial projects only		
3.2.1	Is the project associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities, including activities necessary to prepare a site for drilling and the movement and placement of drilling equipment?	Yes No	Project is excluded. Submit variance for <u>Oil and Gas Exploration Sites Excluded from Permanent Water Quality Requirements</u> . Proceed to 3.2.2.
3.2.2	Is the project for stream stabilization?	Yes No	Project is excluded. Submit variance for <u>Stream Stabilization Sites Excluded from Permanent Water Quality Requirements</u> . Proceed to 3.2.3.
3.2.3	Is the project for installation or maintenance of aboveground or underground utilities or infrastructure that does not permanently alter the terrain, ground cover, or drainage patterns from those present prior to the construction activity including activities to install, replace or maintain utilities under roadways or other paved areas that return the surface to the same condition?	Yes No	Project is excluded. Submit variance for <u>Aboveground and Underground Utilities Excluded from Permanent Water Quality Requirements</u> . Proceed to 3.2.4.
3.2.4	Is the project on undeveloped land (land with no human-made structures such as buildings or pavement) that will remain undeveloped after the project?	Yes No	Project is excluded. Submit variance for <u>Sites with Land Disturbances to Undeveloped Land that will Remain Undeveloped Excluded from Permanent Water Quality Requirements</u> . Proceed to 3.2.5.
3.2.5	Will the post-project condition result in surface water discharge during the 80th percentile storm runoff event?	No Yes	Project is excluded. Submit study along with variance for <u>Non-residential and Non-commercial Infiltration Conditions Excluded from Permanent Water Quality Requirements</u> . This exclusion does not apply. Permanent water quality is required.

Section	Question	Response	Instructions
3.3	Category 3: Residential, Agricultural and Commercial projects		
3.3.1	Is the project a single-family residential lot, or agricultural zoned lands, greater than or equal to 2.5 acres in size per dwelling unit?	Yes	Proceed to next line.
		No	Proceed to 3.3.2.
	Is the project site greater than 10% impervious?	No	Project is excluded. Submit variance for <u>Large Lot Single Family Sites Excluded from Permanent Water Quality Requirements</u> .
		Yes	Proceed to next line.
	Is the project site greater than 20% impervious?	Yes	This exclusion does not apply. Permanent water quality is required.
		No	Proceed to next line.
	Will the post-project condition result in surface water discharge during the 80th percentile storm runoff event?	No	Project is excluded. Submit study along with variance for <u>Large Lot Single Family Sites Excluded from Permanent Water Quality Requirements</u> .
		Yes	This exclusion does not apply. Permanent water quality is required.
3.3.2	Will 100% of the runoff from the residential or commercial site be captured?	Yes	This exclusion does not apply. Permanent water quality is required.
		No	Proceed to next line.
	Is all or a portion of the site undeveloped or will it remain undeveloped after construction?	Yes	This portion of the project is excluded. Submit variance for <u>Sites with Land Disturbance to Undeveloped Land that will Remain Undeveloped Excluded from Permanent Water Quality Requirements</u> . Proceed to next line.
		No	Proceed to next line.
	Is the remaining untreated impervious area greater than 20% of the site?	Yes	This exclusion does not apply. Permanent water quality is required.
		No	Proceed to next line.
	Is the remaining untreated impervious area greater than one acre?	Yes	This exclusion does not apply. Permanent water quality is required.
		No	Proceed to next line.
	Is it practicable to capture runoff from portions of the site that will not drain to a control measure?	No	Document justification demonstrating that it is not practicable to capture runoff from this portion of the site in the drainage report . No further action is needed.
		Yes	This exclusion does not apply. Permanent water quality is required.



Summary of Water Quality Conformance to MS4 Permit

The purpose of this worksheet is to document conformance with the Town of Castle Rock's MS4 permit with regard to permanent water quality on land disturbance projects.

Project Name _____

Project Owner _____

Project Location _____

ToCR Project Number _____

Total Site Area _____ acres

Total Size of Common Plan of Development _____ acres

Check all that apply:

☐ **Project within Plum Creek Basin**

☐ **Project within Cherry Creek Basin**

Estimated construction completion date _____

1. The water quality control measure(s) for applicable development sites shall meet one of the following base design standards as per the SDDTCM Section 14.4. Please select all design standards that were applied to meet conformance with the MS4 on this site.

- ☐ WQCV standard
- ☐ Pollutant removal standard
- ☐ Runoff reduction standard
- ☐ Applicable site draining to regional WQVC control measure (accepts drainage prior to discharging to WOTS)
- ☐ Applicable site draining to regional WQVC control facility (with receiving pervious area control measure upstream of WOTS)
- ☐ Constrained redevelopment sites standard
 - Imperviousness of existing site _____/_____ (Imp. Ac/Site Ac) = ____%
 - Variance required TCV No. _____
- ☐ Existing control measure with WQCV per previous criteria standards
 - Reference Construction Permit No. _____
- ☐ Cherry Creek Basin only, choose one: ☐ Tier 1 ☐ Tier 2 ☐ Tier 3
- ☐ No control measures provided (See Permanent WQ Worksheet for applicability)

Summary of Water Quality Conformance to MS4 Permit

2. Was an exclusion to water quality applied as per SDDTCM Section 13.1.5? ☐ Yes ☐ No

i. If yes, please select all that apply, provide total excluded impervious area(s) and submit variance, as applicable: TCV No. _____

☐ Pavement management site

Excluded impervious area: _____ acres

☐ Excluded roadway redevelopment

Excluded impervious area: _____ acres

☐ Excluded existing roadway areas

Excluded impervious area: _____ acres

☐ Above ground and below ground utilities

☐ Large lot single family home

☐ Non-residential and non-commercial infiltration

Excluded impervious area: _____ acres

☐ Land disturbance for land to remain undeveloped

Excluded impervious area: _____ acres

☐ Stream Stabilization Sites

Excluded impervious area: _____ acres

☐ Trails

Excluded impervious area: _____ acres

☐ Oil and Gas Exploration

3. For Development and Redevelopment sites, following any exclusions claimed above, was any portion of the site excluded up to 20% of the site and not to exceed one acre? ☐ Yes ☐ No

If yes, complete the following:

Excluded area: _____ acres

Total Site area: _____ acres, _____ % site excluded

4. For Constrained sites, was any portion of the site excluded up to 50% of the site and not to exceed 50% of the impervious area? ☐ Yes ☐ No

If yes, complete the following:

Excluded area: _____ acres

Excluded impervious area: _____ acres

Total Site area: _____ acres, _____ % site excluded

Total Impervious area: _____ acres, _____ % impervious excluded

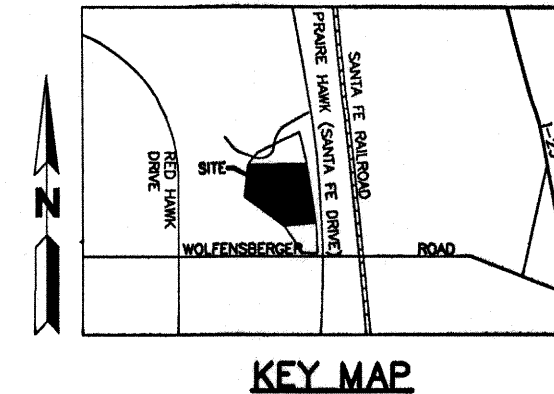
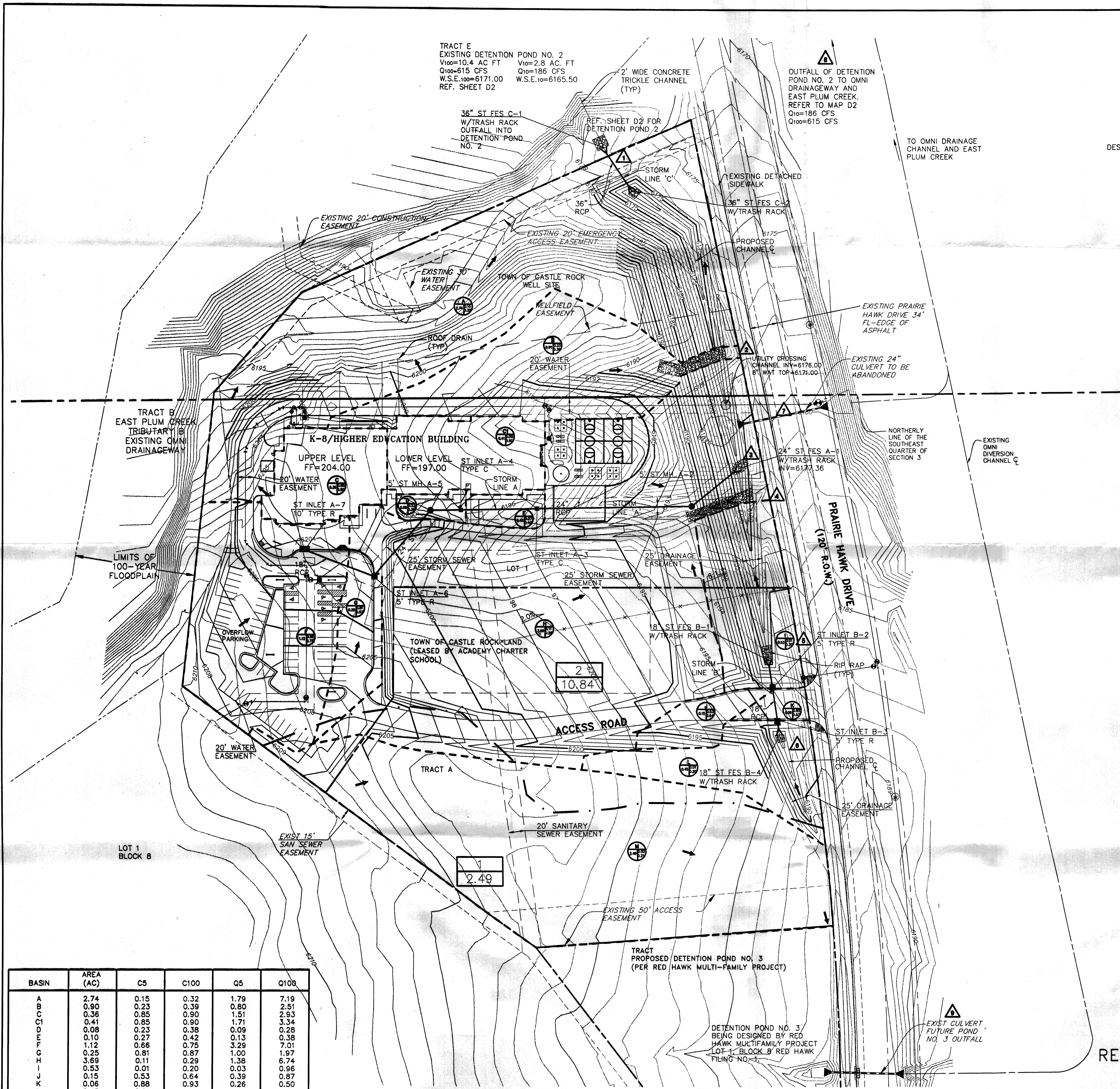


APPENDIX C

- REFERENCE MATERIAL

project G:\THOMAS\CRLLC\plans\Cds\JCM
project manager JCM
designed by JCC
drawn by TAH
job no. 14418.06
sheet no. D1

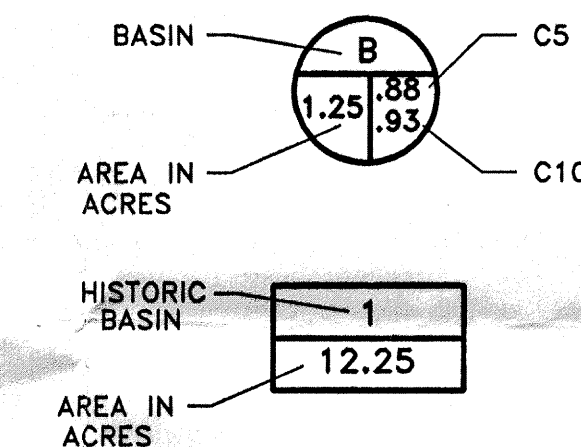
cad information plot date 09/22/00 HOFFMEYER
model space PLAN paper space PLOT
main file DLDWG xreference



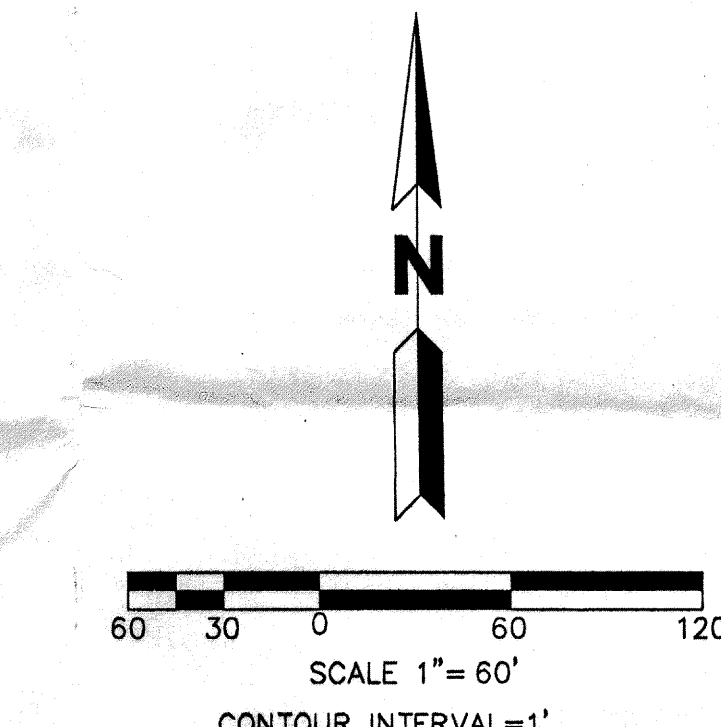
CHANNEL SUMMARY TABLE				
DESIGN POINT	CONTRIBUTION AREA(A.C.)	CONTRIBUTION BASINS	RUN-OFF (5-YR)	RUN-OFF (10-YR)
1	10.78	A	12.14	34.76
2	8.04	B	10.35	27.57
3	7.14	C,D,E,F,G	9.55	25.06
4	4.82	H,I	1.82	9.15
5	0.60	J	0.41	1.45
6	0.45	L	0.02	0.58

LEGEND

- RIP-RAP
MANHOLE
INLET
FLARED END SECTION
PROP. CONTOUR
EXIST. CONTOUR
BASIN BOUNDARY
HISTORIC BASIN
DIRECTION OF FLOW
DESIGN POINT



- NOTES:
1. HISTORICAL BASIN ACREAGE DETERMINED FROM TRACT 'A' ONLY. REFER TO RED HAWK MASTER DRAINAGE PLAN PREPARED FOR U.S. HOMES CORPORATION, PREPARED BY ROCKY MOUNTAIN CONSULTANTS, INC. REV. JANUARY 1998 FOR THE MASTER HISTORICAL BASIN SIZE.
2. REFER TO ACADEMY CHARTER SCHOOL CONSTRUCTION PLANS STORM SEWER, SHEET C9 AND C10 FOR STORM SEWER, CHANNEL AND RIPRAP DESIGN.



MARTIN/MARTIN assumes no responsibility for utility locations. The utilities shown on this drawing have been plotted from the best available information. It is, however, the contractors responsibility to field verify the location of all utilities prior to the commencement of any construction.

DRAINAGE MAP FOR ACADEMY CHARTER SCHOOL RED HAWK FILING NO. 1, 3RD AMENDMENT LOT 1

MARTIN / MARTIN CONSULTING ENGINEERS
4251 KIPLING P.D. BOX 4001 WHEAT RIDGE, CO 80034
303.431.6100 FAX 303.431.4026

ACADEMY CHARTER SCHOOL CASTLE ROCK, COLORADO DRAINAGE MAP

no	description of revisions	date	name
1	SUBMITTED TO TOWN OF CASTLE ROCK	12/12/00	JCM
2	REVISED PER TOWN COMMENTS	01/23/01	JCM
date	NOV. 22, 2000		
job number	14418.06		
design by	JCC		
drawn by	TAH		
checked by	JCM		
sheet number	D1		

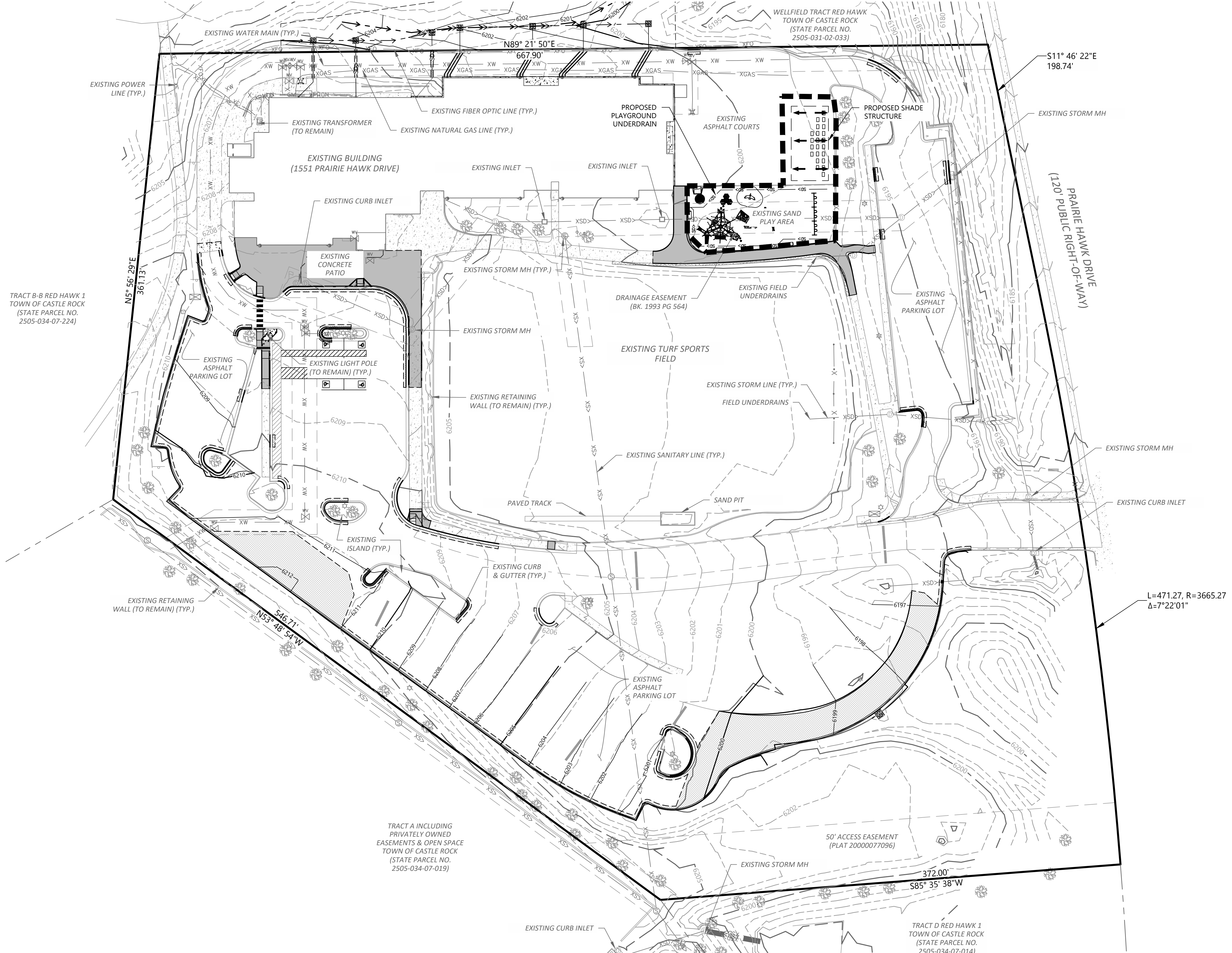


APPENDIX D

- DRAINAGE PLAN

SITE DEVELOPMENT PLAN
ACADEMY CHARTER SCHOOL - AMENDMENT NO. X
LOT 1A, RED HAWK FILING NO. 1 FIFTH AMENDMENT
SITUATED IN THE EAST 1/2 OF SECTION 3, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE 6TH P.M.,
TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO

(1551 PRAIRIE HAWK DRIVE)



LEGEND:

- PROPERTY LINE
- PROPOSED BUILDING
- EXISTING BUILDING
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED BASIN BOUNDARY
- HISTORICAL BASIN BOUNDARY
- 5400 PROPOSED 5' CONTOUR
- 5401 PROPOSED 1' CONTOUR
- 5402 EXISTING 5' CONTOUR
- 5403 EXISTING 1' CONTOUR
- PROPOSED STORM LINE W/F.E.S.
- EXISTING STORM LINE W/F.E.S.
- PROPOSED SAWCUT
- PROPOSED STORM INLET
- EXISTING STORM INLET
- FLOW DIRECTION
- OVERFLOW PATH
- PROPOSED SPOT GRADE
- EXISTING SPOT GRADE
- SLOPE AND DIRECTION
- HP HIGH POINT
- LP LOW POINT
- GB GRADE BREAK
- BASIN ID
- BASIN IDENTIFICATION TAG
- 5-YR RUNOFF COEFFICIENT
- 100-YR RUNOFF COEFFICIENT
- BASIN ACREAGE

PROOF CIVIL
consulting engineers
1531 Market Street | Denver, CO

SEAL:

REVISIONS	
NO.	DESCRIPTION

PROJ. NO.: 25031	DATE: 05/01/2026	DRAWN BY:	CHECKED BY:
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DRAINAGE EXHIBIT

ACADEMY CHARTER SCHOOL

CASTLE ROCK COLORADO

DRAWING NO. **C1**

1 OF 1