



Final Drainage Conformance Letter

Town of Castle Rock

Scileppi's at the Old Stone Church Remodel/Addition

May 25, 2022
Revised September 26, 2022
Revised November 21, 2022

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

Dear Reviewing Engineer,

This letter has been written to describe changes to storm drainage that are anticipated as part of the proposed improvements to the existing Old Stone Church building located at 210 3rd St., Castle Rock, CO 80104 and to demonstrate that the improvements will have a negligible impact on the existing storm drainage infrastructure.

The site currently consists of an existing Scipelli's dine-in restaurant with associated parking, drive aisles, sidewalk, and landscaping. Runoff from the site is largely conveyed to 3rd Street's public street section via sheet flow and a drainage pan and chase drain shared with a neighboring user.

According to the United States Department of Agriculture Natural Resources Conservation Service (NRCS) National Cooperative Soil Survey, onsite soils are identified as Soil Name and are classified as Hydrologic Soil Group A. Group A is sand, loamy sand or sandy loam types of soils. It has low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravels and have a high rate of water transmission.

The proposed improvements include an addition to the existing building that will replace the existing private parking lot. Drainage patterns will be generally maintained as the existing and proposed improvements will drain to the public right of way of 3rd Street and an alley south of the site.

Proposed Drainage

There are no known drainage studies for the site to conform to therefore the site will maintain as close to the existing conditions as feasible. The existing site has a calculated imperviousness of 72.8%. The proposed improvements will result in a minor increase in imperviousness of 73.2%. The increase in imperviousness is negligible and site generated flows are anticipated to decrease in the proposed condition, therefore no improvements to the existing downstream storm drainage infrastructure are anticipated.

The existing and proposed basins have been delineated to determine if the site exceeds existing runoff quantities. Historically the existing site is split into two basins draining to Third Street and a private alley south of the site. The proposed site is divided into similar basins. The basins are described as follows:

Basin EX-A

Historic basin EX-A consists of roof area from the existing building, concrete walks and hardscape, asphalt parking lot, and site landscaping. The basin is 0.16 acres with an imperviousness of 79.7%. Runoff from the basin is conveyed to the intersection of Third Street and Jerry Street via downspouts, sheet flow and existing curb and gutter. The peak runoff rates for the 5-year and 100-year events are 0.54 and 1.15 cfs, respectively.

Basin EX-B

Historic basin EX-B consists of roof area from the existing building, concrete walks and pads, asphalt parking lot, and site landscaping. The basin is 0.12 acres with an imperviousness of 63.1%. Runoff from the basin is conveyed to the intersection of Jerry Street and an existing alley via downspouts, sheet flow and existing curb and gutter. The peak runoff rates for the 5-year and 100-year events are 0.31 and 0.76 cfs, respectively.

Basin A

Basin A consists of roof area from existing building, concrete walks and hardscape, and site landscaping. The basin is 0.09 acres with an imperviousness of 71.0%. Runoff from the basin is conveyed to the intersection of Third Street and Jerry Street via downspouts, sheet flow and existing curb and gutter. The peak runoff rates for the 5-year and 100-year events are 0.28 and 0.63 cfs, respectively.

Basin B

Basin B consists of roof area from the existing and proposed buildings, concrete walks and parking, and site landscaping. The basin is 0.18 acres with an imperviousness of 74.3%. Runoff from the basin is conveyed to the intersection of Jerry Street and an existing alley via downspouts, sheet flow and existing curb and gutter. The peak runoff rates for the 5-year and 100-year events are 0.58 and 1.28 cfs, respectively.

Floodplain Modifications

The proposed site is within the FEMA designated special flood hazard area (zone x), 0.2% chance of flooding according to map #08035C0301G effective date 3/16/2016. No improvements to the designated floodplain or floodway are proposed therefore there will be no impact to the FEMA floodplain

Water Quality Treatment and Detention

Based on the size of the project and area of disturbance, permanent water quality and detention facilities will not be required as a part of this development (see water quality worksheet in the **Appendix**). However, Mile High Flood District's (MHFD) four step water quality process has been considered in site design and water quality measures have been implemented where possible. The four steps are addressed as follows:

- Reduce Runoff Volume to the Maximum Extent Possible: Given the space constraints of the site, not all runoff can be disconnected before reaching formal drainage conveyances. However, where possible runoff will be directed over pervious surfaces to reduce runoff volume (as is the case for the patio and other hardscapes on the north side of the building).
- Provide Water Quality Capture Volume and Flood Control Detention Via Full-Spectrum Detention: Given site space constraints, storage of runoff is not feasible for this project.
- Utilize Stream Channelization Techniques: As streams or open channel vegetation conveyances are not a part of this project, this step in the process does not apply.
- Undertake Source Control: Non-structural practices will be implemented to prevent contamination of stormwater runoff. The grease interceptor and trash containers will be emptied on a regularly scheduled basis to avoid overfilling. Snow will be shoveled into landscaped areas to the maximum extent possible.

Operations and Maintenance

No permanent structural water quality or detention facilities will be constructed with the project, so a formal inspection and maintenance program for these facilities will not be established. However, site operations that effect downstream drainageways will be managed by an onsite facilities maintenance team. As previously mentioned, the grease interceptor and trash containers will be emptied on a regularly scheduled basis to avoid overfilling. A limited amount of snow is anticipated on the new parking stalls. Any excess snow that must be stored will be moved to a designated side of the parking lot and kept onsite until melted. As the site is an active commercial use, all of the listed operations will be consistently privately inspected to ensure orderly operation.

Conclusion

Proposed drainage design meets the criteria within the *Town of Castle Rock Storm Drainage Design and Technical Criteria Manual dated June 2019* and *MHFD manuals updated January 2016*. The proposed improvements will result a negligible change in runoff quantities to surrounding infrastructure. Thus, the proposed development is not anticipated to require any changes to the existing downstream drainage features.

If you have any questions regarding this letter, please feel free to contact me at 303.325.5709 or jdeyoung@proofcivil.com.

Sincerely,

PROOF CIVIL CO.
A Colorado Corporation



Jason DeYoung, P.E.
Principal



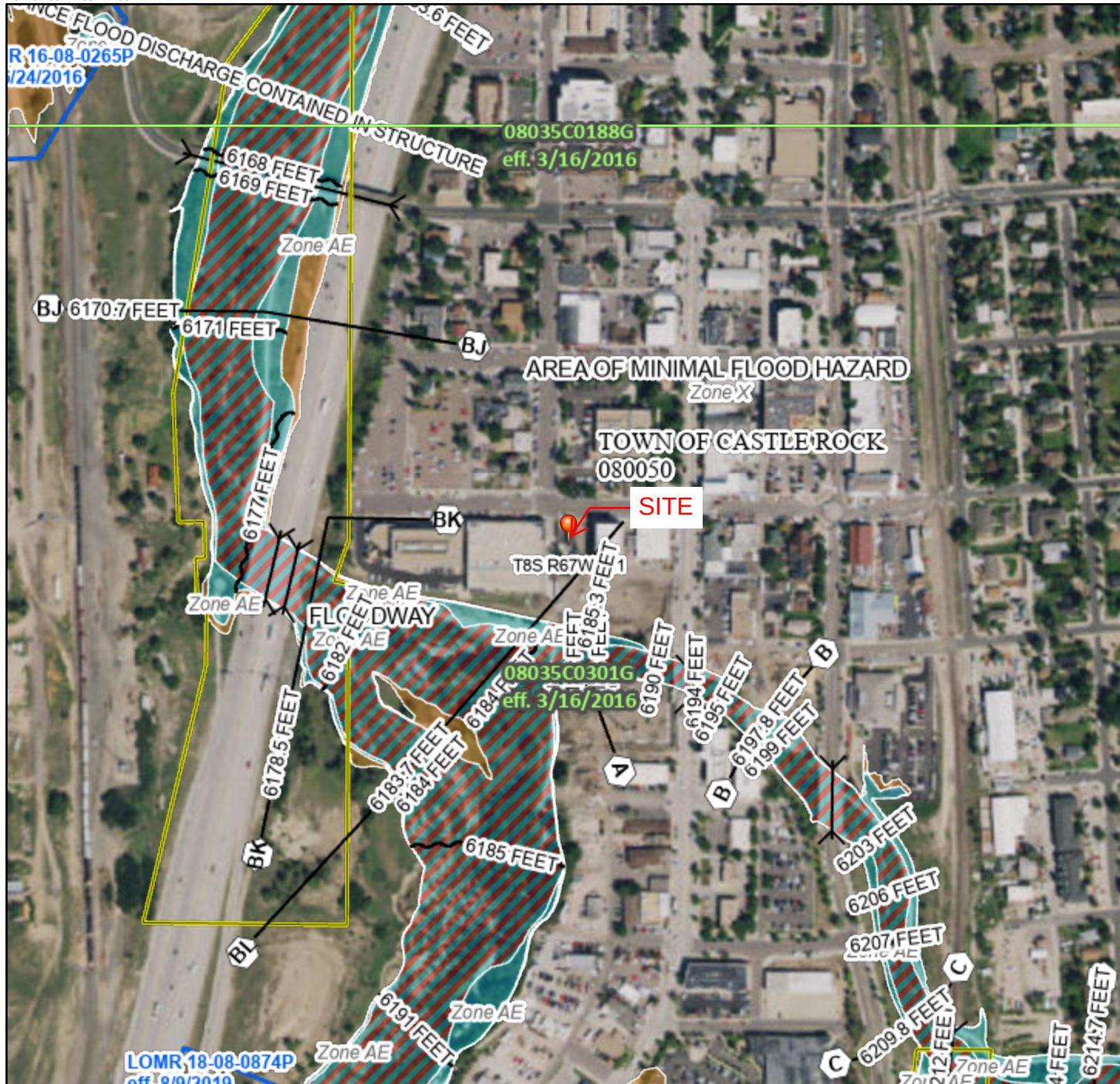


- APPENDIX A – MAPS AND SITE DESCRIPTIONS

National Flood Hazard Layer FIRMMette



104°51'59"W 39°22'33"N



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
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped



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

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

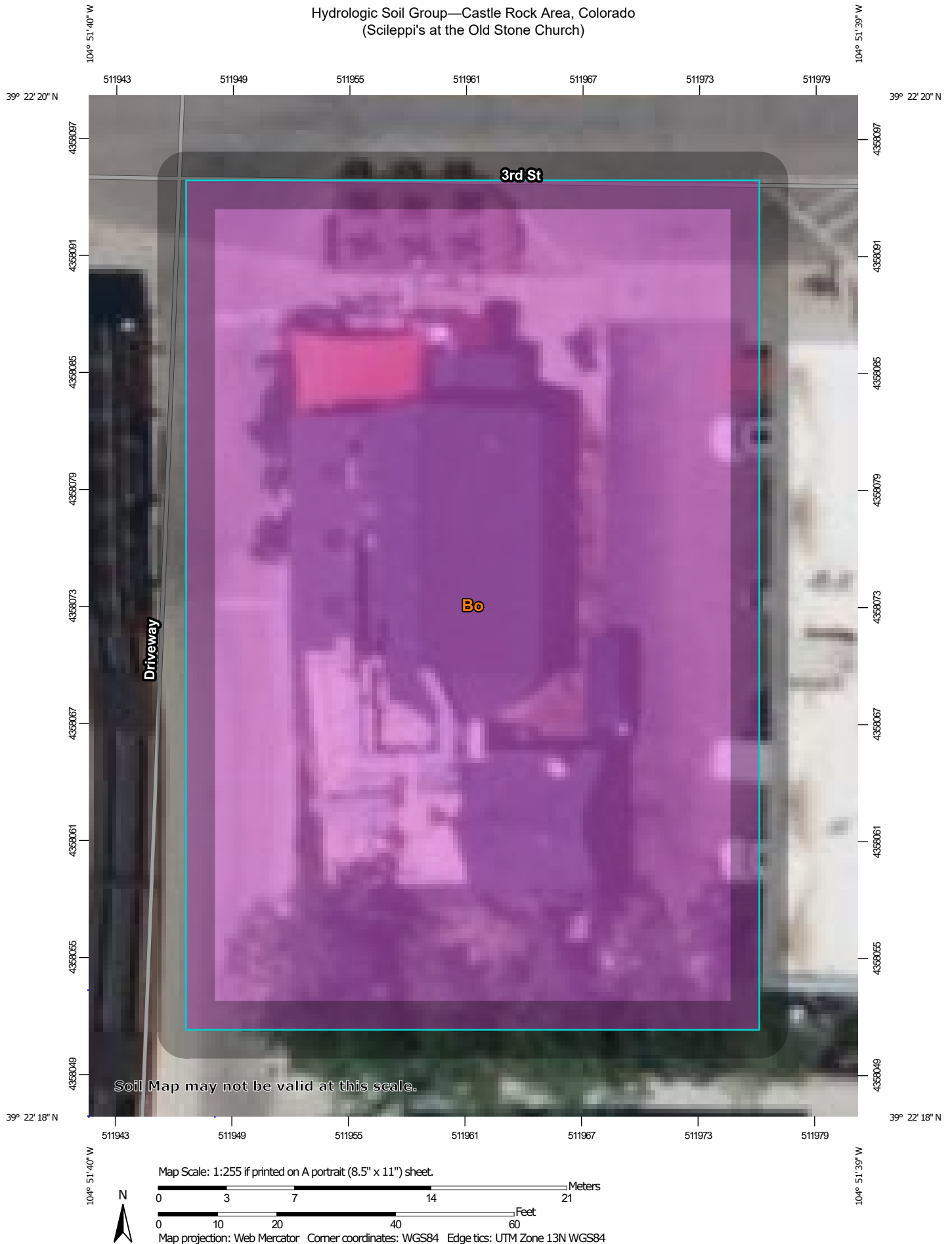
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/23/2022 at 4:12 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by 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.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Hydrologic Soil Group—Castle Rock Area, Colorado
(Scileppi's at the Old Stone Church)



Hydrologic Soil Group—Castle Rock Area, Colorado
(Scileppi's at the Old Stone Church)

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 14, Aug 31, 2021

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

Date(s) aerial images were photographed: Jun 9, 2021—Jun 12, 2021

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
Bo	Blakeland-Orsa association, 1 to 4 percent slopes	A	0.3	100.0%
Totals for Area of Interest			0.3	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 – HYDROLOGIC CALCUATIONS

Project : Scileppi's at the Old Stone Church Addition
 Project No. : 22042

Date : 6/9/2022
 By : JGD

Drainage Basin Imperviousness

Soil Type : **C or D**

	Roof	Concrete	Asphalt	Landscape	Playground	Gravel	Assumed						
Imperviousness :	90%	90%	100%	2%	10%	40%	80%						
Basin Name	Areas (sq.ft.)							Total Area (sq.ft.)	Composite % Imp.	Runoff Coefficients			
										C ₂	C ₅	C ₁₀	C ₁₀₀
EX-A	1,282	727	3,775	1,251				7,035	79.7%	0.64	0.69	0.72	0.81
EX-B	1,933	166	1,249	1,679				5,027	63.1%	0.50	0.55	0.60	0.74
EXISTING SITE	3,215	893	5,024	2,930				12,062	72.8%	0.58	0.63	0.67	0.78
A	1,075	2,077	0	866				4,018	71.0%	0.57	0.62	0.66	0.78
B	5,490	1,123	0	1,431				8,044	74.3%	0.60	0.64	0.68	0.79
PROPOSED SITE	6,565	3,200	0	2,297				12,062	73.2%	0.59	0.64	0.67	0.78

- APPENDIX C – HYDRAULIC CALCUALTIONS



Project : Scileppi's at the Old Stone Church Addition
 Project No. : 22042

Date : 6/9/2022
 By : JGD

SF2 - Time of Concentration

Basin ID	Area (AC.)	C _s	Initial/Overland Time			Travel Time					Time of Concentration		Final
			L _i (ft.)	S (%)	T _i (min.)	L _t (ft.)	S (%)	Conveyance Factor	Vel (fps)	T _t (min.)	Comp. T _c (min.)	Regional T _c (Min.)	T _c (Min.)
EX-A	0.16	0.69	36	25.00	1.5	149	2.0	20	2.8	0.9	2.4	13.3	5.0
EX-B	0.12	0.55	36	25.00	2.1	101	3.5	20	3.7	0.4	2.5	15.8	5.0
A	0.09	0.62	36	25.00	1.8	109	2.0	20	2.8	0.6	2.4	14.6	5.0
B	0.18	0.64	74	5.00	4.2	75	4.0	20	4.0	0.3	4.5	13.7	5.0

Project : Scileppi's at the Old Stone Church
 Project No. : 22042

JGD

Date : 6/9/2022
 By : JGD

SF₃ - Minor Storm

1-hr Point Rainfall **1.43** in. (5-year Event)

Description	Design Point	Direct Runoff						Total Runoff				Street		Travel Time			Comments
		Area (ac.)	C _s	T _c (min.)	CA (ac.)	I (in/hr)	Q (cfs)	T _c (min.)	CA (ac.)	I (in/hr)	Q (cfs)	Slope (%)	Flow (cfs)	Length (ft)	Vel. (fps)	tt (min.)	
EX-A		0.16	0.69	5.0	0.1	4.85	0.54										
EX-B		0.12	0.55	5.0	0.1	4.85	0.31										
EXISTING SITE							0.85										
A		0.09	0.62	5.0	0.1	4.85	0.28										
B		0.18	0.64	5.0	0.1	4.85	0.58										
PROPOSED SITE							0.85										

Project : Scileppi's at the Old Stone Churc
 Project No. : 22042

JGD

Date : 6/9/2022
 By : JGD

SF₃ - Major Storm

1-hr Point Rainfall **2.6** in. (100-year Event)

Description	Design Point	Direct Runoff						Total Runoff				Street		Travel Time			Comments
		Area (ac.)	C ₁₀₀	Tc (min.)	CA (ac.)	I (in/hr)	Q (cfs)	Tc (min.)	CA (ac.)	I (in/hr)	Q (cfs)	Slope (%)	Flow (cfs)	Length (ft)	Vel. (fps)	tt (min.)	
EX-A		0.16	0.81	5.0	0.1	8.82	1.15										
EX-B		0.12	0.74	5.0	0.1	8.82	0.76										
EXISTING SITE							1.91										
A		0.09	0.78	5.0	0.1	8.82	0.63										
B		0.18	0.79	5.0	0.1	8.82	1.28										
PROPOSED SITE							1.92										

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

Project:		Project#	SDP22-0044	Applicant:	
Section	Questions	Response	Check those that apply	Instructions	
1	Non-applicable Sites				
1.1	Will the project result in a temporary disturbance of greater than one acre?	No Yes	☒ ☐	Proceed to section 1.2. Proceed to section 2.	
1.2	Is the project part of a larger common plan of development or sale where multiple separate and distinct construction activities may be taking place at different times on different schedules, but remain related and are within 1/4 mile of each other? (A common plan of development will generally be documented on a site development plan, master plan, or equivalent, for the property/project)	No Yes	☒ ☐	Proceed to section 1.3. Proceed to section 2.	
1.3	Is the project within the Cherry Creek Watershed?	Yes No	☐ ☒	Permanent water quality control measures may be required. Refer to Water Quality Control Regulation 72.7 for details and allowable exclusions. Permanent water quality control measures are not required.	
2	Applicable Site Types and Exclusions by Variance				
2.1	Does the project have more than 35% impervious area on the existing site?	No Yes	☐ ☐	Project is an applicable Development Site. Proceed to section 3. Proceed to 2.2.	
2.2	Does the project have greater than 75% impervious area on the existing site?	No Yes	☐ ☐	Project is an applicable Redevelopment Site. Proceed to section 3. Project is an applicable Constrained Redevelopment Site. Proceed to 2.3.	
2.3	Will 100% of the runoff from the existing and proposed site be captured and treated using one or more of the allowable design standards for permanent water quality?	Yes No	☐ ☐	No further action required. Proceed to 2.4.	
2.4	Do any other water quality exclusions apply to the site?	No Yes	☐ ☐	Portions of the project are excluded. Proceed with design in accordance with Constrained Redevelopment standards and apply for variance for <u>Constrained Redevelopment Sites</u> . Proceed to section 3. Following approval of other exclusions, design remaining site in accordance with Constrained Redevelopment standards and apply for variance for <u>Constrained Redevelopment Sites</u> .	
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.	

Section	Questions	Response	Check those that apply	Instructions
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.
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 No	☐ ☐	Proceed to next line. Proceed to 3.3.2.
	Is the project site greater than 10% impervious?	No Yes	☐ ☐	Project is excluded. Submit variance for <u>Large Lot Single Family Sites Excluded from Permanent Water Quality Requirements</u> . Proceed to next line.
	Is the project site greater than 20% impervious?	Yes No	☐ ☐	This exclusion does not apply. Permanent water quality is required. Proceed to next line.
	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>Large Lot Single Family Sites Excluded from Permanent Water Quality Requirements</u> . This exclusion does not apply. Permanent water quality is required.

Section	Questions	Response	Check those that apply	Instructions
3.3.2	Will 100% of the runoff from the residential or commercial site be captured?	Yes No	☐ ☐	This exclusion does not apply. Permanent water quality is required. Proceed to next line.
	Is all or a portion of the site undeveloped or will it remain undeveloped after construction?	Yes No	☐ ☐	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. Proceed to next line.
	Is the remaining untreated impervious area greater than 20% of the site?	Yes No	☐ ☐	This exclusion does not apply. Permanent water quality is required. Proceed to next line.
	Is the remaining untreated impervious area greater than one acre?	Yes No	☐ ☐	This exclusion does not apply. Permanent water quality is required. Proceed to next line.
	Is it practicable to capture runoff from portions of the site that will not drain to a control measure?	No Yes	☐ ☐	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. 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 Scileppi's at the Old Stone Church Remodel/Addition

Project Owner Scileppi Properties LLC

Project Location 210 Third Street

ToCR Project Number SDP22-0044

Total Site Area 0.28 acres

Total Size of Common Plan of Development 0.28 acres

Check all that apply:

☒ **Project within Plum Creek Basin**

☐ **Project within Cherry Creek Basin**

Estimated construction completion date 03/23

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

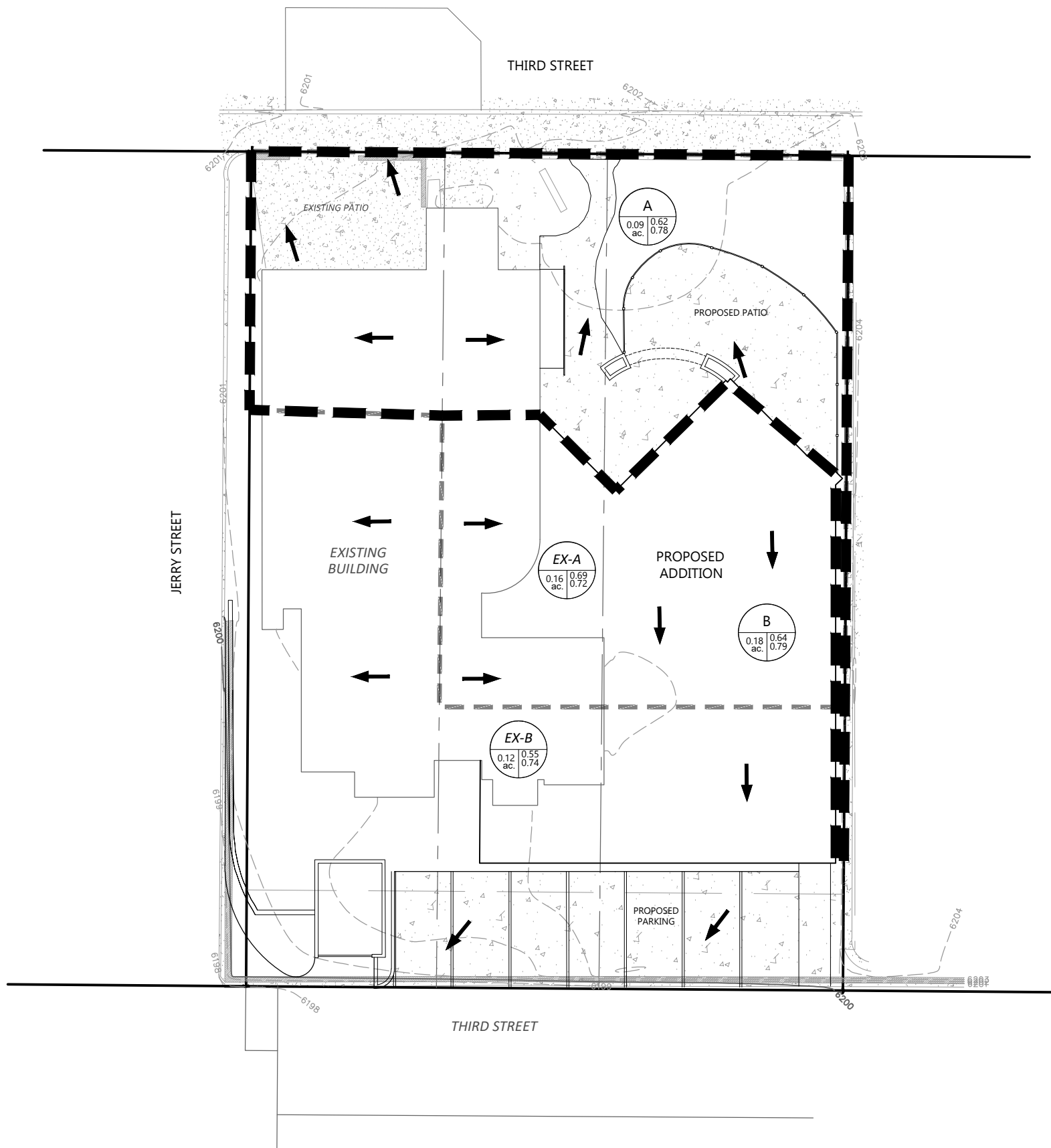
4. For Constrained sites, was any portion of the site excluded up to 50% of the site and not to exceed 50% of the impervious area? ☐ Yes ☐ No

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 D – DRAINAGE PLAN



LEGEND:

	PROPERTY LINE
	PROPOSED BUILDING
	EXISTING BUILDING
	PROPOSED EASEMENT
	EXISTING EASEMENT
	PROPOSED BASIN BOUNDARY
	HISTORICAL BASIN BOUNDARY
	PROPOSED 5' CONTOUR
	PROPOSED 1' CONTOUR
	EXISTING 5' CONTOUR
	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
	HIGH POINT
	LOW POINT
	GRADE BREAK

