
Final Utility Letter

Perry Street Social District

NEC of Fourth Ave and Perry St

September 16, 2022

SDP21-0046

Prepared For:

Perry Street Social District

425 N. Wilcox St., Suite 210A

Castle Rock, CO, 80104

Contact: Paul Myhill

Email: paul@perrystreetsocial.com

Prepared By:



501 S Cherry St, Suite 300

Denver, CO 80246

303-572-7997 www.ees.us.com

Contact: Krysta Houtchens

Email: Krysta.houtchens@ees.us.com

Utility Letter

Perry Street Social District

Engineer's Statement:

The enclosed utility report, and exhibits, were prepared by me or under my direct supervision and is correct to the best of my knowledge and belief. Said utility report has been prepared in accordance with applicable Town of Castle Rock criteria and is in conformance with the master utility plans for the affected area. I accept responsibility for any liability caused by negligent acts, errors, or omissions on my part in preparing this report.

Signature: _____

Registered Professional Engineer

State Of Colorado No. _____

(Affix Seal)

Owner/Developer's Statement:

As Owner/Developer of Land(s) identified within this report; I agree to proceed, implement and comply with all recommendations and requirements outlined herein.

Name of Developer

Authorized Signature

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PROJECT LOCATION AND DESCRIPTION

EES is pleased to provide a utility letter for the proposed site layout for Lot 4A, Block 11 of the town of Castle Rock, located in the Northeast Quarter of Section 11, Township 8 South, Range 67 West of the 6th Principal Meridian. The addresses on site are 414 and 404 North Perry Street, and 411 4th Street, Castle Rock, Colorado. The site is bound to the north by a residential single-family home, Perry Street to west, and 4th Street to the south and east.

The proposed project site is approximately 0.40 acres and will contain three restaurant/bars. The total SFEs proposed for the development are 51.54 based on Section 4.4.1 of the Town of Castle Rock Water System and Wastewater Collection Design 2018 Criteria Manuals.

At the time of this report it is unknown if easements will be required, however any easement or tracts necessary for utilities will be provided at time of either platting or at time of final design/construction documents, in accordance with Town standards regarding location and size of easements and tracts.

Based on FEMA Firm Map Number 08035C0301G, revised March 16, 2016, the project location lies within Zone X – Areas determined to be outside of the 0.2% annual chance floodplain. There are no navigable waterways, irrigation canals or ditches, on-site wastewater treatment systems, or existing water wells on site.

The site is generally flat throughout the development, with water running into the public right-of-way to the east, west, and south of the property. There are no major geologic features on-site that will affect the development of the proposed water or wastewater system.

CALCUALTED WATER DEMANDS

Land Use	Square Footage	Typical ADD/Unit*	ADD (gpm)	ADD (gpd)	ADD (af/yr)
Restaurant (1)	4,786	3.0 gpd/SF	10.0	14,358	16.1
Restaurant (2)	1,400	3.0 gpd/SF	2.9	4,200	4.7
Restaurant (3)	2,841	3.0 gpd/SF	5.9	8,523	9.5
Total			18.8	27,081	30.3

* - Based on Chapter 4 - Section 4.4.1 of the Town of Castle Rock Water System Design 2018 Criteria Manual

Land Use	Square Footage	Typical ADD/Unit*	MDD (gpm) (ADD * 2.5)	MDD (gpd) (ADD * 2.5)
Restaurant (1)	4,786	3.0 gpd/SF	25.0	35,895
Restaurant (2)	1,400	3.0 gpd/SF	7.25	10,500
Restaurant (3)	2,841	3.0 gpd/SF	14.75	21,308
Total			47.0	67,703

* - Based on Chapter 4 - Section 4.4.1 of the Town of Castle Rock Water System Design 2018 Criteria Manual

Based on the above tables, the required storage volume for the water generated by the proposed development will be 247,703 gallons (180,000 gallons from fire demand).

Land Use	Square Footage	Typical ADD/Unit*	PHD (ADD * 5.5)	PHD (gpd) (ADD * 5.5)
Restaurant (1)	4,786	3.0 gpd/SF	55.0	78,969
Restaurant (2)	1,400	3.0 gpd/SF	16.0	23,100
Restaurant (3)	2,841	3.0 gpd/SF	32.5	46,877
Total			103.5	148,946

* - Based on Chapter 4 - Section 4.4.1 of the Town of Castle Rock Water System Design 2018 Criteria Manual

EXISTING WATER SYSTEM

The existing site is serviced by a 12" PVC water main located within N. Perry Street. Based on the utility mapping provided by the city, there are two water meter accounts associated with the existing development – 1239 at 414 Perry St. and 1243 at 404 Perry Street. The 1239 account is serviced by two ¾" lines, while the 1243 account is serviced by a single ¾" line. It is not anticipated any water mains will require extension to service the proposed development. During communication with the city, no bottlenecks or shortcomings were brought up in relation to the project.

The existing pressure zones at the time of this report are unknown but have been requested from the city. The site is within the Yellow Zone and has a pressure of approximately 55 psi. Per Castle Rock Water, there should be no issue meeting proposed demands, based on this submittal.

PROPOSED WATER SYSTEM

The proposed water system will connect using existing ¾" line and upsize the line to a 1" for the southwestern restaurant (Restaurant 2). For the southeastern restaurant (Restaurant 3), a 1" water service line will be proposed with a meter being placed within the building per Town standards. The northern restaurant (Restaurant 1) will require upsizing the existing ¾" pipe to utilize a 1" Type K Copper line connected into 12" PVC main within Perry Street. Restaurant #1 and Restaurant #3 will also required 4" fire service lines. Refer to the SDP set within Appendix A for general utility layout.

The proposed water system layout will consist of only service lines and therefore no looping will be required. With a total proposed water demand of 27,081 gallons per day, the site will not negatively affect any water storage facilities within the town based on the 2017 Water Master Plan.

CALCUALTED WASTEWATER FLOWS

Land Use	Square Footage	Typical ADF/Unit*	ADF (gpm)	ADF (gpd)	ADF (cfs)
Restaurant (1)	4,786	1.5 gpd/SF	5.0	7,179	0.011
Restaurant (2)	1,400	1.5 gpd/SF	1.0	2,100	0.002
Restaurant (3)	2,841	1.5 gpd/SF	2.0	4,262	0.004
Total			8.0	13,541	0.017

* - Based on Chapter 4 - Section 4.4.1 of the Town of Castle Rock Wastewater System Design 2018 Criteria Manual

Peaking Factor*:

$$PF = 3.65 * (ADF^{-0.168})$$

$$PF = 3.65 * (1.5^{-0.168})$$

$$PF = 3.41$$

$$ADF * PF = 9,697 * 3.41 = 33,067 \text{ gpd} = 0.033 \text{ MGD}$$

* - Based on Chapter 4 - Section 4.4.1.2 of the Town of Castle Rock Wastewater System Design 2018 Criteria Manual

Peak Design Flow Rate*:

$$PDF = \text{Peak Base Flow} + I \text{ and } I \text{ Allowance} = (ADF * PF) + (0.1 ADF)$$

$$PDF = (3.41 * 9,697) + (0.1 * 9,697)$$

$$PF = 34,034 \text{ gpd} = 0.034 \text{ MGD}$$

* -Based on Chapter 4 - Section 4.4.1.3 of the Town of Castle Rock Wastewater System Design 2018 Criteria Manual

Therefore, based on the above calculations, the necessary capacity to handle the flow on site will be 0.034 MGD.

EXISTING WASTEWATER SYSTEM

The existing site is serviced by two sanitary laterals extending from an 8" VCP sanitary main within Perry Street. Based on the utility map provided by the city, these sizes are currently unknown. There are two manholes on 4th Street, where the wastewater flows to the west towards Perry Street, where the water flows north on Perry Street. The existing system falls within the downtown subbasin based on the 2016 Wastewater Master Plan and will flow into the Plum Creek Water Reclamation Authority treatment facility.

PROPOSED WASTEWATER SYSTEM

The proposed wastewater system will consist of sanitary laterals and grease interceptors (GI) at two of the restaurants, the third restaurant will not require an interceptor as it'll only be a charcuterie and wine bar. The GI for the northern restaurant will be located within the basement of the building with connection to the west within Perry Street, while the GI for the southeast building will be located in the southeast corner of the building, with connection line going south to the main within 4th street. No manholes or additional infrastructure will be proposed on site. Any future development of the existing wastewater infrastructure needed to serve this site is the responsibility of the developer. Refer to the SDP for the utility layout within Appendix A. There will be no variance required based on the Towns Wastewater Master Plan.

There will be no requirement to dedicate land as all wastewater facilities will be accessible by the responsible parties.

REFERENCES

- Town of Castle Rock Wastewater Collection Design 2018 Criteria Manual [PDF] (December 4, 2018). Town of Castle Rock Water Department
- Town of Castle Rock Waste System Design 2018 Criteria Manual [PDF] (December 4, 2018). Town of Castle Rock Water Department
- Town of Castle Rock Wastewater Master Plan 2016 [PDF] (2016). Town of Castle Rock Engineering Division
- Town of Castle Rock Water Master Plan 2017 [PDF] (2017). Town of Castle Rock Engineering Division



APPENDICES



APPENDIEX A – MAPS AND PLANS

Castle Rock Fire and Rescue Department

300 Perry Street - Castle Rock, CO 80104

(303) 660-1066

PLAN REVIEW

PROJECT LOCATION 404 N Perry Street	PROJECT # 4377
PROJECT DESCRIPTION Perry Street Social - PROJECT IDEA - 404 Perry St - Entertainment Area	OCCUPANCY ID 2112
AREA INVOLVED IN ENTIRE PROJECT Perry Street Social - PROJECT IDEA - 404 Perry St - Entertainment Area	ALTERNATE ID

PERMIT # 11504	PERMIT DESCRIPTION Fire Flow Evaluation		
AREA AFFECTED BY THIS PERMIT Perry Street Social District - 4th and Perry Sts - FIRE FLOW EVALUATION		SQUARE FEET	VALUE OF WORK
CONTACT NAME	NOTIFY BY	NOTIFY AT	
REASON FOR SUBMITTAL Review Only	PLAN REVIEWER bdimock	SUBMITTED 09/08/2021	COMPLETED 09/08/2021

CONTRACTOR See Trakit (ID 3577)	BUSINESS PHONE	FAX NUMBER
STREET ADDRESS	CITY, STATE, ZIP	
E-MAIL ADDRESS	STATE LICENSE NUMBER	

CASTLE ROCK FIRE AND RESCUE DEPARTMENT

** PLAN REVIEW LETTER **

<< PLEASE READ THE FOLLOWING CAREFULLY >>

On 9-8-2021, a review was conducted on the submitted FIRE FLOW requirements for the Perry Street Social District, located on (no exact address designated) Fourth and Perry Streets. The following comments pertain to the project:

CODE USED IN REVIEW:

The submitted plans have been reviewed for compliance to the 2018 edition of the International Fire Code (IFC).

REVIEW COMMENTS:

INFORMATION ON THE PROJECT:

From: Michael Drago <Michael.Drago@ees.us.com>

Sent: Wednesday, September 8, 2021 4:44

To: Brian Dimock <BDimock@crgov.com>

Subject: RE: Pre App 20-0040 Utility Report

Hey Brian,

There will be three buildings, the building square footages are shown below:

Building 1: 2,699 sf



Building 2: 1,399 sf

Building 3: 2,375 sf

All buildings will be Type V-B, non-rated. Please let me know if that is all the info you'll need.

Thank you!

Michael Drago

Civil Engineer

Entitlement and Engineering Solutions, Inc.

501 S. Cherry Street, Suite 300 Glendale, CO 80246

O 303-572-7997, ext. 207

D 610-547-2267 (Preferred)

From: Brian Dimock <BDimock@crgov.com <<mailto:BDimock@crgov.com>>>

Sent: Thursday, August 19, 2021 5:12 PM

To: Michael Drago <Michael.Drago@ees.us.com <<mailto:Michael.Drago@ees.us.com>>>

Subject: RE: Pre App 20-0040 Utility Report

Michael,

The information that we will need from you is the square footage of each building and the type of construction. If buildings are connected in any way they will be considered a single building.

Brian K. Dimock

Division Chief/Fire Marshal

Life Safety Division

Castle Rock Fire and Rescue Department

300 Perry Street

Castle Rock, CO 80104

303.660.1066 Office

303.660.1069 Fax

e-mail bdimock@crgov.com <<mailto:bdimock@crgov.com>>

An internationally accredited Fire/Rescue agency 2017-2022

"The moment a question comes to your mind, see yourself mentally taking hold of it. In that moment...you learn to become the decider and not the vacillator. Thus you build character." - H. Van Anderson

COVID-19 UPDATES: Find the latest COVID-19 updates from the Town and its government partners,



including available community resources and information on how to Work With Us Online , at [CRgov.com/COVID](https://protect-us.mimecast.com/s/wnjnCv2rDnclo44lXiq_t?domain=crgov.com). <https://protect-us.mimecast.com/s/wnjnCv2rDnclo44lXiq_t?domain=crgov.com>

From: Michael Drago <Michael.Drago@ees.us.com <<mailto:Michael.Drago@ees.us.com>>>

Sent: Wednesday, August 18, 2021 13:30

To: FPO <FPO@crgov.com <<mailto:FPO@crgov.com>>>

Subject: FW: Pre App 20-0040 Utility Report

To whom it may concern,

See the below email from Jeanne at the City of Castle Rock requesting a fire flow letter as part of our utility report. For your reference we working on Perry Street Social District at the corner of 4th Street and Perry. What information would you need us to provide in order to get us this fire flow letter?

Thank you,

Michael Drago

Civil Engineer

Entitlement and Engineering Solutions, Inc.

501 S. Cherry Street, Suite 300 Glendale, CO 80246

O 303-572-7997, ext. 207

D 610-547-2267 (Preferred)

From: Jeanne Stevens <JStevens@crgov.com <<mailto:JStevens@crgov.com>>>

Sent: Wednesday, July 7, 2021 4:46 PM

To: Michael Drago <Michael.Drago@ees.us.com <<mailto:Michael.Drago@ees.us.com>>>

Cc: Krysta Houtchens <khoutchens@ees.us.com <<mailto:khoutchens@ees.us.com>>>; Julie Kirkpatrick <JKirkpatrick@crgov.com <<mailto:JKirkpatrick@crgov.com>>>; Tina Close <TClose@crgov.com <<mailto:TClose@crgov.com>>>; David Van Dellen <DVanDellen@crgov.com <<mailto:DVanDellen@crgov.com>>>

Subject: RE: Pre App 20-0040 Utility Report

Michael, we don't need a full-blown utility report, but we need a utility letter that documents the project and at least discusses expected demands in accordance with our criteria manuals for water and wastewater. No hydraulic modeling is required and no analysis of offsite infrastructure; we will require the fire flow letter from the fire department to be part of the utility letter submittal.

Jeanne Stevens

Engineering Manager



Castle Rock Water
Office: 720-733-6033
Cell: 303-435-2436
Fax: 303-688-0437

The project consists of several existing buildings and it is unknown at this time if they will be fully sprinkler protected. From the information currently known to the fire department the following comments pertain to the required fire flows:

The proposed building is a 1-Story, 2,699 square foot building, constructed of Type V-B construction, without a full NFPA 13 Fire Sprinkler system. The base required fire flow as noted in the 2018 IFC - Table B105.1, would be: 1,500 gallons per minute (GPM), the code provides an allowance for sprinkler systems. This building, may be required to have a fire sprinkler system installed based on occupancy, however, does not allow for a reduction based on the minimum GPM is 1,500 for buildings of this construction type and size.

There were three buildings included in this review all of the same construction type. The square footage ranged from 2,699, 1,399, and 2,375. With all of these the requirements would be the same for each of the buildings.

FINAL FIRE FLOW REQUIRED:

2018 International Fire Code (IFC), Appendix B, as amended by the Town of Castle Rock requires a MINIMUM fire flow requirement of 1,500 gpm @ 20 psi for a duration of 2-hours. This fire flow shall be from 2 fire hydrants within 450 feet of the structure.

BUILDING INFORMATION:

Type of Construction: The proposed project is shown as being located in a building of Type V-B.

Occupancy Classification: The proposed occupancy classification for this project has been reviewed for compliance with the 2018 IFC and IBC. The occupancy classification of the project is shown as being Unknown Occupancy at this time.

ACTION TAKEN BY THE FIRE DEPARTMENT:

Approval of the above fire flow is based on the information known to the fire department as of the date of this review, as the result of additional information or inspections if the fire flow changes, corrective action may be required.

Should you have any questions please feel free to contact me.

Brian Dimock - Fire Marshal - fpo@crgov.com

DATE RECEIVED	BY:		
DATE FEE PAID	PLAN REVIEW FEE	CHECK #	RECEIPT #
09/08/2021	0.00		

PICKED UP BY	COMPANY	DATE





TOWN OF CASTLE ROCK FIRE FLOW TEST FORM

11/22/2021

Michael Drago

Entitlement and Engineering Solutions, Inc.

610-547-2267

michael.drago@ees.us.com

404 N. Perry St.

F F24-2021
P _____

Test Conducted By: *Avery, Kyle, Aaron, David*

Date: *11/23/21*

Start Time

7:00

End Time

7:05

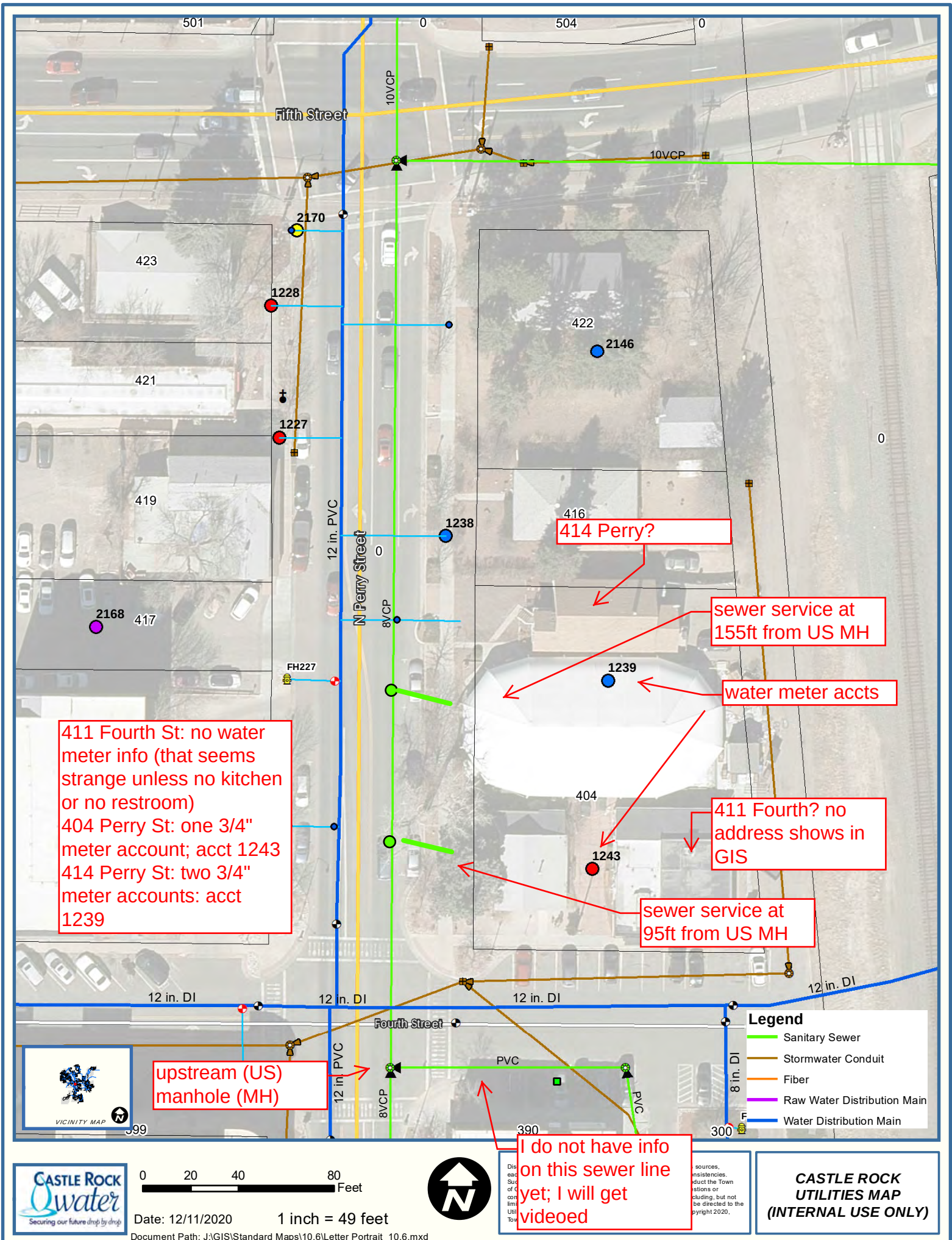
Pressure Hydrant

Hydrant ID	FH	227	
Pre-test Static Pressure (Ps1)			<i>65</i>
Residual Pressure (Pr)			psi <i>38</i>
Post-test Static Pressure (Ps2)			psi <i>65</i>
			psi
Flowing Hydrant			
Hydrant ID	FH	228	
Orifice Side (D)			
Main Size (Dp)			in
			in
Calculated Flowrate (Qr)			
Estimated Volume Discharged (Q)			gpm <i>1797</i>
			gallons <i>8985</i>

Notes: Please see map attached

Peto 28

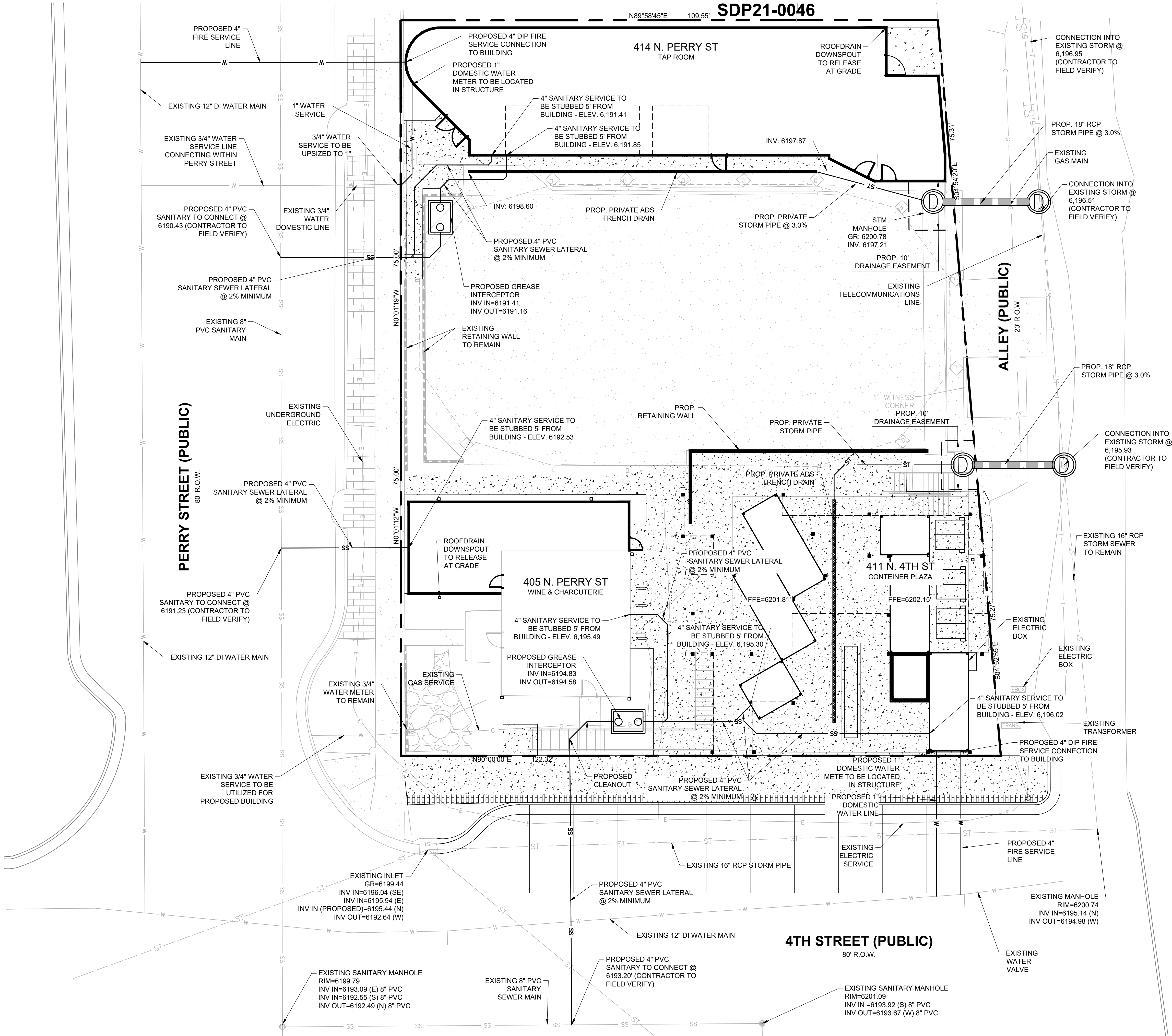
$$\begin{array}{r} 3 \quad 4 \quad 3 \\ 1797 \\ \times \quad 5 \\ \hline 8985 \end{array}$$



SITE DEVELOPMENT PLAN PERRY STREET SOCIAL DISTRICT

LOT 4A, BLOCK 11 OF THE TOWN OF CASTLE ROCK
LOCATED IN THE NORTHEAST QUARTER OF SECTION 11, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE 6TH P.M.
TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO

SDP21-0046

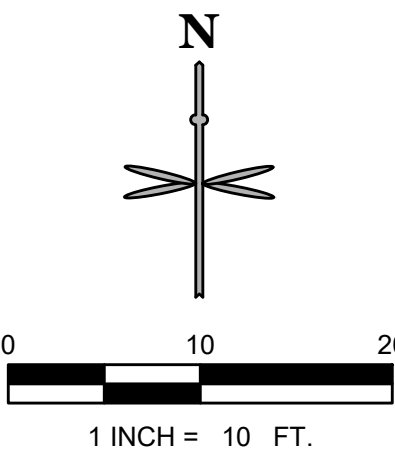


UTILITY PLAN LEGEND

	PROPOSED PROPERTY BOUNDARY
	PROPOSED EASEMENT
	PROPOSED BUILDING SETBACK
	PROPOSED BUILDING OUTLINE
	PROPOSED BUILDING OVERHANG
	PROPOSED CATCH CURB
	PROPOSED SPILL CURB
	PROPOSED WALL
	PROPOSED SIDEWALK
	PROPOSED STORM SEWER
	EXISTING STORM SEWER
	PROPOSED/EXISTING STORM MANHOLE
	PROPOSED/EXISTING STORM INLET
	PROPOSED/EXISTING SANITARY SEWER LINE
	PROPOSED/EXISTING WATER LINE
	PROPOSED/EXISTING ELECTRIC LINE
	PROPOSED/EXISTING TELECOM LINE
	PROPOSED/EXISTING GAS LINE
	PROPOSED/EXISTING RETAINING WALL

UTILITY NOTES

- ALL PROPOSED EASEMENT MUST BE RECORDED PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS.
- THE MINIMUM SEPARATION BETWEEN WATERLINES, SANITARY SEWER AND STORM SEWER IS 10 FEET.
- THE MINIMUM SEPARATION BETWEEN WATER SERVICE LINES IS 5 FEET.
- THIS SITE IS LOCATED WITHIN THE TOWN OF CASTLE ROCK YELLOW WATER PRESSURE ZONE.
- ALL EXISTING UTILITIES AND SITE FEATURES TO REMAIN UNLESS NOTED OTHERWISE.



CALL UTILITY NOTIFICATION
CENTER OF COLORADO
1-800-922-1987 or 811

CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG. GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

SITE DEVELOPMENT PLAN
LOT 4A BLOCK 11 TOWN OF CASTLE ROCK
TOWN OF CASTLE ROCK PROJECT NO. SDP21-0046

DATE	
BY	
REVISION	
No.	

PRELIMINARY
NOT FOR
CONSTRUCTION



SITE DEVELOPMENT PLAN
PERRY STREET SOCIAL DISTRICT
410 PERRY STREET, CASTLE ROCK, CO 80104
UTILITY PLAN

PROJECT NO.: PER001.01
DESIGNED BY: KMH
DRAWN BY: KMH
DATE: 08/05/2022