Concept Utility Letter: YardHomes Ridge View

Parcel 1, Terra Vista

Address:
Northwest corner of Plum Creek Parkway and Ridge Road

Prepared:
July 3, 2024

Prepared for:
Urban Moment
1005 E St Elmo Rd, Building 5
Austin, TX 78745
512.387.5740

Prepared by:
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Town of Castle Rock Project No.

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I. PROJECT LOCATION AND DESCRIPTION

A. Site Location

The YardHomes Ridge View development ("Site") is located at the northwest corner of Ridge Road and Plum Creek Parkway. More specifically, the Site is situated in the South ½ of Section 7, Township 8 South, Range 66 West of the 6th Principal Meridian, County of Douglas, State of Colorado.

The Site is bound by Plum Creek Parkway to the south, North Ridge Road to the east, two single-family residences to the west, and an existing church to the north.

A Vicinity Map is included in Appendix B.

B. Description of Property and Land Use

This Concept Utility Letter has been prepared for the Site and is intended to assess the property's existing and proposed water and wastewater systems.

The 32.3-acre development is anticipated to consist of approximately 165 dwelling units in 130 residential structures, in addition to a clubhouse and amenities such as a pool. The Site also include improvements such as paved streets, surface and garage parking, curb and gutter, hardscaping and landscaping.

The Site is estimated to require approximately 108 SFEs per Section 4.4.1 of the Town of Castle Rock Water Criteria. There are no existing SFEs since the existing zoning is not listed on the SFE table in the Water Criteria.

There are no known waterways, drainageways or floodplains on-Site. There are no known irrigation canals or ditches on-Site. There are no known on-Site wastewater treatment systems or water wells.

The Site currently slopes from northeast to southwest averaging about 4% slopes.

The property is currently zoned Agricultural and is being rezoned to Planned Development under ANX24-0008.

II. EXISTING WATER SYSTEM

A. Existing Distribution System

The Site will be served by the Town of Castle Rock's water infrastructure. Currently, a 30-inch ductile iron pipe exists in Ridge Road. The 30-inch transmission water main appears to have been stubbed out with two 16-inch stubs to the Site, one generally at the northeast corner of the Site, and the second stub generally at the Ridge Road and Plum Creek Parkway roundabout. The existing 30-inch transmission main is within Town of Castle Rock Pressure Zone "Green".

See Appendix D for the Castle Rock Utilities Map.

B. Existing Supply Facilities

The Site is located within the Town of Castle Rock's "Green" Pressure zone. The Site is located near PRV 43, 44 and 46. Since the Site is currently being annexed into Castle Rock, this Site was not included in the Water Master Plan.

See Appendix A for the Pressure Zone Map.

III. PROPOSED WATER SYSTEM

A. Proposed Distribution System

The Site will connect to the two existing 16-inch stubs and consist of an internal 8-inch looped water main. The proposed water system and layout will be analyzed further as the design of the project progresses. Any future development of the existing water infrastructure needed to serve this Site is the responsibility of the developer.

The Site is currently being annexed into the Town of Castle Rock so it has not been included in the Water Master Plan. The existing zoning is Agricultural, which is not included in the SFE calculation table.

The Site is estimated to require approximately 108 SFEs. See Appendix A for the water SFE calculations.

B. Proposed Supply Facilities

There are no additional water supply facilities that are anticipated to serve this development. The system will be further analyzed throughout the project design process to confirm that there is no demand for additional supply facilities.

IV. EXISTING WASTEWATER SYSTEM

A. Existing Collection System

There is a future 8-inch sanitary sewer system in Plum Creek Parkway as a part of the Villages at Castle Rock Metro District No. 4, Outfall Sewer – Plum Creek Parkway – Segment 1, just south of the Site; Town of Castle Rock Project Number: CD23-0005.

The future 8-inch stub is proposed to enter the Site at the middle southern portion of the Site. The Site was not included in the Wastewater Master Plan as it is currently being annexed into the Town of Castle Rock.

V. PROPOSED WASTEWATER SYSTEM

A. Proposed Collection System

The on-Site proposed improvements consist of sanitary main connecting to the future Plum Creek Parkway main. The exact location, both horizontally and vertically, of the future sanitary sewer system will be verified early in the design process. Additional analysis will be required in the future to ensure that adequate capacity is available for the Site. Any future development of the existing wastewater infrastructure needed to serve this Site is the responsibility of the developer. The project is estimated to produce about 108 SFEs. The existing zoning is Agricultural, which is not included in the SFE calculation table. The Site was not included in the Wastewater Master Plan.

See Appendix A, for the wastewater SFE calculations.

B. Proposed Wastewater Facilities

There are no additional wastewater facilities that are anticipated to serve this development. The system will be further analyzed throughout the project design process to confirm that there is no demand for additional supply facilities.

VI. LIST OF REFERENCES

References

1. Town of Castle Rock, Water System Design, 2018 Criteria Manual
2. Town of Castle Rock, Wastewater Collection Design, 2018 Criteria Manual

APPENDIX A

associated with the Town's Concept, Preliminary, and Final Development Packages are documented in Chapter 3 of these Criteria.

4.4.1. Design Demands

The tabulation below provides the Average Daily Demand (ADD) rates that shall be applied to compute the demands associated with the various types of land use within the development. Demands shall be computed for intermediate and full build-out phases of the development, and shall be assigned to the appropriate design points within the model to accurately reflect the geographical distribution of land use throughout the site.

Land Use	Typical ADD/Unit	Typical SFEs/Unit
Single Family Residential and Duplexes	400 gpd/dwelling unit	1.00/dwelling unit
Multi-Family Residential (Townhomes and	260 gpd/dwelling unit	0.65/dwelling unit
Retail/Offices	0.2 gpd/SF	0.0005/SF
Hotels/Motels	75 gpd/room	0.19/room
Restaurants	3.0 gpd/SF	0.0075/SF
Car Washes	5,000 gpd/facility	12.5/facility
Industrial / Other Commercial	1,200 gpd/acre	3.0/acre
Institutional	800 gpd/acre	2.0/acre
Rates for Typical Douglas County		
School Sizes:		
Elementary (10 ac, 675 students)	3,375 gpd/school	8.44/school
Middle (25 ac, 850 students)	8,500 gpd/school	21.25/school
High (50 ac, 1,700 students)	17,000 gpd/school	42.50/school
Rates for Alternate School Sizes:		
Elementary – Domestic	5 gpd/student	0.013/student
Middle – Domestic	10 gpd/student	0.025/student
High – Domestic	10 gpd/student	0.025/student
Elementary Schools – Irrigation	3,000 gpd/total acreage	7.5/total acreage
Middle Schools – Irrigation	5,250 gpd/total acreage	13.1/total acreage
High Schools – Irrigation	4,400 gpd/total acreage	11.0/total acreage
Churches	600 gpd/church	1.5/church
Gym/Fitness Center	0.5 gpd/SF	0.00125 SFE/SF
Irrigated Land (Sports Fields and School Sites Excluded)	3,750 gpd/ irrigated acre	9.38/acre

4.4.1.1 Wastewater System Average Daily Flow (ADF)

Land Use	Typical ADF/Unit	Typical SFEs/Unit
Single Family Residential and Duplexes	**200 gpd/dwelling unit**	**1.00/dwelling unit**
Multi-Family Residential (Townhomes and Condos)	**130 gpd/dwelling unit**	**0.65/dwelling unit**
Retail/Offices	**0.1 gpd/SF**	**0.0005/SF**
Hotels/Motels	**75 gpd/room**	**0.375/room**
Restaurants	**1.5 gpd/SF**	**0.0075/SF**
Car Washes	**5,000 gpd/acre**	**25.0/acre**
Industrial/Other Commercial	**600 gpd/acre**	**3.0/acre**
Institutional	**400 gpd/acre**	**2.0/acre**
Churches	**300 gpd/church**	**1.5/church**
Gym/Fitness Center	**0.5 gpd/SF**	**0.00125 SFE/SF**
Irrigated Land	**0 gpd/acre**	**0.0/acre**
Rates for Typical Douglas County School Sizes:		
Elementary (10 ac, 675 Students)	**3,375 gpd/school**	**16.88/school**
Middle (25 ac, 850 students)	**8,500 gpd/school**	**42.50/school**
High (50 ac, 1700 students)	**17,000 gpd/school**	**85.00/school**
Rates for Alternate School Sizes:		
Elementary	**5 gpd/student**	**0.025/student**
Middle	**10 gpd/student**	**0.050/student**
High	**10 gpd/student**	**0.050/student**

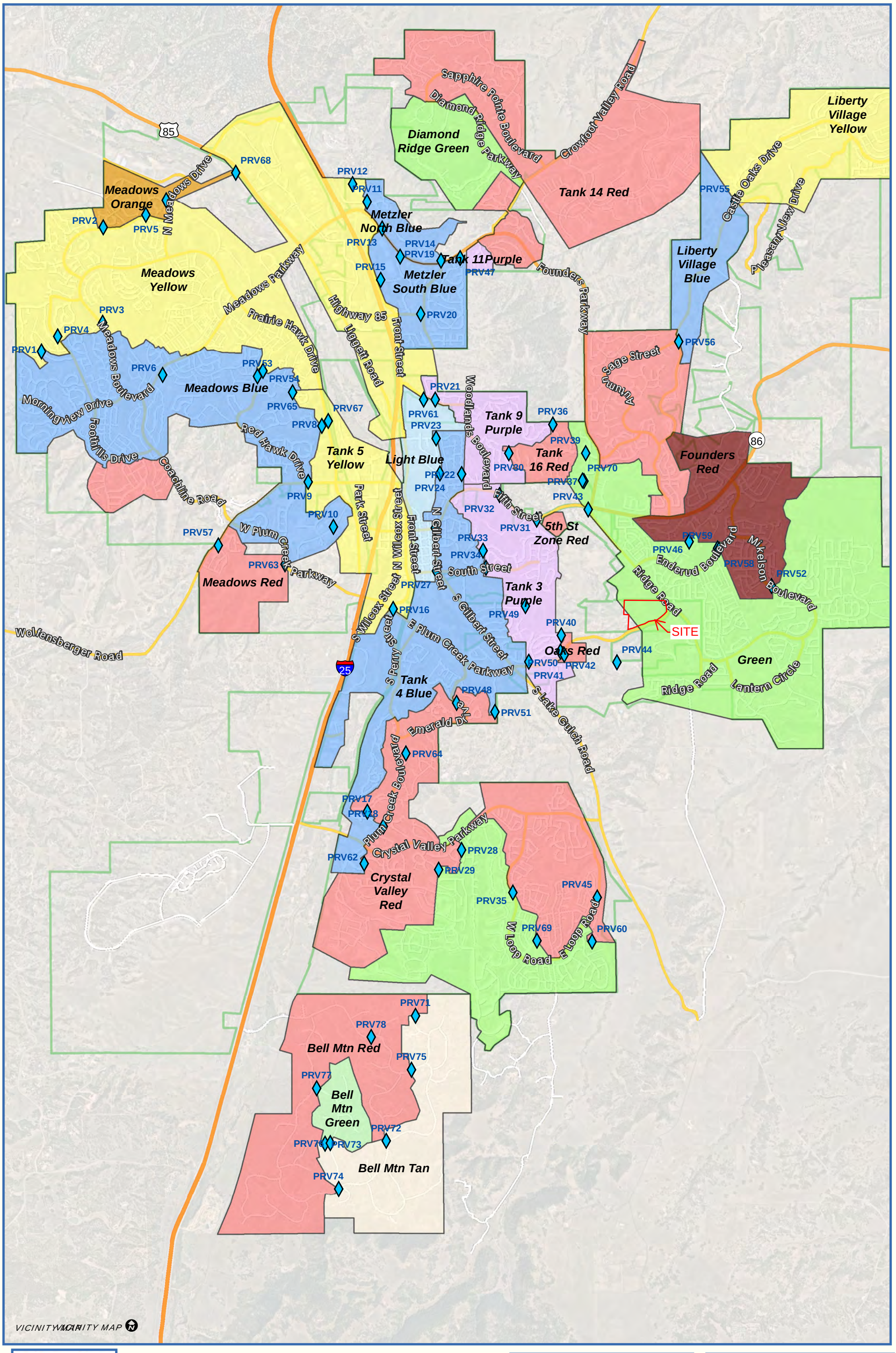
The demands noted in the table above represent the “winter time” or “dry weather” Average Daily Flow (ADF) with no allowance for infiltration and inflow (I/I). I/I shall be accounted for in accordance with the Peak Design Flow computation discussed in the sections to follow.

Regarding design flows for schools, planned school sizes shall be confirmed with the Douglas County School District and documented in the Utility Report. The tabulated rates

Ridgeview SFE Calculations
Project Number: 231150

Proposed Configuration

			Water		Wastewater	
Use	**Amount**	**Unit**	**SFEs/Unit**	**Total SFEs**	**SFEs/Unit**	**Total SFEs**
Residential	165.00	Du	0.65/du	107.25	0.65/du	107.25



CASTLE ROCK Qwater
Securing our future drop by drop

0 1,950 3,900 7,800 11,700 Feet

1 inch = 3,833 feet

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CASTLE ROCK WATER
FIGURE 2.7
PRESSURE ZONES AND PRVs

Date: 3/9/2023 Document Path: J:\GIS\Standard Maps\10.6\11x17 Portrait.mxd

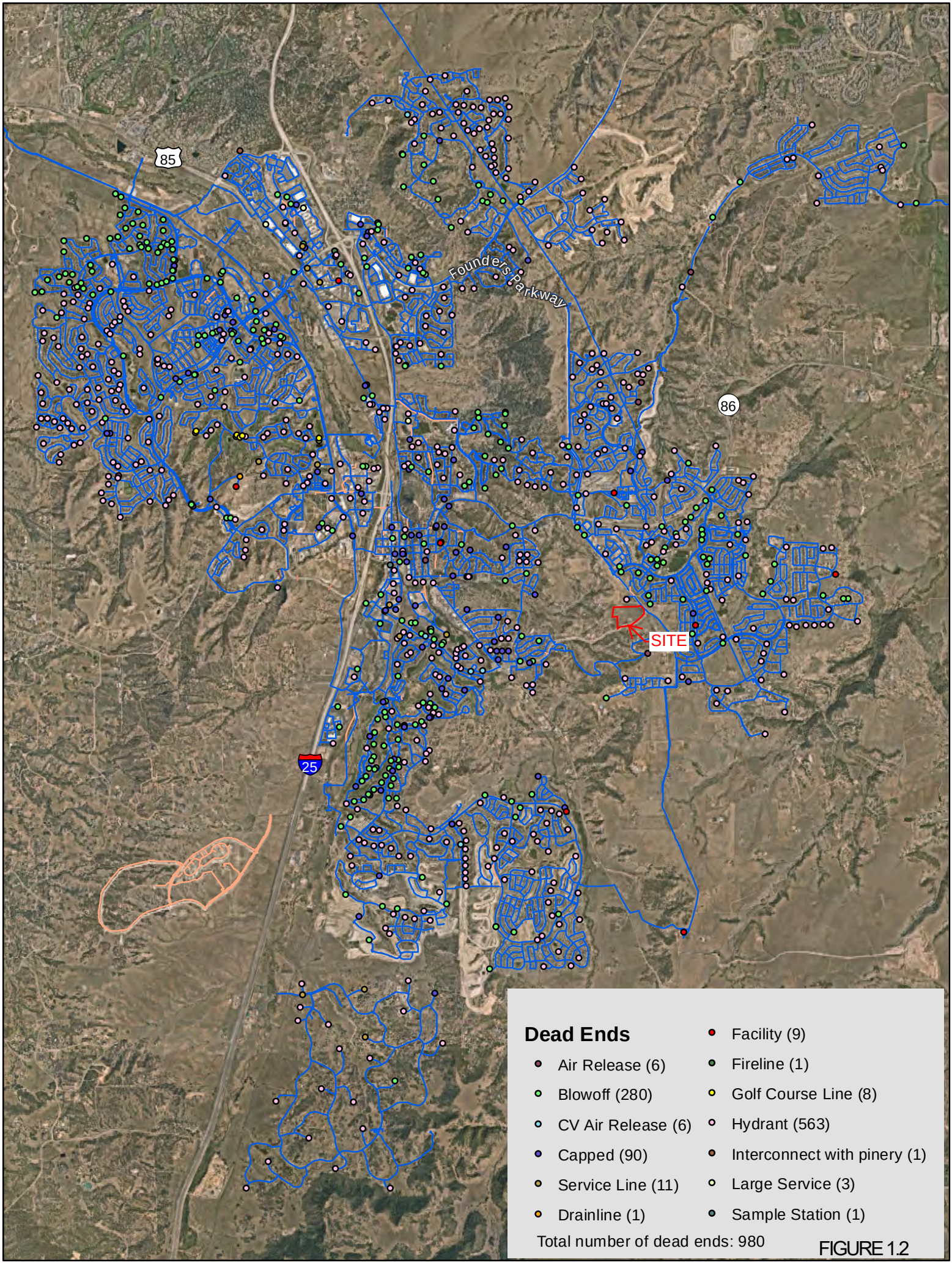
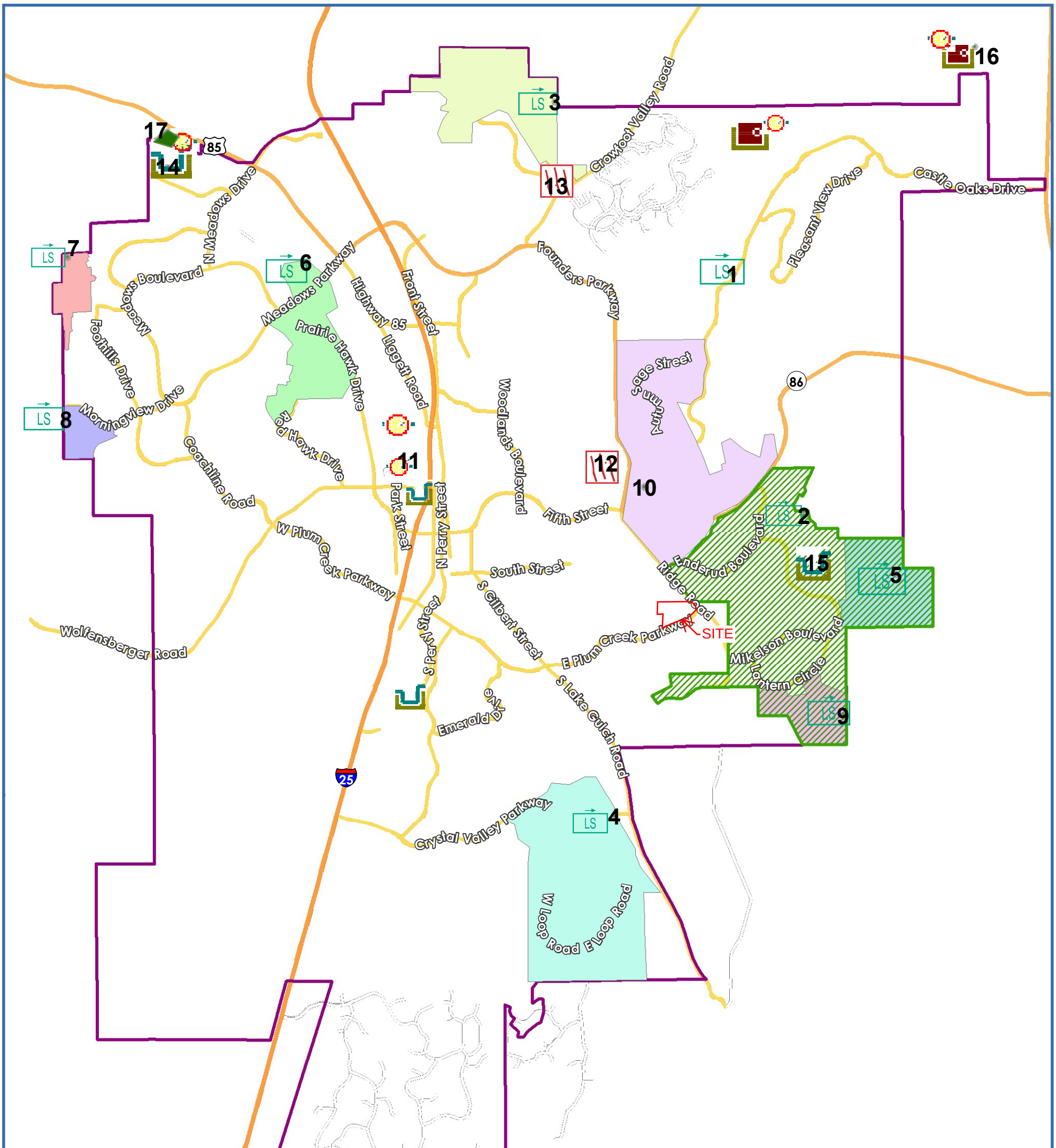

85
Founders Parkway
86
SITE
25
Dead Ends
Air Release (6)
Blowoff (280)
CV Air Release (6)
Capped (90)
Service Line (11)
Drainline (1)
Facility (9)
Fireline (1)
Golf Course Line (8)
Hydrant (563)
Interconnect with pinery (1)
Large Service (3)
Sample Station (1)
Total number of dead ends: 980

FIGURE 1.2



OBJECTID_1	Facility Type	Location
1	Lift Station	Castle Oaks Lift Station
2	Lift Station	Mitchell Creek Lift Station
3	Lift Station	Maher Ranch Lift Station
4	Lift Station	Sellars Gulch Lift Station
5	Lift Station	Castlewood 2 Lift Station
6	Lift Station	Meadows 17 Lift Station
7	Lift Station	Meadows 5 Lift Station
8	Lift Station	Meadows 15 Lift Station
9	Lift Station	Castlewood 1 Lift Station
10	LS-Abandoned	Ray Waterman Lift Station
11	Flow Splitter Box	North Flume
12	Odor Control	Woodlands Odor Control
13	Odor Control	Maher Ranch Odor Control .
14	Grinder	Meadows Grinder
15	Siphon/Grinder	Mitchell Street Depressed Sewer & Grinder
16	Connection/Flow Station	Cobblestone to Pinery
17	Treatment Facility	PCWRA
18	Connection/Flow Station	Canyons South to Pinery
19	Siphon	Perry St
20	Siphon	Under I-25 @Wolfesnberger

Legend

- Sanitary Sewer
- Stormwater Conduit
- Fiber
- Raw Water Distribution Main
- Water Distribution Main

CASTLE ROCK Qwater
Securing our future drop by drop

0 2,350 4,700 9,400 14,100 Feet

1 inch = 4,667 feet

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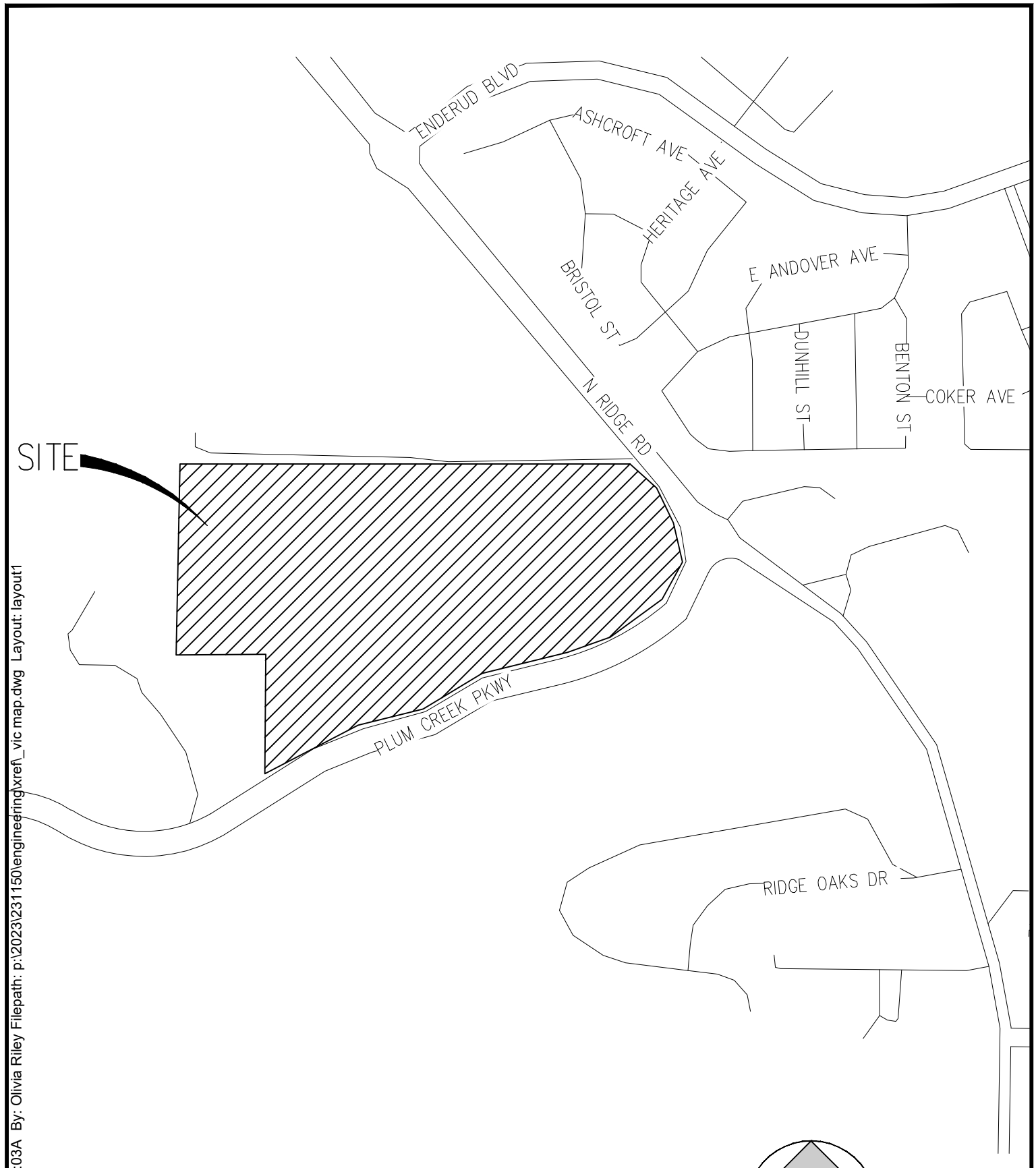
Castle Rock Water
WWMP
Figure 2.1

APPENDIX B



VICINITY MAP

SCALE: 1" = 600'

600 0 600 1200

SCALE: 1" = 600'

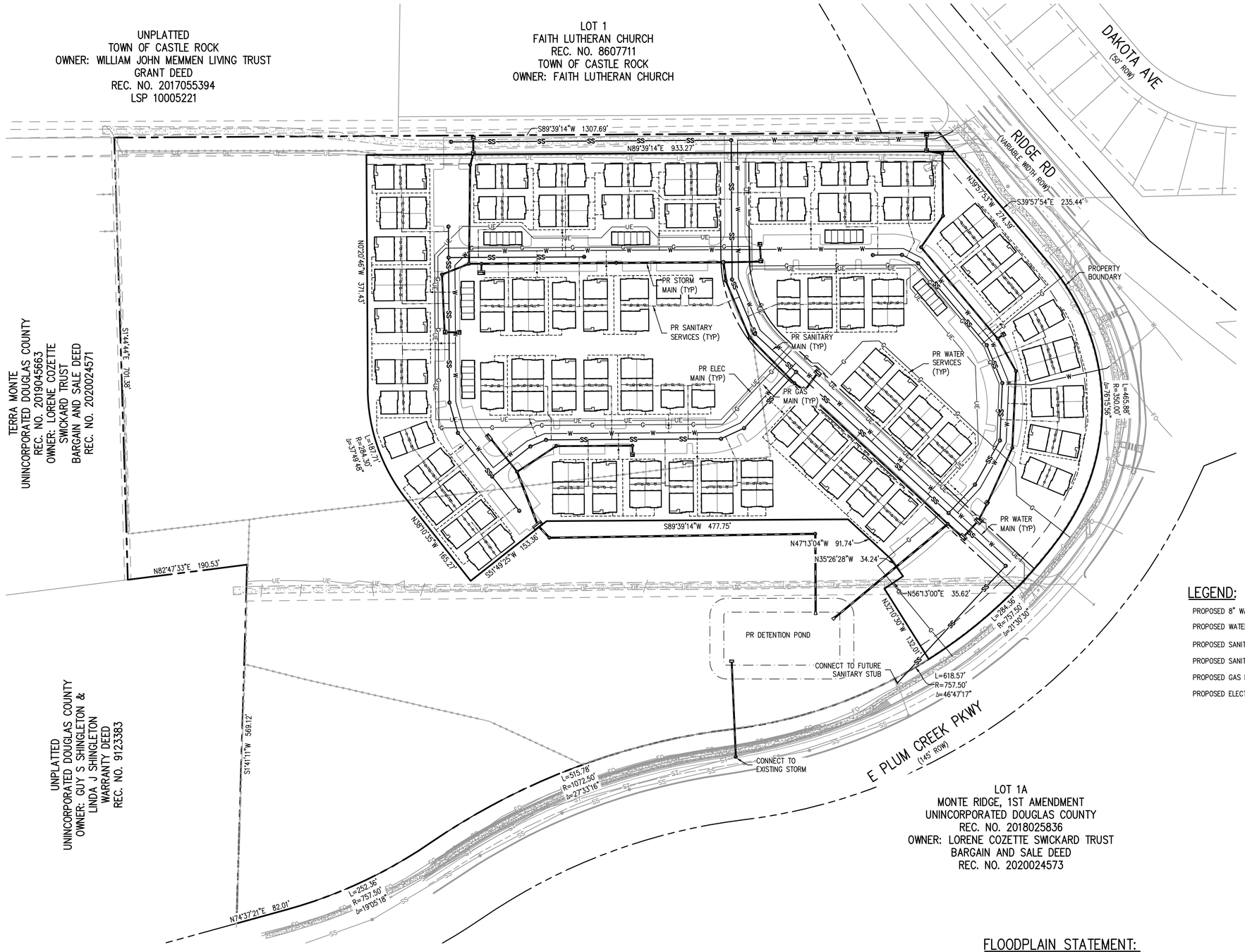
Plotted: THU 05/23/24 10:47:03A By: Olivia Riley Filepath: p:\2023\231150\engineering\xref_vic map.dwg Layout: layout1

APPENDIX C

YARDHOMES RIDGE VIEW

PLANNED DEVELOPMENT PLAN

TERRA MONTE, PARCEL 1



LEGEND:

PROPOSED 8" WATER MAIN	—8W—
PROPOSED WATER SERVICE	----------
PROPOSED SANITARY MAIN	——SS——
PROPOSED SANITARY SERVICE	——·——·——
PROPOSED GAS MAIN	——G——
PROPOSED ELECTRIC MAIN	——UE——

FLOODPLAIN STATEMENT:

THE SITE IS SHOWN TO BE IN A ZONE X (UNSHADED) FLOOD AREA ACCORDING TO FIRM MAP 08035C0302G COUNTY OF DOUGLAS, COLORADO DATED MARCH 16, 2016 (SEE FIRM MAP IN APPENDIX A). ZONE X (UNSHADED), AS DEPICTED ON THE AFOREMENTIONED MAP, IS DESCRIBED BY FEMA AS 'AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANGE FLOODPLAIN'.

HARRIS KOCHER SMITH
1120 Lincoln Street, Suite 1000
Denver, Colorado 80203
P: 303.623.6300 F: 303.623.6311
HarrisKocherSmith.com

YARDHOMES RIDGE VIEW PLANNED DEVELOPMENT PLAN
NW CORNER OF RIDGE RD & PLUM CREEK PARKWAY

OWNER:
URBAN MOMENT DEVELOPMENT

1005 E. ST ELMO ROAD, BUILDING 5
AUSTIN, TEXAS 78745
512-387-5740

NOT FOR CONSTRUCTION

DATE:
07/03/24 1ST SUB.

SHEET TITLE:

CHECKED BY: XX
DRAWN BY: XX

APPENDIX D

Existing 16" water stub-outs

Proposed Site

Existing 30" green zone water transmission main

E PLUM CREEK PARKWAY

RIDGE ROAD

ANDOVER AVENUE

DUNHILL STREET

CHELSEA STREET

DECATUR AVENUE

RIDGE OAKS DRIVE

FH3537 FH141 FH3001 FH3004 FH3003 FH3008 FH3002 FH3539 FH942 FH941

8 in. DI 30 in. DI 16 in. PVC 32 in. Oth 8PVC 6 in. DI

VICINITY MAP

Legend

- Sanitary Sewer
- Stormwater Conduit
- Fiber
- Raw Water Distribution Main
- Water Distribution Main

CASTLE ROCK Qwater
Securing our future drop by drop

0 125 250 500 750 Feet

1 inch = 250 feet

Date: 11/28/2022

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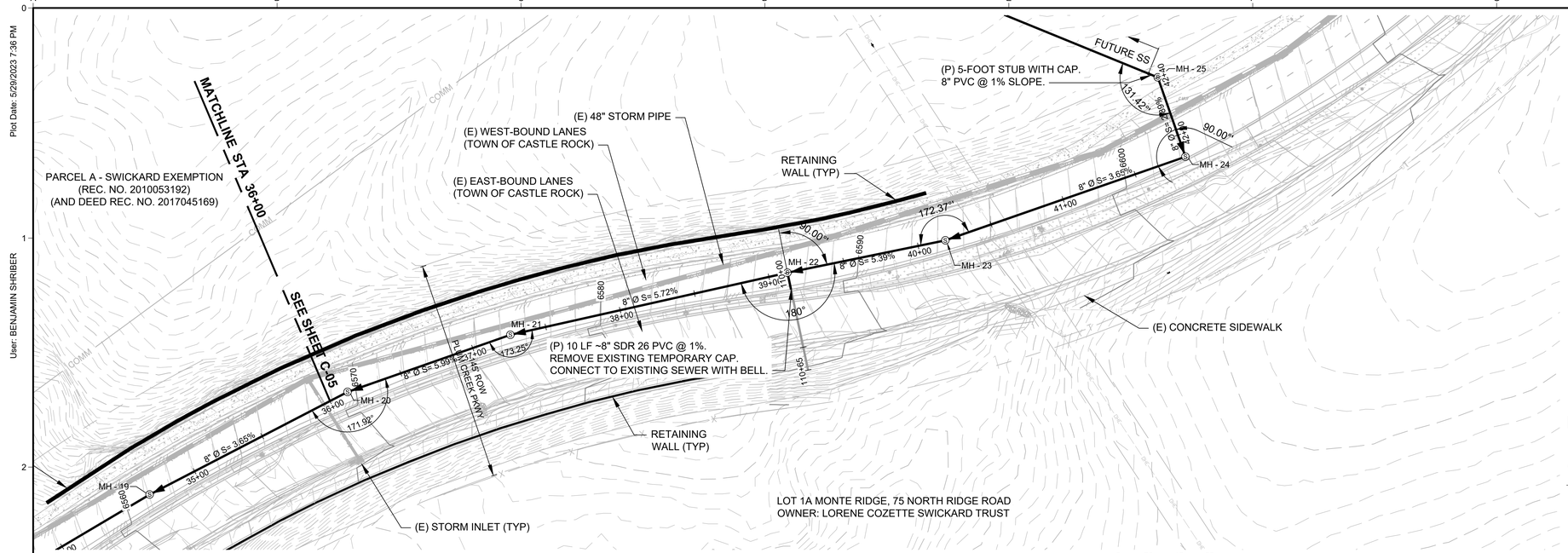
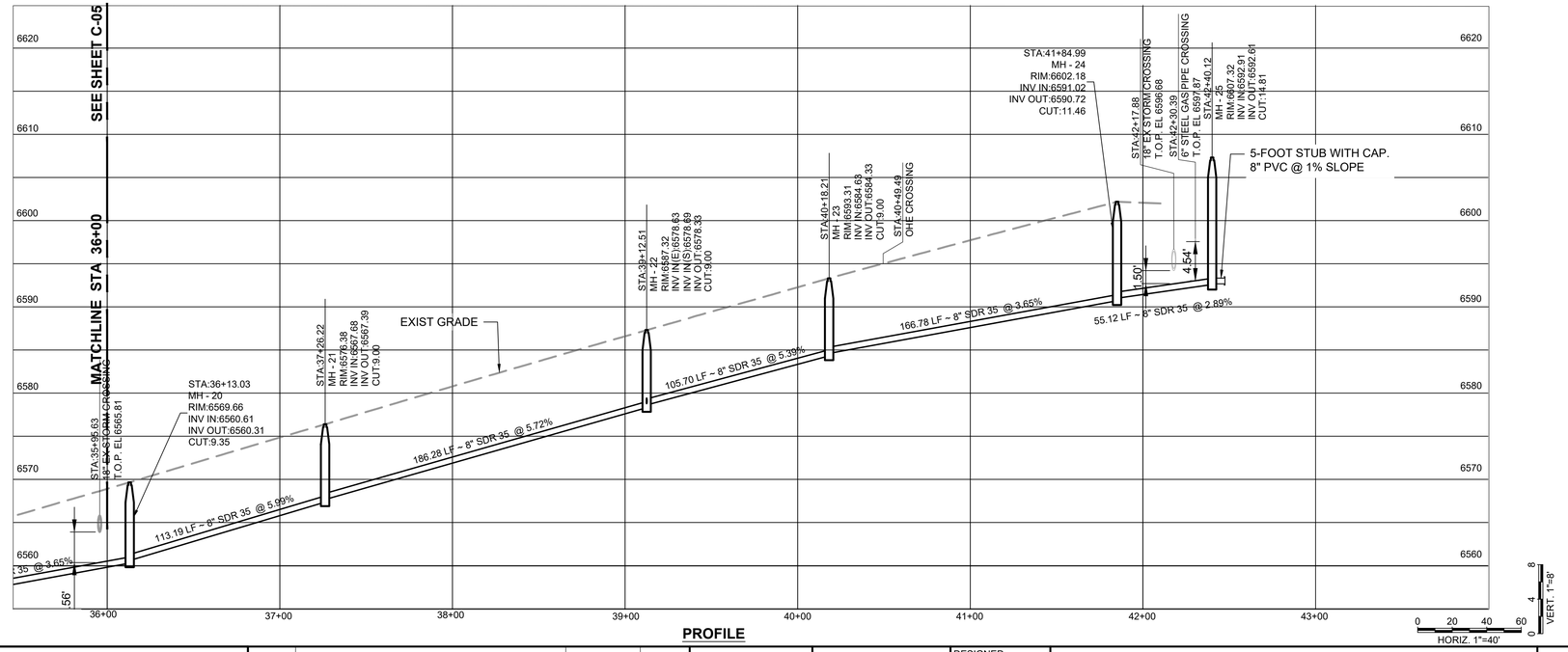
CASTLE ROCK UTILITIES MAP (INTERNAL USE ONLY)

Plot Date: 5/29/2023 7:36 PM
User: BENJAMIN SHRIBER
File: P:\2019\1946051 VCR Founders Vill - W. Memmen Lift Station\1-Sheets\C-06 - SS P&P - STA 36+00-42+83.dwg



PLAN

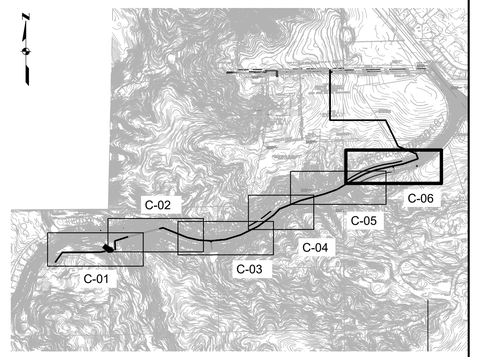
0 20 40 60
1"=40'



PROFILE

0 20 40 60
HORIZ. 1"=40'

0 4 8
VERT. 1"=8'



1. CONTRACTOR SHALL INSTALL SEWER LINE PER THE PROJECT SPECIFICATIONS
2. CONTRACTOR TO PROVIDE MIN 5' OF COVER OVER SS MAIN WHEN BACKFILLING. TOWN OF CASTLE ROCK WILL COMPLETE GRADING WITH ROADWAY PROJECT.
3. PIPE LENGTHS LISTED ON PROFILE ARE HORIZONTAL, FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
4. STATIONING IS ALONG PIPE CENTERLINE.
5. CONTRACTOR SHALL MAINTAIN ACCESS TO HOMES AT ALL TIMES AND ACCESS TO DRIVEWAYS WHENEVER POSSIBLE. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH INDIVIDUAL HOMEOWNERS.
6. CONTRACTOR SHALL LIMIT DISRUPTION TO SEWER SERVICE WHENEVER POSSIBLE. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH INDIVIDUAL HOMEOWNERS.
7. NIGHT AND WEEKEND WORK WILL NOT BE ALLOWED ON THIS PROJECT.
8. WHERE THE SEWER MAIN CROSSES EXISTING WATER MAINS, CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING WATER MAINS IN PLACE.
9. FOR MANHOLES OUTSIDE PAVED ROW, FURNISH AND INSTALL LOCKING-TYPE MANHOLE COVER AND MARKER POST PER TCR STANDARD DETAILS.

PROFESSIONAL ENGINEER'S CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

SIGN DATE

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL

APPROVED BY:

DEVELOPMENT SERVICES DATE

ISSUED FOR BID

ANY PRINTS NOT BEARING THIS STAMP MAY HAVE BEEN PRINTED PRIOR TO ADVERTISING AND CANNOT BE CONSIDERED AS BID DOCUMENTS. USERS OF THIS DOCUMENT IN EDITABLE ELECTRONIC FORMATS ARE CAUTIONED AGAINST USE WITHOUT FIRST DETERMINING WHETHER CHANGES MAY HAVE BEEN MADE SUBSEQUENT TO ITS PREPARATION.

NO	REVISION	DATE	BY

SCALES
0 1"
0 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED BAS/EAW
DRAWN BAS
CHECKED LJS

VILLAGES AT CASTLE ROCK METRO DISTRICT NO. 4
DOUGLAS COUNTY, CO

OUTFALL SEWER - PLUM CREEK PKWY. - SEGMENT 1

Kennedy Jenks

SANITARY SEWER MAIN PLAN AND PROFILE
STA 36+00 TO STA 42+40

SCALE AS SHOWN
JOB NO 1946051*00
DATE MAY 2023
SHEET 9 OF 13
C-06