UTILITY CONFORMANCE LETTER
FOR
LOT 6G-3A-1
THE MEADOWS FILING NO. 17, AREA NO. 4,
HEALTHSPAN MEDICAL OFFICE BUILDING

Castle Rock, Colorado

Prepared for:

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Prepared by:

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October 7, 2026

RLEG NO. 260401
TOWN NO. SDP26-0030

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CERTIFICATIONS

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.

Kevin S. Roth

Registered Professional Engineer

State of Colorado No. 35704

1. GENERAL LOCATION AND DESCRIPTION

A. Location

Healthspan Medical Office Building (hereafter referred to as the Project) is located on Lot 6G-3A-1, The Meadows Filing No. 17, Area No. 4. The Project is proposed as commercial medical office building with one, two-story building of approximately 23,416 square feet being proposed.

The Project is situated in the northwest quarter of Section 34, Township 7 South, Range 67 West of the Sixth Principal Meridian. The site is bounded to the north by Sol Danza Drive and Virtuoso Loop, to the south and west by Prairie Hawk Drive, and to the east by Little Sunshine's Playhouse of Castle Rock and the undeveloped Lot 6G-3A-2. The project and the neighboring areas are designated as a COI planned development type per the Meadows Final P.D. Site Plan and The Meadows Fourth Amendment.

The Project site is approximately 1.79 acres. This Lot is part of The Meadows Filing 17 Lot 5 and 6 Final Utility Report, dated February 15, 2005, as well as the subsequent Addendum to that report, dated May 9, 2006 ("Master Report"), the Final Utility Report for Lot 6G, The Meadows Filing No. 17, dated November 15, 2012 ("Lot 6G Report"), and the Final Utility Report for Lot 6G-3, The Meadows Filing No. 17, CRDC Virtuoso Loop, dated March 22, 2024 ("Virtuoso Report").

This utility conformance letter will quantify the water and sanitary sewer demands and flows associated with the development of Lot 6G-3A-1 as Healthspan Medical Office Building.

B. Description of Property and Land Use

The Project is located southeast of the private streets of Sol Danza Drive and Virtuoso Loop and northeast of Prairie Hawk Drive and is currently vacant, undeveloped land. The proposed improvements will include one, two-story commercial medical office building, parking lots, interior drive/fire lanes with two points of access to the site, interior sidewalks, providing pedestrian access, associated landscaping, a dead-end 8-inch water main extension with domestic and fire service stubs for the buildings as well as one new fire hydrant, a separate proposed irrigation tap and meter, a 6-inch sanitary sewer service line, and storm drainage improvements including inlets and storm main. The proposed

limits of construction encompass approximately 1.48 acres of the 1.79-acre site. The total number of Single Family Equivalents (SFEs) that the proposed water system will serve is 5.4. The final assigned project SFEs will be determined at the time of permitting based on meter sizes.

Existing utilities are found on and adjacent to the Property. They include:

- An existing 8-inch water main that is located in Sol Danza Drive and Virtuoso Loop north of the Project with an existing 8-inch stub to the property. There also exists a separate 1-inch stub to the Project off the 8-inch Virtuoso main that was intended for future irrigation service.
- An existing 12-inch raw water main that is located in Prairie Hawk Drive south of the Project.
- An onsite, existing 8-inch sanitary sewer main and 6-inch sanitary stub that is located on the east side of the Project near the east property line.
- An onsite, existing 24-inch storm sewer and separate 18-inch storm sewer that are located in the northeast corner of the Project.

Existing and proposed utility easements showing the type and width are depicted on the Overall Utility Plan (see Appendix A) and will be provided the time of final design/construction documents, in accordance with Town of Castle Rock standards.

2. CALCULATED WATER DEMANDS

Average Day Demand (ADD), Max Day Demand (MDD), and Peak Hour Demand (PHD) calculations can be found in the Calculated Water Demands spreadsheet in Appendix B. All calculations were made in accordance with Chapter 4 of the *Town of Castle Rock (TOCR) Water System Design 2018 Criteria Manual*. The proposed water main will serve the proposed building through domestic and fire service lines as well as a proposed onsite fire hydrant. An estimation of the required fire flow has been determined to be 1,500 gpm for a flow duration of 3 hours. This estimation was achieved using the conceptual building square footage, the assumption that the buildings will be fully sprinklered, and the 2024 IFC Table B105.1(2). The type of construction assumed for

this estimation was Type IIB. The final required fire flow will be determined at final design.

A. Average Daily Demand (ADD)

The land use for the Project has been classified as Industrial/Other Commercial by the previous reports. A demand of 1,200 gallons per day per acre for Industrial/Other Commercial was used for calculations. This demand was obtained from Section 4.4.1 of the *Town of Castle Rock Water System Design 2018 Criteria Manual*. ADDs are sub-totaled as a flow rate in gallons per minute (GPM), gallons per day (GPD), and as an average annual supply in acre-feet per year (AF/YR).

		AVERAGE DAILY DEMAND (ADD)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(AF/YR)**
Industrial/Other Commercial	1.79 ac	1.49	2,148	2.41
TOTAL		**1.49**	**2,148**	**2.41**

B. Max Daily Demand (MDD)

With a 2.5 peaking factor applied to the ADD, the MDD's are as follows:

		MAX DAILY DEMAND (MDD)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(AF/YR)**
Industrial/Other Commercial	1.79 ac	3.73	5,370	6.02
TOTAL		**3.73**	**5,370**	**6.02**

The required storage volume based on MDD's and fire flows necessary to serve the development is 275,371 gallons. The fire flow used for this calculation is as discussed above. See Appendix B for demand and storge calculations.

STORAGE	**MDD (1) (gpm)**	**FIRE FLOW (2) (gpm)**	**TIME (hr)**	**STORAGE VOLUME (3) (gallons)**
MDD	3.73		24	5,371
Fire Flow		1500	3	270,000
TOTAL				**275,371**

REFERENCE: *Town of Castle Rock Water System Design Criteria Manual*, Dec. 2018. Section 4.4.2

NOTES: (1) MDD = Maximum Day Demands = see spreadsheet: *Calculated Demands - Water*
(2) Estimated Largest Potential Fire Flow Calculated From IFC
(3) Storage Volume = MDD Storage + Fire Flow Storage = (MDD*60min*24hr) + (FF*60min*2hr)

C. Peak Hourly Demand (PHD)

With a 5.5 peaking factor applied to the ADD, the PHD's are as follows:

		PEAK HOURLY DEMAND (PHD)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(AF/YR)**
Industrial/Other Commercial	1.79 ac	8.20	11,814	13.23
TOTAL		**8.20**	**11,814**	**13.23**

3. EXISTING WATER SYSTEM

A. Existing Water Distribution System

An existing 8-inch water main, located north of the Project site, running within Sol Danza Drive and Virtuoso Loop with an 8-inch stub onto the property will serve this site. The Overall Utility Plan can be found in Appendix A. No known shortcomings or bottlenecks associated with the existing distribution system will impact the Town's ability to adequately deliver fire flows and meet the required demand conditions. This project is served by the Meadows Yellow water pressure zone by tanks 12A and 12B with a capacity of 10 MG. Developed site elevations range from 6140 to 6150.

Pressure Zone Designation	Max HGL Elev.	20% HGL	Top Elev. Served	Low Elev. Served
2 (Yellow)	**6352**	**6334**	**6230**	**6065**

Table from Section 4.4.3.1 Operating Pressures and Pressure Zone Characteristics from *Town of Castle Rock Water System Design Criteria Manual*, Dec 2018.

4. PROPOSED WATER SYSTEM

A. Proposed Water Distribution System

A proposed 8-inch PVC water main extension of the existing stub will run through the drive aisles of the Project site and dead-end in front of the building. The proposed water main shall serve the proposed development on Lot 6G-3A-1. One 2-inch domestic service, one 6-inch fire service, and one fire hydrant are currently being proposed. The domestic meter will be set inside the building in the water entry room. The irrigation meter will be set on the existing irrigation stub, within an existing easement. The water main, fire hydrant, and domestic service line upstream of a curb stop will be located in a dedicated utility easement. Meter size will be based on water supply fixture units and irrigation area at the time of building permitting.

B. Proposed Water Supply Facilities

No pump stations, wells, PRVs, storage reservoirs, purification facilities, or other elements will be required to adequately serve the development and its requirements. Any future development of the existing water infrastructure needed to serve this site is the responsibility of the developer.

C. Water Facilities Land Dedication Requirements

Water Facilities Land Dedication requirements are pursuant to Section 16.08.040 of the Town's *Municipal Code*. The code states that for Retail, office, light industrial and other commercial land uses, 0.0123 acres/acre is required.

5. PROPOSED WATER SYSTEM ANALYSIS

A. Compliance with Previous Reports

As mentioned in section 2.A of this report, the land use for the project has been classified as Industrial/Other Commercial by the previous reports. As the land use demand per acre, SFE per acre, Lot area, and fire flow remain unchanged from that of the original reports, there are no changes to the total water demand for the Project from the previous reports. There is potential that the development of Project falls into a

different land use classification than the previous reports had assumed. This other classification is Retail/Offices. If the land use classification were to be changed to Retail/Offices, then the calculated domestic water demand would increase by 4.49 GPM for MDD from the calculations of the previous reports. This is a nominal change in the total demand for the Project when accounting for fire flow demand. The total MDD and fire flow demand would increase with this reclassification from 1,503.73 GPM to 1,508.22 GPM. Therefore, regardless of land use classification, we believe the water system has capacity to serve the Project and is in general compliance with previous reports.

The proposed water system conforms to the *Town of Castle Rock Water System Design 2018 Criteria Manual.* Any future development of the existing water infrastructure needed to serve this site is the responsibility of the developer.

6. CALCULATED WASTEWATER FLOWS

Average Daily Wastewater Flows (ADF), Peaking Factor, and Peak Design Flow (PDF) calculations can be found in the *Calculated Wastewater Flows* spreadsheet in Appendix C. All calculations were made in accordance with Chapter 4 of the *Town of Castle Rock Wastewater Collection System Design Criteria Manual 2018 Edition*.

A. Average Day Wastewater (ADF)

The land use for the Project has been classified as Industrial/Other Commercial by the previous reports. A demand of 1,200 gallons per day per acre for Industrial/Other Commercial was used for calculations. This demand was obtained from Section 4.4.1 of the *Town of Castle Rock Wastewater Collection Design 2018 Criteria Manual*. ADFs are subtotaled by land use for each building as a flow rate in gallons per day (GPD), gallons per minute (GPM), and cubic feet per second (CFS).

		AVERAGE DAY WASTEWATER (ADF)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(CFS)**
Industrial/Other Commercial	1.79 ac	0.75	1,074	0.0017
TOTAL		**0.75**	**1,074**	**0.0017**

B. Peaking Factor and Inflow

A maximum Peaking Factor of 5 was used for this project and Inflow and Infiltration was applied at a rate of (0.1 * ADF) per *Castle Rock Wastewater Collection System Design 2018 Criteria Manual.*

C. Peak Design Flows (PDF)

With a Peaking Factor of 5 applied to the ADF and with Inflow and Infiltration added to the Peak Flow, the resulting PDF's are as follows:

		PEAK DESIGN FLOW (PDF)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(CFS)**
Industrial/Other Commercial	1.79 ac	3.80	5,477	0.008
TOTAL		**3.80**	**5,477**	**0.008**

Note: PDF values include I&I added to ADF per TOCR 2018 Wastewater Collection Criteria Section 4.4.1.3 Peak Design Flow Rate.

7. EXISTING WASTEWATER SYSTEM

A. Existing Wastewater Collection System

An existing 8-inch PVC sanitary main line runs onto the property from the east, with an existing 6-inch stub intended as a connection point for the Project (See Appendix A for GIS utility map of existing utilities).

8. PROPOSED WASTEWATER SYSTEM

A. Proposed Wastewater Collection System

A 6-inch PVC sanitary service is proposed to connect the effluent flows from the building to the existing 6-inch sanitary stub on the Project site. The proposed sanitary service will include a two-way cleanout as the service leaves the building, as well as a few bends with cleanouts as the proposed service runs through the parking lot and landscape area to connect to the existing stub.

B. Proposed Wastewater Facilities

No grease interceptors, lift stations, force mains, pretreatment facilities, or other elements are proposed to adequately serve the development. Effluent flow from the Project is directed by the existing sanitary sewer main to the Plum Creek Wastewater Authority treatment plant, located north of the Project.

C. Wastewater Facilities Land Dedication Requirements

No land dedication requirements for wastewater facilities were found in the Town's *Municipal Code*.

9. PROPOSED WASTEWATER SYSTEM ANALYSIS

A. Compliance with Previous Reports

Sanitary sewer demands from table 4.4.1.1 of the *Town of Castle Rock Wastewater Collection System Design 2018 Criteria Manual* have been used to calculate proposed flows instead of the typical fixture counts. At the time of this report, there are no finalized building interior designs, therefore, fixture counts are not available. As previously mentioned, the land use classification used for the Project was Industrial/Other Commercial as set forth in the previous reports for the area. Based on the calculations, the Project will produce 0.75 GPM (0.0017 CFS) of average flow. The peak design flow for the Project has been calculated to be 3.80 GPM (0.008 CFS). This peak design flow was used for hydraulic calculations. Both the average and peak flows match that of the previous reports. As mentioned in section 5 of this report, there is potential that the Project falls into a different land use classification than the previous reports had assumed. If the land use classification were to be changed to Retail/Offices, then the calculated wastewater flow would increase by 0.89 GPM (0.002 CFS) for ADF and 4.58 GPM (0.010 CFS) for PDF from the calculations of the previous reports. This is a nominal change in the total flow within the existing sanitary main. To show this, hydraulic calculations were performed for both land use classification flows. These hydraulic calculations show that the existing main downstream of the Project has ample capacity, regardless of the land use classification used. See Appendix C for the demand calculations and hydraulic calculations.

The proposed wastewater system conforms to the *Town of Castle Rock Wastewater Collection System Design 2018 Criteria Manual.* Any future development of the existing wastewater infrastructure needed to serve this site is the responsibility of the developer.

10. POTENTIAL PERMITTING REQUIREMENTS

This project is not anticipating any permits other than Town issued construction permits (building, right of way, etc.). Future permitting may include Plum Creek Water Reclamation Authority (PCWRA) for commercial developments.

11. CONCLUSION

The proposed utility demands and calculations presented herein for the Project are in conformance with and based upon the current Town of Castle Rock criteria. The proposed water and sanitary sewer as included in the Overall Utility Plan (see Appendix A) coincide with the demands set forth in the reports titled The Meadows Filing 17 Lot 5 and 6 Final Utility Report, dated February 15, 2005, as well as the subsequent Addendum to that report, dated May 9, 2006, Final Utility Report for Lot 6G, The Meadows Filing No. 17, dated November 15, 2012, and Final Utility Report for Lot 6G-3, The Meadows Filing No. 17, CRDC Virtuoso Loop, dated March 22, 2024. The analyses provided within this report show that there is capacity for the proposed water and wastewater demands of the Project.

The Project is proposing an 8-inch PVC water main extension to connect to the existing 8-inch PVC water main stub on the northwest side of the subject property. This is being done for the purpose of providing domestic water service to the proposed building as well as to provide fire protection through a fire service line and a fire hydrant.

The Project is also proposing a 6-inch sanitary service line to connect to the existing 6-inch stub located on the east end of the site. This is being done for the purpose of providing sanitary service to the proposed building.

Neither the sanitary extension nor water loop connection for the Project will affect the system analysis presented in the previously approved reports.

REFERENCES

Amendment to the Final Utility Report for The Meadows Filing No. 17 – Lot 5 and 6; CVL Consultants of Colorado, Inc., May 9, 2006.

Final Utility Report for Lot 6G, The Meadows Filing No. 17; CVL Consultants of Colorado, Inc., November 15, 2012.

Final Utility Report for Lot 6G-3, The Meadows Filing No. 17, CRDC Virtuoso Loop; Roth Lang Engineering Group LLC., March 22, 2024.

Final Utility Report for The Meadows Filing No. 17 – Lot 5 and 6; CVL Consultants of Colorado, Inc., February 15, 2005.

All Utilities Printing Map; Town of Castle Rock, Utilities Department, July 2, 2026.

International Fire Code 2024.

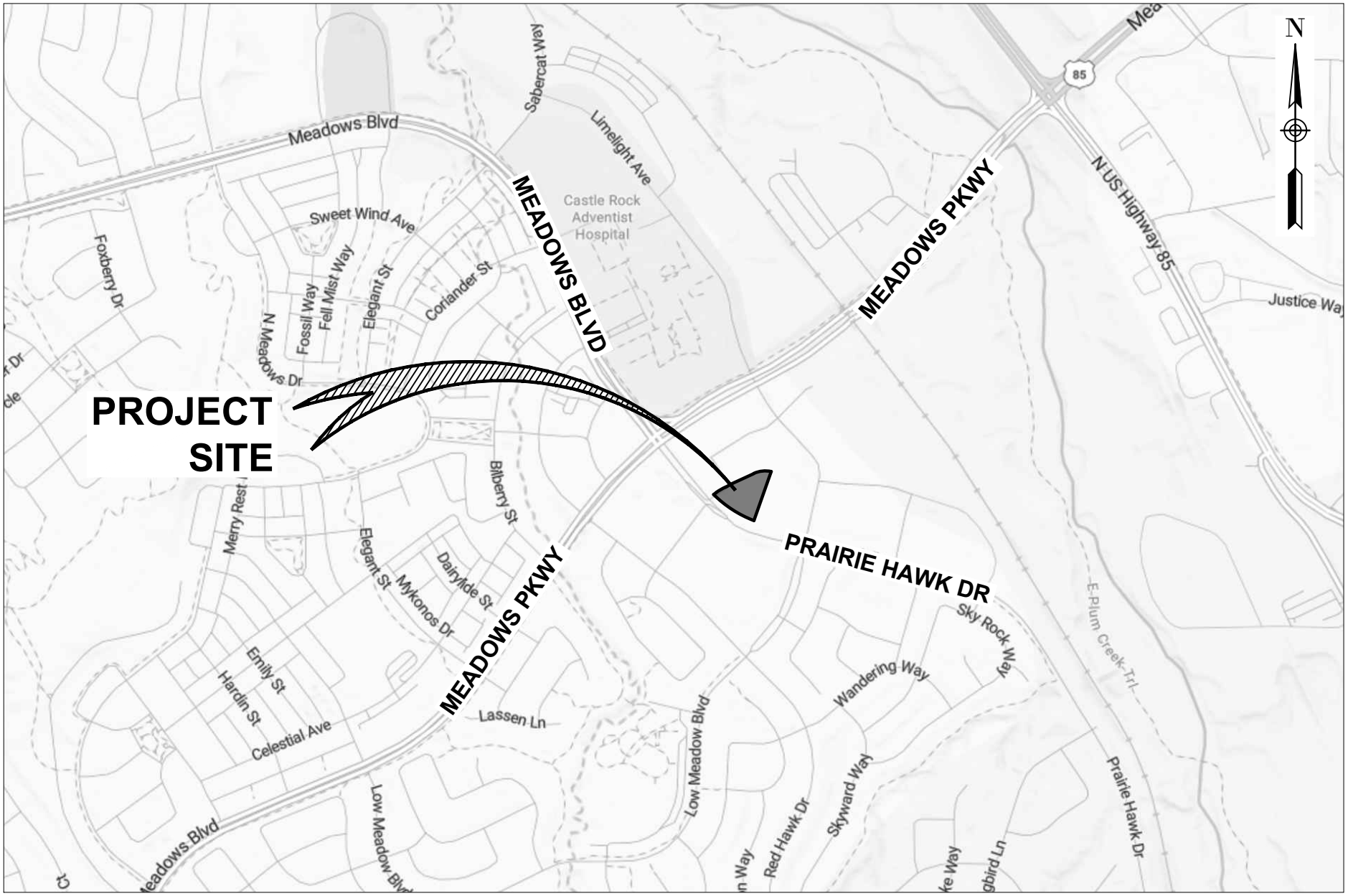
Wastewater Collection System Design Criteria Manual; Town of Castle Rock, December 4, 2018.

Water System Design Criteria Manual; Town of Castle Rock, December 4, 2018.

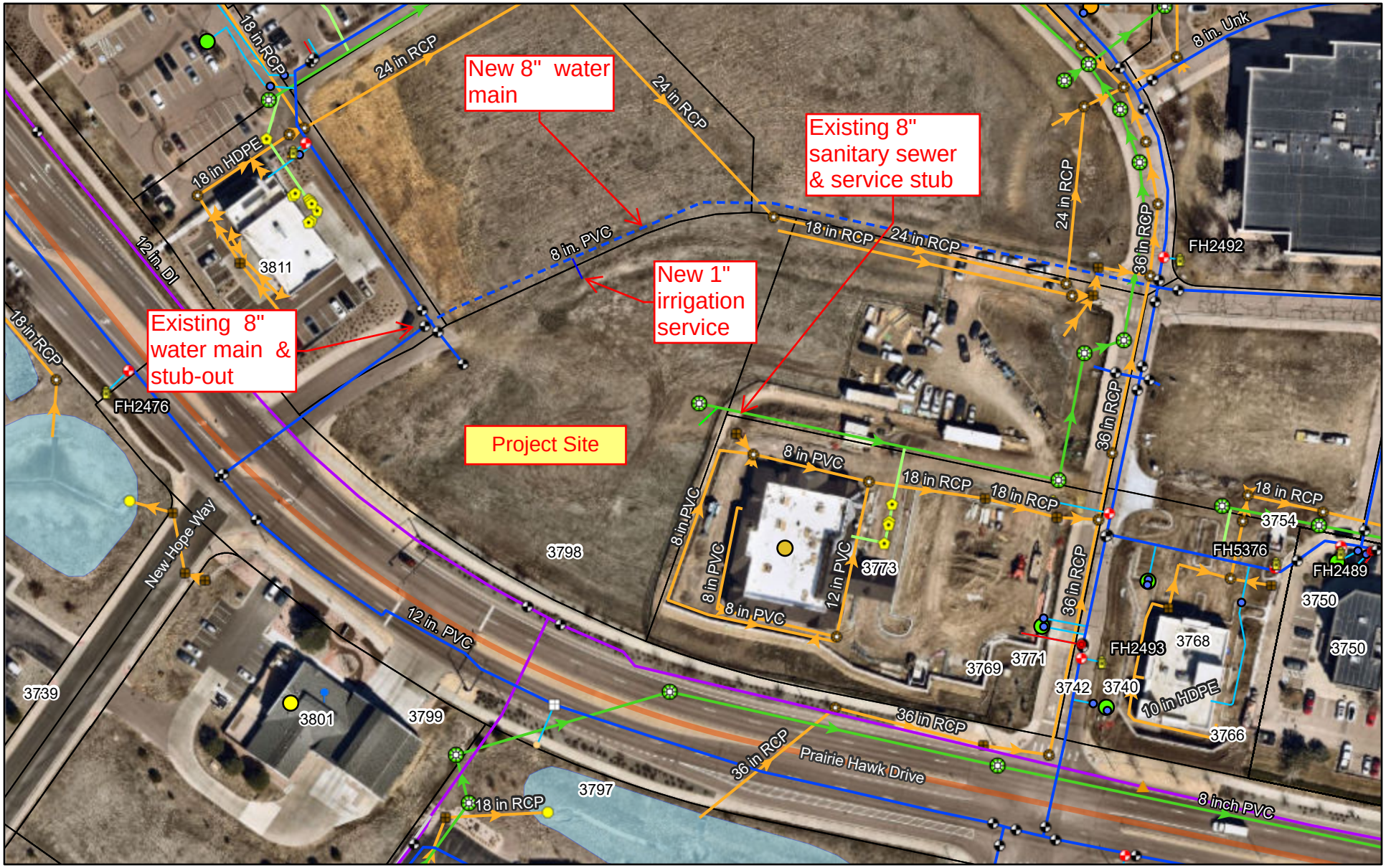
APPENDIX A – MAPS AND PLANS

VICINITY MAP

SCALE: 1" = 1000'



All Utilities Printing Map



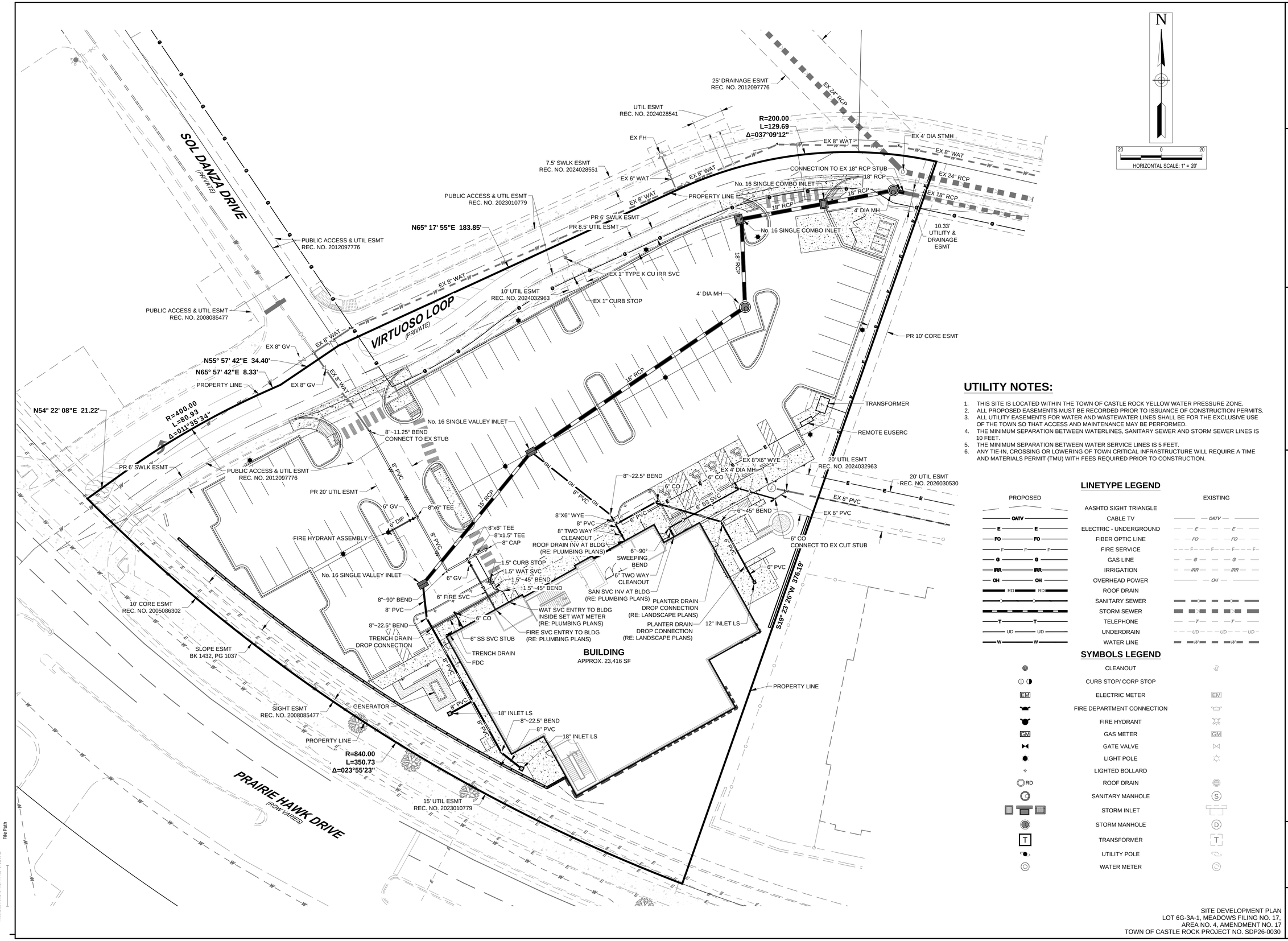
7/2/2026

1:1,800

0 65 130 260 ft

0 15 30 60 m

Fire Hydrant
Control Valve
CV / Air Release
System Valve
Fire, Active
Gate, Active
Hydrant, Active
Curb Stop Valve
Active
Fitting
Vent, Active
Water Quality Sample Station
Meters
Commercial
Greenbelts
School
Town
Test Station
Pressurized Water Main
Active
Proposed
Raw Water Main
Active
Abandoned, Inactive
Fire Supression Lateral
Active
Lateral Line
Active
Clean Out
Manhole
TCR
Gravity Main
Active
Lateral Line
Active
Inlet
Outfall
No
Manhole
Pipe
Active
Ponds (Polygon Layer)
Address Labels
Parcels
Major Streets
Minor Streets



UTILITY NOTES:

1. THIS SITE IS LOCATED WITHIN THE TOWN OF CASTLE ROCK YELLOW WATER PRESSURE ZONE.
2. ALL PROPOSED EASEMENTS MUST BE RECORDED PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS.
3. ALL UTILITY EASEMENTS FOR WATER AND WASTEWATER LINES SHALL BE FOR THE EXCLUSIVE USE OF THE TOWN SO THAT ACCESS AND MAINTENANCE MAY BE PERFORMED.
4. THE MINIMUM SEPARATION BETWEEN WATERLINES, SANITARY SEWER AND STORM SEWER LINES IS 10 FEET.
5. THE MINIMUM SEPARATION BETWEEN WATER SERVICE LINES IS 5 FEET.
6. ANY TIE-IN, CROSSING OR LOWERING OF TOWN CRITICAL INFRASTRUCTURE WILL REQUIRE A TIME AND MATERIALS PERMIT (TMU) WITH FEES REQUIRED PRIOR TO CONSTRUCTION.

LINETYPE LEGEND

PROPOSED		EXISTING
	AASHTO SIGHT TRIANGLE	
CATV	CABLE TV	CATV
E E	ELECTRIC - UNDERGROUND	E E
FO FO	FIBER OPTIC LINE	FO FO
F F F	FIRE SERVICE	F F F
G G	GAS LINE	G G
IRR IRR	IRRIGATION	IRR IRR
OH OH	OVERHEAD POWER	OH
RD RD	ROOF DRAIN	
	SANITARY SEWER	
	STORM SEWER	
T T	TELEPHONE	T T
UD UD	UNDERDRAIN	UD UD UD
W W	WATER LINE	W W

SYMBOLS LEGEND

	CLEANOUT	
	CURB STOP/ CORP STOP	
EM	ELECTRIC METER	EM
	FIRE DEPARTMENT CONNECTION	
	FIRE HYDRANT	
GM	GAS METER	GM
	GATE VALVE	
	LIGHT POLE	
	LIGHTED BOLLARD	
RD	ROOF DRAIN	
S	SANITARY MANHOLE	S
	STORM INLET	
D	STORM MANHOLE	D
T	TRANSFORMER	T
	UTILITY POLE	
	WATER METER	

SITE DEVELOPMENT PLAN
LOT 6G-3A-1, MEADOWS FILING NO. 17,
AREA NO. 4, AMENDMENT NO. 17
TOWN OF CASTLE ROCK PROJECT NO. SDP26-0030

BLA
1426 PEARL STREET, SUITE 300
BOULDER, COLORADO 80302
303.499.7795

ROTH LANG ENGINEERING GROUP, LLC
6855 S. HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

PROJECT 260040.00

HEALTHSPAN MEDICAL OFFICE BUILDING

PRAIRIE HAWK DR. &
SOL DANZA DR.
CASTLE ROCK, CO 80109

SITE DEVELOPMENT PLAN

DATE 10/9/2026

REVISIONS

#	DESCRIPTION	DATE

SHEET TITLE

OVERALL UTILITY PLAN

SHEET NUMBER

Plotted by: Jacob Huseton Date: 10/7/2026 3:02 PM
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File Path
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APPENDIX B – WATER DEMANDS AND STORAGE

ROTH LANG ENGINEERING GROUP LLC

CALCULATED DEMANDS - WATER

HEALTHSPAN MEDICAL OFFICE BUILDING
LOT 6G-3A-1
THE MEADOWS FILING NO. 17, AREA NO. 4
8/7/2026
JJH

					FACTORS [3]		ESTIMATED DEMANDS (GPD)		
LAND USE	**QUANTITY**	**ADD/UNIT [1]**	**SFEs/UNIT [2]**	**SFE's**	**MDD FACTOR**	**PHD FACTOR**	**ADD [4]**	**MDD [5]**	**PHD [6]**
Industrial/Other Commercial	1.79 ac	1200 gpd/ac	3.0 ac	5.4	2.5	5.5	2,148	5,370	11,814
TOTAL				**5.4**			**2,148**	**5,370**	**11,814**

REFERENCE: Town of Castle Rock Water System Design Criteria Manual, December 2018

NOTES:

[1] ADD = Average Daily Demand = Reference Table 4.4.1
[2] SFE = Single Family Equivalent = Reference Table 4.4.1
[3] Reference Section 4.4.1.2
[4] ADD includes irrigation demands for specified land use.
[5] MDD = Maximum Day Demands = ADD * MDD Factor + Irrigation ADD
[6] PHD = Peak Hour Demand = ADD * PHD Factor + Irrigation ADD

ROTH LANG ENGINEERING GROUP LLC

CALCULATE DEMANDS - WATER

HEALTHSPAN MEDICAL OFFICE BUILDING
LOT 6G-3A-1
THE MEADOWS FILING NO. 17, AREA NO. 4
8/7/2026
JJH

		AVERAGE DAILY DEMAND (ADD)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(AF/YR)**
Industrial/Other Commercial	1.79 ac	1.49	2,148	2.41
TOTAL		**1.49**	**2,148**	**2.41**

		MAX DAILY DEMAND (MDD)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(AF/YR)**
Industrial/Other Commercial	1.79 ac	3.73	5,370	6.02
TOTAL		**3.73**	**5,370**	**6.02**

		PEAK HOURLY DEMAND (PHD)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(AF/YR)**
Industrial/Other Commercial	1.79 ac	8.20	11,814	13.23
TOTAL		**8.20**	**11,814**	**13.23**

STORAGE REQUIREMENTS - WATER

STORAGE	MDD [1] (gpm)	FIRE FLOW [2] (gpm)	TIME (hr)	STORAGE VOLUME [3] (gallons)
MDD	3.73		24	5,371
Fire Flow		1,500	3	270,000
TOTAL				**275,371**

REFERENCE: Town of Castle Rock Water System Design Criteria Manual, Dec. 2018. Section 4.4.2

NOTES:
[1] MDD = Maximum Day Demands = see spreadsheet: *Calculated Demands - Water*
[2] Estimated Largest Potential Fire Flow Calculated From IFC
[3] Storage Volume = MDD Storage + Fire Flow Storage = (MDD*60min*24hr) + (FF*60min*2hr)

Operating Pressures and Pressure Zone Characteristics

Pressure Zone Designation	Max HGL Elev.	20% HGL	Top Elev. Served	Low Elev. Served
2 (Yellow)	6352	6334	6230	6065

REFERENCE: Town of Castle Rock Water System Design Criteria Manual, Dec. 2018. Section 4.4.3.1

APPENDIX C – WASTEWATER DEMANDS AND HYDRAULIC CALCULATIONS

ROTH LANG ENGINEERING GROUP LLC

CALCULATED FLOWS - WASTEWATER

HEALTHSPAN MEDICAL OFFICE BUILDING
LOT 6G-3A-1
THE MEADOWS FILING NO. 17, AREA NO. 4
8/7/2026
JJH

					FACTORS		ESTIMATED FLOW (MGD)	
LAND USE	**QUANTITY**	**ADF/UNIT (1)**	**SFEs/UNIT (2)**	**SFE's**	**PF (3)**	**I/I (4)**	**ADF (5)**	**PDF (6)**
Industrial/Other Commercial	1.79 ac	600 gpd/ac	3.0 /ac	5.4	5.0	0.00011	0.0011	0.0055
TOTALS				**5.4**			**0.0011**	**0.0055**

REFERENCE: Town of Castle Rock Wastewater Collection System Design Criteria Manual, Dec. 2018

NOTES:

(1) ADF = Average Daily Flow = Reference Table 4.4.1.1
(2) SFE = Single Family Equivalent = Reference Table 4.4.1.1
(3) PF = Peaking Factor = (3.65) * ($ADF^{-0.168}$) or Max of 5.0
(4) I/I = Infiltration and Inflow = (0.1 * ADF)
(5) ADF represents winter or dry weather with no allowance for infiltration or inflow
(6) PDF = Peak Design Flow = ADF * Peaking Factor + I/I

ROTH LANG ENGINEERING GROUP LLC

CALCULATED FLOWS - WASTEWATER

HEALTHSPAN MEDICAL OFFICE BUILDING
LOT 6G-3A-1
THE MEADOWS FILING NO. 17, AREA NO. 4
8/7/2026
JJH

		AVERAGE DAY WASTEWATER (ADF)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(CFS)**
Industrial/Other Commercial	1.79 ac	0.75	1,074	0.0017
TOTAL		**0.75**	**1,074**	**0.0017**

		PEAK DESIGN FLOW (PDF)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(CFS)**
Industrial/Other Commercial	1.79 ac	3.80	5,477	0.008
TOTAL		**3.80**	**5,477**	**0.008**

Note: PDF values include I&I added to ADF per TOCR 2018 Wastewater Collection Criteria Section 4.4.1.3 Peak Design Flow Rate

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Oct 2 2026

1.0% (Flattest) Slope Section - Peak Design Flow - Industrial/Other Commercial Land Us

Circular

Diameter (ft)	=	0.67
Invert Elev (ft)	=	10.00
Slope (%)	=	1.00
N-Value	=	0.011

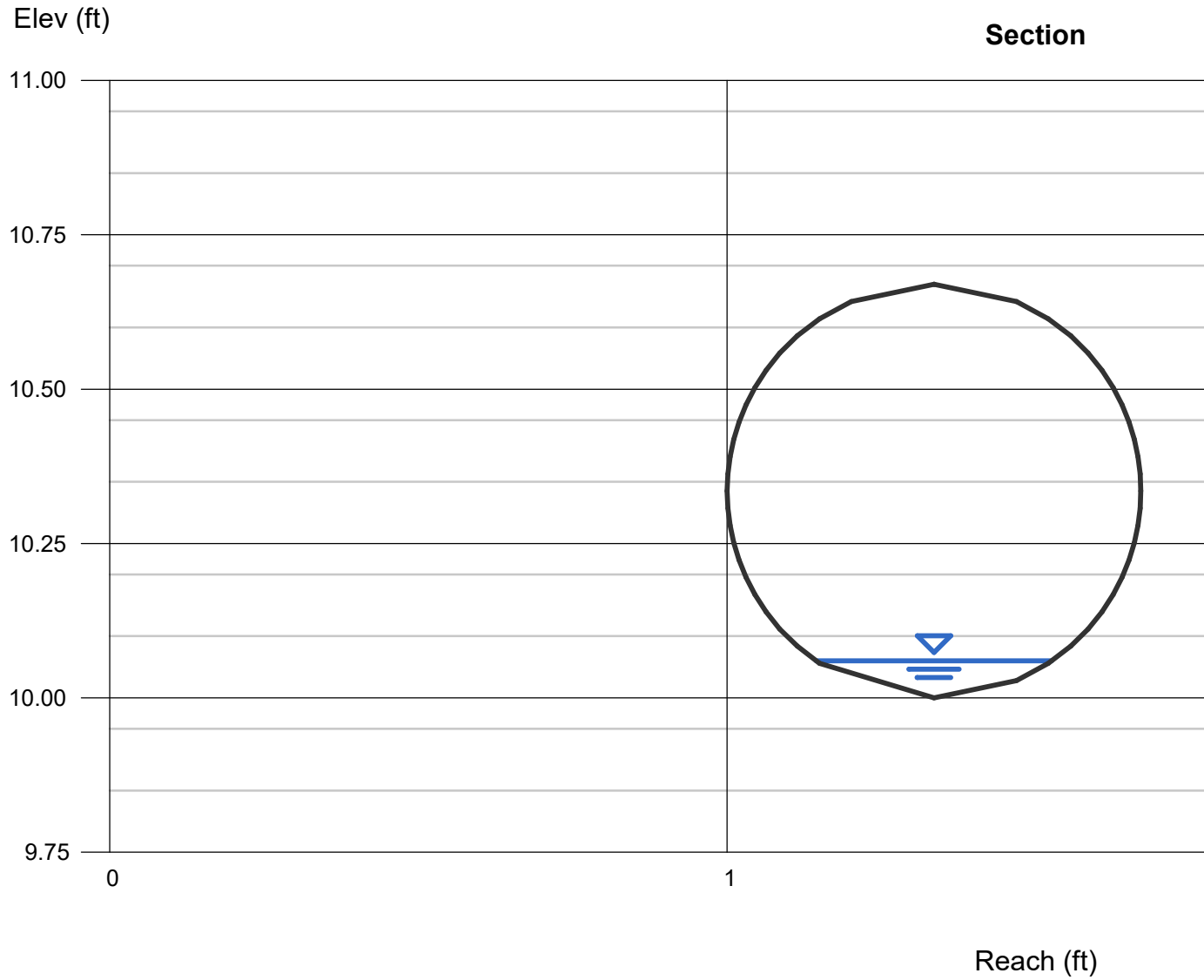
Calculations

Compute by:		Known Q
Known Q (cfs)	=	0.02

Includes calculated flows from Lots 6G-3A-1, 6G-3A-2, and 6G-3A-3

Highlighted

Depth (ft)	=	0.06
Q (cfs)	=	0.020
Area (sqft)	=	0.02
Velocity (ft/s)	=	1.27
Wetted Perim (ft)	=	0.41
Crit Depth, Yc (ft)	=	0.07
Top Width (ft)	=	0.38
EGL (ft)	=	0.09



Channel Report

1.0% (Flattest) Slope Section - Peak Design Flow - Retail/Offices Land Use

Circular

Diameter (ft)	=	0.67
Invert Elev (ft)	=	10.00
Slope (%)	=	1.00
N-Value	=	0.011

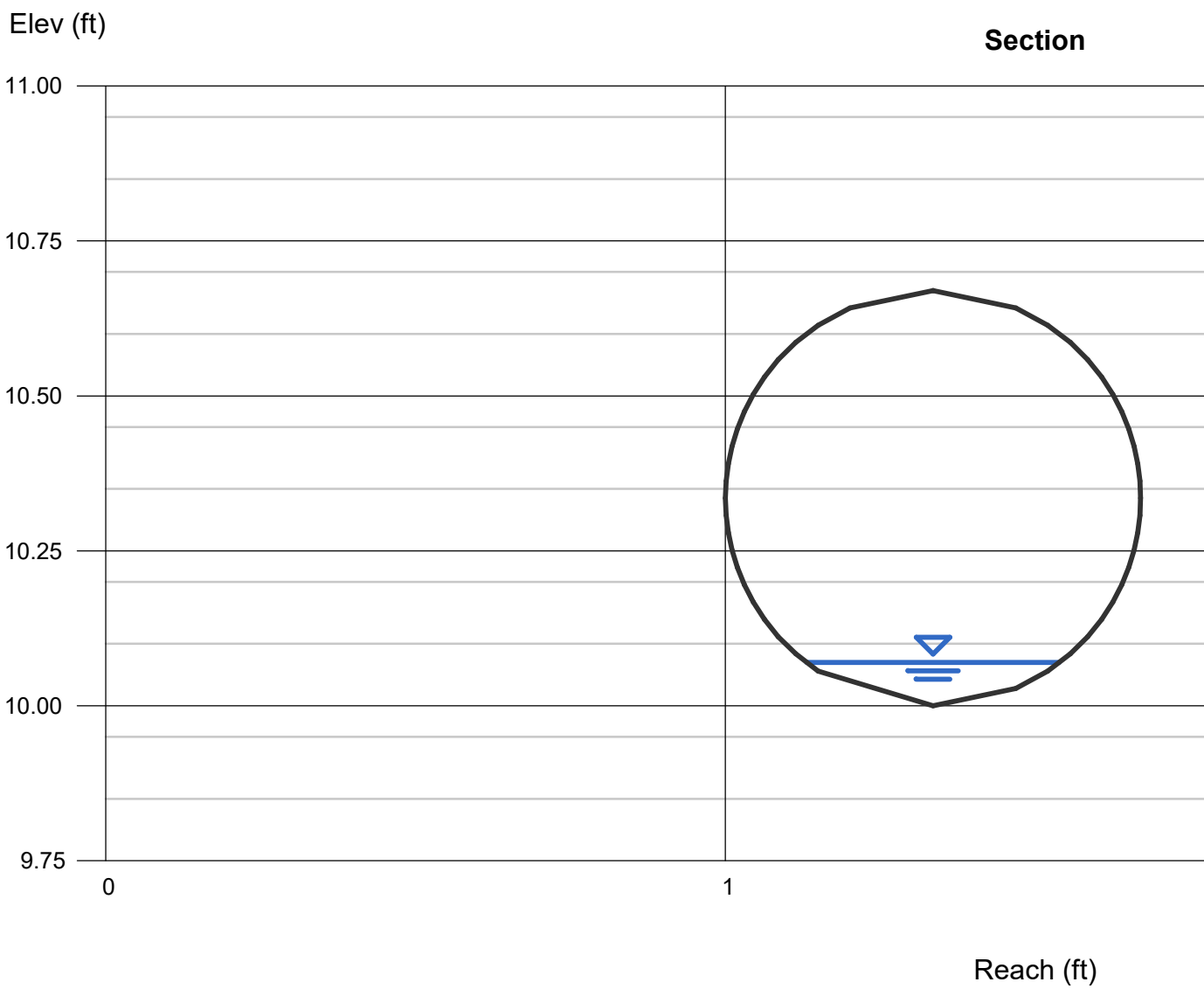
Calculations

Compute by:		Known Q
Known Q (cfs)	=	0.03

Includes calculated flows from Lots 6G-3A-1, 6G-3A-2, and 6G-3A-3

Highlighted

Depth (ft)	=	0.07
Q (cfs)	=	0.030
Area (sqft)	=	0.02
Velocity (ft/s)	=	1.52
Wetted Perim (ft)	=	0.44
Crit Depth, Yc (ft)	=	0.08
Top Width (ft)	=	0.41
EGL (ft)	=	0.11



APPENDIX D – EXCERPTS FROM PREVIOUS REPORTS

ADDENDUM TO THE

FINAL UTILITY REPORT

For

THE MEADOWS FILING NO. 17
LOT 5 & LOT 6
TOWN OF CASTLE ROCK

Prepared for:

Castle Rock Development Company
3033 E. First Avenue Ste. 410
Denver, CO 80206

Prepared by:

CVL Consultants of Colorado, Inc.
7901 E. Belleview Ave, Suite 150
Englewood, CO 80111
Phone (720) 482-9526

March 20, 2006
Revised: May 9, 2006

ADDENDUM TO THE FINAL UTILITY REPORT
Meadows Filing 17 Lot S & Lot 6
May 9, 2006

Engineer's Statement:

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

COLORADO REGISTERED KURT A. LANG 32249 PROFESSIONAL ENGINEER

5-15-06

Kurt A. Lang Date
Colorado P.E. No. 32249

Owner's/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.

5/12/06

Castle Rock Development Date

Town of Castle Rock Approvals:

ACCEPTED

Utilities Department Date P. Clark

DATE 5/19/06

Development Services Director Date

Introduction

Filing 17 is a part of a 4000+ acre planned community named "The Meadows" located in the Town of Castle Rock west of Interstate 25 and north of Wolfensberger Road. Lot 5 and Lot 6 are located within the south quadrant of Filing 17. The site is bordered on the northwest by Meadows Parkway and the southwest by Prairie Hawk Drive and The Meadows Filing 18. The AT&SF railroad right-of-way borders the northeast side of the property. The site is approximately 48 acres and is slated for commercial, office, or industrial uses. At this time, only Lot 5, the existing theater site, has been developed. Please refer to the vicinity, water, and sanitary sewer maps located within the report appendices.

This addendum to the Final Utility Report addresses the effect of the additional water line infrastructure to the existing potable water system and verifies the water and wastewater demand assumptions for future commercial lots within Meadows Filing 17 Lots 5 and 6. A final utility report must be submitted with each Final PD Site Plan for each lot developed.

Potable Water System

Existing Potable Water and Related Studies

The site falls within the designated Yellow Zone per the Water Master Plan for the Meadows (Ref. 4.). There is an existing 16" waterline within Meadows Parkway along the length of the project. Prairie Hawk Drive contains an existing 12" waterline from the Meadows Parkway intersection to the existing fire station. The existing water mains adjacent to the Meadows Filing 17 site are fed from the nearby Yellow Zone storage tank of 4.0MG north of the Meadows Boulevard and Coachline Road intersection. Connections to the existing mains around the site have been modeled as reservoirs 1 and 2 in the WaterCAD water study.

The following utility reports were used in the analysis of the proposed water system.

- Water Master Plan for The Meadows by Rocky Mountain Consultants, Inc., February 2002.
- Preliminary Utility Report for The Meadows - Filing No. 17 by CVL Consultants of Colorado, Inc., May 18, 2004
- Town of Castle Rock – 2000 Water Facility Plan; Integra Engineering, Inc., August 2000.
- The Final Utility Report for Meadows Filing 17, Lots 5 and 6, by CVL Consultants, February 15, 2005.

Design Criteria

The potable water system is designed using the Town of Castle Rock – Public Works Regulations (Ref. 1.), Section 14 in conjunction with the Water Master Plan for the Meadows (Ref. 4.).

The Land Use Demand Rate (Ref. 1.) for commercial development is 1200 gpad (3 SFE/acre). Demand factors of 2.65 and 4.5 were used to figure Maximum Day Demand and Peak-Hour Demand respectively for commercial demands. (See appendix for calculations and related assumptions). Refer to Table 1.1.

Table 1.1: Demand Criteria

Land Use	Land Use Demand Rates (gpad)	Single Family Equivalent (SFE/Acre)	Max. Day Peaking Factor	Peak Hour Peaking Factor
Commercial	1200	3 SFE	2.65	4.5

Table 1.2 below presents the criteria for hydraulic performance including system pressure, velocity and head loss, which are used to verify the analysis results.

	Hydraulic Parameter	Maximum	Minimum
Static	Pressure	125 psi	43 psi
Dynamic	Pressure - Max. Day Demand + Fire Flow	-	20 psi
	Pressure – Peak Hour Demand	-	35 psi
	Velocity – Peak Hour Demands	5 fps	-
	Velocity – Max. Day Demands + Fire Flow	15 fps	-
	Head loss through 16-inch	2ft/1000ft	-

Table 1.2 System Criteria

The current Yellow Zone tank's HGLs were obtained from the Town of Castle Rock's Utilities Department and were modeled as reservoir elevations. Two phases with the tank 100% full and 20% full were modeled. Refer to Table 1.3.

	Maximum HGL	Initial HGL	Minimum HGL	Base HGL
100% Full	6349	6349	6326	6325
20% Full	6329.8	6329.8	6326	6325

Table 1.3: Yellow Zone Tank Elevations

Future development of these lots will be required to determine fire flows and durations depending on type of construction in conformance with Appendix III of the Uniform Fire Code (UFC). In following the Lot 5 and 6 Final Utility Report, the fire flow has been held at 1500 gpm for a two hour period in accordance with the 1997 Uniform Fire Code and Town of Castle Rock Fire Department. Fire flow requirements will need to be confirmed as each lot is developed. Within the Yellow Water Zone the top elevation served is 6230 and the low elevation served is 6072.

Addendum to the Proposed Design

This Final Utility Report was set up to analyze the proposed water system for two tank conditions, the tank at 20% full and the tank at 100% full. The water system has been revised to add two additional water mains to serve the Lot 6 layout. The first main connects the existing 12" water line in Prairie Hawk Drive to the existing 12" water line in Limelight Avenue with an 8" water line in Sol Danza Drive. This proposed line loop provides service for the future 6G lots.

The second additional main loops an 8" water line from the existing 12" water line in Limelight Avenue at Sol Danza Drive northeasterly towards the railroad, southeast behind the theater parking lot and then southwest along the parking lot to the existing 8" stub from the existing theater site. This additional main provides loop service for Lot 6A and the 6B lots without having to cut into Meadows Parkway for a loop connection. The future 12" water main by others in Prairie Hawk Drive shown on the preliminary plat and the water map is needed for the looping of Meadows Filing 17, Lots 5 and 6.

Analysis

Haestead's WaterCad version 6.5 was used to modify the model from the Lot 5 and 6 Final Utility Report. Additional pipes and nodes have been added to model the two additional 8" water lines.

The demands for the water system have been recalculated based on the current layout. No additional area has been added to the system, but the demands have been re-allocated based on the revised water system. A landscaping demand of 5 gpm has been added to Junction 19 anticipating potential landscaping for the developed Tract A1. Please see the updated Table 1, Demand Calculations, and Table 2, Water demands per node, provided in Appendix A.

The revised system was modeled for the static, peak hour, and maximum hour during fire flow with one critical connection closed. The detailed analysis results and map for the WaterCAD model is provided in Appendix C.

A fire flow of 1500 gpm for a 2-hour duration was placed at each junction to determine the junction with the lowest pressure. This resulted in applying the fire flow demand at Junction (J-44) in combination with the Max. Day demands. Velocity and pressure criteria were verified for all scenarios. The results of system analysis are summarized in the following tables.

Scenario	Minimum Pressure (psi)	Node	Maximum Pressure (psi)	Node	Maximum Velocity (fps)	Pipe ID
Static	84.8	J-1	102.8	J-14	N/A	N/A
Peak Hour	84.8	J-1	102.8	J-14	0.5	P-9
Max. Day + FF @ J-44 (w/ P-9 closed)	65.2	J-44	100.1	J-14	9.72	P-60
Max. Day + FF @ J-44 (w/ P-57 closed)	64.5	J-44	100.0	J-14	10.3	P-9

Table 1.4: Phase 1 - Tank 100% Full

Scenario	Minimum Pressure (psi)	Node	Maximum Pressure (psi)	Node	Maximum Velocity (fps)	Pipe ID
Static	76.5	J-1	94.5	J-14	N/A	N/A
Peak Hour	76.5	J-1	94.4	J-14	0.5	P-9
Max. Day + FF @ J-44 (w/ P-9 closed)	60.3	J-45	91.8	J-14	9.7	P-60
Max. Day + FF @ J-44 (w/ P-57 closed)	58.7	J-44	91.7	J-14	10.2	P-9

Table 1.5: Phase 1 - Tank 20% Full

Water Analysis Conclusion

The design and analysis depicted herein provides potable water and fire service for Filing 17, Lot 5 and Lot 6. The results of the system analysis indicate that the proposed water system conforms to the Town of Castle Rock's Public Works Regulations. This water analysis has been prepared in conformance with the Town of Castle Rock's Public Works Regulations and will be used as a guide in the final design of Phase II for the development of Lot 5 & 6.

As more specific design information is determined, changes and deviations may occur to create the most efficient and cost-effective system possible. If development occurs using the analysis contained herein, potable water and fire service can be provided for Lot 5 & 6 within the guidelines of the Town of Castle Rock requirements.

Sanitary Sewer System

The sanitary sewer system for the approved Lot 5 and 6 Final Utility report calculated the sanitary sewer demands and main sizes for the entire Lot 5 and 6 site. This report does not change the demand assumptions from the Final Utility report. The calculated sanitary sewer main sizes from this report were 8" pvc pipe for all lines accepting and conveying the sewer demands to the existing sanitary sewer interceptor main.

The proposed preliminary plat shows the extension of the sanitary sewer mains throughout Lot 6 as a conceptual layout. These main locations are subject to change and each lot will be required to submit a Final Utility Report with their respective Final PD Site Plan.

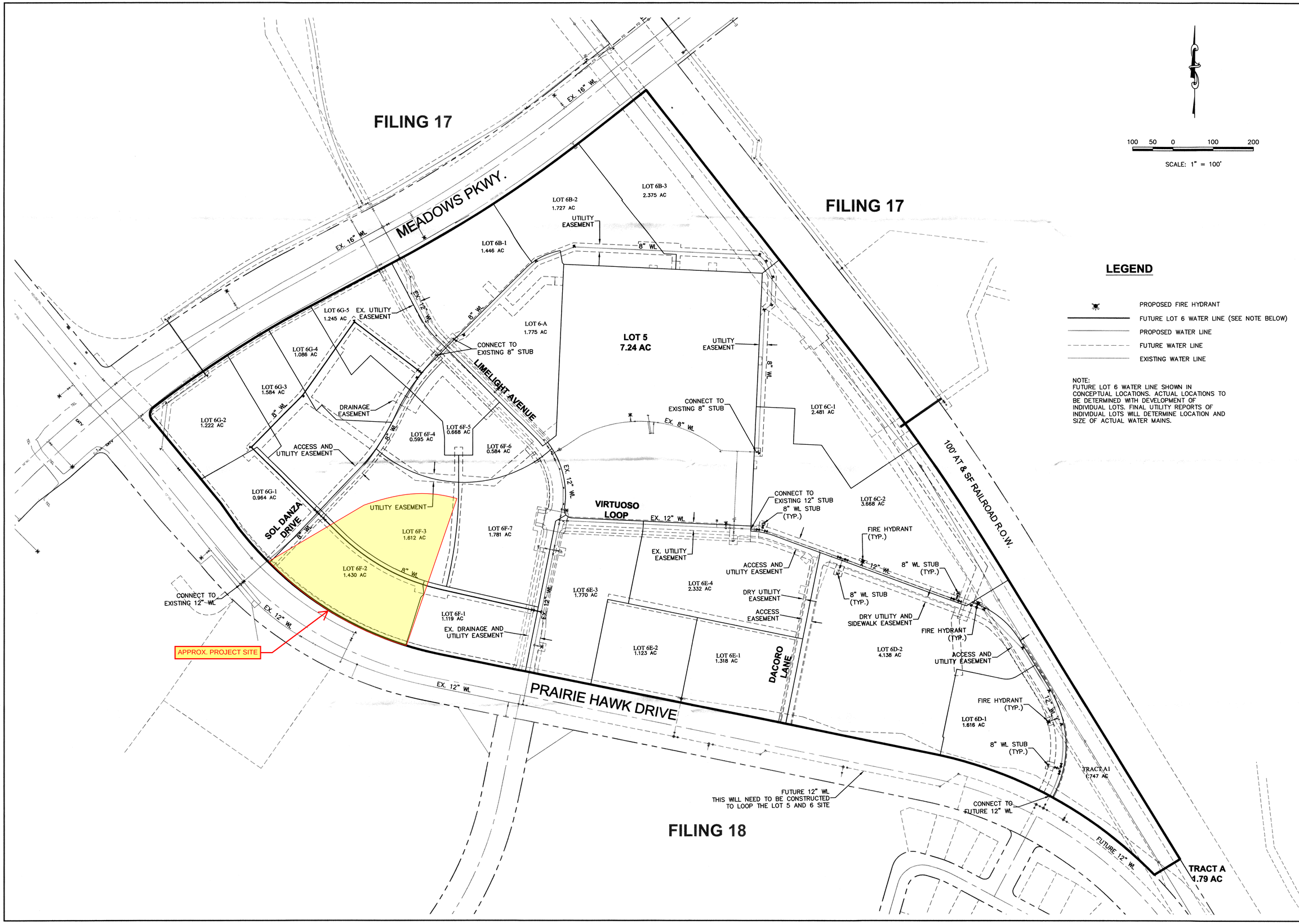
At this time, the 8" mains that serve the proposed design points in the Final Utiliy Report are still adequate for this analysis and will be verified in the Final Utility Report for each developed lot. The Sanitary Sewer Plan Map from the approved Final Utility Report and the Utility Plan from the Preliminary Plat, Amendment 2 have been provided in the appendix.

THE MEADOWS
FILING NO. 17 Lot 5 & Lot 6
TOWN OF CASTLE ROCK
WATER PLAN
TABLE 1.0: DEMAND CALCULATIONS

Max Day Demand	2.65 x Avg. Day Demand
Peak Hour Demand	4.5 x Avg. Day Demand
Commercial Land Use Demand	3 SFE/ac

	Lot Type	Gross area (Acres)	Commercial Land Use Demand Rate (GPAD)*	Total Average Day Demand (GPM)	Total Max Day Demand (GPM)	Total Peak Hour Demand (GPM)	Commercial Equivalent Demand SFE
Lot 5	Commercial	7.24	1200	6.0	16.0	27.2	22
Lot 6-A	Commercial	1.78	1200	1.5	3.9	6.7	5
Lot 6-B	Commercial	5.55	1200	4.6	12.3	20.8	17
Lot 6-C	Commercial	6.15	1200	5.1	13.6	23.1	18
Lot 6-D	Commercial	5.75	1200	4.8	12.7	21.6	17
Lot 6-E	Commercial	6.54	1200	5.5	14.4	24.5	20
Lot 6-F	Commercial	7.79	1200	6.5	17.2	29.2	23
Lot 6-G	Commercial	6.10	1200	5.1	13.5	22.9	18
Tract A1	Open Space	1.79	0	5.0	5.0	5.0	0
TOTALS		50.23		44.1	108.6	180.9	141

*Land use demands are per "Town of Castle Rock Public Works Regulations, Chapter 14"
SFE-Single Family Equivalent



100 50 0 100 200

SCALE: 1" = 100'

LEGEND

- PROPOSED FIRE HYDRANT
- FUTURE LOT 6 WATER LINE (SEE NOTE BELOW)
- PROPOSED WATER LINE
- FUTURE WATER LINE
- EXISTING WATER LINE

NOTE:
FUTURE LOT 6 WATER LINE SHOWN IN CONCEPTUAL LOCATIONS. ACTUAL LOCATIONS TO BE DETERMINED WITH DEVELOPMENT OF INDIVIDUAL LOTS. FINAL UTILITY REPORTS OF INDIVIDUAL LOTS WILL DETERMINE LOCATION AND SIZE OF ACTUAL WATER MAINS.

No.	Revisions	Date	Init.	Appr.	Date

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CASTLE ROCK LAND COMPANY
3033 EAST 1ST AVENUE, #410
DENVER, CO 80206

THE MEADOWS FILING 17
LOTS 5 AND 6
POTABLE WATER PLAN

DRAWN BY:	ACS	SCALE:	AS SHOWN
CHECKED BY:	BRH	FILE NO:	05812601
DATE:	MAY 12, 2006		

SHEET NUMBER 1

Projects\05812601\dwg\final\02-WL-MAP.dwg, 5/15/2006 7:56:12 AM, ACS

FINAL UTILITY REPORT
FOR
LOT 6G, THE MEADOWS
FILING NO. 17
CASTLE ROCK, COLORADO
(CD12-0013)

Prepared for:

Castle Rock Development Company

3033 E. 1st Avenue, Suite 410

Denver, Colorado 80206

Attn: Jim Riley

Prepared by:

C2C Engineering, LLC

6551 S. Revere Parkway

Suite 140

Centennial, CO 80111

(720) 221-4520

October 8, 2012

September 2012

November 15, 2012

Introduction

Lots 6G and 6G-1, The Meadows Filing No. 17 comprise of an area of 12 acres and 1.8 acres respectively and are located in the westerly part of Lot 6 adjacent to Prairie Hawk Drive and Meadows Parkway. Please refer to the vicinity map in Appendix A.

The project site is located in the northwest quarter section of Section 34, Township 7 South, Range 67 West of the 6th Principle Meridian, Town of Castle Rock, Colorado. Prairie Hawk Drive is adjacent to the westerly boundary of the property and Meadows Parkway is adjacent to the northern boundary. Limelight Avenue is on the east and south sides of the project.

The development of this site entails providing infrastructure for anticipated development in the area. The proposed site is surrounded by the existing Prairie Hawk drive to the west and the existing Meadows Parkway to the north.

The area of Lot 6 was part of the Meadows Filing 17 Lot 5 and 6 Final Utility Report, approved February 15, 2005, as well as an Addendum to that report, approved May 12, 2006.

This Addendum to the Final Utility Report will quantify the water and sanitary sewer demands and flows associated with the development of Lot 6G-1 (1.8 acres) and an anticipated platted lot titled Lot 6G-2 (3.1 acres). The remaining lot 6G-3 (9.0 acres) will not have services provided at this time. We will quantify they demands and compare the values with the values assumed in the original Final Utility Report for Lot 6G-1 and the Meadows Filing 17 Lot 5 and 6 Final Utility Report as well as the Addendum to this report, approved with the Filing 17 Preliminary Plat, Amendment 2. The uses of the area have not been changed and therefore the demands should be compatible with previous studies.

Potable Water System

Existing Potable Water Line

The site falls within the designated Yellow water pressure zone per the Water Master Plan for the Meadows. There is an existing 16" waterline within Meadows Parkway along the length of Meadows Filing 17 Lot 6. Prairie Hawk Drive contains an existing 12" waterline from the Meadows Parkway extended past the Meadows Filing 17 – Lot 6 to the Meadows Filing 18. Developed site elevations within Lot 6G range from 6130 to 6145.

Design Criteria
The potable water system is designed using the Town of Castle Rock – Public Works Regulations, PWR Section 14 in conjunction with the Water Master Plan for the Meadows. Table 1.0 on the following page presents the PWR criteria for hydraulic performance including system pressure, velocity and head loss, which are used to verify the analysis results.

Table 1.0 System Criteria

	Hydraulic Parameter	Maximum	Minimum
Static	Pressure	125 psi	43 psi
Dynamic	Pressure - Max. Day Demand + Fire Flow *	-	20 psi
	Pressure – Peak Hour Demand *	-	35 psi
	Velocity – Peak Hour Demand	5 fps	-
	Velocity – Max. Day Demands + Fire Flow	15 fps	-
	Head loss through 16-inch	2ft/1000ft	-

* - with one critical loop out of service

Sanitary Sewer System

Existing Sanitary Sewer System
The infrastructure consists of an 8" main line located in Limelight Avenue with a stub provided for this development to connect with. The existing stub was provided for as part of the Meadows Filing 17 Lot 5 and 6 Final Utility Report. The said stub was designed for 5.8 gpm.

The approved Lot 5 and 6 Final Utility Report defines the current Lots 6G-1, 2 & 3 as part of the Lot 6- Area 5 sanitary sewer basin. The Town of Castle Rock sanitary sewer demands of 600 gpd/acre for commercial use has been used to determine the flows.

Addendum to the Proposed Design

This Addendum to the Final Utility Report for Lot 6G-1 is intended to analyze the expected flows for a revised building on Lot 6G-1 and anticipated develop for Lot 6G-2. The current design of the waterline and sanitary sewer are very similar to the approved Lot 6G-1 design in terms of horizontal and vertical geometry and tie-in points.

Water System
We intend to install an 8" watermain in a private access road with appropriate easements. The tie-in locations will not deviate from the original design. A

domestic tap for Lot 6G-1 will be reduced in size from the approved 1" to ¾". We anticipate an additional ¾" tap for irrigation as well. An additional 1" tap will be provided for a potential future pad site located on Lot 6G-1. A meter will not be set for this service tap until such time as a building is proposed.

Two additional taps will be provided to Lot 6G-2. This is a 3.1 acre site along the south right-of-way boundary of Meadows Parkway and east of Lot 6G-1. Both domestic water taps will be 2" and we anticipate one additional ¾" tap for irrigation.

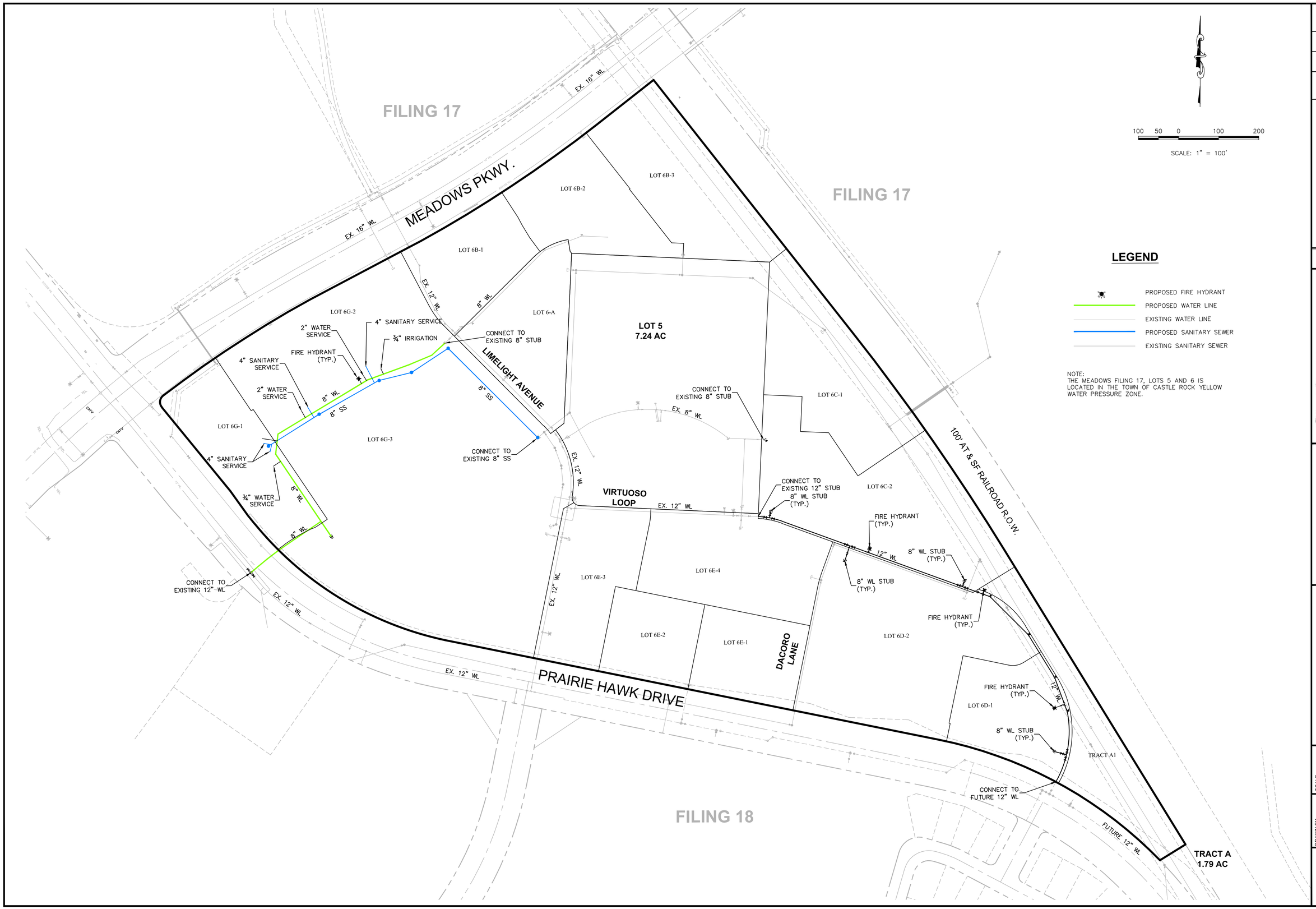
Analysis
The demands for the water system have been recalculated based on the current layout and anticipated development occurring in the near future. No additional area has been added to the system. Based on Table 1.0, Demand Calculation located in Appendix B, the remaining SFE's attributed to the remaining portion of Lot 6G (platted Lot 6G-3) is 23 for 9 acres, or 2.6 SFE's/acre. This compares to the previously approved Lot 6G-1 study which had 2.9 SFE's/acre for the remaining undeveloped area.

Sewer System
The current design provides for two 4" sanitary laterals to Lot 6G-1 and two 4" laterals to future Lot 6G-2.

Analysis
At this time, the Town of Castle Rock sanitary sewer demands have been used to calculate proposed flows instead of the typical fixture counts. At this time, we do not have building interior design so fixture counts are not available. Based on the calculations, the two areas, Lots 6G-1 and 6G-2 will provide 2.0 gpm of average flow with 3.8 gpm remaining for future development of Lot 6G. This flow coincides with the flows identified in the Lot 5 and 6 Final Utility Report. See Appendix B for the demands.

Conclusion

The calculations identified herein for the revision to the Lot 6G-1 water tap size, along with additional taps identified for future development are in conformance with the original Final Utility Report for Lot 6G-1 and the Final Utility Report for The Meadows Filing No. 17, Lots 5 and Lot 6, and the addendums.



100 50 0 100 200

SCALE: 1" = 100'

LEGEND

- PROPOSED FIRE HYDRANT
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER

NOTE:
THE MEADOWS FILING 17, LOTS 5 AND 6 IS LOCATED IN THE TOWN OF CASTLE ROCK YELLOW WATER PRESSURE ZONE.

No.	Revisions	Date	Init.	Appr.	Date

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DENVER, COLORADO 80206

THE MEADOWS FILING 17
LOT 6G
PROPOSED UTILITY EXHIBIT

SCALE:	AS SHOWN
FILE NO:	12-07051
DRAWN BY:	CT
CHECKED BY:	KAL
DATE:	OCTOBER 15, 2012
SHEET NUMBER	

N:\2012 Projects\12-07051 Meadows Marketplace Inf\docs\Utility\Utility Exhibit.dwg

THE MEADOWS
FILING 17 LOTS 6G-1 & 6G-2
WATER PLAN
TABLE 1: WATER DEMAND CALCULATIONS

Max Day Demand	2.65	x Avg. Day Demand
Peak Hour Demand	4.5	x Avg. Day Demand
Commercial Land Use Demand	3.0	SFE/ac

	Lot Type	Gross area (Acres)	Commercial Land Use Demand Rate (GPAD)	Total Average Day Demand (GPD)	Total Average Day Demand (GPM)	Total Max Day Demand (GPM)	Total Peak Hour Demand (GPM)	Commercial Equivalent Demand (SFE)	Tap Size	Commercial Equivalent Demand based on Tap Size (SFE)
Lot 6G-1 Domestic	Commercial	1.80	1200	2160	1.5	4.0	6.8	5	3/4"	**1**
Lot 6G-1 Irrigation									3/4"	**1**
Lot 6G-1 Future Pad Site	Commercial								1"	**2**
Lot 6G-2 Domestic	Commercial	3.00	1200	3600	2.5	6.6	11.3	9	2~2"	**13**
Lot 6G-2 Irrigation									3/4"	**1**
Lot 6G-3 (Undeveloped)	Commercial	9.00	1200	10800	7.5	19.9	33.8	27		**25**
TOTALS		13.80			1.5	4.0	6.8	41		**43**

*Land use demands are per "Town of Castle Rock Public Works Regulations, Chapter 14"
SFE-Single Family Equivalent
SFE for 2" tap = 6.67

Comparison with Addendum to Lot 5 and 6 Final Utility Report:

1. Total SFE calculated for Lots 6G-1 and 6G-2 is 18.
2. Total SFE assumed for Lots 6F and 6G per approved addendum = 41 SFE (See enclosed Table 1.0 in Appendix D)

THE MEADOWS
FILING NO. 17, LOTS 6G-1 & 6G-2
SANITARY SEWER ANALYSIS
TABLE 2 BASIN SEWER LOADING

Flow Rate
Commercial 600 gpd/acre
Peak Factor = 3.79 x [(Avg. Flow in cfs)^-0.168], where Max. Peaking Factor = 5.0

Basins	Lot Type	Gross Area* (Acres)	Typical Demand/Unit (gpd/acre)	Avg. Flow (gpd)	Avg. Flow (gpm)	Avg. Flow (cfs)	Equivalent SFEs/Unit (SFE/acre)	Equivalent Demand SFE	Peak Factor
Lot 6G-1	Commercial	1.80	600	1,080	0.8	0.002	2	4	5.00
Lot 6G-2	Commercial	3.00	600	1,800	1.3	0.003	2	6	5.00
Lot 6G-3 (Undeveloped)	Commercial	9.00	600	5,400	3.8	0.008	2	18	5.00
TOTAL		*13.80*		*8,280*	*5.8*	*0.013*		*28*	

**Gross Areas are based on total lot areas and do not take into account additional dedication of right-of-way or tracts.*

THE MEADOWS
FILING NO. 17, LOTS 6G-1 & 6G-2
TABLE 3: SANITARY SEWER DEMAND PER DESIGN POINT

Contributing Basins	Avg. Flow (gpm)	Avg. Flow (cfs)	Routed Peak Factor	Downstream Pipe Size (in.)	Peak Flow (gpm)	Peak Flow (cfs)
Lot 6G-1	0.8	0.002	5.00	8.00	3.8	0.008
Lot 6G-2	1.3	0.003	5.00	8.00	6.3	0.014
Lot 6G-3 (Undeveloped)	3.8	0.008	5.00	8.00	18.8	0.042

Note: Minimum velocity of 2.0 fps when running full required by TOCR PWR
Maximum permissible velocity at design flow shall not exceed 10.0 fps per TOCR PWR.
Peak Factor = 3.79 x [(Avg. Flow in cfs)^-0.168], where Max. Peaking Factor = 5.0

FINAL UTILITY REPORT
FOR
LOT 6G-3, THE MEADOWS FILING NO. 17, CRDC VIRTUOSO LOOP

Prepared for:

CASTLE ROCK DEVELOPMENT COMPANY
3033 EAST 1ST AVE., SUITE 305
DENVER, CO 80206

Prepared by:

ROTH LANG ENGINEERING GROUP LLC

6855 S. Havana St. #600
Centennial, CO 80112
(303) 841-9365
Kurt A. Lang, P.E.

March 22, 2024

RLEG NO. 220404
TOWN NO. CD23-0046

TOWN OF CASTLE ROCK COLORADO
DEVELOPMENT SERVICES
APPROVED
By tkucewesky
on 04/02/2024
Approved CD23-0046 Final Util Rpt.pdf
Record Document on File

building was assumed to have no automatic sprinkler system. The final required fire flow for this Lot will be determined at development.

A. Average Daily Demand (ADD)

The land use for the project is classified as Commercial. A demand of 1200 gallons per day per acre was used for calculations. This demand was obtained from Section 4.4.1 of the Town of Castle Rock Water System Design Criteria Manual. ADDs are sub-totaled by land use as a flow rate in gallons per minute (GPM) and gallons per day (GPD), and as an average annual supply in acre-feet per year (AF/YR).

		AVERAGE DAILY DEMAND (ADD)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(AF/YR)**
Commercial (All of Lot 6G-3)	9.00 acres	7.50	10,800	12.10
Commercial (Lots 6G-3A-1, 6G-3A-2, 6G-3B, AND 6G-3C)	7.36 acres	6.13	8,832	9.89
TOTAL		**7.50**	**10,800**	**12.10**

B. Max Daily Demand (MDD)

With a 2.5 peaking factor applied to the ADD, the MDD's are as follows:

		MAX DAILY DEMAND (MDD)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(AF/YR)**
Commercial (All of Lot 6G-3)	9.00 acres	18.75	27,000	30.24
Commercial (Lots 6G-3A-1, 6G-3A-2, 6G-3B, AND 6G-3C)	7.36 acres	15.33	22,080	24.73
TOTAL		**18.75**	**27,000**	**30.24**

The required storage volume based on MDDs and fire flows necessary to serve the development is 607,075 gallons. The fire flow used for this calculation is the estimated largest potential commercial required fire flow discussed above. See Appendix B.

STORAGE	MDD [1] (gpm)	FIRE FLOW [2] (gpm)	TIME (hr)	STORAGE VOLUME [3] (gallons)
MDD	15.33		24	22,075
Fire Flow		3,250	3	585,000
TOTAL				**607,075**

REFERENCE: Town of Castle Rock Water System Design Criteria Manual, Sept. 2012. Section 4.4.2

NOTES:
[1] MDD = Maximum Day Demands = see spreadsheet: *Calculated Demands - Water*
[2] Estimated Largest Potential Fire Flow Calculated From IFC
[3] Storage Volume = MDD Storage + Fire Flow Storage = (MDD*60min*24hr) + (FF*60min*2hr)

C. Peak Hourly Demand (PHD)

With a 5.5 peaking factor applied to the ADD, the PHD's are as follows:

		PEAK HOURLY DEMAND (PHD)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(AF/YR)**
Commercial (All of Lot 6G-3)	9.00 acres	41.25	59,400	66.54
Commercial (Lots 6G-3A-1, 6G-3A-2, 6G-3B, AND 6G-3C)	7.36 acres	33.73	48,576	54.41
TOTAL		**41.25**	**59,400**	**66.54**

3. EXISTING WATER SYSTEM

D. Existing Water Distribution System

An existing 12-inch water main in Limelight Avenue and an existing 8-inch water main in Sol Danza Drive will serve this site. The Utility Plan can be found in Appendix A. No known shortcomings or bottlenecks associated with the existing distribution system will impact the Town's ability to adequately deliver fire flows and meet the required demand conditions. This project is served by the Meadows Yellow water pressure zone. Developed site elevations range from 6130 to 6145.

Pressure Zone Designation	Max HGL Elev.	20% HGL	Top Elev. Served	Low Elev. Served

2 (Yellow)	6352	6334	6230	6065

Table from Section 4.4.3.1 Operating Pressures and Pressure Zone Characteristics from Town of Castle Rock Water System Design Criteria Manual, Dec 2018.

4. PROPOSED WATER SYSTEM

E. Proposed Water Distribution System

A proposed 8-inch PVC water main extension loop will run along Virtuoso Loop and tie into the water mains in Limelight Avenue and Sol Danza Drive at both ends of the project. The tie-in locations will not deviate from the original design. The proposed water main is to serve Lots 6G-3A-1 (1.79 acres), 6G-3A-2 (1.24 acres), 6G-3B (1.66 acres), and 6G-3C (2.67 acres). Two 1-inch taps, one for domestic and one for landscape, will be provided to lots 6G-3A-2, 6G-3B, and 6G-3C. Due to there being an existing 8-inch stub on lot 6G-3A-1, only one 1-inch tap will be provided for this lot. For Lot 6G-3A-1, any future proposed development of the existing water infrastructure is the responsibility of the developer/owner. Meters will not be set for these service taps until such time as a building is proposed. Meter size will be based on water supply fixture units at time of building permitting. The Project will not be providing taps for lot 6G-3A-3 (1.63 acres) as this lot will be served from the existing 12-inch main located in Limelight Avenue.

F. Proposed Water Supply Facilities

No pump stations, wells, PRVs, storage reservoirs, purification facilities, or other elements will be required to adequately serve the development and its requirements.

G. Water Facilities Land Dedication Requirements

Water Facilities Land Dedication requirements are pursuant to Section 16.08.040 of the Town's *Municipal Code*. The code states that for Retail, office, light industrial and other commercial land uses, 0.0123 acres/acre is required.

- Model #4 – Max Daily Demand (MDD)
- Model #5 – Peak Hour Demand (PHD)
- Model #6 – MDD w/ Fire Flow
- Model #7 – MDD w/ Fire Flow & Pipe Out #1
- Model #8 - MDD w/ Fire Flow & Pipe Out #2
- Model #9 - MDD w/ Fire Flow & Pipe Out #3

The water system analysis was performed using EPANET 2.2. The water loop is sized to convey water for the average day, max day + fire flow and peak hour. The proposed water system conforms to the Town of Castle Rock Water System Design 2018 Criteria Manual Dec. 2018.

6. CALCULATED WASTEWATER FLOWS

Average Daily Wastewater Flows (ADF), Peaking Factor, and Peak Design Flow (PDF) calculations can be found in the *Calculated Wastewater Flows* spreadsheet in Appendix C. All calculations were made in accordance with Chapter 4 of the *Town of Castle Rock Wastewater Collection System Design Criteria Manual 2018 Edition*. The proposed sanitary line is to serve Lots 6G-3A-1 (1.79 acres), 6G-3A-2 (1.24 acres), and 6G-3A-3 (1.63 acres). Calculations were done for all of Lot 6G-3 as well as the subdivided lots that the proposed sanitary line will serve.

J. Average Day Wastewater (ADF)

The land use for the project is classified as Commercial. ADFs are subtotaled by land use as a flow rate in gallons per day (GPD), gallons per minute (GPM), and cubic feet per second (CFS).

		AVERAGE DAY WASTEWATER (ADF)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(CFS)**
Commercial (All of Lot 6G-3)	9.00 acres	3.75	5,400	0.0084
Commercial (Lots 6G-3A-1, 6G-3A-2, AND 6G-3A-3)	4.66 acres	1.94	2,796	0.0043
TOTAL		**3.75**	**5,400**	**0.0084**

K. Peaking Factor and Inflow

A maximum Peaking Factor of 5 was used for this project and Inflow and Infiltration was applied at a rate of (0.1 * ADF) per *Castle Rock Wastewater Collection System Design Criteria Manual.*

L. Peak Design Flows (PDF)

With a Peaking Factor of 5 applied to the ADF and with Inflow and Infiltration added to the Peak Flow, the resulting PDF's are as follows:

		PEAK DESIGN FLOW (PDF)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(CFS)**
Commercial (All of Lot 6G-3)	9.00 acres	19.12	27,540	0.043
Commercial (Lots 6G-3A-1, 6G-3A-2, AND 6G-3A-3)	4.66 acres	9.90	14,260	0.022
TOTAL		**19.12**	**27,540**	**0.043**

Note: PDF values include I&I added to ADF per TOCR 2018 Wastewater Collection Criteria Section 4.4.1.3 Peak Design Flow Rate.

7. EXISTING WASTEWATER SYSTEM

A. Existing Wastewater Collection System

An existing 8-inch PVC sanitary transmission line runs along Limelight Avenue with an existing 8-inch stub to Lot 6G-3A-2.

8. PROPOSED WASTEWATER SYSTEM

A. Proposed Wastewater Collection System

An 8-inch transmission line is proposed to connect to the existing 8-inch sanitary stub on Lot 6G-3A-2 via a proposed manhole and extend south to the lot line between lots 6G-3A-2 and 6G-3A-3 where it will then run along this lot line to the west where it will end at a manhole located on Lot 6G-3A-1. The proposed 8-inch line is to serve lots 6G-3A-1, 6G-3A-2, and 6G-3A-3. No sanitary service lines are proposed for these lots. The Project is not proposing any sanitary improvements for lots 6G-3B or 6G-3C. Any future development of the existing wastewater infrastructure needed to serve this site is the responsibility of the developer.

B. Proposed Wastewater Facilities

No lift stations, force mains, pretreatment facilities, grease interceptors or other elements are proposed to adequately serve the development. Influent flow from the project is directed by the existing sanitary sewer main to the Plum Creek Wastewater Authority treatment plant north of the Project. This project does not anticipate any uses that would warrant a grease interceptor per Plum Creek Reclamation Authority. Further analysis will be required at the time of tenant lease out.

C. Wastewater Facilities Land Dedication Requirements

No land dedication requirements for wastewater facilities were found in the Town's *Municipal Code*.

9. PROPOSED WASTEWATER SYSTEM ANALYSIS

At this time, the Town of Castle Rock sanitary sewer demands have been used to calculate proposed flows instead of the typical fixture counts. Currently, there are no building interior designs, therefore, fixture counts are not available. Based on the calculations, all of Lot 6G-3 will provide 3.8 gpm (0.008 cfs) of average flow. This flow coincides with the flow identified in the Lot 5 and 6 Final Utility Report. For the lots to be served by the proposed 8-inch line, lots 6G-3A-1, 6G-3A-2, and 6G-3A-3, 1.9 gpm (0.004 cfs) of average flow is the calculated demand. The peak design flow for these lots to be served was calculated to be 9.9 gpm (0.022 cfs). This peak design flow was used for hydraulic calculations. See Appendix C for the demand calculations and hydraulic calculations. The proposed wastewater system conforms to the *Castle Rock Wastewater Collection System Design Criteria Manual.*

10. POTENTIAL PERMITTING REQUIREMENTS

This project is not anticipating any permits other than Town issued construction permits (building, right of way, etc). Future permitting may include Plum Creek Water Reclamation Authority (PCWRA) for commercial developments.

11. CONCLUSION

The proposed utility demands and calculations presented herein for the Project are in conformance with and based upon the current Town of Castle Rock criteria. The proposed water and sanitary sewer as included in the Overall Utility Plan coincide with the demands

set forth in the reports titled The Meadows Filing No. 17 – Lot 5 and 6; prepared by CVL Consultants of Colorado, Inc., February 15, 2005, and Final Utility Report for Lot 6G, The Meadows Filing No. 17; prepared by CVL Consultants of Colorado, Inc., November 15, 2012.

The Project is proposing an 8-inch PVC water main loop around the project to connect to the existing 12-inch PVC water main in Limelight Avenue and the existing 8-inch water main in Sol Danza Drive. This is being done for the purpose of providing water service to Lots 6G-3A-1, 6G-3A-2, 6G-3B, and 6G-3C, and to provide fire protection i.e. fire hydrants.

The Project is also proposing an 8-inch sanitary line extension to connect to the existing 8-inch stub located in Lot 6G-3A-2. This is being done for the purpose of providing sanitary service to Lots 6G-3A-1, 6G-3A-2, and 6G-3A-3.

Neither the sanitary extension nor water loop connection for the Project will affect the system analysis presented in the previously approved reports.

ROTH LANG ENGINEERING GROUP LLC

CALCULATED DEMANDS - WATER

CRDC VIRTUOSO LOOP

					FACTORS [3]		ESTIMATED DEMANDS (GPD)		
LAND USE	QUANTITY	ADD/UNIT [1]	SFEs/UNIT [2]	SFE's	MDD FACTOR	PHD FACTOR	ADD [4]	MDD [5]	PHD [6]
Commercial (Lot 6G-3A-1)	1.79 acres	1200 gpd/acre	3.0 /acre	5.4	2.5	5.5	2,152	5,379	11,834
Commercial (Lot 6G-3A-2)	1.24 acres	1200 gpd/acre	3.0 /acre	3.7	2.5	5.5	1,487	3,717	8,177
Commercial (Lot 6G-3B)	1.66 acres	1200 gpd/acre	3.0 /acre	5.0	2.5	5.5	1,992	4,980	10,956
Commercial (Lot 6G-3C)	2.67 acres	1200 gpd/acre	3.0 /acre	8.0	2.5	5.5	3,204	8,010	17,622
TOTAL (Lots 6G-3A-1, 6G-3A-2, 6G-3B, and 6G-3C)	**7.36 acres**			**22.1**			**8,834**	**22,086**	**48,589**

REFERENCE: Town of Castle Rock Water System Design Criteria Manual, December 2018

NOTES:

[1] ADD = Average Daily Demand = 600 gpm Reference Table 4.4.1
[2] SFE = Single Family Equivalent = Reference Table 4.4.1
[3] Reference Section 4.4.1.2
[4] ADD includes irrigation demands for church's land use.
[5] MDD = Maximum Day Demands = ADD * MDD Factor + Irrigation ADD
[6] PHD = Peak Hour Demand = ADD * PHD Factor + Irrigation ADD

LAND USE	QUANTITY	AVERAGE DAILY DEMAND (ADD) (GPM)	(GPD)	(AF/YR)
Commercial (Lot 6G-3A-1)	1.79 acres	1.49	2,152	2.41
Commercial (Lot 6G-3A-2)	1.24 acres	1.03	1,487	1.67
Commercial (Lot 6G-3B)	1.66 acres	1.38	1,992	2.23
Commercial (Lot 6G-3C)	2.67 acres	2.22	3,204	3.59
TOTAL (Lots 6G-3A-1, 6G-3A-2, 6G-3B, and 6G-3C)		**6.13**	**8,834**	**9.90**

LAND USE	QUANTITY	MAX DAILY DEMAND (MDD) (GPM)	(GPD)	(AF/YR)
Commercial (Lot 6G-3A-1)	1.79 acres	3.74	5,379	6.03
Commercial (Lot 6G-3A-2)	1.24 acres	2.58	3,717	4.16
Commercial (Lot 6G-3B)	1.66 acres	3.46	4,980	5.58
Commercial (Lot 6G-3C)	2.67 acres	5.56	8,010	8.97
3A-2, 6G-3B, and 6G-3C)		**15.34**	**22,086**	**24.74**

LAND USE	QUANTITY	PEAK HOURLY DEMAND (PHD) (GPM)	(GPD)	(AF/YR)
Commercial (Lot 6G-3A-1)	1.79 acres	8.22	11,834	13.26
Commercial (Lot 6G-3A-2)	1.24 acres	5.68	8,177	9.16
Commercial (Lot 6G-3B)	1.66 acres	7.61	10,956	12.27
Commercial (Lot 6G-3C)	2.67 acres	12.24	17,622	19.74
TOTAL (Lots 6G-3A-1, 6G-3A-2, 6G-3B, and 6G-3C)		**33.74**	**48,589**	**54.43**

STORAGE REQUIREMENTS - WATER

STORAGE	MDD [1] (gpm)	FIRE FLOW [2] (gpm)	TIME (hr)	STORAGE VOLUME [3] (gallons)
MDD	15.33		24	22,075
Fire Flow		3,250	3	585,000
TOTAL				**607,075**

REFERENCE: Town of Castle Rock Water System Design Criteria Manual, Sept. 2012. Section 4.4.2

NOTES:
[1] MDD = Maximum Day Demands = see spreadsheet: *Calculated Demands - Water*
[2] Estimated Largest Potential Fire Flow Calculated From IFC
[3] Storage Volume = MDD Storage + Fire Flow Storage = (MDD*60min*24hr) + (FF*60min*2hr)

Operating Pressures and Pressure Zone Characteristics

Pressure Zone Designation	Max HGL Elev.	20% HGL	Top Elev. Served	Low Elev. Served
2 (Yellow)	6352	6334	6230	6065

REFERENCE: Town of Castle Rock Water System Design Criteria Manual, Sept. 2012. Section 4.4.3.1

ROTH LANG ENGINEERING GROUP LLC

CALCULATED FLOWS - WASTEWATER

CRDC VIRTUOSO LOOP

					FACTORS		ESTIMATED FLOW (MGD)	
LAND USE	**QUANTITY**	**ADF/UNIT (1)**	**SFEs/UNIT (2)**	**SFE's**	**PF (3)**	**I/I (4)**	**ADF (5)**	**PDF (6)**
Commercial (All of Lot 6G-3)	9.00 acres	600 gpd/acre	3.0 /acre	27.0	5.0	0.00054	0.0054	0.0275
Commercial (Lots 6G-3A-1, 6G-3A-2, AND 6G-3A-3)	4.66 acres	600 gpd/acre	3.0 /acre	14.0	5.0	0.00028	0.0028	0.0143
TOTALS				**27.0**			**0.0054**	**0.0275**

REFERENCE: Town of Castle Rock Wastewater Collection System Design Criteria Manual, Dec. 2018

NOTES:

(1) ADF = Average Daily Flow = Reference Table 4.4.1.1

(2) SFE = Single Family Equivalent = Reference Table 4.4.1.1

(3) PF = Peaking Factor = (3.65) * ($ADF^{-0.168}$) or Max of 5.0

(4) I/I = Infiltration and Inflow = (0.1 * ADF)

(5) ADF represents winter or dry weather with no allowance for infiltration or inflow

(6) PDF = Peak Design Flow = ADF * Peaking Factor + I/I

CALCULATED FLOWS - WASTEWATER

		AVERAGE DAY WASTEWATER (ADF)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(CFS)**
Commercial (All of Lot 6G-3)	9.00 acres	3.75	5,400	0.0084
Commercial (Lots 6G-3A-1, 6G-3A-2, AND 6G-3A-3)	4.66 acres	1.94	2,796	0.0043
TOTAL		**3.75**	**5,400**	**0.0084**

		PEAK DESIGN FLOW (PDF)		
LAND USE	**QUANTITY**	**(GPM)**	**(GPD)**	**(CFS)**
Commercial (All of Lot 6G-3)	9.00 acres	19.12	27,540	0.043
Commercial (Lots 6G-3A-1, 6G-3A-2, AND 6G-3A-3)	4.66 acres	9.90	14,260	0.022
TOTAL		**19.12**	**27,540**	**0.043**

Note: PDF values include I&I added to ADF per TOCR 2018 Wastewater Collection Criteria Section 4.4.1.3 Peak Design Flow Rate

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Feb 2 2024

1.0% Slope Section

Circular

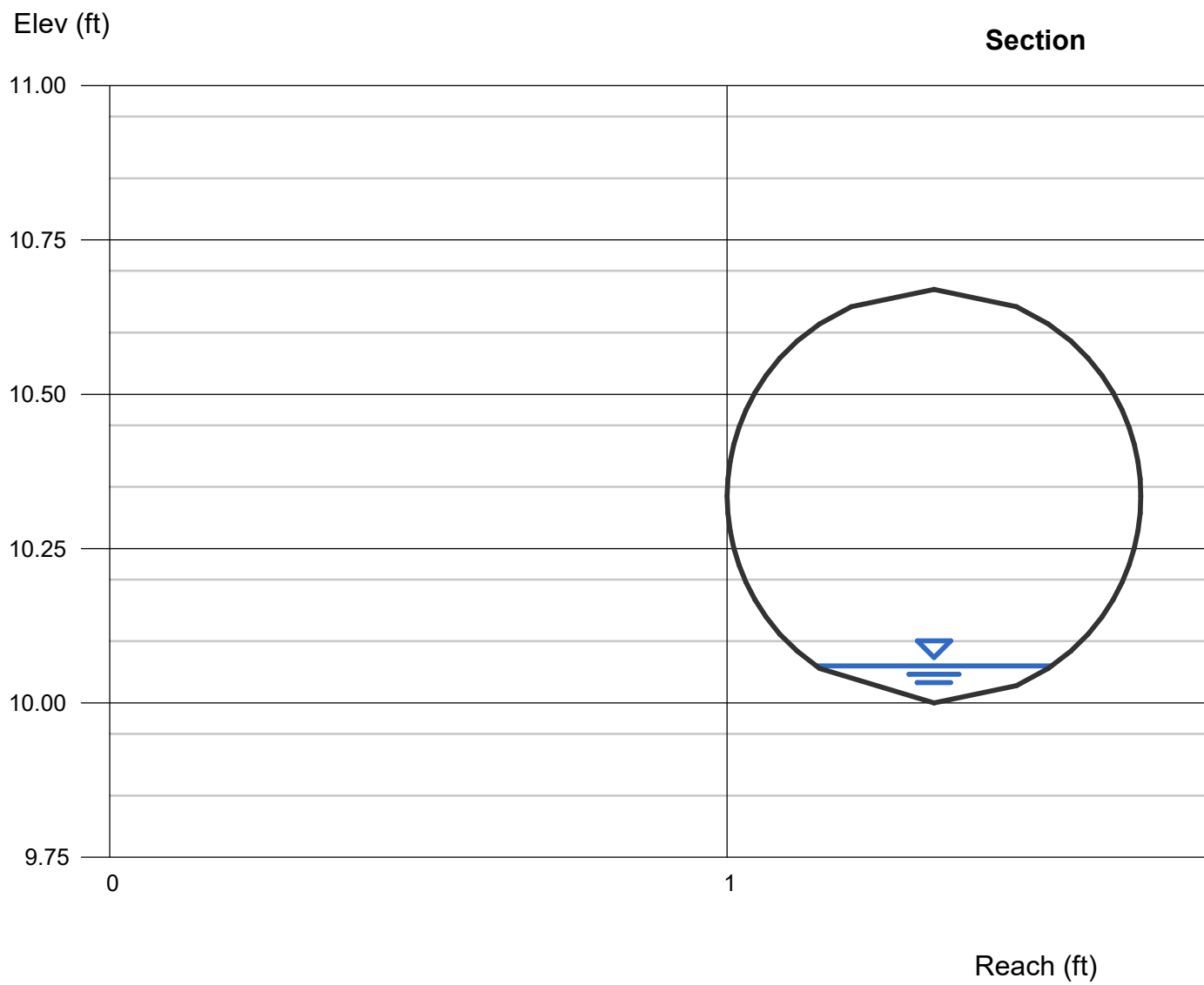
Diameter (ft)	= 0.67
Invert Elev (ft)	= 10.00
Slope (%)	= 1.00
N-Value	= 0.011

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.02

Highlighted

Depth (ft)	= 0.06
Q (cfs)	= 0.022
Area (sqft)	= 0.02
Velocity (ft/s)	= 1.40
Wetted Perim (ft)	= 0.41
Crit Depth, Yc (ft)	= 0.07
Top Width (ft)	= 0.38
EGL (ft)	= 0.09



APPENDIX E – COMMERCIAL BUSINESS BUILDING PERMIT GREASE INTERCEPTOR REQUIREMENT FORM

Complete and sign this PCWRA/CRW-interceptor acknowledgement form, to verify the determination for a oil/grease interceptor and include it in the Utility Report

CASTLE ROCK water
Securing our future drop by drop

Commercial Business Building Permit

Grease Interceptor Requirement

All Commercial Business Building Permits for new business and construction of new buildings, remodels, or tenant improvement permits will be required to comply with Town Code 13.05, Grease Interceptors Required. Applicant will be required to submit an Industry Information Questionnaire through the Plum Creek Water Reclamation Authority (PCWRA) to verify if the business will require an oil/grease interceptor. Please go to PCWRA website at:

https://www.pcwracolorado.org/commercial-businesses

CONSTRUCTION DRAWINGS

Please note PCWRA requires all new commercial buildings to provide a stub-out for a separate waste line for future interceptor installation, if not proposed with the project. All drainage fixtures and grease waste lines that are tied to the oil/grease must be shown in the construction drawings as well as the location of the oil/grease interceptor.

ACKNOWLEDGEMENT

The applicant must sign and date this form to acknowledge that the applicant has read and understands the Town's Code requirement regarding Grease Interceptors, PCWRA's requirement to complete an Industry Information Questionnaire and Food Service Application, and the Town's requirement that a letter from PCWRA must be provided with the Town of Castle Rock Building Permit. This signed form is required to be included in the Utility Report with the Predevelopment Plan (PDP), Site Development Plan (SDP) and Construction Document (CD) submittals.

SDP 26-0030 The Meadows Healthspan MOB

Name of Project

3808 SOL DANZA DR., CASTLE ROCK, CO 80109

Address of property, if known

Signature

10/7/26

Date