

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.



Denver

Civil

Structural

Integrated Services

Registered Professional Engineer
State Of Colorado No. 64927
Ryan J. Humphrey, P.E.

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

AdventHealth Castle Rock Hospital – Cancer Center Radiation Oncology

February 20, 2026

Town of Castle Rock
Engineering Development Review
100 North Wilcox Street
Castle Rock, CO 80104

RE: AdventHealth Castle Rock Hospital – Cancer Center Radiation Oncology – CD26-0001, SDP26-0003

To whom it may concern,

This letter serves as a Utility Conformance Letter for the AdventHealth Castle Rock Hospital – Cancer Center Radiation Oncology. This letter references the “Castle Rock Adventist Hospital - MOB III addition Utility Conformance Letter”, prepared by S.A. Miro, dated December 3, 2021 and the “Final Utility Report for Castle Rock Adventist Health Campus: Phase 2A”, prepared by S.A. Miro, dated August 5, 2011, “Final Utility Report Addendum 3 for Castle Rock Adventist Health Campus: Phase 2B (MOB 2)”, prepared by S.A. Miro, dated June 15, 2012, and “Final Utility Report Addendum 4 for Castle Rock Adventist Health Campus: Phase 1B (MOB 2)”, prepared by S.A. Miro, dated March 28, 2014.

I. Introduction

Lot 3, part of the Meadows Filing 17, is part of a 4,000+ acre planned community named “The Meadows” located in the Town of Castle Rock west of Interstate 25 and north of Wolfensberger Road. Lot 3 is located within the northeast quadrant of Filing 17. Filing 17 is designated for commercial, office, or industrial uses. Meadows Filing No. 17, Lot 3 contains approximately 40.8 acres of undeveloped land. Filing 20, west of Meadows Boulevard, is designated as single-family and multi-family uses.

This report will discuss updates in anticipated water demands and sanitary sewer flow rates associated with the Cancer Center expansion, which consists of a 0.07 acre site, 920 SF Medical Office Building (MOB), with landscaping, and associated utility improvements.

II. Location

The project is located in the northwest quarter of Section 34, Township 7 South, Range 67 West of the 6th Principal Meridian. The site consists of Lot 3 of the Meadows Filing No. 17 proposed development along with the proposed Limelight Avenue. Lot 3 is bound by Meadows Boulevard on the southwest, Meadows Parkway on the southeast, Limelight Avenue on the northeast and Elegant Street on the northwest. There is a water well field northeast of the site, with a dirt access road leading from Limelight Avenue.

III. Existing Infrastructure

The existing MOB contains a 2” water meter and a 6” sanitary sewer service. The domestic water and wastewater service will be routed internally to the addition.

The site falls within the designated Meadows Yellow Zone per the Town of Castle Rock Utilities Map, provided by the Town of Castle Rock Water. The site is bordered by 16” water transmission mains along both Meadows Boulevard and Meadows Parkway, as well as a 12” raw water line along Meadows Parkway and an 8” reuse water line along Meadows Boulevard. Along the east side of the site, a series of 8” stubs exist on the property which connect to the 16” transmission main in Meadows Blvd. East of the site, there are 16” and 18” raw water lines, located along the northern portion of Limelight Avenue, along with a 12” sanitary main. North of the site, a 12” potable water main existing along Elegant St. and is stubbed out for future construction to the south. During Phase 1A, a 12” main

was constructed in Limelight Avenue. Also, an 8" main was constructed through the southern end of the site.

In addition to fire hydrants constructed with Phase 1A and Phase 2B, there are 5 fire hydrants located near the site. Fire Hydrant 2501 is located at the southern portion of the site along Meadows Parkway. Fire Hydrant 2502, 2503, 2504, 2505 are located along the western portion of the site adjacent to Meadows Boulevard. The site is served by Meadows Yellow Zone Tanks 12A and 12B, located at 1760 Meadows Boulevard with a total storage volume of 10.07 MG.

IV. Proposed Development

The existing utility services and meters will be evaluated based on the required demand of the total existing and proposed building fixture units and any other additional usage, provided to the Town of Castle Rock at the time of building permitting.

Reference the Phase 1A, 2A, and 2B Utility Reports and the MOB III Utility Conformance Letter for descriptions of Phase 1A, 2A, 2B, and MOB III infrastructure and utility improvements. Said improvements will be considered and regarded as existing from here forth.

The existing utility infrastructure on the exterior will remain unchanged. The existing domestic, fire, and sanitary sewer service lines completed with MOB III project are anticipated to be adequate to serve this Cancer Center expansion.

V. Water Distribution Analysis Results

The Town of Castle Rock had previously performed an InfoWater Analysis for this site and determined that the estimated water demands from the Castle Rock Adventist Hospital Campus would not negatively impact the Town's water distribution system.

There are no proposed water infrastructure changes and as such no domestic water demand calculations have been performed. The building will have a fire suppression sprinkler system which allowed for the 50% reduction in fire flow requirements. The required fire flow for the project has been calculated as 1,500 GPM and is pending confirmation by Castle Rock Fire and Rescue. The fire sprinkler system's demand is 350 GPM.

An increase of 288 gallons per month is anticipated with the landscape and irrigation changes associated with the proposed development.

Bentley WaterCAD Version 8 V8i (SELECT Series 2) was used to model the existing water distribution system. The detailed analysis results and maps for the WaterCAD models are provided in Appendix C of the Phase 2A report.

VI. Sanitary Sewer Analysis

There is an existing 12" sanitary sewer main located in Limelight Avenue, which the MOB III connected into, and this project is anticipated to tie into the existing sewer service lines. No anticipated increase in flows are known for this Project and as such, an analysis of the Limelight Avenue main was not completed for the purposed of this utility conformance letter.

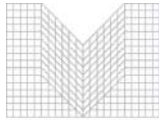
VII. Conclusion

This design depicted herein provides no changes to the exterior domestic water, fire protection, and sanitary services for the proposed Cancer Center Expansion. Thus, the proposed water and sanitary sewer systems are anticipated to still conform to the Town of Castle Rock's Public Works Regulations, the Meadows Master Plan, and are in conformance with the Town of Castle Rock's Water Facilities Master Plan and Wastewater and Reclaimed Water Master Plan.

References

1. Town of Castle Rock – Wastewater Collection System Design Criteria Manual, Town of Castle Rock, Colorado; December 2018.
2. Town of Castle Rock – Water System Design Criteria Manual, Town of Castle Rock, Colorado; December 2018.
3. Castle Rock Utilities Maps, Town of Castle Rock, Colorado
4. Town of Castle Rock: Water Master Plan 2023 Update, Town of Castle Rock Engineering Division, Colorado, Publishing Date Unknown
5. Town of Castle Rock: Wastewater Master Plan 2022 Update, Town of Castle Rock Engineering Division, Colorado, Publishing Date Unknown

APPENDIX A
Fire Flow Memo



M I R O

Civil

Structural

S.A. Miro, Inc.

4582 S. Ulster St., Suite 750

Ryan Humphrey, P.E., Project Engineer

rhumphrey@samiro.com

Fire Flow Confirmation Memo

To: Castle Rock Fire and Rescue Department

From: S.A. Miro Inc.

Date: January 23, 2026

Re: AdventHealth Castle Rock Hospital – Cancer Center Rad Onc Addition

Building Area: 920 s.f.

Construction Type: I-B

Sprinklered: Yes

Required Fire Flow: **1,500 GPM** (Minimum Required; 750 GPM calculated)

Duration: **2 Hours**

Signed:

FIRE REVIEW AND PERMIT 18826

These plans have been reviewed for the adopted fire code by Castle Rock Fire and Rescue Department, and are:

Approved

Fire and Life Safety Division on 02/18/2026 9:36:24 AM. Signature of Plans Reviewer:

Alayna Moore
ICC/STATE Certification number: 246317922

Review and approval are for general compliance and compatibility with the design as outlined by the adopted fire code, adopted building code and NFPA standards of the submitted structural and fire protection documents. The contractor and fire protection company shall be responsible for

complying with the submitted plans/documents and coordination of the work of those trades associated with the construction and life safety elements of the project.

Castle Rock Fire and Rescue Department



APPENDIX B
Irrigation Calcs



IRRIGATION CHART

Registered Professional: [REDACTED] Registration #: Co Lic. L.A. [REDACTED] Date: 11-29-21

Company Name: [REDACTED]

Phone: [REDACTED] Email: [REDACTED] Clock Make: Existing 2-wire, ET based

__ x __ Monday, Wednesday, Friday (west side of I-25) __ Tuesday, Thursday, Saturday (east side of I-25)

Zone	Hydrozone Very Low (<5") Low (5-10") Medium (10-15") High (>15")	Plant Type (turf, native, shrubs, perennials, trees, annuals, etc.)	Head Type (rotors, sprays, bubblers, drip, SDI, etc.)	Nozzle (nozzle/ emitter size)	App. Rate (inches/hour)	GPM (per zone)	Inches/Month (peak not to exceed 6" per month or 1.5" per week)	Run Time (minutes per month)	Run Time (minutes per day)	Water Usage (gallons per month)
A1	HIGH	FESCUE TURF	SPRAY	MP1000	0.41	16	4	585	59	9,483
A2	LOW	TREES, SHRUBS	DRIP	.5 - 1.0 GPH	1	2	2.75	165	17	396
A3	LOW	TREES, SHRUBS	DRIP	.5 - 1.0 GPM	1	3	2.75	165	17	479
A4	HIGH	PERENNIALS	DRIP	.5 - 1.0 GPM	1	1	3	180	18	216
A5	LOW	TREES, SHRUBS	DRIP	.5 - 1.0 GPH	1	1	2.75	165	17	198
A6	LOW	TREES, SHRUBS	DRIP	.5 - 1.0 GMP	1	6	2.75	165	17	974
A7	LOW	SHORT GRASS	ROTOR	#2.0, #3.0	0.36	31	2	333	33	10,333
A8	LOW	TREES	DRIP	.5 - 1.0 GPM	1	1	2.75	165	17	99
A9	LOW	SHORT GRASS	ROTOR	#2.0, #3.0	0.18	20	2	667	67	13,333
A10	LOW	SHORT GRASS	ROTOR	#2.0, #3.0	0.36	20	2	333	33	6,667
A11	LOW	TREES	DRIP	.5 - 1.0 GPH	1	1	2.75	165	17	149
A12	LOW	TREES, SHRUBS	DRIP	.5 - 1.0 GPH	1	1	2.75	165	17	149
13	HIGH	PERENNIALS	DRIP	.5 - 1.0 GPH	1	4	3	180	18	738
14	LOW	TREES, SHRUBS	DRIP	.5 - 1.0 GPM	1	4	2.75	165	17	677
15	LOW	SHORT GRASS	SPRAY	MP1000	0.41	27	2	293	29	7,785
16	LOW	SHORT GRASS	ROTOR	#2.0	0.33	12	2	364	36	4,364
17	LOW	TREES, SHRUBS	DRIP	.5 - 1.0 GPM	1	1	2.75	165	17	116
18								0	0	0
19								0	0	0
20	LOW	SEED	SPRAY	MP1000	.41	1.68	2	364	36	90
21	LOW	TREES	DRIP	.5-1.0 GPH	1	2.25	2.75	165	17	99
22	LOW	SHRUBS	DRIP	.5-1.0 GPH	1	2.16	2.75	165	17	99
23								0	0	0
24								0	0	0
25								0	0	0
26								0	0	0
27								0	0	0
28								0	0	0
29								0	0	0
30								0	0	0
Total								5,114	512	56,541
								Min/month	Min/cycle	Gallons/month

revised 7/2018

REVISIONS TO PREVIOUS
IRRIGATION CALCULATIONS
SHOWN IN RED

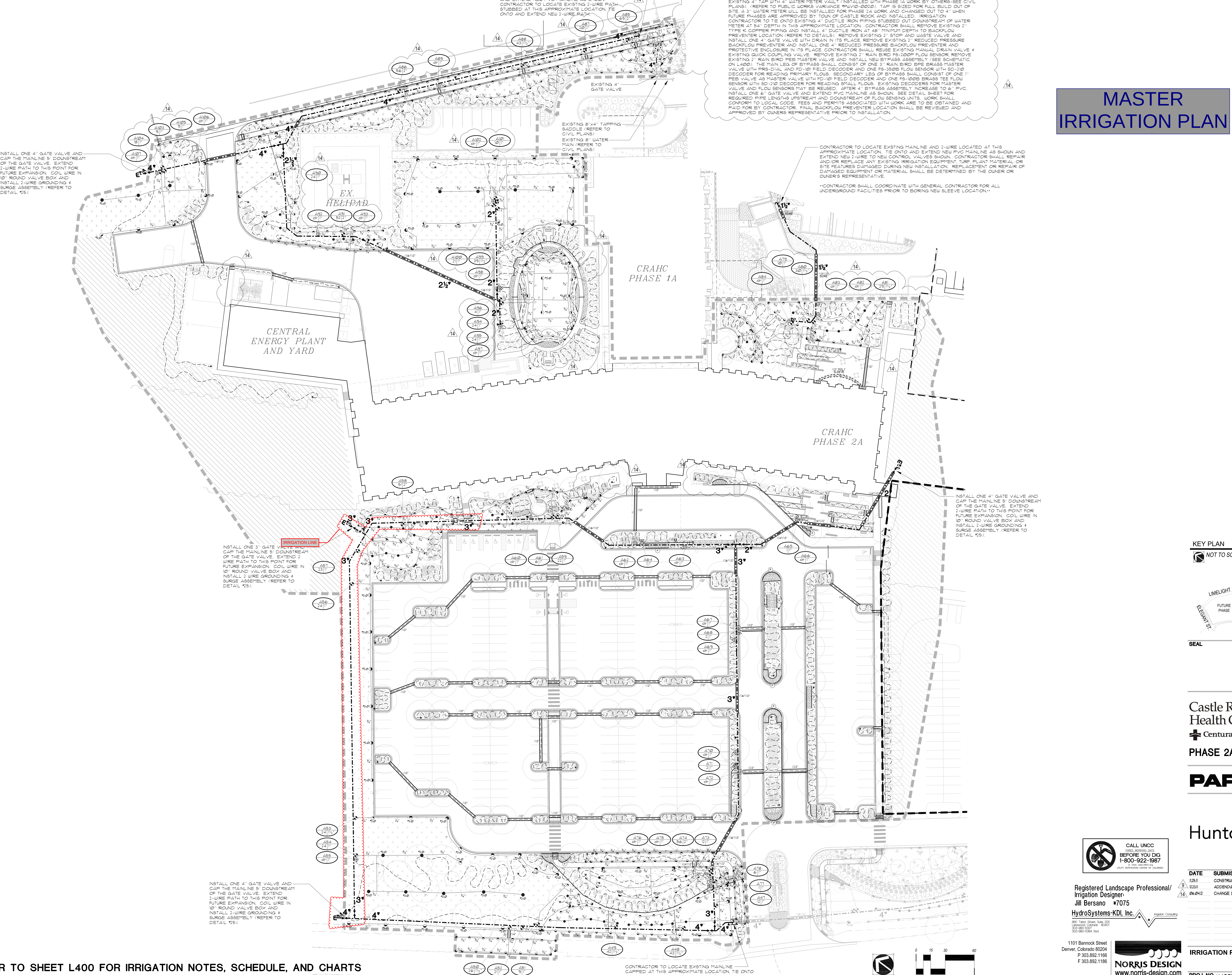
IRRIGATION CONTROLLER SCHEDULE

Zone No.	Plant Type	Zone Description	Prec. rate in/hr	Zone flow GPM	Peak inches per week	Weekly zone run time hours	Daily zone run time minutes	Water usage gallons per week	Design operating pressure psi	Peak Precip/Week			
										Turf	Shrubs	Perennials	Native
A01	Turf	MP Rotator	0.41	16.0	1.00	2.44	49	2,341	30.00	1.00	0.68	0.80	0.50
A02	Shrubs	Drip	1.00	2.0	0.68	0.68	14	82	30.00				
A03	Shrubs	Drip	1.00	3.0	0.68	0.68	14	122	30.00				
A04	Perennials	Drip	1.00	1.0	0.80	0.80	16	48	30.00				
A05	Shrubs	Drip	1.00	1.0	0.68	0.68	14	41	30.00				
A06	Shrubs	Drip	1.90	6.0	0.68	0.36	7	129	30.00				
A07	Native Seed	Rotors	0.36	31.0	0.50	1.39	28	2,583	30.00				
A08	Trees	Drip	1.00	1.0	0.68	0.68	14	41	30.00				
A09	Native Seed	Rotors	0.18	20.0	0.50	2.78	56	3,333	30.00				
A10	Native Seed	Rotors	0.36	20.0	0.50	1.39	28	1,667	30.00				
A11	Trees	Drip	1.00	1.0	0.68	0.68	14	41	30.00				
A12	Shrubs	Drip	1.00	1.0	0.68	0.68	14	41	30.00				
A13	Perennials	Drip	1.00	4.0	0.80	0.80	16	192	30.00				
A14	Shrubs	Drip	1.00	4.0	0.68	0.68	14	163	30.00				
A15	Native Seed	Spray	0.41	27.0	0.50	1.22	24	1,976	30.00				
A16	Native Seed	Rotors	0.33	12.0	0.50	1.52	30	1,091	30.00				
A17	Shrubs	Drip	1.00	1.0	0.68	0.68	14	41	40.00				
A-20	SEED	SPPRAY	.41	1.68	.5	1.22	24	1,976	40				
A-21	TREE	DRIP	1	2.25	.68	0.68	14	163	30				
A-22	SHRUB	DRIP	1	2.16	.68	0.68	14	163	30				
Total projected peak season water use per week (gallons)								16,233					
Total peak season hours per week						21.71							
Number of days/week (M,W,F)						3							
Number of cycles/day						1							

highest demand zone: Native Seed Zone A9

REVISIONS TO PREVIOUS IRRIGATION CALCULATIONS SHOWN IN RED

APPENDIX C
Previous Utility Reports



INSTALL ONE 4" GATE VALVE AND CAP THE MAINLINE 5' DOWNSIDE OF THE GATE VALVE. EXTEND 2-WIRE PATH TO THIS POINT FOR FUTURE EXPANSION. COIL WIRE IN 10" ROUND VALVE BOX AND INSTALL 2-WIRE GROUNDING 4 SURGE ASSEMBLY (REFER TO DETAIL #29).

INSTALL ONE 3" GATE VALVE AND CAP THE MAINLINE 5' DOWNSIDE OF THE GATE VALVE. EXTEND 2-WIRE PATH TO THIS POINT FOR FUTURE EXPANSION. COIL WIRE IN 10" ROUND VALVE BOX AND INSTALL 2-WIRE GROUNDING 4 SURGE ASSEMBLY (REFER TO DETAIL #29).

INSTALL ONE 4" GATE VALVE AND CAP THE MAINLINE 5' DOWNSIDE OF THE GATE VALVE. EXTEND 2-WIRE PATH TO THIS POINT FOR FUTURE EXPANSION. COIL WIRE IN 10" ROUND VALVE BOX AND INSTALL 2-WIRE GROUNDING 4 SURGE ASSEMBLY (REFER TO DETAIL #29).

REFER TO SHEET L400 FOR IRRIGATION NOTES, SCHEDULE, AND CHARTS
REFER TO SHEETS L400, L402 AND L403 FOR IRRIGATION DETAILS

CONTRACTOR TO LOCATE EXISTING MAINLINE CARRIED AT THIS APPROXIMATE LOCATION. TIE ONTO AND EXTEND NEW PVC MAINLINE AS SHOWN. CONTRACTOR TO LOCATE EXISTING 2-WIRE PATH STUBBED AT THIS APPROXIMATE LOCATION. TIE ONTO AND EXTEND NEW 2-WIRE PATH.

POINT OF CONNECTION #1 - 4"
PEAK FLOW REQUIREMENT: 150 GPM. REQUIRED STATIC PRESSURE: 85 PSI
EXISTING 4" WATER METER SHALL BE INSTALLED AT THIS APPROXIMATE LOCATION. TAP IS SIZED FOR FULL BUILD OUT OF SITE. A 3" WATER METER WILL BE INSTALLED FOR PHASE 2A WORK AND CHANGED OUT TO 4" WHEN FUTURE PHASES ARE APPROVED BY TOWN OF CASTLE ROCK AND INSTALLED. IRRIGATION CONTRACTOR TO TIE ONTO EXISTING 4" DUCTILE IRON PIPING STUBBED OUT DOWNSIDE OF WATER METER AT 54" DEPTH IN THIS APPROXIMATE LOCATION. CONTRACTOR SHALL REMOVE EXISTING 2" TYPE K COPPER PIPING AND INSTALL 4" DUCTILE IRON AT 48" MINIMUM DEPTH TO BACKFLOW PREVENTER LOCATION (REFER TO DETAILS). REMOVE EXISTING 1" STOP AND WASTE VALVE AND INSTALL ONE 4" GATE VALVE WITH DRAIN IN ITS PLACE. REMOVE EXISTING 2" REDUCED PRESSURE BACKFLOW PREVENTER AND INSTALL ONE 4" REDUCED PRESSURE BACKFLOW PREVENTER AND PROTECTIVE ENCLOSURE IN ITS PLACE. CONTRACTOR SHALL REUSE EXISTING MANUAL DRAIN VALVE 4 EXISTING QUICK COUPLING VALVE. REMOVE EXISTING 2" RAIN BIRD FB-200P FLOW SENSOR. REMOVE EXISTING 2" RAIN BIRD FFB MASTER VALVE AND INSTALL NEW BYPASS ASSEMBLY (SEE SCHEMATIC ON L400). THE MAIN LEG OF BYPASS SHALL CONSIST OF ONE 3" RAIN BIRD BPE BRASS MASTER VALVE WITH FFB-DIAL AND FD-101 FIELD DECODER AND ONE FB-350B FLOW SENSOR WITH SD-210 DECODER FOR READING PRIMARY FLOWS. SECONDARY LEG OF BYPASS SHALL CONSIST OF ONE 1" FFB VALVE AS MASTER VALVE WITH FD-101 FIELD DECODER AND ONE FB-100B BRASS TEE FLOW SENSOR WITH SD-210 DECODER FOR READING SMALL FLOWS. EXISTING DECODERS FOR MASTER VALVE AND FLOW SENSORS MAY BE REUSED. AFTER 4" BYPASS ASSEMBLY INCREASE TO 6" PVC. INSTALL ONE 6" GATE VALVE AND EXTEND PVC MAINLINE AS SHOWN. SEE DETAIL SHEET FOR REQUIRED PIPE LENGTHS UPSTREAM AND DOWNSIDE OF FLOW SENSING UNITS. WORK SHALL CONFORM TO LOCAL CODES. FEES AND PERMITS ASSOCIATED WITH WORK ARE TO BE OBTAINED AND PAID FOR BY CONTRACTOR. FINAL BACKFLOW PREVENTER LOCATION SHALL BE REVIEWED AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

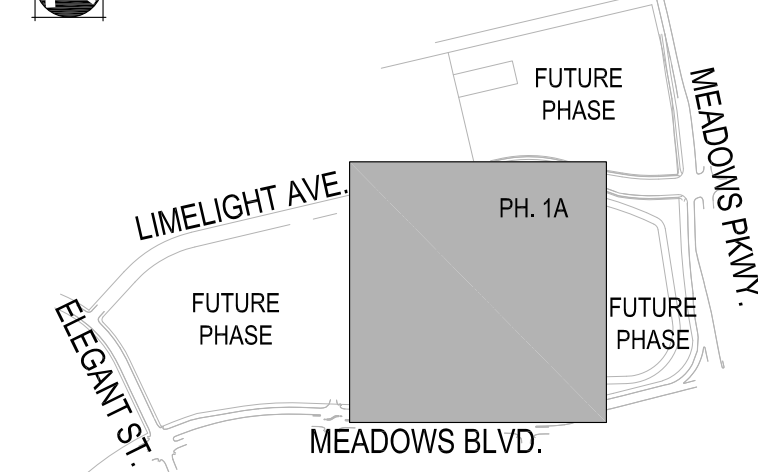
CONTRACTOR TO LOCATE EXISTING MAINLINE AND 2-WIRE LOCATED AT THIS APPROXIMATE LOCATION. TIE ONTO AND EXTEND NEW PVC MAINLINE AS SHOWN AND EXTEND NEW 2-WIRE TO NEW CONTROL VALVES SHOWN. CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY EXISTING IRRIGATION EQUIPMENT. TURF PLANT MATERIAL OR SITE FEATURES DAMAGED DURING NEW INSTALLATION, REPLACEMENT OR REPAIR OF DAMAGED EQUIPMENT OR MATERIAL SHALL BE DETERMINED BY THE OWNER OR OWNER'S REPRESENTATIVE.

CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR ALL UNDERGROUND FACILITIES PRIOR TO BORING NEW SLEEVE LOCATION.

MASTER IRRIGATION PLAN

KEY PLAN

NOT TO SCALE



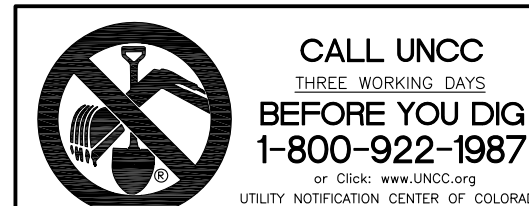
SEAL

Castle Rock Adventist Health Campus
Centura Health.

PHASE 2A - HOSPITAL

PARSONS

HuntonBrady ARCHITECTS



Registered Landscape Professional/
Irrigation Designer:
Jill Bersano #7075

HydroSystems-KDI, Inc.

850 Tabor Street, Suite 200
Denver, Colorado 80204
P 303.892.1166
F 303.892.1166

NORRIS DESIGN
www.norris-design.com

IRRIGATION PLAN

PROJ. NO. 14-10201.00 SHEET
DRAWN JSB

L401



NO GI ANTICIPATED WITH THIS RAD ONC EXPANSION. PREVIOUS PROJECT'S GI FORM INCLUDED FOR REFERENCE

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 Plum Creek Water Reclamation Authority (PCWRA) to verify if the business will require an oil/grease interceptor. Please go to the PCWRA website at:

https://www.pcwracolorado.org/pretreatment/commercial_businesses/index.php

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.

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.

CASTLE ROCK ADVENTIST HOSPITAL MOB #3 - SDP21-0030

Name of Project

2360 MEADOWS BOULEVARD

Address of property, if known


Signature

8/30/21
Date



S. A. Miro, Inc.

Final Utility Report

FOR

Castle Rock Adventist Health Campus: Phase 2A

Lot 3, The Meadows Filing No. 17
Town of Castle Rock, Colorado
Project # CD-11 0015

May 9, 2011

July 8, 2011

Revised August 5, 2011

Prepared By:

S. A. Miro, Inc.

Consulting Engineers
4582 South Ulster St. Pkwy., Suite 300
Denver, Colorado 80237
(303) 741-3737
fax (303) 694-3134

S. A. Miro Job No. 10145



Jason D. Carr, P.E.

Registered Professional Engineer State of Colorado
No. CO33854

I. ENGINEER'S STATEMENT:

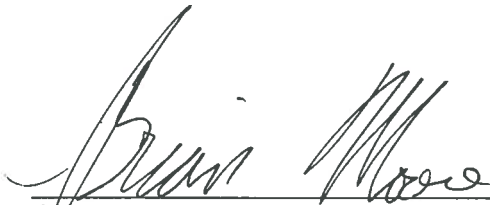
The enclosed Final Utility Report, and exhibits, were prepared by me, or under my direct supervision, and are correct to the best of my knowledge and belief. Said Final Utility Report has been prepared in accordance with applicable Town of Castle Rock criteria and is in conformance with the master plans 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 this report.

Jason D. Carr, P.E.
Colorado P.E. 33854



II. OWNER'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.


Owner

8/10/11
DATE

III. TOWN OF CASTLE ROCK APPROVALS:


UTILITIES DEPARTMENT

9/1/11
DATE


DEVELOPMENT SERVICES

9/1/11
DATE

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Appendixes

Appendix A – Water Demands

Appendix B – Water Storage

Appendix C – WaterCAD Analysis

Appendix D – Wastewater Flows

Appendix E – Downstream Sanitary Sewer System Capacity

Appendix F – Maps/Plans

I. Introduction

Lot 3, part of the Meadows Filing 17, is 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 3 is located within the northeast quadrant of Filing 17. Filing 17 is designated for commercial, office, or industrial uses. The Meadows Filing No. 17, Lot 3 contains approximately 39.95 acres of undeveloped land. Filing 20, west of Meadows Boulevard, is designated as single-family and multi-family uses.

The proposed project consists of a hospital, medical office buildings, a utility plant, along with adjacent roadways, parking and landscaping. Site improvements also include improvements to the adjacent public roadways. The site is being phased into a total of 9 phases with this report specifically addressing Phase 2A of the development. However, this report will mention the past development of Phase 1A, and future development of Phase 2A, and 2B, which are planned medical office buildings and Phase 5, which is planned Wellness Center.

Phase 2A consists of construction of a portion of Limelight Avenue, a hospital and central energy plant (CEP), as well as associated parking and landscaping. The Phase 2A portion of Limelight Avenue will end north of the hospital entrance.

II. Location

The project is located in the northwest quarter of Section 34, Township 7 South, Range 67 West of the 6th Principal Meridian. The site consists of Lot 3 of the Meadows Filing No. 17 proposed development along with the proposed Limelight Avenue. Lot 3 is bound by Meadows Boulevard on the southwest, Meadows Parkway on the southeast, Limelight Avenue on the northeast and Elegant Street on the northwest. There is a water well field northeast of the site, with a dirt access road leading from Limelight Avenue.

III. Existing Infrastructure

The site falls within the designated Meadows Yellow Zone per the Town of Castle Rock Utilities Map, provided by the Town of Castle Rock Utilities Department (Ref. 3). The site is bordered by 16” water transmission mains along both Meadows Boulevard and Meadows Parkway, as well as a 12” raw water line along Meadows Parkway and an 8” reuse water line along Meadows Boulevard. Along the east side of the site, a series of 8” stubs exist on the property which connect to the 16” transmission main in Meadows Blvd. East of the site, there are 16” and 18” raw water lines, located along the northern portion of Limelight Avenue. North of the site, a 12” potable water main existing along Elegant St., and is stubbed out for future construction to the south. During Phase 1A, a 12” main was constructed along a portion of Limelight Avenue and stubbed out for future connection to the north. Also, an 8” main was constructed through the southern end of the site, and stubbed out for future connection to the west.

During Phase 1A, an irrigation meter vault was sized for a 4” meter and constructed on the east side of the Phase 1A site. See variance PWV 10-0020. The vault was plumbed for a 2” meter and it is proposed that a 3” meter be installed with Phase 2A. This irrigation tap will serve the entire Phase 1A and 2A sites.

In addition to fire hydrants constructed with Phase 1A, there are 5 fire hydrants located near the site. Fire Hydrant 2501 is located at the southern portion of the site along Meadows Parkway. Fire Hydrant 2502, 2503, 2504, 2505 are located along the western portion of the site adjacent

to Meadows Boulevard (see Appendix B). Fire Flow tests performed for these hydrants are discussed in this report. The site is served by Meadows Yellow Zone Tanks 12A and 12B, located at 1760 Meadows Boulevard with a total storage volume of 10.07 MG.

There is an existing 12" sewer main running along the northern portion of Limelight Avenue.

IV. Proposed Development

A proposed 12" water line will tie into the existing 12" water stubs to the north in Sabercat Way and east in Limelight Avenue. The proposed 12" water main will complete a 12" loop through Limelight Avenue. The twelve inch main will connect one 6" potable service and one 8" fire service. It is important to note that for Phase 2A, a 6" domestic water tap, a 6" service, and 4" meter will be installed. However, the meter will be upsized with future phases. See Variance PWV 11-0018. The meter from the eastern service will be located within the CEP.

An additional 8" water main will connect to the existing stubs to the west of the site and loop through the site. The loop will travel eastward into the site and along the front of the building. This main will provide service for 2 fire hydrants and a 5" Fire Department Connection (FDC). One 6" domestic service line, with a 6" meter vault with a 4" meter to be upsized in future phases, will connect to the 8" main. From the meter, the service will be routed through the building to the CEP. See variance PWV 11-0018.

Water and fire services will be routed from the CEP to the proposed building, and ultimately connect to the Phase 1A development. Upon full buildout of the site, the CEP will serve all of the buildings except the MOB's with potable water and fire services. During Phase 2A, the service line, meter, and meter pit installed during Phase 1A will be removed per town requirements. Also, the fire service line and FDC from Phase 1A will be removed.

In addition to the proposed water line, a proposed 8" private sanitary sewer service line will serve the Phase 2A development. The 8" sanitary sewer service is planned for the future development of the Phase 3 and 4 hospital in addition to the demands associated with Phase 2A. Also, the 8" main in Limelight Avenue will be stubbed out to the southeast in anticipation of the development of Lot 4 (Phase 5). This stub out is being provided now because Limelight Avenue will be paved in the location of the stub out.

V. Domestic Water System Design Criteria

Table V-1 below presents the PWR criteria for hydraulic performance including system pressure, velocity and head loss, which are used to verify the analysis results.

Table V-1: System Criteria

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

*- with one critical loop out of service

The site falls within the Meadows Yellow Zone per the Town of Castle Rock Utilities Map, provided by the Town of Castle Rock Utilities Department (Ref. 3). The current Meadows Yellow Zone tank's HGLs were obtained from the Town of Castle Rock's Utilities Department and were modeled as reservoir elevations. The proposed demands were applied with the tank 100% full and 20% full. Refer to Table V-2. The site is served by two reservoirs (Meadows Yellow Zone - Tanks 12A and 12B) located at 1760 Meadows Boulevard with a total storage volume of 10.07 MG.

Table V-2: Yellow Zone Tank Elevations

	Maximum HGL
100% Full	6352
80% Full	6347
20% Full	6332

VI. Domestic Water Demands

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

The 12" main in Limelight Avenue was designed using both Phase 2A demands and full buildout demands. Peak (instantaneous) demands were determined from fixture counts provided by the design team's plumbing engineer. Peak-hour demands are considered 75% of the instantaneous demands, per the plumbing engineer's experience and recommendation. The cooling tower makeup demands account for evaporation within the cooling tower and were included within the Peak Hour Demand, but not reduced by 75%. Demand factors of 2.65 and 4.5 were used to figure Average Daily and Maximum Daily Demands, where Average Daily = PH/4.5, and Maximum Daily = AD*2.65. Table VI-1 shows the demands used.

Table VI-1 Demand Rates

Demand	Maximum Daily (gpm)**	Average Daily (gpm)*	Peak-Hour (gpm)
Irrigation	88.33	33.33	150
Phase 2A (4" meter)	182.56	68.89	310.00
Full Buildout (6" meter)	257.93	97.33	438.00

*ADD = PH/4.5

**MDD = ADD*2.65

The 8" main that loops through the west side of the site was designed using demands from the future development of Phase 1B and 2B, both of which will be served by the loop. Table VI-2 shows the demand rates of both future phases.

The irrigation period is 10pm to 5am. A 2" irrigation meter was installed in Phase 1A and will be upsized to 3" during this phase per variance PWV 10-0020, approved 08/20/2010. Irrigation demands accounted for in Phase 1A were 70 gpm. Per table VI-1, an additional 80 gpm will be

added to the Phase 1A 8" water main at the irrigation tap. Because the Phase 1A building will now be served by the Phase 2A CEP for water and fire, the domestic water demands at the Phase 1A service will be reduced, creating a net loss of approximately 30 gpm for the Phase 1A model. Therefore, irrigation demands will not be modeled with this Phase 2A.

Table VI-2 Future Demand Rates

Phase	Planned Development Area (acres)	Land Use Demand Rate (gpad/ac)	Maximum Daily (gpm)	Average Daily (gpm)	Peak-Hour (gpm)	SFE
1B	3.14	1200	6.93	2.62	11.78	9
2B	3.57	1200	7.88	2.98	13.39	11
Total	6.71	1200	14.82	5.59	25.16	20.00

VII. Fire Flow Demand

Fire Flow requirements were established per the 2006 UFC for building type I-B. The building was assumed to be fully sprinklered, reducing the flow by 50% - 75% and a minimum of 2500 gpm for a two-hour duration. Conforming to Appendix III of the UFC with respect to hydrant placement, the minimum number of hydrants for the proposed development is 2. The analysis of the proposed system shows that the proposed 12" and 8" water lines can support fire flows greater than 2500 gpm.

Fire Flow Tests were obtained from the Town of Castle Rock Utilities Department from Phase 1A. See table VII-1 for a summary of these results. See Appendix B for these documents.

Table VII-1: Fire Flow Test Summary

Hydrant Read	Hydrant Flowed	Pre-Static Pressure	Post-Static Pressure	Residual Pressure	Pitot Reading
2501	2494	91	91	89	47
2502	2503	92	92	91	38

VIII. Water Storage

Total Storage Volume for Phase 2A is 0.56 MG. See Appendix B

IX. Water Distribution Analysis Results

The Town of Castle Rock performed an InfoWater Analysis for this site and determined that the estimated water demands from Phases 1A and 2A would not negatively impact the Town's water distribution system.

Bentley WaterCAD Version 8 V8i (SELECT Series 2) was used to model the proposed water distribution system. The detailed analysis results and maps for the WaterCAD models are provided in Appendix C of this report. Four models were developed to analyze the proposed lines:

1. Phase 2A (12") – represents the proposed 12" main in Limelight Avenue and the Phase 2A demands.
2. Full Buildout (12") – represents the proposed 12" main in Limelight Avenue and the full buildout demands.
3. West Loop 2A (8") – represents the proposed 8" main that loop through the western portion of the site and accounts for flows associated with Phase 2A and future phases 1B and 2B.
4. West Loop Buildout (8") – represents the proposed 8" main that loops through the western portion of the site and accounts for flows associated with full buildout flows and future phases 1B and 2B.

The scenarios used for all models are as follows:

- A. Static (Tank 20% Full)
- B. Peak Hour
- C. Max Day + Fire Flow
- D. Max Day + Fire Flow with Critical Loop Closed
- E. Peak Hour with Critical Loop Closed

A summary of the results are as follows:

Scenario A: Static (Tank 20% Full)

Model	Minimum Pressure (psi)	Maximum Pressure (psi)
Phase 2A (12" main)	92.6 @ J-1	101.2 @ FH-1
Full Buildout (12" main)	92.6 @ J-1	101.2 @ FH-1
West Loop 2A (8" main)	89.0 @ J-7	99.3 @ J-1
West Loop Buildout (8" main)	89.0 @ J-7	99.3 @ J-1

Scenario B: Peak Hour

Model	Maximum Velocity
Phase 2A (12" main)	.55 @ P-5
Full Buildout (12" main)	.78 @ P-5
West Loop 2A (8" main)	1.07 @ P-9
West Loop Buildout (8" main)	1.53 @ P-1

Scenario C: Max Day + Fire Flow

Model	Maximum Velocity (fps)
Phase 2A (12" main)	3.90 @ P-5
Full Buildout (12" main)	3.97 @ P-5
West Loop 2A (8" main)	9.20 @ P-10
West Loop Buildout (8" main)	9.34 @ P-10

**MOST RECENTLY
COMPLETED PREVIOUS
PROJECT'S UTILITY
CONFORMANCE LETTER**

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.

Registered Professional Engineer
State Of Colorado No. 33854
Jason D. Carr, P.E.



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.

Portercare Adventist Health System
Name of Developer

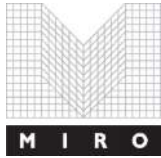
Sean Tracy
Authorized Signature



DEVELOPMENT SERVICES
APPROVED

by Larry Hearold
on 01/28/2022

**Approved CD21-0019 Utility Conformance
Letter.pdf
Record Document on File**



Civil

Structural

Integrated Services

S.A. Miro, Inc.

4582 S. Ulster St. Pkwy. Suite 750

Ryan Humphrey, E.I., Design Engineer II

rhumphrey@samiro.com

Fire Flow Confirmation Memo

To: Castle Rock Fire and Rescue Department

From: S.A. Miro Inc.

Date: September 2, 2021

Re: Castle Rock Adventist Hospital MOB III

Building Area: 70,000 s.f.

Construction Type: I-B

Sprinklered: Yes

Required Fire Flow: **1,500 GPM** (Minimum Required; 1,375 GPM calculated)

Duration: **2 Hours**

Signed:

Castle Rock Fire & Rescue Department



These plans have been reviewed and accepted subject to any/all corrections in compliance with the International Fire Code as amended and adopted by the Town of Castle Rock.

Comments and Corrections will be in the attached plan review letter and/or marked on the plans.

All projects are subject to changes in the field in accordance with the current codes and ordinances.

Completed by:

Kevin Sullivan

ICC Cert #: 206210450

Castle Rock Fire and Rescue Department

APPENDIX D
Water Supply
Fixture Unit Counts

WATER SUPPLY FIXTURE UNIT COUNTS

Water Closets – 5

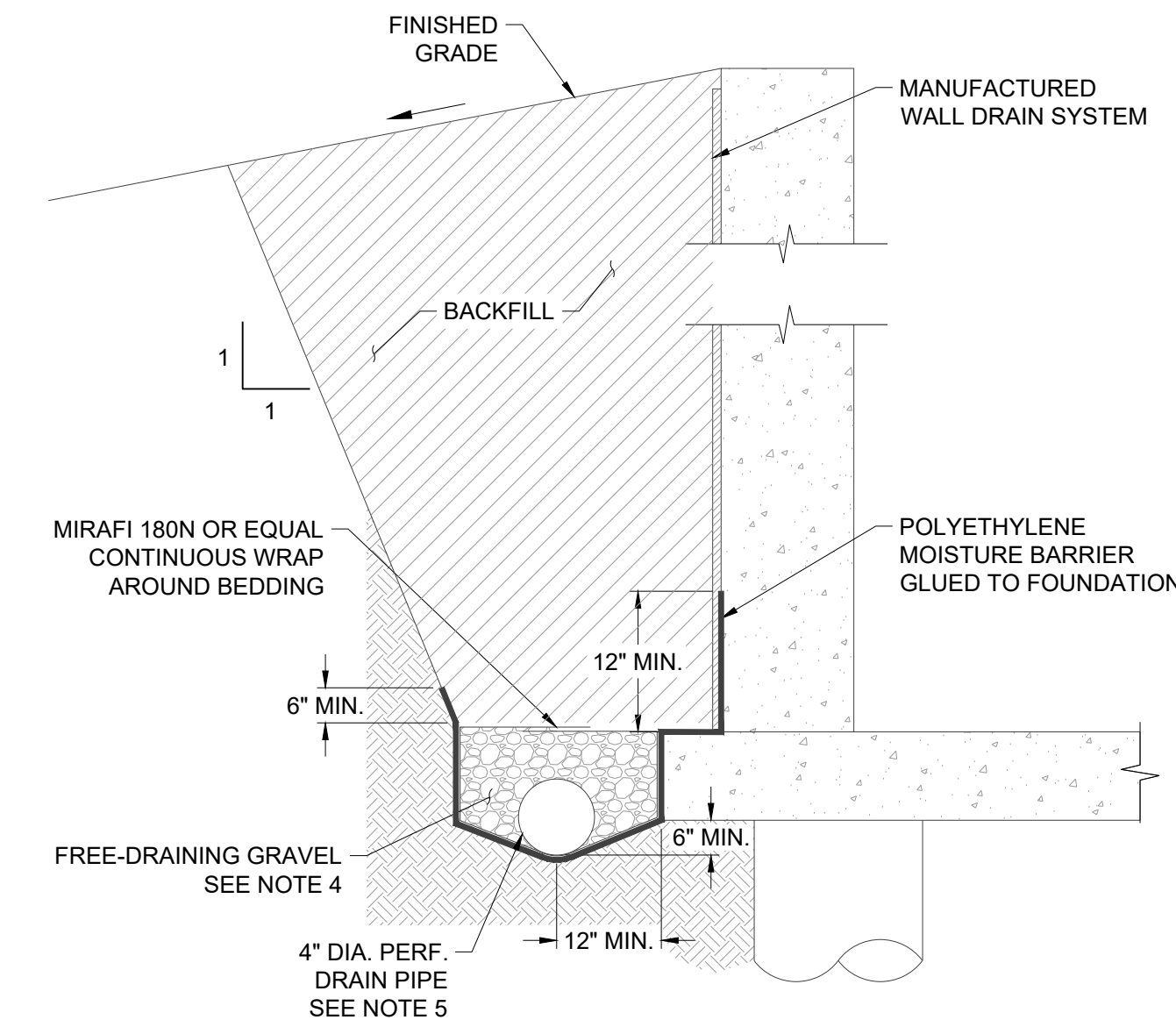
Lavatories – 5

Sinks – 9

Mop Sinks – 1

Hose Bibb – 1

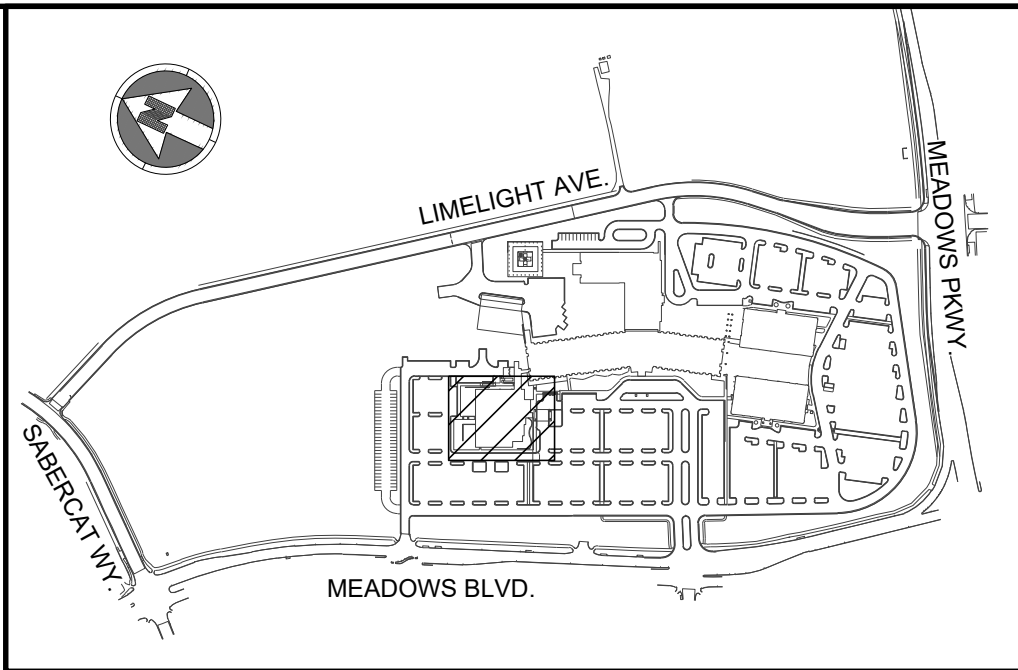
APPENDIX E
Proposed Utility Plan



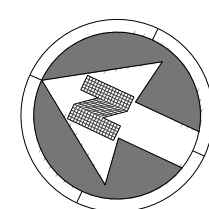
- NOTES:**
1. THIS IS NOT A DESIGN LEVEL DRAWING. IT SHOULD BE USED SOLELY FOR GENERAL INFORMATIONAL PURPOSES ONLY. ACTUAL UNDERDRAIN DESIGN SHOULD BE COMPLETELY BY OTHERS.
 2. THE UNDERDRAIN SYSTEM MUST BE TESTED BY THE CONTRACTOR AFTER INSTALLATION AND BACKFILLING TO VERIFY THAT IT FUNCTIONS PROPERLY.
 3. THE HIGHEST POINT OF THE DRAIN PIPE FLOW LINE SHOULD BE AT LEAST 6 INCHES BELOW THE BOTTOM OF THE FOOTING AND SLOPE DOWNWARD TO A POSITIVE GRAVITY OUTLET OR TO WHERE WATER CAN BE REMOVED BY PUMPING.
 4. PIPES SHOULD BE SURROUNDED ON TOP AND SIDES BY FREE DRAINING GRAVEL WITH LESS THAN 5% PASSING THE NO. 200 SIEVE, LESS THAN 30% PASSING THE NO. 4 SIEVE, AND MAXIMUM PARTICLE SIZE OF 2".
 5. 4-INCH DIAMETER PERFORATED DRAIN PIPE DRAINLINE SHOULD BE LAID ON A 0.5% OR GREATER SLOPE. PERFORATIONS SHOULD BE AT 4 O'CLOCK OR 8 O'CLOCK POSITIONS. SEE PLANS FOR INVERT ELEVATIONS.
 6. SEE GEOTECHNICAL REPORT FOR FOUNDATION DRAIN DESIGN.

TYPICAL FOUNDATION DRAIN DETAIL

NO SCALE



KEYMAP
NTS



20 0 2

SCALE: 1" = 20'

NOTES:

1. EXISTING 6" PVC STORM SEWER AND AREA DRAIN WITHIN RESERVED LINNACE TO BE CUT AND USED AS THE OUTFALL FOR THE ROOF DRAIN CONNECTION FOR BUILDING.
2. SANITARY SERVICE WILL BE ROUTED INTERNALLY TO THE EXISTING SERVICE LINE(S).
3. FIRE PROTECTIVE WATER AND SPRINKLER SERVICES WILL BE ROUTED INTERNALLY TO THE EXISTING SERVICE LINES.
4. PROTECT EXISTING FIRE HYDRANT AND LATERAL LINE DURING FOUNDATION DRAIN INSTALLATION. THE PUBLIC TOWN OF CASTLE ROCK FIRE HYDRANT AND PIPE CANNOT BE DAMAGED. THE EXISTING UTILITY EASEMENT IS NON-EXCLUSIVE.

LEGEND:

EX E	EXISTING ELECTRICAL LINE
EX FO	EXISTING FIBER OPTIC LINE
EX G	EXISTING GAS LINE
EX T	EXISTING TELEPHONE LINE
EX SS	EXISTING SANITARY LINE
EX SD	EXISTING STORM LINE
EX W	EXISTING WATER LINE
	EXISTING EASEMENT
	EXISTING STORM INLET
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER VALVE
	EXISTING MANHOLES

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.

RYAN J. HUMPHREY, PE
CO# 64927

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

APPROVED BY:

DEVELOPMENT SERVICES	DATE
----------------------	------



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1	1ST TOWN SUBMITTAL	01/23/2026
2	2ND TOWN SUBMITTAL	02/20/2026

PROJECT:
ADVENTHEALTH CAST ROCK CANCER CENTER
23350 MEADOWS BLVD., CASTLE ROCK, CO 80109

GARDEN LEVEL - UTILITY PLAN

FILE PATH: j:\Jobs\24026 ahcr cancer center\05 CAD\Plans and Details\C511-UTIL-PLAN.dwg C511 - 2/19/2026

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DESIGNED BY:	RJH
DRAWN BY:	RJH
CHECKED BY:	JDC
MIRO JOB NO.	24-026

DRAWING NUMBER

C5.1.1