Kelly Development Services, LLC

June 15, 2022

Mr. Mark Marlowe
Director, Castle Rock Water
175 Kellogg Court
Castle Rock, CO 80109

RE: Lot 1, Meadows Filing 17, Area No. 2, Amendment No. 1
Utility Conformance Letter

Dear Mr. Marlowe

This utility conformance letter is for the Site Development Plan for Lot 1, Meadows Filing 17, Area No. 2, Amendment No. 1 (SDP 22-0012). The purpose of this letter is to verify that the proposed use conforms with the approved Meadows Filing 17, Lot 8 Utility Report (Castle Rock Project #CD15-0021, 07-25-15 rev.).

Lot 1 is 1.63 acres. The size of the proposed building on Lot 1 is 16,880 square feet. Water demands and wastewater flows were determined from the design criteria based upon this lot size. Below is comparison of the water demand and wastewater flow calculated in the Approved Utility Plan versus the demands and flows calculated using the lot size per the town's water and wastewater criteria manuals.

<u>Water Demand Comparison</u>
Average Day Demand:
Approved Utility Report - 3.0 SFE per acre x 1.63 acres = 4.9 SFE x 0.28gpm/SFE = 1.37 gpm
Proposed Building Size – 1200 gpd/acre x 1.63 acres = 1,956 gpd/1,440 min/day = 1.36 gpm

Max Day Demand – Peaking Factor = 2.5:
Approved Utility Report - 1.37 gpm x 2.5 = 3.43 gpm
Proposed Building Size – 1.36 gpm x 2.5 = 3.40 gpm

Peak Hour Demand – Peaking factor = 5.5:
Approved Utility Report - 1.37 gpm x 5.5 = 7.54 gpm
Proposed Building Size – 1.36 gpm x 5.5 = 7.48 gpm

<u>Wastewater Demand Comparison</u>
Average Daily Flow:
Approved Utility Report – 3.0 SFE per acre x 1.63 acres = 4.9 SFE x 200 gpd/SFE = 980 gpd
Proposed Building Size – 600 gpd/acre x 1.63 acres = 978 gpd

9301 Scrub Oak Drive Lone Tree, Colorado 80124 TEL: 303-888-6338 EMAIL:greg@kellydev.com

Peak Design Flow – Peaking Factor = 5.0
Approved Utility Report – 980 gpd x 5.0 = 4,900 gpd
Proposed Building Size – 978 gpd x 5.0 = 4,890 gpd

The proposed building will be 16,880 square feet, Type II-B construction. The building will be fully sprinklered. The 2018 International Fire Code (IFC), Appendix B, requires a fire flow requirement of 2,750 gpm @ 20 psi for a duration of 2-hours. Since the building is fully sprinklered, there is a 50% reduction in fire flow allowed, with a minimum of 1,500 gpm. Therefore, the fire flow is 1,500 gpm for 2 hours as approved in the attached fire flow rate confirmation memo.

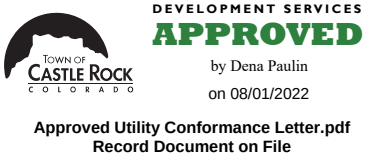
No revisions to the water demand and wastewater flows in the approved Final Utility Report are necessary.

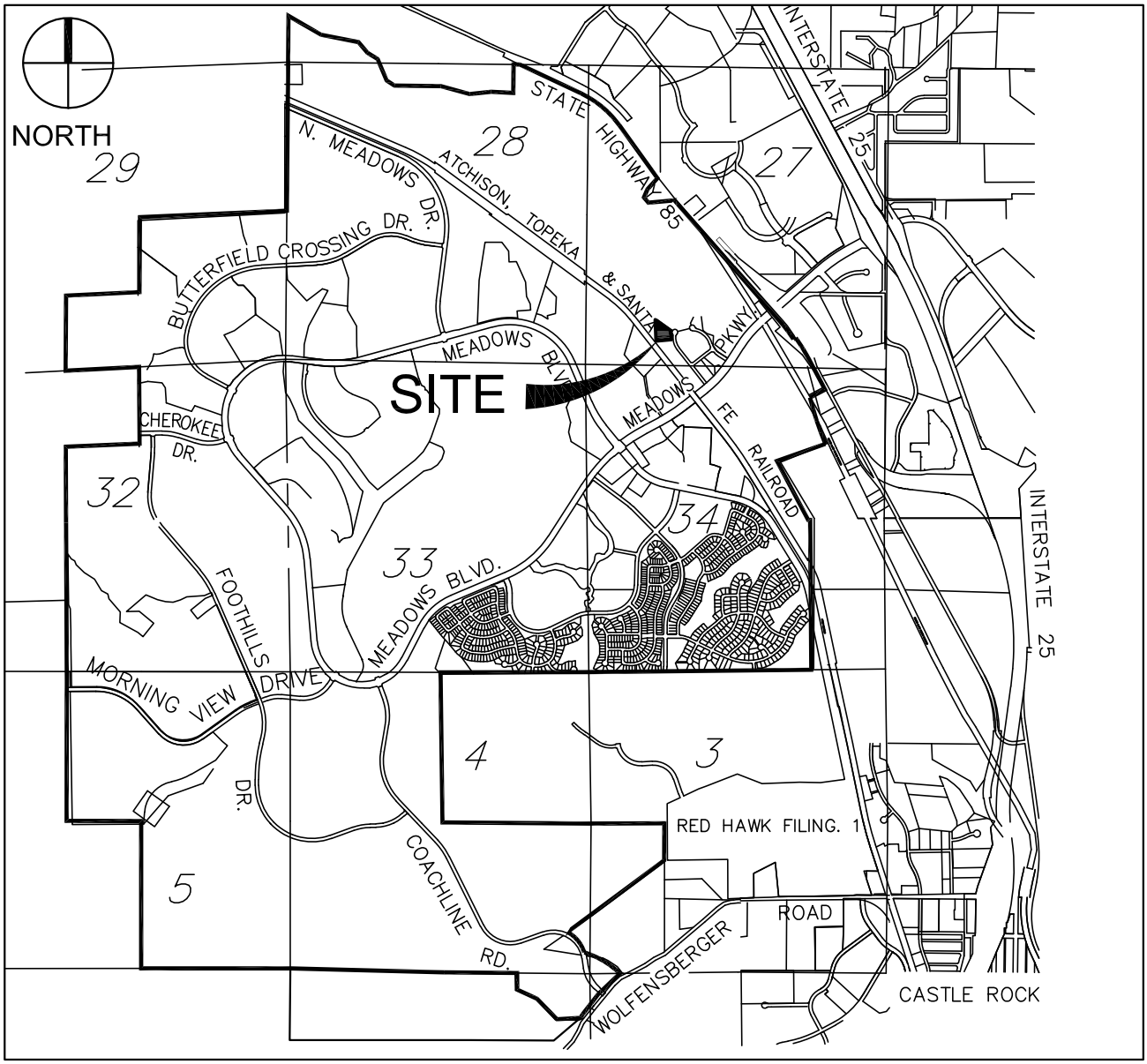
Therefore, for the proposed Lot 1, the site will be in conformance with the approved Final Utility Report.

Sincerely,

Greg S. Kelly, P. E.
President

PREPARED UNDER THE DIRECT SUPERVISION OF
GREGORY S. KELLY, PE COLORADO LIC. #15813
FOR AND ON BEHALF OF KELLY DEVELOPMENT SERVICES, LLC





VICINITY MAP

1"=3000'

PLAN REVIEW # 12922

Castle Rock Fire and Rescue Department

300 Perry Street - Castle Rock, CO 80104
(303) 660-1066

PLAN REVIEW

PROJECT LOCATION	PROJECT #
CD22-0012 - Meadows F17 - Moore Lumber Building - Regent Street - Fire	5464
PROJECT DESCRIPTION	**OCCUPANCY ID**
CD22-0012 - Meadows F17 - Moore Lumber Building - Regent Street - Fire Review	
AREA INVOLVED IN ENTIRE PROJECT	**ALTERNATE ID**
CD22-0012 - Meadows F17 - Moore Lumber Building - Regent Street - Fire Review	

PERMIT #	PERMIT DESCRIPTION		
12922	Fire Flow Evaluation		
AREA AFFECTED BY THIS PERMIT		**SQUARE FEET**	**VALUE OF WORK**
Moore Lumber - Regent Street (No specific address) - FIRE FLOW EVALUAT			
CONTACT NAME	**NOTIFY BY**	**NOTIFY AT**	
REASON FOR SUBMITTAL	**PLAN REVIEWER**	**SUBMITTED**	**COMPLETED**
Review Only	ryoung	06/13/2022	06/14/2022

CONTRACTOR	BUSINESS PHONE	FAX NUMBER
N/A (ID 3373)		
STREET ADDRESS	**CITY, STATE, ZIP**	
E-MAIL ADDRESS	**STATE LICENSE NUMBER**	

CASTLE ROCK FIRE AND RESCUE DEPARTMENT

**** PLAN REVIEW LETTER ****

<< PLEASE READ THE FOLLOWING CAREFULLY >>

On 06-14-2022 a review was conducted on the submitted FIRE FLOW requirements for the Moore Lumber, located on (no exact address designated) Regent Street. The following comments pertain to the project:

CODE USED IN REVIEW:

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

REVIEW COMMENTS:

INFORMATION ON THE PROJECT:

The project consists of a new storage building that will be fully sprinkler protected. From the information currently known to the fire department the following comments pertain to the required fire flows:

The proposed building is a 2-Story, 16,880 square foot building, constructed (NOT SPECIFIED) of Type II-B (Assumed) construction, with a full NFPA 13 Fire Sprinkler system. The base required fire flow as noted in the 2018 IFC - Table B105.1, would be: 2,750 gpm, the code provides an allowance for sprinkler systems, and based on the knowledge of this building the fire department will allow a 50% reduction (Due to High Piled Storage) bringing the required fire flow to: 1,500 gpm for a duration of 2-Hours, from a minimum of 1 hydrant within 225 feet of the building, measured as firefighters drop 5" hose from the hydrant to the building as they drive on the street. One hydrant must be a MINIMUM of not greater than 75 feet from the Sprinkler Fire Department Connection as approved on the building.

BUILDING INFORMATION:

Type of Construction: The proposed project is shown as being located in a building of II-B. The Fire Flow was calculated as Type V-B Building.

Occupancy Classification: The proposed occupancy classification for this project has been reviewed for compliance with the 2018 IFC and IBC. The occupancy classification of the project is shown as being a Group "S" Occupancy.

ACTION TAKEN BY THE FIRE DEPARTMENT:

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

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

Rick L. Young - Fire Prevention Officer - RYoung@crgov.com

DATE RECEIVED	BY:		
DATE FEE PAID	PLAN REVIEW FEE	CHECK #	RECEIPT #
06/14/2022	0.00		

PICKED UP BY	COMPANY	DATE

Kelly Development Services, LLC

MEMORANDUM

To: Rick Young, Castle Rock Fire and Rescue Department
From: Greg S. Kelly
Date: June 13, 2022
Project: Moore Lumber at the Meadows, Lot 1, Filing No. 17, 2nd Amendment
Subject: Fire Flow Requirements

Please accept the following required fire flow evaluation(s) based upon the currently adopted 2012 International Fire Code for review and confirmation for the proposed Moore Lumber building (16,880 SF) referenced above.

Building Construction Type: **II-B**

Are fire sprinklers provided throughout this building? **YES**
Are you proposing a reduction in Required Fire Flow for fire sprinklers? **YES**
Are Fire walls provided in this building? **NO**

Reference Appendix B, Table B105.1

Required Fire Flow: **2,750**-gpm at 20-psi
Flow Duration: **2**-hours
If applicable, Calculated Fire Flow including 50% reduction for sprinklers: **1,500**-gpm at 20-psi
Flow Duration: **2**-hours

Reference Appendix C, Table C102.1

Required Number of Fire Hydrants: **1**
Maximum Average Spacing: **400**
Maximum Distance from Fire Hydrant to Building FDC: **104**-feet

Design Engineers Signature: Greg Kelly Date: 06/13/2022

The determined Required Fire Flow, Number of Fire Hydrants and Hydrant Spacing as shown above satisfy the fire protection requirements of the Castle Rock Fire and Rescue Department.

Castle Rock Fire Signature: Rick L. Young Date: 06-14-2022

Fire Department Plan Review Number: 12922

Comments and corrections will be noted in the Fire Plan Review Letter and Permit.
All projects are subject to changes in the field, or as determined necessary to be in accordance with the current Code, Standards, and Ordinances
Completed by: Rick L. Young
ICC Cert #: 0632915-67 DFS Fire Suppression: 91-147 DFS Fire Insp III / Plans Examiner: 146303087

9301 Scrub Oak Drive Lone Tree, Colorado 80124 TEL: 303-888-6338 EMAIL:greg@kellydev.com

APPENDIX

1. Filing 17, Lot 8 Utility Report Water Demands
2. Filing 17, Lot 8 Utility Report Wastewater Flows
3. PCWRA Industry Information Questionnaire

FINAL WATER & SANITARY SEWER UTILITY REPORT
FOR

THE MEADOWS FILING 17, LOT 8
SITE DEVELOPMENT PLAN
CASTLE ROCK, CO
PROJECT #CD15-0021

PREPARED FOR:

CASTLE ROCK DEVELOPMENT
3033 E. FIRST AVENUE, SUITE 410
DENVER, CO 80206
PHONE: 303-394-5500
CONTACT: JIM RILEY

PREPARED BY:

CORE CONSULTANTS, INC.
1950 WEST LITTLETON BLVD.
SUITE 109
LITTLETON, CO 80120
PHONE: 303-703-4444
CONTACT: MARTIN METSKER, PE
CORE PROJECT NUMBER: 14-003

APRIL 23, 2015
REVISED JUNE 11, 2015
REVISED JULY 25, 2015

UTILITY REPORT APPROVAL

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

Signature: _____
Registered Professional Engineer
State Of Colorado No. 41743
(Affix Seal)

COLORADO LICENSED
MARTIN R. MEISKER
41743
9/28/15
PROFESSIONAL ENGINEER

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.

CRDC
Name of Developer

TOWN OF CASTLE ROCK APPROVALS:

Larry Heard — 9/30/15
UTILITIES DEPARTMENT — DATE

Larry Heard — 9/30/15
DEVELOPMENT SERVICES — DATE

Approved
Development Services
SEP 30 2015
Town of Castle Rock

I. PROJECT LOCATION AND DESCRIPTION

This Final Water and Sanitary Sewer Analysis Report analyzes the proposed infrastructure associated with the development of the proposed Meadows Filing 17, Lot 8 (Lot 8). The Meadows is a proposed Planned Unit Development (PUD), consisting of single-family homes, multi-family homes, commercial development, community parks and a school site on approximately 4000+/- acres in Castle Rock Colorado. The site is currently zoned COI for Commercial, Office, or Industrial uses.

The site is approximately 22.39 acres of which 16.06 acres will consist of COI Lots, and is bound by Meadows Parkway to the south, the AT&SF railroad to the southwest, Plum Creek to the north and east. Lot 8 is located in Sections 27 and 34, Township 7 South, Range 67 West of the 6th Principal Meridian, Castle Rock, Colorado. A vicinity map for the site can be found in Appendix A.

The site has naturally occurring slopes ranging from 3 to 25 percent and is covered with native vegetation and small stands of Scrub Oak. The soils vary throughout the site and include Bresser sandy loam, Newlin gravelly sandy loam, and Sandy wet alluvial land.

There are no irrigation facilities within or affected by the development of Lot 8. The site also has no significant geologic features. There are no existing water wells or individual sewage disposal systems within the project boundary.

This report will analyze the proposed water and sanitary sewer systems which will be built as part of the development of Lot 8. The utility design will conform to the current Town of Castle Rock standards.

II. CALCULATED WATER DEMANDS

The water demand for Lot 8 was calculated by using a total of 16.06 acres of commercial lots AND 3.0 SFE's per acre for Lot 8. Based on this information, an Average Day Demand of 13.42 gallons per minute (gpm), 19,320 gallons per day (gpd), and 21.6 acre-ft/year was calculated for Lot 8. A Peaking Factor of 2.5 was used to obtain a Maximum Daily flow of 33.54 gpm and 48,300 gpd for Lot 8. A Peaking Factor of 5.5 was used to obtain a Peak Hourly flow of 73.79 gpm and 106,260 gpd for Lot 8. The Meadows Lot 8 will be entirely serviced by the Town of Castle Rock water pressure Yellow Zone. Landscaping will be part of the development of each individual lot, and will be included in the construction plans for those individual lots. To account for future irrigation demands an assumption of a 1" tap has been made and included in the water demand calculations. Tables 1 and 2 below summarizes the proposed water demands for Lot 8.

TABLE 1: MEADOWS FILING 17 LOT 8 WATER DEMANDS

	AVERAGE DAY DEMAND (GPM)	MAX DAY DEMAND (GPM)	PEAK HOUR DEMAND (GPM)
LOT 8	13.42	33.54	73.79
TOTAL DEMAND	13.42	33.54	114.79*

*Includes 41 GPM Demand for Irrigation.

TABLE 2: MEADOWS FILING 17 LOT 8 WATER DEMANDS

	GALLONS PER MINUTE (GPM)	GALLONS PER DAY (GPD)	ACRE-FT PER YEAR (AF/YR)
AVERAGE DAY DEMAND	13.42	19,320	21.6
MAX DAY DEMAND	33.54	48,300	54.1
PEAK HOUR DEMAND*	114.79	165,298	185.1

*Irrigation Demand for the site to be applied to the Peak Hour Demand.

III. EXISTING WATER SYSTEM

An existing 8" water line is located along the eastern edge of Lot 8 and an existing 16" potable water line is located in Meadows Parkway.

Based on the proposed elevations within the site, this site should be served off water mains connected to the Yellow Zone. The Yellow Zone serves a top elevation of 6230 and a low elevation of 6065. A maximum static hydraulic grade line (HGL) of 6352 is provided in the system for the Yellow Zone. Elevations in Lot 8 will very between 6130 and 6220, with the higher elevation at the south portion of the site.

The site is served by tanks located northeast of the intersection of Coachline Road and Meadows Boulevard. The tanks have a storage volume of 10.0 MG.

The required storage needed for The Meadows Lot 8 is based on the proposed demand and is calculated as follows:

400gpd/SFE x49 SFE x 2.5 (Max Day) =	*49,000 gallons*
Fire Flow @ 1,500 gpm x 2.0 hours =	*180,000 gallons*
Total Storage Volume for Lot 8 =	*229,000 gallons(0.290 MG)*

IV. PROPOSED WATER SYSTEM

The proposed water system will connect to the existing water system at two locations for to provide adequate looping. Lot 8 will connect to the existing 8" water line in two locations and off of the existing 16" line in Meadows Parkway with a 16" x 8" cut in tee and kick block, 8" gate valve to the west and a 16" butterfly valve to the north.

The site will not need any PRV's, pump stations, etc. as part of the site development. The proposed water line will be accessible within the site in the

Filing 17 Lot 8 Water Demand

PARCEL NO.	USE	ACRES	EQUIVALENT (SFE/AC)	SFE	DEMAND AVG DAY (GPD/DU)	DEMAND AVG DAY (GPM/SFE)	DEMAND AVG DAY (GPM)
Filing 17 Lot 8	COI	16.1	3.00	48.3	400	0.28	13.42
			SUB-TOTAL	48.30		SUB-TOTAL	13.42
			FILING TOTAL	48.30		FILING TOTAL	13.42

PEAKING FACTOR			
MAX DAY (MDD)	2.5	33.54	GPM
PEAK HOUR (PHD)	5.5	73.79	GPM

IRRIGATION DEMANDS
1" Tap

	Peak Flow (gpm)
Total Irrigation	41.00

TOTAL COI	GPM	GPD	AF/YR
AVERAGE DAY (ADD)	13.42	19,320	21.6
MAX DAY (MDD)	33.54	48,300	54.1
PEAK HOUR (PHD)	114.79	165,300	185.1

pressures approach the minimum design pressure, but do not go below the value.

TABLE 3: MAX DAY + FIRE FLOW + ONE MAJOR LOOP CLOSED+20% FULL TANK

Pipe Closed	Junction	Minimum Design Pressure (psi)	Junction Pressure (psi)	Feed Pipe	Velocity (fps)
P-4	J-9	20.00	110.94	P-11	5.30
P-17	J-9	20.00	101.03	P-19	9.68

*Fire Flow of 1,500 gpm applied at J-13 for the scenarios represented above.
**Maximum Velocity for these scenarios is 15 fps.

Table 4 below represents a critical connection closed for the site during a Peak Hour event. The minimum pressure for this scenario is 35 psi, and the maximum velocity is 10 fps. The full results of all scenarios can be found in Appendix C. Table 4 shows that system pressures approach the minimum design pressure, but do not go below the value.

TABLE 4: PEAK HOUR DEMAND + ONE MAJOR LOOP CLOSED+20% FULL TANK

Pipe Closed	Junction	Junction Pressure (psi)	Feed Pipe	Velocity (fps)
P-17	J-3	108.96	P-4	0.21

Output for the simulations can be found in Appendix C. Each simulation contains two outputs: (1) Junction Report, which is used to check the water pressure in the model against the Town's criteria, and (2) Pipe Report, which is used to check velocities and head loss in the model against the Town's criteria.

VI. CALCULATED WASTEWATER FLOWS

This report addresses only the portion of the sanitary sewer system that services Lot 8. There are no Individual Sewage Disposal Systems (ISDS) on the site, or proposed as part of this development. In addition, there are no major drainageways, irrigation ditches, and significant geologic features on or adjacent to the site.

The proposed wastewater flows for the Lot 8 site have been calculated for the site using the criteria listed below.

- Demand per SFE — 200 gal/day/dwelling unit
- Peak Factor — $PF=3.65(ADF^{-0.168})$, max=5.0
  ADF= Average Daily Flows (MGD)
- Infiltration/Inflow — I= 0.10*Average Flow
- Peak Design Flow — PDF=(PF*ADF)+(Infiltration/Inflow)

The Average Daily Flows were calculated using 200gpd/SFE, and based on 16.1 acres of commercial development and 3.0 SFE's per acre. This results in an Average Daily Flow of 6.69 gpm, 9,660 gpd, and 0.01 cfs for Lot 8. A peaking factor was calculated using the equation above. This peaking factor was used to determine the Peak Design Flows for the site. This results in a Peak Design Flow of 33.36 gpm, 48,180 gpd, and 0.07 cfs for Lot 8. This value includes infiltration/inflow demands. For the complete calculations, see Appendix D.

VII. EXISTING WASTEWATER SYSTEM

Lot 8 will utilize the existing 12" sewer line located along the east side of Lot 8 and the existing sewer stub located along the west side of the existing lift station to make connections to the existing sewer system. Sanitary flows typically flow to the north towards the existing lift station, then north to the Town's Wastewater Treatment Facility.

The Final Utility Report for The Meadows Filing 17 dated February 15, 2005 was used to determine the existing wastewater flows. This report provided wastewater flows for both the existing 12" and 8" gravity lines, and those flows were included in the wastewater calculation for this report.

VIII. PROPOSED WASTEWATER SYSTEM

The proposed sanitary sewer system for Lot 8 will utilize the existing 12" sanitary sewer line along the east side of Lot 8 and the existing stub located along the west side of the existing lift station. The sanitary sewer lines will run within the proposed roadways and the entire site will drain to the existing lift station. Any future development of the existing wastewater infrastructure needed to serve this site is the responsibility of the developer.

Existing sanitary flows typically flow to the north towards the Town's Wastewater Treatment Facility. This project is included within the Town's Master Plans and demands have been factored in.

No lift stations, force mains, etc. are being proposed as part of this development. The existing gravity system and proposed connection will be sufficient in serving the site. Any sanitary sewer not located within in a public right-of way will be within a dedicated utility easement for access and maintenance. The minimum width of the easement will be 20'.

IX. PROPOSED WASTEWATER SYSTEM ANALYSIS AND MODELING

The proposed sanitary sewer system was evaluated with the use of Autodesk Storm and Sanitary Analysis 2014. Autodesk SSA is a program for the design and analysis of gravity flow and pressure flow through pipe networks. Design constraints input into The Meadows model included:

- 8' average cover

Filing 17 Lot 8 Sanitary Sewer Demand

PEAKING FACTOR*

PEAK HOUR (PHD) **5.0**

PARCEL	*USE*	*DWELLING UNITS*	*ACRES*	*EQUIVALENT* (SFE/AC)	*SFE*	DEMAND *AVG DAY* (GPD/DU)	*AVG DAY* (GPD)	*AVG DAY* (GPM)	*AVG DAY* (CFS)	*PEAK DESIGN* (GPM)	*PEAK DESIGN* (GPD)	*PEAK DESIGN* (CFS)
RESIDENTIAL												
Filing 17 Lot 8	COI		16.1	3.00	48.2	200	9636	6.69	0.01	33.46	48180	0.07
				SUB-TOTAL	**48.2**		**SUB-TOTAL**	**6.69**	**0.01**	**33.46**	**48180**	**0.07**
				TOTAL	**48**		**TOTAL**	**6.69**	**0.01**	**33.46**	**48180**	**0.07**
				(10% OF THE AVERAGE DAILY FLOW)			**INFILTRATION=**			**0.67**	**963.6**	**0.001**
							TOTALS WITH INFILTRATION=	**6.69**	**0.01**	**34.13**	**49143.6**	**0.08**

Commercial Water Meter Fixture Unit Worksheet

COMMERCIAL FIXTURE UNIT WORKSHEET

In order to determine the required water meter and water supply line size the following information must be provided and completed by the applicant, and must be **signed and sealed** by a registered professional engineer.

Moore Lumber at The Meadows
Permit #:

1) TOTAL NUMBER OF NEW AND EXISTING WATER SUPPLY FIXTURE UNITS:

TYPE OF FIXTURE	NUMBER OF EXISTING FIXTURES	NUMBER OF NEW FIXTURES		WATER FIXTURE UNIT VALUE*		TOTAL FIXTURE UNITS
Clothes Washer			X		=	0
Dishwasher			X		=	0
Drinking Fountain		1	X	0.25	=	0.25
Hose Bibb			X		=	0
Kitchen Sink			X		=	0
Lavatory		2	X	2	=	4
Service or Mop Basin		1	X	3	=	3
Service Sink			X	3	=	0
Shower			X		=	0
Urinal			X		=	0
Water Closet (Flush Valve)			X		=	0
Water Closet (Flush Tank)		2	X	5	=	10
Other (Specify)			X		=	0
Other (Specify)			X		=	0
Other (Specify)			X		=	0
				TOTAL WATER SUPPLY FIXTURE UNITS		17.25

* Based on 2012 IPC Table E103.3(2)
Attach additional sheets if necessary.

2) SYSTEM IS PRIMARILY: Flush Tank — X — (check one)
Flush Valve —

3) CONVERTED WATER DEMAND IN GPM: 18.5

4) ADDITIONAL WATER USAGE IN GPM: (irrigation, cooling towers, process equipment, etc.) 2.25

5) TOTAL DEMAND IN GPM (add lines 3+4) 20.75

6) Total Building Gross Floor Area: 16,880

7) P.E. CERTIFICATION:
(required)

TOWN OF CASTLE ROCK COLORADO

PLUM CREEK WATER RECLAMATION AUTHORITY

Industry Information Questionnaire

In order to properly evaluate, process, and issue a connection approval to discharge into the sanitary sewer, an Industry Information Questionnaire must be completed online.

HANDWRITTEN COPIES WILL NOT BE ACCEPTED.

(Additional applications may be required.)

PROPOSED LOCATION OF COMMERCIAL, PRODUCTION OR MANUFACTURING FACILITY

Proposed Facility Name *	Moore Lumber at The Meadows **Name of New Business**
Street Address *	xxxx Regent Street
City *	Castle Rock
State	CO
Postal Code *	80109
Is this a multi-tenant building? *	○ Yes ◉ No

COMPANY OWNERS INFORMATION

Company Name *	Pilatus Construction Management
Mailing Address *	2407 Morningview Trail
City *	Castle Rock
State *	CO
Postal Code *	80109
Contact Name *	Mike HUmphrey
Phone Number *	(303)-594-1194
Contact Email *	mike@poloproperties

PROPERTY OWNER OF THE PROPOSED LOCATION

Property Owner Name *	Moore Lumber and Hardware Inc
Property Owner Mailing Address *	1335 Park Street
City *	Castle Rock
State *	CO
Postal Code *	80109
Property Owner Contact Name *	Bill Moore
Phone Number *	(303)-883-8547
Email *	alps@moorelbr.com

AUTHORIZED REPRESENTATIVE IN OFFICIAL DEALINGS WITH PCWRA

Authorized Representative Name *	Charlie Marker
Title (i.e. Owner, Manager, General Contractor, etc.) *	Project Manager
Phone Number *	(303)-601-2995
Email *	charlie@pilatusmanagement.com

BUSINESS INFORMATION

Will this be a new build? *	(●) Yes ( ) No
Provide a brief description of the commercial, manufacturing, or service activities your business plans to conduct: *	Light Industrial Warehouse
When did/will the business begin operations? *	12/30/2022
Comments	

Business Category *

- ( ) Assembly
- ( ) Auto Services
- ( ) Dental (please provide NAICS or SIC code below)
- ( ) Food Processing/Service
- (•) Industrial (please provide NAICS or SIC code below)
- ( ) Manufacturing (please provide NAICS or SIC code below)
- ( ) Medical (please provide NAICS or SIC code below)
- ( ) Office (Not Medical)
- ( ) Retail
- ( ) Vehicle/Equipment Wash
- ( ) Warehouse/Storage
- ( ) Other

6 Digit NAICS/SIC Code

332323

If unsure of code, please visit https://www.naics.com/

Comments

Will there be other businesses leasing or occupying space at this facility? *

( ) Yes (•) No

Will the business dispose of any chemicals or hazardous waste? *

( ) Yes (•) No

Permit number assigned by Building Division if applicable

Signature *

I have personally examined and am familiar with the information submitted in this document and attachments. Based upon my inquiry of those individuals immediately responsible for obtaining the information reported herein, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and/or imprisonment.

Mike Humphrey

TOWN OF CASTLE ROCK OPEN SPACE

TRACT B
EXISTING
DETENTION/WATER
QUALITY FACILITY

PROPOSED BUILDING
16,880 SF
FFE=6070.45

LOT 1
71,121 SF (1.63 AC)

LOT 2
SELF
STORAGE

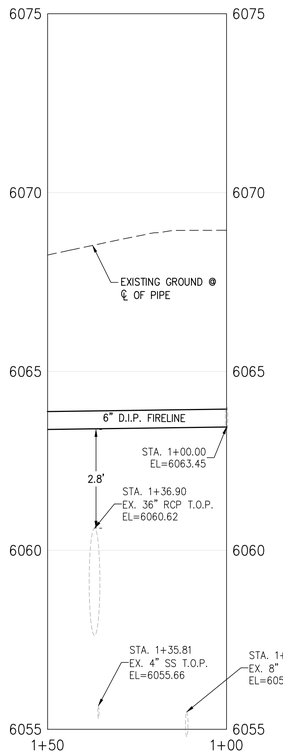
REGENT ST.
(60' R.O.W.)

S 54°26'28" E 341.12'

S 84°31'07" W 268.91'

N 02°12'27" W 377.60'

PROPOSED STORM SEWER (ROOF DRAIN LEADER)
EX. 10' UTILITY EASEMENT
PROPOSED CT CABINET LOCATION
PROPOSED TRANSFORMER LOCATION
EX. 10' UTILITY EASEMENT
EXISTING 36" STORM SEWER
Δ=71°40'05"
R=50.00'
L=62.54'
ChB=S00°16'30"E
ChL=58.54'
SEE FIRE SPRINKLER PLANS FOR CONTINUATION
FDC
PCWRA STUB
INV. EL.=6066.45
2-WAY C.O.
INV. EL.=6066.45
20-LF 4" SDR35 PVC @2.00%
EXISTING 15' TYPE R INLET
EXISTING FIRE HYDRANT
12.11-LF 4" SDR35 PVC @2.00%
45° 4" PVC VERTICAL BEND. INV.=6066.21
10.00-LF 4" SDR35 PVC @100%
45° 4" PVC VERTICAL BEND. INV.=6056.21
5.00-LF 4" SDR35 PVC @3.86%
SEE M.E.P. FOR CONTINUATION
22.5° 4" PVC BEND. INV.=6056.49
17.77-LF 4" SDR35 PVC @3.86%
8" STM B.O.P.=6060.97
4" SS T.O.P.=6055.71
11.25° 4" PVC BEND. INV.=6055.33
CONNECT TO EXST. 4" SS INV. EL.=6055.30±/-
C.O. INV. EL.=6056.55
EXISTING 4" SANITARY SEWER SERVICE INV.=(6053.99)(AB)
113.16-LF 6" 6900 PVC
EXISTING 36" STORM SEWER
6" G.V.
EX. 8" G.V.
11.60°
EXISTING 8" PVC WATER MAIN
EXISTING 8" PVC SANITARY SEWER
8"x8"x6" M.J. TEE W/ T.B.
8" G.V.
PROPOSED TRENCH DRAIN
EX. 10' UTILITY EASEMENT
PROPOSED INLET
PROPOSED STORM SEWER
PROPOSED STORM MH
PROPOSED STORM MH
25' DRAINAGE EASEMENT
SIDEWALK EASEMENT
Δ=42°45'07"
R=28.00'
L=20.89'
ChB=S14°43'59"E
ChL=20.41'
Δ=12°07'27"
R=355.00'
L=75.12'
ChB=S00°34'50"W
ChL=74.98'
108.19-LF 3/4" TYPE K COPPER
124.87-LF 3/4" TYPE K COPPER
PROPOSED INLET
EX. 10' UTILITY EASEMENT
RELOCATED 3/4" CURB STOP
EXISTING 3/4" WATER
20' ACCESS EASEMENT
ACCESS EASEMENT
PROPOSED 1"x3/4" REDUCER AND RELOCATED 1" CURB STOP
EXISTING 1" WATER
SIDEWALK EASEMENT
EX. 10' UTILITY EASEMENT
EXISTING 8" WATER MAIN
EXISTING 24" STORM SEWER
EXISTING 16" RAW WATER MAIN
RWL



6" FIRELINE PROFILE IN REGENT ST.
H: 1"=20'
V: 1"=2'

LEGEND

PROPOSED		EXISTING
	PROPERTY LINE	
	R.O.W. LINE	
	EASEMENT	
	SIGHT TRIANGLE	
	SECTION LINE	
GAS	GAS LINE	GAS
UGT	UNDERGROUND TELEPHONE	UGT
FO	FIBER OPTIC	FO
CTV	UNDERGROUND CABLE	CTV
	FIRE HYDRANT	
W	WATER MAIN	W
WM	WATER METER	WM
W	WATER SERVICE	W
	WATER VALVE	
IR	IRRIGATION PIPE	IR
T	TRANSFORMER	T
UGE	UNDERGROUND ELECTRIC	UGE
OHE	OVERHEAD ELECTRIC	OHE
	LIGHTPOLE	
	POWER POLE	
SS	SANITARY MAIN	SS
	SANITARY CLEANOUT	
SS	SANITARY MANHOLE	SS
SS	SANITARY SERVICE	SS
	STORM INLET	
SD	STORM MANHOLE	SD
	STORM PIPE	
	BACK OF CURB	
	CONCRETE HATCH	
	EDGE OF PAVEMENT / PAN	
	FLOWLINE	
	SIDEWALK	
	SIDEWALK HATCH	
	PAVEMENT MARKING	
	TRAFFIC SIGN	
	BOLLARD	
	LIGHT POLE	
	MONUMENT SIGN	

PRESSURE ZONE: YELLOW

NOTE:
CONTRACTOR SHALL PROVIDE A MINIMUM SEVENTY TWO (72) HOURS' NOTICE TO THE ON-SITE TCR CONSTRUCTION INSPECTOR, (720) 733-2200, PRIOR TO MAKING ANY CONNECTIONS OR TIE-INS TO EXISTING WATER, SANITARY SEWER, AND/OR STORM SEWER SYSTEMS PROVIDED THAT THE UTILITY TIE-IN DOES NOT DISRUPT SERVICE TO EXISTING CR WATER CUSTOMERS. IF THE TIE-IN REQUIRES A LINE SHUTDOWN, OR WILL DISRUPT UTILITY SERVICE, THEN CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) WEEKS' NOTICE TO THE TCR CONSTRUCTION INSPECTOR TO ALLOW TIME FOR CR WATER TO PROVIDE WRITTEN NOTIFICATION TO EXISTING CUSTOMERS AFFECTED BY THE TIE-IN. ALL TOWN UTILITY TIE-INS MUST BE APPROVED BY CR WATER PRIOR TO COMMENCING WORK.

AT ALL INSTANCES WHERE A SANITARY SEWER MAIN CROSSES A WATER MAIN OR STORM SEWER, REGARDLESS OF VERTICAL CLEARANCE, AND WHICH PIPE CROSSES OVER THE OTHER, ONE FULL STANDARD LENGTH SECTION OF SEWER PIPE SHALL BE LOCATED SUCH THAT BOTH JOINTS WILL BE AS FAR FROM THE WATER MAIN OR STORM SEWER CROSSING AS POSSIBLE.

NORTH
GRAPHIC SCALE
20 0 10 20
1 INCH = 20 FEET

CAUTION NOTICE TO CONTRACTORS
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUCH CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

PREPARED FOR:
PILATUS MANAGEMENT LLC
MIKE HUMPHREY
2401 MORNINGVIEW TRAIL
CASTLE ROCK, CO 80109
PH: 303-360-6600
FAX:

#	DATE	REVISION DESCRIPTION	BY
1			
2			
3			
4			

project no.	2110.01	drawn by	
date	6/15/2022 – 9:57 am	designed by	
dwg.	06 – C1.6 – Overall Utility Plan.dwg	approved by	

MOORE LUMBER AT THE MEADOWS

OVERALL UTILITY PLAN

KELLY DEVELOPMENT SERVICES, LLC
9301 SCRUB OAK DR
LONE TREE, CO 80124
303-888-6338
greg@kellydev.com

SHEET NUMBER
C1.6
SHEET 6 of 19
PROJECT NUMBER
2110.01

[V-MA.dwg] [EXMA.dwg] [C-PN-L1.dwg] [V-PN.dwg] [C-UT-L1.dwg] [V-UT.dwg] [LEGEND.dwg] [A-BG-L1.dwg] [TBh.dwg] [C-MA-L1.dwg] [D-UT-L1.dwg]
Drawing name: C:\Data\Projects\2110 MCR\C3D\Sheet\CD\Lot 1\06 – C1.6 – Overall Utility Plan.dwg Jun 15, 2022 – 9:57am

ANNUAL WATER USE CALCULATIONS

Moore Lumber
Seasonal Water Use and Peak Flow Projections
4/8/22

Description	Irrigated Acres	Month	Application Rate (in./month)	Monthly water use (gallons)	Maximum Required Flow-(GPM)	
Irrigated Turf Grass		April	0.00	0		
		May	2.07	0		
		June	3.11	0		
	0.000	July	4.00	0	0.0	
		August	3.40	0		
		Sept.	2.22	0		
		Octobe	0.00	0		
annual sub-total			14.80	/yr	0	/yr
					0.00	acrefeet
Irrigated Shrub Beds		April	0.00	0		
		May	1.36	13,552		
		June	2.13	21,225		
	0.367	July	2.72	27,105	5.4	
		August	2.37	23,617		
		Sept.	1.42	14,150		
		Octobe	0.00	0		
annual sub-total			10.00	/yr	99,649	/yr
					0.31	acrefeet
Irrigated Native Grass		April	0.00	0		
		May	0.50	0		
		June	0.76	0		
	0.000	July	1.00	0	0.0	
		August	0.86	0		
		Sept.	0.55	0		
		Octobe	0.00	0		
annual sub-total			3.67	/yr	0	/yr
					0.00	acrefeet
Totals	**0.37**	**irrigated acres**			**99,649**	**gals/yr**
					0.31	**acrefeet/yr**
					5	**GPM - peak flow required**

HYDRAULIC CALCULATIONS

TOWN OF CASTLE ROCK COLORADO

Irrigation System Hydraulic Worksheet

Project Name:	**Moore Limber**						**Date:**	April 8, 2022	
Project Location:	**Castle Rock Coffee**								
Prepared by:	**David Zickerman**						**Current TOCR Registration #**	15-1032	
	Controller "A" - zone A5								
Tap Size		**0.75**	**"**			**Source of Pressure**	Town of Castle Rock Utilities		
Static Water Pressure:		**119**	**psi**						
Hydraulic Grade At Zone:						**Company**	Avocet Irrigation Design		
	Ft. of Copper			Pipe Size (")		K Copper	Friction Loss (from chart)	Flow-GPM	Loss/Gain
Service Line (tap to meter):	240	LF		0.75		K Copper	2.64 /100 FT	4	6.34
Water Meter:				0.75			0.50	4	0.50
Service Line (meter to backflow):	30	LF		0.75		K Copper	2.64 /100 FT	4	0.79
Backflow:		Febco 860		0.75			12	4	12.00
Master Valve:		Grisold DW-075		3/4			2.9	4	2.90
Pressure Required at Head:		Drip Emitters							30
Lateral Allowance:									4.00
Control Valve Allowance:									3.00
Mainline Allowances:									
Length of Mainline	Pipe Material		Size		Gals.				
420	LF CL200BE		1	"@	4	GPM	0.24 /100 FT		1.01
	LF CL200BE			"@	4	GPM-Looped	/100 FT		0.00
Elevation:									
	Tap elevation		6,070				High/Low:	6,078	3.46

Green shading indicates required information you must provide

Total System requirements (PSI) ***64.00***

Available System Pressure (PSI) ***119.00***

Town of Castle Rock provides a minimum of 43 psi

Total irrigated area for tap # 1 ***is*** 15,989 ***sq. ft.***

CLWUR (Composite landscape water use rating) Chart

TOWN OF CASTLE ROCK COLORADO

Project Name: MOORE LUMBER AT THE MEADOWS

Site Development Plan (SDP) Number:

Irrigation Spray or Drip?	Plant Name (Common)	Appl. Rate (inches/month)	Zone (VL,L,Mod,HW)	% of Total Area	IA Irrigated area (in sq. ft. for each zone)	LWUR Landscape Water Use Rating	TA Total Area of all Irrigated Landscape Zones	CLWUR (LWUR x IA) /TA
								0
								0
Drip	Trees & Shrubs	1"	Low	100.00%	15989	2.25	15989	2.25
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
						Total of the CLWUR		2.25

Reference Chapter 13.20 of the Castle Rock Municipal Code

IRRIGATION SCHEDULE

TOWN OF CASTLE ROCK COLORADO

IRRIGATION CHART

Registered Professional David Zickerman Registration # 15-1032 Date 9-10-21
Company Name __Avocet Irrigation Design Address 7114 W. Jefferson Ave.., Suite 201, Lakewood, CO
Phone 303-986-2175 Email avocet@wisperteL.net Clock Make: Hunter I-CORE

r Circle r Diamond r Square

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"/month or 1.5"/week)	Run Time (Minutes/ Month)	Run Time (Minutes Every Third Day)	Water Usage (Gallons per month)
Ex: 1	*High*	*Blue Grass*	*RB 1806 SAM PRS*	*15'*	*1.83*	*15*	*6*	*197*	*20*	*2951*
Ex: 2	*Low*	*Buffalo Grass*	*Hunter I-20*	*3*	*1.83*	*15*	*1*	*33*	*3*	*492*
A1	Low	Shrubs/Trees	Drip	1.0 GPH	1	3	2	120	12	360
A2	Low	Shrubs/Trees	Drip	1.0 GPH	1	3	2	120	12	360
A3	Low	Trees	Drip	1.0 GPH	1	2	2	120	12	240
A4	Low	Trees	Drip	1.0 GPH	1	1	2	120	12	120
A5	Low	Shrubs/Trees	Drip	1.0 GPH	1	2	2	120	12	240
A6	Low	Shrubs/Trees	Drip	1.0 GPH	1	2	2	120	12	240
							Totals	720	72	1560
Total								**Min/Month**	**Min/cycle**	**Gallons/Month**

Owner/Developer:
CASTLE ROCK DEVELOPMENT CO.
3033 East First Ave. #410
Denver, CO 80206
303-394-5500
bstokes@crdvcoo.com

Landscape Architect:
JDC
PLANNING & LANDSCAPE ARCHITECTURE
Jump Design Company
1733 S. Clarkson Street
Denver, Colorado 80210
303.282.0463
info@jumpdesignco.com

Stamp / Registration:

THOMAS R. JUMP 150
01/01/2008
Original Date of Licensure
STATE OF COLORADO
LICENSED LANDSCAPE ARCHITECT

Moore Lumber at The meadows
Castle Rock, Colorado

Landsccape
Construction Documents

Issue Date 04/08/22
Revisions

Job #:
Drawn by:
Checked by:

Sheet Title
IRRIGATION DETAILS

Sheet No.
I1.4

Sheet 17 of 19