



## FINAL SANITARY SEWER REPORT

# Watermark at Akers Drive

Akers Drive  
El Paso County, Colorado

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Prepared for:

**Thompson Thrift Delevopment, INC. d/b/a Watermark Apartments**

**Monica Unger**

**111 Monument Circle,**

**Suite 1500**

**Indianapolis, IN 46204**

**Contact: (720) 495-3693**

Prepared by:

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**Kimley»Horn**

Project #: 096302009  
Prepared: January 29<sup>th</sup>, 2021



Eric J. Gunderson, P.E.  
Project Manager



# WATERMARK AT AKERS DRIVE

AKERS DRIVE  
EL PASO COUNTY, COLORADO

WASTEWATER RESOURCE REPORT

JANUARY 29, 2021

Prepared by:

**Kimley»»Horn**

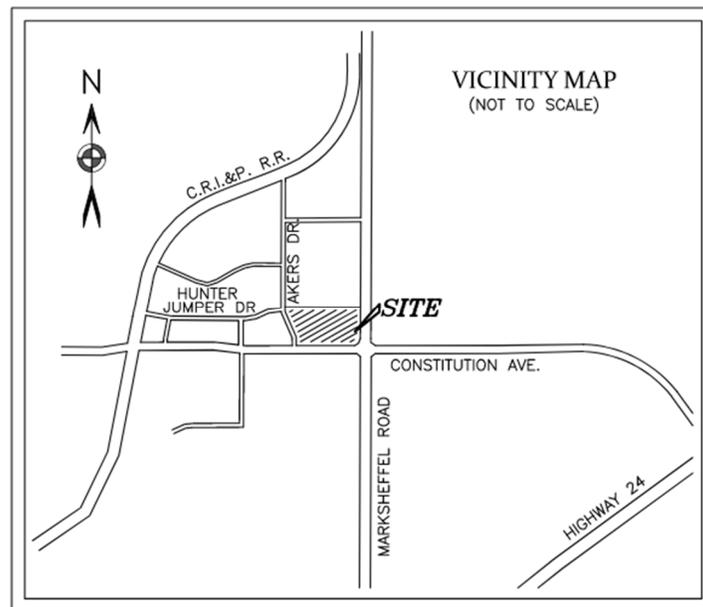
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## GENERAL LOCATION AND PROJECT DESCRIPTION

### Site Location

The Site is located at the northeast corner of Constitution Avenue and Akers Drive and currently consists of Tract DD of the Hannah Ridge at Feathergrass Filing No. 1 (the "Site"). More specifically, the Site has been amended by affidavit of correction recorded July 14, 2014 under reception NO. 214061663 and affidavit of clarification recorded September 9, 2014 under reception NO. 214081923, County of El Paso, State of Colorado. The Site is bounded by Constitution Avenue to the south, Marksheffel Road to the east, Akers Drive to the west, and vacant land adjacent to a commercial building to the north. A vicinity map is provided below for reference:



### Description of Property

The overall site is approximately 15.39 acres of partially undeveloped land. The site development is anticipated to consist of 300 Multi-family homes. Roadway infrastructure proposed within the site will provide access from the Project to adjacent right-of-way and access roadways. Project access will be obtained through Akers Drive.

The existing topography generally drains from east to west. The overall site varies in elevation from a low of approximately 6440 feet to a high of approximately 6475.

There is one point of connection for proposed sanitary sewer service to the Site. The connection will be made off the 12-inch line within Akers Drive from the southwestern corners of the Project. Refer to **Appendix A** for an overview of the sewer system and point of connection.

The sanitary sewer design presented herein will focus on the sanitary sewer demands anticipated with development of the Site.

## DESIGN CRITERIA

The Project is within the Cherokee Metropolitan District Service area. This Project will substantially comply with the current Colorado Springs Utilities Wastewater Line Extension & Service Standards 2019 (the Criteria) adopted by Cherokee Metropolitan District (CMD).

### Opinion of Probable Population and Quantity of Effluent

The site development is anticipated to consist of 300 Multi-Family homes. The opinion of probable population and effluent is as follows:

300 Multi-Family Homes \* 1.9 residents/ household= 570 residents

570 resident\* 65 GPD/ resident =37,050 GPD or 25.7 GPM

This estimate is made based on methodology used by other utility providers in the area and on industry standards. The actual number of residents and effluent flow could vary from these calculations.

### Capacity of Existing Treatment Plant and Current Utilization

The sanitary sewer system capacity was based on correspondence sent by the CMD for dated October 9<sup>th</sup>, 2020. See **Appendix B** for reference.

The following statement clearly defines the Meadowbrook Park project to be in compliance with the CMD allowable capacities:

“Wastewater from the CMD main district flows by gravity to a 1.1 million gallon equalization pond before being pumped east to the Cherokee Metropolitan District/Meridian Metropolitan District Water Reclamation Facility operated by Cherokee. Cherokee holds 2.6 million gallons per day of the 4.8 million gallon per day (MGD) capacity of the plant of which CMD is currently using approximately 1.5 MGD. At buildout of the District area, CMD expects flow from the main district to reach 1.9 MGD and the development of this property is in line with the buildout estimate.”

### Anticipated Capacity of Proposed Treatment Plants

Cherokee holds 2.6 million gallons per day of the 4.8 million gallon per day (MGD) capacity of the plant of which CMD is currently using approximately 1.5 MGD. At buildout of the District area, CMD expects flow from the main district to reach 1.9 MGD and the development of this property is in line with the buildout estimate.

### Letter of Commitment

Cherokee Metro District provided a letter of commitment to provide both water and wastewater services. The letter is attached to in the Appendix.

## Opinion of Probable Construction Costs

Below is a probable opinion of construction costs that was also provided in the financial assurance estimate:

<b>Sanitary Sewer Improvements - Opinion of Construction Costs</b>				
<b>Item</b>	<b>Unit</b>	<b>Price per Unit</b>	<b>Unit Count</b>	<b>Cost</b>
8" PVC Sewer Main	LF	\$ 65.00	2,120	\$ 137,800.00
Sanitary Manhole, Depth < 15 ft	EA	\$ 4,400.00	11	\$ 48,400.00
Sanitary 6" Service Line	EA	\$ 1,500.00	13	\$ 19,500.00
<b>Total Cost</b>				<b>\$ 205,700.00</b>

## Creation or Annexation into Special Sewer District

The Site is already within the Cherokee Metro District service area and does not require a special district.

## Map of Existing and Proposed Facilities

An Overall Utility Plan of the Project with both proposed and existing utility facilities is shown in the Appendix. The plan is subject to review by Cherokee Metro District.

## REFERENCES

Colorado Springs Utilities Wastewater Line Extension & Service Standards 2019, City of Colorado Springs; January 2, 2017.

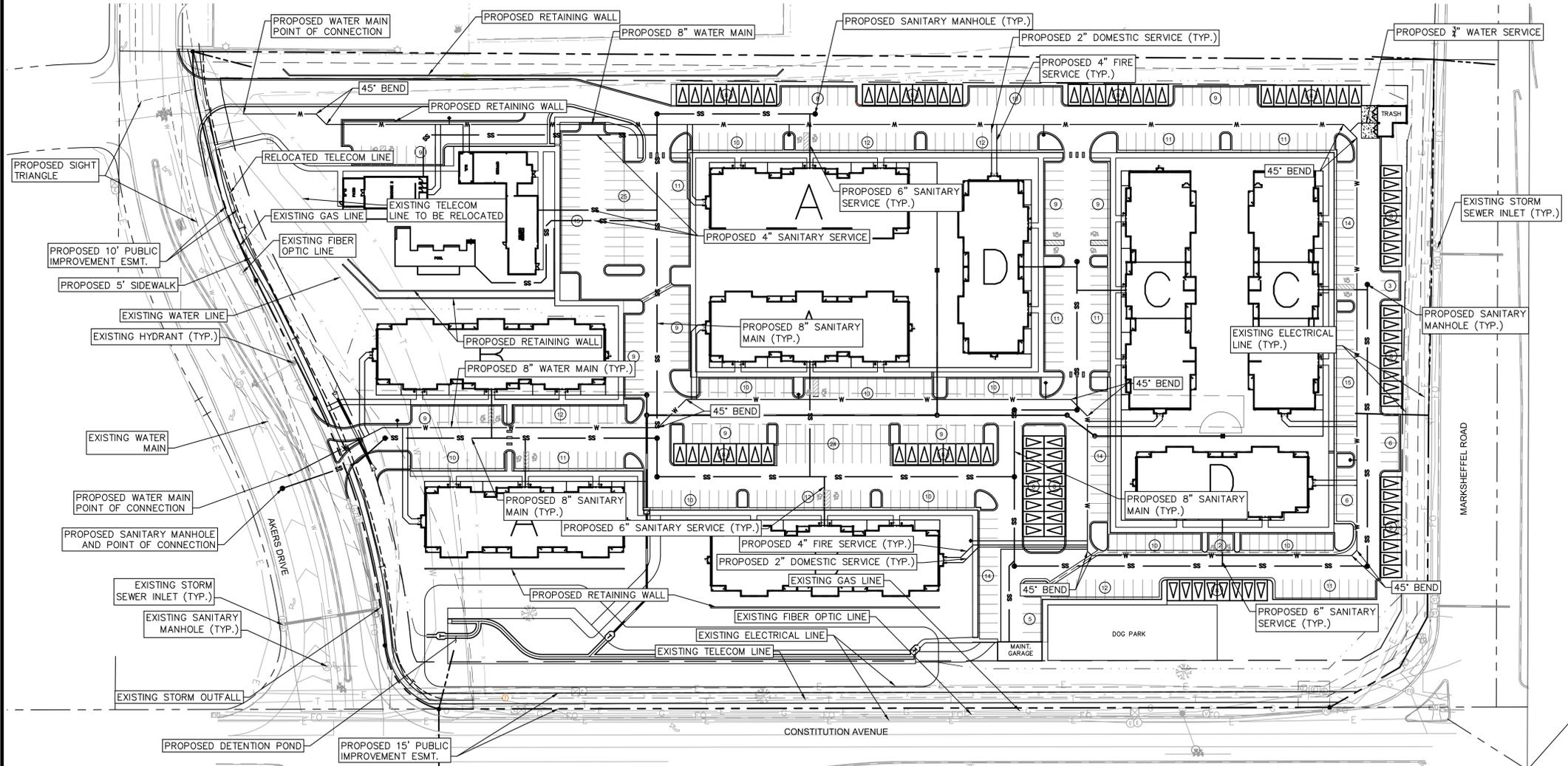
Cherokee Metropolitan District. "Meadowbrook Park-Preliminary Utility Plan." Email to Kevin Kofford. 9 October. 2020.

# APPENDIX A – WASTEWATER SCHEMATIC & COMPUTATIONS

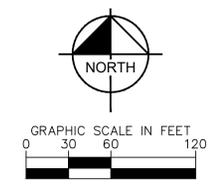
# WATERMARK AT AKERS SITE DEVELOPMENT PLAN

TRACT DD, HANNAH RIDGE AT FEATHERGRASS FILING NO. 1, AS AMENDED  
SECTION 32, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH P.M., CITY OF COLORADO SPRINGS,  
COUNTY OF EL PASO, STATE OF COLORADO

LEGEND	
	PROPERTY LINE
	PROPOSED SETBACK
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING WATER LINE
	PROPOSED WATER LINE
	EXISTING SANITARY LINE
	PROPOSED SANITARY LINE
	EXISTING STORM LINE
	EXISTING STORM MANHOLE
	EXISTING SANITARY MANHOLE
	PROPOSED SANITARY MANHOLE
	EXISTING FIBER OPTIC LINE
	EXISTING UNDERGROUND TELECOM
	EXISTING UNDERGROUND ELECTRIC



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## APPENDIX B – LETTER OF COMMITMENT AND CORRESPONDENCE



# CHEROKEE METROPOLITAN DISTRICT

6250 Palmer Park Blvd., Colorado Springs, CO 80915-2842

Telephone: (719) 597-5080 Fax: (719) 597-5145

January 28<sup>th</sup>, 2021  
Monica Unger  
LLH Development  
111 Monument Circle, Suite 1500  
Indianapolis, IN 46204

*Sent via email: [kevin.kofford@kimley-horn.com](mailto:kevin.kofford@kimley-horn.com)  
Original to follow by US Mail*

Re: Water and Sewer Service to **Watermark at Constitution**  
Commitment Letter No. **2021-01**

Dear Monica Unger,

As requested, this document will serve as a formal Letter of Commitment from the Cherokee Metropolitan District to provide municipal water and sewer services for Watermark at Constitution located at the Northwest corner of Marksheffel Road and Constitution Avenue. The proposed location for this development is located within the District's established boundaries and therefore is eligible for service connections from the District.

Cherokee Metropolitan District staff, along with the developer, have determined that the following will be the total water demand required by this occupancy:

Type of Use	Demand (AF/yr)
Domestic	60.7
Irrigation	10.1
<b>Total</b>	<b>70.8</b>

This water commitment is hereby made exclusively for this specific development project at this site within the District. To confirm this commitment you must provide the District with a copy of the final plat approval from El Paso County Development Services within 12 months of the date of this letter. Otherwise, the District may use this allocation for other developments requesting a water commitment. If the subject project is re-platted, you must submit a new commitment request prior to submitting the re-plat to El Paso County, which may result in a recalculation of the water demand for the project.

Wastewater flows from the development, conservatively estimated at 100% of domestic water use, are expected to be 54,000 gallons per day at full occupancy. This represents 2.1% of Cherokee

Metropolitan District's wastewater treatment capacity and is in line with anticipated wastewater system buildout.

If I may be of further assistance please contact me at your convenience.

Sincerely,



Amy Lathen  
General Manager

Cc: Peter Johnson; Water Counsel w/ encl: sent via email  
Steve Hasbrouck; Board President w/ encl: sent via email  
Kevin Brown; Jr. Engineer

**From:** Kevin Brown <[kbrown@cherokeemetro.org](mailto:kbrown@cherokeemetro.org)>  
**Sent:** Friday, October 9, 2020 11:12 AM  
**To:** Kofford, Kevin <[Kevin.Kofford@kimley-horn.com](mailto:Kevin.Kofford@kimley-horn.com)>; Heiberger, John <[john.heiberger@kimley-horn.com](mailto:john.heiberger@kimley-horn.com)>  
**Cc:** Houk, Jim <[Jim.Houk@kimley-horn.com](mailto:Jim.Houk@kimley-horn.com)>; Jeff Munger <[jmunger@cherokeemetro.org](mailto:jmunger@cherokeemetro.org)>; Peter C. Johnson <[pcj@vrlaw.com](mailto:pcj@vrlaw.com)>; Steven Hasbrouck (Board Member) <[s.hasbrouck@cherokeemetroboard.org](mailto:s.hasbrouck@cherokeemetroboard.org)>  
**Subject:** RE: Meadowbrook Park-Preliminary Utility Plan

Kevin,

We haven't had a supplemental wastewater report requested in the past and our wastewater system is far simpler than our water system. I can give you some basic details below to integrate into a report:

Wastewater from the CMD main district flows by gravity to a 1.1 million gallon equalization pond before being pumped east to the Cherokee Metropolitan District/Meridian Metropolitan District Water Reclamation Facility operated by Cherokee. Cherokee holds 2.6 million gallons per day of the 4.8 million gallon per day (MGD) capacity of the plant of which CMD is currently using approximately 1.5 MGD. At buildout of the District area, CMD expects flow from the main district to reach 1.9 MGD and the development of this property is in line with the buildout estimate.

Let me know what other information you need.

Thanks,  
Kevin Brown