EASTWOOD VILLAGE

MEADOWBROOK PARKWAY
EL PASO COUNTY, COLORADO

WASTEWATER DISPOSAL REPORT

APRIL 24, 2023

Prepared by:

Kimley»Horn

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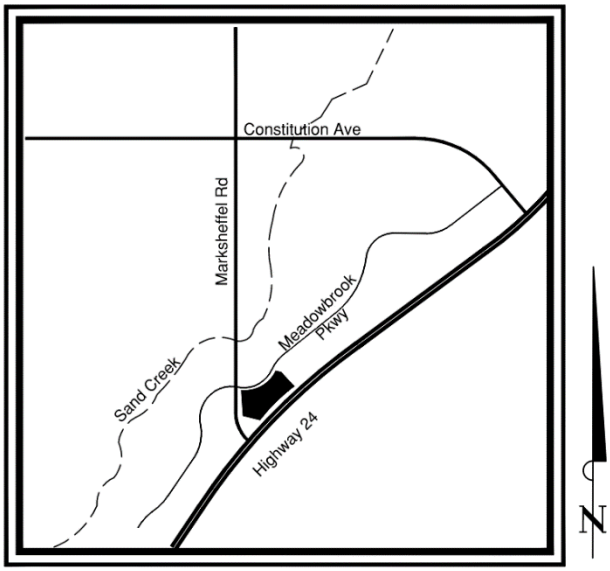
GENERAL LOCATION AND PROJECT DESCRIPTION

SITE LOCATION

The Site is located at the southeast corner of Marksheffel Road and Meadowbrook Parkway and includes Tract F of the Claremont Ranch Filing No. 7, which has since been renamed to Eastwood Village (the "Site"). More specifically, the Site is situated in the northwest quarter of Section 4, Township 14 South, Range 65 West of the Sixth Principal Meridian, County of El Paso, State of Colorado. The Site is bounded by Meadowbrook Parkway to the north, an existing residential lot to the east, Highway 24 to the south, and Marksheffel Road to the west. A vicinity map is provided below for reference:



VICINITY MAP
N.T.S

DESCRIPTION OF PROPERTY

The overall site is approximately 9.81 acres of undeveloped land. The site development is anticipated to consist of 107 townhomes. 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 Meadowbrook Parkway.

A proposed drive will loop throughout the entirety of the Project connecting to Meadowbrook Parkway to provide proficient emergency access for the site. In addition, there is a proposed gravel emergency access road from Meadowbrook Parkway, and a second proposed gravel access road to loop the proposed drives on the northeast side of the Site. These proposed gravel access roads are to provide emergency fire access and act as public utility easements.

The topography generally drains from east to west. The overall site varies in elevation from a low of approximately 6,386 feet to a high of approximately 6,429 feet.

There is one point of connection for proposed sanitary sewer service to the Site. The connection will be at an existing manhole within Meadowbrook Pkwy northwest 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 (CMD) service area. The District will provide both water and wastewater services as stated in the Letter of Commitment in **Appendix B**. This Project will comply with the CMD Water and Wastewater Infrastructure Construction Standards of December 2020 and the Colorado Springs Utilities Water and Wastewater Line Extension and Service Standards of 2023.

OPINION OF PROBABLE POPULATION AND QUANTITY OF EFFLUENT

The site development is anticipated to consist of 107 townhomes. From the Letter of Commitment in **Appendix B**, the development is expected to produce a maximum day wastewater flow of 24,000 GPD. The opinion of probable population and effluent is as follows:

24,000 GPD / 2 Peaking Factor = 12,000 GPD (Average Day)

12,000 GPD / 107 Units = 112 GPD per Unit

This estimate is based on values expected by CMD and a peaking factor of 2 used in consistency with the water demands for the Site, resulting in maximum day sanitary sewer flows of 24,000 GPD. 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 CMD for Eastwood Village dated March 31, 2023. See **Appendix C** for reference.

The following statements clearly defines the Eastwood Village project to be in compliance with the CMD allowable capacities:

“When it comes to wastewater we [Cherokee Metro District] are in the same position we were in 2020.”

The position refers to the usage and capacity values as stated below, and also as stated in **Appendix C**.

“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. Therefore, Eastwood Village can utilize the existing treatment plant and does not need to propose a new wastewater treatment plant.

LETTER OF COMMITMENT

Cherokee Metro District provided a letter of commitment to provide both water and wastewater services. See **Appendix B** for letter.

OPINION OF PROBABLE CONSTRUCTION COSTS

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

SANITARY SEWER IMPROVEMENTS					
Sewer Main Pipe (PVC), Size 8"	2,580	LF	$ 78.00	=	$ 201,240.00
Sanitary Sewer Manhole, Depth < 15 feet	13	EA	$ 5,305.00	=	$ 68,965.00
Sanitary Service Line Installation, complete	32	EA	$ 1,696.00	=	$ 54,272.00

TOTAL: $324,477

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. See **Appendix D** for a service area map of CMD.

MAP OF EXISTING AND PROPOSED FACILITIES

An Overall Utility Plan of the Project with both proposed and existing utility facilities is shown in **Appendix A**. The plan is subject to review by Cherokee Metro District. From the connection to the existing system managed by CMD, the wastewater will flow southeast to the wastewater treatment plant.

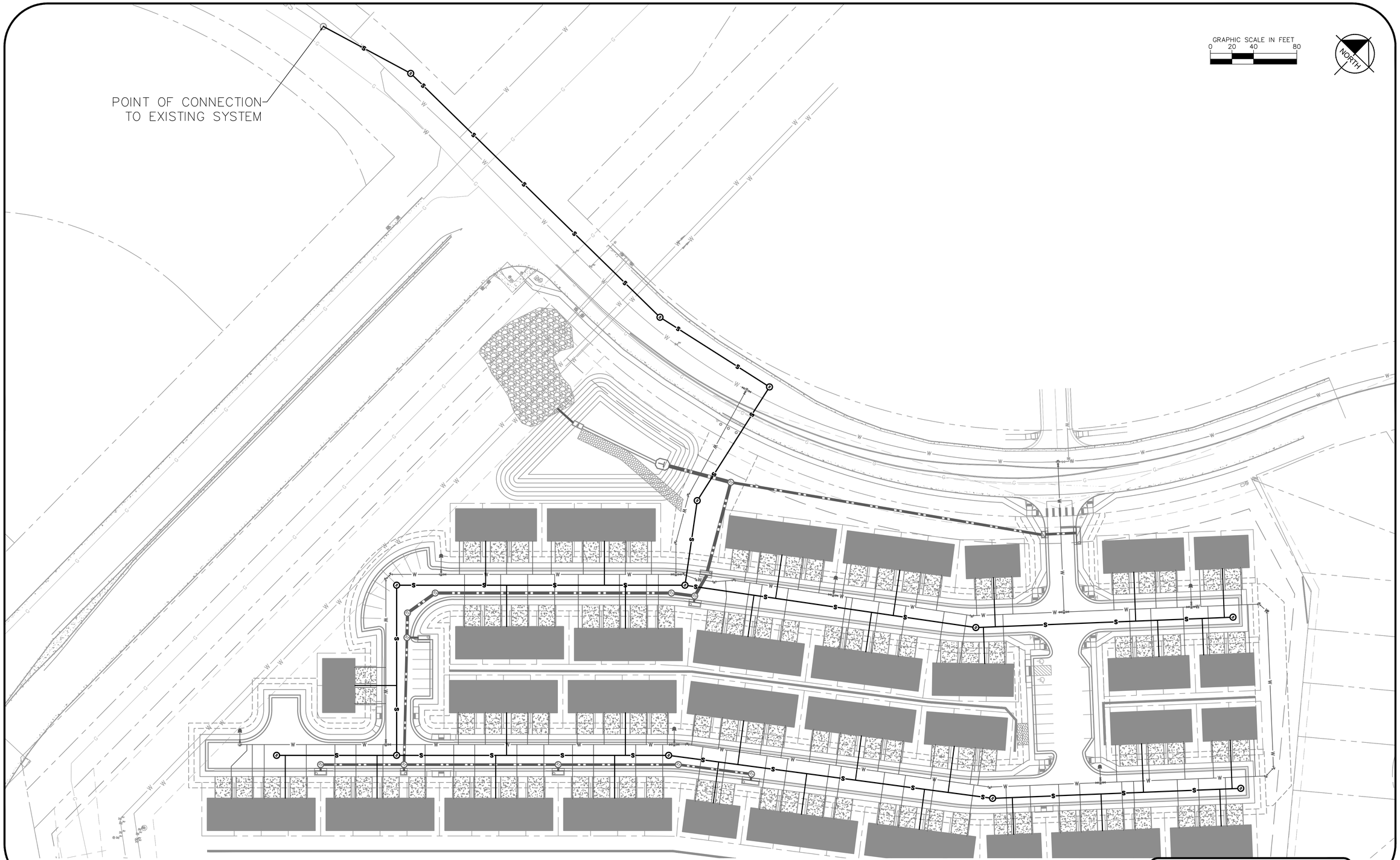
REFERENCES

Cherokee Metropolitan District. “Claremont Ranch Supplemental Reports”. Email to Katy Corkill. March 31, 2023.

Cherokee Metropolitan District. “Water and Wastewater Infrastructure Construction Standards”. December 15, 2020.

Colorado Springs Utilities. “Water Line Extension and Service Standards”. 2023.

APPENDIX A – WASTEWATER SYSTEM SCHEMATIC



WASTEWATER SYSTEM SCHEMATIC

2 NORTH NEVADA AVE. COLORADO SPRINGS, CO 80903
PHONE: 719-435-0182

APPENDIX B – CHEROKEE METRO DISTRICT LETTER OF COMMITMENT FOR SEWER SERVICES

CHEROKEE METROPOLITAN DISTRICT

6250 Palmer Park Blvd., Colorado Springs, CO 80915-2842
Telephone: (719) 597-5080 Fax: (719) 597-5145

November 21st, 2022
John Raptis
Rockwood Homes, LLC
5436 Carvel Grove
Colorado Springs, CO 80922

Sent via email: Andrew.Lundberg@kimley-horn.com

Re: Water and Sewer Service to **Claremont Ranch Filing 7**
Commitment Letter No. **2022-15 (Revision of 2022-02)**

Dear John Raptis,

As requested, this document will serve is as a formal Letter of Commitment from the Cherokee Metropolitan District to provide municipal water and sewer services for Caliber on Constitution located at the Southeast Corner of Marksheffel Road and Meadowbrook Parkway. 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 development:

Type of Use	**Demand (AF/yr)**
Domestic	26.8
Irrigation	0.9
Total	**27.7**

Based on a conservatively low 0% consumptive use of domestic water, the development is expected to produce 24,000 gallons of wastewater per day, representing 1% of CMD's wastewater capacity. This usage is in line with anticipated wastewater demand for this area of the District. This 0% consumptive use is calculated for the purposes of ensuring CMD wastewater collection and treatment infrastructure is capable of treating the maximum possible volume of wastewater generated from this development. This is not intended in any way to limit consumptive uses of potable water on the subject property.

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.

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

Sincerely,

Amy Lathen
General Manager

Cc: Peter Johnson; Water Counsel: sent via email
Steve Hasbrouck; Board President: sent via email
Jeff Munger; Water Resource Engineer: sent via email
Kevin Brown; Jr. Engineer: sent via email

APPENDIX C – CHEROKEE METRO DISTRICT WASTEWATER TREATMENT PLANT CAPACITY INFORMATION

Corkill, Katy (Rodriguez)

From:	Kevin Brown <kbrown@cherokeemetro.org>
Sent:	Friday, March 31, 2023 10:56 AM
To:	Corkill, Katy (Rodriguez)
Cc:	Kofford, Kevin; Lundberg, Andrew; Chesak, Makenzie (Darby)
Subject:	RE: Claremont Ranch Supplemental Reports
Attachments:	Water Resource Report SE Corner Marksheffel & Meadowbrook 2022-15.pdf

Katy,

I've attached the water provider's supplement to the water resource report. Let me know if there are any changes we need to make. When it comes to wastewater we are in the same position we were in 2020. In 2022 our average wastewater production was 1.5 MGD and our owned wastewater plan capacity is 2.6 MGD. Let me know what other information you need from us for the wastewater report.

Thanks,

Kevin Brown, PE

Water Resource Engineer
Cherokee Metropolitan District
719-322-4339
kbrown@cherokeemetro.org

From: Corkill, Katy (Rodriguez) <Katy.Corkill@kimley-horn.com>
Sent: Thursday, March 23, 2023 1:39 PM
To: Kevin Brown <kbrown@cherokeemetro.org>
Cc: Kofford, Kevin <Kevin.Kofford@kimley-horn.com>; Lundberg, Andrew <Andrew.Lundberg@kimley-horn.com>; Chesak, Makenzie (Darby) <Makenzie.Chesak@kimley-horn.com>
Subject: Claremont Ranch Supplemental Reports

Hey Kevin,

It was great seeing you today at the Loop Authority meeting. Thanks again for talking through the low flow sewer conditions with me for Claremont Ranch. It is super helpful to know that you would prefer to have a mainline not meeting velocity requirements than to have a very long service line!

There are a couple more items that we need before our submittal to the county. The first is an updated Water Resource Report. I have attached the original report dated from February 2021. It has the water commitments and water balances from our original unit count and expected demand, but all other information should still apply. I attached the Water Letter Commitment which has the accurate expected demand after we lowered our townhome unit count to 107.

For our wastewater resource report, we are also in need of updated numbers regarding your WWTP capacity. Below is a snip of an email and the language you sent for this same purpose for Meadowbrook Park in October 2020.

From: Kevin Brown <kbrown@cherokeemetro.org>
Sent: Friday, October 9, 2020 11:12 AM
To: Kofford, Kevin <Kevin.Kofford@kimley-horn.com>; Heiberger, John <john.heiberger@kimley-horn.com>
Cc: Houk, Jim <Jim.Houk@kimley-horn.com>; Jeff Munger <jmunger@cherokeemetro.org>; Peter C. Johnson <pcj@vrlaw.com>; Steven Hasbrouck (Board Member) <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

Feel free to call me if we need to discuss any of this further, thanks!
Katy

Katy Corkill (Rodriguez)
Kimley-Horn | 2 N Nevada Ave, Suite 900, Colorado Springs, CO 80903
Direct: 719 501 3032 | www.kimley-horn.com
Connect with us: Twitter | LinkedIn | Facebook | Instagram

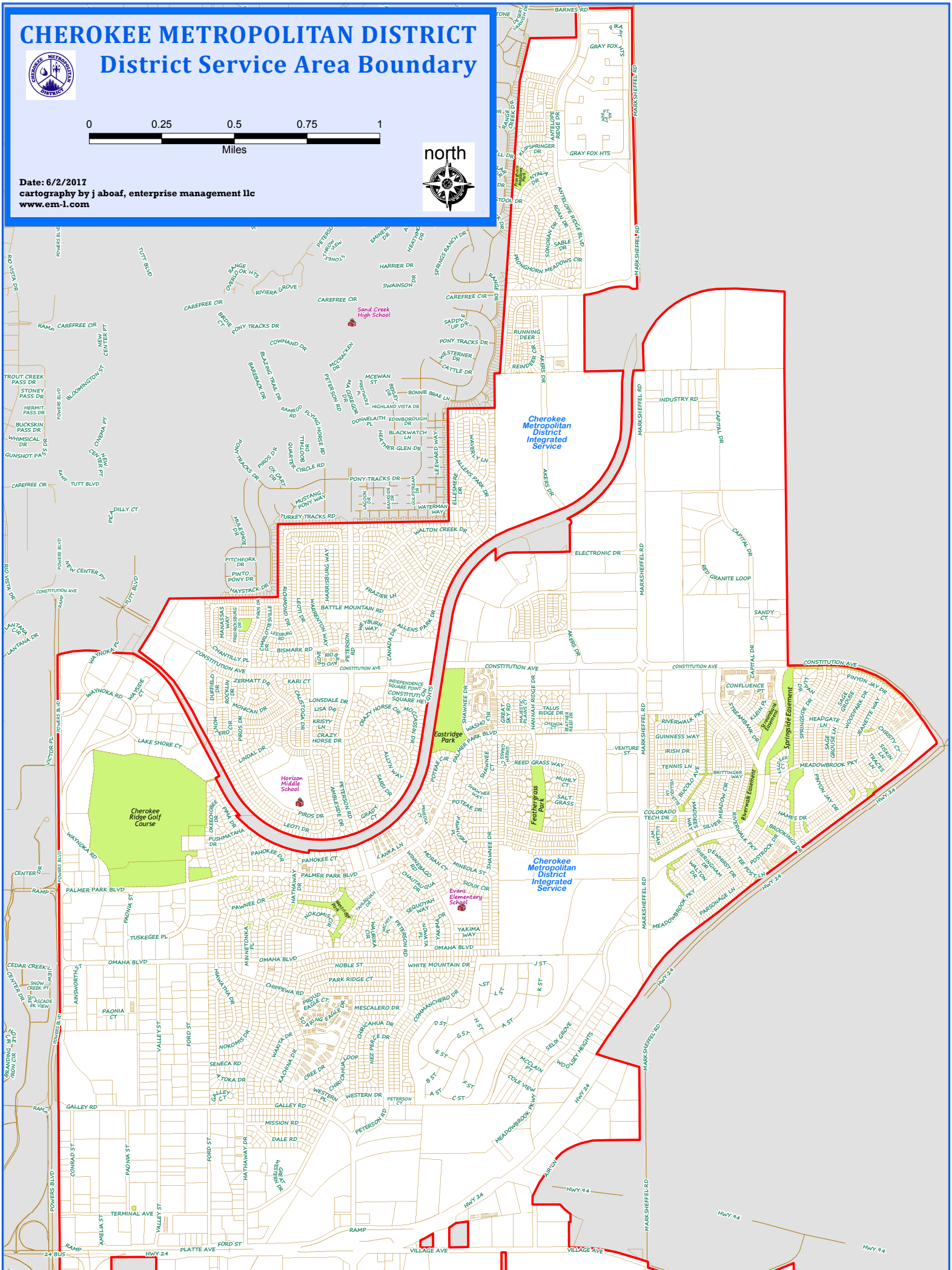
APPENDIX D – CHEROKEE METRO DISTRICT SERVICE AREA MAP

CHEROKEE METROPOLITAN DISTRICT
District Service Area Boundary

0 0.25 0.5 0.75 1
Miles

north

Date: 6/2/2017
cartography by j aboaf, enterprise management llc
www.em-1.com



APPENDIX E – EL PASO COUNTY WASTEWATER DISPOSAL REPORT CHECKLIST

2880 International Circle, Suite 110
Colorado Springs, CO 80910
Phone 719-520-6300
Fax 719-520-6695
www.elpasoco.com

EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT

WASTEWATER DISPOSAL REPORT CHECKLIST

Revised: January 2022

Wastewater Disposal Report

The purpose of the wastewater disposal report is to establish the wastewater disposal provisions atthe sketch plan or preliminary plan stage of subdivision development and ensure conformanceof wastewater disposal with this Code at the time of approval of the final plat. All sketch plans, preliminary plans, and final plats submitted for review shall be accompanied with a wastewater disposal report. The requirements of the preliminaryplan report shall not be deferred or postponed until the final plat application.

The PCD Director may modify the applicable requirements, including requiring additional items or removing items, based upon the project and site-specific circumstances.

		Applicant	PCD
	NOTE: Please confirm each item below has been included by placing a check mark in the "Applicant" column. See right for an example. The "PCD" column is for office use only.	√	Office use only
	Report Content		
	Sketch Plan Report		
1	The following information shall be included in the wastewater report submitted with the sketch plan application		
	Map showing relative location of point of connection to an existing system;	✓	
	Map showing relative location of the existing or proposed treatment facility;	✓	
	Estimate of projected population, units, and density, as related to wastewater production on an average daily basis;	✓	
	Capacity of the existing treatment plant and current utilization;	✓	
	Anticipated capacity of any proposed treatment plant; and	✓	
	Letter of commitment from the wastewater provider proposed for service, with identification of whether the sketch plan area is within the service boundaries of the proposed provider.	✓	
	Preliminary Plan Report		
1	The following information shall be included in the wastewater report submitted with the preliminary plan application:		
	All items required to be included with the sketch plan report; and	✓	
	Letter of commitment from the wastewater provider proposed for service, which includes whether the preliminary plan area is within the service boundaries of the proposed provider, and a statement by the wastewater provider that adequate capacity exists or will exist in order to provide service.	✓	
	Final Plat Report		
1	The following information shall be included in the wastewater report submitted with the final plat application:		
	Unless previously provided with a preliminary plan application for the property, all items required to be included with the sketch plan report; and		
	Unless provided with the preliminary plan, a Letter of Commitment from the wastewater provider proposed for service, which includes information indicating that the land has been included into the boundaries of the provider's service area, or that contractual arrangements for service have been met.		
	OWTS Report		
1	The following shall be fully addressed in or submitted with an OWTS Report. These requirements may be updated from time to time by EPCPH without corresponding amendments to this Code being approved. Any such updates by EPCPH shall control. The EPCPH may require the subdivider to submit additional engineering or geological applicant reports or data and to conduct a study of the economic feasibility of service by central sewage system prior to making its recommendations, which may be updated from time to time by EPCPH without.		
	A map, drawn at the same scale as the preliminary plan, locating all lots, drainage-ways, floodplains, slopes in excess of 30%, surface and sub-surface soils hazards and constraints, natural and cultural features, geologic hazards and constraints, depth to bedrock, water table depth, current and historic land use, and other hazards;		
	Soil conditions, NRCS soils classification, slope of the terrain, underground water table, subsurface rock, and limitations on site location of the system;		

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WASTEWATER DISPOSAL REPORT CHECKLIST

Revised: January 2022

	Conditions which may cause deleterious effects to systems in the area, such as runoff or irrigation;		
	The availability of a central sewage system and the feasibility of inclusion into the system;		
	The proximity of water wells, lakes, streams, irrigation ditches, ponded water, and other water sources in the area being subdivided; and		
	Soils investigation, including the following:		
	Visual and tactile evaluation of 2 or more soil profile test pit excavations must be conducted to determine soil type as well as to determine whether a limiting layer is encountered;		
	In addition to the 2 soil profile test pit excavations, percolation testing may be conducted to obtain additional information regarding the long-term acceptance rate of the soil;		
	If the site evaluation includes both the visual and tactile evaluation of soil profile test pit excavations and percolation tests, and the results from these 2 evaluations do not coincide with the same LTAR (Long Term Acceptance Rate) as noted in Table 10-1 of the EPCPH Regulations, the designer must use the more restrictive LTAR in determining the size of the soil treatment area as listed below:		
	Evaluation of 2 or more soil profile test pit excavations must be performed to determine soil types, limiting layers, and best depth for the infiltrative surface, unless otherwise approved by EPCPH. (At least 1 of the soil profile test pit excavations must be performed in the portion of the soil treatment area anticipated to have the most limiting conditions).		
	The total number of soil profile test pit excavations required is based on the judgment of the competent technician who may require an additional soil profile test pit excavation in the area of the proposed alternate soil treatment area if deemed necessary.		
	The minimum depth of the soil profile test pit excavation must be to any limiting layer, or 4 feet below the infiltrative surface of the in-situ soil, whichever is encountered first.		
	Layers and interfaces that interfere with the treatment and dispersal of effluent must be noted. Thus, any limiting soil characteristic such as consistence also needs to be evaluated. The evaluation of consistence may also include an evaluation of excavation difficulty, rupture resistance, and/or penetration resistance.		
	The soil observations must be conducted at or immediately adjacent to the location of the proposed soil treatment area, but if possible, not under the final location of a trench or bed.		
	Each soil profile test pit excavation observed at the proposed soil treatment area must be evaluated under adequate light conditions with the soil in an unfrozen state.		
	The soil observation method must allow observation of the different soil horizons that constitute the soil profile.		
	Soil profile test pit observations must be conducted prior to percolation tests to determine whether the soils are suitable to warrant percolation tests and, if suitable, at what depth percolation tests must be conducted.		
	The soil type at the proposed infiltrative surface of the soil treatment area or a more restrictive soil type within the treatment depth must be used to determine the long-term acceptance rate from Table 10-1 or Table 10-1A. The treatment depth is 2 to 4 feet depending on the required thickness for the treatment level below the infiltrative surface from Item 4. Table 7-2.		
	Soils data, previously collected by others at the site can be used for the purposes of an OWTS design at the discretion of EPCPH. It is recommended that the data be verified, at a minimum, by performing an evaluation of a soil profile test pit excavation.		
	Soil descriptions for determination of a limiting layer must include:		

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WASTEWATER DISPOSAL REPORT CHECKLIST

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	The depth of each soil horizon measured from the ground surface and a description of the soil texture, and structure of each soil horizon;		
	Depth to the bedrock;		
	Depth to the periodically saturated soil as determined by:		
	Redoximorphic features and other indicators of water levels, or		
	Depth of standing water in the soil observation excavation, measured from the ground surface, if observed, unless redoximorphic features indicate a higher level.		
	Any other soil characteristic that needs to be described to design a system, such as layers that will restrict permeability.		
2	Additional Requirements for Lot Sizes Between 2½ and 5 Acres		
	Soil Investigation conducted for no fewer than 20% of the total number of lots in the filing. Investigation shall be evenly dispersed over the project area. In cases in which unique geologic, topographic, or soils conditions, such as depth to bedrock, depth to groundwater, slopes in excess of 30 percent, etc. are found, additional tests may be required by EPCPH; and		
	An analysis of the availability of a central sewage system and the feasibility of service by a central sewage system. If there is a central sewage system within 1 mile of the proposed subdivision, or if the subdivision is within an organized sewage district or municipal service area, the applicant shall submit documentation that the district or municipality is incapable of serving the site or that the costs of service are prohibitive.		
3	Additional Requirements for OWTS on Lots Within 400 Feet of a Sewer Line. Pursuant to Chapter 8, On-Site Wastewater Treatment Systems (OWTS) Regulations, of the Regulations of the El Paso County Board of Health. A permit to construct, alter, modify or repair an OWTS may be denied by EPCPH if a municipal or sanitation district sewer mainline exists within 400 feet, as measured by way of public access or legal easement, to any part of the applicant's property, and if the municipality or district agrees to provide sewer service. EPCPH shall only approve an OWTS permit for a property that is subject to connection to sanitary sewer if all OWTS installation criteria can be satisfied, and the applicant can provide evidence that the municipality or district does not expressly object to the OWTS installation. If. as a condition of service, an annexation of the property to a different political entity is required, connection to the community sewer is not required by EPCPH.		