

Wastewater Treatment Report

**Waterside
(to be Replatted as Waterside at Lake Woodmoor)**

El Paso County, Colorado

Prepared for:
La Plata Communities, Inc.
9540 Federal Drive, Suite 200
Colorado Springs, Colorado 80921

Prepared by:
Kiowa
Engineering Corporation

1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

Kiowa Project No. 22027
January 19, 2024

I. Introduction

All utility design for the proposed development has been performed in accordance with the *Woodmoor Water and Sanitation District No. 1 Rules and Regulations*, *Woodmoor Water and Sanitation District No. 1 System Specifications*, and the *El Paso County Land Development Code*. Supporting design calculations are included in Appendix A of this report.

II. Project Description

Waterside is a planned residential development located in northern El Paso County, Colorado. The project is planned as a townhome community. The site is located in a portion of the West Half of the Southeast Quarter of Section 11, Township 11 South, Range 67 West of the 6th Principal Meridian. The property is currently platted as the Waterside Condominiums in accordance with the declaration recorded on February 13, 1981, in Book 3403-722 and the condominium map recorded on February 13, 1981 in Plat Book 2-47. The property is currently undeveloped and covers a total of approximately 7.53 acres. The property will be platted/replatted as 'Waterside at Lake Woodmoor'. The streets will be private and 44 townhouse lots will be developed. With the platting of Waterside at Lake Woodmoor, water and wastewater mains and services within the property will be constructed.

III. Sanitary Sewer Collection System

The proposed sanitary sewer collection system for Waterside at Lake Woodmoor will be connected to the existing Woodmoor Water and Sanitation District sanitary sewer main located southeast of the intersection of Deer Creek Road and Woodmoor Drive with new mains with service connections generally following the private roads of the project. The proposed sanitary sewer collection system will be comprised of existing and new 8-inch PVC public gravity sewer constructed per WWSD Standards and Specifications.

Wastewater flow calculations, which are contained in Appendix A of this report, indicate that the new 8-inch PVC sanitary sewer will be adequate for the Waterside at Lake Woodmoor gravity sewer system. The Utility Plan is included in Appendix D of this report and shows the locations of the existing and proposed sewer lines and associated appurtenances.

IV. Wastewater Collection and Treatment

The sanitary sewer collection system to be constructed as part of the Waterside at Lake Woodmoor development is comprised of 8-inch PVC public gravity sewer. The sanitary sewer within Waterside at Lake Woodmoor anticipated for the Woodmoor Water and Sanitation District (WWSD) is summarized in Section 4.0 of the District's Long Range Plan (LRP). The complete LRP has not been included in this report. Contained within Appendix B is a letter that addresses the commitment to serve the subdivision from the District.

Wastewater conveyed by the existing WWSD's collection system outfalls to the Tri-Lakes Wastewater Treatment Plant. A description of the Plant's current operation and future projects is

contained within the LRP. The plant has adequate capacity to treat and discharge wastewater flows generated by Waterside at Lake Woodmoor in conformance with current Colorado Department of Public Health and Environment standards and regulations.

APPENDIX A
Vicinity Map
Woodmoor District Overview Map
Wastewater Calculations

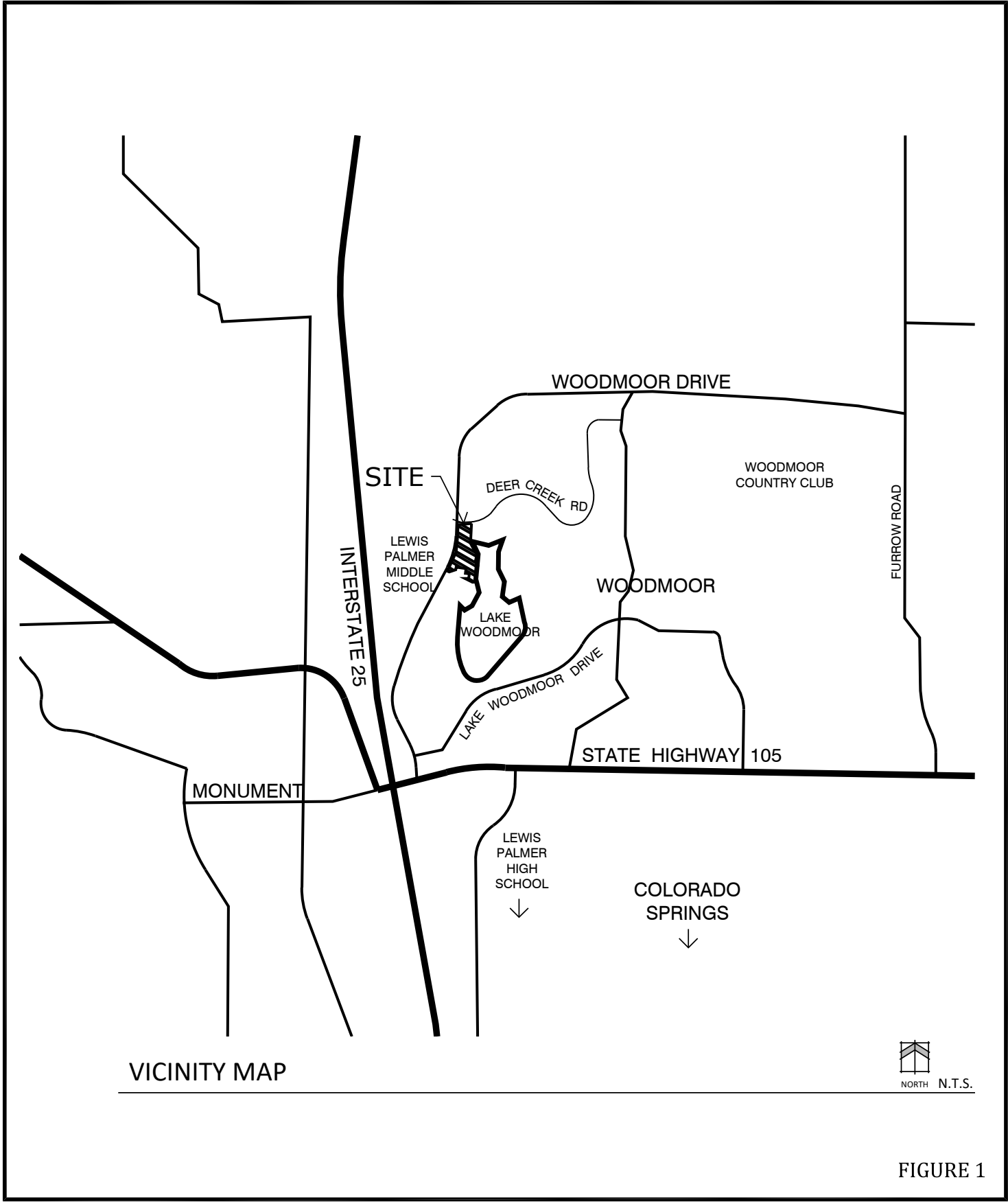


FIGURE 1

15073 Drainage Plan.dwg/Nov. 03, 2016

Waterside
Vicinity Map
El Paso County, Colorado

PROJECT NO. 22027

Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

MAP LEGEND

WOODMOOR
WOODMOOR DRIVE
321 TRACT "A"

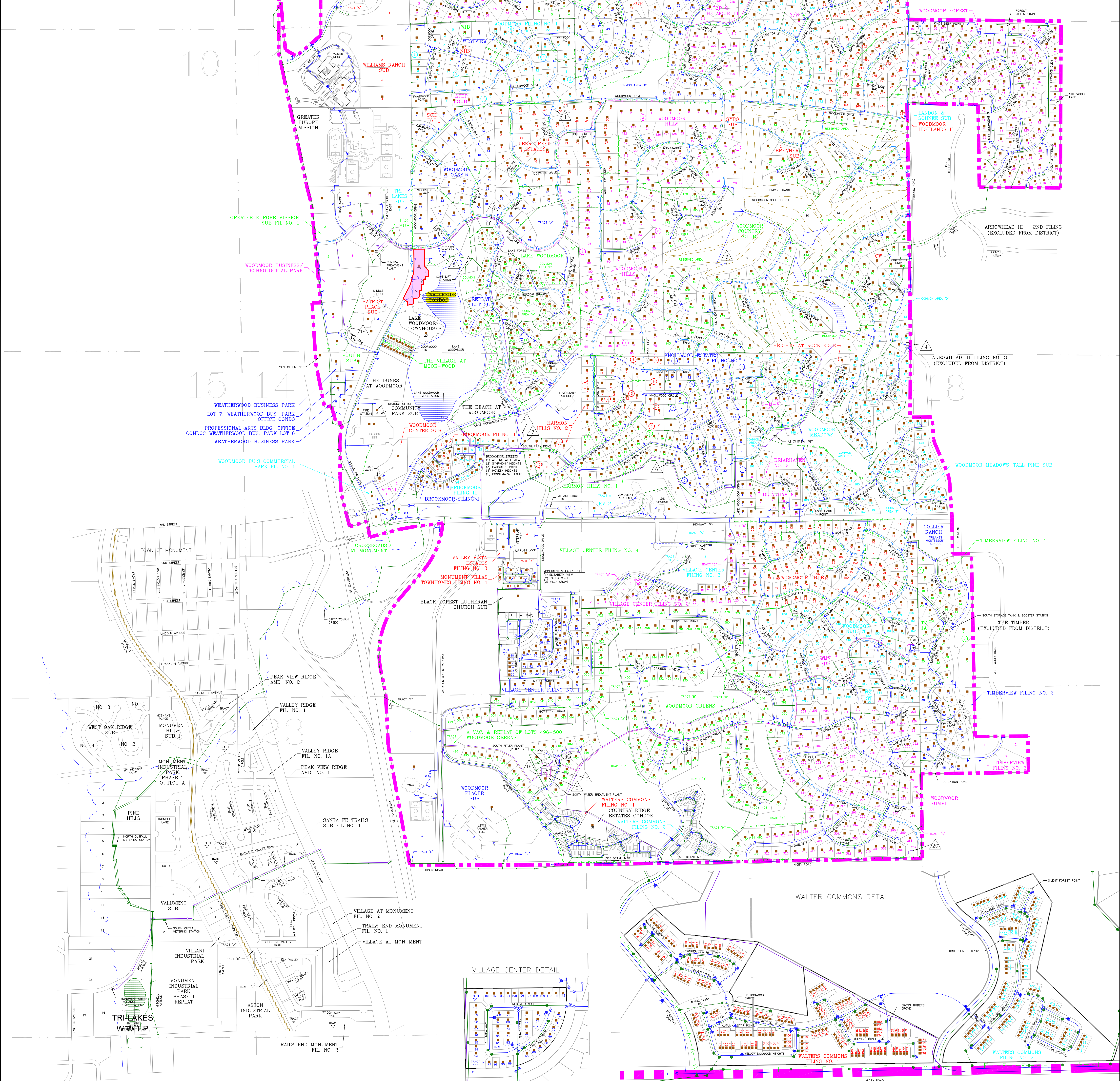
SUBDIVISION NAME
STREET NAME
LOT INFORMATION
DISTRICT BOUNDARY
SECTION LINE
SUBDIVISION BOUNDARY
LOT LINE
SURFACE WATER
DETAIL BOUNDARY
SEWER R&R BOUNDARY
SEWER BASIN BOUNDARY
SEWER LINE (PVC)
SEWER LINE (STL)
SEWER LINE (VCP)
SEWER LINE W/ FOLDIFORM
SEWER LINE W/ KISTIFORM
SEWER LINE W/ HDPE
SEWER FORCE MAIN (PVC)
WATER PRESSURE ZONE BNDY.
POTABLE WATER PIPE (PVC)
POTABLE WATER PIPE (CP)
POTABLE WATER PIPE (HDPE)
NON-POTABLE WATER PIPE (PVC)
TRANSMISSION LINE (PVC)
PRIVATE SYSTEM
NOT FINAL ACCEPTED SYSTEM

1 SECTION NUMBER
2 SEWER RENEWAL & REPLACEMENT ZONE NUMBER
3 MAP PANEL NUMBER
4 WATER PRESSURE ZONE NUMBER
5 SEWER BASIN NUMBER

NOTES:
SOME OBJECTS IN THIS LEGEND MAY NOT BE USED ON THIS PLAN.
ALL WATER MAINS ARE 6" UNLESS NOTED OTHERWISE.
ALL SEWER MAINS ARE 8" UNLESS NOTED OTHERWISE.

SUBDIVISION ABBREVIATIONS

BMG'S = BOMGAAR'S REPLAT
C-M = COOK-MALONEY SUBDIVISION
CHS = CHISHOLM SUB FIL. NO. 3
COVE = THE COVE AT WOODMOOR
CW = COUNTRY WOODMOOR
G-D SUB = GILMORE-DANSKIN SUB
KV 1 = KNOLLWOOD VILLAGE FIL. NO. 2
KV 2 = KNOLLWOOD VILLAGE FIL. NO. 2
LPH = LOFTY PINE HEIGHTS
NMN = NICHOLAS H. NANCE SUB FILING NO. 1
LWR = A REPLAT OF LOT 56 LAKE WOODMOOR
S-M-V = SHIPLEY-MILLER-VANCE SUB
SCH. EST. = SCHOELL ESTATES
STEP. SUB = STEPHAN SUB
TV 1A = TIMBERVIEW SUB FILING 1A
VCW 1 = VCW 1 TRUST SUB
WIB = WOODMOOR FILING NO. 1B
WESTVIEW = WESTVIEW AT WOODMOOR
WHI = WOODMOOR HIGHLANDS III
WHS = WINDING HILLS NO. 2
WMY SUB = WOODMOOR MOUNTAIN VIEW SUB
WN 1ST = WOODMOOR NUGGET 1ST AMD
WT = WOODMOOR WATER TANK SUB
Y/N = YATES NIBLACK SUB



**Waterside at Lake Woodmoor
Wastewater Demand Calculations**

Single-Family Detached/Attached	44 units	
Persons per Dwelling Unit	<u>3.5 persons</u>	
	154 persons	
1 Person = <u>100 gpd</u>		
Average Daily Flow (ADF) =	15,400 gpd	ADF = persons x gpd
Peak Flow Factor = <u>4</u>		
Peak Hourly Flow (PHF) =	61,600 gpd	PHF = ADF x Peak Flow Factor
Single-Family PHF =	43 gpm	

Total PHF =	43 gpm	
Total PHF =	0.10 cfs	cfs = gpm / (7.48 gal/ft ³) / (60 sec/min)
Pipe (8" SDR35) Capacity =	1.23 cfs	Qcap = (1.486/0.009)*0.349*0.167 ^{2/3} *0.005 ^{1/2} Pipe Slope = 0.5%
Pipe Capacity is Greater than Total PHF		
Pipe (12" SDR35) Capacity =	2.14 cfs	Qcap = (1.486/0.009)*0.785*0.25 ^{2/3} *0.0017 ^{1/2} Pipe Slope = 0.17%
Pipe Capacity is Greater than Total PHF		

APPENDIX B
Woodmoor Water and Sanitation District
Commitment Letter



WOODMOOR

Water & Sanitation District No. 1

P. O. Box 1407 • Monument, Colorado 80132
Phone (719) 488-2525 • Fax (719) 488-2530

November 10, 2023

To: La Plata Communities, Inc
Attn: Steve Rossell
9540 Federal Drive, Suite 200
Colorado Springs, CO 80921

RE: Water & Wastewater Service Commitment – Waterside Condominiums
El Paso County Parcel Numbers: 7111404113 - 7111404194

Dear Mr. Rossell:

The above referenced development, as depicted in the attached sketch, is located within the service boundaries of Woodmoor Water and Sanitation District No. 1 (the District).

It is the District's understanding that La Plata Communities intends to construct 44 multi-family units on 7.53 acres of land within the Waterside Development with a projected total water demand of 11.836 Acre-Feet per year.

The District is committed to providing water and sewer services to the development once the following terms and conditions are met:

1. The Developer must apply for, be subsequently allocated, and enter into an agreement with the District for Supplemental Water Service. Supplemental Water Service is allocated by the District's Board (in its sole and absolute discretion) and therefore is not guaranteed. The District makes no representation herein (expressed or implied) as to whether Developer will or won't be successful in obtaining Supplemental Water Service for the Development.
2. The Development must comply with all District rules, regulations, specifications, and policies regarding water and wastewater service, including the District's System Specifications regarding installation of Water and Sewer utilities, granting of water and sewer utility easements, and construction of offsite improvements if required.

If you should have any questions or need further assistance, please contact me.

Sincerely,

Jessie J. Shaffer
District Manager

Cc: Ariel Hacker – District Engineer, Dan LaFontaine – Operations Superintendent

Appendix C
Water Supply Summary

Kiowa Engineering Corporation

FORM NO.
GWS-76
05/2011

WATER SUPPLY INFORMATION SUMMARY
STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
1313 Sherman St., Room 821, Denver, CO 80203
Main (303) 866-3581 dwr.colorado.gov

Section 30-28-133,(d), C.R.S. requires that the applicant submit to the County, "Adequate evidence that a water supply that is sufficient in terms of quantity, quality, and dependability will be available to ensure an adequate supply of water."

1. NAME OF DEVELOPMENT AS PROPOSED:

Waterside at Lake Woodmoor

2. LAND USE ACTION: **PUD Development Plan/Preliminary Plan**

3. NAME OF EXISTING PARCEL AS RECORDED:

SUBDIVISION: **Waterside Condominiums**, FILING (UNIT), BLOCK, LOT

4. TOTAL ACREAGE: **7.53**

5. NUMBER OF LOTS PROPOSED **44**

PLAT MAP ENCLOSED? YES or NO

6. PARCEL HISTORY – Please attach copies of deeds, plats, or other evidence or documentation.

A. Was parcel recorded with county prior to June 1, 1972? YES or NO

B. Has the parcel ever been part of a division of land action since June 1, 1972? YES or NO

If yes, describe the previous action:

7. LOCATION OF PARCEL – Include a map delineating the project area and tie to a section corner.

----- 1/4 of the SE 1/4, Section 11, Township 11 N or S, Range 67 E or W

Principal Meridian (choose only one): Sixth New Mexico Ute Costilla

Optional GPS Location: GPS Unit must use the following settings: Format must be **UTM**, Units must be **meters**, Datum must be **NAD83**, Unit must be set to **true N**, Zone 12 or Zone 13

Easting: _____

Northing: _____

8. PLAT – Location of all wells on property must be plotted and permit numbers provided.

Surveyor's Plat: YES or NO If not, scaled hand drawn sketch: YES or NO

9. ESTIMATED WATER REQUIREMENTS

USE	WATER REQUIREMENTS	
	Gallons per Day	Acre-Feet per Year
HOUSEHOLD USE # <u>44</u> of units	_____	<u>11.836*</u>
COMMERCIAL USE # _____ of S. F	_____	_____
IRRIGATION # _____ of acres	_____	_____
STOCK WATERING # _____ of head	_____	_____
OTHER: _____	_____	_____
TOTAL	_____	<u>11.836</u>

*Includes irrigation use

10. WATER SUPPLY SOURCE

EXISTING WELL DEVELOPED SPRING

WELL PERMIT NUMBERS

MUNICIPAL
 ASSOCIATION
 COMPANY

DISTRICT
NAME Woodmoor W&S

LETTER OF COMMITMENT FOR SERVICE YES or NO

NEW WELLS -

PROPOSED AQUIFERS – (CHECK ONE)

ALLUVIAL UPPER ARAPAHOE
 UPPER DAWSON LOWER ARAPAHOE
 LOWER DAWSON LARAMIE FOX HILLS
 DENVER DAKOTA

OTHER: _____

WATER COURT DECREE CASE NUMBERS:

11. WAS AN ENGINEER'S WATER SUPPLY REPORT DEVELOPED? YES or NO IF YES, PLEASE FORWARD WITH THIS FORM. (This may be required before our review is completed.)

12. TYPE OF SEWAGE DISPOSAL SYSTEM

SEPTIC TANK/LEACH FIELD

CENTRAL SYSTEM

DISTRICT NAME: Woodmoor W&S

LAGOON

VAULT

LOCATION SEWAGE HAULED TO: _____

ENGINEERED SYSTEM (Attach a copy of engineering design.)

OTHER:

Appendix D
Preliminary Utility Plan

Kiowa Engineering Corporation

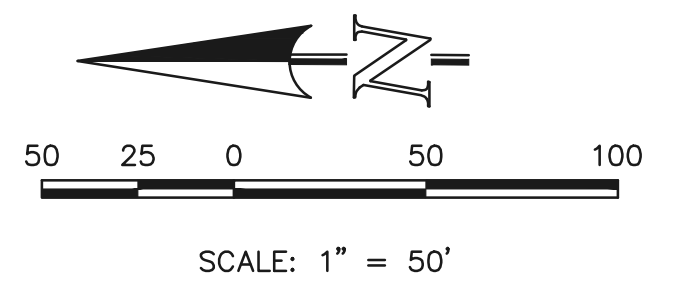
WATERSIDE TOWNHOMES
Preliminary/Final
PUD Site Plan

Monument, Colorado

DATE: 12/06/23
PROJECT MGR: M. Larson
PREPARED BY: M. Sinneros

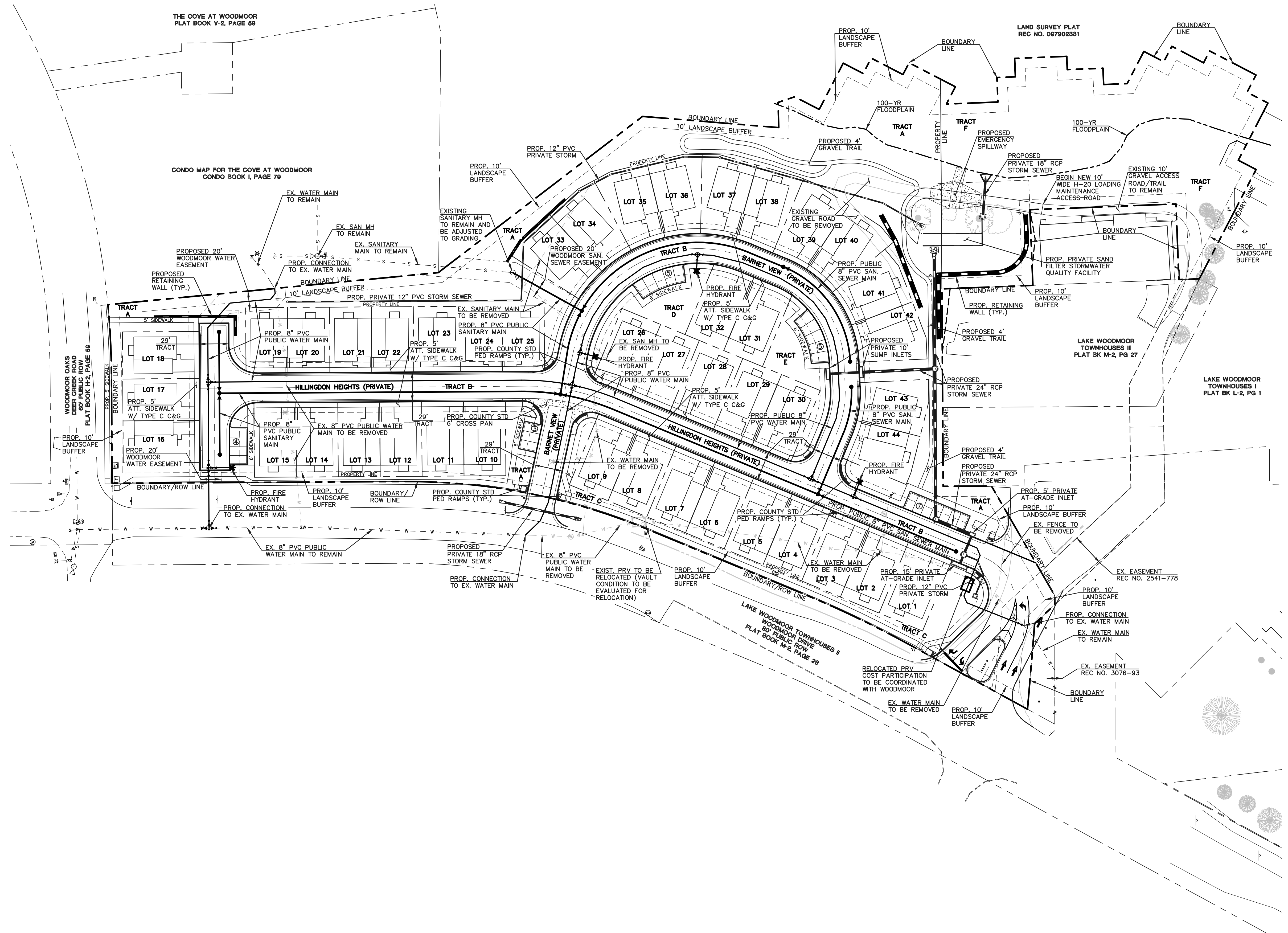
NOTES:

1. THE UTILITY SIZES SHOWN HEREON ARE PRELIMINARY AND SUBJECT TO CHANGE DURING THE FINAL DESIGN PROCESS.
2. ALL PROPOSED ROADWAYS SHOWN HEREON ARE PRIVATE.
3. ALL WATER AND SEWER LINES SHOWN HEREON ARE 8" DIAMETER UNLESS LABELED OTHERWISE.
4. FIRE HYDRANT LATERALS ARE 6" DIA.
5. ALL LOTS PLATTED WITH 5' SIDE YARD UTILITY EASEMENTS AND 5' FRONT AND 7' REAR YARD UTILITY EASEMENT, UNLESS OTHERWISE NOTED.
6. ALL CORNER LOTS PLATTED WITH 25' SIGHT TRIANGLE TO MEET TOWN STANDARDS UNLESS OTHERWISE SHOWN.
7. NO SEPARATE IRRIGATION TAPS FOR INDIVIDUAL LOTS
8. CURB AND GUTTER TRANSITIONS ARE TYPICAL AT 4-WAY AND TEE INTERSECTIONS OF RESIDENTIAL STREETS AND DOWN DRAINING CUL-DE-SACS.



LEGEND:

DESCRIPTION	SYMBOL
EXISTING FIRE HYDRANT	⊙
PROPOSED FIRE HYDRANT	⊛
PROPOSED WATER MAIN	—●—
PROPOSED SANITARY SEWER	—○—
BOUNDARY	—
PROPOSED STORM PIPE	—■—
EXISTING SANITARY	—○—
EXISTING WATER W/EX. VALVE	—○—



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SEAL, ISSUE INFO, SHEET NUMBER, PLAN FILE #

PRELIMINARY UTILITY PLAN

5
OF 16