

Job No. 192449

May 23, 2023

Viewpoint Development  
12750 Oak Cliff Way  
Colorado Springs, CO 80908

Re: Wastewater Study  
Lots 1-7, New Breed Ranch, Filing No. 3  
El Paso County, Colorado

Ref: *Development Plan/Preliminary Plan, dated May 24, 2000*

Dear Mr. Scott:

As requested, personnel of RMG – Rocky Mountain Group has performed a preliminary investigation and site reconnaissance at the above referenced address.

The area within the proposed Filing No. 3 is currently undeveloped land within a larger parcel identified as:

- A portion of EPC Schedule No. 6210000002: addressed as 3250 Shoup Rd, which consists of 279.07 acres and is zoned PUD RR-5.

It is our the southern portion of the parcel is to be subdivided into 7 new lots, each approximately 5 acres. The approximate location of the site is shown on the Site Vicinity Map, Figure 1.

This letter is to provide information for the on-site wastewater report per the On-Site Wastewater Treatment Systems (OWTS) Regulations of the El Paso County Board of Health pursuant to Chapter 8.

The following are also excluded from the scope of this report including (but not limited to) foundation recommendations, site grading/surface drainage recommendations, subsurface drainage recommendations, geologic, natural and environmental hazards such as landslides, unstable slopes, seismicity, snow avalanches, water flooding, corrosive soils, erosion, radon, wild fire protection, hazardous waste and natural resources.

### **Previous Studies and Field Investigation**

Reports of previous geotechnical engineering/geologic investigations for this site were available for our review and are listed below:

1. Soil and Geology Study, Lots 1-7, New Breed Ranch, Filing No. 3, El Paso County, Colorado, prepared by RMG – Rocky Mountain Group, Job No. 192449, dated May 23, 2023.
2. *Onsite Wastewater Report, New Breed Ranch, Filing No. 2, Meadow Run Circle, El Paso County, Colorado*, prepared by RMG Engineers Group, Job No. 118479, dated August 26, 2008.
3. *Soil and Geology Report, New Breed Ranch, Filing No. 2, Meadow Run Circle, El Paso County, Colorado, prepared by RMG Engineers Group*, Job No. 118479, dated August 30, 2008.
4. *Geologic Hazard Investigation, New Breed Ranch, Should Road Near Black Forest, Colorado, prepared by RMG Engineers Group*, Job No. 41765, dated February 11, 1999.

The findings, conclusions and recommendations contained in these reports were considered during the preparation of this report.

## SITE CONDITIONS

Personnel of RMG performed a reconnaissance visit on April 11, 2023. The purpose of the reconnaissance visit was to evaluate the site surface characteristics including landscape position, topography, vegetation, natural and cultural features, and current and historic land uses. Two 5-foot deep test pits were performed within the boundaries of the proposed Filing No. 3, during our reconnaissance visit. A Test Pit Layout Plan is presented in Figure 2.

The site surface characteristics were observed to consist of low lying grasses and weeds across the entire site. Deciduous trees are scattered across the property.

The following conditions were observed with regard to Filing No. 3:

- A well currently **does not** exist within the proposed Filing No. 3 boundaries;
- No runoff or irrigation features anticipated to cause deleterious effects to treatment systems on the site were observed;
- A drainageway exists on the eastern portion of the property. The entire site lies outside the designated floodway or floodplain;
- Slopes greater than 20 percent **do not** exist on the site; and
- Significant man-made cuts **do not** exist on the site.

## Treatment Areas

Treatment areas at a minimum must achieve the following:

- The treatment areas must be 4 feet above groundwater or bedrock as defined by the Definitions 8.3.4 of the Regulations of the El Paso County Board of Health, Chapter 8, *OWTS Regulations*, effective July 7, 2018;
- Prior to construction of an OWTS, an OWTS design prepared per *the Regulations of the El Paso County Board of Health, Chapter 8, OWTS Regulations* will need to be completed. A scaled site plan and engineered design will also be required prior to obtaining a building permit;

- Comply with any physical setback requirements of Table 7-1 of the El Paso County Department of Health and Environment (EPCDHE);
- Treatment areas are to be located a minimum 100 feet from any well (existing or proposed), including those located on adjacent properties per Table 7-2 per the EPCDHE;
- Treatment areas must also be located a minimum 50 feet from any spring, lake, water course, irrigation ditch, stream or wetland, and 25 feet from dry gulches;
- Other setbacks include the treatment area to be located a minimum 10 feet from property lines, cut banks and fill areas (from the crest);
- The new lots shall be laid out to ensure that the proposed OWTS does not fall within any restricted areas, (e.g. utility easements, right of ways). Based on the test pit observations, the parcel has a minimum of two locations for the OWTS.

Contamination of surface and subsurface water resources should not occur if the treatment areas are evaluated and installed according to El Paso County Health Department and State Guidelines in conjunction with proper maintenance.

## **DOCUMENT REVIEW**

RMG has reviewed the above referenced development plan. We have identified the soil conditions anticipated to be encountered during construction of the proposed OWTS for the lots included in the proposed Filing No. 3. Our review included a review of documented Natural Resource Conservation Service - NRCS data provided by [websoilsurvey.nrcs.usda.gov](http://websoilsurvey.nrcs.usda.gov). The Soil Survey Descriptions are presented below. A review of FEMA Map No. 08041C0295G, effective December 7, 2018, indicates that the proposed treatment areas are not located within an identified floodplain.

## **SOIL EVALUATION**

Personnel of RMG performed a soil evaluation to include two 5-foot deep test pits, on April 11, 2023 (Test Pit TP-1 and TP-2), utilizing the visual and tactile method for the evaluation of the site soils. The test pits were terminated at 5 feet due to the limiting layer (bedrock) encountered. The test pits were excavated in areas that appeared most likely to be used for residential construction. The Test Pit Logs are presented in Figure 3. A Septic Suitability Map is presented in Figure 4.

The soil conditions as indicated by the NRCS data are anticipated to consist of:

- 41 – Kettle gravelly loamy sand, 8 to 40 percent slopes. The Kettle gravelly loamy sand was mapped by the USDA to be located along the southern portion of the property. Properties of the Kettle gravelly loamy sand include, somewhat excessively drained soil, depth of the water table is anticipated to be greater than 6.5 feet, runoff is anticipated to be medium, frequency of flooding and ponding is none, and landforms are depressions.
- 69 – Peyton-Pring complex, 8 to 15 percent slopes. Properties of the Peyton-Pring complex include, well-drained soils, depth of the water table is anticipated to be more than 80 inches, runoff is anticipated to be medium, frequency of flooding and ponding is none, and landforms include hills. The hydrologic soil group of the unit is B.
- 93 – Tomah-Crowfoot complex, 8 to 15 percent slopes. Properties of the Tomah-Crowfoot complex include, well-drained soils, depth of the water table is anticipated to be more than

80 inches, runoff is anticipated to be medium, frequency of flooding and ponding is none, and landforms include alluvial fans and hills. The hydrologic soil group of the unit is B.

Groundwater was not encountered in the test pits. However, bedrock was encountered at approximately 5 feet in both the test pits performed by RMG.

*An OWTS is proposed for each lot and should conform to the recommendations of a future OWTS site evaluation, performed in accordance with the applicable health department codes prior to construction.* This report may require additional test pits in the vicinity of the proposed treatment field. A minimum separation of 4 feet shall be maintained from groundwater and bedrock to the infiltrative surface.

Redoximorphic features indicating the fluctuation of groundwater or higher ground water levels were not observed in the test pits.

## **CONCLUSIONS**

In summary, it is our opinion the site is suitable for individual on-site wastewater treatment systems within the cited limitations. There are no foreseeable or stated construction related issues or land use changes proposed at this time.

Soil and groundwater conditions at the site are suitable for individual treatment systems. It should be noted that the LTAR values stated above are for the test pit locations performed for this report only. The LTAR values may change throughout the site. If an LTAR value of less than 0.35 (or soil types 3A to 5) or greater than 0.80 (soil type 0) is encountered at the time of the site specific OWTS evaluation, an "engineered system" will be required.

Additionally, based on the depth of the limiting layer (bedrock) encountered at a depth of 5 feet below the existing ground surface, the maximum depth of the OWTS components may be limited to 1 foot below the existing ground surface or mound systems (above the ground surface) may be required.

## **LIMITATIONS**

The information provided in this report is based upon the subsurface conditions observed in the profile pit excavations and accepted engineering procedures. The subsurface conditions encountered in the excavation for the treatment area may vary from those encountered in the test pit excavations. Therefore, depth to limiting or restrictive conditions, bedrock, and groundwater may be different from the results reported in this letter.

An OWTS site evaluation will need to be performed in accordance with the applicable health department codes prior to construction.


I hope this provides the information you have requested. Should you have questions, please feel free to contact our office.

Cordially,

Reviewed by,

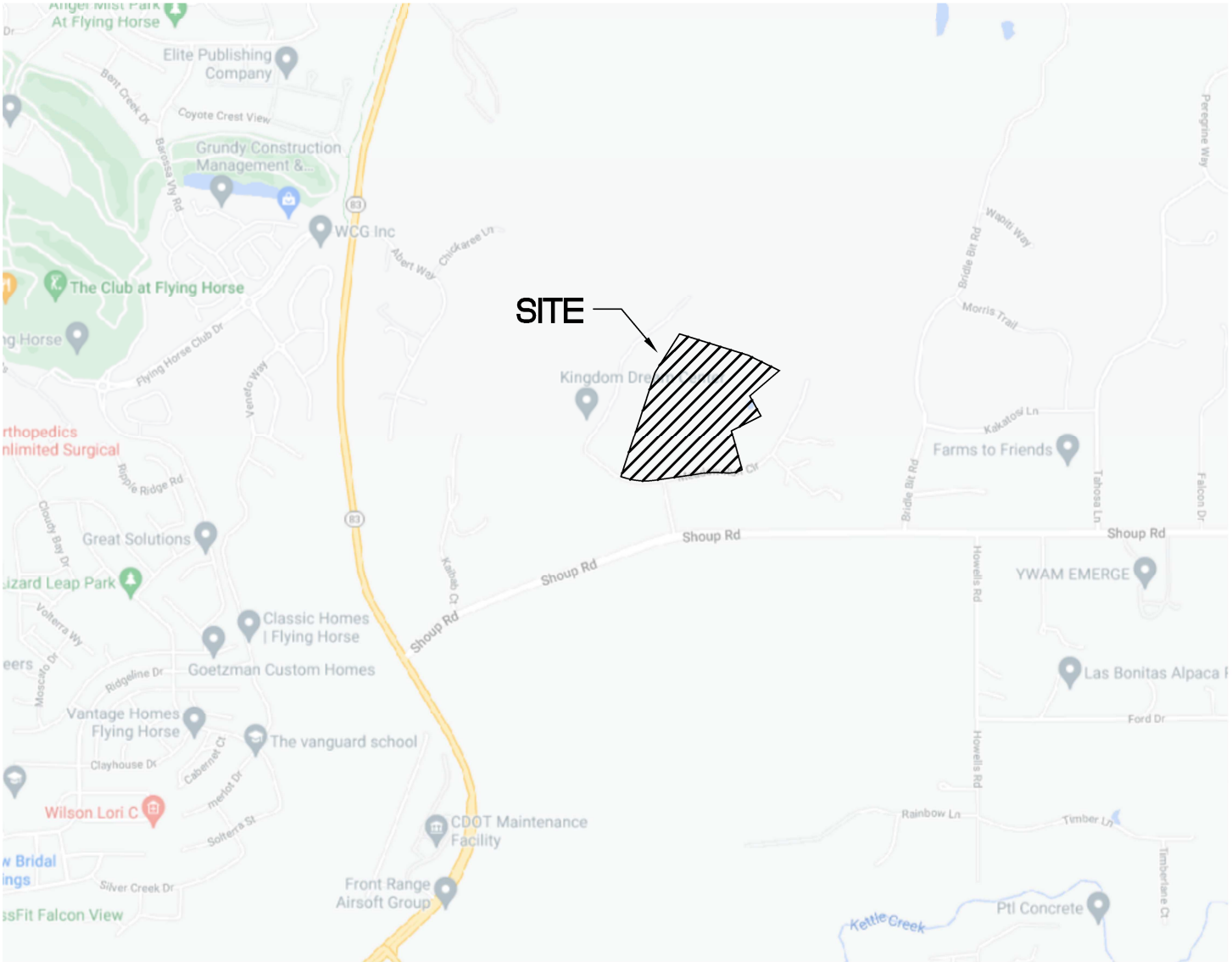
RMG – Rocky Mountain Group

RMG – Rocky Mountain Group



Kelli Zigler  
Project Geologist

Tony Munger, P.E.  
Sr. Geotechnical Project Manager



**SITE**



NOT TO SCALE

Architecture  
Structural  
Geotechnical



**Engineers / Architects**

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SOUTHERN COLORADO, DENVER METRO, NORTHERN COLORADO

Materials Testing  
Forensics  
Civil / Planning

## SITE VICINITY MAP

LOTS 1-7  
NEW BREED RANCH, FILING NO. 3  
EL PASO COUNTY, COLORADO  
VIEWPOINT DEVELOPMENT

JOB No. 192449

FIG No. 1

DATE 5-23-2023





  
 NOT TO SCALE

 DENOTES APPROXIMATE LOCATION OF TEST PITS

JOB No. 192449

**RMG**  
 Materials Testing  
 Forensics  
 Civil / Planning  
 Architecture  
 Structural  
 Geotechnical

Engineers / Architects  
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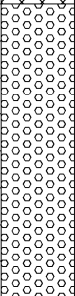
LOTS 1-7  
 NEW BREED RANCH, FILING NO. 3  
 EL PASO COUNTY, COLORADO  
 VIEWPOINT DEVELOPMENT

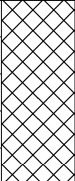
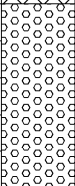
ENGINEER:	TM
DRAWN BY:	NM
CHECKED BY:	TM
ISSUED:	4-25-2023

TEST PIT LAYOUT PLAN

SHEET No.  
**FIG-2**



TEST PIT TP-1			
DATE OBSERVED: 4/11/23			
SOIL DESCRIPTION	DEPTH (FT)	SYMBOL	SOIL TYPE
0 - 1.0 FT SANDY, CLAY (BLOCKY, MODERATE)	0 - 1ft		4
1.0 - 5.0 FT SANDY, CLAY LOAM (BLOCKY, MODERATE)	1ft - 5ft		3
NO GROUNDWATER LIMITING LAYER (BEDROCK) AT 5 FEET	6ft - 8ft		

TEST PIT TP-2			
DATE OBSERVED: 4/11/23			
SOIL DESCRIPTION	DEPTH (FT)	SYMBOL	SOIL TYPE
0 - 2.5 FT SANDY CLAY (BLOCKY, MODERATE)	0 - 2ft		4
2.5 - 5.0 FT SANDY CLAY LOAM (BLOCKY, MODERATE)	2ft - 5ft		3
NO GROUNDWATER LIMITING LAYER (BEDROCK) AT 5 FEET	6ft - 8ft		

SOIL DESCRIPTIONS



SANDY CLAY



SANDY CLAY LOAM

Architecture  
Structural  
Geotechnical



Materials Testing  
Forensics  
Civil / Planning

**Engineers / Architects**

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**TEST PIT LOGS**

NEW BREED RANCH  
LOTS 1-7, FILING NO. 3

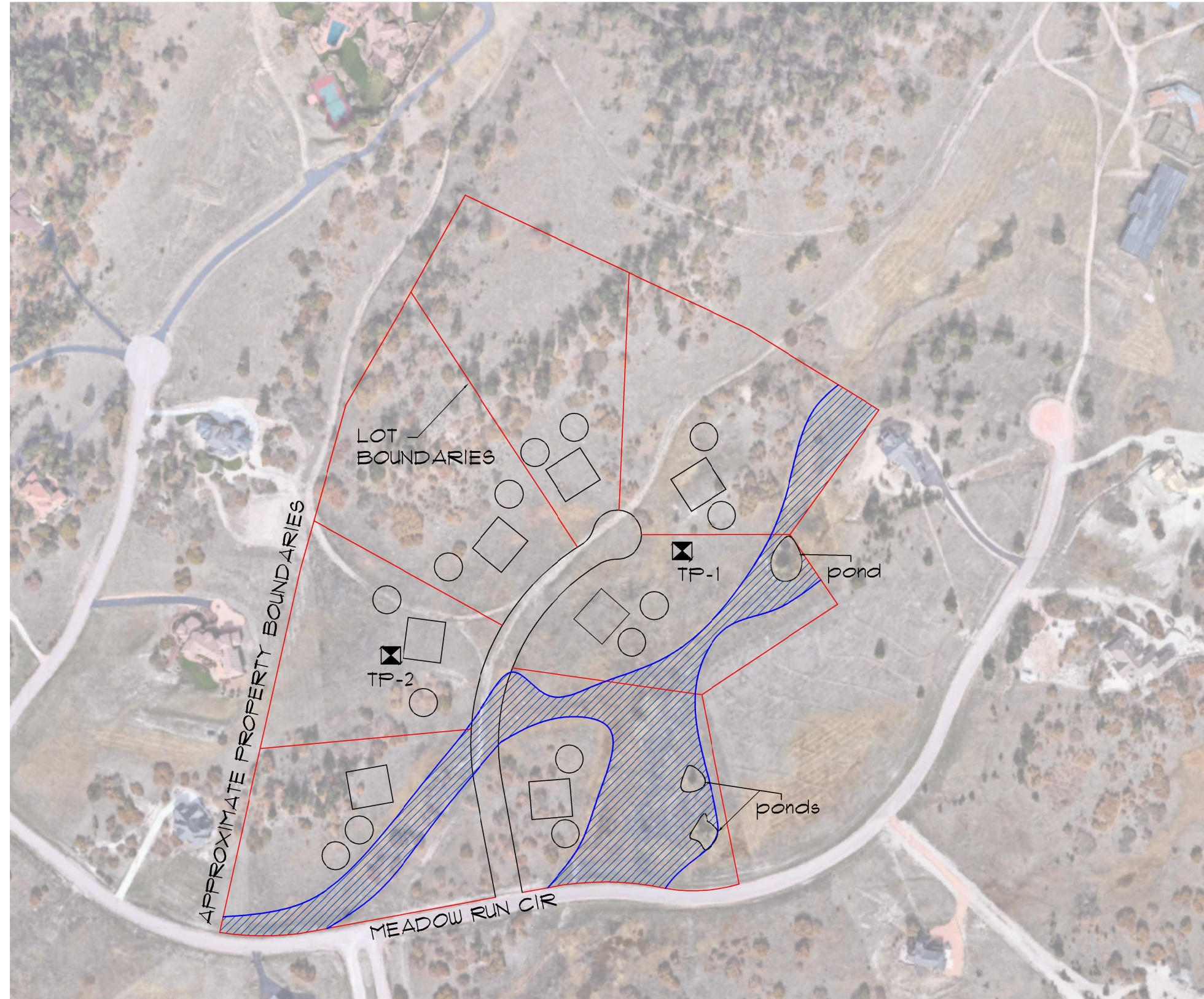
EL PASO COUNTY, COLORADO  
VIEWPOINT DEVELOPMENT

JOB No. 192449

FIG No. 3

DATE 5-23-2023





○ DENOTES APPROXIMATE LOCATION OF OUTFALLS

□ DENOTES APPROXIMATE LOCATION OF RESIDENCE

▨ DENOTES APPROXIMATE LOCATION OF SEASONALLY WET AREAS THAT SHOULD BE AVOIDED IN PLACEMENT OF OUTFALLS

⊠ DENOTES APPROXIMATE LOCATION OF TEST PITS



NOT TO SCALE

LOTS 1-7  
NEW BREED RANCH, FILING NO. 3  
EL PASO COUNTY, COLORADO  
VIEWPOINT DEVELOPMENT

ENGINEER:	TM
DRAWN BY:	NM
CHECKED BY:	TM
ISSUED:	5-23-2023

SEPTIC  
SUITABILITY MAP

SHEET No.  
**FIG-4**