do all of these need to be on the same map or can they be scattered throughout the report?

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

ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, CO 80907
PHONE (719) 531-5599
FAX (719) 531-5238

Colorado Springs, CO 80921

Re: Wastewater Study
Crowe Subdivision
Parcel No. 61280-00-001
15980 Roller Coaster Road
El Paso County, Colorado

Dear Mr. and Mrs. Crowe:

GENERAL SITE CONDITIONS AND PROJECT DESCRIPTION

The site is located in a portion of the NE ¼ of SW ¼ of Section 28 Township 11 South, Range 66 West of the 6th Principal Meridian in El Paso County, Colorado. The site is located approximately 2-miles northeast of Colorado Springs city limits, southwest of Reveille Drive and Roller Coaster Road in El Paso County, Colorado. The location of the site is as shown on the Vicinity Map, Figure 1.

The topography of the site is gradually to moderately sloping to the south-southeast, with steeper slopes along a ridges in the northeastern and western portions of the parcel. Two dry drainages were observed in the central and eastern portions of the property. Water was not observed in the drainages at the time of this investigation. The site boundaries are indicated on the USGS Map, Figure 2. Previous land uses have included undeveloped and rural residential. The site contains field grasses, weeds, kinnikinnick, and ponderosa pines. An existing house with a cabin, sheds, water well and septic system are located on Lot 2, which will remain. Site photographs taken April 22, 2021, are included in Appendix A. Site mapping was completed on April 22, 2021, and test pits were excavated on April 29, 2021.

Total acreage involved in the proposed subdivision is 20-acres. Three rural residential lots are proposed as part of the replat. The proposed lot sizes range from 5-acres to 9.11-acres. Access to the lots will be along the southern side of the property. An existing house is located on Lot 2 which will remain. The new lots will be serviced by individual wells and on-site wastewater treatment systems. The Site Plan with the proposed replat is presented in Figure 3.

SCOPE OF THE REPORT

The scope of the report will include the following:

- A general geologic analysis utilizing published geologic data. Detailed site-specific mapping will be conducted to obtain general information in respect to major geographic and geologic features, geologic descriptions and their effects on the development of the property with regards to on-site wastewater treatment systems (OWTS).

FIELD INVESTIGATION

Our field investigation consisted of the preparation of a geologic map of bedrock features and significant surficial deposits. The Natural Resource Conservation Service (NRCS), previously the Soil Conservation Service (SCS) survey was also reviewed to evaluate the site. The position of mappable units within the subject property are shown on the Geologic Map. Our mapping procedures involved both field reconnaissance and measurements, and aerial photo reconnaissance and interpretation. The same mapping procedures have also been utilized to produce the Geology/Engineering Geology Map which identified pertinent geologic conditions affecting development. The field mapping was performed by personnel of Entech Engineering, Inc. on April 22, 2021.

Two test pits were excavated on the two new proposed lots to determine general suitability of the soil characteristics for residential construction and for onsite wastewater treatment. The locations of the test pits are indicated on the Site Plan/Test Pit Location Map, Figure 3. The Test Pit Logs are presented in Appendix B. Results of this testing will be discussed later in this report.

Laboratory testing was also performed on some of the soils to classify and determine the soils engineering characteristics. Laboratory tests included grain-size analysis, ASTM D-422. Results of the laboratory testing are included in Appendix C.

SOIL AND GEOLOGIC CONDITIONS

Soil Survey

The Natural Resource Conservation Service (NRCS) (Reference 1, Figure 4), previously the Soil Conservation Service (Reference 2) has mapped two soil types on the site. Complete descriptions of the soil types are presented in Appendix D. In general, the soils consist of sandy loam to gravelly loamy sand. The soils are described as follows:

Type	Description
41	Kettle gravelly, loamy sand, 8 – 40% Slopes
71	Pring coarse sandy loam, 3 – 8% Slopes

The soils have been described to have rapid permeabilities. The soils are described as well suited for use as homesites. Possible hazards with soils erosion are present on the site. The erosion potential can be controlled with vegetation. The soils have been described to have moderate erosion hazards (Reference 2).

Soils

The soils encountered in the test pits consisted of silty to clean sand and sand/clay. The test pits were excavated to depths of 6 and 8 feet. Bedrock was encountered at depth of 6 feet in Test Pit No. 1, and not encountered in Test Pit No. 2. The soils were encountered at medium dense states and moderate moisture conditions. The samples of sand tested had 3 to 9 percent of the soil size particles passing the No. 200 sieve. The sand/clay sample had 42 percent of the soil size particles passing the No. 200 sieve. Highly expansive claystone and siltstone lenses are commonly interbedded in the Dawson Formation in this area. The sand soils and sandstone typically have low expansion potential.

Groundwater/Drainage Areas

Groundwater was not encountered in the test pits which were excavated to depths of 6 and 8 feet. Groundwater is not anticipated to affect on-site waste water treatment systems on the majority of the site. Areas of potentially seasonal shallow groundwater were observed along two minor dry drainages in the central and eastern portions of the site. Fluctuations in groundwater conditions may occur due to variations in rainfall or other factors not readily apparent at this time. Isolated sand layers within the soil profile can carry water in the subsurface. Contractors should be cognizant of the potential for the occurrence of subsurface water features during construction.

Two minor dry drainages exist in the central and eastern portions of the site. No water was observed flowing in the drainages at the time of the investigation, however, these areas have the potential for seasonal shallow groundwater. These areas are indicated in the Geology/Engineering Geology Map (Figure 6). Due to the size of the proposed lots these areas can either be avoided or redirected around proposed structures or proposed soil treatment areas. The proposed building areas are not affected by these areas. The site does not lie within any floodplain zones according to the FEMA Map Nos. 08041CO285G and 08041CO295G dated December 7, 2018 (Figure 7, Reference 7). The two dry drainages mapped with these hazards have been identified in the National Wetland Inventory as a Freshwater Emergent Wetland habitat classified as Riverine habitat classified as R4SBC (Riverine – R, Intermittent – 4, Streambed – SB, Seasonally Flooded – C) (Figure 8, Reference 8).

Geology

Approximately 7 miles west of the site is a major structural feature known as the Rampart Range Fault. This fault marks the boundary between the Great Plains Physiographic Province and the Southern Rocky Mountain Province. The site exists within a large structural feature known as the Denver Basin. Bedrock in the area is typically gently dipping in a northerly direction (Reference 3). The bedrock underlying the site consists of the Dawson Formation of Tertiary to Cretaceous Age. The Dawson Formation typically consists of coarse-grained arkosic sandstone with interbedded layers of claystone or siltstone.

The geology of the site was evaluated using the *Geologic Map of the Monument Quadrangle,* by Thorson and Madole in 2003, (Reference 4, Figure 5). The Geology Map for the site is presented in Figure 6. Two mappable units were identified on this site which is described as follows:

Qau **Alluvium Undivided of Holocene and Pleistocene Age:** The materials consist of pale brown to brown sand and gravel. The sands deposited by action of sheetwash and gravity, and stream deposited along minor drainages.

Qc/Tkd **Colluvium of Quaternary Age overlying Dawson Formation of Tertiary to Cretaceous Age:** The materials consist of colluvial or residual soils overlying the bedrock materials on-site. The colluvial soils were deposited by the action of sheetwash and gravity. The residual soils were derived from the in-situ weathering of the bedrock on site. These materials typically consist of silty to clayey sand with potential areas of sandy clays. The bedrock consists of the Dawson Formation. The Dawson Formation typically consists of coarse-grained, arkosic sandstone with interbedded lenses of fine-grained sandstone, siltstone and claystone.

The soils listed above were mapped from site-specific mapping, the *Geologic Map of the Monument Quadrangle* distributed by the Colorado Geologic Survey in 2003 (Reference 4, Figure 5), The *Geologic Map of the Colorado Springs-Castle Rock Area,* distributed by the US Geological Survey in 1979 (Reference 5), and the *Geologic Map of the Denver 1° x 2° Quadrangle,* distributed by the US Geological Survey in 1981 (Reference 6). The test borings were used in evaluating the site and are included in Appendix B. The Geology Map prepared for the site is presented in Figure 6.

ON-SITE WASTEWATER TREATMENT

The Natural Resource Conservation Service (Reference 1), previously the Soil Conservation Service (Reference 2) has been mapped with three soil descriptions. The Soil Survey Map (Reference 1) is presented in Figure 4, and the Soil Survey Descriptions (Reference 2) are presented in Appendix C. The soils are described as having moderate to rapid percolation rates. The existing conventional septic system is located on Lot 1. Observations of the leach area indicated that the system is operating properly. Records for the existing septic system located on Lot 2 are included in Appendix D.

Soils encountered in the tactile test pits consisted of gravelly, sandy loam to sandy loam, and sandy clay. Sandstone bedrock was encountered at 6 feet in Test Pit No. 1 where refusal was encountered during excavation. The limiting layers encountered in the test pits are the gravelly, sandy loam, and the sandy clay, which corresponds with USDA Soil Types R-1, R-2, 4 with an LTAR values of 0.50 and 0.20 gallons per day per square foot. Bedrock was encountered at approximately 6 feet in Test Pit No. 1 (Lot 3). Bedrock was not encountered in Test Pit No. 2 (Lot 1).

Signs of seasonally occurring groundwater were not observed in the test pits. Absorption fields must be maintained a minimum of 4 feet above groundwater or bedrock, or confining layer. Should groundwater or bedrock be encountered within 6 feet of the surface, designed systems will be required. Designed systems are anticipated for the lots based on restrictive clay soils or high rock percentages, and potentially shallow bedrock.

In summary, it is our opinion the site is suitable for individual on-site wastewater treatment systems (OWTS) and that contamination of surface and subsurface water resources should not occur provided the OWTS sites are evaluated and installed according to El Paso County and State Guidelines and properly maintained. Based on the testing performed designed systems will be required for proposed lots 3 and 4. The Septic Suitability Map is presented in Figure 8. Proposed house locations, water wells, and two septic sites for the new lots are indicated. Absorption fields must be located a minimum of 100 feet from any well, including those on adjacent properties. Absorption fields must also be located a minimum of 50 feet from any drainages, floodplains or ponded areas and 25 feet from dry gulches.

Mike and Ruth Crowe
OWTS – Wastewater Study
Crowe Subdivision
Parcel No. 61280-00-001
15980 Roller Coaster Road
El Paso County, Colorado

CLOSURE

This report has been prepared for Mike and Ruth Crowe, for application to the proposed project in accordance with generally accepted geologic soil and engineering practices. No other warranty expressed or implied is made.

We trust that this report has provided you with all the information that you required. Should you require additional information, please do not hesitate to contact Entech Engineering, Inc.

Respectfully Submitted,

ENTECH ENGINEERING, INC.

Logan L. Langford, P.G.
Geologist

Reviewed by:

Joseph C. Goodell Jr., P.E.
President

LLL

Encl.

Entech Job No. 210825
AAprojects/2020/210825 wws

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2. United States Department of Agriculture Soil Conservation Service. June 1981. *Soil Survey of El Paso County Area, Colorado.*

3. Scott, Glen R.; Taylor Richard B.; Epis, Rudy C; and Wobus, Reinhard A. 1978. *Geologic Structure Map of the Pueblo 1° x 2° Quadrangle, South-Central Colorado.* Sheet 2. U.S. Geologic Survey. Map I-1022, Sheet 2.

4. Thorson, Jon P. and Madole, Richard F., 2003. *Geologic Map of the Monument Quadrangle, El Paso County, Colorado.* Colorado Geological Survey. Open-File Report 02-40.

5. Trimble, Donald E. and Machette, Michael N. 1979. *Geologic Map of the Colorado Springs-Castle Rock Area, Front Range Urban Corridor, Colorado.* USGS, Map I-857-F.

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7. Federal Emergency Management Agency. December 7, 2018. *Flood Insurance Rate Maps for the City of Colorado Springs, Colorado.* Map Numbers 08041CO285G, and 08041CO295G

8. U.S. Fish & Wildlife Service, May 1, 2020. *National Wetlands Inventory.* Department of the Interior, fws.gov/wetlands/data/Mapper.html.

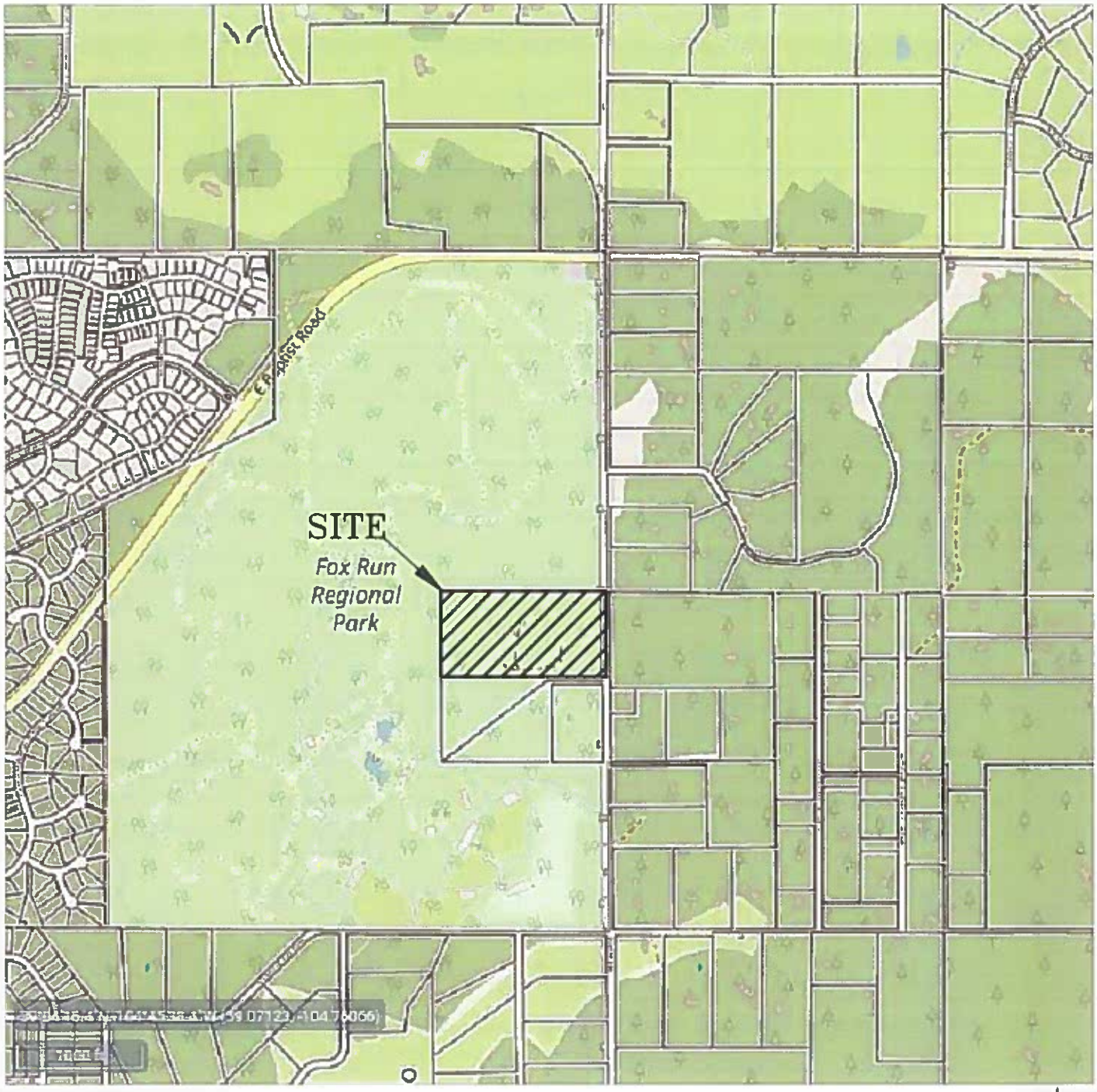
TABLE

Table 1: Summary Test Pit Results

Test Pit No.	Depth to Bedrock (ft.)	Depth to Groundwater (ft.)	USDA Soil Type	LTAR Value
1	6	>6	4*	0.20*
2	>8	>8	R-1/R-2*	0.80*

*- Conditions that will require an engineered OWTS

FIGURES



N

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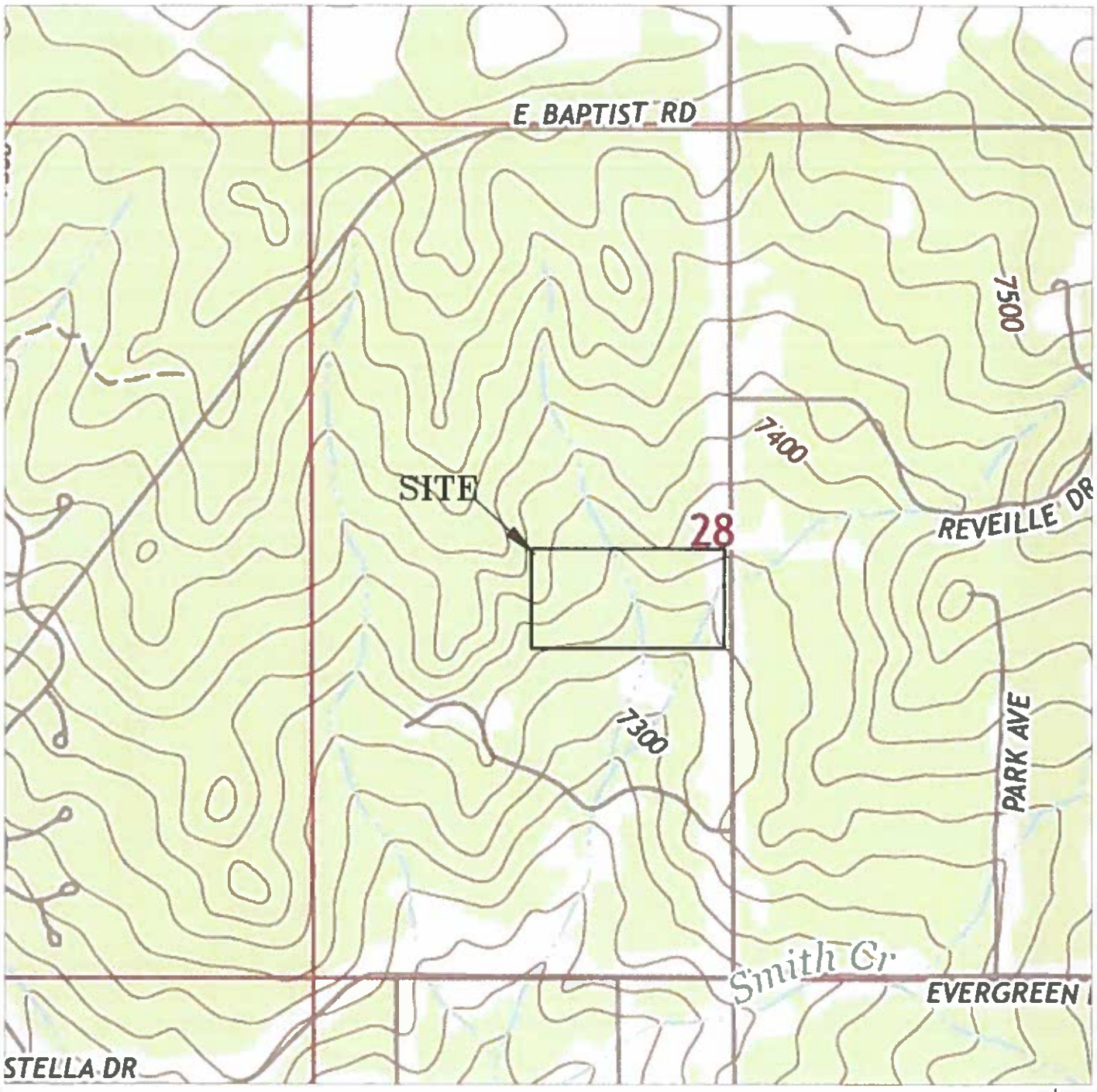
505 ELKTON DRIVE
COLORADO SPRINGS, CO. 80907 (719) 531-5599

VICINITY MAP
CROWE SUBDIVISION
15980 ROLLER COASTER ROAD
EL PASO COUNTY, CO.
FOR: MIKE AND RUTH CROWE

DRAWN:	DATE:	CHECKED:	DATE:
LLL	5/22/21		

JOB NO.: 210825

FIG NO.: 1



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USGS TOPOGRAPHY MAP
CROWE SUBDIVISION
15980 ROLLER COASTER ROAD
EL PASO COUNTY, CO.
FOR: MIKE AND RUTH CROWE

DRAWN:	DATE:	CHECKED:	DATE:
LLL	5/22/21		

JOB NO.: 210825

FIG NO.: 2

N 89°50'24" E, 1317.86'

15980 ROLLER COASTER RD
20.052 AC
(873,478 SF)

LOT 1
5.00± AC

LOT 2
9.11± AC

LOT 3
5.00± AC

ROLLER COASTER ROAD
R.O.W. 0.94± AC

ACCESS DRIVE (LOT 1)
ACCESS DRIVE (LOT 2)
ACCESS DRIVE (LOT 3)
ACCESS DRIVE (LOTS 2 & 3)

SOLAR PANELS

20' P.U.D.E.

S 00°27'11" E, 663.55'
S 00°27'11" E, 663.10'
S 00°27'11" E, 662.29'

328.35'
61.68'
329.14'
598.99'
328.36'

TP-1
TP-2

P1
P2
P3
P4
P5
P6
P7
P8

S 89°55'04" W, 1318.17'

5 of 3

LEGEND:

TP- APPROXIMATE TEST PIT LOCATION AND NUMBER

P2 - APPROXIMATE PHOTOGRAPH LOCATION AND NUMBER

REVISION	BY

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COLORADO SPRINGS, CO. 80907

SITE PLAN/TEST PIT LOCATION MAP
CROWE SUBDIVISION
15980 ROLLER COASTER ROAD
EL PASO COUNTY, CO.
FOR: MIKE AND RUTH CROWE

DRAWN	T.T.L.
CHECKED	
DATE	5/22/21
SCALE	AS SHOWN
JOB NO.	210825
FIGURE No.	3

N

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383 ELKTON DRIVE
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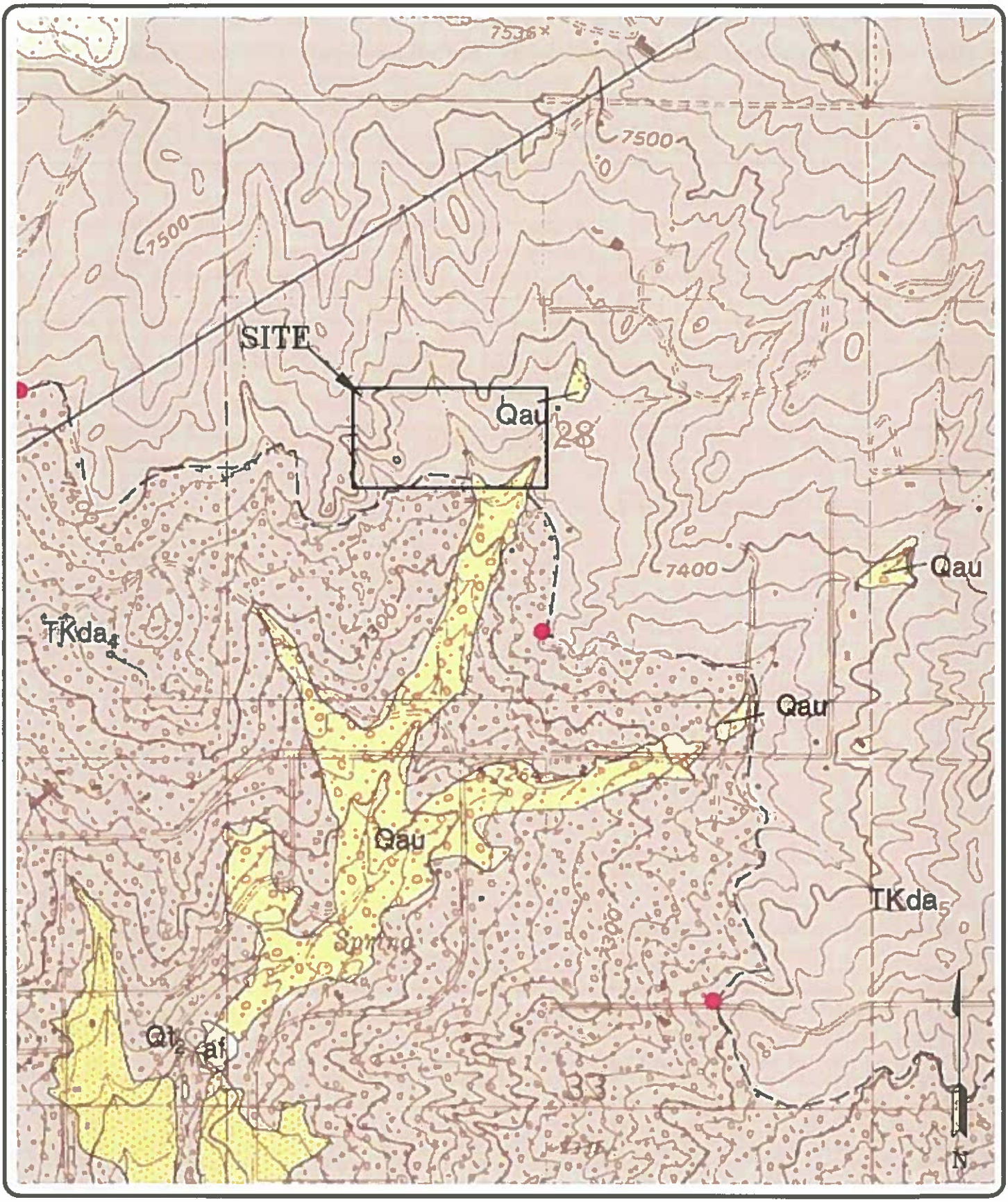
SOIL SURVEY MAP
CROWE SUBDIVISION
15980 ROLLER COASTER ROAD
EL PASO COUNTY, CO.
FOR: MIKE AND RUTH CROWE

DRAWN:	DATE:	CHECKED:	DATE:
LLL	5/22/21		

JOB NO.: 210825

FIG NO.: 4



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MONUMENT QUADRANGLE GEOLOGIC MAP
CROWE SUBDIVISION
15980 ROLLER COASTER ROAD
EL PASO COUNTY, CO.
FOR: MIKE AND RUTH CROWE

DRAWN:	DATE:	CHECKED:	DATE:
LLL	5/22/21		

JOB NO.: 210825

FIG NO.: 5

N 89°50'24" E, 1317.86'

15980 ROLLER COASTER RD
20.052 AC
(873,478 SF)

Qc/Tkd

Qc/Tkd, dsc

Qau

Qau, psw

TP-1

TP-2

LOT 3
5.00± AC

LOT 2
9.1[illegible] AC

LOT 1
5.00± AC

ACCESS DRIVE (LOT 3)

ACCESS DRIVE (LOT 2)

ACCESS DRIVE (LOT 1)

ACCESS DRIVE (LOTS 2 & 3)

SOLAR PANELS

20' P.U.D.E.

ROLLER COASTER ROAD
R.O.W. 0.94± AC

S 00°27'11" E, 662.29'

S 00°27'11" E, 663.10'

S 00°27'11" E, 663.55'

329.14'

598.99'

328.36'

61.68'

S 89°55'04" W, 1318.17'

Legend:

QcTKd - Colluvium of Quaternary Age overlying Dawson Formation of Tertiary to Cretaceous Age: colluvial and residual soils overlying arkosic sandstone with interbedded fine-grained sandstone, siltstone and claystone

dsc - downslope creep

psw - potentially seasonal shallow groundwater area

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GEOLOGY/ENGINEERING GEOLOGY MAP
CROWE SUBDIVISION
15980 ROLLER COASTER ROAD
EL PASO COUNTY, CO.
FOR: MIKE AND RUTH CROWE

DRAWN	LLL
CHECKED	
DATE	5/22/21
SCALE	AS SHOWN
JOB NO.	210525
FIGURE No.	6

N

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FEMA FLOODPLAIN MAP
CROWE SUBDIVISION
15980 ROLLER COASTER ROAD
EL PASO COUNTY, CO.
FOR: MIKE AND RUTH CROWE

DRAWN:	DATE:	CHECKED:	DATE:
LLL	5/22/21		

JOB NO.: 210825

FIG NO.: 7

N

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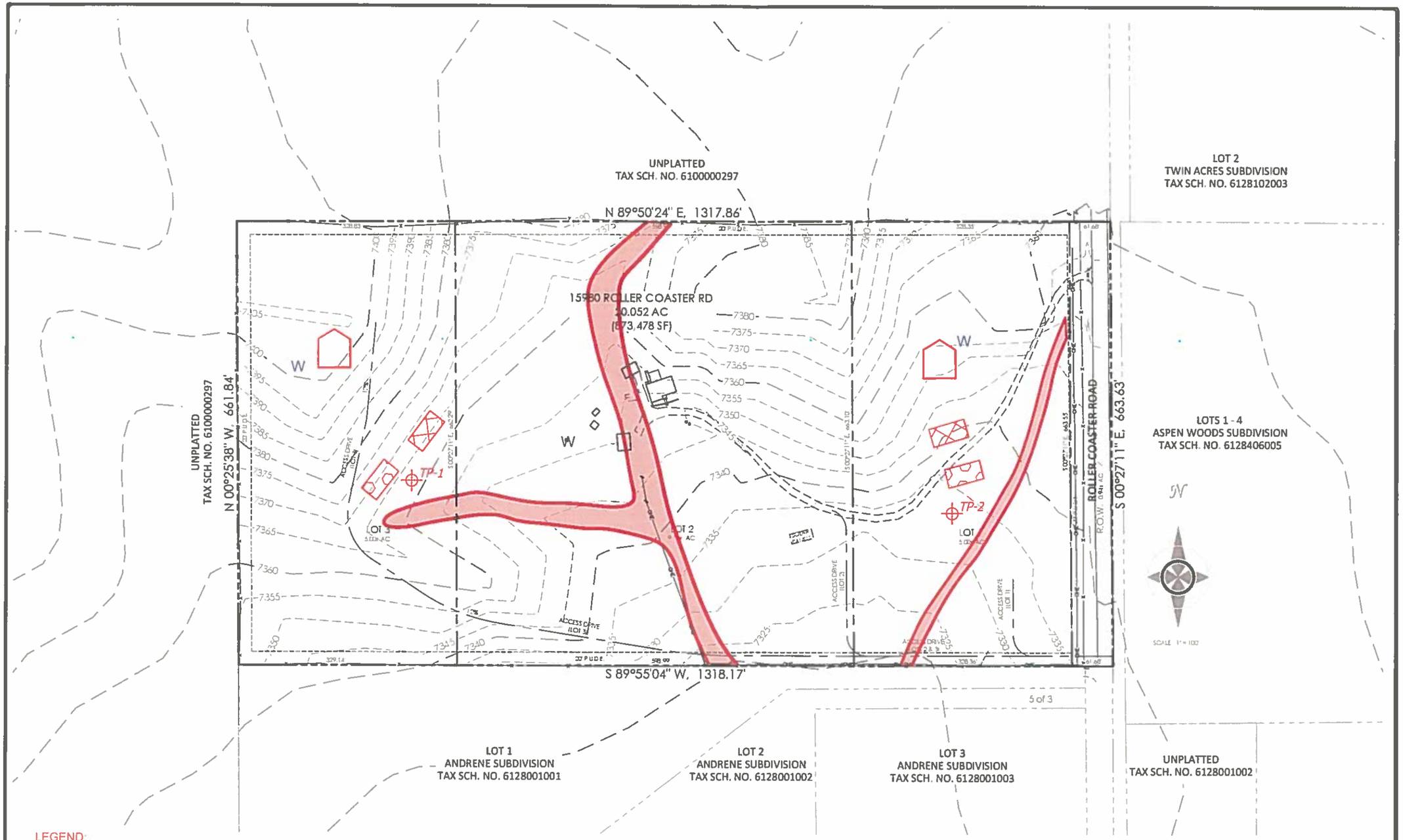
395 ELKTON DRIVE
COLORADO SPRINGS, CO. 80907 (719) 531-5599

NATIONAL WETLANDS INVENTORY MAP
CROWE SUBDIVISION
15980 ROLLER COASTER ROAD
EL PASO COUNTY, CO.
FOR: MIKE AND RUTH CROWE

DRAWN:	DATE:	CHECKED:	DATE:
LLL	5/22/21		

JOB NO.: 210825

FIG NO.: 8



5 of 3

LEGEND:

- POSSIBLE OWTS LOCATIONS
- POSSIBLE OWTS ALTERNATE LOCATIONS

W *- WATER WELLS MUST BE A MINIMUM OF 100 FT FROM OWTS ABSORPTION FIELDS

REVISION	BY

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COLORADO SPRINGS, CO. 80907 (719) 531-5599

SEPTIC SUITABILITY MAP
CROWE SUBDIVISION
15980 ROLLER COASTER ROAD
EL PASO COUNTY, CO.
FOR: MIKE AND RUTH CROWE

DRAWN	LLL
CHECKED	
DATE	5/22/21
SCALE	AS SHOWN
JOB NO.	210825
FIGURE No.	9

APPENDIX A: Photographs

1

Looking south from the northeastern portion of the site.

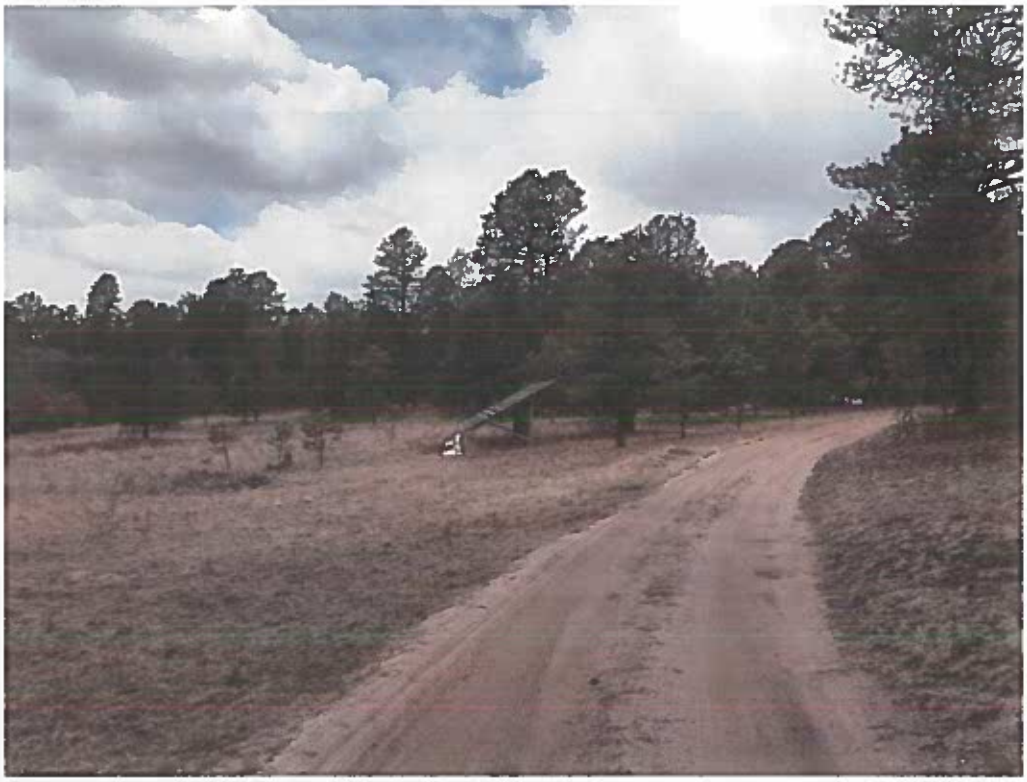
April 22, 2021

2

Looking northwest from the southeastern side of the site.

April 22, 2021

Job No. 210825



3

Looking west from the southeastern portion of the site.

April 22, 2021

4

Looking southeast along existing driveway from the central portion of the site.

April 22, 2021

Job No. 210825

5

Looking northeast from the south central portion of the site.

April 22, 2021

6

Looking northwest the central portion of the site.

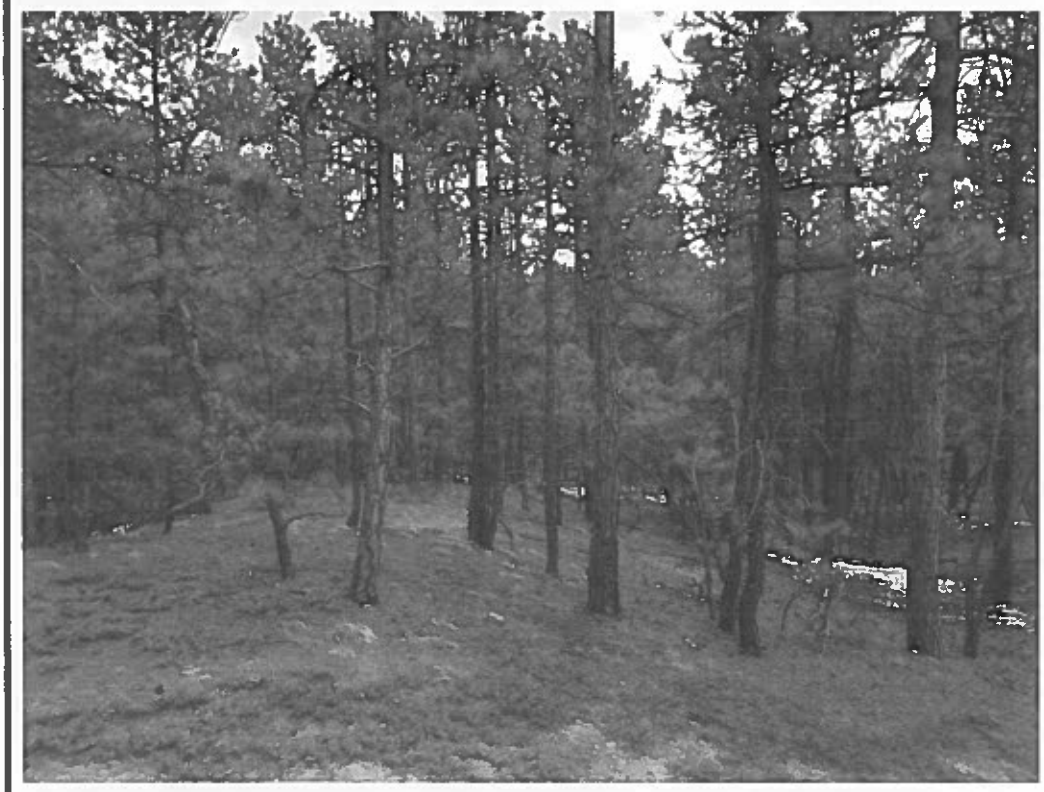
April 22, 2021

Job No. 210825

7

Looking southeast along at moderate slope in the western portion of the site.

April 22, 2021



8

Looking east from the western side of the site.

April 22, 2021

Job No. 210825

APPENDIX B: Test Pit Logs

TEST PIT NO. 1
DATE EXCAVATED 4/29/2021
Job # 210825

REMARKS	Depth (ft)	Symbol	Samples	Soil Structure Shape	Soil Structure Grade	USDA Soil Type
topsoil, sandy clay loam, brown, moist	1					
sandy loam, Fine to coarse grained, grayish brown, moist	2			gr	w	2A
	3					
sandy loam with gravel, fine to very coarse grained, pale brown, moist	4			gr	w	R-2
	5					
sandy clay, fine to coarse grained, pale brown, moist	6			bl	s	4
Refusal @ 6' - due to sandstone bedrock	7					
	8					
	9					
	10					

TEST PIT NO. 2
DATE EXCAVATED 4/29/2021
CLIENT Mike and Ruth Crowe
LOCATION 15980 Roller Coaster Road

REMARKS	Depth (ft)	Symbol	Samples	Soil Structure Shape	Soil Structure Grade	USDA Soil Type
topsoil, sandy clay loam, brown, moist	1					
sandy loam, fine to coarse grained, grayish dark brown, moist	2			gr	w	2
	3					
sandy loam, fine to coarse grained, pale brown, moist	4			gr	w	R-1
	5					
sandy loam, fine to coarse grained, pale brown, moist	6			gr	w	R-2
	7					
	8					
	9					
	10					

Soil Structure Shape
granular - gr
platy - pl
blocky - bl
prismatic - pr
single grain - sg
massive - ma

Soil Structure Grade
weak - w
moderate - m
strong - s
loose - l

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505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

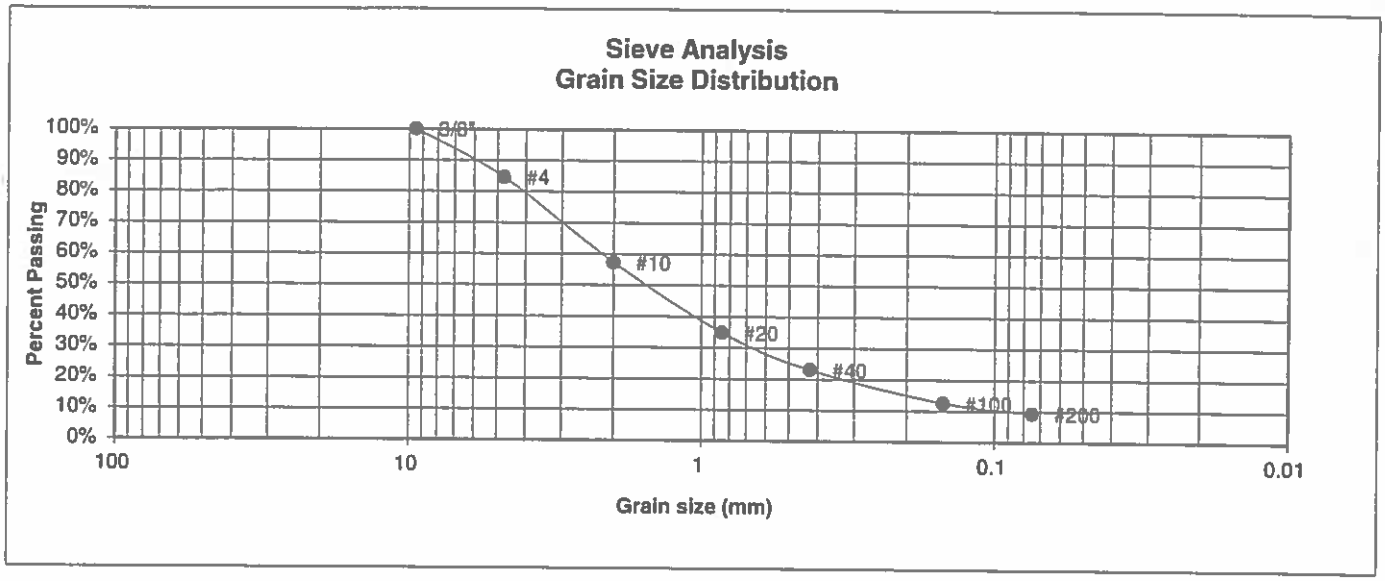
TEST PIT LOG

DRAWN:	DATE:	CHECKED	DATE:
jhr	5/14/21	LLL	5/22/21

JOB NO. 210825
FIG NO. B-1

APPENDIX C: Laboratory Test Results

BORING NO.	TP-1	UNIFIED CLASSIFICATION	SM-SW	TEST BY	BL
DEPTH(ft)	1	AASHTO CLASSIFICATION		JOB NO.	210825
CLIENT	MIKE AND RUTH CROWE				
PROJECT	15980 ROLLER COASTER RD				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	84.6%
10	57.3%
20	34.9%
40	23.1%
100	12.6%
200	9.4%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

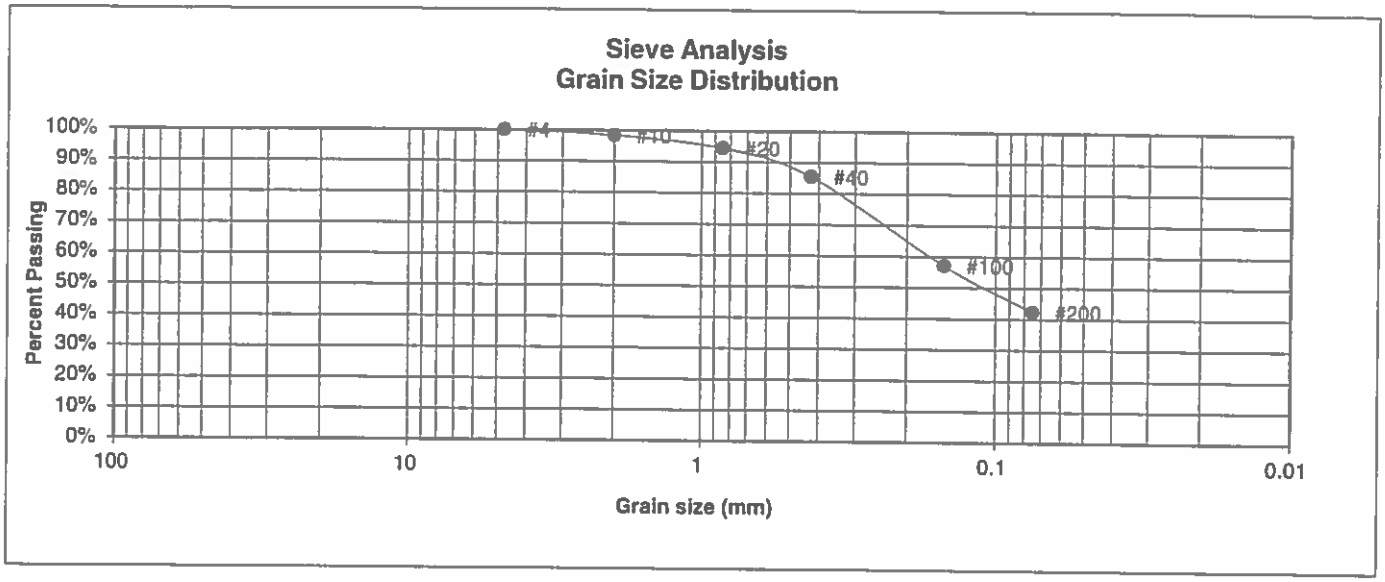
LABORATORY TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		JHL	5-14-21

JOB NO.: 210825

FIG NO.: C-1

BORING NO.	TP-1	UNIFIED CLASSIFICATION	SC	TEST BY	BL
DEPTH(ft)	5	AASHTO CLASSIFICATION		JOB NO.	210825
CLIENT	MIKE AND RUTH CROWE				
PROJECT	15980 ROLLER COASTER RD				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	
4	100.0%
10	98.4%
20	94.5%
40	85.4%
100	57.1%
200	42.3%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

ENTECH ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

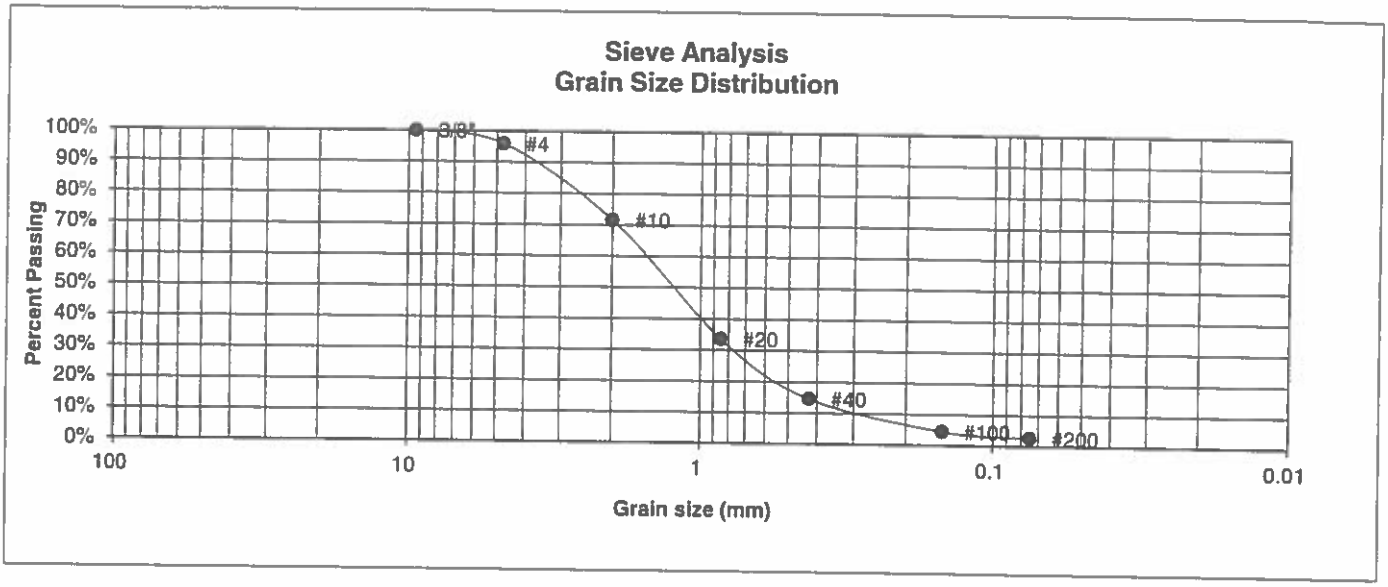
LABORATORY TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		JHL	5-24-21

JOB NO.: 210825

FIG NO.: L-2

BORING NO.	TP-2	UNIFIED CLASSIFICATION	SW	TEST BY	BL
DEPTH(ft)	2-3	AASHTO CLASSIFICATION		JOB NO.	210825
CLIENT	MIKE AND RUTH CROWE				
PROJECT	15980 ROLLER COASTER RD				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	95.9%
10	71.6%
20	33.6%
40	14.6%
100	4.5%
200	2.7%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

ENTECH ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

LABORATORY TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		SHL	5-19-21

JOB NO.: 210825

FIG NO.: L-3

APPENDIX D: Soil Survey Descriptions

El Paso County Area, Colorado

41—Kettle gravelly loamy sand, 8 to 40 percent slopes

Map Unit Setting

National map unit symbol: 368h
Elevation: 7,000 to 7,700 feet
Farmland classification: Not prime farmland

Map Unit Composition

Kettle and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kettle

Setting

Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy alluvium derived from arkose

Typical profile

E - 0 to 16 inches: gravelly loamy sand
Bt - 16 to 40 inches: gravelly sandy loam
C - 40 to 60 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 8 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Pleasant

Percent of map unit:
Landform: Depressions
Hydric soil rating: Yes

Other soils

Percent of map unit:
Hydric soil rating: No

Data Source Information

Soil Survey Area: El Paso County Area, Colorado
Survey Area Data: Version 18, Jun 5, 2020

El Paso County Area, Colorado

71—Pring coarse sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 369k
Elevation: 6,800 to 7,600 feet
Farmland classification: Not prime farmland

Map Unit Composition

Pring and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pring

Setting

Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Arkosic alluvium derived from sedimentary rock

Typical profile

A - 0 to 14 inches: coarse sandy loam
C - 14 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R048AY222CO
Hydric soil rating: No

Minor Components

Pleasant

Percent of map unit:
Landform: Depressions
Hydric soil rating: Yes

Other soils

Percent of map unit:
Hydric soil rating: No

Data Source Information

Soil Survey Area: El Paso County Area, Colorado
Survey Area Data: Version 18, Jun 5, 2020

APPENDIX E: El Paso County Health Department Septic Records

Black Forest

P

EL PASO COUNTY HEALTH DEPARTMENT
COLORADO SPRINGS, COLORADO

5228

SEWAGE DISPOSAL INSPECTION FORM

#6128000001

APPROVAL:
YES ✓ NO ____ DATE 10/6/78

ENVIRONMENTALIST Krueger

LOCATION (street number) 15480 Roller Coaster Rd Wilson

LEGAL DESCRIPTION ____

TYPE OF CONSTRUCTION ____ NO. OF BEDROOMS 3

SYSTEM INSTALLED BY Homeowner

COMMERCIAL MFG. Ojes SIZE 1000

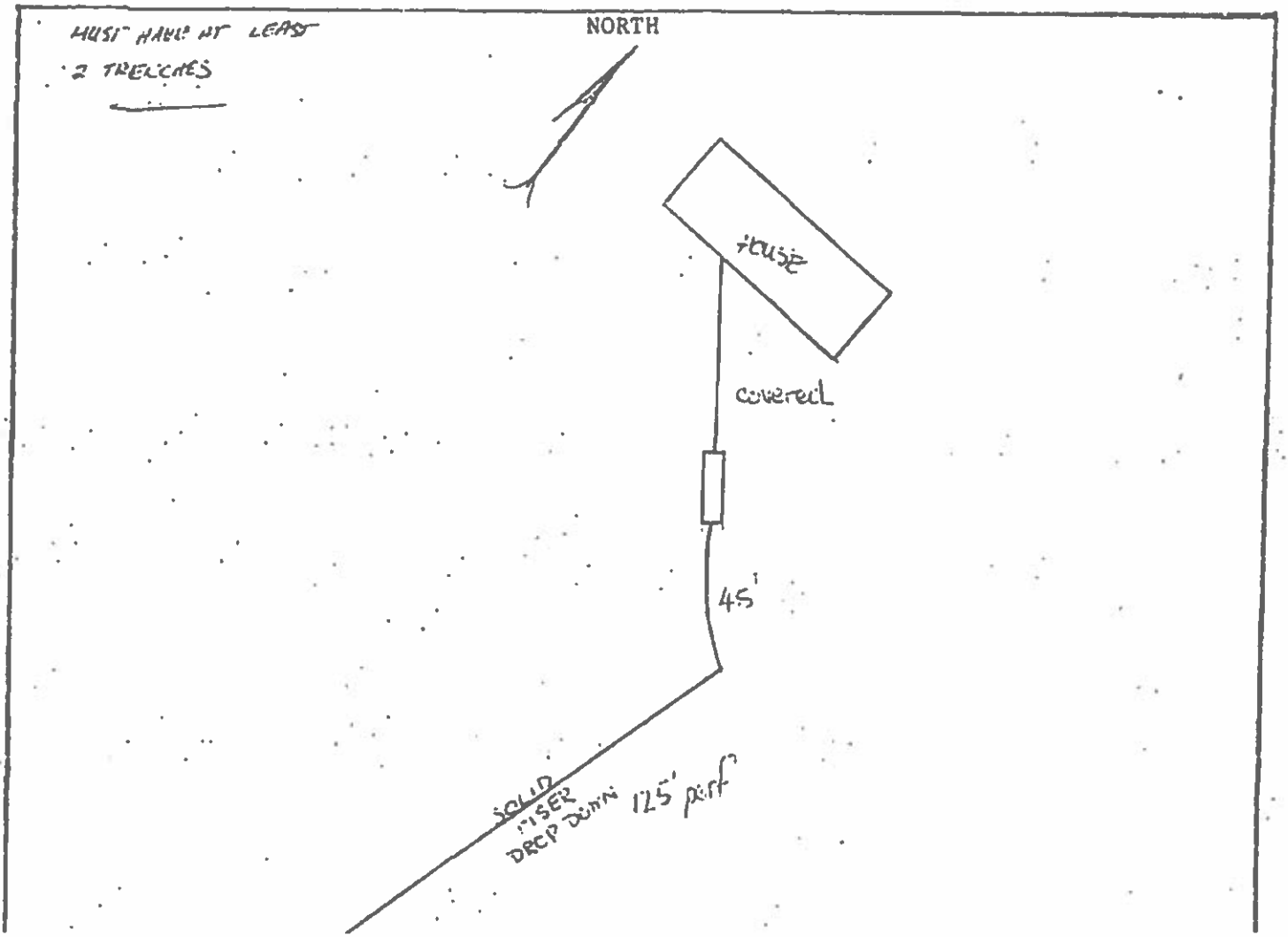
TYPE OF MATERIAL ____ NO. COMPARTMENTS 2

WIDTH ____ LENGTH ____ DEPTH (total) ____ LIQ. CAP ____

DISPOSAL FIELD: BED OR TRENCH DEPTH 12"-36" WIDTH 36" LENGTH 125' SQ. FT 375

DISTANCE BETWEEN LINES N/A ROCK river DEPTH 12" UNDER 6" OVER 2"

LEACHING PITS (NO.) ____ LINING MATERIAL ____ CAPACITY SQ. FT. ____



FE 10/6

Acres _____ EL PASO COUNTY CITY-COUNTY HEALTH DEPARTMENT No. 05228

501 North Foote Avenue · Colorado Springs, Colorado · 475-8240

Water Supply [illegible] 1404

PERMIT

Receipt No. 9552

TO CONSTRUCT, ALTER, REPAIR OR MODIFY AN INDIVIDUAL SEWAGE DISPOSAL SYSTEM

Issued To Don Wilson Date 4/20/78

Address of Property 15980 Roller Coaster Road, Black Forest

(Permit valid at this address only)

Builder - Contractor - Owner Address _____ Phone _____

Sewage Disposal System work to be performed by Hamacher Phone _____

This Permit is issued in accordance with Regulation XII and Article 2 of Chapter 66, Colorado Revised Statutes 1963, as amended by the addition of a new Section 66-2-16. (H.B. 1205, 7-1-65). PERMIT EXPIRES upon completion-installation of sewage-disposal system or at the end of six (6) months from date of issue - whichever occurs first - (unless work is in progress).

This Permit does not denote approval of zoning and acreage requirements.

Permit Fee $50.00. Charles H. Dowdinn, Jr., M.D., M.P.H.
Director, City-County Health Department

October 28, 1978 Steven R. Rock
Date of Expiration Environmentalist

NOTE: LEAVE ENTIRE SEWAGE DISPOSAL SYSTEM UNCOVERED FOR FINAL INSPECTION. 375 Sq. F.
24-HOUR ADVANCE NOTICE REQUIRED

Septic tank 1000 gals. Field 188 Feet of trench 24 inches wide
OR. Field [illegible] Feet of trench [illegible] inches wide
Seepage bed _____ ft. long _____ ft. wide. Seepage pit _____ sq. ft. _____ diam. _____ w/d

The Health Officer shall assume no responsibility in case of failure or inadequacy of a sewage-disposal system, beyond consulting in good faith with the property owner or representative. Free access to the property shall be authorized at reasonable times for the purpose of making such inspections as are necessary to determine compliance with requirements of this regulation.

fenced S. side of drive rd

2 mi. N of Northgate.

E of N of cabin

EL PASO ~~COUNTY~~-COUNTY HEALTH DEPARTMENT
301 NORTH FOOTE AVENUE
COLORADO SPRINGS, COLORADO
475-8240 EXT. 220

Application for permit to construct, Remodel, or Install a Sewage Disposal System

Name of Owner Don Wilson Phone

Address of Property 15980 Roller Coaster Rd.

Legal Description of Property

Owner's Address (if different) Phone

Systems Contractor Address

Type of Construction Source and Type of Water Supply well

Size of Lot 20 Acres

The construction of the Sewage Disposal System will comply with all applicable Laws, Ordinances, Standards or Resolutions.

HEALTH DEPARTMENT USE ONLY

Permit Number Receipt Number

Number of Bedrooms 3 Tank Capacity 1000 gallons Absorption area 375 Sq. Ft.

REMARKS recommend keeping leach field from natural drainage area 188' of 2' trench

Trench System - 375 sq ft total - 125' of 3' trench.

APPLICATION IS (X) APPROVED ( ) DENIED

ENVIRONMENTALIST [signature] DATE 4/17 19 73

PLOT PLAN WILL INCLUDE THE FOLLOWING

Plot plan may be drawn on the back of this sheet or on a seperate sheet.

1. Streams, Lakes, Ponds, Irrigation Ditches and other Water Courses
2. North Direction
3. Location of Property Line
4. Buildings
5. Wells
6. Location of Proposed Septic System
7. Location of percolation test
8. Geographical features
9. Other Information as required

EHS - 6/9/76 - SEWAGE