



PLAT : NONE
A-5
4.77 ACRES
CREATION DATE 12/17/67
Prevent • Promote • Protect

1675 W. Garden of the Gods Rd., Suite 2044
Colorado Springs, CO 80907
(719) 578-3199 phone
(719) 578-3188 fax
www.elpasocountyhealth.org

APPLICATION FOR AN ON-SITE WASTEWATER TREATMENT SYSTEM PERMIT

Property Information:

Property Address: 12740 BLACK FOREST RD City: CO SP Zip: 80908
Legal Description: N2NE4SE4 E4R1 Sec 7-12-65
Tax Schedule #: 5207000004 Lot size: 4.77 ACRES
Is the property gated: Yes No Please provide a gate code if required: _____
Site Located Inside City Limits: Yes No Proposed Use: Residential Commercial
Water Supply: Well Cistern Municipal Potential Number of Bedrooms: _____

Owner Information: Primary Contact

Owner: BLACK FOREST LLC Daytime Phone: 719 337 1238
Owners Mailing Address: 8750 WALKER RD CO SP CO 80908
Email Address: HARVEY@SEEGERHOMES.COM Fax #: _____
General Contractor: Seeger Homes Phone/Email: 719 644 9040

OWTS Installer Information: Primary Contact

System Installer: COLORADO FUEL Daytime Phone: 303 817 6130
Email Address: MIKE@CO.CIVIL.CO.COM Licensed installer: Tier 1 Tier 2

All engineer-design systems must be installed by a Tier 2 licensed installer

CURRENT FEES AS APPROVED BY THE EL PASO COUNTY BOARD OF HEALTH

All Payments are due at the time of application submittal; by cash, check or major credit card (Visa / MC)

- New Permit:** \$750.00 (EPCPH Charge) + \$147.00 (EPC Planning Dept. Surcharge) + \$23.00 (CDPHE Surcharge) = \$920.00
- Modification Permit:** \$675.00 (EPCPH Charge) + \$23.00 (CDPHE Surcharge) = \$698.00
- Major Repair Permit:** \$535.00 (EPCPH Charge) + \$23.00 (CDPHE Surcharge) = \$558.00
- Minor Repair Permit:** \$245.00 (EPCPH Charge) + \$23.00 (CDPHE Surcharge) = \$268.00

Permits expire one year from date of issuance, unless otherwise noted

REQUIRED: Provide a complete written scope of work to be performed on the property.

New TANK AND FIELD See ATTACHED

The following documents MUST be included with your application.

- A soils report: including at least 2 soil profile excavation pits, in accordance with section 8.5 A-F of OWTS regulations
- A clear and legible design document: including the proposed and alternate locations, profile pit locations with respect to system layout, labeled with all setbacks to pertinent structures and features in table 7-1.
- Provide directions to property, from a main highway, on the backside of application.

Failure to provide the above listed documents may result in denial of the permit application

I certify that the information provided on this application is in compliance with the Chapter 8 Onsite Wastewater System (OWS) Regulations of the El Paso County Board of Health. I also authorize the assigned representative of El Paso County Public Health to enter onto this property in order to obtain information necessary for the issuance of a permit.

Applicants Signature: _____

Date: 10-22-20

- Property address or lot number must be clearly marked and visible from the road.
- Profile excavation test pit and/or soil profile holes must be clearly marked
- Proposed and alternate soil treatment areas must be protected from compaction and disturbance
- Locked gates require the gate code or lock combination be provided on front of application
- Please provide directions to the property from a main highway, by text or picture, below.



Failure to comply with the above information may result in an additional charge for a return trip.

Completed application includes:

EPCPH will only accept application if all required components are submitted at time of application submittal.

- Completed Application
- Professional Engineer (P.E.) stamped soils report
- Calculation/design worksheet
- Clear legible 8.5'x11' Design document



ENTECH
ENGINEERING, INC.

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

September 28, 2020

Black Forest, LLC
8655 Table Butte Road
Colorado Springs, CO 80908

Attn: Rob Haddock

Re: OWTS Site Evaluation – Two Building Sites
12740 Black Forest Road
Colorado Springs, Colorado

Dear Mr. Haddock:

As requested, personnel of Entech Engineering, Inc. have observed the excavation of four test pits in the areas of the proposed on-site wastewater treatment system (OWTS) absorption field location at the above referenced site. This letter presents the results of our testing.

The locations of the test pits are shown in Figure 1. The test pits were excavated on September 2 and 10, 2020, to approximate depths of 6 to 8 feet. Soils encountered in the test pits consisted of sandy clay loam overlying weathered silty clayey sandstone with gravel. The Test Pit Logs and Laboratory Test Results are shown in Figures 2 through 6. Bedrock was encountered at depths of 2.5 to 5.5 feet. Signs of seasonally occurring groundwater were not encountered in the test pits.

Visual and tactile evaluation of the soils was performed. The limiting layer encountered in the test pits is the Dawson Sandstone, which classified as USDA Soil Type 4A. For design purposes a LTAR Value of 0.15 gallons per day per square foot is recommended, for Treatment Level 1. An engineer designed system will be required for this site due to shallow bedrock and Type 4A Soil encountered in two of the four test pits. The absorption field should be installed in accordance with El Paso County Health Department regulations.

We trust that this has provided you with the information you required. If you have any questions or need additional information, please do not hesitate to contact us.

Respectfully Submitted,

ENTECH ENGINEERING, INC.

Robert P. Jaquet, E.I.

JG/rj

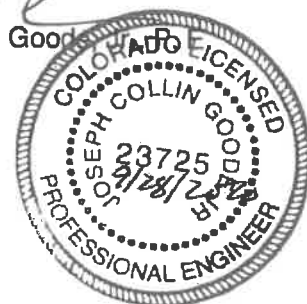
Encl.

Entech Job No. 201514

AA projects/2020/201514 owts site eval

Reviewed by:

Joseph C. Good
President





TP - APPROXIMATE TEST PIT LOCATION AND NUMBER

- TP-1 39°0'57.26"N, 104°42'8.12"W
- TP-2 39°0'57.84"N, 104°42'8.34"W
- TP-3 39°0'56.49"N, 104°42'9.68"W
- TP-4 39°0'56.38"N, 104°42'8.94"W



ENTECH
ENGINEERING, INC.
303 ELKTON DRIVE
COLORADO SPRINGS, CO. 80907 (719) 531-3599

TEST PIT LOCATION MAP
12740 BLACK FOREST ROAD
COLORADO SPRINGS, COLORADO
FOR: BLACK FOREST, LLC.

DRAWN: RPJ	DATE: 09/18/20	CHECKED: JCG	DATE: 09/18/20
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JOB NO.:
201514

FIG NO.:

1

TEST PIT NO. 1
 DATE EXCAVATED 9/2/2020
 Job # 201514

TEST PIT NO. 2
 DATE EXCAVATED 9/2/2020
 CLIENT Black Forest, LLC
 LOCATION 12740 Black Forest Road

REMARKS	Depth (ft)	Symbol	Samples	Soil Structure Shape	Soil Structure Grade	USDA Soil Type	REMARKS	Depth (ft)	Symbol	Samples	Soil Structure Shape	Soil Structure Grade	USDA Soil Type
topsoil sandy clay loam, fine to coarse grained, moist, tan	1			gr	m	3	topsoil sandy clay loam, fine to coarse grained, moist, tan	1			gr	m	3
	2							2					
	3						weathered sandstone, coarse grained, moist, light brown	3			ma	s	3A
	4							4					
	5							5					
weathered sandstone, coarse grained, moist, orange-brown	6			ma	s	3A		6					
	7							7					
	8							8					
	9							9					
	10							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



ENTECH
ENGINEERING, INC.

505 ELKTON DRIVE
 COLORADO SPRINGS, COLORADO 80907

TEST PIT LOG

DRAWN:

DATE:

CHECKED:

DATE:

KCF 9/15/20

JOB NO.:
 201514

FIG NO.:

2

TEST PIT NO. 3
 DATE EXCAVATED 9/10/2020
 Job # 201514

TEST PIT NO. 4
 DATE EXCAVATED 9/10/2020
 CLIENT Black Forest, LLC
 LOCATION 12740 Black Forest Road

REMARKS						REMARKS					
Depth (ft)	Symbol	Samples	Soil Structure Shape	Soil Structure Grade	USDA Soil Type	Depth (ft)	Symbol	Samples	Soil Structure Shape	Soil Structure Grade	USDA Soil Type
1			gr	m	3	1			gr	m	4
2						2					
3						3					
4						4			ma	s	4A
5			ma	s	4A	5					
6						6					
7						7					
8						8					
9						9					
10						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



**ENTECH
 ENGINEERING, INC.**

505 ELKTON DRIVE
 COLORADO SPRINGS, COLORADO 80907

TEST PIT LOG

DRAWN:

DATE:

CHECKED:

DATE:

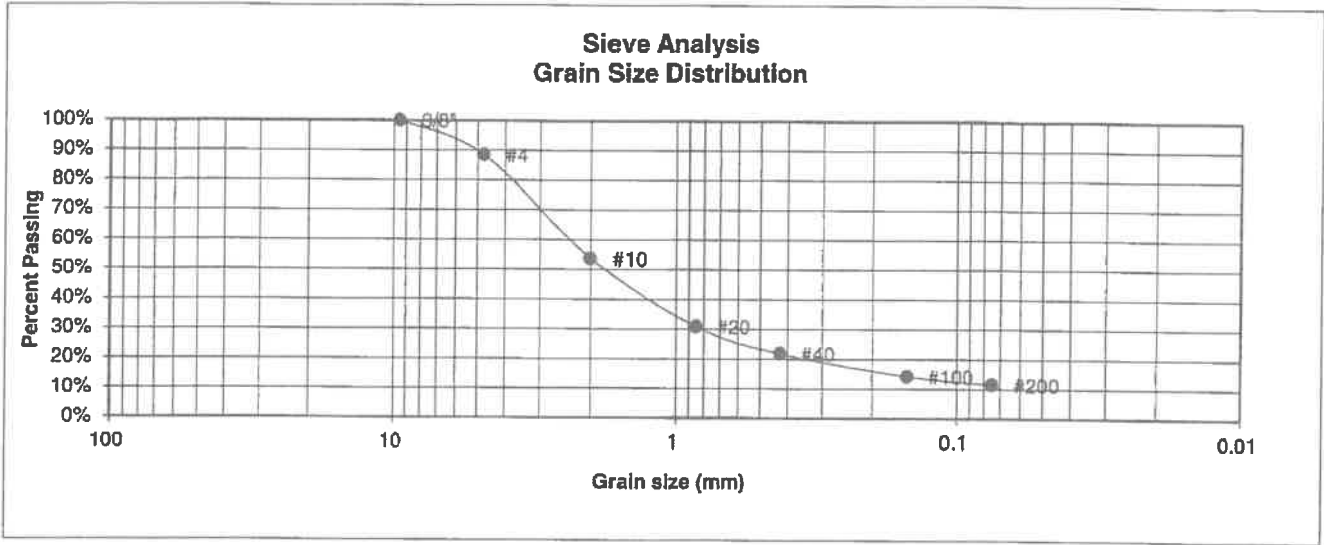
[Signature] 9/15/20

JOB NO.:
 201514

FIG NO.:

3

BORING NO.	TP-3	UNIFIED CLASSIFICATION	SM-SW	TEST BY	BL
DEPTH(ft)	3.5	AASHTO CLASSIFICATION		JOB NO.	201514
CLIENT	BLACK FOREST, LLC				
PROJECT	12740 BLACK FOREST RD				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	88.4%
10	53.7%
20	30.8%
40	21.8%
100	14.2%
200	11.5%

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:

RPJ

9/15/20

JOB NO:
201514

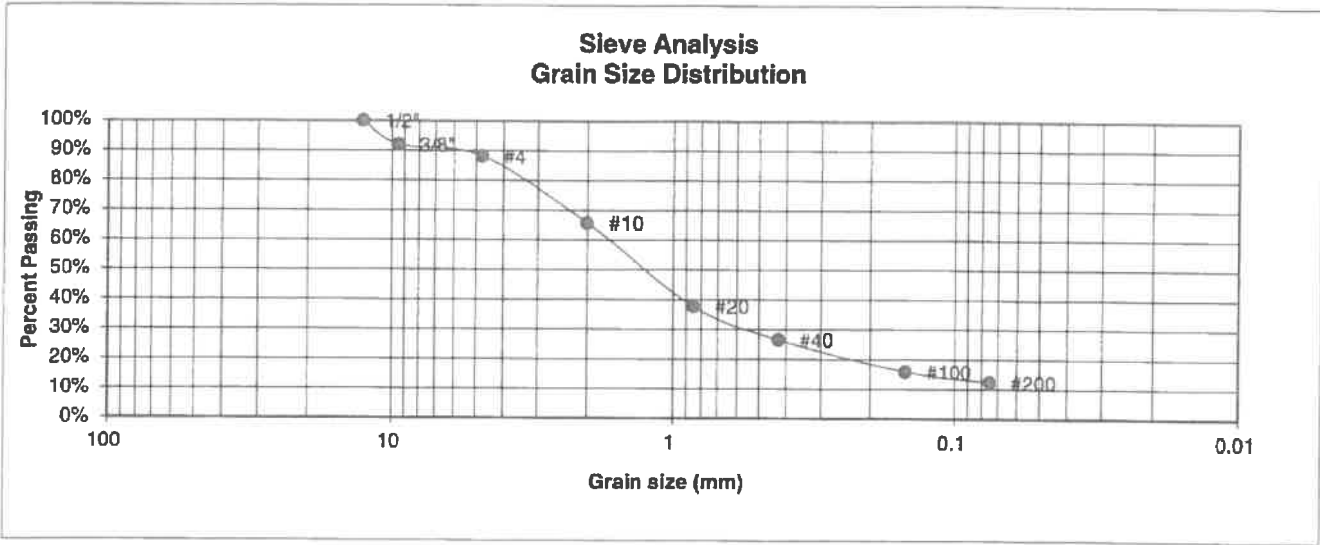
FIG NO.:

4

BORING NO. TP-3
 DEPTH(ft) 6
 CLIENT BLACK FOREST, LLC
 PROJECT 12740 BLACK FOREST RD

UNIFIED CLASSIFICATION SM
 AASHTO CLASSIFICATION

TEST BY BL
 JOB NO. 201514



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	100.0%
3/8"	92.1%
4	88.1%
10	65.7%
20	37.7%
40	26.5%
100	15.9%
200	12.4%

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:

9/15/20

JOB NO.:
 201514

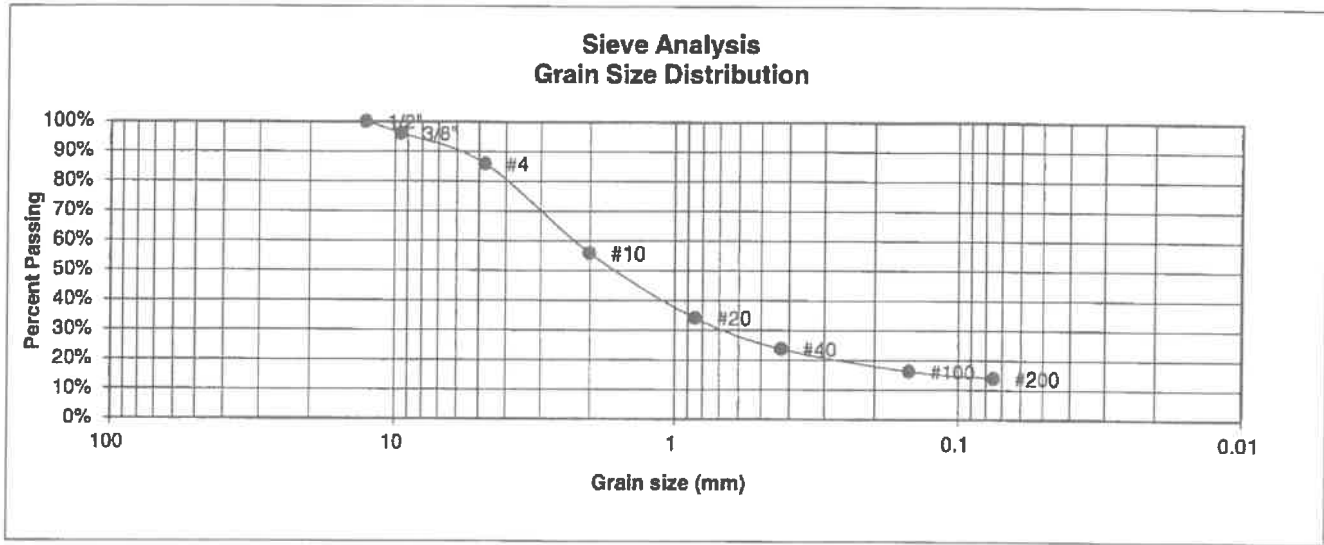
FIG NO.:

5

BORING NO. TP-4
 DEPTH(ft) 2.5
 CLIENT BLACK FOREST, LLC
 PROJECT 12740 BLACK FOREST RD

UNIFIED CLASSIFICATION SM
 AASHTO CLASSIFICATION

TEST BY BL
 JOB NO. 201514



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	100.0%
3/8"	96.1%
4	85.9%
10	55.9%
20	34.1%
40	23.7%
100	16.2%
200	14.0%

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:

[Signature] 9/15/20

JOB NO.:
201514

FIG NO.:

6

NOTES:
Site conditions require a designed septic system. We recommend a septic tank and pressure dosed chambers. A pumping chamber will be required.

DESIGN CRITERIA:
El Paso County Health Department Onsite Wastewater Treatment System (OWTS) Regulations Dated May 23, 2018 effective July 7, 2018.

TEST PIT OBSERVATION:
Four test pits were observed by Enitech Engineering, Inc. The results were provided in OWTS Site Evaluation dated September 20, 2020, Enitech Job No. 201514. An LTRF value of 0.15 gallons per day square foot is recommended for Treatment Level 1. Clayey Sandstone was encountered at 2.2 ft to 5.5 ft below grade. Groundwater was not encountered in the Test Pit.

DESIGN DATA:
30 - Employees (Max number of Employees between 2 office buildings)
15 - Gallons Per Day Per Employee
Total Average flow = 30*15 = 450 gpd

DESIGN FLOW:
Total Average flow = 450 gpd
SOIL TYPE:
Clayey Sandstone

CALCULATIONS	
30 - EMPLOYEES	
LTAR (0.15)	
BASIC REQUIRED AREA	
A = $\frac{0}{LTAR}$	
FOR BED SYSTEM (CHAMBERS)	
0 = 450 GPD	
0.5 = SOIL TYPE & TREATMENT LEVEL 1 (0.1749)	
10 = BED (PRESSURE Dosed)	
0.7 = SIZE ADJUSTMENT FACTOR (CHAMBERS)	
A = $\frac{(450)(10)(0.7)}{0.15}$	
A = 2100 SF	USE 2102 SF
QUICK-4 = $\frac{2102}{12}$	= 76 USE 76
TOTAL - 76 QUICK-4	
USE (2) 4 ROWS OF 22 INFILTRATORS FOR TOTAL OF 76 INFILTRATORS	

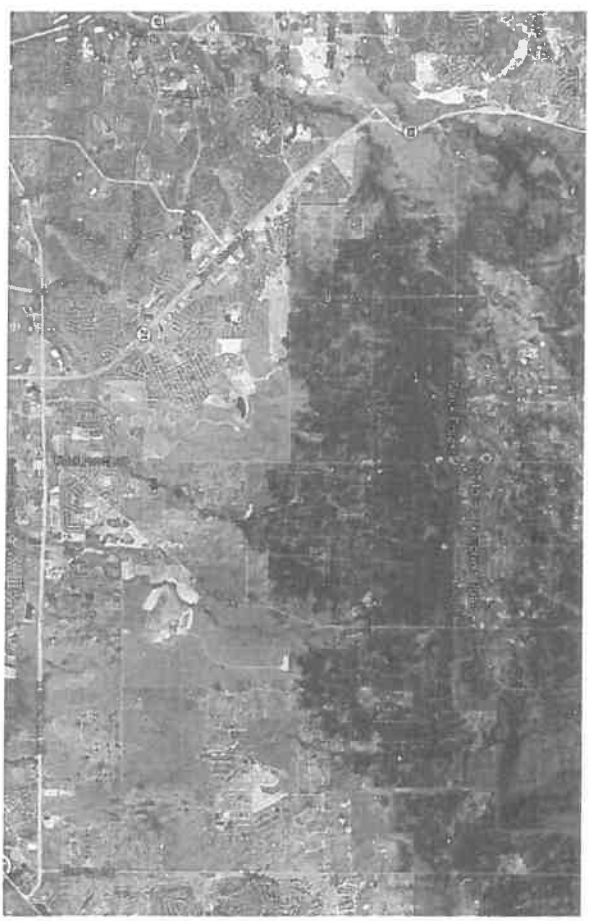
SEPTIC TANK:
The septic tank capacity should be a minimum of 1,200 gallons. The septic tank shall comply with El Paso County Department of Health and Environment Regulations. The tank should be checked periodically and pumped as needed.

PUMPING CHAMBER:
A pumping chamber with a capacity of 500 gallons shall be sealed at all joints and shall be coated with a suitable asphalt waterproofing. A pump with a high water alarm shall be installed in the pumping chamber. The pumping chamber shall comply with El Paso County Department of Health and Environment Regulations. Periodic monitoring of water usage is recommended to adjust dosing to 2 to 3 doses per day, with a 100 gallon minimum dose. Install check valve / air release valve to permit line to drain to pumping tank or to field.

INSTALLATION OBSERVATION:
The installation of the septic system shall be observed to check compliance with the design. Recommended observations include:
1) A meeting with Enitech, builder, homeowner and the installer to state the field locations.
2) Site observation of required test pits prior to excavating tanks.
3) Site observation during and after beds are excavated.
4) Site observation of pipe installation, infiltrators, distribution valves and manifold assembly, pumping chamber, and verify that the stand pipes have been installed.
5) Site observation of final finishing soil cover over the chambers.

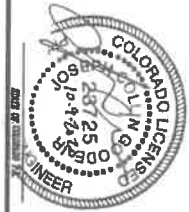
PRE-CONSTRUCTION MEETING:
Contractor should contact Enitech Engineering, Inc. to discuss installation and scheduling of recommended observations. A site meeting with an engineer from Enitech Engineering, Inc., a El Paso County Health Officer and the SDS contractor is required prior to excavation or installation of the field. The absorption field location will be finalized at the pre-construction meeting. The installed system minimum horizontal distances must be maintained from pertinent physical features according to El Paso County Department of Health and Environment Regulations.

WATER
The well(s) must be located a minimum of 100 feet away from the new absorption field.



VICINITY MAP
SCALE: N.T.S.

MODIFICATIONS TO THIS DESIGN MAY BE REQUIRED, TO BE DETERMINED AT THE TIME OF SITE OBSERVATIONS.



DATE	10/10/20
SCALE	AS SHOWN
REV	201814
1	3

ON-SITE WASTEWATER TREATMENT SYSTEM
12740 BLACK FOREST ROAD
EL PASO COUNTY, COLORADO
FOR: BLACK FOREST, LLC

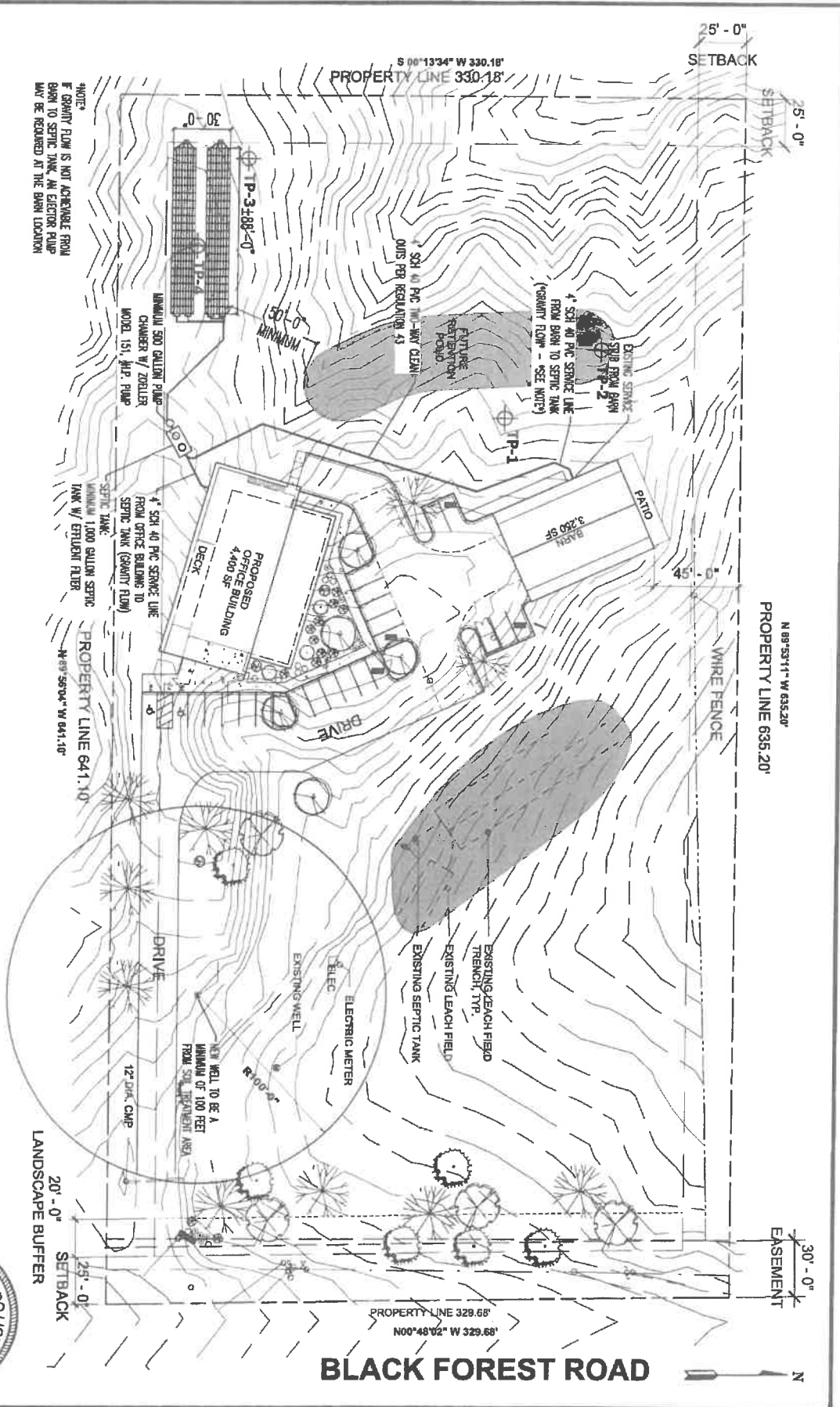
ENTECH ENGINEERING, INC.
88 E CLAYTON DRIVE
COLORADO SPRINGS, CO 80907
719.531.5599

REVISIONS	BY:

MODIFICATIONS TO THIS DESIGN MAY BE REQUIRED, TO BE DETERMINED AT THE TIME OF SITE OBSERVATIONS.

NOTES:
IF GRANT FLOW IS NOT ACCEPTABLE FROM BARN TO SEPTIC TANK, AN ELECTRIC PUMP MAY BE REQUIRED AT THE BARN LOCATION.

SITE PLAN
SCALE: 1" = 5'



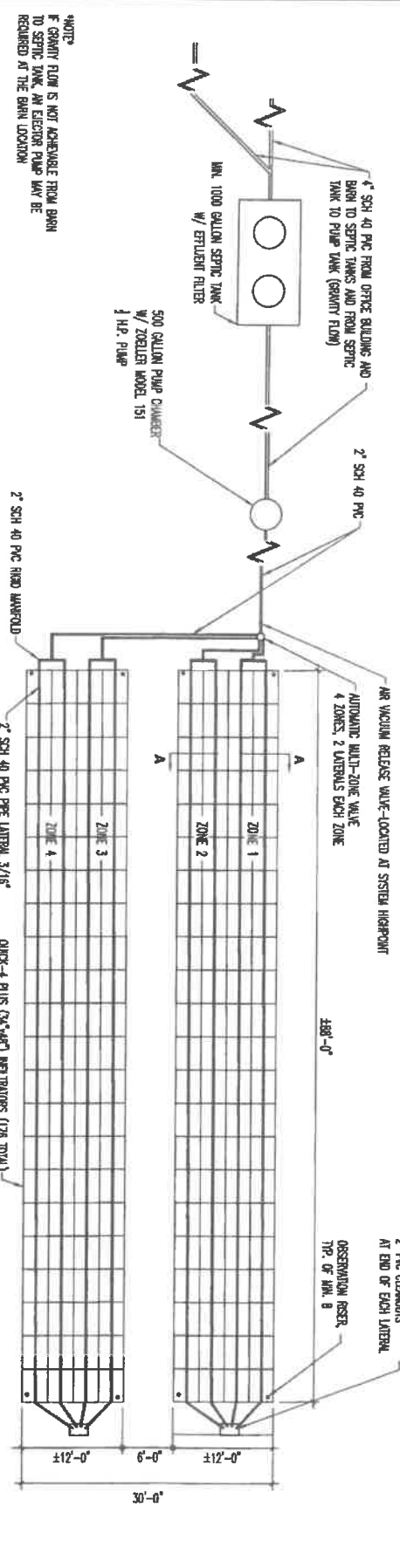
BLACK FOREST ROAD

DATE	201614
SCALE	1" = 5'
DATE	10/20/20
DESIGNED BY	L. ROBERT, PE
CHECKED BY	R. B. ANDREWS, PE
DATE	201614
NO.	2
	3

ON-SITE WASTEWATER TREATMENT SYSTEM
12740 BLACK FOREST ROAD
EL PASO COUNTY, COLORADO
FOR: BLACK FOREST, LLC

ENTECH ENGINEERING, INC.
305 ELKTON BLVD
COLORADO SPRINGS, CO 80907 (719) 531-2599

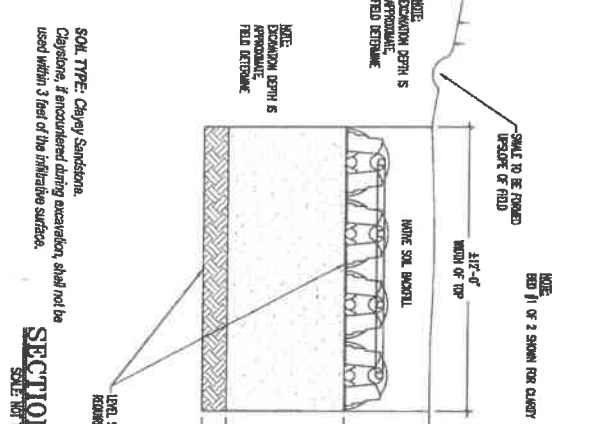
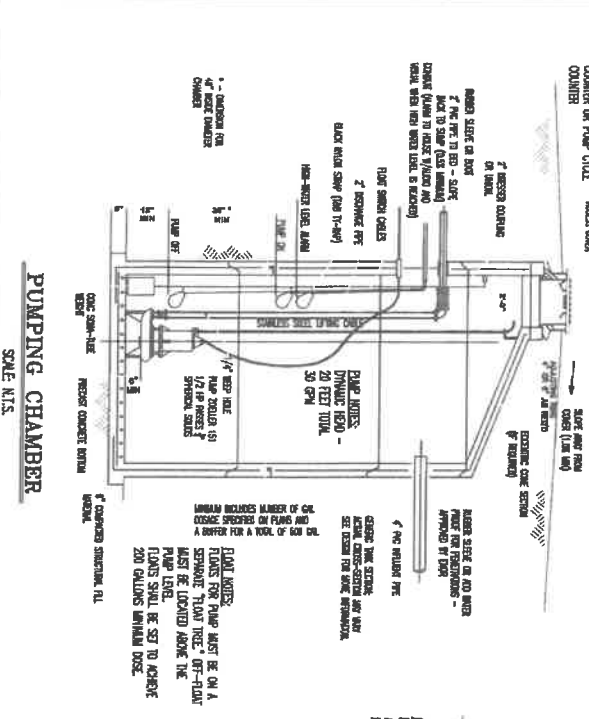
REVISIONS	BY:



NOTE:
 * GRANULAR FLOW IS NOT ACCEPTABLE FROM BARRI
 TO SEPTIC TANK, AN EJECTOR PUMP MAY BE
 REQUIRED AT THE BARRI LOCATION

(2) BODS - (4) ZONES WITH (2) LATERALS IN EACH ZONE
 (22) QUICK INFLTRATORS PER LATERAL

TYPICAL ABSORPTION LAYOUT
 SCALE: NOT TO SCALE



NOTE:
 * GRANULAR FLOW IS NOT ACCEPTABLE FROM BARRI
 TO SEPTIC TANK, AN EJECTOR PUMP MAY BE
 REQUIRED AT THE BARRI LOCATION

(2) BODS - (4) ZONES WITH (2) LATERALS IN EACH ZONE
 (22) QUICK INFLTRATORS PER LATERAL

2" SCH 40 PVC PER LATERAL, 3/16"
 HOLES @ 4' O.C. (STAGGERED AT 10
 O'CLOCK AND 2 O'CLOCK POSITIONS) - IN
 ADDITION TO DRAINAGE HOLES (EACH END)

SCALE: NOT TO SCALE

2" SCH 40 PVC PER LATERAL, 3/16"
 HOLES @ 4' O.C. (STAGGERED AT 10
 O'CLOCK AND 2 O'CLOCK POSITIONS) - IN
 ADDITION TO DRAINAGE HOLES (EACH END)

SCALE: NOT TO SCALE

MULTIZONE DETAIL
 SCALE: NOT TO SCALE

NOTE:
 * GRANULAR FLOW IS NOT ACCEPTABLE FROM BARRI
 TO SEPTIC TANK, AN EJECTOR PUMP MAY BE
 REQUIRED AT THE BARRI LOCATION

(2) BODS - (4) ZONES WITH (2) LATERALS IN EACH ZONE
 (22) QUICK INFLTRATORS PER LATERAL

2" SCH 40 PVC PER LATERAL, 3/16"
 HOLES @ 4' O.C. (STAGGERED AT 10
 O'CLOCK AND 2 O'CLOCK POSITIONS) - IN
 ADDITION TO DRAINAGE HOLES (EACH END)

SCALE: NOT TO SCALE

SECTION A-A
 SCALE: NOT TO SCALE

NOTE:
 * GRANULAR FLOW IS NOT ACCEPTABLE FROM BARRI
 TO SEPTIC TANK, AN EJECTOR PUMP MAY BE
 REQUIRED AT THE BARRI LOCATION

(2) BODS - (4) ZONES WITH (2) LATERALS IN EACH ZONE
 (22) QUICK INFLTRATORS PER LATERAL

2" SCH 40 PVC PER LATERAL, 3/16"
 HOLES @ 4' O.C. (STAGGERED AT 10
 O'CLOCK AND 2 O'CLOCK POSITIONS) - IN
 ADDITION TO DRAINAGE HOLES (EACH END)

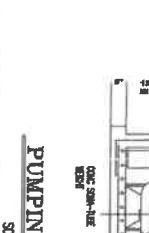
SCALE: NOT TO SCALE

PLACEMENT AND TESTING
 IF RECONDITIONED SANDSTONE IS NOT
 SUITABLE, C-33 SAND MAY BE
 IMPORTED FOR PLACEMENT INSTEAD.

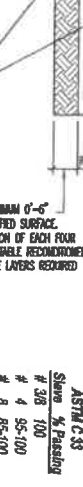
MATERIAL SHALL BE PLACED TO
 CONTROL SETTLEMENT WITHOUT
 CONTACT WITH EXISTING SANDSTONE
 TESTING OF PLACED IMPORTED SAND
 PRIOR TO PLACEMENT OF INFLTRATORS.

ASTM C-33
 Stone % Passing
 # 4 95-100
 # 8 85-100
 # 16 50-65
 # 30 25-40
 # 60 10-20
 # 100 Less than 8
 (less than 3% preferred)
 # 200 Less than 3
 (less than 1% preferred)

MODIFICATIONS TO THIS
 DESIGN MAY BE REQUIRED.
 TO BE DETERMINED AT THE
 TIME OF SITE OBSERVATIONS.



ON-SITE WASTEWATER TREATMENT SYSTEM
 12740 BLACK FOREST ROAD
 EL PASO COUNTY, COLORADO
 FOR: BLACK FOREST, LLC



REVISIONS	BY:

3 3