

NOTES:

Site conditions require a designed septic system. We recommend TWO septic tanks and pressure dosed chambers. At least one pumping chamber will be required, an additional lift station may be required if gravity flow from the Septic Tank for the Pine Meadows Restroom facilities cannot be achieved to the main pumping chamber.

DESIGN CRITERIA:

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

TEST PIT OBSERVATION:

Two test pits were observed by Entech Engineering, Inc. The results were provided in a letter dated September 18, 2020, Entech Job No. 201776. An LTAR value of 0.20 gallons per day square foot is recommended for Treatment Level 1. Bedrock was not encountered in the Test Pits. Groundwater was not encountered in the Test Pits.

DESIGN DATA:

Design Flow Rate - Two Public Restrooms BY ENTECH ENGINEERING, INC., DATED DECEMBER 18, 2020

Total Average flow = 1950 gpd

DESIGN FLOW:

Total Average flow = 1950 gpd

SOIL TYPE:

Sandy Clay (LTAR = 0.20)

SEPTIC TANK:

The septic tank capacity for each restroom facility should be a minimum of 2,000 gallons with an Effluent Filter. The septic tank shall comply with El Paso County Health Department regulations. The tank should be checked periodically and pumped as needed.

PUMPING CHAMBER / LIFT STATION:

A pumping chamber with a capacity of 500 gallons shall be sealed at all joints and shall be coated with a suitable asphaltic waterproofing. An Effluent Screen (ES1848 by ORENCO or Similar) shall be installed. A pump with a high water alarm shall be installed in the pumping chamber. The pumping chamber shall comply with El Paso County Health Department regulations. Periodic monitoring of water usage is recommended to adjust dosing to 5 to 6 doses per day, with a 300 gallon minimum dose. Install check valve / air release valve to permit line to drain to pumping tank or to field.

A lift station may be required if gravity flow cannot be achieved from the Pine Meadows Restrooms to the main pumping chamber due to site constraints. The lift station (if required) shall have a capacity of 500 gallons and be sealed at all joints and shall be coated with a suitable asphaltic waterproofing. A Zoeller Model 98 pump with a high water alarm (SJE Rhombus Control Panel) shall be installed in the pumping chamber. The pumping chamber shall comply with El Paso County Health Department regulations.

INSTALLATION OBSERVATION:

The installation of the septic system shall be observed to check compliance with the design. Recommended observations include:

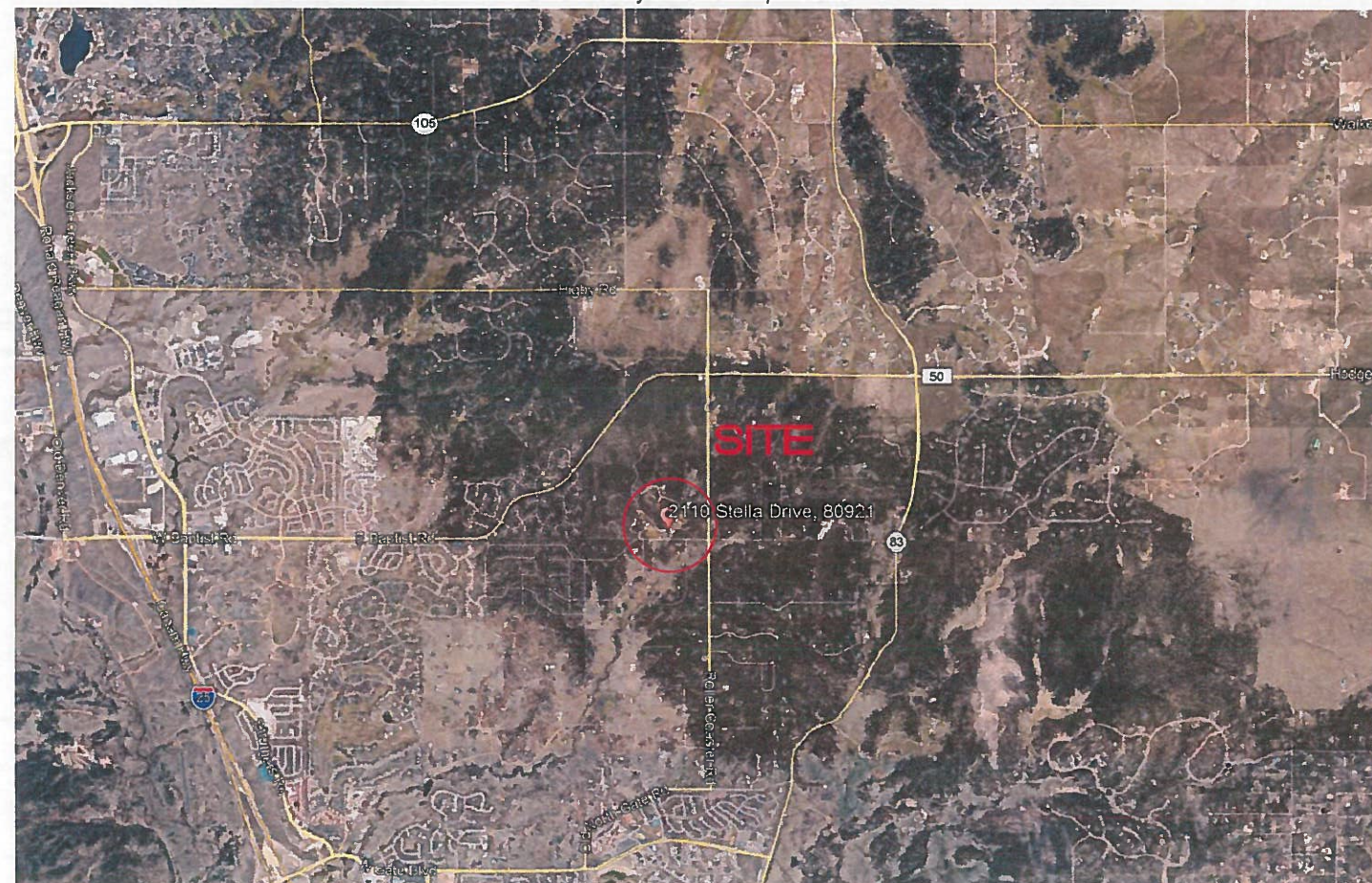
- 1) A meeting with Entech, El Paso County Parks and the installer(s) to stake the field locations.
- 2) Site observation(s) during and after beds are excavated (2 site visits minimum).
- 3) Site observation of pipe installation, infiltrators, distribution valves and manifold assembly, pumping chamber, and verify that the stand pipes have been installed;
- 4) Site observation of final including soil cover over the chambers with swales / drainage mitigation around the soil treatment area .

PRE-CONSTRUCTION MEETING:

Contractor should contact Entech Engineering, Inc. to discuss installation and scheduling of recommended observations. A site meeting with an engineer from Entech Engineering, Inc., an El Paso County Health Officer and the ISDS 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 Health Department Regulations.

WATER

Wells must be located a minimum of 180 feet away from the absorption field.



VICINITY MAP
SCALE: N.T.S.



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

REVISIONS	BY:

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

ON-SITE WASTEWATER TREATMENT SYSTEM
2110 STELLA DRIVE
EL PASO COUNTY, COLORADO
FOR: EL PASO COUNTY PARKS

DRAWN BY: R. JAQUET
DESIGNED BY: R. JAQUET
CHECKED BY: J. COODS, Jr.
DATE: 12/21/20
SCALE: AS SHOWN
JOB NO.: 201776
SHEET NO.: 1 OF 4

CALCULATIONS

2 PUBLIC RESTROOM FACILITIES

LTAR (0.20)

BASIC REQUIRED AREA

$$A = \frac{Q}{LTAR}$$

FOR BED SYSTEM WITH CHAMBERS

Q = 1950 GPD (See Flow Rate Report By Entech Engineering, Inc., Dated December 18, 2020 Entech Job No. 201776)

0.20 = SOIL TYPE 4, TREATMENT LEVEL 1 (LTAR)

10 = BED (PRESSURE DOSED)

0.7 = SIZE ADJUSTMENT FACTOR (CHAMBERS)

$$A = \frac{(1950)(10)(0.7)}{0.20}$$

A = 6,825 SF USE 7,200 SF

$$\text{QUICK-4} = \frac{7,200}{12} = 600 \text{ USE } 600$$

TOTAL = 600 QUICK-4

USE (6) 4 ROWS OF 25 INFILTRATORS FOR TOTAL OF 600 INFILTRATORS

NORTHERN PORTION OF FOXRUN
PARK NOT SHOWN FOR CLARITY

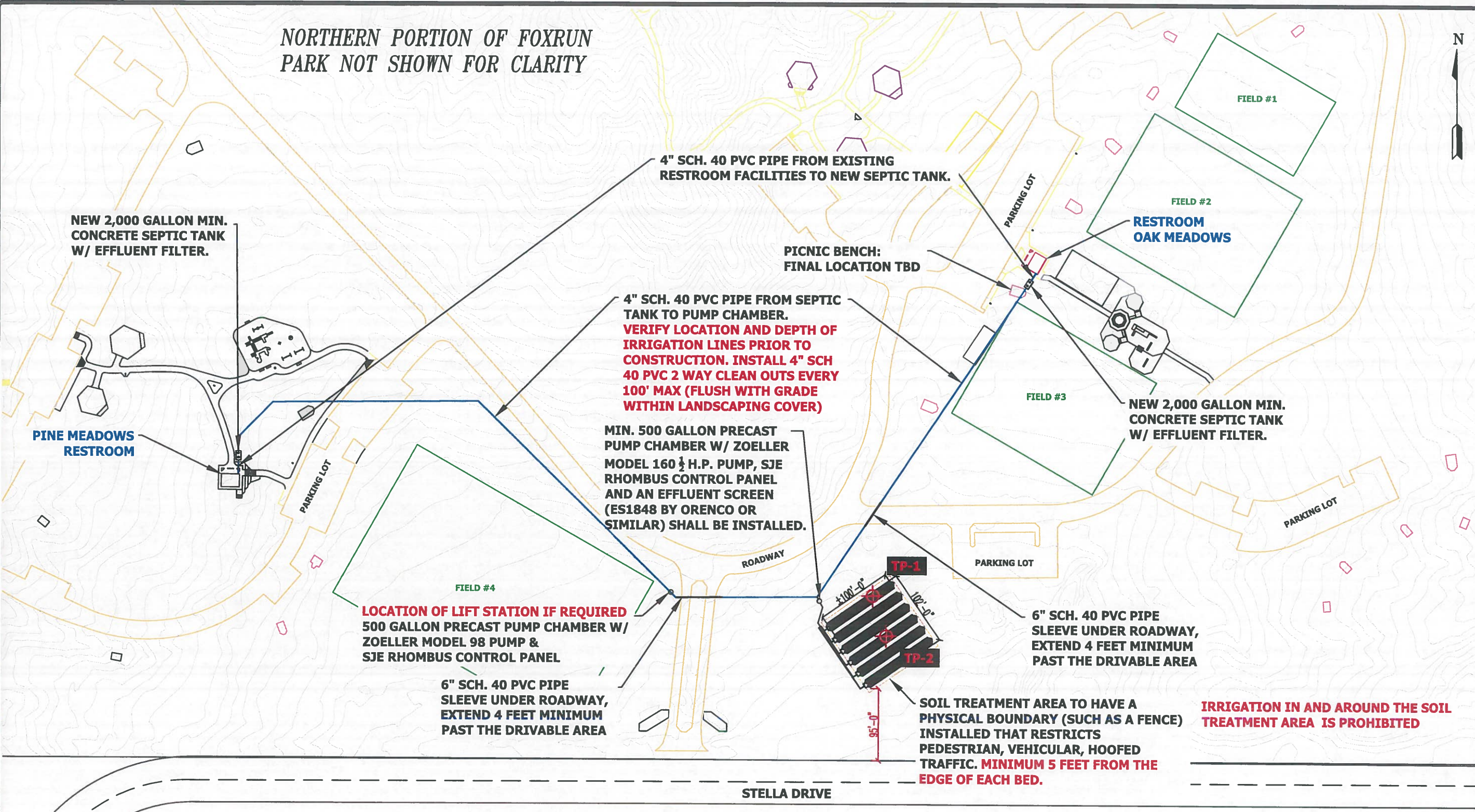


REVISIONS	BY:

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

ON-SITE WASTEWATER TREATMENT SYSTEM
2110 STELLA DRIVE
EL PASO COUNTY, COLORADO
FOR: EL PASO COUNTY PARKS

DRAWN BY:	R. JAQUET
DESIGNED BY:	R. JAQUET
CHECKED BY:	J. COODR, JR.
DATE:	12/21/20
SCALE:	AS INDICATED
JOB NO.:	201776
SHEET NO.:	2 OF 4



**ON-SITE WASTEWATER
TREATMENT SYSTEM SITE PLAN**
SCALE: 1" = 130'

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



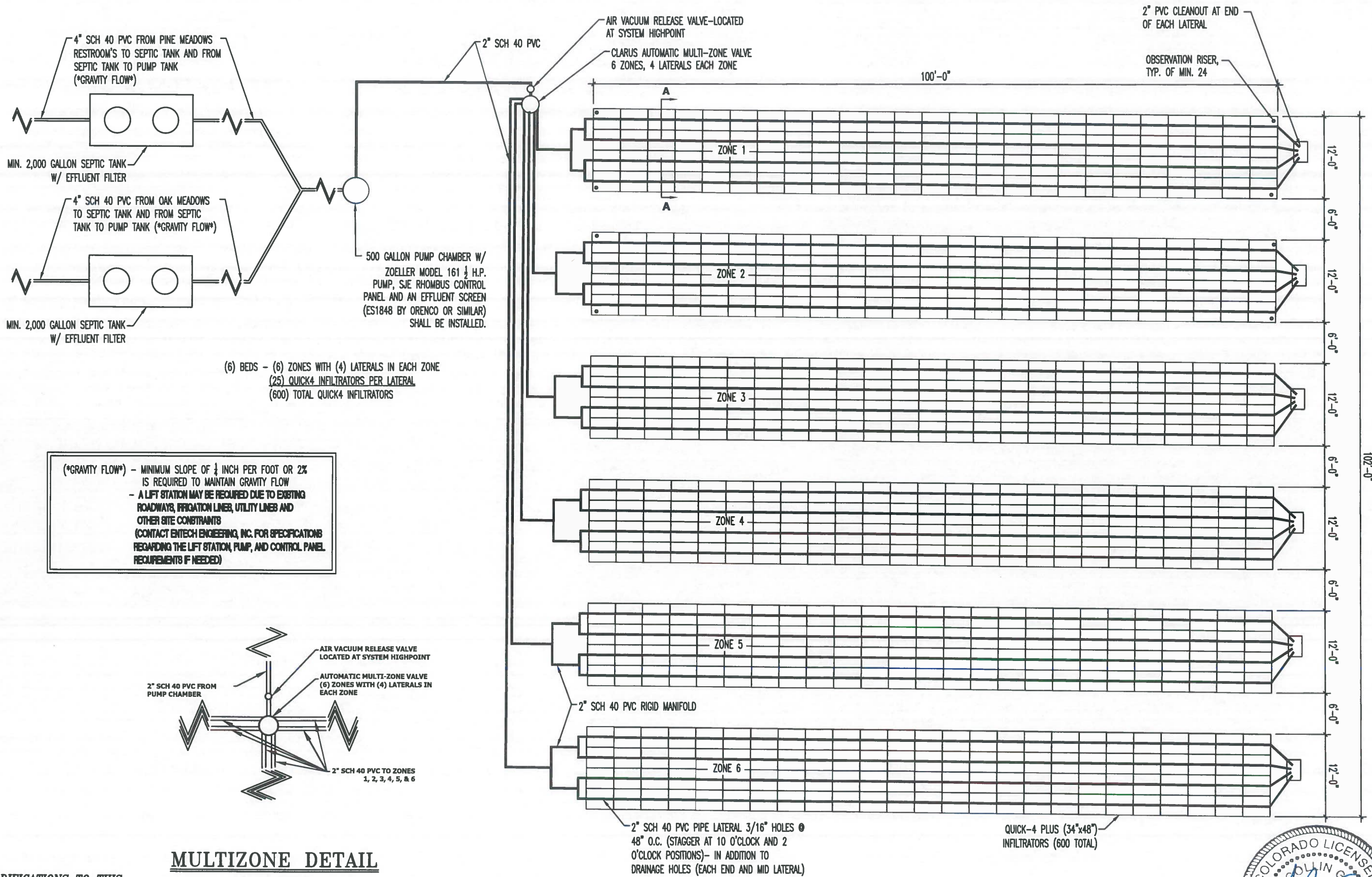
REVISIONS	BY:

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

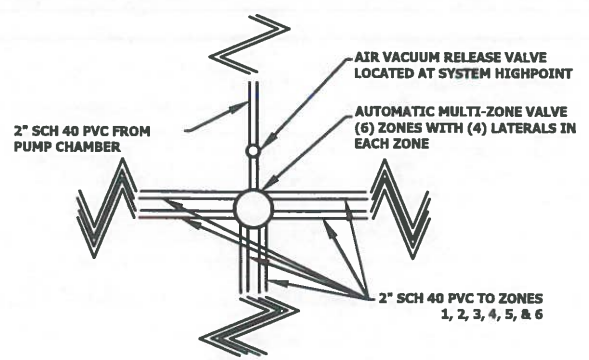


ON-SITE WASTEWATER TREATMENT SYSTEM
 2110 STELLA DRIVE
 EL PASO COUNTY, COLORADO
 FOR: EL PASO COUNTY PARKS

DRAWN BY: R. JAQUET
DESIGNED BY: R. JAQUET
CHECKED BY: J. COODR, Jr.
DATE: 12/21/20
SCALE: AS SHOWN
JOB NO.: 201776
SHEET NO.: 3 OF 4



(*GRAVITY FLOW*) - MINIMUM SLOPE OF 1/4 INCH PER FOOT OR 2% IS REQUIRED TO MAINTAIN GRAVITY FLOW
 - A LIFT STATION MAY BE REQUIRED DUE TO EXISTING ROADWAYS, IRRIGATION LINES, UTILITY LINES AND OTHER SITE CONSTRAINTS
 (CONTACT ENTTECH ENGINEERING, INC. FOR SPECIFICATIONS REGARDING THE LIFT STATION, PUMP, AND CONTROL PANEL REQUIREMENTS IF NEEDED)



MULTIZONE DETAIL
 SCALE: NOT TO SCALE

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

SOIL TYPE: Sandy Clay (LTAR 0.20).

TYPICAL ABSORPTION LAYOUT
 SCALE: NOT TO SCALE



REVISIONS	BY:

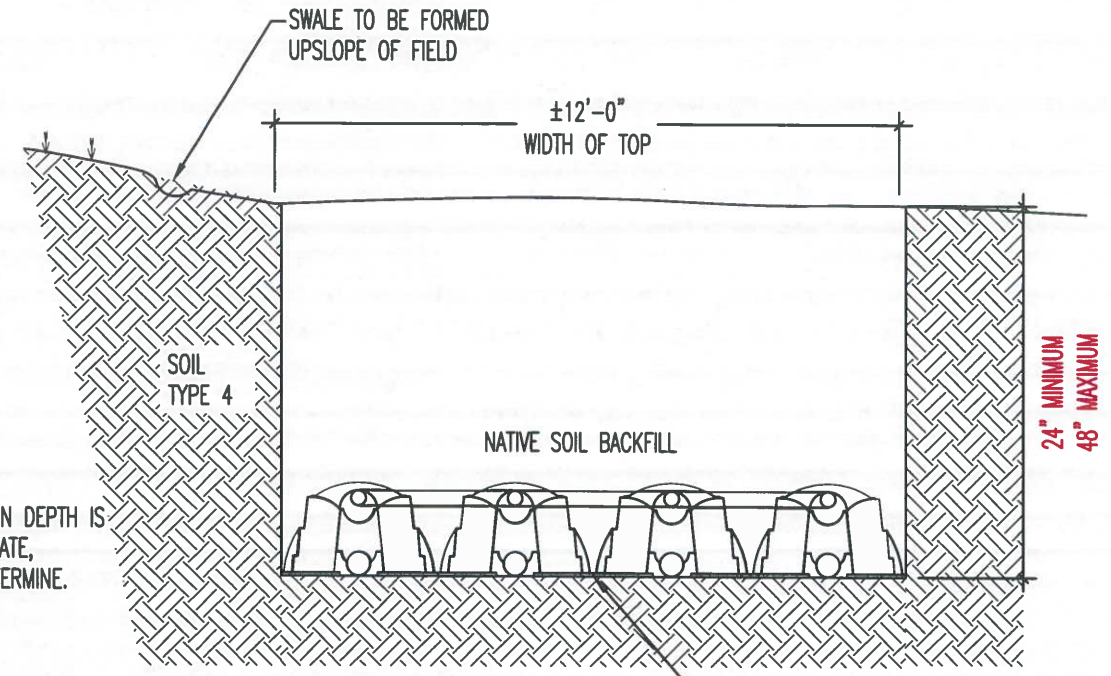
ENTTECH ENGINEERING, INC.
 505 ELKTON DRIVE
 COLORADO SPRINGS, CO. 80907 (719) 531-5599



ON-SITE WASTEWATER TREATMENT SYSTEM
 2110 STELLA DRIVE
 EL PASO COUNTY, COLORADO
 FOR: EL PASO COUNTY PARKS

DRAWN BY: R. JAQUET
DESIGNED BY: R. JAQUET
CHECKED BY: J. GOODE, Jr.
DATE: 12/21/20
SCALE: AS SHOWN
JOB NO.: 201776
SHEET NO.: 4 OF 4

NOTE:
 BEDS #2, #3, #4, #5, & #6
 NOT SHOWN FOR CLARITY



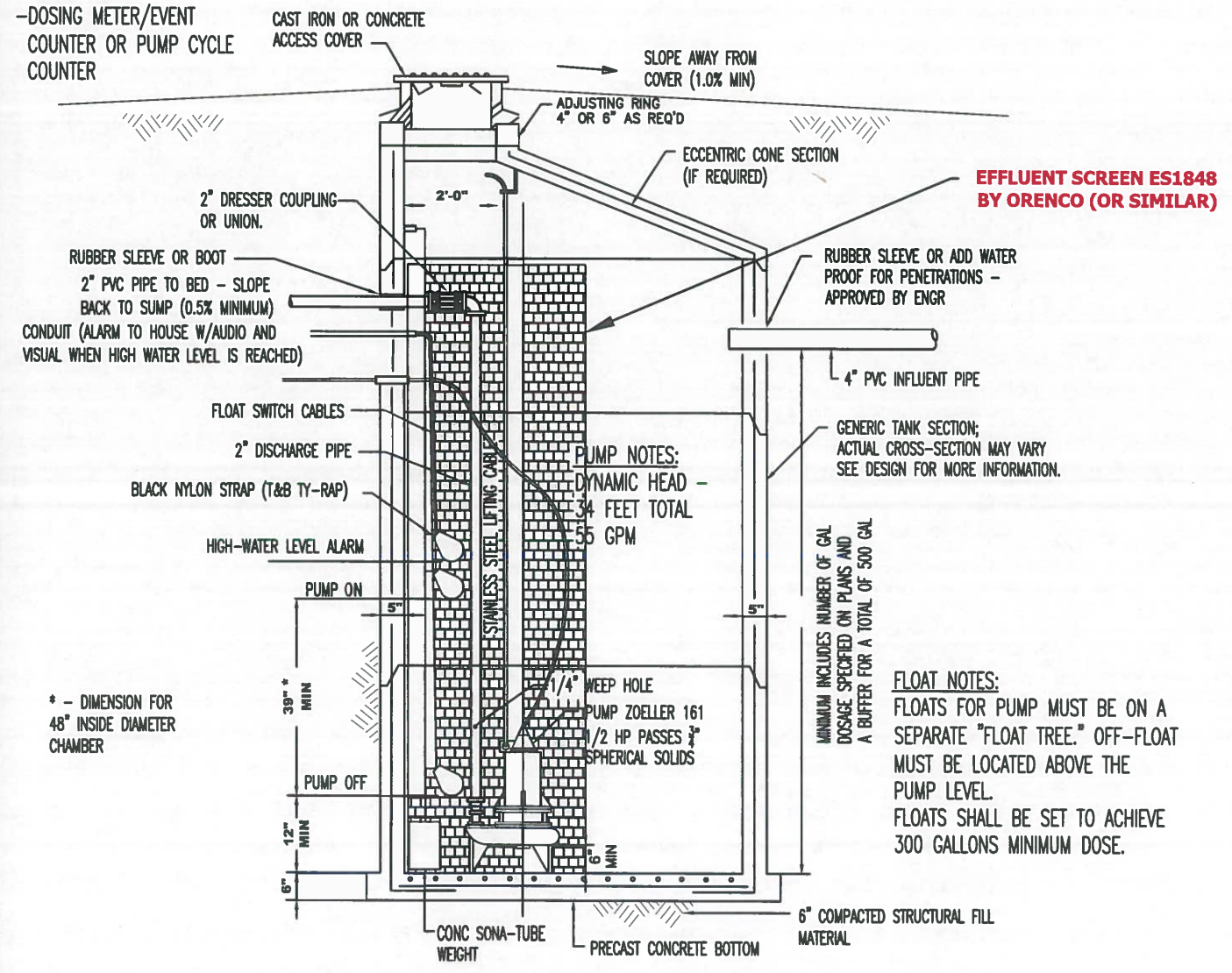
NOTE:
 EXCAVATION DEPTH IS
 APPROXIMATE,
 FIELD DETERMINE.

SECTION A-A
 SCALE: NOT TO SCALE

SOIL TYPE: Sandy Clay (LTAR = 0.20)

LEVEL SURFACES
 REQUIRED.

NOTE:
 CONTROL PANEL MUST HAVE:
 -AUDIO/VISUAL ALARM
 -HOA SWITCH
 -DOSING METER/EVENT
 COUNTER OR PUMP CYCLE
 COUNTER



**EFFLUENT SCREEN ES1848
 BY ORENCO (OR SIMILAR)**

GENERIC TANK SECTION;
 ACTUAL CROSS-SECTION MAY VARY
 SEE DESIGN FOR MORE INFORMATION.

MINIMUM INCLUDES NUMBER OF GAL
 DOSAGE SPECIFIED ON PLANS AND
 A BUFFER FOR A TOTAL OF 500 GAL

FLOAT NOTES:
 FLOATS FOR PUMP MUST BE ON A
 SEPARATE "FLOAT TREE." OFF-FLOAT
 MUST BE LOCATED ABOVE THE
 PUMP LEVEL.
 FLOATS SHALL BE SET TO ACHIEVE
 300 GALLONS MINIMUM DOSE.

PUMP NOTES:
 DYNAMIC HEAD -
 34 FEET TOTAL
 55 GPM

PUMPING CHAMBER
 SCALE: N.T.S.

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

