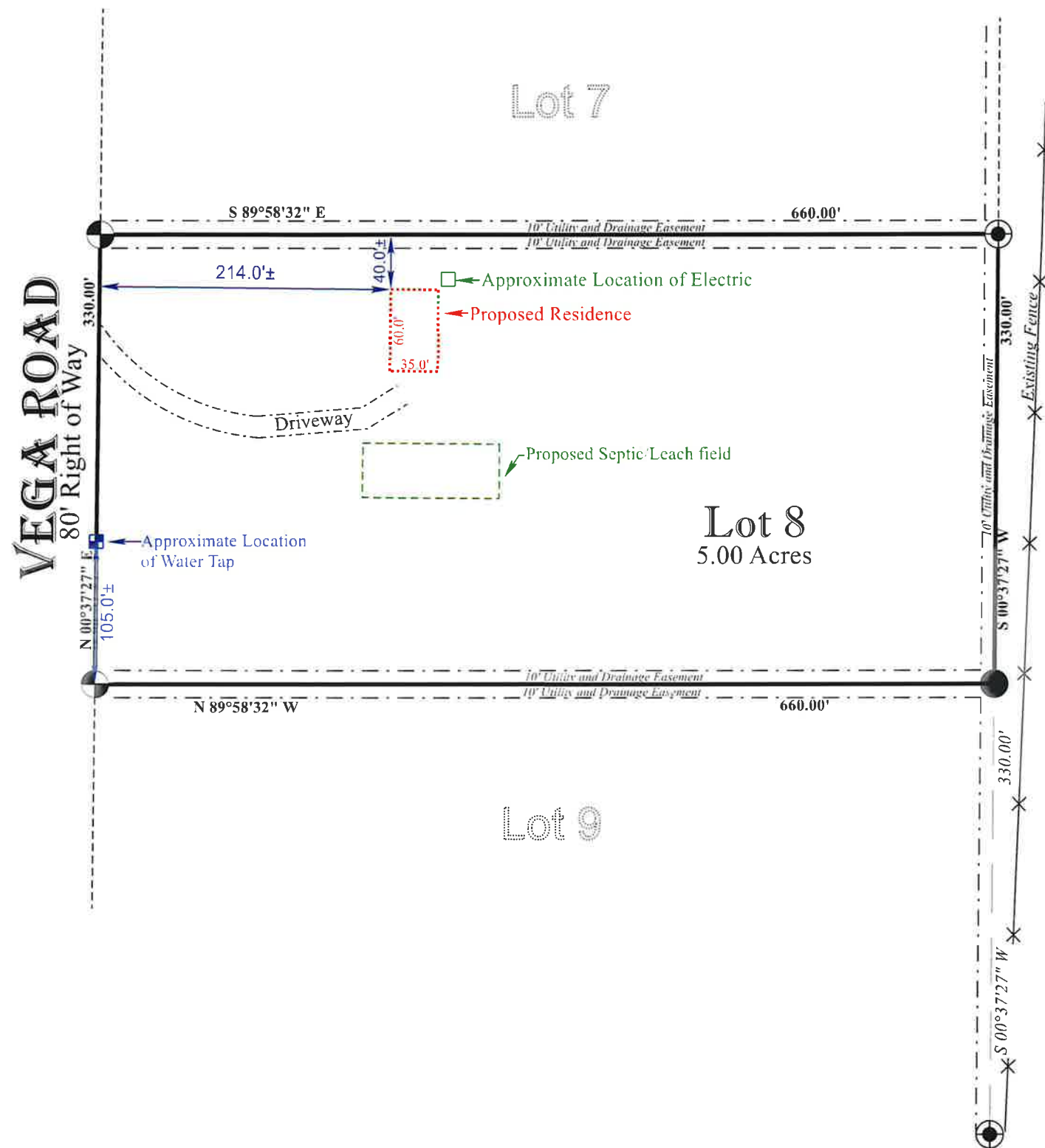


Plot Plan


FOR DAVID AND DEANA HEGGEN
 LOT 8, BLOCK 1, PINION HILLS ESTATES, UNIT No. 1
 COUNTY OF HUERFANO, STATE OF COLORADO



Scale 1" = 100'
 (U.S. Survey Feet)



William S. Bechaver, License No. 38103
 BH² LAND SURVEYING, LLC



BH² LAND SURVEYING, LLC
 P.O. Box 20399, Colorado City, CO 81019
 Phone: 719-676-2072
 Email: hh2@ghvalley.net

Scale 1" = 100'	Date: 1-16-2024	Drawn By: WSB
Sheet 1/1	Job No. 2023-037	

PROJECT INFORMATION

AUTHORITY:

Las Animas / Huerfano Counties District Health Department
412 Benedicta Avenue
Trinidad, CO 81082
719-846-2213

SITE:

This on-site wastewater treatment system was designed for:
David Heggen
Address TBD
Walsenburg, CO 81089
Lot 8, Block 1, Pinon Hills Estates #1

DESIGN DATA:

- 3 Bedrooms
- Design Required to be based on 2 people per bedroom or 6 people

Average Daily Flow = (6) * 75 GPD / Person = 450gpd

SOILS SPECIFIC SITE INFORMATION:

Soils based off soil evaluation by Aaron Chavez of the Las Animas and Huerfano County Health Department on 8/1/2023

- 0 - 2'-0" Sandy Loam Type 1 Soil
- 2'-0" - 4'-0" Decomposed Sandstone Type R-0
- Limiting layer @ 2'-0"

SUMMARY OF SYSTEM DESIGN:

- Due to a limiting layer at 2' and decomposed sandstone less than 2', a pressure distributed, mound system with a min. 3' layer of sand to be used.

INDEX OF DRAWINGS

SHEET NO.	TITLE
1.	Project Info / Cover Sheet / Site
2.	OWTS Site Plan Design
3.	Section A-A Soil Treatment Area
4.	Section B-B
5.	OWTS Tank Detail
6.	Equalization Tank Detail
7.	Pump Curve
8.	General Notes & Do's N' Dont's

GENERAL NOTES

This design is in accordance with Las Animas / Huerfano Counties District Health Department and State of Colorado requirements. Installation, inspection and maintenance shall also be in accordance with these requirements and are the responsibility of others.

The guidelines, rules and regulations Las Animas / Huerfano Counties District Health Department and the Colorado Department of Health and Environment are hereby specified and made part of this design where applicable.

- The Contractor is responsible for ensuring that the minimum distances below are maintained between the soil treatment area or septic tank and the physical features listed:

	Soil Treatment	Septic Tank
Springs, wells or suction lines	100'	50'
Potable water supply	25'	10'
Cistern	25'	25'
Dwelling or occupied building	20'	5'
Property Line	10'	10'
Subsoil drain	25'	10'
Lake, water course or stream	50'	50'
Dry gulches	25'	10'

- Sewage pipe crossings or encroachments with water conveyance pipe is acceptable provided that the water conveyance pipe is encased for a minimum distance of ten (10) feet on each side of the crossing. Such length of pipe shall be used with a minimum Schedule 40 rating with sufficient diameter to easily slide over and completely encase the water conveyance. Ridged end caps of at least Schedule 40 rating shall be glued or secured in a watertight fashion to the ends of the encasement pipe. A hole of sufficient size to accommodate the pipe shall be drilled in the lower most section of the ridged end cap so that the conveyance pipe rests on the bottom of the encasement pipe. The area in which the pipe passes through the end caps shall be sealed with an underground sealant compatible with the piping used.
- Sewer line from building to septic tank shall be laid on a grade of two (2) percent. Bends in the sewer line shall be limited to 22 degrees, 45 degrees or long sweep quarter bends.
- This sewage disposal system is not designed to carry any loads applied by vehicles or equipment. Schedule 40 PVC pipe shall be installed where vehicles will cross any portion of the system. If necessary, provide a physical barrier around the absorption bed to protect it from vehicle or equipment traffic.
- Schedule 40 pipe shall extend in to and out of the septic tank a minimum of 5'.
- Design, fabrication and structural integrity of the septic tank is the responsibility of the tank manufacturer. Fiberglass, fiberglass-reinforced polyester, or plastic tank shall meet the minimum design and structural criteria of IAPMO/ANSI Z2000-2007 (American Standards for Fabricated Septic Tanks) and certified by a professional engineer as meeting these standards. The tank shall also meet requirements set forth in El Paso County Health Department Environmental Health Division On-site Waste Water Treatment Systems Regulations.
- Final location of soil treatment area shall be confirmed in the field by the contractor and coordinated with the owner, El Paso County Health Department Environmental Health Division and Engineer prior to construction.

SYSTEM INFORMATION (TIMED & PRESSURE DOSED SYSTEM)

CALCULATIONS:

House - 3 Bedrooms
-Design Flow (Q) = 75 GPD/person x 6 people = 450 GPD

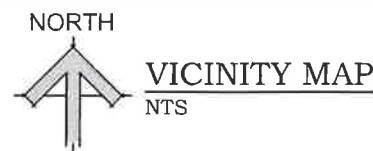
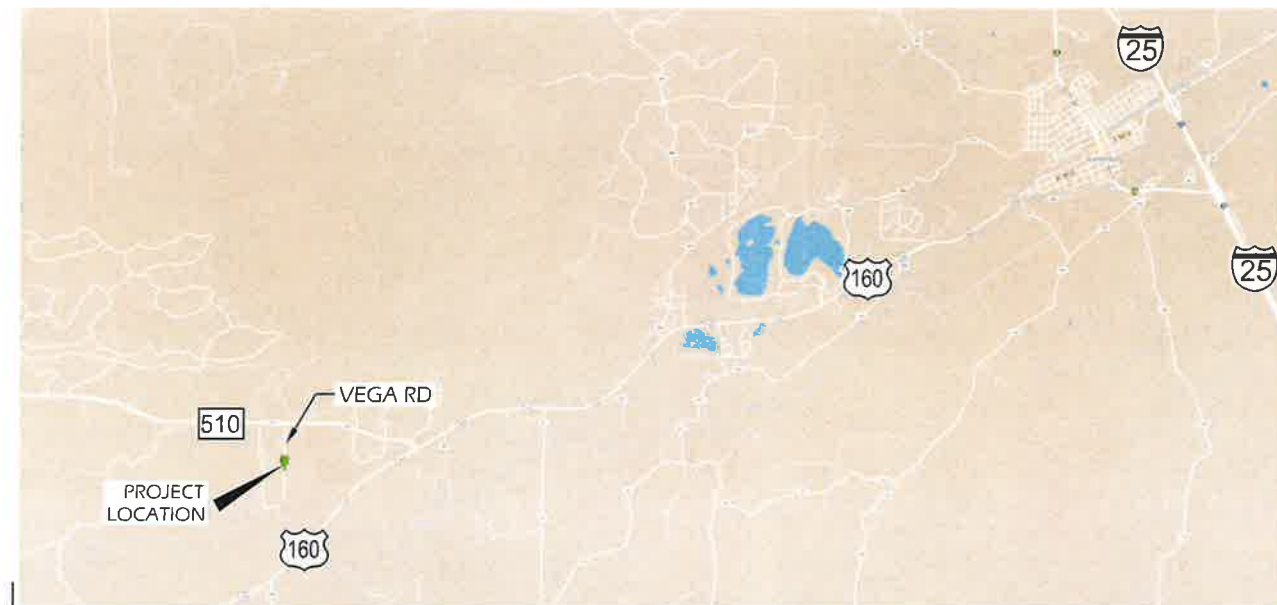
-Septic Tank
Tank shall have capacity to hold 48 hours of effluent or 450 x 2 = 900 gallons. The minimum tank size for 3 bedroom residence is 1000 gallons, so therefore a plastic 1000 gallon infiltrator septic tank is required.

-Pump Tank
Tank shall be 60% of septic tank, so therefore 600 gallon min. flow equalization or pump tank is required, However due to local availability, a plastic 540 Gallon Infiltrator Pump Tank by is to be used.

-Soil Treatment Area (STA) Size
A = 450 GPD = 563 SF
Secondary Sands = 0.8GPD/SF
No. of panels (12 SF each): 563 SF = 47 Panels, use 48 panels (2 Laterals of 24)
12 SF/panel

-Dosing
Lateral Volume: ft of Pipe x Volume / Ft
(? LATERALS) X DIST = (2)(88') x .078 Gallons per foot (1 1/4" sch 40) = 13.7 Gallons
Drainback: ft of Pipe x Volume / Ft
82' x .174 Gallons per foot (2" sch 40) = 14.3 Gallons
Maximum Dose Volume: 25% of Q + Drainback
(.25*Q) = .25(450) + 14.3 = 126.8 Gallons
Minimum Dose Volume
4 * Lateral Volume + Drainback = 4(13.7)+14.3 = 69.1 Gallons
Recommended Dose Volume = 100 Gallons

PUMP INFORMATION:
ORENCO HH PF3005 Orenco High Head 1/2 hp 30gpm 120v Single Phase pump.
Pump included in Orenco ProPak™



2441 S PRAIRIE AVE
PUEBLO, CO 81005
TEL 719.696.8274

**OWTS FOR HEGGEN REDIDENCE
ADDRESS TBD - VEGA RD**
LOT 8, BLOCK 1, PINON HILLS ESTATES #1
WALSENBURG, CO 81089

PROJECT NUMBER:	303-LAD-2024
DRAWN BY:	AVM
REVIEWED BY:	DNH
DATE:	APRIL 30, 2024
ISSUE RECORD:	

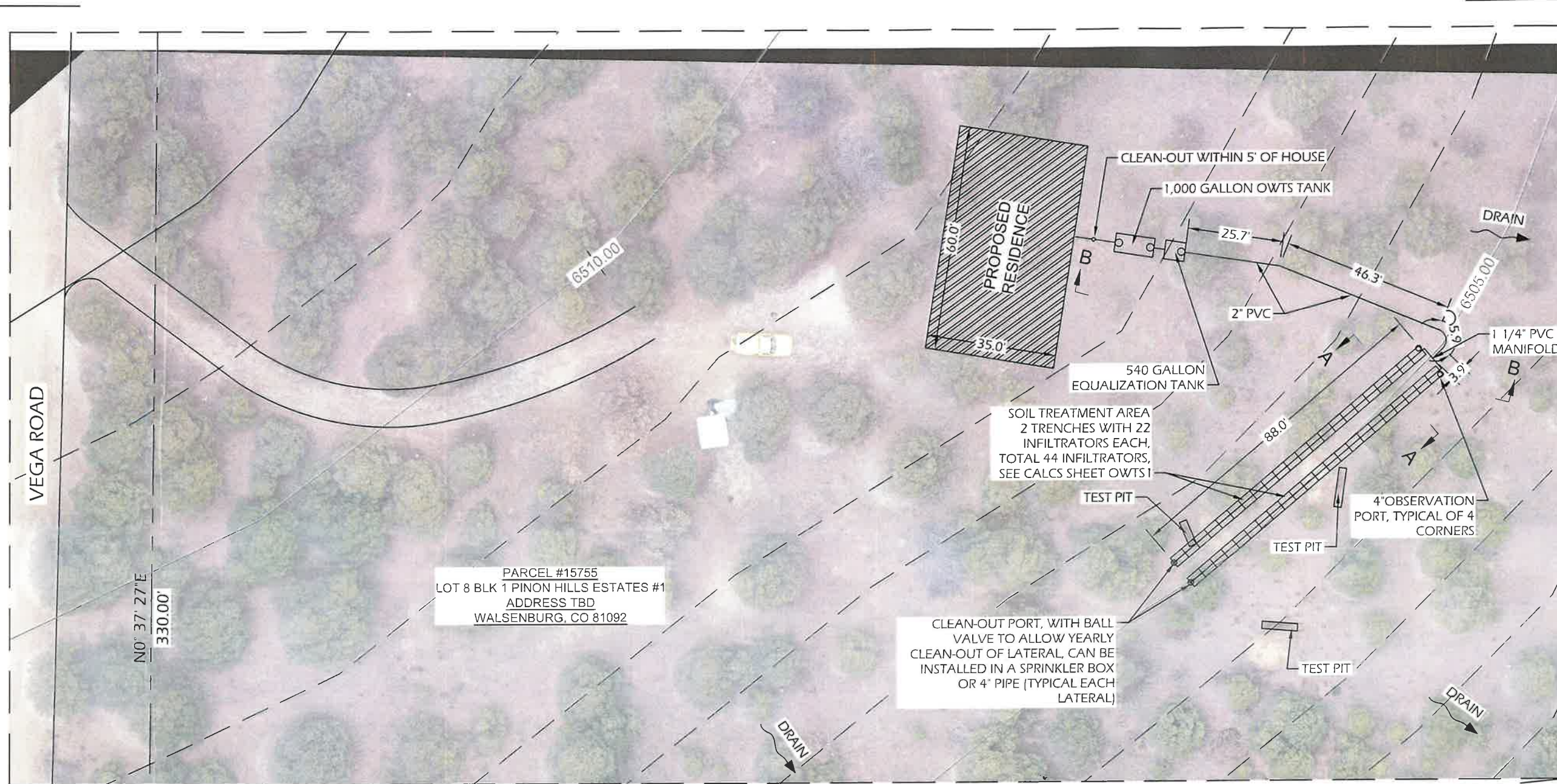
COVER SHEET
CALCULATIONS
1

**OWTS FOR HEGGEN REDIDENCE
ADDRESS TBD - VEGA RD**

LOT 8, BLOCK 1, PINON HILLS ESTATES #1
WALSENBURG, CO 81089

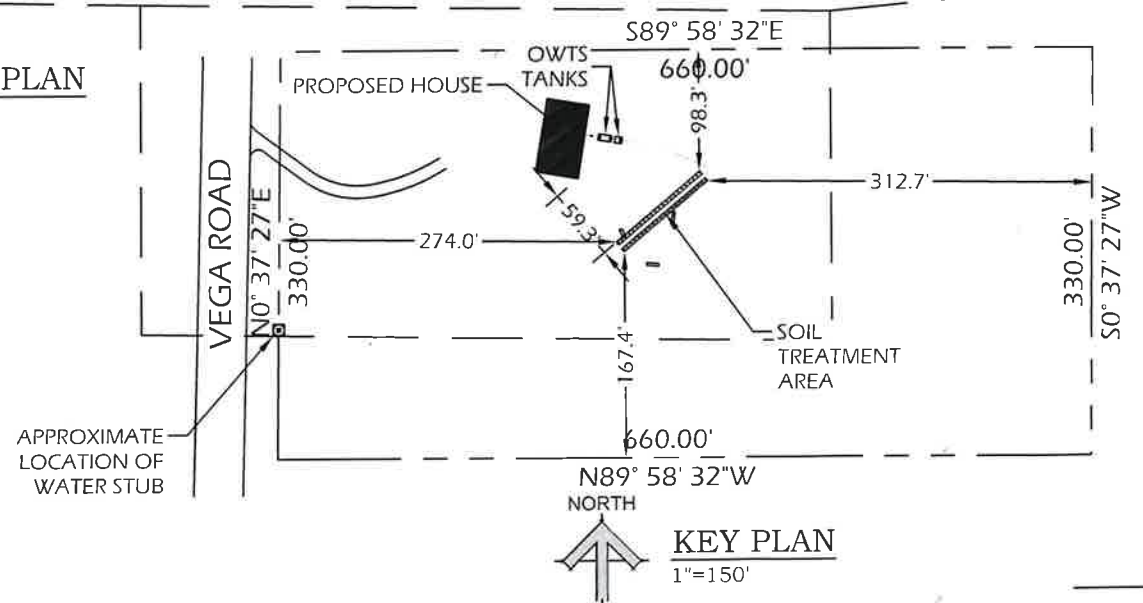
PROJECT NUMBER:	300420N
DRAWN BY:	AM
REVIEWED BY:	DKH
DATE:	APRIL 30, 2024
ISSUE RECORD:	

SITE PLAN



PARCEL #15755
LOT 8 BLK 1 PINON HILLS ESTATES #1
ADDRESS TBD
WALSENBURG, CO 81092

NORTH
PLOT PLAN
1"=40'



NORTH
KEY PLAN
1"=150'

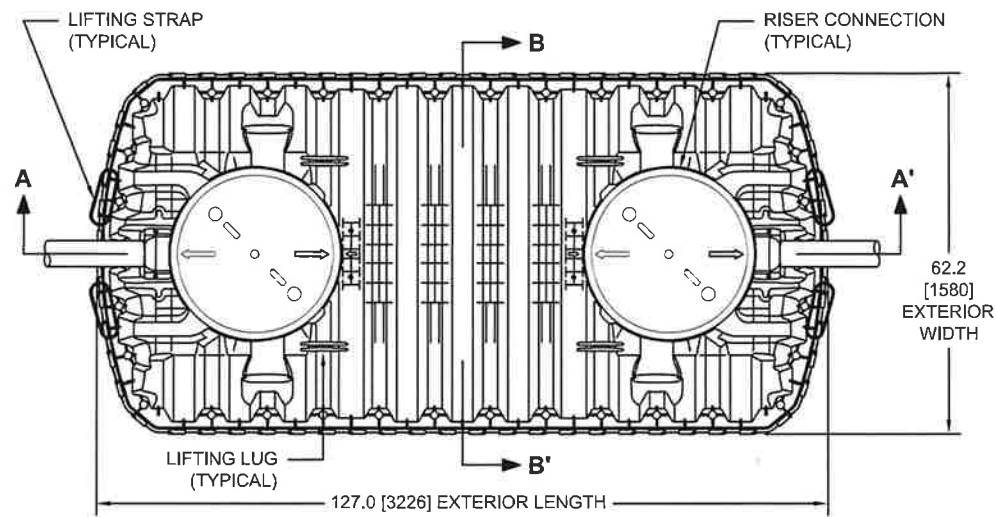
APPROVED SET
FOR CONSTRUCTION BY
AARON CHAVEZ OF THE
LA-HC-DHD ON 7-8-2024



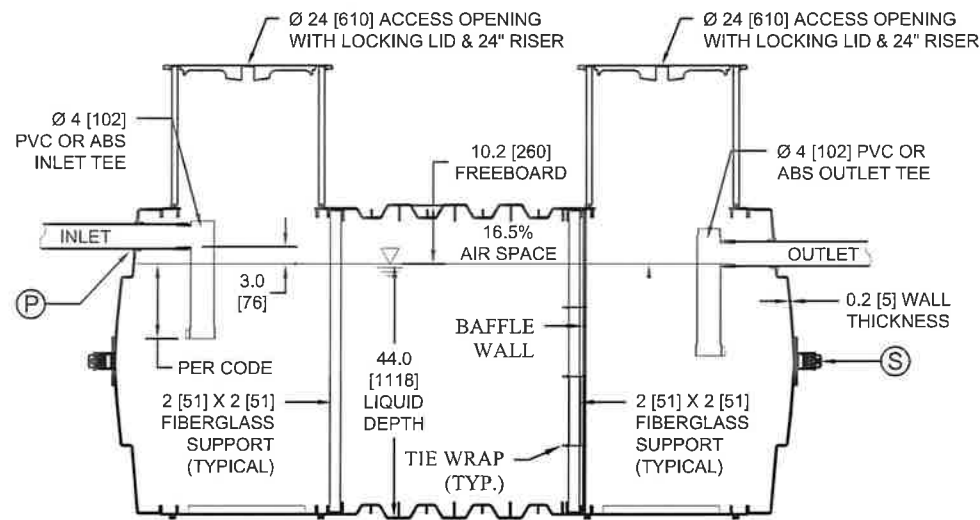
OWTS SEPTIC TANK NOTES

1. Access risers shall be sealed to prevent the intrusion of ground water and surface water into the system.
2. Install all access risers to grade.
3. Install 2 foot of cover and 2 inches of direct burial insulation on the septic tank.
4. The septic tank shall be constructed to withstand earth and hydrostatic pressures at the installed depth, both when full and empty.
5. Drill $\frac{1}{8}$ " diameter hole in the pump line within the septic tank to facilitate drainback (Pressure Distribution Systems Only).
6. The Discharge Assembly for the pumping system is to have a disconnect union accessible from grade to allow for pump replacement. (Pressure Distribution Systems Only).
7. All electrical connections must be housed in a UL approved waterproof splice box.
8. The pump control panel is to be mounted in a manner allowing alarms to be seen and heard, and must be readily accessible.

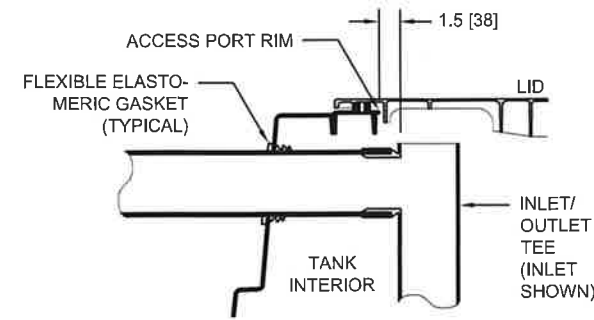
Infiltrator Plastic Septic Tanks - 1287 Gallons



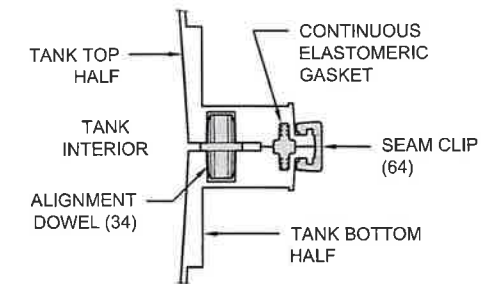
TOP VIEW



SECTION A - A'



(P) PIPE PENETRATION SECTION DETAIL

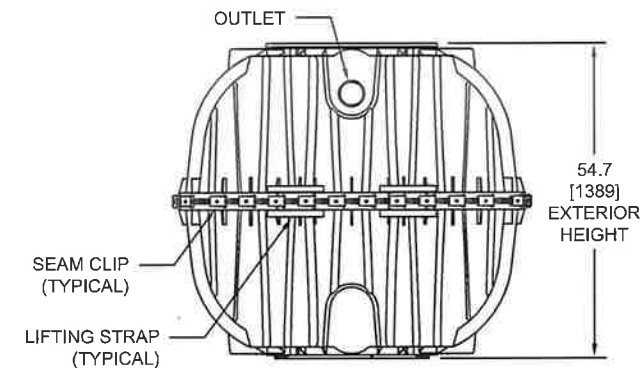


(S) MID-HIGHT SEAM SECTION DETAIL

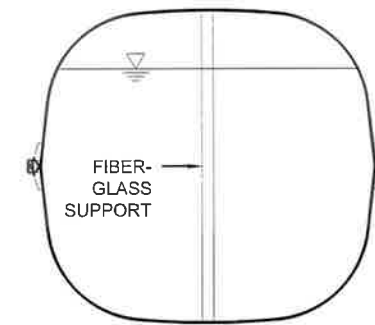
TANK EXTERIOR	
LENGTH	127.0 [3226]
WIDTH	62.2 [1580]
HEIGHT	54.7 [1389]

LIQUID DEPTH	44.0 [1118]
INVERT DROP	3.0 [76]
FREEBOARD	10.2 [260]

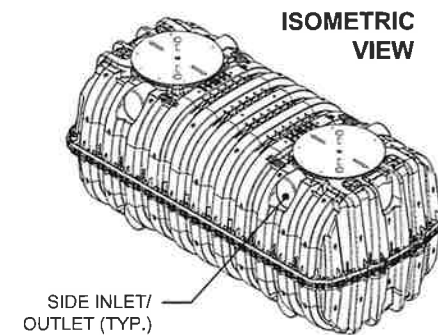
TOTAL CAPACITY	1287 GAL [4872 L]
WORKING VOLUME	1094 GAL [4141 L]



END VIEW



SECTION B - B'



ISOMETRIC VIEW

NOTES:

1. ALL DRAWING DIMENSIONS IN INCHES [MILLIMETERS] OR AS NOTED.
2. EXTERIOR OF ACCESS OPENING LID INCLUDES THE FOLLOWING WARNING IN ENGLISH, FRENCH & SPANISH: "DANGER DO NOT ENTER: POISON GASES."
3. TANK MARKINGS WILL INCLUDE: MANUFACTURER NAME, MODEL NUMBER, LIQUID CAPACITY, DATE OF MANUFACTURE, MAXIMUM BURIAL DEPTH, INLET, AND OUTLET.
4. MAXIMUM BURIAL DEPTH IS 48 in [1219 mm].
5. MINIMUM BURIAL DEPTH IS 6 in [152 mm].
6. TANK IS FOR NON-TRAFFIC APPLICATIONS.
7. AIRSPACE IS 16.5%.
8. OUTLET TEE IS COMPATIBLE WITH AN EFFLUENT FILTER.
9. INTERIOR LENGTH TO WIDTH RATIO IS 2.3:1 (118.8-INCH LENGTH / 51.7-INCH WIDTH = 2.3).



2441 S PRAIRIE AVE
PUEBLO, CO 81005
TEL 719.696.8274

**OWTS FOR HEGGEN REDIGENCE
ADDRESS TBD - VEGA RD**

LOT 8, BLOCK 1, PINON HILLS ESTATES #1
WALSENBURG, CO 81089

PROJECT NUMBER:	302-1001
DRAWN BY:	DNK
REVIEWED BY:	APRIL 30, 2024
DATE:	
ISSUE RECORD:	

TANK DETAIL

OWTS SEPTIC TANK NOTES

1. Access risers shall be sealed to prevent the intrusion of ground water and surface water into the system.
2. Install all access risers to grade.
3. Install 2 foot of cover and 2 inches of direct burial insulation on the septic tank.
4. The septic tank shall be constructed to withstand earth and hydrostatic pressures at the installed depth, both when full and empty.
5. Drill 3/4" diameter hole in the pump line within the septic tank to facilitate drainback (Pressure Distribution Systems Only).
6. The Discharge Assembly for the pumping system is to have a disconnect union accessible from grade to allow for pump replacement. (Pressure Distribution Systems Only).
7. All electrical connections must be housed in a UL approved waterproof splice box.
8. The pump control panel is to be mounted in a manner allowing alarms to be seen and heard, and must be readily accessible.

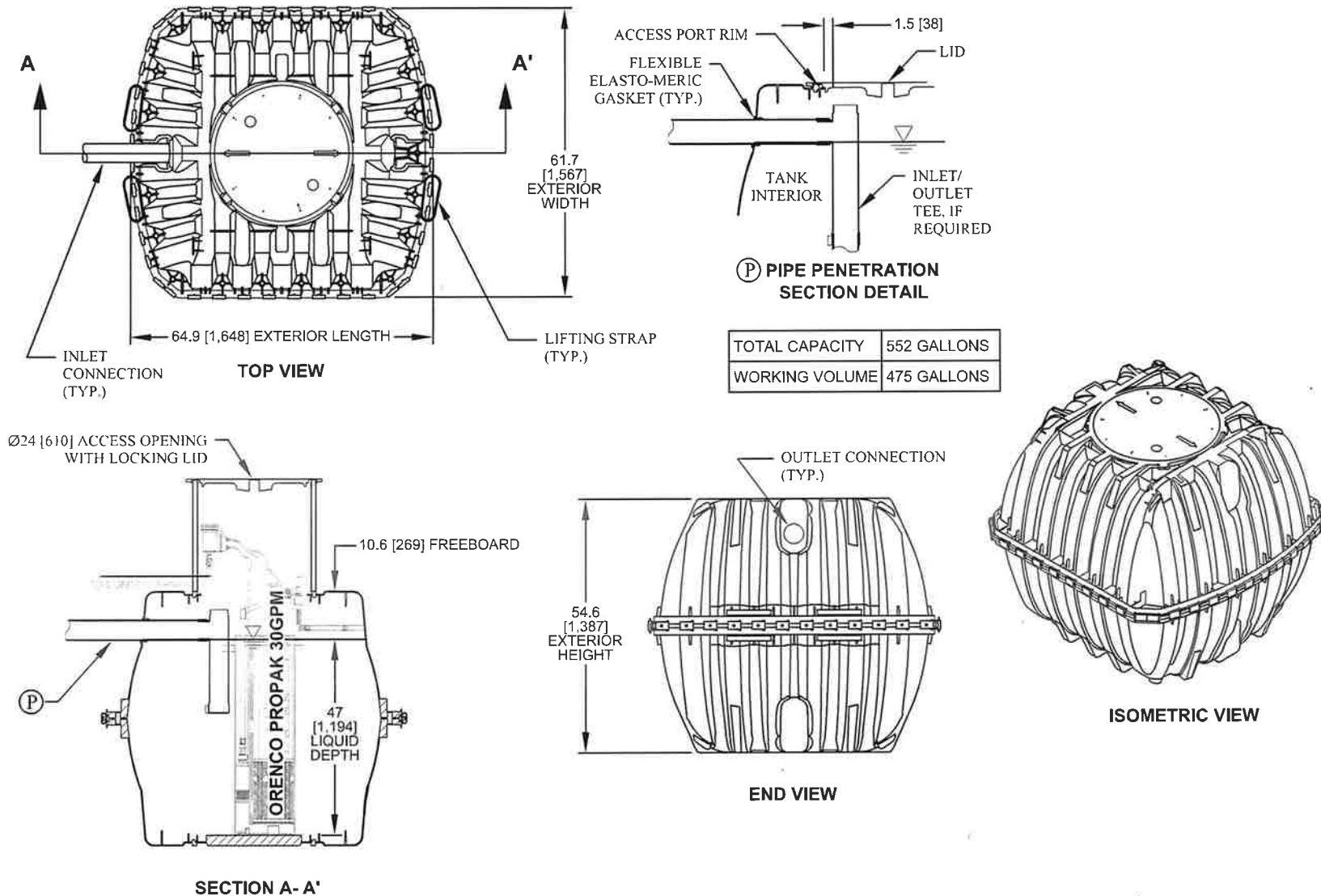
DOSING INFORMATION

540 GALLON PUMP TANK
 475 USABLE GALLONS
 = 10 GALLONS PER INCH

 100 Gallon Dose = 10"

* PUMP & FILTER INFORMATION *
 ORENCO PROPAK SIMPLEX EFFLUENT PUMP PACKAGE TO BE USED (WHICH INCLUDES BUT NOT LIMITED TO, PUMP, VAULT, SPLICE BOX, DISCHARGE ASSEMBLY, CONTROL PANEL, AND POLYETHYLENE AND PVC FILTER) RATED FOR 50GPM IS RECOMMENDED FOR THIS SITE

Infiltrator Plastic Septic Tanks - 552 Gallons



- NOTES:**
1. ALL DRAWING DIMENSIONS IN INCHES [MILLIMETERS] OR AS NOTED.
 2. EXTERIOR OR ACCESS OPENING LID INCLUDES THE FOLLOWING WARNING IN ENGLISH, FRENCH & SPANISH: "DANGER DO NOT ENTER: POISON GASES."
 3. TANK MARKINGS WILL INCLUDE: MANUFACTURING NAME, MODEL NUMBER, LIQUID CAPACITY, DATE OF MANUFACTURE CODE, MAXIMUM BURIAL DEPTH, INLET, AND OUTLET.
 4. THE TANK MAY BE BACKFILLED WITH SUITABLE NATIVE SOIL. SEE INSTALLATION INSTRUCTIONS FOR GUIDANCE. IF THE NATIVE SOIL DOES NOT MEET THE INSTALLATION INSTRUCTIONS GUIDANCE THEN BACKFILLING WITH SELECT MATERIAL WILL BE REQUIRED.
 5. MAXIMUM BURIAL DEPTH IS 48 in [1,219 mm].
 6. MINIMUM BURIAL DEPTH IS 6 in [152 mm].
 7. TANK IS FOR NON-TRAFFIC APPLICATIONS.
 8. AIRSPACE IS 13.9%.
 9. INLET TEE MAY NOT BE REQUIRED BY DESIGN.



APPROVED SET
 FOR CONSTRUCTION BY
 AARON CHAVEZ OF THE
 LA-HC-DHD ON 7-8-2024



2441 S PRAIRIE AVE
 PUEBLO, CO 81005
 TEL 719.696.8274

OWTS FOR HEGGEN REDIDENCE
ADDRESS TBD - VEGA RD

LOT 8, BLOCK 1, PINON HILLS ESTATES #1
 WALSENBURG, CO 81089

PROJECT NUMBER:	3024209
DRAWN BY:	AKV
REVIEWED BY:	DKH
DATE:	APRIL 30, 2024

ISSUE RECORD:

