



Prevent • Promote • Protect

Environmental Health Division

1675 W. Garden of the Gods Rd., Suite 2044  
Colorado Springs, CO 80907  
(719) 578-3199 phone  
(719) 575-8664 fax  
www.elpasocountyhealth.org

## ENGINEERED ON-SITE WASTEWATER TREATMENT SYSTEM FINAL INSPECTION FORM

P

On-site ID: ON0049312 Tax schedule (APN) #: 7417000064 Permit Type: New ☒ Major ☐ Minor ☐  
Environmental Health Specialist: Neil Mayes Final Inspection Date: 9/14/2018 Approved: YES ☒ NO ☐

### Residential Property Information:

Owner: Craig and Deborah Gardner Address: 5020 High Ridge VW, Manitou Spgs CO 80829 Approved No. Bedrooms: 3  
Water supply: Municipal ☐ Well ☒ Cistern ☐ Date well installation verified: 9/14/2018 GPS of Well: 38°49.948'N 104°54.887'W  
*Approval will be revoked if in the future any well is found to be within 50 feet of the septic tank and/or 100 feet of the soil treatment area.*

**Minimum System Requirements:** Soil Type: R-2 LTAR: 0.50 Limiting Layer: ☐ Groundwater ☐ Bedrock

OWTS Tank: Capacity (gallons): 1000

Soil Treatment Area (STA): Sq. Ft. (10-1): 900 Sq. Ft. (10-2):      Sq. Ft. (10-3):      Sq. Ft. (with Diverter Valve): (10-2)/(2)

NDDS (STA): Sq. Ft. (10-1):      NDDS Factor:      Sq. Ft. (NDDS adjustment):     

### Engineering:

Design Engineer: Geoquest, LLC. Engineer design #: 16-0872  
Date engineer record drawing/certification letter received: 10/3/2018

### Final system installation:

Licenses Installer: Tier 2: ☒ Installer: DMC Sewer and Water Repair

Treatment Level: 1 ☐ 1PD ☐ 2 ☐ 2N ☒ 3 ☐ 3N ☐

OWTS Tank: GPS Location: 38°49.958'N 104°54.913'W

Construction Material: Concrete with Bio-Microbics Microfast Capacity (gallon): 1500 Existing ☐ New ☒

OWTS Pump Tank: YES ☐ NO ☐ Capacity (gallon):      Audio/visual Alarm: YES ☐ NO ☐

Pump (Gal/dose):      Dose:      Total Dynamic Head:      Elevation difference:     

Soil Treatment Area (STA): GPS Location: 38°49.947'N 104°54.919'W Total Sq. Ft installed: 933

Configuration: Trench ☐ Bed ☒ Distribution: Gravity ☒ Pressure Dosed ☐ NDDS ☐

☐ Rock and Pipe: Width:      Total Length:      Installation Depth:     

Depth of Rock (under pipe):      Type of cover on Rock:     

☐ Chambers: Type:      Sq. Ft./chamber:      No. Chambers:      Installation Depth (range):     

☐ NDDS: # Zones:      # Laterals/zone:     

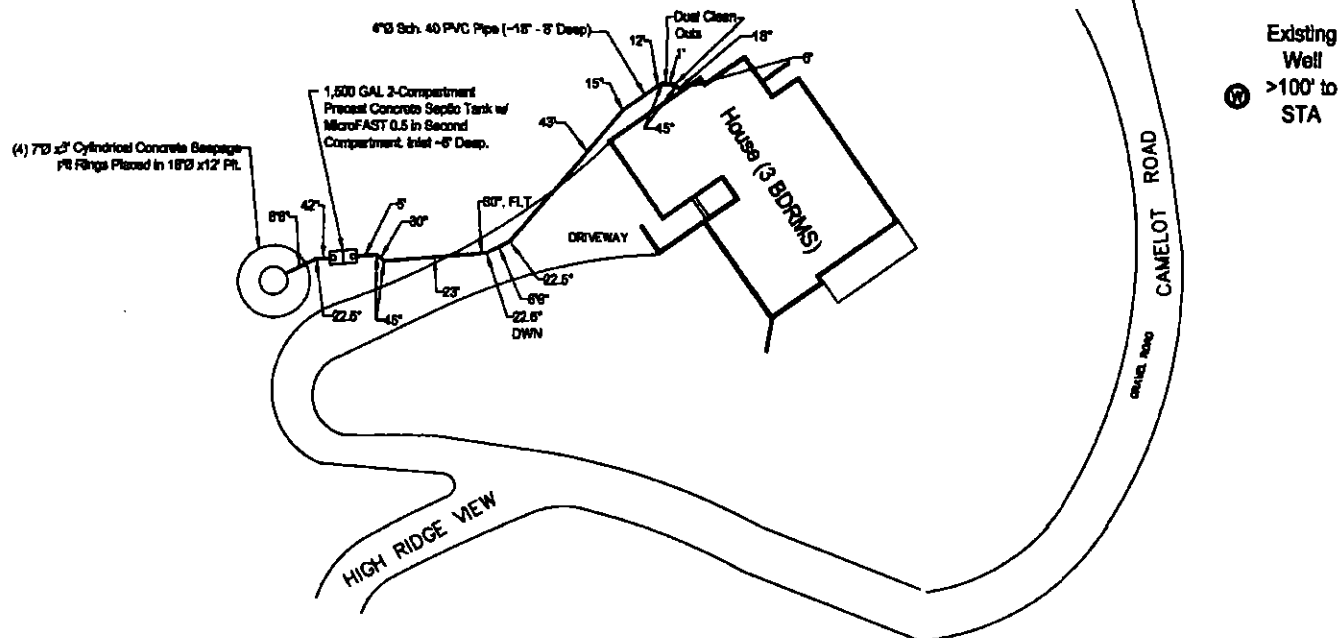
☒ Seepage Pit: # Rings: 3

Notes:

September 20, 2017

## On-Site Wastewater Treatment System (OWTS) Record Drawing

Geoquest, LLC. has Provided this Design in Accordance with the Standards of Practice Common to the Area. However, as with All Underground Absorption Fields, Guarantee from Failure is Impossible. Even with Proper Installation, as Outlined for this Proposed Construction, There Can Remain Many Uncertainties, and Difficulties Can Still Arise in the Operation of the System in the Future. Proper Design, Construction, and Maintenance can Assist in Minimizing Uncertainties, but Cannot Entirely Eliminate Them. Homeowners Should be Advised of Maintenance and Special Considerations for Septic Systems. Refer to El Paso County Public Health Brochure, "Maintaining Your Septic System" for Additional Information. Due to the Possibility of Unknown Water Usage Factors, Geoquest, LLC. Provides No Warranty of this Design or Installation Against Failure or Damage of Any Type.



0 10 20 30  
GRAPHIC SCALE IN FEET  
SCALE: 1" = 30'

**OWTS Installer Information:**  
Installed by: DMC Sewer and Water Repair  
Contact Info:  
(719) 201-5013  
P.O. Box 9227  
Colorado Springs, CO 80932  
Installation Inspection Performed on: 8/18/18  
Final Inspection Performed on: 9/28/18

Project: 16-0872	Project Name and Address
Sheet: 1 of 1	G.J. Gardner Homes
Date: 3 Oct. 2018	Falcon 2
Reviewed:	5020 South High Ridge View
Scale: 1" = 30 FT	Site 184,
	Crystal Park Subdivision
Drawn by: rah	Sch. No. 7417000084
Checked by: oam	El Paso County, CO

**GEOQUEST, LLC.**  
6825 SILVER PONDS HEIGHTS  
SUITE 101  
COLORADO SPRINGS, CO  
80908  
OFFICE: (719) 481-4580  
FAX: (719) 481-8204



Attn: CRAIG AND DEBORAH GARDNER  
5020 HIGH RIDGE VW  
MANITOU SPRINGS, CO 80829

Notify Environmental Health of any change of ownership, type of business activity, business name, or billing address by calling (719) 578-3199. Failure to notify Environmental Health may result in late penalties, Permit/License denial or revocation, and business closure. PERMITS/LICENSES TO OPERATE AND ANNUAL FEE PAYMENTS ARE NOT TRANSFERABLE. Permits become void on change of ownership. New owners must apply and pay for a new Permit(s)/License(s) prior to beginning operation.



**EL PASO COUNTY PUBLIC HEALTH  
ENVIRONMENTAL HEALTH DIVISION**  
1675 W. GARDEN OF THE GODS ROAD, SUITE 2044  
COLORADO SPRINGS, CO 80907  
PHONE: (719) 578-3199 FAX: (719) 578-3188  
[www.elpasocountyhealth.org](http://www.elpasocountyhealth.org)

## NEW SYSTEM PERMIT - OWTS

Valid From 7/25/2018 To 7/25/2019

PERMITEE :

**CRAIG AND DEBORAH GARDNER  
5020 HIGH RIDGE VW  
MANITOU SPRINGS, CO 80829**

Onsite ID: ON0049312

Tax Schedule # : 7417000064

Permit Issue Date: 07/25/2018

Dwelling Type: RESIDENTIAL

OWNER NAME :

**CRAIG AND DEBORAH GARDNER**

# of Bedrooms (if Res): 3

Proposed Use (if Comm):

Designed Gallons/Day:

Water Source: PRIVATE WELL

### System Installation Requirements:

- The issuance of this permit supersedes the original permit which was issued on 8.4.2017
- Permit is reissued based on the new soils report that has been dated June 22, 2018 by GeoQuest LLC. The new soils report deletes the finding of USDA Soil Type 0.
- New design is sized for a 3 bedroom home only.
- System installation to include seepage pit with bio-microbics microfast. Minimum tank requirements 1500 gallon and 933 sq ft of soil treatment area (9 ft radius X 12 ft in depth is required).
- The system must be installed per approved Geoquest, LLC design document #16-0872 stamped and dated 7.11.2018, changes to the approved design document must be submitted and approved by Public Health prior to installation.
- All horizontal setbacks must be maintained through system installation. In addition system must remain completely uncovered, including the tank size, for final inspection.
- The well must be installed at time of final inspection, or final approval will not be given until well installation is verified.
- Engineered systems require the as built drawing and certification letter from the engineer be submitted to Public Health prior to final approval and Regional Building sign off
- Ensure that all work is completed prior to contacting and requesting final line for inspection, otherwise additional fees may be incurred.

Attn: CRAIG AND DEBORAH GARDNER  
5020 HIGH RIDGE VW  
MANITOU SPRINGS, CO 80829

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This permit is issued in accordance with 25-10-106 Colorado Revised Statutes. The PERMIT EXPIRES upon completion/installation of the Onsite Wastewater Treatment System, or at the end of twelve (12) months from date of issue, whichever occurs first. If both a Building Permit and an Onsite Wastewater Treatment System Permit are issued for the same property and construction has not commenced prior to the expiration date of the Building Permit, the Onsite Wastewater Permit shall expire at the same time as the Building Permit. This permit is revocable if all stated requirements are not met. The Onsite Wastewater Treatment System must be installed by an El Paso County Licensed System Contractor, or the property owner.

The Health Officer shall assume no responsibility in case of failure or inadequacy of an Onsite Wastewater Treatment System, beyond consulting in good faith with the property owner or representative. Access to the property shall be authorized at reasonable time for the purpose of making such inspections as are necessary to determine compliance with the requirements of this law (permit).

**Inspection request line: Call (719) 575-8699 before 3:30 p.m. the business day prior to the requested inspection date.**

  
Authorized By: Environmental Health Specialist

50007552 AB0011793 ON0049312

### APPLICATION FOR AN ON-SITE WASTEWATER TREATMENT SYSTEM PERMIT

#### Property Information:

Property Address: 5020 High Ridge View City and Zip: Manitou Spgs, CO 80829  
site S-184R Crystal Park

Legal Description: PART NW1/4 SEC 17 T.14S. R. 67W 6TH PM

Tax Schedule #: 74/80-00-178 Lot size: 30.421 sq ft

Is the property gated: ☒ Yes ☐ No Please provide a gate code if necessary: access booth @ Gate

Site Located Inside City Limits: ☐ Yes ☒ No Proposed Use: ☒ Residential ☐ Commercial

Water Supply: ☒ Well ☐ Cistern ☐ Municipal Potential Number of Bedrooms: 4

Has a Conditional Acceptance Document been issued for this property: ☐ Yes ☐ No ☐ Unsure

#### Owner Information: ☒ Primary Contact

Owner: Craig & Deborah Gardner Daytime Phone: 719-485-7164

Owners Mailing Address: 12674 Pine Valley Circle

Email Address: mlieb.snider@gigardner.com Fax #: -

General Contractor: B.J. Gardner Homes Phone/Email: 814-780-8008

#### OWTS Installer Information: ☐ Primary Contact

System Installer: Konau Drilling Daytime Phone: -

Email Address: Konau.drilling@cox.net 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:** \$685.00 (EPCPH Charge) + \$147.00 (EPC Planning Dept. Surcharge) + \$23.00 (CDPHE Surcharge) = **\$855.00**

☐ **Major Repair Permit:** \$525.00 (EPCPH Charge) + \$23.00 (CDPHE Surcharge) = **\$548.00**

☐ **Minor Repair Permit:** \$240.00 (EPCPH Charge) + \$23.00 (CDPHE Surcharge) = **\$263.00**

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 septic system to be installed in conjunction to new home construction

#### The following documents **MUST** be included with your application.

- A soils report: including at least 1 soil profile excavation pit, in accordance with section 8.5 A-F of OWTS regulations
- A clear and legible design document: including the proposed and alternate locations, as well as 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 back side 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 Section 8.3, Chapter 8 of the On-site 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.

Applicant Signature: [Signature] Date: 8/26/2017

- Left on manitow Ave. left on crystal Park rd. at Code will direct to home site.

Permit #: ON0049312 Site Inspection date: 7/27/17  
Date Approvals Rcvd: Development Services: 8/2/17 Floodplain/enumerations: 7/28/17  
Design: ☐ Conventional ☒ Engineer Design Engineer: Geoguest, LLC  
Engineer Job #: 18-0872 Engineer Date Stamped: 11 Jul 18  
LTAR/Soil Type: SO / Type A Groundwater: — PP1/ — PP2 Bedrock: — PP1/ — PP2  
Minimum Requirements: Tank Capacity: 1250 Soil Treatment Area: \_\_\_\_\_  
System Feed: ☐ Gravity ☐ Pump to Gravity ☐ Pressure Dosed ☒ Other: Sepage Pit w/ Bio-Microbials  
System Media: ☐ Chambers ☐ Rock and Pipe ☒ Other Soil Treatment Area: ☐ Trenches ☒ Bed  
Additional Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
E.H. Specialist: Neil Mar Date: 7/24/18 ☒ Approved ☐ Denied



6825 Silver Ponds Heights #101  
Colorado Springs, CO 80908  
(719) 481-4560

3 October 2018

El Paso County Health Department  
1675 West Garden of the Gods Road  
Colorado Springs, Colorado 80907

Re: Septic System Inspection (GQ #16-0872)  
Site 184,  
Crystal Park Subdivision,  
5020 South High Ridge View,  
El Paso County, Colorado

Dear Sir,

We inspected the installation of the engineered septic system at the above address at several points during its construction as well as the finished product. It has been installed in accordance with our engineered plans and specification. This includes having the correct size septic tanks, the proper grade on all pipes and sections of the absorption field, the correct depth, size and configuration of the absorption field, and the backfill around and over the field.

The field should be seeded in the future to allow for vegetation growth next spring. Additional grading may be required in the future to repair any minor erosion areas until the grass seed takes hold. You should ensure that no vehicles are allowed to park on any portion of the system.

The system is ready for final certification from the El Paso County Health Department. A Certificate of Occupancy (CO) will not be issued by PPRBD until El Paso County Health Department has received this letter and the Record Drawing. Please call me if you have any questions.

Sincerely,

  
Charles E. Milligan  
Civil Engineer





SR0009862  
AR0011793  
ON0049312  
IN0026207

6825 Silver Ponds Heights #101  
Colorado Springs, CO 80908  
(719) 481-4560

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## PROFILE PIT EVALUATION

FOR

**G.J. GARDNER HOMES FALCON 2**

**JOB #16-0872**

Crystal Park Subdivision,  
5020 South High Ridge View,  
El Paso County,  
Colorado

Sincerely,

  
Charles E. Milligan, P.E.  
Civil Engineer





## PROFILE PIT FINDINGS

Enclosed are the results of the profile pit for the septic system to be installed at **Crystal Park Subdivision, 5020 South High Ridge View, El Paso County, Colorado**. The location of the test pit was determined by G.J. Gardner Homes Falcon 2. The residence will not be on a public water system. The number of bedrooms in the design for the residence is unknown. Due to the natural slope of the property, the entire system will feed to the man-made west at approximately 11% at least 20 feet. All applicable portions of the El Paso County Health Department Onsite Wastewater Treatment System Regulations (OWTS) must be complied with for the installation of the treatment system.

The inspection was performed on June 8, 2018, in accordance with Table 10-1 of the **E.P.C.P.H. OWTS Regulations**.

### Soil Profile #1:

**0 to 4"** - Topsoil- loam, organic composition.

**4" to 14'** - USDA soil texture sandy loam, soil type R-2, structure shape none, structure grade 0, non-cemented, LTAR 0.50, reddish brown in color, 5 YR 4/4, soil type 2A with 75% rock, 4% rock greater than 20mm, decomposed granite.

No water was encountered during the inspection. Bedrock was not encountered during the inspection. No known wells were observed within 100 feet of the proposed system. **All setbacks shall conform to county regulations.**

**Due to encountering USDA soil type R-2, the septic system to be installed on this site shall be designed by a Colorado Licensed Engineer. Based on the observed conditions, we feel a design based on an LTAR of 0.50, GPD/SF (USDA R-2, treatment soil, treatment level 2) is reasonable. A seepage pit is proposed for this site. Treatment Level 2 or higher will be required for this site.**

If during construction of the field itself, subsurface conditions change considerably or if the location of the proposed field changes, this office shall be notified to determine whether the conditions are adequate for the system as designed or whether a new system needs to be designed.

Weather conditions at the time of the test consisted of clear skies with hot temperatures.

# PROFILE PIT LOG - Profile Pit #1

JOB#: 16-0872  
DATE EVALUATED: 08 Jun 2018  
EQUIPMENT USED: MINI-EXCAVATOR

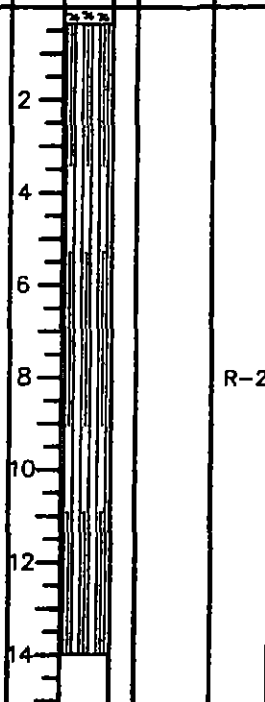
## 0"-4" TOPSOIL

Loam  
Organic Composition

## 4"- 14' Decomposed Granite

Fine-coarse Grained	USDA Soil Texture: Sandy Loam
Low-moderate Density	USDA Soil Type: R-2
Low Moisture Content	USDA Structure Shape: None
Low Clay Content	USDA Structure Grade: 0
Low Cohesion	Cementation Class: Non-cemented
Low Plasticity	Long Term Acceptance Rate (LTAR, Treatment Level 1): 0.50
Reddish Brown Color	Soil Type 2A w/ 75% Rock
5YR 4/4	4% Rock > 20mm

DEPTH (in ft.)  
SYMBOL  
SAMPLES  
WATER %  
SOIL TYPE



**LTAR to be Used for OWTS Sizing: 0.50GPD/SF (USDA Type R-2, Treatment soil, Treatment Level 1)**

**Depth to Groundwater (Permanent or Seasonal):** Not Encountered

**Depth to Bedrock and Type:** Not Encountered

**Depth to Proposed Infiltrative Surface from Ground Surface:** Unknown

**Soil Treatment Area Slope and Direction:** Man Made West @ 11%

Note: See El Paso County Board of Health Regulation Chapter 8: On-Site Wastewater Treatments Systems (OWTS) Regulations for Additional Information. Refer to Table 10-1 for Corresponding LTAR if Treatment Level 2, 2N, 3, or 3N will be Implemented in the Design of the OWTS. System Sizing Depends on a Number of Factors (i.e. LTAR, # of Bedrooms, Type of Soil Treatment Area (STA), Method of Transfer to the STA (Gravity, Dosed, or Pressure Dosed), and Type of Storage / Distribution Media Used in the STA)

Project: 16-0872

Sheet: 1 of 1

Date: 18 Jun 2018

Scale: 1/4" = 1'

Drawn by: mtj

Checked by: cem

## Project Name and Address

**G.J. Gardner Homes**

5020 S High Ridge View  
Crystal Park  
Sch. No. 7417000064  
El Paso County, Colorado

## GEOQUEST, LLC.

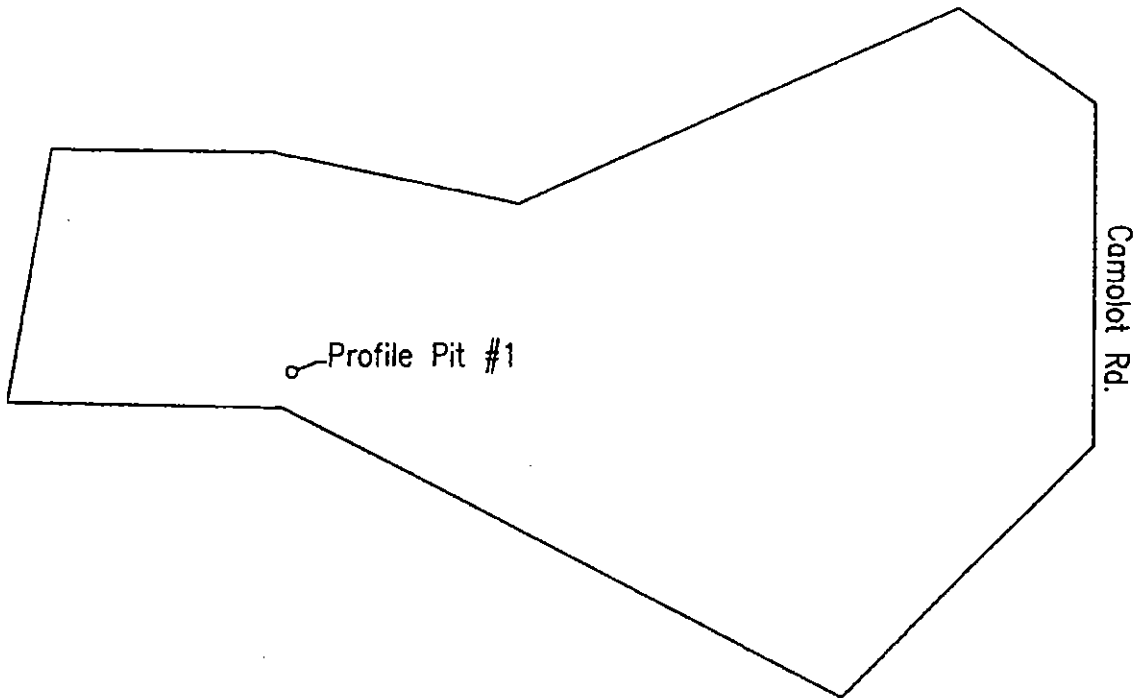
6825 SILVER PONDS HEIGHTS  
SUITE 101  
COLORADO SPRINGS, CO  
80908

OFFICE: (719) 481-4560  
FAX: (719) 481-9204

GEOQUEST LLC

**SITE MAP**

Crystal Park  
5020 S High Ridge View  
El Paso County,  
Colorado  
Job #16-0872



Location from Southwest Lot Corner to Profile Pit #1:

N. 84° E. - 77'

GPS Coordinates:

Pit 1; N. 39° 49' 56.60" W. 104° 54' 55.23"



0 10 20 30 40 50  
GRAPHIC SCALE IN FEET  
SCALE: 1" = 50'

## Cover Page

### CALCULATIONS (Major Repair OWTS):

Existing Single Family  
Residence with 3 Bedrooms

LTAR = 0.50 Gallons per Day per Square Foot (GPD/SF).

USDA Soil Type R-2 per Profile Pit 6/8/2018.

No Bedrock Encountered.

Treatment Level 2 Effluent

$$Q = (3 \text{ BDRM})(150 \text{ GPD})$$

$$Q = 450.0 \text{ Gallons per Day (GPD)}$$

$$A = \frac{Q}{\text{LTAR}} = \frac{450.0 \text{ GPD}}{0.50 \text{ GPD/SF}}$$

$$A = 900.0 \text{ SF Required}$$

### SEEPAGE PIT DESIGN:

Use 1 Pits: Min. 18" Ø 12' D

4 Seepage Pit Rings (~7' Ø x 3' Tall Each)

If Ring Size Changes Please Contact Engineer.

### AREA:

$$A = \pi (r^2) + 2 \pi r D$$

$$A = \pi (9^2) + 2 \pi (9)(12)$$

$$A = 933.0 \text{ SF Actual}$$

### HIGHER LEVEL TREATMENT REQUIRED:

Per EPCBH Chapter 8, Higher Level Treatment (TL2 or TL2N) is  
Required for Use of Seepage Pits.

Install Bio-Microbics MicroFAST 0.5 (TL2N Up To 500 GPD)

### TANK SIZES:

Minimum Tank Size = 1,000 Gallons

Proposed Treatment Tank = 1,500 Gallon Two-Compartment Tank w/ MicroFAST 0.5  
in Second Compartment.

### \*IMPORTED GRAVEL SPECIFICATION:

All Imported Gravel to be  $\frac{1}{2}$ " -  $2\frac{1}{2}$ " Washed Crushed Rock i.e.

CDOT #4 (Coarse Aggregates AASHTO 43) or Approved Equivalent.

Gradation Curve to be Provided for Engineer to Approve.

Geoquest, LLC. has Provided this Design in Accordance with the Standards of Practice Common to the Area. However, as with All Underground Absorption Fields, Guarantee from Failure is Impossible. Even with Proper Installation, as Outlined for this Proposed Construction, There Can Remain Many Uncertainties, and Difficulties Can Still Arise in the Operation of the System in the Future. Proper Design, Construction, and Maintenance can Assist in Minimizing Uncertainties, but Cannot Entirely Eliminate Them. Homeowners Should be Advised of Maintenance and Special Considerations for Septic Systems. Refer to El Paso County Public Health Brochure: "Maintaining Your Septic System" for Additional Information. Due to the Possibility of Unknown Water Usage Factors, Geoquest, LLC. Provides No Warranty of this Design or Installation Against Failure or Damage of Any Type.

### SPECIAL NOTES:

Due to Limited Site Conditions as well as Difficult Terrain, a  
Seepage Pit Design is Proposed for This Site.

### MINIMUM DISTANCES:

Seepage Pit to:

House = 20 FT

Property Line = 10 FT

Water Line = 25 FT

Septic Tank to:

House = 5 FT

Property Line = 10 FT

Water Line = 10 Ft

Sewer / Effluent Line to:

Property Line = 10 FT

Water Line = 10 FT

(Sleeve Sewer / Effluent Pipe if Encroaching Setbacks)

Reference El Paso County Health Department Chapter 8: Table 7-1

### INSPECTIONS REQUIRED ARE AS FOLLOWS:

- 1.) Engineer to Inspect the Excavation Prior to Importing Gravel.
  - 2.) Engineer Will Inspect the Installation of Pipe, Septic Tank, Rings, and Gravel, Etc. Prior to Backfill.
  - 3.) Engineer to Inspect the Soil Treatment Area After Backfill to Insure Min. Cover and Proper Drainage Away from OWTS.
- Notify this Office Min. 24 Hours Prior to Inspection.

### HOMEOWNER RESPONSIBILITY:

- Maintain Active Service Contract w/ Licensed Operation & Maintenance Contractor per EPCHD Regulations
- Have OWTS Inspected as Required by Service Contract
  - Check Operation of MicroFAST System
  - Clean Effluent Filter
  - Function Test Components
  - Check Water Levels in Inspection Ports
- Have Septic Tank Pump Every 3-5 Years (or As Needed, Contact Licensed Pumper)
- Plant Native Grass Over STA (No Plants with Roots or that Require Irrigation)
- Don't Pour Chemicals Down Drain
- Don't Throw Trash in Toilet (Minimize Toilet Paper Consumption)
- Use of Garbage Disposal is Discouraged
- Conserve Water and Repair Leaking Fixtures

This is NOT a Complete List (Contact Local Health Department and EPA List of Septic "Do's and Don'ts")

### GENERAL NOTES:

All Work per El Paso County Board of Health  
Regulations Chapter 8: On-Site Wastewater Treatment  
Systems (OWTS) Criteria.

All Setbacks Shall Conform to El Paso County  
Regulations (See Table 7-1 in the Regulations for  
Additional Information). Contractor/Homeowner Must  
Verify All Setbacks and Obtain Utility Clearances Prior  
to Construction.

Contractor/Homeowner is Responsible for Permit.  
Contractor/Homeowner Must Obtain Approval of  
Engineered OWTS from the El Paso County Health  
Department.

All Bends Limited to 45 Degree Ells or Long Sweep  
Quarter Bends. Areas Under Driveways Shall Be  
Protected as Per El Paso County Health Department  
Regulations.

Building Sewer Clean-Outs Shall Be Installed within 5  
FT of the Structure and at Intervals Not to Exceed 100'  
in Straight Runs and When the Cumulative Change in  
Direction Exceeds 135 Degrees.

Grade Surrounding Area to Drain Away from the Soil  
Treatment Area (STA).

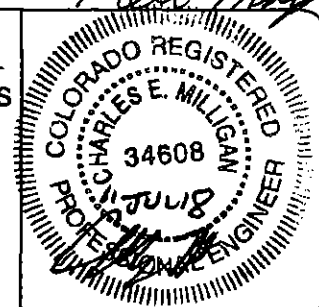
Paving, Planting of Trees/Shrubs, and Vehicular  
Traffic or Hoofed Animal Traffic of Any Kind Over the  
STA may Cause Premature Failure and is Prohibited.

Refer to Sheet 2 and 3 for Additional  
Details and Information.

### GEOQUEST, LLC.

6825 SILVER PONDS HEIGHTS  
SUITE 101  
COLORADO SPRINGS, CO  
80908

OFFICE: (719) 481-4560  
FAX: (719) 481-9204



Project: 16-0872

Sheet: 1 of 3

Date: 6 July 2018

Revised:

Drawn by: vsm

Checked by: cem

### Project Name and Address

G.J. Gardner Homes Falcon 2  
5020 South High Ridge View,  
Site 184,  
Crystal Park Subdivision,  
Sch. No. 7417000064  
El Paso County, Colorado

7/24/18

### SEEPAGE PIT DESIGN:

Use 1 Pits: Min. 18' Ø 12' D

4 Seepage Pit Rings (~7'Ø x 3' Tall Each)

If Ring Size Changes Please Contact Engineer.

### AREA:

$$A = \pi (r^2) + 2 \pi r D$$

$$A = \pi (9^2) + 2 \pi (9)(12)$$

$$A = 933.0 \text{ SF Actual}$$

### Seepage Pit:

(4) 7'Ø x 3' Cylindrical Concrete Seepage Pit Rings Place in 18'Øx12' Pit.

Material to be On-Site Soil or Imported Decomposed Granite. (See Page 3 for Details).

4"Ø Sch. 40 PVC Pipe from Pump Chamber to Pit Inlet. 90° Down Through Concrete Pit Lid. Min. 2% from Tank to Pit.

Min. 1,500 Gal. Two-Compartment Precast Concrete Septic Tank w/ MicroFAST 0.5 in Second Compartment. (Inlet Approx. 36" Below Existing Grade). Secure Risers to Grade (Water Tight, Min. 3" Above Finish Grade). Exact Location to be Field Determined.

### Site Plan

\* Indicates Geoquest, LLC. Profile Pit Test Locations  
Location from Southwest Lot Corner to Profile Pit #1: N. 84° E. - 77'  
GPS Coordinates Profile Pit #1: N. 39° 49' 56.60", W. 104° 54' 55.23"

Install Drainage Swale on All Uphill Sides to Ensure Surface Runoff is Diverted Around the STA.

STA shall Maintain the Approximate Orientation Shown w/ Respect to Buildings and Lot Lines. Contact Engineer for Clarification.

OWTS to be Roped Off (Caution Tape or Temporary Construction Fencing is Acceptable) During Construction to Prevent Construction Traffic from Compacting Surface Soils and Protect the STA from Traffic After Installation.

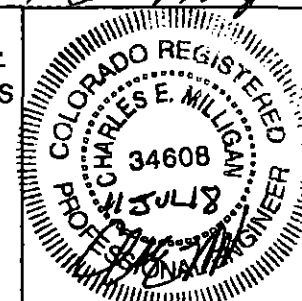
Existing Well (Field Verify Exact Location). Maintain Min. 100 FT from the Well and Any STA. Min. 50 FT to the Septic Tanks (100 FT Preferred).

Proposed Single Family Residence (3 BDRMs)

### GEOQUEST, LLC.

6825 SILVER PONDS HEIGHTS  
SUITE 101  
COLORADO SPRINGS, CO  
80908

OFFICE: (719) 481-4560  
FAX: (719) 481-9204



Project: 16-0872

Sheet: 2 of 3

Date: 6 July 2018

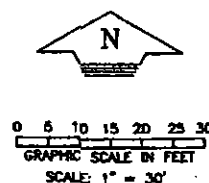
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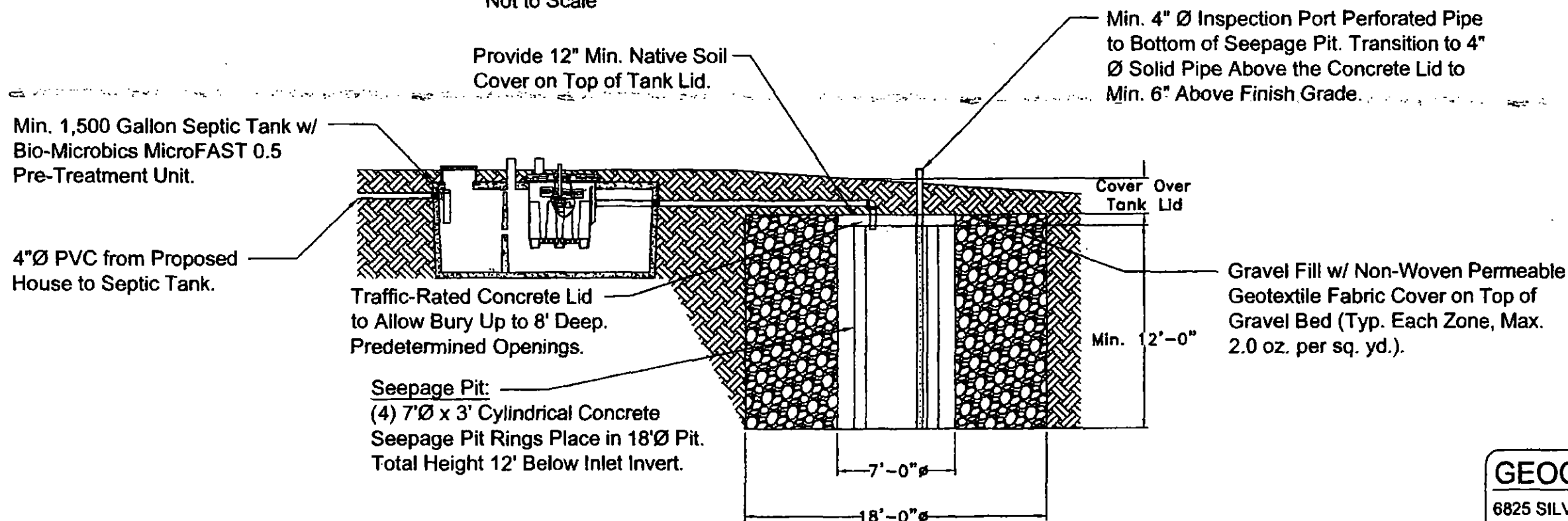
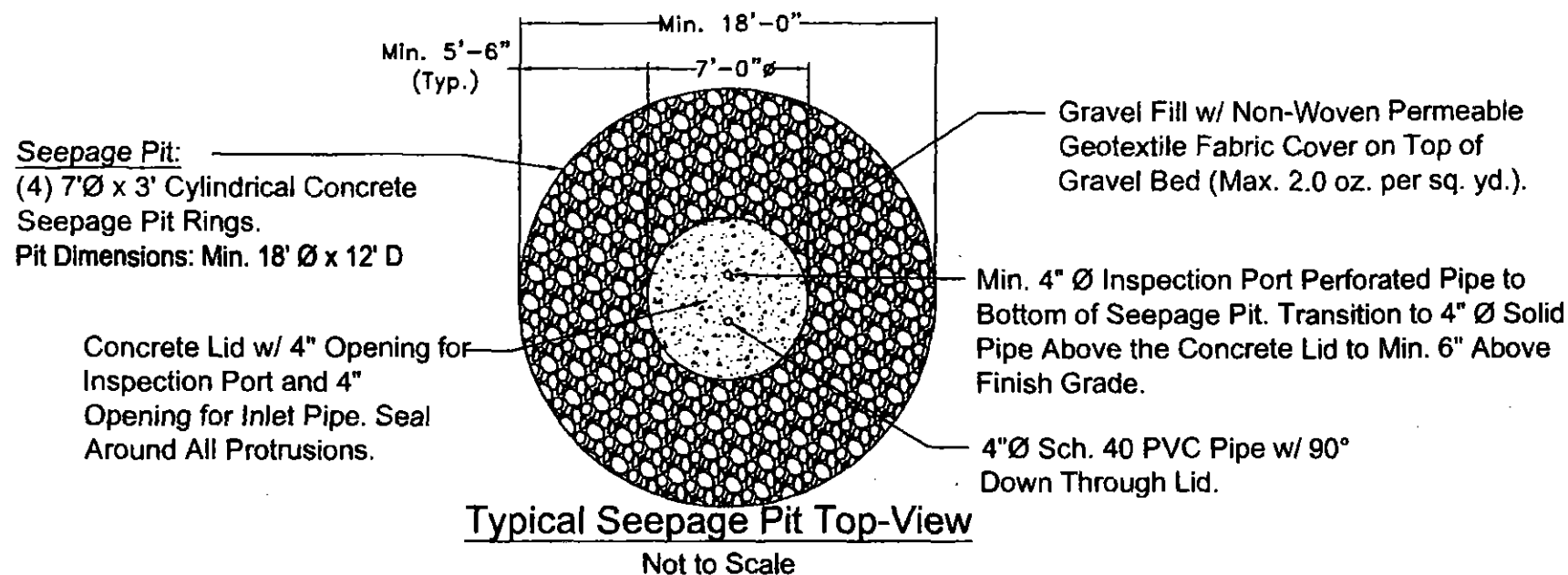
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Checked by: cem

### Project Name and Address

G.J. Gardner Homes Falcon 2  
5020 South High Ridge View,  
Site 184,  
Crystal Park Subdivision,  
Sch. No. 7417000064  
El Paso County, Colorado





Approved Fill - Use On-Site Material. Remove Excess Material from High Spot Under Shed and Use to Re-Grade Proposed STA. Create Level Pad Prior to Excavating for Pit.

Native Soil - (USDA R-2, 4" - 14'-0" Deep, Decomposed Granite)

Imported Gravel Bed Surrounding Tank ( $\frac{1}{2}$ " to  $2\frac{1}{2}$ " Washed) See Above.

#### SPECIAL NOTE:

All Imported Gravel to be  $\frac{1}{2}$ " -  $2\frac{1}{2}$ " Washed Crushed Rock i.e. CDOT #4 (Coarse Aggregates AASHTO 43) or Approved Equivalent. Gradation Curve to be Provided for Engineer to Approve.

#### General Notes:

All Work per El Paso County Board of Health Regulations Chapter 8: On-Site Wastewater Treatment Systems (OWTS) Criteria.

All Setbacks Shall Conform to El Paso County Regulations (See Table 7-1 in the Regulations for Additional Information). Contractor /Homeowner Must Verify All Setbacks and Obtain Utility Clearances Prior to Construction.

Contractor/Homeowner is Responsible for Permit. Contractor/Homeowner Must Obtain Approval of Engineered OWTS from the El Paso County Health Department.

All Bends Limited to 45 Degree Ells or Long Sweep Quarter Bends. Areas Under Driveways Shall Be Protected as Per El Paso County Health Department Regulations.

Building Sewer Clean-Outs Shall Be Installed within 5 FT of the Structure and at Intervals Not to Exceed 100 FT in Straight Runs and When the Cumulative Change in Direction Exceeds 135 Degrees.

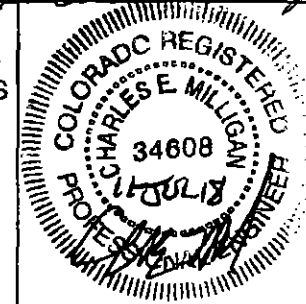
Grade Surrounding Area to Drain Away from the Soil Treatment Area (STA).

Paving, Planting of Trees/Shrubs, and Vehicular or Hoofed Animal Traffic of Any Kind Over the Leach Field may Cause Premature Failure and is Prohibited.

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Sheet: 3 of 3

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Revised:

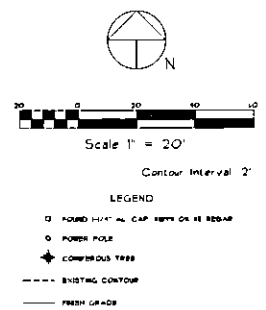
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VICINITY MAP

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