

SD-1

#### 5.2.52. Tiny House, Single Lot

(A) Applicability. The following standards apply to tiny houses used as a guest house or as a principle use on an individual lot or parcel. This section does not apply to tiny houses located in a Recreational Vehicle Park zoning district.

(B) Number of Tiny Houses per Lot or Parcel. One tiny house shall be allowed as a principle use on an individual lot or parcel, except in the A-35 (Agricultural) zoning district where two tiny houses may be allowed. One additional tiny house may be allowed on an individual lot or parcel where a guest house is permitted.

(C) Minimum Construction Standard. Tiny houses shall be constructed to ANSI RVIA standards. Tiny houses not constructed to ANSI RVIA standards shall be allowed with certification by a licensed professional structural engineer certifying that, at a minimum, the unit and support structure has been designed in accordance with all applicable horizontal and vertical loads as required by the local authority having jurisdiction.

(D) Exterior Appearance Single-Family in Character.

(1) All tiny houses shall be designed and constructed so as to comply with the following:

- Be finished on all sides with finished wood panel siding, vinyl siding, brick or stone veneer siding, stucco finish siding, other architecturally finished veneer, or with other types of siding as approved by the PCD Director;
- Have no attached motor as the means of propulsion;
- Have premanufactured insulated residential grade exterior doors;
- Have premanufactured insulated residential grade windows; and
- Have residential style/type roofing materials.

(2) Tiny Houses shall have a minimum of four of the following design features:

- More than one type of exterior siding listed above in subsection D.1 on a single side in an integrated manner;
- Upgraded entry feature, such as transom or side windows around an exterior door;
- Exterior accessories, such as permanent shutters, or fixed sunshade devices, or gutters/downspouts;
- Pitched roofline (3:12 pitch or steeper);
- Dormers;
- Premanufactured skylights;
- Built-in porch or deck;
- Exterior residential light sconces or downcans; or
- Other features as otherwise approved by the PCD Director.

The provision of more than one item within the same category of design features may be counted independently towards the overall minimum requirements (e.g., including both a sunshade and shutters).

(E) Screening. Tiny house wheels, running gear, and hitch components shall be either:

- Removed and the tiny houses set on a platform;
- Screened from view with skirting of the same exterior siding and materials as the tiny house;
- Screened from view via placement on a subsurface pad serving as a foundation and with integrated plantings and landscaping; or
- Screened with other methods as otherwise approved by the PCD Director.

(F) Interior Storage of Water Prohibited. No interior water storage tank, unless otherwise approved as an integrated water system by the PCD Director in consultation with El Paso County Public Health, shall be allowed within a tiny house.

(G) Storage of Wastewater Prohibited. No interior storage of wastewater, unless approved by the PCD Director in consultation with El Paso County Public Health, shall be allowed within a tiny house.

(H) Proof of Utilities. Proof of electric, natural gas, and/or propane availability is required. Proof of water and wastewater service is required unless otherwise approved by the PCD Director pursuant to subsections F and G above. Electrical, natural gas, propane, water, and wastewater connections must meet the requirements of the utility provider and/or El Paso County Public Health, as appropriate. Individual wells and on-site wastewater treatment systems (OWTS) shall be permitted in accordance with state and local regulations. A permit from the local jurisdiction having authority is required for electrical, gas, propane, and plumbing connections.

(I) Tiny House Site Plan Review Required. A tiny house site plan application shall be applied for and approved prior to the placement of the tiny house on an individual lot or parcel. Tiny house residential site plan applications shall, at a minimum, consist of the following:

- Proof of ANSI RVIA construction or certification by a licensed professional structural engineer;
- Elevation drawings of the tiny house to include the method of screening/skirting and identification of the type of siding material(s);
- Floorplan of the tiny house;
- Proof of utilities;
- Applicable landscaping plan with subsurface pad; and
- Additional documentation as required by the PCD Director that may be necessary, in his or her opinion, to approve the site plan.

## MEMORANDUM OF SUPPLEMENTAL INSTRUCTIONS

**Date:** August 13, 2019

**Subject:** Tiny House Review and Foundations

**Project:** David and Camilla Good Tiny Home

**Address:** Struther's Loop, Colorado Springs, CO (Lot 31 Cahparral Hills Su

**Work Code:**

**Requested By:** David and Camilla Good

**Company:** Homeowner

**Completed By:** Redge Hudson, P.E.

**Reviewed By:** Redge Hudson, P.E.

**Distribution:** Kevin Olsen - Olsen Construction

**Total Pages:** 1

(INCLUDING THIS SHEET)

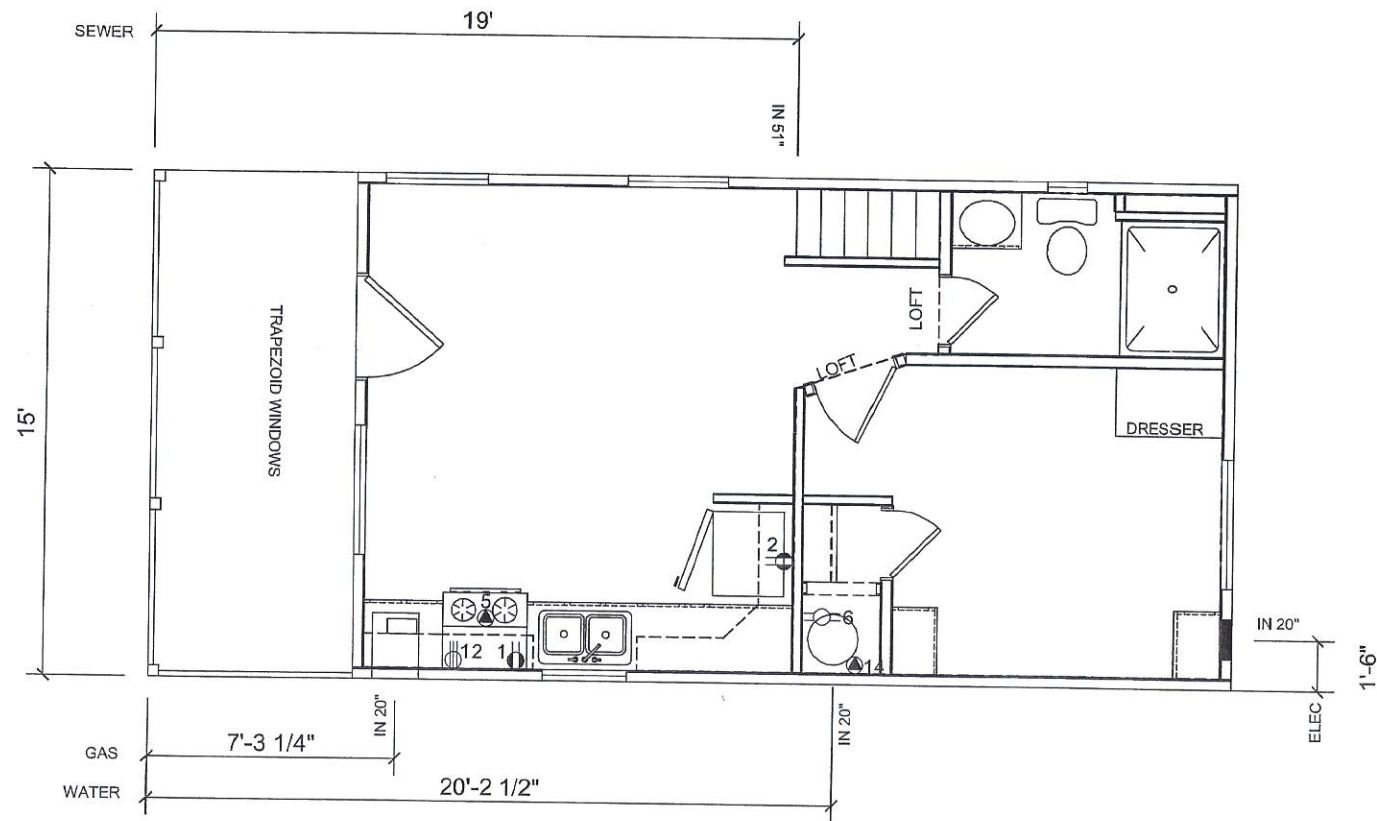


### Remarks:

The attached tiny house was reviewed and was designed in accordance to the minimum design standards as set for by PPRBD namely wind zone 1, thermal zone 3 and a design roof load of 30 psf. The homeowner shall note that the tiny home shall be installed on 24" diameter drilled pier that extends a minimum of 36" below grade. Affix a 12" sq. by 1/2" thick steel plate with (4)1/2" diameter headed anchor studs. The dircular footing shall be install as noted on the manufacturer's plans. Weld the carrying beams to the steel plates with 3/16" fillet weld, a minimum of 4" long. The homeowner shall take care during winter months to mitgate snow removal from the roof. No other revisions to the structural are required for life safety or code compliance.

To the best of my knowledge, the structural work has been completed in conformance with the structural construction documents. Should you have any further questions, please don't hesitate to contact Redge Hudson, P.E. at 385-203-7170

# SPECIAL ONE UNIT ONLY: PM077



**CHAMPION** 

3200 ENTERPRISE AVE. YORK, NE 68467

APPROVER'S SEAL

MODIFICATIONS

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MODEL: 05-514-FD-LOFT-MIRRORED  
390 SQ FT 1 BEDROOM 1 BATH W/DECK

TITLE: SERVICE ENTRANCES

DRAWN BY: STAFF

DATE: 04-22-13

SCALE: 1/8" = 1'-0"




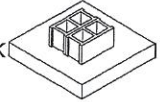
SHEET  
**S-101**

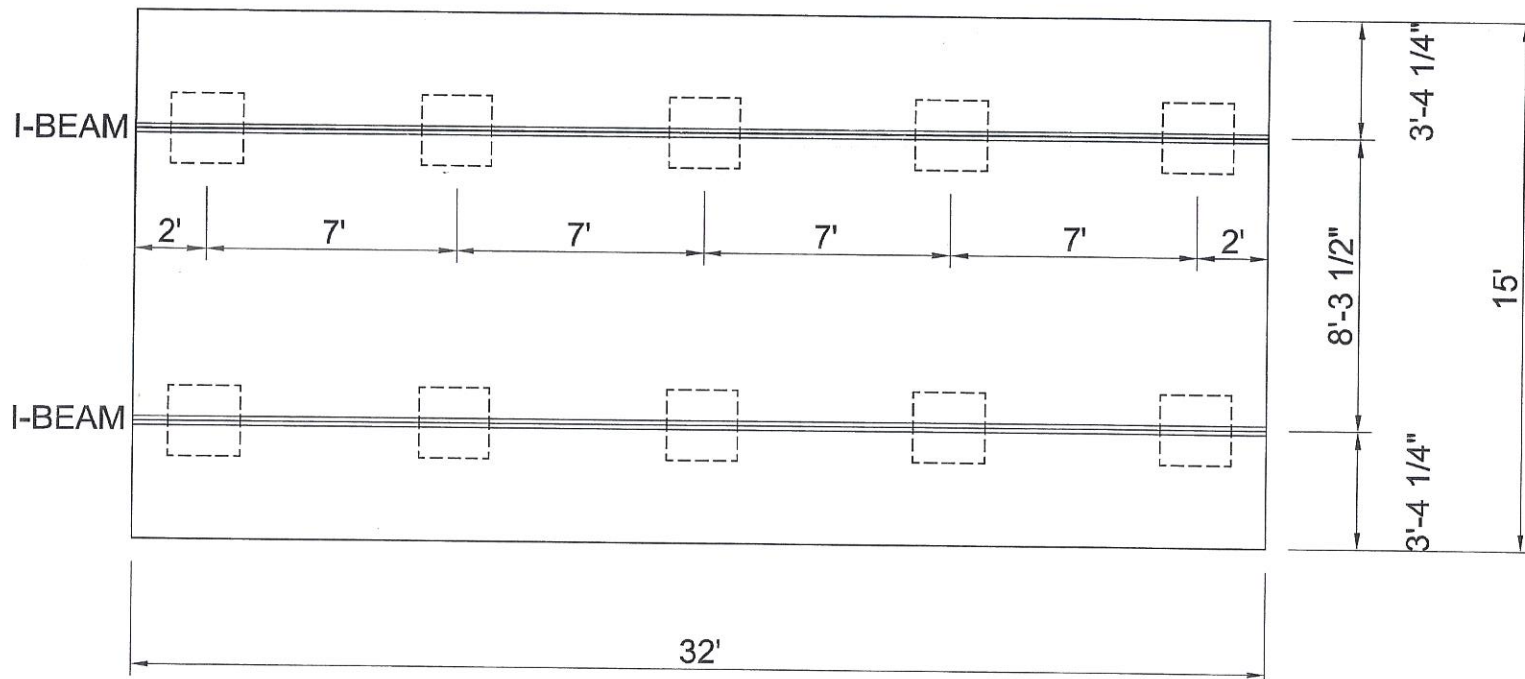
# SPECIAL ONE UNIT ONLY: PM077

## PIER NOTES

20 PSF ROOF LOAD MAX.	30 PSF ROOF LOAD MAX.
2000 PSF SOIL MIN.	2000 PSF SOIL MIN.
8'-0" O.C. SPACING MAX.	8'-0" O.C. SPACING MAX.
14' / 28' WIDE - 20" x 20" x 6" FOOTING	14' / 28' WIDE - 21" x 21" x 6" FOOTING
16' / 32' WIDE - 20" x 20" x 6" FOOTING	16' / 32' WIDE - 22" x 22" x 7" FOOTING
NOTE: FOR ALL OTHER INFORMATION SEE CHAMPION HOMES SET-UP MANUAL.	

## PIER LEGEND

	TYPICAL 20" x 20" x 6" FOOTING - SINGLE BLOCK	
	TYPICAL 36" x 36" x 10" FOOTING - DOUBLE BLOCK	



**CHAMPION** 

3200 ENTERPRISE AVE. YORK, NE 68467

APPROVER'S SEAL

MODIFICATIONS

MODEL: 05-514-FD-LOFT-MIRRORED

390 SQ FT 1 BEDROOM 1 BATH W/DECK

TITLE: PIER FOUNDATION

F-101

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DATE: 04-03-13




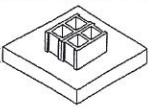
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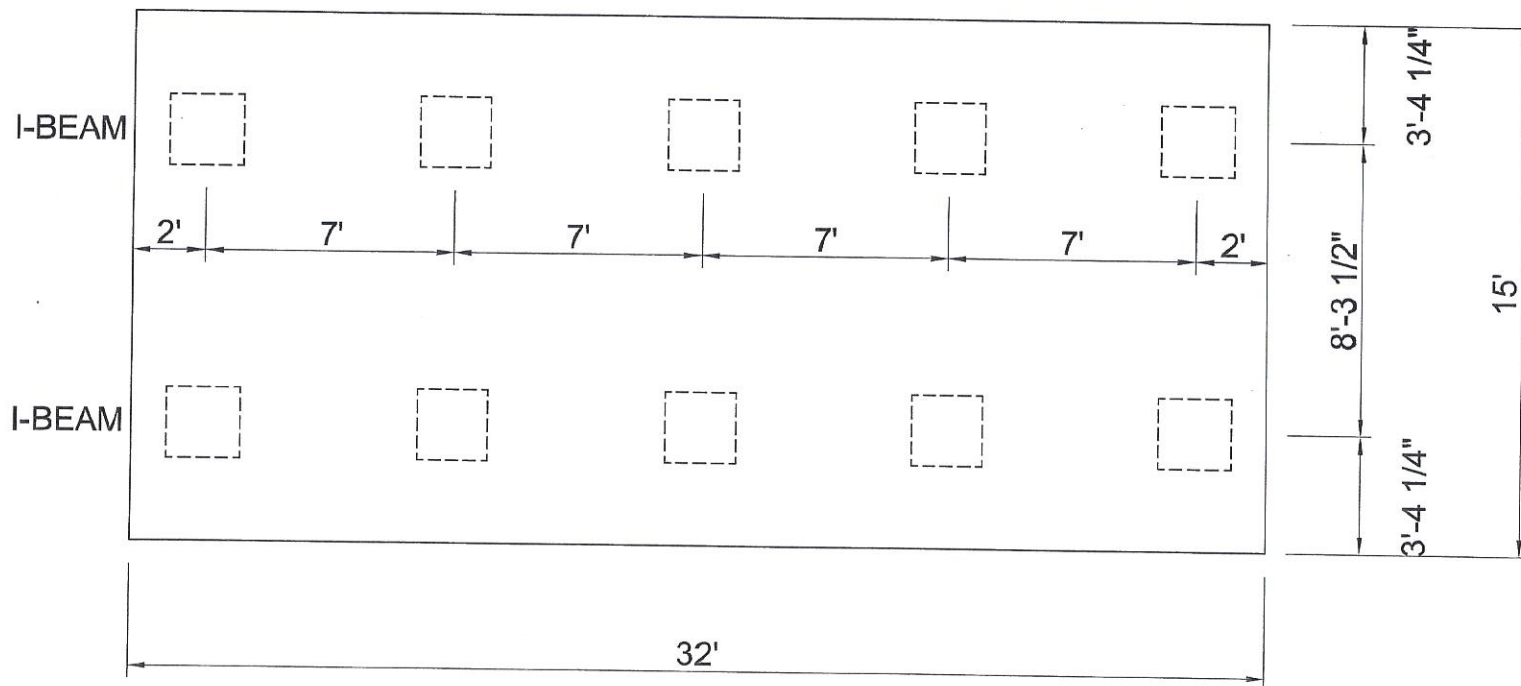


# PIER NOTES

20 PSF ROOF LOAD MAX.	30 PSF ROOF LOAD MAX.
2000 PSF SOIL MIN. 8'-0" O.C. SPACING MAX.	2000 PSF SOIL MIN. 8'-0" O.C. SPACING MAX.
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	TYPICAL 36" x 36" x 10" FOOTING - DOUBLE BLOCK	



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TITLE: PIER FOUNDATION

F-101

DRAWN BY: STAFF

DATE: 04-03-13

SCALE: 1/8" = 1'-0"









OFFICE OF THE STATE ENGINEER  
COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203  
(303) 866-3581

797

WELL PERMIT NUMBER **172337**

DIV. 2 CNTY. 21 WD 10 DES. BASIN MD

APPLICANT

Lot: 31 Block: Filing: Subdiv: CHAPARRAL HILLS

APPROVED WELL LOCATION  
EL PASO COUNTY

SE 1/4 NW 1/4 Section 36  
Twp 11 S RANGE 67 W 6th P.M.

HERBERT HAROLD AND CAROL M PRICE  
4070 IRON HORSE TRAIL  
CO SPGS CO 80917

(719)591-8971

DISTANCES FROM SECTION LINES

1900 Ft. from North Section Line  
1600 Ft. from West Section Line

PERMIT TO CONSTRUCT A WELL

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT  
CONDITIONS OF APPROVAL

- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- 2) The construction of this well shall be in compliance with the Water Well Construction and Pump Installation Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 17.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(II)(A) as the only well on a residential site of 5.22 acres described as Lot 31, Chaparral Hills Subdivision, El Paso County.
- 4) The use of ground water from this well is limited to ordinary household purposes inside a single family dwelling and the watering of the user's noncommercial domestic animals. The ground water shall not be used for irrigation or other purposes.
- 5) Production from this well is restricted to the Denver aquifer which corresponds to the interval between 170 feet and 835 feet below ground surface. Plain casing shall be installed and sealed to prevent production from other zones.
- 6) The maximum pumping rate shall not exceed 15 GPM.
- 7) The return flow from the use of the well must be through an individual waste water disposal system of the non-evaporative type where the water is returned to the same stream system in which the well is located.
- 8) This well shall be constructed not more than 200 feet from the location specified on this permit.

Note: To insure a maximum productive life of this well, perforated casing should be set through the entire producing interval of the approved zone or aquifer indicated above.

Note: Permit No. 135135 (expired) was previously issued on April 23, 1984, for this lot. MAS & 31-93

APPROVED  
MAS

State Engineer

Receipt No. 0354661

DATE ISSUED JUN 30 1993

By

EXPIRATION DATE JUN 30 1995

NOTE: It is the responsibility of the applicant to ensure compliance with the Colorado Division of Water Resources. The applicant must contact the State to verify they do not require an additional permit or modification of this permit in order to utilize the same well permit for the tiny house.



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Environmental Health Division

1675 W. Garden of the Gods Rd., Suite 2044  
 Colorado Springs, CO 80907  
 (719) 578-3199 phone  
 (719) 573-3188 fax  
[www.elpasocountyhealth.org](http://www.elpasocountyhealth.org)

**CONVENTIONAL (NON-ENGINEERED)  
 ON-SITE WASTEWATER TREATMENT SYSTEM (OWTS) DESIGN WORKSHEET  
 (MUST BE COMPLETED FOR ALL CONVENTIONAL DESIGNS)**

**Wastewater Flow**

Total number of bedrooms:

4

Design wastewater flow (gallons/day) from Table 6-1:

✓ 525

**Septic Tank**

Septic tank size (in gallons) from Table 9-1:

1500

1250

Tank burial depth (from top of tank, in inches)

36"

(NOTE: Shall not exceed 48 inch depth by regulation)

Will groundwater affect tank?

Yes  
☐

No  
☒

Will an effluent screen be installed?

Yes  
☐

No  
☒

(Note: Effluent screens are required for all new systems or replacement of the septic tank)

**Soil Treatment Area (STA)**

Long Term Acceptance Rate (LTAR) From Table 10-1:

.50

Unadjusted STA size (see 8.10.C.4) – show calculation:

875

Design flow (gallons per day)

LTAR (gallons/day/sq.ft.) =

.7

612.50 368 sq'

Depth of STA (cannot exceed 48"):

Trenches are preferred. If bed system is selected,  
 the selection reason must be specified:

Type of STA (check which applies):

☒ Trench    ☐ Bed

FOR REPAIRS ONLY (check which applies):

☐ Wide Bed (more than 12 feet wide)  
☐ Deep Gravel Trenches  
☐ Seepage Pit  
☐ None of the Above

**Method of Septic Tank Effluent Application (check which applies):**

- ☒ Gravity  
☐ Pump to gravity  
☐ Dispersed by siphon

**Type of Distribution Media (check which applies):**

- ☐ Rock  
☐ Tire chips  
☒ Chambers  
☐ Other \_\_\_\_\_ Other type \_\_\_\_\_

Adjusted STA size, using factors from Table 10-2 & 10-3 (show calculation, with adjustment factors utilized):


A scale drawing *shall* be provided with each design document (see attached example design documents), showing:

- Layout of entire OWTS, including the STA configuration (trench, bed, etc.)
- Dimensions of the trench(s) or the bed(s)
- Location of all OWTS components and distances to all applicable physical features in Table 7-1
- Depths of all components (or elevations relative to a designated benchmark)
- Location of the soil profile test pit excavation(s), or percolation test holes, if required
- Location of the alternate STA site
- North direction arrow
- Graphic scale (1" = 20', 1" = 30', etc.)
- Contours, OR slope direction and % slope

**Note: It is recommended that the design document is completed by a professional in the OWTS industry. EPCPH does not complete, or alter design documents. Contact EPCPH with any questions.**

The proposed STA sites must be protected from disturbance, compaction, or other damage by staking, fencing, posting or other effective methods.

**Certification**



Signature

Richard Broders

Print Name

8-9-16

Date

715 S Truherle Loop

Property Address

Broders Excavating

Company Name

557 Rose Dr

Address

719-338-4630

Phone

2.broders @ qq.com

Email

(See attached Tables and Design Document examples)





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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

## ON-SITE WASTEWATER TREATMENT SYSTEM INSPECTION FORM

ON-SITE ID: ON0036190

P

APN # 7136002061

DATE: 8/29/2016

APPROVED YES ☒ NO ☐

Environmental Health Specialist: Janet Christensen

Address: 715 Struthers Loop 80921

Owner: David Good

Residence: ☒ #Bedrooms: 4 Commercial: ☐ System Installer: Broders Excavating

SEPTIC TANK: Construction Material Concrete (Installed 6/4/97)

Capacity Gallon 1500

### SOIL TREATMENT AREA:

Trench: Depth (Range):     Width:     Total Length:     Sq. Ft.:    

Bed: Depth (Range):     Width:     Total Length:     Sq. Ft.:    

Depth of Rock:     Under PVC:     Type of cover on Rock:    

SEEPAGE PITS: # of Pits:     Working Depth #1:     #2:     Size (L x W) #1     #2     Total Sq. Ft.    

### CHAMBER SYSTEMS:

Type of Chamber: ARC 36 #Chambers: 42 Sq. Ft./Chamber: 15 Bed: ☐ Trench: ☒ Depth (Range: 2 1/2' Sq. Ft. Required (10-1):

875 Sq. Ft. Required (10-2): 875 Sq. Ft. Required (10-3): 613 Sq. Ft. Required for Diverter Valve: N/A

Sq. Ft. Installed: 624

Engineer Design: Y ☐ N ☒ Engineering Firm:     Approval Letter Provided: Y ☐ N ☒

Well installed at time of OWTS Inspection: Y ☒ N ☒ Public Water: Y ☐ N ☒

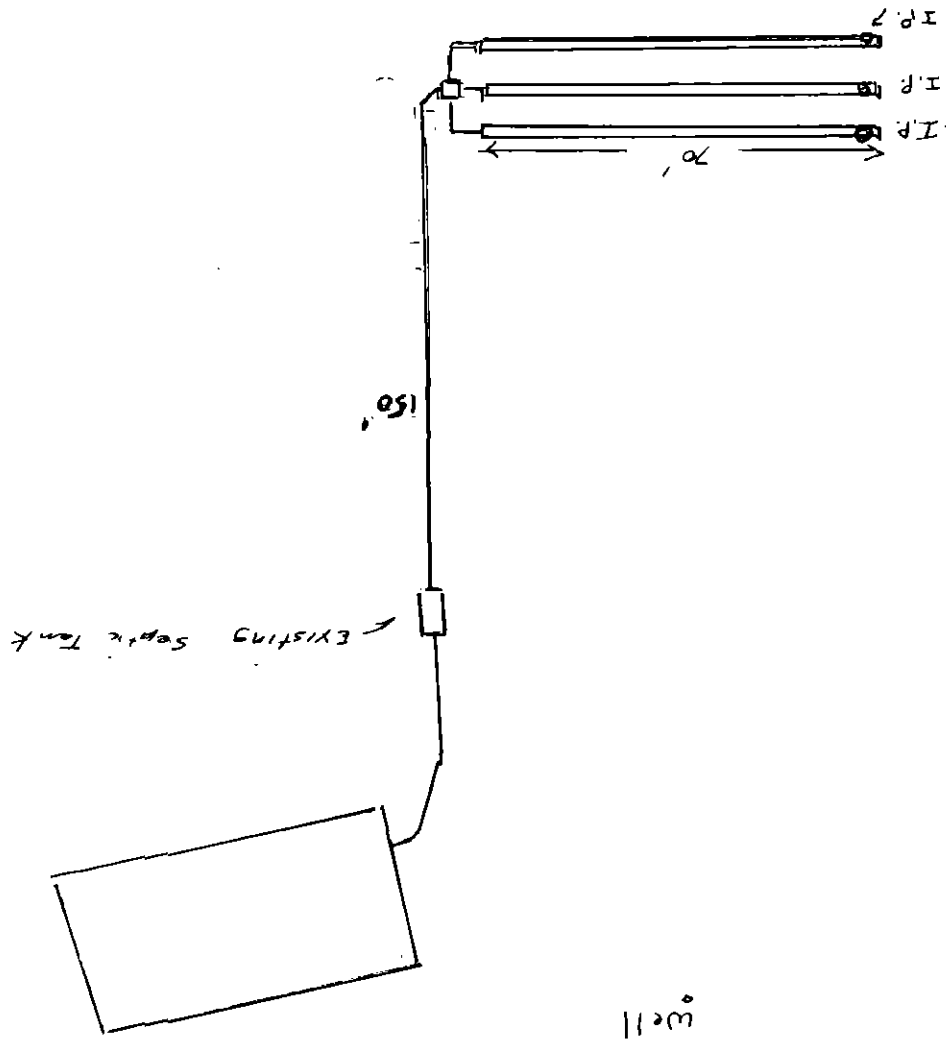
\*Approval will be revoked if in the future the well is found to be within 50 feet of the septic tank and/or 100 feet of the soil treatment area.

Notes

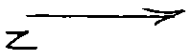
Existing Soil Treatment Area (STA) is abandoned..

It is the responsibility of the applicant to verify the existing septic system may be utilized for the tiny house and that no additional permits or approvals are required. The applicant must contact EPC Health to verify compliance.

I.P. = Inspection Port



As-Built  
715 Structure Loop  
ON 0036190  
APN 7136002061  
8/29/2016



Attn: DAVID GOOD  
715 STRUTHERS LOOP  
COLORADO SPRINGS, CO  
80921-2432

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

## MAJOR REPAIR PERMIT - OWTS

Valid From 8/23/2016 To 8/23/2017

PERMITEE :

DAVID GOOD  
715 STRUTHERS LOOP  
COLORADO SPRINGS, CO 80921-2432

Onsite ID: ON0036190

Tax Schedule #: 7136002061

Permit Issue Date: 08/23/2016

Dwelling Type: RESIDENTIAL

OWNER NAME :

GOOD DAVID A

# of Bedrooms (if Res): 4

Proposed Use (if Comm):

Designed Gallons/Day:

Water Source: PRIVATE WELL

### System Installation Requirements:

- The existing On-Site Wastewater Treatment System (OWTS) was installed for 3 bedroom Sep. 1994. A 1250 gallon septic tank and 360 square feet of chambers in a trench.
- A major repair was installed June 1997. The installation was for a 4 bedroom. The existing 1250 septic tank was abandoned and a new 1500 gallon tank installed and an additional trench with chambers of 361 square feet for total 721 square feet of Soil Treatment Area (STA).
- The existing STA is failing and will be abandoned and a new STA installed.
- A minimum of 613 square feet in a trench configuration per approved design document will be installed.
- The existing septic tank has been pumped and inspected for sound condition.

The OWTS must be installed per the stamped and approved Design Document dated 08/23/2016.

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 8:30 a.m. of the day that the inspection is requested  
Weekends & Holidays excluded.

*Neil Mayes for Janet*

Authorized By: Environmental Health Specialist





Environmental Health Division

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Colorado Springs, CO 80907  
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SP0005466 AB3000 9755

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

☐ NEW PERMIT ☒ MAJOR REPAIR PERMIT ☐ MINOR REPAIR PERMIT

Owner David Good Daytime Phone \_\_\_\_\_  
System Installer Brodie Eke Daytime Phone 719-338-4630  
Property Address 715 Stryker Loop City and Zip 80921  
Legal Description LOT 31 CHURCH HILLS EXOT COMM TO COCTY 207026273  
Owners Mailing Address Same  
Email Address 2brodie4@gmail.com Fax # \_\_\_\_\_  
Tax Schedule # 7136002061 Lot Size 5.4c  
Site Located Inside City Limits ☐ Yes ☒ No Primary Contact ☐ Owner ☒ Contractor  
Proposed Use: ☐ Single Family ☐ Multi-Family ☐ Commercial  
Water Supply: ☒ Well ☐ Cistern ☐ Municipal Number of Bedrooms 4  
☐ \_\_\_\_\_ ☐ \_\_\_\_\_ ☒ \_\_\_\_\_

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

**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

- All Payments are due at the time of application submittal; by cash, check or major credit card (Visa / MC)
- This permit will expire one year from the date of issuance.

I certify that the information provided on this application is in compliance with Section 8.3, Chapter 8 of the 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: [Signature] Date: 8-9-16

Site Insp. Date: 8-11-16 Perc. Rate: LTAR? 0.60 Permit # 0N0036190

E.H.S. Review Notes: Leather Chaps Rd off Baptist Rd  
Back of house faces I-25

3 Soil Test Pits done Aug. 19, 2016. Test Pit 3 location to be used

Date to: E.P.C. Development Services N/A Flood Plain and Enumerations N/A

Permit Requirements: design flow 525  
LTAR  
Conventional  
875 x 1.0 = 875  
875 x 0.7 = 612.5 ft<sup>2</sup>  
52 quick 4's  
or 41 ARC36

Min. Septic Tank Capacity

Min. Absorption Area

E.H. Specialist Janet Christman Date 8/12/16 ☒ Approved ☐ Denied

Reviewed 2016 approved fee (12/30/2015)

ON 00 36,190

APN 7136002061

8/29/2016



**ENTECH**  
ENGINEERING, INC.

505 ELKTON DRIVE  
COLORADO SPRINGS, CO 80907  
PHONE (719) 531-5588  
FAX (719) 531-5238

August 19, 2016

Broders Excavation  
557 Rose Drive  
Colorado Springs, Colorado 80911

Attn: Richard Broders

Re: Test Pit Observation – OWTS Repair  
715 Struthers Loop  
El Paso County, Colorado

Dear Mr. Broders:

As requested, personnel of Entech Engineering, Inc. have observed the excavation of three test pits at the above referenced site. This letter presents the results of our testing.

The following recommendations are based on conditions observed on August 16, 2016. Entech Engineering, Inc. should be notified if any changes in conditions are encountered or if the proposed absorption field location should change. A Test Pit Location Map is included as Figure 1.

Soil types observed in the test pit excavations were found to consist of sand, sandy clay loam and clay overlying weathered to formational sandstone. Grain size analysis of the upper sand soils resulted in 4 to 21 percent or the soil particles passing the No. 200 sieve. Weathered to formational sandstone bedrock was encountered at approximately 4 to 5 feet in Test Pit Nos. 1 and 2, which were excavated to depths 5 to 8 feet. Bedrock was not encountered in Test Pit No. 3, which was excavated to 8 feet. Signs of seasonal groundwater were observed at depths of approximately 4 to 5 feet in Test Pit Nos. 1 and 2, and at approximately 7 feet in Test Pit No. 3. Test Pit logs are presented in Figures 2 and 3.

Based on the soils observed the area of Test Pit No. 3 has been chosen for the new OWTS field location. A LTAR Value of 0.60, for Treatment Level 1 is recommended for the design of the field repair. The field should be sized based on the number of bedrooms and anticipated usage. If gravity flow is not possible, a pump and pumping chamber will be required. A minimal separation of 4 feet is required between the absorption field and the groundwater or bedrock.

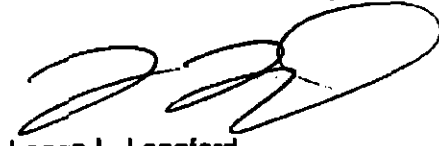
The absorption field should be installed in accordance with El Paso County Health Department regulations.

Broders Excavation  
Test Pit Observation – OWTS Repair  
715 Struthers Loop  
El Paso County, Colorado  
Page Two

We trust 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.



Logan L. Langford  
Geologist

LLL/crf

Encl.

Entech Job No. 161641  
AAproject/2016/161641 tpo

Reviewed by:



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







**TP- APPROXIMATE TEST PIT LOCATION AND NUMBER**



**BM- APPROXIMATE BENCHMARK LOCATION  $39^{\circ}3'2.51''\text{N}$ ,  $104^{\circ}50'40.42''\text{W}$   
- 270' N X 180' W OF BM**



**ENTECH**  
**ENGINEERING, INC.**  
300 ELSTON DRIVE  
COLORADO SPRING, CO. 80907 (719) 521-9399

**Site Plan/Test Pit Location Map**  
**715 Struthers Loop**  
**El Paso County, CO.**  
**For: Broders Excavation**

**DRAWN:**  
**LLL**

**DATE:**  
**8/19/16**

**CHECKED:**

**DATE:**

**JOB NO.:**  
**161641**

**FIG NO.:**  
**1**

TEST PIT NO. 1  
 DATE EXCAVATED 8/16/2016  
 Job # 161641

TEST PIT NO. 2  
 DATE EXCAVATED 8/16/2016  
 CLIENT BRODERS EXCAVATION  
 LOCATION 715 STRUTHERS LOOP

REMARKS	Depth (ft)	Symbol	Samples	Blows per foot	Watercontent %	Soil Type
topsoil - sandy loam, fine to coarse grained, dark brown	1					
sand, fine to coarse grained with gravel, tan	2					
	3					
sandy clay loam, fine to coarse grained, grayish tan	4					
sandstone, very silty, fine grained, tan	5					
	6					
sandstone, fine to coarse grained, tan	7					
	8					
	9					
	10					

REMARKS	Depth (ft)	Symbol	Samples	Blows per foot	Watercontent %	Soil Type
topsoil - sandy loam, fine to coarse grained, dark brown	1					
sand, fine to coarse grained with gravel, tan	2					
	3					
	4					
sandstone, fine to coarse grained, tan	5					
	6					
	7					
	8					
	9					
	10					



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

### TEST PIT LOG

DRAWN:	DATE:	CHECKED:	DATE:
		LLL	8/19/16

JOB NO:  
 161641  
 PID NO:  
 2

TEST PIT NO. 3  
 DATE EXCAVATED 8/16/2016  
 Job # 161641

TEST PIT NO. 4  
 DATE EXCAVATED 8/16/2016  
 CLIENT BRODERS EXCAVATION  
 LOCATION 715 STRUTHERS LOOP

REMARKS	Depth (ft)	Symbol	Samples	Blows per foot	Watercontent %	Soil Type
topsoil - sandy loam, fine to coarse grained, dark brown	1	⬢				
sand, fine to coarse grained, tan	2	⬢				
	3	⬢				
	4	⬢				
	5	⬢				
	6	⬢				
	7	⬢				
clay, reddish gray	8	⬢				
	9	⬢				
	10	⬢				

REMARKS	Depth (ft)	Symbol	Samples	Blows per foot	Watercontent %	Soil Type
	1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					



**ENTECH**  
 ENGINEERING, INC.

505 ELKTON DRIVE  
 COLORADO SPRINGS, COLORADO 80907

### TEST PIT LOG

DRAWN:

DATE:

CHECKED:

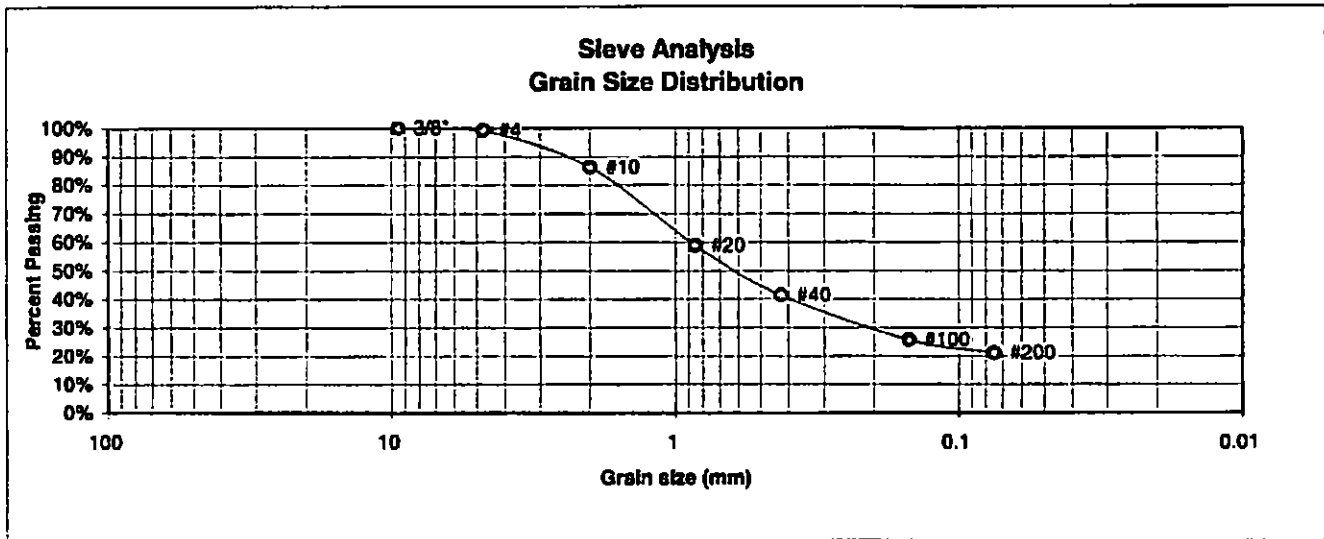
DATE:  
 8/19/16

JOB NO:  
 161641

FIG NO:

3

BORING NO.	TP-1	UNIFIED CLASSIFICATION	SM	TEST BY	BL
DEPTH(ft)	4.5-5'	AASHTO CLASSIFICATION		JOB NO.	161641
CLIENT	BRODERS EXCAVATING				
PROJECT	715 STRUTHERS LOOP				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	99.2%
10	86.1%
20	58.8%
40	41.3%
100	25.7%
200	21.0%

**Atterberg  
Limits**

Plastic Limit	18
Liquid Limit	19
Plastic Index	1

**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:

LL

8/19/16

JOB NO.:

161641

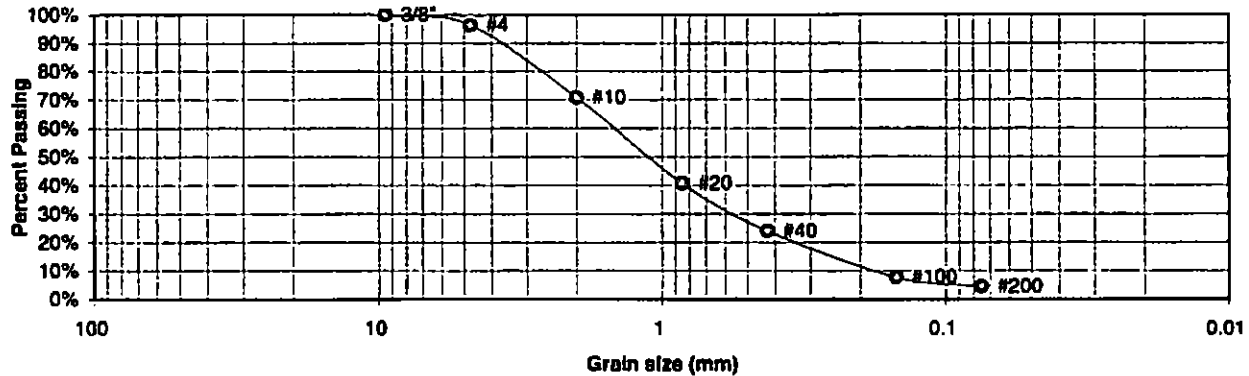
FIG NO.:

4



BORING NO.	TP-3	UNIFIED CLASSIFICATION	SW	TEST BY	BL
DEPTH(ft)	1.5-7'	AASHTO CLASSIFICATION		JOB NO.	161641
CLIENT	BRODERS EXCAVATING				
PROJECT	715 STRUTHERS LOOP				

### Sieve Analysis Grain Size Distribution



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	96.4%
10	70.8%
20	40.7%
40	23.9%
100	7.7%
200	4.4%

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:

LLL

8/19/16

JOB NO.:

161641

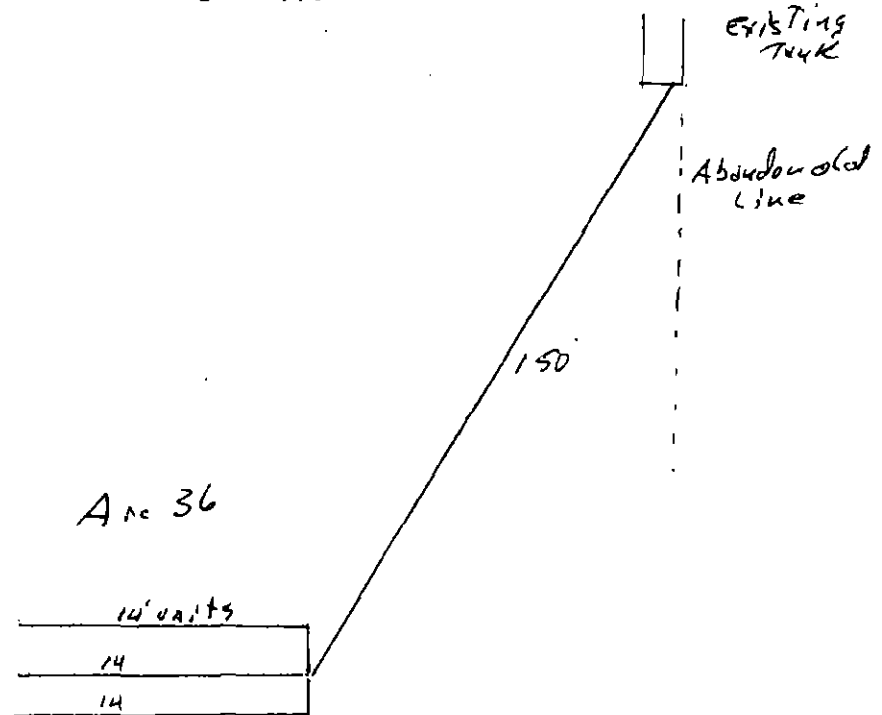
FIG NO.:

5

8-22-16  
Broderick Excavating

715 STANTHEM LOOP  
0N00 36190  
APN# 7136 002061

Well  
North



Approved design document  
8-23-16 Janet

1" = 40'

DO NOT ACCEPT WITHOUT VERIFYING EAGLE WATERMARK IN PAPER  
STATE OF COLORADO

CERTIFICATE OF TITLE

VIN: 1C9133241E5324074  
MADE IN:

YEAR: 2015  
MAKE: CHAM

MODEL: AERTRAILER

BODY: TC

SUN HOME SERVICES INC  
650 SKY VIEW LN #116  
LARKSPUR, CO 80118

COPIES MADE  
SIZE 15X32  
PROVIDER'S TITLE  
47E950696  
FILE

DATE: 03/27/2017  
SUN HOME SERVICES INC

DATE PURCHASED  
03/27/2017  
DATE ACCEPTED  
03/31/2017  
DATE ISSUED  
04/27/2017

47H513391  
ODOMETER  
0  
COUNTER LIFESPAN  
A. Actual Mileage  
B. Estimated Mileage  
C. Not actual mileage. WARRANTY  
D. Odometer discrepancy

TITLE BRAND:

BARBARA BROHL

Signature below certifies valid priority of  
claim in the several states for release of the  
first lienholder's interest in the vehicle.

DATE FILED

FILE NUMBER

LIEN EXTENDED TO COUNTY

MATURITY DATE

Lienholder's Name

AMOUNT OF LIEN

SECOND LIENHOLDER

DATE FILED

FILE NUMBER

LIEN EXTENDED TO COUNTY

MATURITY DATE

Lienholder's Name

AMOUNT OF LIEN

THIRD LIENHOLDER

DATE FILED

FILE NUMBER

LIEN EXTENDED TO COUNTY

MATURITY DATE

Lienholder's Name

AMOUNT OF LIEN

FOURTH LIENHOLDER

DATE FILED

FILE NUMBER

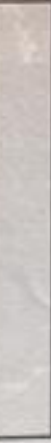
LIEN EXTENDED TO COUNTY

MATURITY DATE

Lienholder's Name

AMOUNT OF LIEN

Signature below certifies valid priority of  
property in the several states for release of the  
last lienholder's interest in the vehicle.



Lienholder's Name

Authorized Agent's Signature: Date

THE APPLICANT HAS BEEN DULY REGISTERED IN THIS OFFICE AS THE OWNER OF THE MOTOR VEHICLE DESCRIBED  
SUBJECT TO LIENS AND ENCUMBRANCES IN THE ORDER SHOWN.

EXECUTIVE DIRECTOR, COLORADO DEPARTMENT OF REVENUE  
BARBARA BROHL

DATE DUPLICATE ISSUED

JLS 116 41230

KEEP IN SAFE PLACE - ANY ALTERATION OR ERASURE VOID THIS TITLE

J93185556

CPH 2003 18-110

VOID IF ALTERED

**TRANSFER OF OWNERSHIP/BUYER(S) REQUIREMENT:** Upon the sale or transfer of a motor vehicle the owner in whose name the Certificate of Title is issued shall execute a formal transfer of the vehicle. Within 60 days the buyer shall present to the Department of Transportation a duly executed certificate of title, together with an application for title to authorize agentoursant to C.R.S. 4-6-110.

**TRANSFER OF OWNERSHIP/SELLER(S) REQUIREMENT.** When the owner of a motor vehicle transfers or assigns the certificate of title to a buyer, the registration of such vehicle shall expire and the seller shall remove the license plates pursuant to C.R.S. 42-3-115.

**ODOMETER CERTIFICATION:** Federal and state law requires the seller to disclose the mileage of the motor vehicle and requires the buyer to acknowledge the mileage of the motor vehicle upon transfer of ownership. The seller and buyer are required to print and sign their name to acknowledge the mileage transferred to the buyer. **SELLER'S SIGNATURE:** \_\_\_\_\_ **BUYER'S SIGNATURE:** \_\_\_\_\_  
(attach to 40 USC 202)

THE SELLER(S) CERTIFIES, UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, THAT THE SELLER(S) SIGNATURE(S) RELEASES AND TRANSFERS INTEREST IN THE VEHICLE AND THE ODOMETER READING AND DECLARATION ARE TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE.

NOTICE: ANY ALTERATION OR ERASURE MAY VOID THE ASSIGNMENT AND ALL ASSIGNMENTS THAT FOLLOW

[illegible]

Buyer's Hand Printed Name	Buyer's Hand Printed Name
Buyer's Hand Printed Name	Buyer's Hand Printed Name
Buyer's Hand Printed Name	Buyer's Hand Printed Name
Buyer's Hand Printed Name	Buyer's Hand Printed Name

Seller's Hand Printed Name(s)	Date of Sale	Buyer's Physical Address
	8-3-19	715 St. Arthur Loop
Seller's Signature	Purchase Price	Buyer's City, State, ZIP
	10,000	Chapel Hill, NC 27514

THE FOLLOWING REASSIGNMENT MAY ONLY BE USED BY LICENSED DEALERS.

THE FOLLOWING REASSIGNMENT MAY ONLY BE USED BY LICENSED DEALERS.

Odometer Reading No. Tires	Buyer's hand printed Name(s) <input type="checkbox"/> Actual Mileage <input type="checkbox"/> Mileage to nearest 1000 Miles <input type="checkbox"/> Not Actual - Working Odometer Discrepancy
Selling Dealer Name	Buyer's Signature Acknowledges Odometer Reading License Number

Agent's Hand Printed Name	Date of Sale	Buyer's Hand Printed Name(s)
Agent's Signature	Purchase Price	Buyer's Hand Printed Name

Auction Name (When Applicable)	Auction Number	Buyer's Physical Address, City, State, ZIP
Odometer Reading	<input type="checkbox"/> Actual Mileage	Buyer's hand printed Name(s)

Selling Dealer Name	<input type="checkbox"/> Not Selling <input type="checkbox"/> Selling Outright Discrepancy	
	License Number	Buyer's Signature Acknowledges Odometer Reading

Agent's Signature	Purchase Price	Buyer's Hand Printed Name
-------------------	----------------	---------------------------

Auction Name (When Applicable)	Auction Number	Buyer's Physical Address, City, State, Zip
Odometer Reading <input type="checkbox"/> Actual Mileage <input type="checkbox"/> Mileage in excess of Mechanical Limits		Buyer's hand printed Name(s)

Selling Dealer Name		License Number		Buyer's Signature Acknowledges Odometer Reading	
Date of Sale		Date of Sale		Buyer's Hand Printed Name(s)	

Agent's Signature	Purchase Price	Buyer's Hand Printed Name
-------------------	----------------	---------------------------

Auction Name (When Applicable)	Product Name	Product Description (When Applicable)
		<p>• NO ADDITIONAL REASSIGNMENTS PERMITTED - Last Assignee must obtain title in their example</p>

• NO ADDITIONAL REASSIGNMENTS PERMITTED - Last Assignee must obtain title in their name(s)