ON# #7427284017

EL PASO COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT Permit # 1448
INDIVIDUAL SEWAGE DISPOSAL SYSTEM INSPECTION FORM Date 9-18-00

P

APPROVED: YES X NO ENVIRONMENTALIST L Griffen for S. Freidman

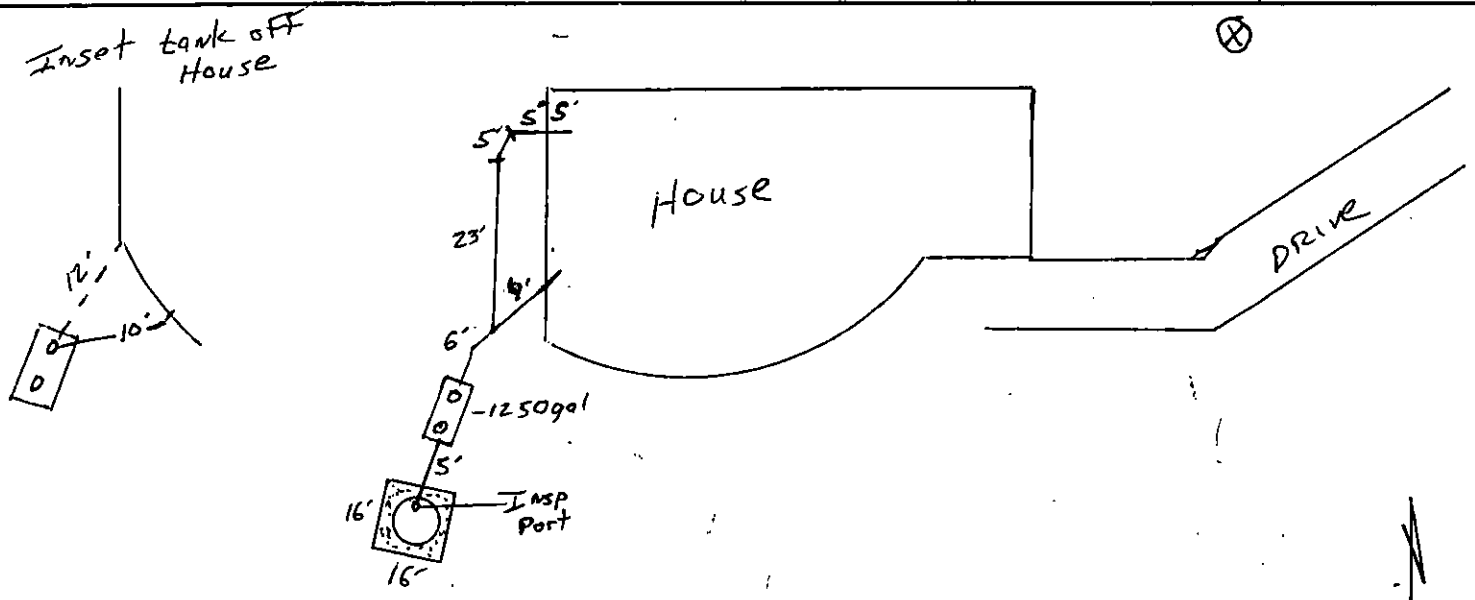
Address 1880 Ponder Heights Dr Owner Westwood

Legal Description Lot 1 Star Heights Filing #1
Residence X, # of bedrooms 3; Commercial ____; System Installer ~~[illegible]~~ R+R.

SEPTIC TANK:
Commercial X; Noncommercial ____, L ____, W ____, WD ____
Construction Material 2 compt Precast concrete, capacity 1250 gallons.

DISPOSAL FIELD:
Rock Systems:
Trench: depth ____, width ____, total length ____, sq. feet ____
Bed: depth ____, length ____, width ____, sq. feet ____
Rock type ____, depth ____, under PVC ____, over PVC ____
Seepage Pits: # of pits 1, total # of rings 2, working depth(s) 5'
size of pit(s) L X W 16X16, lining material 1½ R. Rock, total sq. feet 536
Rockless Systems:
Chamber: Type ____, number of chambers ____, bed ____, trench ____
sq. ft./section ____, reduction allowed ____%, sq. ft required ____
total sq. ft. installed ____, depth of installation ____
Engineer Design Y or N, Designing Engineer ____,
Approval letter provided? Y or N
Well 50 feet from tank Y or N 100 feet from leach field (Y) or N
Well installed at time of septic system inspection (Y) or N Public Water ____
*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 disposal field.

NOTES: 4½' Rock around 2 rings Sidewall = 320 ft
in. D = 5' Bottom = 256 ft



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EL PASO COUNTY

DEPARTMENT OF HEALTH AND ENVIRONMENT
301 S Union Blvd, Colorado Springs, Colorado 719-578-3126

INDIVIDUAL SEWAGE DISPOSAL SYSTEM PERMIT

WATER SOURCE: WELL
PERMIT NUMBER: ON0001448

OWNER NAME: WESTWOOD
DATE PERMITTED: 1/26/00

ADDRESS: 1880 PONDER HTS DR

CITY,STATE,ZIP: COLORADO SPRINGS 80906
PHONE NUMBER: 7192279177

INSTALLED BY:

This permit is issued in accordance with 25-10-107 Colorado Revised Statues. PERMIT EXPIRES upon completion-installation of sewage-disposal system or at the end of twelve (12) months from date of issue- whichever occurs first-(unless work is in progress). This permit is revokable if all stated requirements are not met.
Sewage disposal system to be installed by an El Paso County Licensed System Contractor or the property owner.

THIS PERMIT DOES NOT DENOTE APPROVAL OF ZONING AND ACREAGE REQUIREMENTS.

PERMIT FEE(NON REFUNDABLE) :
New Permit-----$ 300.00
ISDS Repair -$ 50.00
Voided/Altered permit --$ 25.00

PERMIT EXPIRATION DATE :
Expires twelve months from date of issue

John Downing
DIRECTOR, EL PASO COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT

Sandy Friedman 578 3130
ENVIRONMENTALIST / PHONE NUMBER

NOTE: LEAVE THE ENTIRE SEWAGE DISPOSAL SYSTEM UNCOVERED FOR FINAL INSPECTION, 48 HOUR ADVANCE NOTICE REQUIRED.

MINIMUM SEPTIC TANK SIZE: 1,250 GALLONS *MINIMUM ABSORPTION AREA REQUIRED* 486 SQ FT

PLANNING DEPARTMENT N/A ENUMERATION 1/26/00 FLOOD PLAIN 1/26/00 WASTEWATER 1/26/00

COMMENTS:

MEET ALL MINIMUM DISTANCES; INSTALL SYSTEM PER ENGINEER DESIGN; LETTER OF VERIFICATION REQUIRED FROM P.E. PRIOR TO FINAL APPROVAL.

The Health Office shall assume no responsibility in case of failure or inadequacy of a sewage-disposal system, beyond consulting in good faith with the property owner or representative. Free access to the property shall be authorized at reasonable time for the purpose of making such inspections as are necessary to determine compliance with requirements of this law.

Inspector Sandy Record I.D. 1448

EL PASO COUNTY ENVIRONMENTAL HEALTH SERVICES

301 South Union Boulevard • Colorado Springs, CO • 80910-3123 • (719) 578-3126

APPLICATION FOR A ☒ NEW ☐ REMODEL ☐ REPAIR OR ☐ ADDITION

TO AN INDIVIDUAL SEWAGE DISPOSAL SYSTEM ☒ P.E. DESIGN

Owner Westwood Daytime Phone 227-9177

Address of Property 1880 Powder Hts. Dr. City & Zip Co Spgs. 80906

Legal Description Lot 1 Star Heights Filing #1

Tax Schedule # 74272-04-010 Lot Size 2.5 Acre Septic Contractor Lacey

Inside City Limits ☐ No ☒ Yes-City _____ Water Supply ☒ Well or Spring ☐ Cistern ☐ Public

Type of Building ☒ Frame ☐ Modular ☐ Mobile ☐ Commercial ☐ Manufactured ☐ Other _____

Owner's MAILING Address 3810 Brushland Ct. City, State & Zip Co Spgs, Co 80904

☐ MAIL PERMIT OR ☒ PICK UP PERMIT ☐ THERE IS AN ADDITIONAL RESIDENCE ON THIS PROPERTY

MAXIMUM POTENTIAL BEDROOMS 3

Percolation Test Attached Y (N) Garbage Disposal (Y) N Basement (Y) N Clothes Washer (Y) N

I have supplied a plot plan as described on the back of this form. I acknowledge the completeness of the application is conditional upon such further mandatory and additional tests and reports as may be required by the Department to be made and furnished by an applicant for purposes of evaluating the application, and issuance of the permit is subject to such terms and conditions as deemed necessary to ensure compliance with rules and regulations adopted pursuant to C.R.S. 25-10-107 et. seq. I hereby certify all represented to be true and correct to the best of my knowledge and belief, and are designed to be relied on by the El Paso County Department of Health and Environment in evaluating the same for purposes of issuing the permit applied for herein. I further understand any falsification or misrepresentation may result in the denial of the application or revocation of any permit granted based upon said application and in legal action for perjury as provided by law.

OWNER'S SIGNATURE _____ Date 1/18/00

DEPARTMENT OF HEALTH USE ONLY

2186 sf	1250 Gal	1/18/00
Minimum Absorption Area	Minimum Tank Capacity	Date of Site Inspection

REMARKS Meet all Minimum Distances; Install System per Engineer Design; Letter of Verification Required from PE prior to Final Approval

EHS INSPECTOR _____ DATE 1/25/00 (APPROVED) DENIED

(FEE) NO FEE DATE TO PLANNING / WASTEWATER 1/19/00

6/99.DEB

1) We require a copy of your percolation **(PERC) TEST** with an original professional engineer's (PE) stamp and signature.

2) A **PLOT PLAN** must be drawn (not to scale) on a 8 ½ x 11 sheet of paper. The plot plan must include
   1) a north bearing
   2) property lines
   3) property dimensions
   4) all buildings (proposed or existing)
   5) proposed septic system site
   6) designated alternate septic system site
   7) driveway (proposed or existing and name of adjoining street)

3) Initial any of the following features that apply to your property and include them on your plot plan.

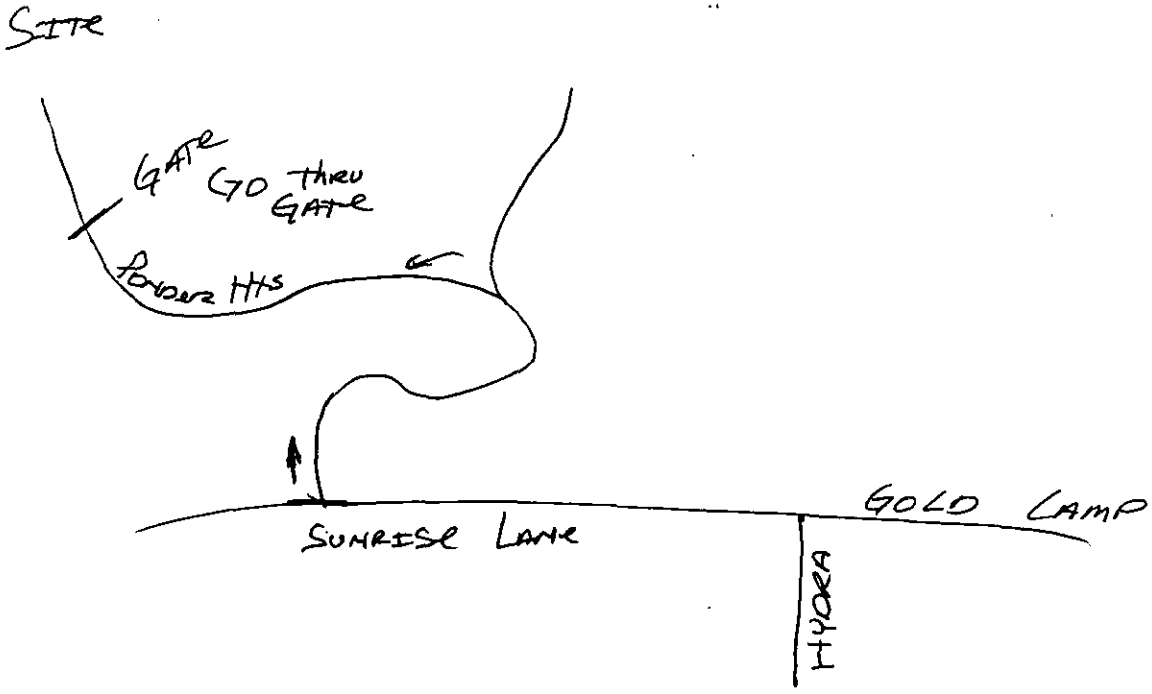
   ____ Well(s) ____ Adjacent property well(s) ____ Subsoil drain
   ____ Cistern ____ Water line

4) Initial any of the following that are within 100 feet of your proposed septic system and include on your plot plan.

   _____Spring(s) _____Lake(s)
   _____Pond(s) _____Stream(s)
   _____Dry Gulch(es) _____Natural drainage course(s)

5) **PROPERTY ADDRESS OR LOT NUMBER MUST BE POSTED AND CLEARLY VISIBLE FROM ROAD. PERC HOLES MUST BE CLEARLY MARKED.**

6) GIVE COMPLETE DIRECTIONS TO THE PROPERTY FROM A MAIN HIGHWAY



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9-18-00

Hildenbrandt & Associates, Inc.

January 24, 2000 Project 000108

Westwood Building Company
3810 Brushland Ct.
Colorado Springs, CO 80904
Attn: Verlyn Rosenthal

Re: Percolation Test - On-Site Disposal System for a Proposed Residence
1880 Ponder Heights Dr.
Colorado Springs, CO

Dear Mr. Rosenthal:

As requested, personnel of Hildenbrandt & Associates, Inc. have performed percolation testing for an on-site disposal system at the above referenced site. This letter presents the results of our testing.

The percolation test was performed on January 19 & 20, 2000. The locations of the percolation holes are shown in Figure 1. Soils encountered in the profile hole consisted of dry, reddish-brown, sand and gravel overlying decomposed granite with underlying granite bedrock. Groundwater was not encountered in either the percolation holes or the profile hole during the time of drilling. The profile hole was excavated to a 15'0" depth and terminated on the granite bedrock.

The ground in the area of the proposed absorption system has been graded to flat conditions. The native ground slopes to the east at a 2:1 (horizontal:vertical) grade.

The average percolation rate was determined to be 5 minutes per inch. Percolation results are shown in Figure 2. Based on a percolation rate of 5 minutes per inch, the absorption area should be 101 square feet per bedroom. The calculated size shall increase by 20% if wastes from a garbage disposal are discharged into the system and shall increase by 40% if wastes from an automatic washing machine are discharged into the system. The absorption field should be sized based on the number of bedrooms and anticipated usage. Due to the steep topography at the site, a designed septic system is required.

Where possible, gravity flow should be used to transfer liquid wastes from the septic tank to the absorption area. A pump and pumping chamber may otherwise be installed.

The septic tank and absorption system should be installed in accordance with El Paso County Health Department regulations.

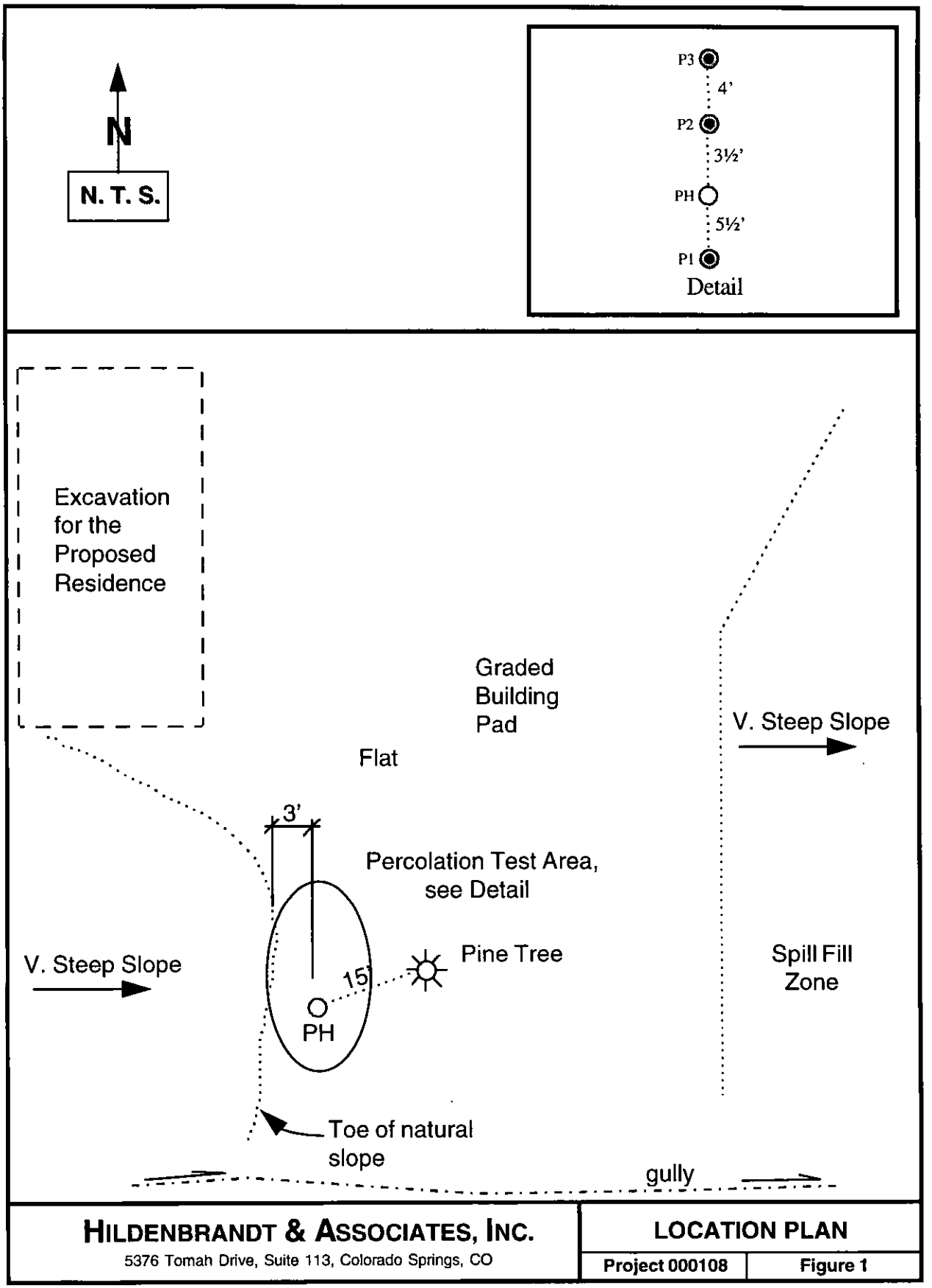
We trust this report has provided you with the information you required. If you have any questions or need additional information, please do not hesitate to contact us.

Respectfully submitted,

HILDENBRANDT & ASSOCIATES, INC.

Brian Hildenbrandt,

P.E. #29623



HILDENBRANDT & ASSOCIATES, INC.
5376 Tomah Drive, Suite 113, Colorado Springs, CO

LOCATION PLAN

Project 000108	Figure 1

Client Westwood Building Company

Date: 1/24/2000

Test Location: 1880 Ponder Heights Dr.
Colorado Springs, CO

Date Test Performed: 1/20/2000
Observer: C.C.

PERCOLATION TEST DATA

Hole No. 1

Trial	Time (min.)	Water Level Change (In.)
1	1	2.50
2	1	2.00
3	1	2.00

Depth of Hole: 84"
Perc Rate min./In.: < 5 *

Hole No. 2

Trial	Time (min.)	Water Level Change (In.)
1	1	3.00
2	1	2.94
3	1	3.00

Depth of Hole: 53"
Perc Rate min./In.: < 5 *

Hole No. 3

Trial	Time (min.)	Water Level Change (In.)
1	1	2.75
2	1	2.75
3	1	2.50

Depth of Hole: 83"
Perc Rate min./In.: < 5 *

Average Perc Rate (min./In.): 5

PROFILE HOLE

Date Excavated: 1/19/2000 Method: Drilled with a 4-inch dia. truck mounted flight auger.

Depth	Description
0-1'	Fill; Sand, gravel and cobbles, light to reddish brown,
1' - 11'	Colluvium; Sand and Gravel with Cobbles; light to reddish-brown, dry, medium dense, caving from the ground surface down.
11' - 15'	Decomposed Granite; dry, reddish-brown, friable, dense to very dense.

Total Depth = 15'0", practical refusal at 15'
Caving to a 2' depth measured on 1/20/2000.
No Groundwater during drilling or 24-hours after drilling.

Required Absorption Area: 0.45 Sq. Ft/gpd sewage volume
Required Absorption Area: 101 Sq. Ft./bedroom

Remarks: * - Perc Rate of 5 mpi used for calculating field size.

HILDENBRANDT & ASSOCIATES, INC.
5376 Tomah Drive #201 Colorado Springs, CO 80918

Percolation Test Results

Project **000108** **Figure 2**

Hildenbrandt & Associates, Inc.

January 24, 2000 Project 000108

Westwood Building Company
3810 Brushland Ct.
Colorado Springs, CO 80904
Attn: Verlyn Rosenthal
227-9177 Off
332-6017 Cell

Re: Drywell Design
1880 Ponder Heights Dr.
Colorado Springs, CO 80906

Reference: 1) Percolation Test, 1880 Ponder Heights Dr., by Hildenbrandt & Associates, Inc., Project 000108, dated January 24, 2000.

Dear Mr. Rosenthal:

As requested, personnel of Hildenbrandt & Associates, Inc. have designed a drywell for an individual sewage disposal system at the above referenced site. The system was designed for a 3 bedroom residence. This letter presents the results of our drywell design.

Site Conditions

The proposed drywell will be located southeast of the proposed residence. The existing ground upgradient of the proposed drywell slopes at an approximate 2:1 grade in an easterly direction (Reference 1). The building pad has been created by placing fill from the residence excavation over the side of the natural slope. The fill was not benched into the native material and was not placed in a controlled manner. The fill will be susceptible to settlement and downslope movement. Care must be taken to assure all components of the disposal system are placed into native material.

Percolation Test

A percolation test was performed on this site on January 19 & 20, 2000. Soils encountered in the profile hole consisted of reddish-brown, sand and gravel, overlying decomposed granite with underlying granite bedrock. The soil was encountered at dry conditions. The profile hole was drilled to refusal on granite bedrock at a depth of 15-feet. Groundwater was not encountered in the profile hole. The average percolation rate was determined to be 5 minutes per inch (Reference 1).

Recommendations

Based on a percolation rate of 5 minutes per inch, the drywell sidewall and bottom area should be 101 square feet per bedroom. The calculated size shall be increased by 60% for a garbage disposal and washing machine. The drywell sidewall area is sized based on the number of bedrooms and anticipated usage.

Calculations:

Average Percolation Rate	= 5 minutes per inch
Required Area of Drywell	= 101 sq. ft. / bdrm.
60% Increase for G.D. & Washer	= 162 sq. ft. / bdrm.
3 Bdrm residence with increase	= 486 sq. ft.

For the proposed 3-bedroom house, with a garbage disposal and washing machine, the system should have a total minimum sidewall and bottom percolation area of 486 square feet. The new drywell shall be 11-feet square and 9-feet deep (three rings), for a total percolation area of 517 square feet.

The top of the new drywell shall be placed at a 2-foot depth below the existing building pad grade. Excavations on the order of 12 to 14 feet will be necessary to install the drywell. The sidewalls of the excavation will be highly unstable, and the excavation should not be entered until the pit sidewalls are shored with the concrete rings and gravel.

Due to the fast percolation rate, six inches of washed concrete sand shall be placed in the bottom of the excavation. The sand shall have no more than 5% passing the no. 200 sieve size. The bottom concrete ring shall be firmly bedded in the sand.

All piping shall consist of SCH 40 PVC, except the perforated vertical pipe in the drywell may consist of SDR 35. The SCH 40 pipe is required, as lateral movement of the filled material, resulting in higher than normal stresses on the pipe, are anticipated. All pipe fittings shall be glued with the appropriate cement.

The rock shall be between 1" and 2.5" in size. The rock shall be placed around the outside of the perforated concrete rings. The rock shall extend to a minimum of 2" above the inlet pipe.

The septic tank shall be a minimum of 1,250 gallons. The tank and piping network shall be bearing on firm, native ground, or on compacted structural fill. The sewer pipe from the residence to the tank, and from the tank to the drywell, shall slope at a 2% minimum grade.

Periodic inspections of the drywell installation are required by personnel of Hildenbrandt & Associates, Inc. The inspections should be performed after the excavation is complete, after the sand, rings and gravel are in place, and final, including site grading. Modifications to the drywell design may be recommended. All inspections will be billed at our normal hourly rate.

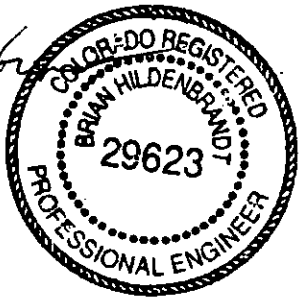
The drywell installation should be performed in accordance with El Paso County Health Department regulations. The minimum setback requirements for the septic tank, and drywell from the residence and the drainage gully shall be maintained. It may be necessary to move the residence slightly to the north. The gully will be rerouted further to the south during placement of an additional 2.5 feet of earth.

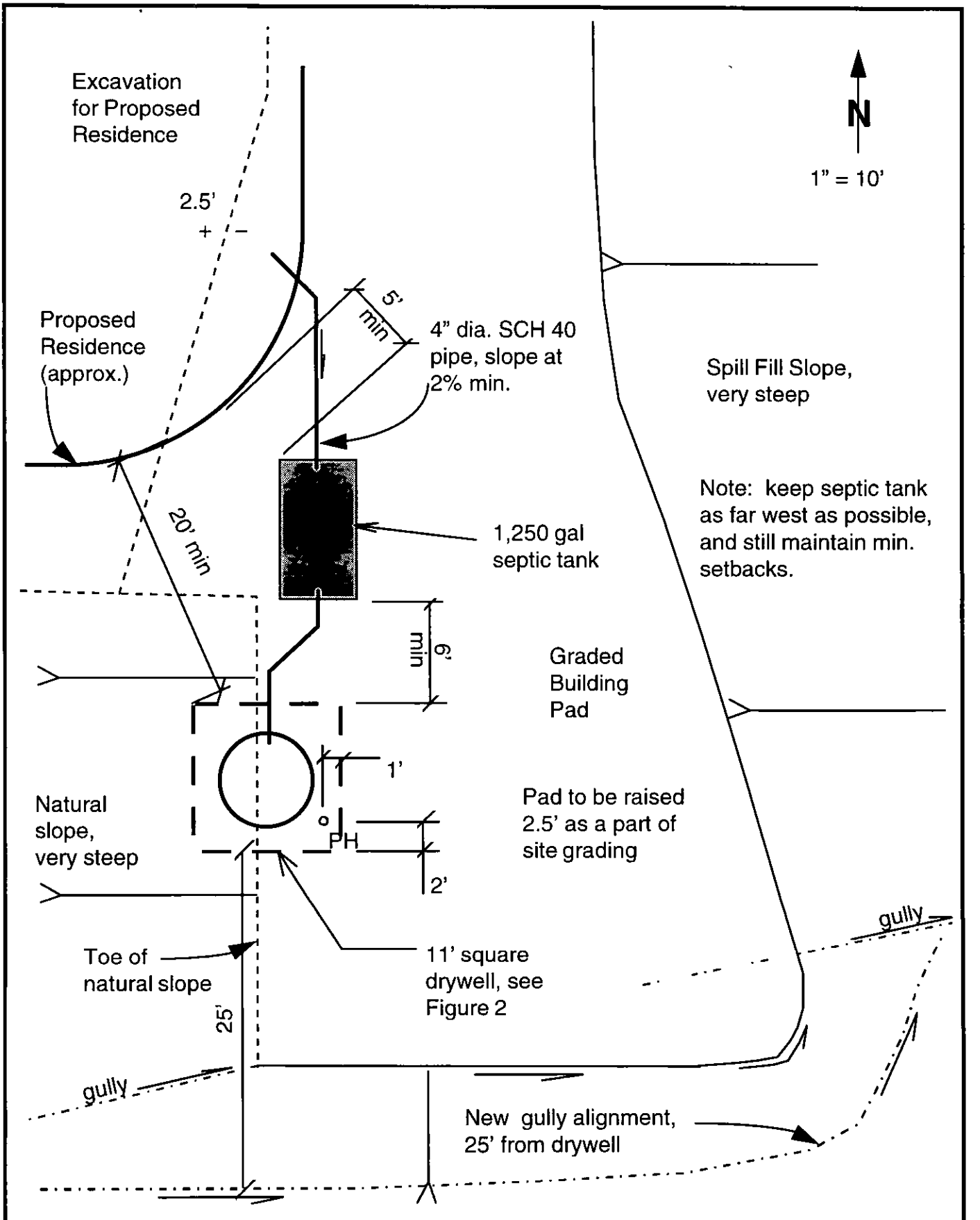
We trust this report has provided you with the information you required. If you have any questions or need additional information, please do not hesitate to contact us.

Respectfully submitted,

HILDENBRANDT & ASSOCIATES, INC.

Brian Hildenbrandt,
P.E. #29623

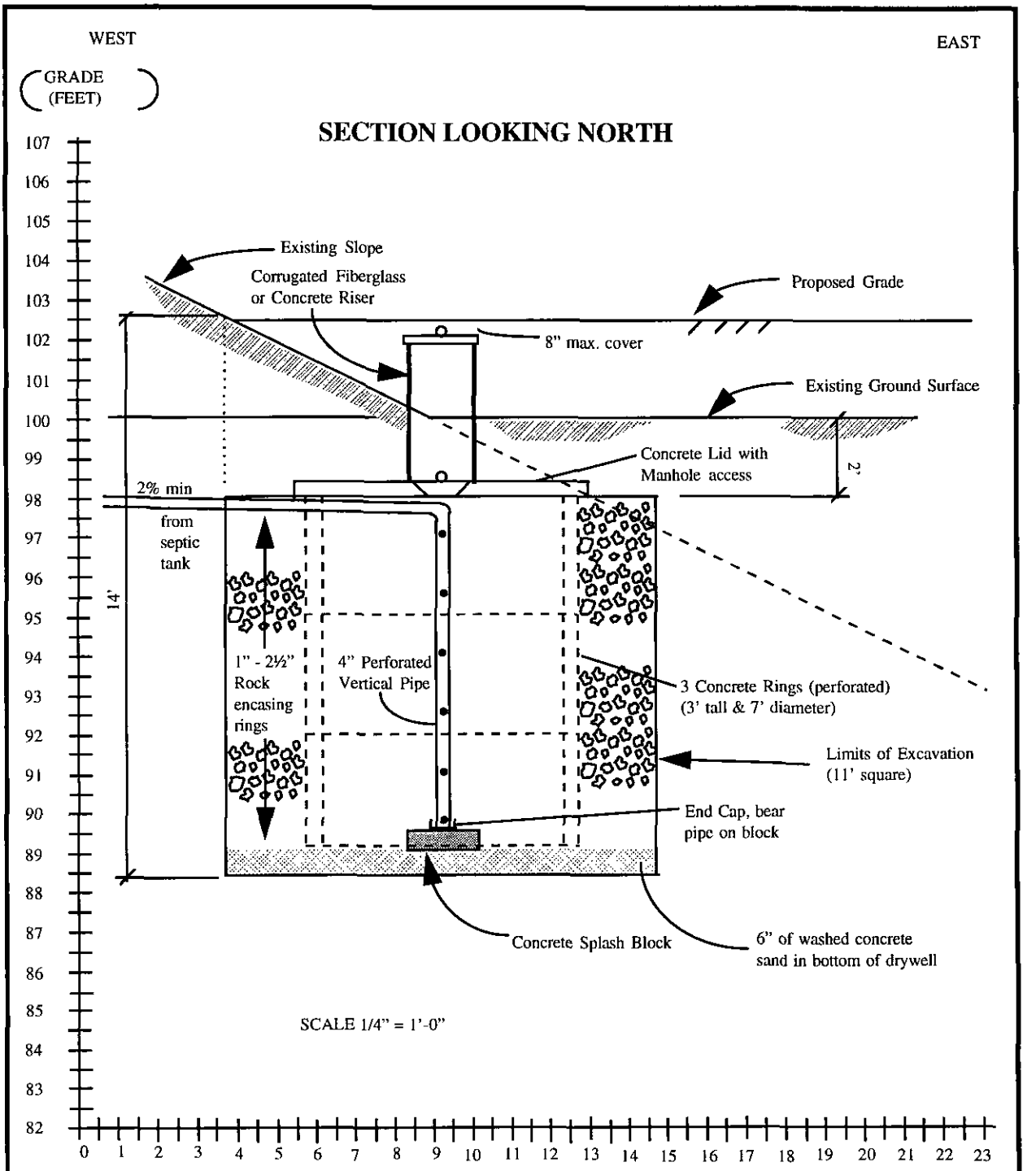




HILDENBRANDT & ASSOCIATES, INC.
5376 Tomah Drive, Suite 113, Colorado Springs, CO

LOCATION PLAN

Project 000108	Figure 1



HILDENBRANDT & ASSOCIATES, INC.	DRYWELL SECTION	
5376 Tomah Drive, Suite 113, Colorado Springs, CO	Project 000108	Figure 2

Hildenbrandt & Associates, Inc.

December 13, 2000 Project 000108

Westwood Building Company
3810 Brushland Ct.
Colorado Springs, CO 80904
Attn.: Mr. Verlyn Rosenthal

Re: Inspection of On-Site Disposal System for a Proposed Residence
1880 Ponder Heights Dr.
Colorado Springs, CO

Reference 1) Our Drywell Design - Proposed 3 bedroom Residence, 1880 Ponder Heights Dr., Project 000108, dated January 24, 2000.

Reference 2) Our Percolation Test, 1880 Ponder Heights Dr., by Hildenbrandt & Associates, Inc., Project 000108, dated January 24, 2000.

Dear Mr. Rosenthal:

As requested, personnel of Hildenbrandt & Associates, Inc. have observed the installation of the septic system for the proposed residence at the referenced site. The purpose of our site visit was to determine if the septic system was installed in accordance with our recommendations. The septic design is outlined in our plan, Reference 1.

The site was visited, and the drywell construction was inspected periodically between September 12 and 25, 2000. The septic system was designed for a 3-bedroom residence, including an automatic washing machine and garbage disposal.

Our first two inspections were to verify the drywell excavation. Material types exposed consisted of shallow occurring sand and gravel fill with underlying decomposed granite. Bedrock was not encountered in the drywell excavation.

The drywell excavation was approximately 15½-feet square and 6-feet in depth (2-rings deep). The excavation is slightly larger than our recommended design due to the fill encountered during the excavating procedures. The top of the drywell is approximately 11-feet below the building pad grade to properly seat the drywell rings into native soils. Modifications to the excavation size and depth will not compromise the integrity of the system.

Components of the drywell were approved on September 17, 2000, including the 2 concrete rings, gravel, geofabric, and the 'tee' junction in the 4-inch vertical pipe above the concrete splash block.

A 1,250 gallon, 2-compartment, concrete tank was installed. All sewer lines were in place consisted of SCH 40 PVC during the inspection. The sewer line from the residence to the septic tank is steeply sloping, with a 2% slope from the septic tank to the drywell. The drywell was completely covered with the septic tank excavated soils during the final site visit. Notably, the system was not designed for vehicular surcharge.

The excavation and the components of the septic system were installed in substantial conformance with our recommendations. Maintenance of the septic tank is critical to the performance of the system. The septic tank should be pumped every other year.

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,

HILDENBRANDT & ASSOCIATES, INC.

Brian Hildenbrandt,
P.E. #29623