

COMMUNITY DEVELOPMENT AGENCY  
ENVIRONMENTAL HEALTH SERVICES

MARIN COUNTY CIVIC CENTER  
3501 CIVIC CENTER DRIVE, ROOM 236, SAN RAFAEL, CA 94903  
(415) 473-6907 FAX: (415) 473-4120  
[www.marincounty.org/ehs](http://www.marincounty.org/ehs)

November 21, 2018

[REDACTED]

RE: Pre-Application Conceptual Design Review for 44 Sylvan Way, Woodacre, CA, APN 172-252-03

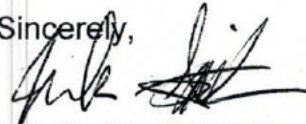
Dear [REDACTED]

This letter is in response to a pre-application for 44 Sylvan Way submitted to Environmental Health Services on November 8, 2016.

The septic system conceptual design presented by Questa Engineering Corporation for a proposed 3-bedroom residence on an existing **vacant lot** *appears feasible* for the above referenced parcel. Based on limited information the concept design consists of a design flow of 315 gallons per day. The proposed wastewater treatment consists of a 1200 gallon septic tank and AdvanTex textile filter, a 1500 gallon recirculation tank, followed by a sump pump chamber. The proposed disposal system is a 200% drip field (788 sq. ft.). This is based on an assumed wastewater application rate of 0.8 gpd/sq.ft. (this is assumed from soil morphology site conditions). 12 inches of cover is required for a drip field on 48 to 55 % slopes. Please note that a percolation test with holes at 12 and 24 inches is required for this design. Another proposed disposal field option is for a pressure dosed field that is 25 lineal feet with 60 inch trench depth and 37 lineal feet with 53 inch trench depth, with 24 inches of cover, preceded by a textile filter.

This letter is **not an approval** for any type of septic system on the above referenced parcel. You may contact me at (415) 473-6907 for discussion and assistance in this matter.

Sincerely,



Jock Smith, R.E.H.S.

cc: Paul Pospisil, Questa Engineering Corporation





October 27, 2016

Mr. Jock Smith; Senior REHS  
County of Marin  
Environmental Health Services  
3501 Civic Center Drive, Rm. 236  
San Rafael, CA 94903

**Subject:** 44 Sylvan Way, Woodacre, California; APN 172-252-03

Dear Mr. Smith:

This letter report is for the proposed conceptual wastewater disposal design for a property at 44 Sylvan Way in Woodacre. Questa Engineering previously performed a site review (percolation testing and soil profiles), with observation from Marin County Environmental Health Services (MCEHS), in April 2001 and proposed a conceptual design to MCEHS with a report dated May 24, 2001 (attached). The 2001 report concluded that, based on the six passing percolation rates with an average of 4.4 minutes per inch, suitable soil and weathered sandstone to 96 inches with no obvious signs of slope instability, and proper setbacks from the seasonal drainage and property lines, that the property was suitable for a pressure dosed leachfield. On May 18, 2001, Questa met with Ernesto Jacobo, REHS, from MCEHS and reviewed the conceptual design proposal. Mr. Jacobo agreed that it appeared feasible. There is likely a record in the County file of this meeting and conclusion.

Since that time, the owner had a detailed topographic survey performed (attached) that accurately locates the drainage that exists on the property; consequently, we are providing a revised conceptual design for your review and are requesting a written response as to whether the revised conceptual design appears feasible. A copy of the previous report is attached with the soil profile descriptions and percolation test results. We conducted a recent site investigation to confirm that site conditions have not changed since the original test work.

Following are the revised design calculations for a sub-surface drip disposal system and a second option of a pressure distribution trench system. Attached are revised site plans, one showing the proposed drip system and the other showing a leachfield option and how they meet the 75-foot setback to the seasonal drainage. The proposed disposal fields are located in the same location as the 2001 percolation testing and soil profiles. Note that the percolation tests in 2001 were performed at 48- and 60- inch depths. In one option we are proposing a shallow subsurface drip disposal system using a wastewater application rate of 0.8 gpd /sq. ft.; this rate assumes a percolation rate of less than 10 minutes per inch (MPI). The surface soils consist of sandy loams and this soil type in Marin typically yields a percolation rate of less than 10 MPI. Consequently we understand your opinion regarding the drip field will be contingent on performing additional shallow percolation testing to confirm a percolation rate between 1 MPI and 10 MPI.



KAY | PAUL. FAX  
44 SYLVAN.



May 24, 2001

RECEIVED  
MAY 29 2001  
Environmental Health



Subject: Septic System Suitability Evaluation for Property at 44 Sylvan Way, Woodacre, California APN# 172-252-03

Dear

This letter presents the results of the site investigation for on-site wastewater disposal conducted by Questa Engineering on February 1, April 24 and 26, 2001 at the subject property. The lot is currently undeveloped. The purpose of the investigation was to determine the most suitable area and design for a leachfield to serve a new four-bedroom residence and to gain conceptual approval from Marin County Environmental Health Services for the proposed septic system.

The site investigation included soil profile inspection, groundwater determination and percolation testing within the parcel. Based on the site investigation we recommend that the septic system be located along the western section of the lot in an area 70-feet long by 40-feet wide (see **Figure 1**). The proposed design would incorporate pressure-dosed leaching trenches. The test results and design recommendations are as follows.

### PROJECT SITE

The slopes on the lot are greater than 60 percent. The property is accessible from Sylvan and Conifer Way. The section of the parcel, 75 feet from the ephemeral watercourse and 50 feet from the intermittent drainage and southeastern property line, is the area which has suitable soils and percolation rates (**Note:** Marin County Regulations require 75-foot leachfield setback from a ephemeral watercourse and 50-foot setback from intermittent drainage).

### SOIL CONDITIONS

Two soil profile pits were excavated by hand on April 24, 2001, in order to observe soil conditions. The soil profile pits, T-1 and T-2, were excavated to a depth of 96 inches. The soils consisted of organic rich sandy loam topsoils to approximately 24 inches, underlain by sandy loam with extremely weathered sandstone to 96 inches. The soils in both profile trenches exhibit suitable depth and texture for sewage disposal in a pressure-dosed leachfield system. Brief descriptions of the soil profiles are as follows:

May 24, 2001

### ***Soil Profile Trench T-1***

- 0 - 24" Sandy loam, dark brown;
- 24"-72" Sandy loam, reddish-brown, with highly weathered sandstone;
- 72"-96" Sandy loam, with increasing weathered sandstone and an increase in density.

### ***Soil Profile Trench T-2***

- 0 - 23" Sandy loam, dark brown;
- 23"-76" Sandy loam, reddish-brown, with highly weathered sandstone;
- 76"-96" Sandy loam, with increasing weathered sandstone and an increase in density.

## **GROUNDWATER**

Both trenches excavated on April 24, 2001 and observed by the County, showed little evidence of seasonal saturation or perched groundwater. Faint mottling was noted at approximately 56 inches which is probably due to vertical drainage of surface waters which slow at the approach of the slightly denser soil horizon. On February 1, 2000, during the wet weather season, a five-foot hole was hand augured in the leachfield area and no ground water was encountered. The presence of highly permeable soil to 96 inches and lack of an impermeable horizon precludes the use of a curtain drain. Also, the proposed residence will be upslope of the proposed leachfield and will divert any surface waters. We observed no evidence of groundwater and do not believe groundwater will effect the leachfield and surrounding area. We do recommend that some type of sub-drain be installed with construction of the house, which may be incorporated with a retaining wall or house foundation, that will divert upslope drainage.

## **SLOPE STABILITY**

Due to the steep slope (>20%), slope stability issues need to be addressed for septic system feasibility. According to the California State Department of Conservation "*Interpretation of Relative Stability of Slopes Map for the San Geronimo Valley Area*", the subject property is located partially in Zone 1 and a Zone 3 areas. On this 4-value scale, slopes in Zone 1 are the most stable and includes resistant rock that has been exposed or is covered only by shallow colluvium or soils. Zone 3 areas are considered to have overall relatively stable positions with local variations. From the California State Department of Conservation "*Geologic Map of San Geronimo Valley Area*" the project site is within Cretaceous Sandstone. The sandstone is generally strong and, therefore, competent in stability.



May 24, 2001

## PERCOLATION TEST RESULTS

Six percolation tests were performed in the proposed leachfield area at depths of 48 inches and 60 inches on April 26, 2001. The results are presented in **Table 1**. The tests showed a range from 1.8 to 8.6 minutes per inch (MPI), with an average rate of 4.4 MPI.

## SUITABILITY AND RECOMMENDATIONS

Based on the soil and percolation test results the proposed area has suitable conditions for an on-site sewage disposal system. The best design for the site appears to be a pressure-dosed trench system, based upon the Marin County Regulations. Features of system design include the following:

- 1,200-gallon septic tank and 750-gallon pump chamber, both 50 feet from the southeastern property line, and associated controls to pump septic tank effluent to the leaching trenches;
- Pressure-dosed leaching trenches consisting of 134 lineal feet of leachline (dual 67-foot systems) with an overall depth of 60 inches and a width of 18 inches. Sizing of the leachfield is based on the sidewall area of the trenches (33-inch depth, two sides). The trenches will have 36 inches of drain rock. The distribution piping is placed in the upper three inches of the drain rock. Twenty-four inches of native backfill covers the drain rock.
- Installation of water conservation plumbing fixtures, i.e., 1.6-gallon flush toilet and low-flow shower heads, will be required.

## DESIGN ANALYSIS

The following are the preliminary design calculations used to establish the sizing of the proposed septic system. The sizing is for a four-bedroom residence.

- Design flow: based on 150 gpd/bedroom; four-bedroom house with 30-percent reduction for low-flow fixtures = 420 gpd;
- Wastewater application rate, based on average percolation rate of 4.4 MPI = 1.14 gpd/ft<sup>2</sup>;
- Trench depth/width: 60"/18";
- Soil cover depth: 24 inches;

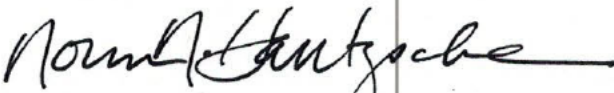
May 24, 2001

- Effective wastewater application area, based on sidewall area of trench =  $2.75 \text{ ft}^2$  per L.F.;
- Wastewater loading per foot of trench:  $(2.75 \text{ ft}^2)(1.14 \text{ ft}^2/\text{L.F.})(2 \text{ sidewalls}) = 6.27 \text{ gpd/L.F.}$ ;
- Required trench length:  $(420 \text{ gpd})/(6.27 \text{ gpd/L.F.}) = 67$  feet for single system; 134 feet for dual system;

In our opinion, the above design recommendation is the best wastewater disposal solution for the property. We have discussed the overall design concept with Marin County Environmental Health Services (Mr. Ernesto Jacobo, R.E.H.S.) on May 18, 2001, who has indicated agreement with our approach. Mr. Ernesto Jacobo was also present for the soil profile and percolation testing. A topographic survey will be required for the exact locations of the house, trenches and tanks.

This conceptual design and our meeting with the County has served to identify and address any potentially critical issues and obtain "conceptual approval" from the County; however, you should be aware that it does not constitute a formal design report and does not include the required engineered plans and drawings. A formal design report with engineered plans and drawings must be submitted to the County for review in order to obtain a building permit for the septic system. If you have any questions, please feel free to contact the undersigned or our Tanya Leffler at (510) 236-6114.

Sincerely,



Norman N. Hantzsche, P.E.  
Principal/Managing Engineer

cc: Ms. Kathy Kurpita  
Mr. Ernesto Jacobo, R.E.H.S.

Ref.: 20094 L2

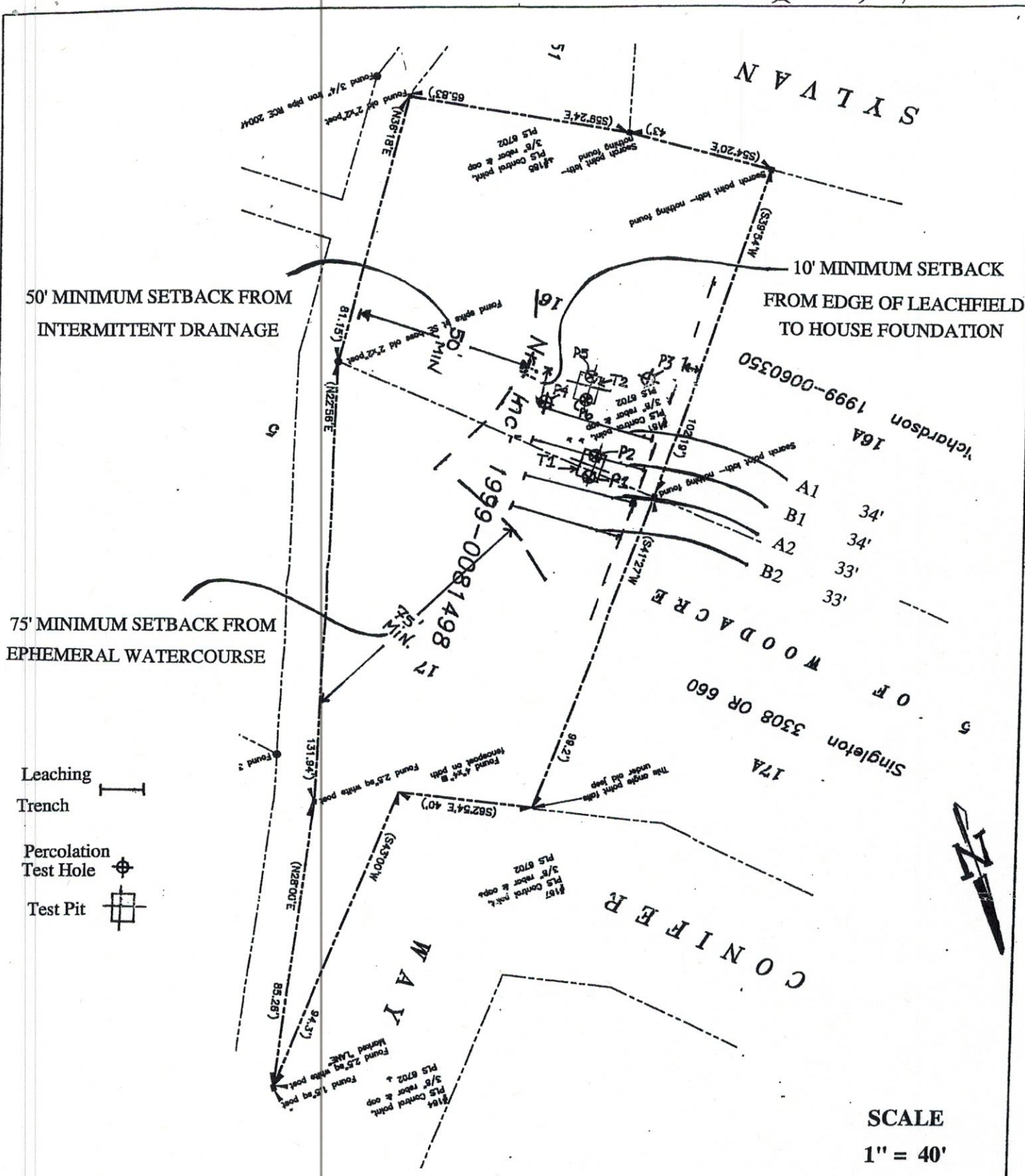
RECEIVED  
MAY 29 2001  
Environmental Health

**Table 1**

**Percolation Test Results**

<i>Test #</i>	<i>Depth (inches)</i>	<i>Adjusted Rate (MPI)</i>
P1	60	4.8
P2	48	8.6
P3	48	4.2
P4	60	5.1
P5	48	1.8
P6	60	2.0
Average Adjusted Rate		4.4 MPI





50' MINIMUM SETBACK FROM  
INTERMITTENT DRAINAGE

10' MINIMUM SETBACK  
FROM EDGE OF LEACHFIELD  
TO HOUSE FOUNDATION

75' MINIMUM SETBACK FROM  
EPHEMERAL WATERCOURSE

- Leaching Trench
- Percolation Test Hole
- Test Pit

SCALE  
1" = 40'

QUESTA ENGINEERING CORPORATION  
1220 BRICKYARD COVE ROAD  
PT. RICHMOND, CA 94807


PRELIMINARY SITE PLAN  
44 SYLVAN WAY  
WOODACRE, CA

FIGURE  
1

Job No: 20094 Appr:

Date: 05/24/01



From: JL Admin1 [mailto:jlengrs@sbcglobal.net]   
Subject: Sylvan Way/ [REDACTED] JLE 2015-089  
Date: December 29, 2015 at 1:24 PM  
To: [REDACTED]

Hello Tony;

In looking through our records we noticed we didn't have a signed copy of our Exhibit A contract, nor our Agreement for Professional Services. We like to have signed contracts for all our jobs in the file.

Would you be so kind as to sign them and return via email? Just the 2 signature pages are fine.

Thank you in advance,

*Paula* at JL Engineering  
1539 Fourth St, San Rafael, CA 94901  
415-457-6647



2015-08-24\_Agreement  
for Profess...ervices.pdf

## J. L. ENGINEERING

PROPOSAL

Exhibit A

CIVIL ENGINEERING - LAND SURVEYING

1539 Fourth St, San Rafael, CA 94901

Ph: (415) 457-6647

Email: [mailto:jlengrs@sbcglobal.net]

Date: August 24, 2015

To: [REDACTED]

Cell: [REDACTED]

Ph: [REDACTED]

Fax: [REDACTED]

Eml: [REDACTED]

Re: 44 Sylvan Way, Woodacre (APN 172-252-03)

JLE# 2015-089

Limit.Topo, Prelim.Bndry - Septic Plans

Subdiv Map:2002-RS-52,5-RM-15,4-RM63

Dear Tony Oei,

In response to your request, we herewith submit our proposal to provide services for the property listed above. **As requested by Paul Pospisil, Questa, a topographic survey is needed to show trees, 2 foot contours and drainages and old percolation pipes if they are still in. We understand your boundary survey was previously filed by Terwilliger and you are planning a house and septic system development.**

The scope of our work and its associated costs are as follows:

**SURVEY PHASE:**

1. **Limited Topographic Survey:** This item of work also includes performing a field survey of the site and preparing a topographic plan of the property addressed above. We will locate and identify on plan form the street frontage features, the surrounding topography of the existing buildings, driveway, garage, parking, yard space, significant trees, impervious roof area and slope. \$4500
2. **Property Boundary Survey- Preliminary "Record of Survey" Map:**
  - A. **Baseline Research:** Review deeds, maps, title reports. This may involve research of easements, agreements, recorded licenses, title conflicts, restrictions, disclosures, or claims.
  - B. **Reconnaissance & Field Study:** Field work to discover monumentation, discrepancies, improvements, potential problems, potential easements, and the need to file or record.
  - C. **Field Survey:** Field survey to establish control lines with recoverable markers, noting conflicts & encroachments, sufficient for setting property corners under a separate contract. \$500

**TOTAL Time & Materials estimated cost** **\$5000**

**Not included in the above proposal are the following:** Title reports, Geotechnical engineering, Structural engineering, Architectural plans, Public and Utility Agency fees and processing, Production blueprinting, nor Agency Fees Unless otherwise stated, no property corners are to be set nor a Record of Survey be filed

Additional services not described in this Proposal will only be provided after a written addendum to the Contract is executed.

**Progress billings submitted are due and payable upon receipt.**

We will commence within 2 week(s) upon receipt of our signed agreement, preliminary title report, and a retainer fee of \$2000. Retainer fee remains on deposit until requested final statement.

Contract termination procedures are set forth in client agreement item 9, page 2. It would be a pleasure assisting you with this project.

Sincerely,

Tony Oei

A handwritten signature in black ink, appearing to read 'Tony Oei', is written over a horizontal line.

Jay L. Hallberg (RCE 30465)  
J.L.Engineering by Deputy, Peter Ring

JLH Engineering, A Professional Service Corporation  
dba JL Engineering