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July 17, 2018 **Job No. 1-216-0670**

Mr. Jeff Hornacek (209) 405-0617 Phone
Yosemite Mountain Builders, Inc. yosemitebuilder@gmail.com Email
7509 Yosemite Park Way
Yosemite National Park, CA 95389

Subject: **GEOTECHNICAL FEASIBILITY LETTER**
"SCENIC WONDERS" DEVELOPMENT
7548 HENNESS RIDGE DRIVE
YOSEMITE WEST, YOSEMITE NP, MARIPOSA COUNTY, CALIFORNIA 95389

Dear Mr. Hornacek:

This Feasibility Letter presents information regarding the geotechnical aspects of planning the development of the proposed "Scenic Wonders" property into a multi-building development. The "Scenic Wonders" Development property is located at 7548 Henness Ridge Drive, in the "Yosemite West" Development, located in Yosemite National Park, Mariposa County, California. The Vicinity Map, Figure 1, attached to the end of this report shows the location of the site. This letter describes the study, findings, and conclusions with respect to project feasibility and planning.

This letter is intended for feasibility and preliminary planning only. It is not intended for project design and construction. SALEM has previously conducted a Preliminary Feasibility Study for On-Site Septic System and conducted an Additional Soil Profile Logs and Percolation Test Results / Addendum #1 (reference file 1-216-0670, dated July 7, 2016, and February 15, 2017, respectively), to investigate the feasibility of constructing on-site septic systems within the subject project. Consequently, a Project Specific Geotechnical Investigation Report will ultimately be required, which should address the specific project features and geotechnical design recommendations.

1.0 PROJECT DESCRIPTION

The project site consists of approximately 7 acres of undeveloped land located south/southeast of the intersection of Henness Ridge Road and Henness Ridge Drive, and has been given an address of 7548 Henness Drive Circle, located within the community of Yosemite West, within the borders of Yosemite National Park, Mariposa County, California. The site is located in a portion of the northeast ¼ of the southeast ¼ of the northwest ¼ of Section 25, Township 3 South, Range 20 East, Mt. Diablo Base Meridian, (see Figure 1). The project site is located within forested, mountainous terrain. Preliminary planning indicates the property will be developed with several cabins/outbuildings, building structures, and single-family residences.

At the time of the preparation of this letter, a Final Site Plan has not yet been developed. However, it is our understanding that the subject site is planned to be developed with a single family residence. The location of the proposed residence will be determined at a later date.

2.0 PREVIOUS INVESTIGATIONS

SALEM has previously conducted a Preliminary Feasibility Study for On-Site Septic System and conducted an Additional Soil Profile Logs and Percolation Test Results/Addendum #1 (reference file 1-216-0670, dated July 7, 2016, and February 15, 2017, respectively), to investigate the feasibility of constructing on-site septic systems within the subject project. A total of twelve (12) Test Pits were excavated with a backhoe for both previous investigations for means of profiling the subsurface stratigraphy and observing bedrock depths, restrictive layers, and the presence of subsurface water. The test pits generally encountered refusal due to slightly weathered granitic bedrock at depths ranging from 3 to a maximum depth of 13 feet below existing grade, at which point the backhoe encountered practical refusal due to competent bedrock. Percolation tests were constructed within test pits at depths indicated in the referenced reports. A representative of Mariposa County who was present on-site during test pit excavation and percolation test set-up, advised that, due to varying depths to bedrock and percolation rates faster than 5 minutes per inch, a pre-treatment system should be used and therefore, shallow percolation testing was recommended.

The previous report concluded it is geotechnically feasible to develop the site with regards to constructing on-site septic systems, given the proposed development is sized accordingly to the available disposal area.

3.0 SURFACE CONDITIONS

The site is generally bounded by sparsely dense rural residential subdivision to the north and west, undeveloped forested land to the east, and a condominium / multi-family development immediately south with additional single family rural residential / vacation rental, and lodging development further south.

At the time of the field reconnaissance, the site consisted primarily of conifer forest and mountain terrain with various rock outcroppings. The general site topography was generally sloping downward in a northeast to southwest direction with elevations varying from 6,125 feet to 6,050 feet above mean sea elevation. The excavated test pits and related percolation testing were conducted in areas that were observed to be generally flat. In addition, as noted on the Site Map and observed in Test Pits TP-6 & TP-8, a drainage course is slightly evident within the central-eastern portion of the site and subsurface water was observed seeping from test-pit sidewalls at depths of 10 feet and 12.5 feet, respectively. Specific recommendations will be presented in the Project Specific Geotechnical Investigation Report.

4.0 SUBSURFACE CONDITIONS

The onsite residual soils were observed to consist primarily of a mixture of silty sands and sands that graded into medium to coarse grained sands of decomposed granite. Based on the site exploration, the residual soil cover ranged between 3 and 13 feet in thickness. The above is a general description of the earth material profile. A more detailed representation of the stratigraphy at the specific exploration locations is provided on the soil profile test pit logs from the referenced previous reports. For reference, the previous test pit logs have been included at the end of this report.

The proposed site is located in a mountainous terrain in the Yosemite West area within Yosemite National Park. Bedrock underlying the site is mapped as Mesozoic granite, quartz monzonite granodiorite, and quartz diorite (grMz).

GROUNDWATER CONDITIONS

Evidence of groundwater and seasonal high groundwater (mottling, gleying, etc.) was generally not encountered within the depth of exploration, 10 feet bgs. However, subsurface water runoff can be attributed to seasonal rainfall, snowmelt, etc. During our investigation on June 16th and 17th, 2016, Test Pits TP-6 & TP-8 were observed to contain a small amount of subsurface water seeping from the pit sidewalls at depths of 10 feet and 12.5 feet, respectively, from adjacent surround grade surface. It is assumed this subsurface water can be attributed to seasonal rainfall, snowmelt, etc. During our investigation on December 22nd and 23rd, 2016, subsurface water was not encountered. The surrounding area should be further investigated if subsurface water is encountered.

5.0 FEASIBILITY OF DEVELOPMENT

Based on the soil/rock conditions encountered, the site is considered feasible for single family residential construction. When the precise location of the proposed residences are known, SALEM should be contacted to provide a design level geotechnical engineering investigation.

At a minimum, the primary geotechnical concerns to be addressed by future design geotechnical reports include the following:

Potential for perched water conditions and requirements for subdrains;

Minimum allowable bearing capacity and embedment depth for proposed building foundations;

Preparation of subgrade soils below proposed foundations, slabs on grade, etc.;

Seismic Design Parameters;

Evaluation of on-site soils expansion potential and mitigation measures as needed for foundations and slabs on grade;

Minimum foundation setback requirements to adjacent slopes;

Recommendations for site retaining walls; and

Recommendations for positive venting below raised wood floor foundations;

8.0 LIMITATIONS AND CHANGED CONDITIONS

This letter is intended for feasibility and preliminary planning only. It is not intended for project design and construction. Consequently, a Project Specific Geotechnical Investigation Report will ultimately be required, which will address the specific project features and geotechnical design recommendations.

The analyses and recommendations submitted in this letter are based upon the data obtained from the test pits previously excavated at the approximate locations shown on the Site Plan, Figure 1. The report does not reflect variations which may occur between test pits. The nature and extent of such variations may not

become evident until final site plans have been developed and a Project Specific Geotechnical Investigation is initiated.

SALEM appreciates the opportunity to provide geotechnical engineering services to during the feasibility and planning phase of the project. If there are any questions concerning the information presented in this letter/report, please contact this office at your convenience. The feasibility letter has been prepared in accordance with generally accepted geotechnical engineering practices in the area. No other warranties, either express or implied, are made as to the professional advice provided under the terms of our agreement and included in this report. If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (559) 271-9700.

Respectfully submitted,

SALEM Engineering Group, Inc.

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Geotechnical Project Engineer
Central / Northern California

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CEG 2613

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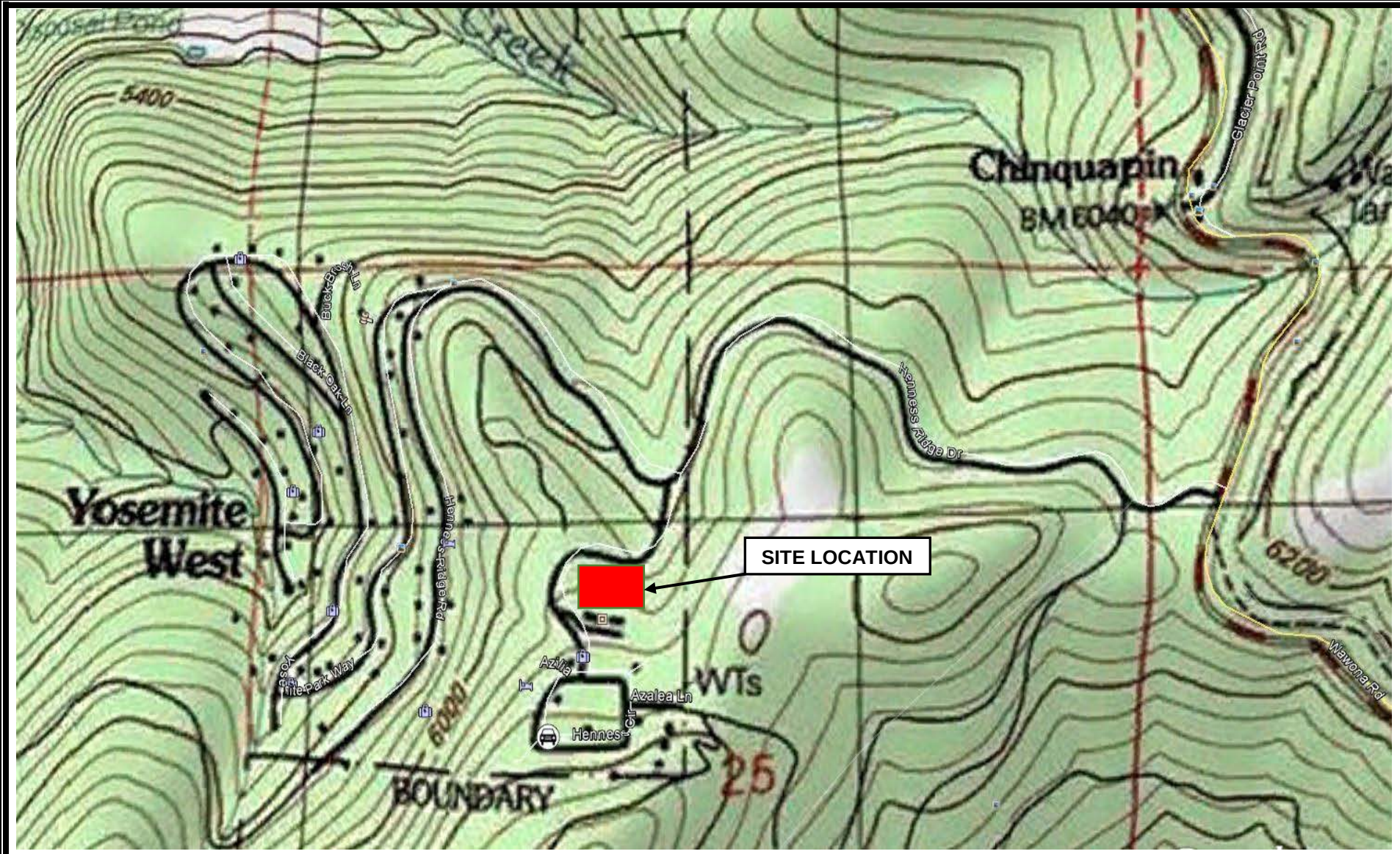
STATE OF CALIFORNIA

Attachments: Figure 1, Vicinity Map
Figure 2, Site Plan
Test Pit Logs from Previous Investigations



Source Image: U.S. Geological Survey, EL Capitan, Calif. 7.5' Quadrangle.

VICINITY MAP **PRELIMINARY ON-SITE SEPTIC FEASIBILITY STUDY** **Proposed Scenic Wonders** **7548 Henness Circle** **Yosemite West, California 95389**	SCALE: NOT TO SCALE DRAWN BY: SR PROJECT NO. 1-216-0670	DATE: 07/2016 APPROVED BY: SR FIGURE NO. 1

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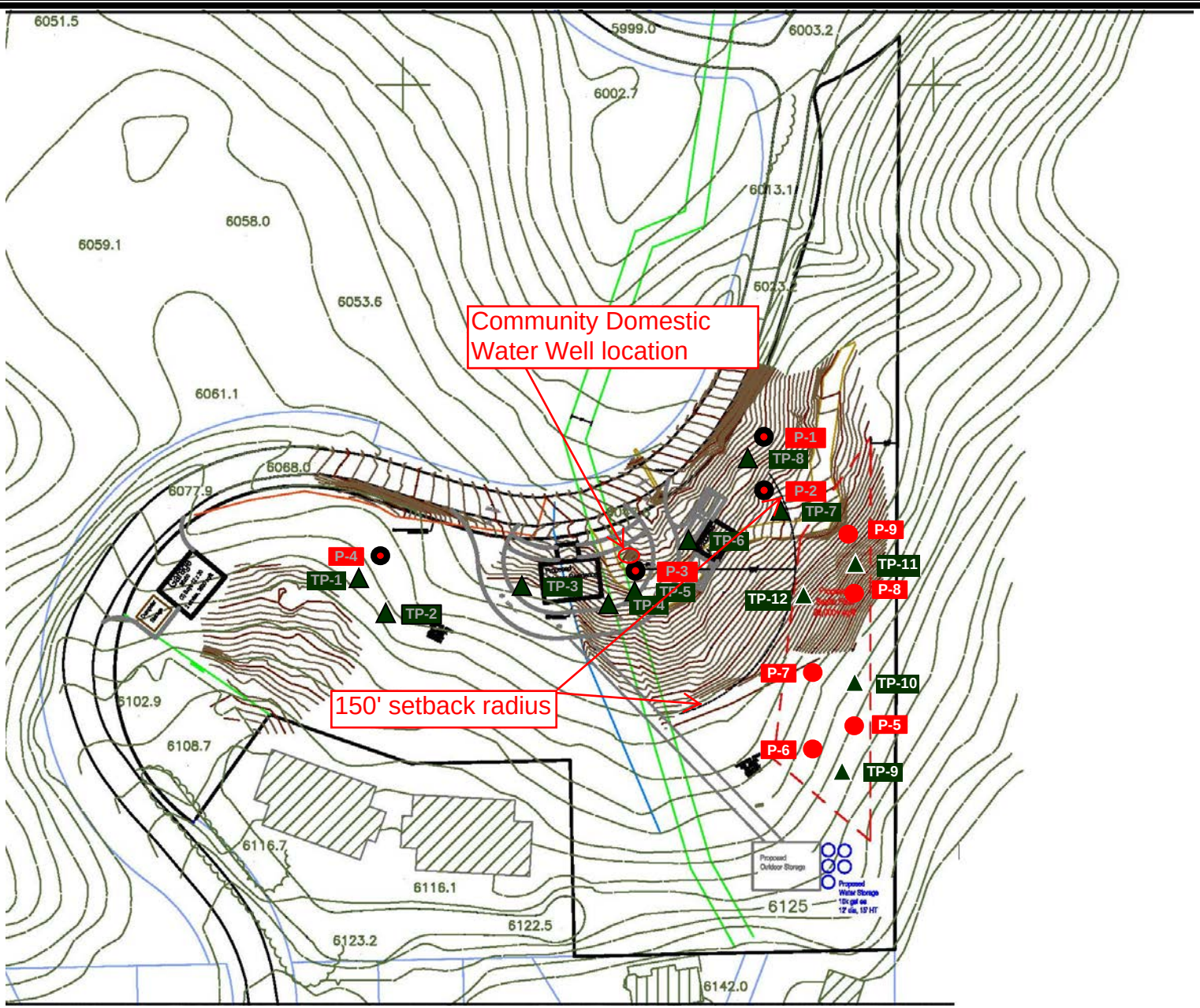

SITE PLAN

PRELIMINARY ON-SITE SEPTIC FEASIBILITY STUDY
Addendum #1
Proposed "Scenic Wonders"
7548 Henness Circle
Yosemite West, California 95389

SCALE:	DATE:
NOT TO SCALE	02/2017
DRAWN BY:	APPROVED BY:
AW	SR
PROJECT NO.	FIGURE NO.
1-216-0670	2

LEGEND:

- TP-9 — Soil Profile Pit Location
- P-5 — Percolation Location
- TP-1 — Prev. Soil Profile Pit Loc.
- P-1 — Previous Perc. Loc.

All Locations Approximate

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Test Pit No. TP-1

Project: Proposed Scenic Wonders On-Site Septic System
Client: Yosemite Mountain Builders Inc.
Location: 7548 Henness Circle, Yosemite, CA 95389
Grnd. Surf. Elev. (Ft. MSL) N/A

Depth to Water>

Project No: 1-216-0670
Figure No.: A-1
Logged By: JRM
Initial: None
At Completion: None

SUBSURFACE PROFILE			SAMPLE						
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Dark brown; moist; medium to fine-grained; organics (forest humus & roots). Without organics.							
		Refusal @ 4 Feet Due to Slightly Weathered Granite.							
5									
10									

Excavation Method: Backhoe Excavator
Excavation Date: 6/16/2016
Equipment: Extend-A-Hoe
Pit Size:
Operator: Client
Sheet: 1 of 1

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Test Pit No. TP-2

Project: Proposed Scenic Wonders On-Site Septic System
Client: Yosemite Mountain Builders Inc.
Location: 7548 Henness Circle, Yosemite, CA 95389
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 1-216-0670
Figure No.: A-2
Logged By: JRM
Initial: None
Depth to Water>
At Completion: None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Dark brown; moist; medium to fine-grained; with organics (forest humus & roots).							
		Without organics.	--	--	BB		--		
5		**Decomposed Granite (DG)** Brown with orange hue; moist; highly weathered; grades to medium to fine-grained sands.	--	--	BB		--		
10		Decreased weathering; grades to coarse to medium with fine sands.							
		Refusal @ 11 Feet Due to Slightly Weathered Granite.							
15									

Excavation Method: Backhoe Excavator
Excavation Date: 6/16/2016
Equipment: Extend-A-Hoe
Pit Size:
Operator: Client
Sheet: 1 of 1

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Test Pit No. TP-3

Project: Proposed Scenic Wonders On-Site Septic System
Client: Yosemite Mountain Builders Inc.
Location: 7548 Henness Circle, Yosemite, CA 95389
Grnd. Surf. Elev. (Ft. MSL) N/A

Depth to Water>

Project No: 1-216-0670
Figure No.: A-3
Logged By: JRM
Initial: None
At Completion: None

SUBSURFACE PROFILE			SAMPLE						
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Dark brown; moist; medium to fine-grained; with organics (forest humus & roots).							
		Without organics.							
		Refusal @ 3 Feet Due to Slightly Weathered Granite.							
5									
10									

Excavation Method: Backhoe Excavator
Equipment: Extend-A-Hoe
Operator: Client

Excavation Date: 6/16/2016
Pit Size:
Sheet: 1 of 1

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Test Pit No. TP-4

Project: Proposed Scenic Wonders On-Site Septic System
Client: Yosemite Mountain Builders Inc.
Location: 7548 Henness Circle, Yosemite, CA 95389
Grnd. Surf. Elev. (Ft. MSL) N/A

Depth to Water>

Project No: 1-216-0670
Figure No.: A-4
Logged By: JRM
Initial: None
At Completion: None

SUBSURFACE PROFILE			SAMPLE						
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Dark brown; moist; medium to fine-grained; with organics (forest humus & roots). Without organics.							
		Refusal @ 4 Feet Due to Slightly Weathered Granite.							
5									
10									

Excavation Method: Backhoe Excavator
Excavation Date: 6/16/2016
Equipment: Extend-A-Hoe
Pit Size:
Operator: Client
Sheet: 1 of 1

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Test Pit No. TP-5

Project: Proposed Scenic Wonders On-Site Septic System
Client: Yosemite Mountain Builders Inc.
Location: 7548 Henness Circle, Yosemite, CA 95389
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 1-216-0670
Figure No.: A-5
Logged By: JRM
Initial: None
Depth to Water>
At Completion: None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Brown; moist; medium to fine-grained; with organics (forest humus & roots).							
		Without organics at 1-foot depth.	--	--	BB		--		
5		Grades as above; brown with orange hue; with some heavily weathered granite cobbles; coarse to fine-grained.	--	--	BB		--		
		Decomposed GRANITE (DG) Brown with orange hue; moist; coarse to fine-grained; moderately weathered.							
10			--	--	BB		--		
		Refusal @ 10.5 Feet Due to Slightly Weathered Granite.							
15									

Excavation Method: Backhoe Excavator
Excavation Date: 6/16/2016
Equipment: Extend-A-Hoe
Pit Size:
Operator: Client
Sheet: 1 of 1

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Test Pit No. TP-6

Project: Proposed Scenic Wonders On-Site Septic System
Client: Yosemite Mountain Builders Inc.
Location: 7548 Henness Circle, Yosemite, CA 95389
Grnd. Surf. Elev. (Ft. MSL) N/A

Depth to Water>

Project No: 1-216-0670
Figure No.: A-6
Logged By: JRM
Initial: 10 Feet
At Completion: 10 Feet

SUBSURFACE PROFILE			SAMPLE						
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Brown; moist; medium to fine-grained; with organics (forest humus & roots).							
		Without organics at a depth of 1-foot.	--	--	BB		--		
5		**Decomposed Granite (DG)** Brown with orange hue; moist; moderately weathered; grades to coarse to fine-grained sands.							
10		Grades as above; water seeping from pit sidewall assumed to be associated with seasonal drainage.							
		Refusal @ 10.5 Feet Due to Slightly Weathered Granite.							
15									

Excavation Method: Backhoe Excavator
Excavation Date: 6/16/2016
Equipment: Extend-A-Hoe
Pit Size:
Operator: Client
Sheet: 1 of 1

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Test Pit No. TP-7

Project: Proposed Scenic Wonders On-Site Septic System
Client: Yosemite Mountain Builders Inc.
Location: 7548 Henness Circle, Yosemite, CA 95389
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 1-216-0670
Figure No.: A-7
Logged By: JRM
Initial: None
Depth to Water>
At Completion: None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Brown; moist; medium to fine-grained; with organics (forest humus & roots).							
		Without organics at a depth of 1-foot.	--	--	BB		--		
5		**SAND (SP)** Brown with orange hue; moist; coarse to fine-grained.	--	--	BB		--		
10		**Decomposed Granite (DG)** Brown with orange hue; moist; highly weathered; grades to coarse to fine-grained Grades as above.	--	--	BB		--		
		Refusal @ 13 Feet Due to Slightly Weathered Granite.							
15									

Excavation Method: Backhoe Excavator
Excavation Date: 6/16/2016
Equipment: Extend-A-Hoe
Pit Size:
Operator: Client
Sheet: 1 of 1

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Test Pit No. TP-8

Project: Proposed Scenic Wonders On-Site Septic System
Client: Yosemite Mountain Builders Inc.
Location: 7548 Henness Circle, Yosemite, CA 95389
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 1-216-0670
Figure No.: A-8
Logged By: JRM
Initial: 12.5
Depth to Water>
At Completion: 12.5

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Brown; moist; medium to fine-grained, with organics (forest humus & roots).							
		Without organics at a depth of 1-foot.	--	--	BB		--		
5		**Decomposed Granite (DG)** Brown; moist; highly weathered; grades to medium to fine-grained sands.	--	--	BB		--		
		With oxidation staining; grades to coarse to medium-grained sands; decreased weathering.							
10		Grades as above; water seeping from pit sidewall assumed to be associated with seasonal drainage.	--	--	BB		--		
		Refusal @ 12 Feet Due to Slightly Weathered Granite.							
15									

Excavation Method: Backhoe Excavator
Excavation Date: 6/16/2016
Equipment: Extend-A-Hoe
Pit Size:
Operator: Client
Sheet: 1 of 1

SALEM

Test Pit No. TP-9

Project: Scenic Wonders On-Site Septic System
Client: Yosemite Mountain Builders Inc.
Location: S. of Henness Ridge Drive & Henness Circle, Yosemite West, CA
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 1-216-0670
Figure No.: A-9
Logged By: JRM/JH
Initial: None
At Completion: None
Depth to Water>

SUBSURFACE PROFILE			SAMPLE						
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Brown; moist; medium to fine-grained.							
5		**SAND with Silt (SP-SM)** Brown; moist; medium to fine-grained.							
		Refusal @ 8 Feet Due to Bedrock							
10									

Excavation Method: 24 Inches Excavator Bucket
Excavation Date: 12/22/2016
Equipment: JCB eco
Pit Size: 2' x 8' x 8'
Operator:
Sheet: 1 of 1

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Test Pit No. TP-10

Project: Scenic Wonders On-Site Septic System
Client: Yosemite Mountain Builders Inc.
Location: S. of Henness Ridge Drive & Henness Circle, Yosemite West, CA
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 1-216-0670
Figure No.: A-10
Logged By: JRM/JH
Initial: None
At Completion: None
Depth to Water>

SUBSURFACE PROFILE			SAMPLE						
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Brown; moist; medium to fine-grained; with some organics.							
5		Refusal @ 4.5 Feet Due to Bedrock							
10									

Excavation Method: 24 Inches Excavator Bucket
Excavation Date: 12/22/2016
Equipment: JCB eco
Pit Size: 2' x 8' x 4.5'
Operator:
Sheet: 1 of 1

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Test Pit No. TP-11

Project: Scenic Wonders On-Site Septic System
Client: Yosemite Mountain Builders Inc.
Location: S. of Henness Ridge Drive & Henness Circle, Yosemite West, CA
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 1-216-0670
Figure No.: A-11
Logged By: JRM/JH
Initial: None
At Completion: None
Depth to Water>

SUBSURFACE PROFILE			SAMPLE						
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Brown; moist; medium to fine-grained; with some organics.							
		Refusal @ 3.5 Feet Due to Bedrock							
5									
10									

Excavation Method: 24 Inches Excavator Bucket
Excavation Date: 12/22/2016
Equipment: JCB eco
Pit Size: 2' x 8' x 3.5'
Operator:
Sheet: 1 of 1

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Test Pit No. TP-12

Project: Scenic Wonders
Client: Yosemite Mountain Builders Inc.
Location: S. of Henness Ridge Drive & Henness Circle, Yosemite West, CA
Grnd. Surf. Elev. (Ft. MSL) N/A

Depth to Water>

Project No: 1-216-0670
Figure No.: A-12
Logged By: JRM/JH
Initial: None
At Completion: None

SUBSURFACE PROFILE			SAMPLE						
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Brown; moist; medium to fine-grained; with some organics.							
5		**SAND with Silt (SP-SM)** Light brown with oxidation; moist; medium to fine-grained.							
10		Refusal @ 10 Feet Due to Bedrock							
15									

Excavation Method: 24 Inches Excavator Bucket
Excavation Date: 12/22/2016
Equipment: JCB eco
Pit Size: 2' x 8' x 10'
Operator:
Sheet: 1 of 1

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