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**MEMORANDUM**

Date: October 12, 2017

To: TRPA Hearings Officer

From: TRPA Staff

Subject: Stringer Land Capability Challenge; 4076 Courchevel Road, Tahoe City, CA, 96145; Placer County, CA; Assessor's Parcel No: 083-430-006; TRPA File No: LCAP2017-0304

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**Proposed Action:** Hearings Officer review and approve the proposed Land Capability Challenge.

**Staff Recommendation:** Staff recommends the TRPA Hearings Officer approve the land capability challenge on the subject parcel. This parcel does not have a prior Land Capability Verification, but based on the 1974 Soil Survey of the Lake Tahoe Basin, this parcel is mapped as 100% Class 3 (TeE, Tallac stony coarse sandy loam, 15 to 30 percent slopes). The soil was determined to be an unmapped soil (XXX) in the Lake Tahoe Basin Soil Survey (1974), with Class 4 Capability, based on slopes. The area of Class 4 is 11,451 sq. ft. (100 percent of parcel).

**Background:** The Soil Conservation Service Soil Survey of Tahoe Basin Area, California-Nevada (Rogers, 1974) places the subject parcel within the TeE, Tallac very stony coarse sandy loam, 15 to 30 percent slopes mapunit. This parcel has a geomorphic mapping of E1 - Depositional lands, moraine lands undifferentiated (Moderate hazard lands). Tallac soils have gravelly coarse sandy loam surface textures. Subsurface textures are gravelly coarse sandy loam and very cobbly sandy loam. A weakly silica-cemented duripan occurs at depths of 40 to 70 inches.

A land capability challenge (LCAP2017-0304) was filed with TRPA on September 15, 2017. Mr. Furumoto of Sagan Design Group is representing the owner, Chris Stringer. A private soil scientist was not retained for this project. TRPA consultant, Mrs. Munnecke visited the site on September 6, 2017. One soil pit was excavated by backhoe, and described by Mrs. Munnecke.

**Findings:** The soil pit was located on the eastern side of the parcel, northwest of the residence. The pit was excavated by backhoe to 60 inches. The soil is characterized by medial sandy loam surface textures over extremely cobbly medial loamy sand, and extremely gravelly medial loamy coarse sand textures in the subsoil. A dense horizon, composed of finer till deposits, is present at 51 inches. This layer is not root restrictive, but is hard and very firm. There are many, distinct, yellow (10YR 7/6), dry redox masses in the matrix. This soil is very deep, well drained, and is a member of Soil Hydrologic Group B. The vegetation is dominated by Jeffrey pine, white fir, greenleaf manzanita, and oceanspray.

The soil described does not meet the range and characteristics of the Tallac soil series as described in the Lake Tahoe Basin Soil Survey (1974), because it lacks a weakly cemented silica hardpan. This is an unmapped soil (XXX) in the Tahoe Basin Soil Survey (1974), and based on slopes, has Class 4 (XXX) Land Capability. This parcel is mapped as 7182, Paige medial sandy loam, 15 to 30 percent slopes in the 2007 Soil Survey of the Tahoe Basin Area, California and Nevada. The Paige soil, and other soils mapped in this area (Kneeridge) are Andisols that developed from tephra or other parent materials which contain a significant amount of volcanic glass. Based on this information, the pit was described as an Andisol. The soil described is similar to the Paige soil, but has >35 percent gravels, and a root-restrictive, till layer was not observed.

The table below summarizes the changes in land capability as concluded by this land capability challenge.

| <b>Land Capability District</b>  | <b>Area (sq. ft.)<br/>1974 soil survey</b> | <b>Area (sq. ft.)<br/>2017 LCC</b> |
|----------------------------------|--------------------------------------------|------------------------------------|
| Class 3 (TeE, 15 to 30 % slopes) | 11,451                                     | 0                                  |
| Class 4 (XXX, 9 to 30 % slopes)  | 0                                          | 11,451                             |
| <b>Total Parcel Area</b>         | <b>11,451</b>                              | <b>11,451</b>                      |

This memorandum was jointly prepared by TRPA consultant, Marchel Munnecke (Pyramid Botanical Consultants) and TRPA Senior Planner, Shannon Friedman. If you have questions on this Hearings Officer item, please contact Shannon Friedman, 775-589-5205, [sfriedman@trpa.org](mailto:sfriedman@trpa.org).

### BAILEY LAND CAPABILITY CHALLENGE FINDINGS

| <b>Site Information</b>                 |                                         |
|-----------------------------------------|-----------------------------------------|
| <b>Assessor's Parcel Numbers: (APN)</b> | 083-430-006                             |
| <b>TRPA File No. / Submittal Date:</b>  | LCAP2017-0304 / 9/15/2017               |
| <b>Owner or Applicant:</b>              | Chris Stringer                          |
| <b>Address:</b>                         | 20100 Skyline Blvd., Woodside, CA 94062 |

| <b>Environmental Setting</b>                                                                                    |                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bailey Soil Mapping Unit<sup>1</sup> / Hydrologic Soil Group (HSG) / Land Class / Geomorphic Hazard Unit</b> | TeE, Tallac very stony coarse sandy loam, 15 to 30 percent slopes/ HSG B/ E1, Depositional Lands; moraine lands undifferentiated (Moderate hazard lands). |
| <b>Soil Parent Material</b>                                                                                     | Colluvium over till                                                                                                                                       |
| <b>Slopes and Aspect</b>                                                                                        | 22 to 28 percent; sloping to south southeast                                                                                                              |
| <b>Elevation and Datum</b>                                                                                      | 7044 to 7175                                                                                                                                              |
| <b>Rock Outcrops and Surface Configuration</b>                                                                  | None present                                                                                                                                              |
| <b>SEZ and Hydrology Source</b>                                                                                 | NA                                                                                                                                                        |
| <b>Vegetation</b>                                                                                               | Jeffrey pine, white fir, greenleaf manzanita, and oceanspray.                                                                                             |
| <b>Ground Cover Condition</b>                                                                                   | Good (vegetation 65%, duff/mulch 75% cover)                                                                                                               |
| <b>Site Features</b>                                                                                            | Residence, asphalt/concrete driveway, and deck.                                                                                                           |

| <b>Field Investigation and Procedures</b>                       |                                                                                         |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>Consultant and Address</b>                                   | Marchel Munnecke (TRPA consultant)<br>Post Office Box 1015; Twin Bridges, CA 95735-1015 |
| <b>TRPA Staff Field Dates</b>                                   | September 6 <sup>th</sup> 2017                                                          |
| <b>SEZ Mapping / NRCS Hydric Soil</b>                           | None present                                                                            |
| <b>Number of Soil Pits or Auger Holes and Description Depth</b> | 1 pit excavated by backhoe to 60 inches.                                                |
| <b>Additional or Repetitive TRPA Sample Locations</b>           | NA                                                                                      |
| <b>Representative Soil Profile Descriptions</b>                 | Mrs. Munnecke's soil profile descriptions- attached                                     |
| <b>Areas Not Examined</b>                                       | Residence, asphalt/concrete driveway, and deck.                                         |

| <b>TRPA Findings</b>                                       |                                                                                                                        |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>2006 Soil Survey Map Unit</b>                           | 7182, Paige medial sandy loam, 15 to 30 percent slopes                                                                 |
| <b>Consultant Soil Mapping Determination and Rationale</b> | Pit 1- Class 4, XXX. The soil is dissimilar to the Tallac soil because it lacks a weakly silica cemented hardpan. This |

<sup>1</sup> TRPA currently relies upon the Soil Survey of Tahoe Basin, California-Nevada (Rogers and Soil Conservation Service, 1974), which the Bailey Land Capability system is predicated upon.

|                            |                                                                                                                                                                                                                                                                                    |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | soil is similar to the Paige soils mapped in this area in 2007 Soil Survey of the Lake Tahoe Basin Area, California and Nevada. However, it is dissimilar to the Paige soil, because a root-restrictive, dense till layer was not observed, and this soil has higher rock content. |
| <b>Slope Determination</b> | 22 to 28 percent slopes                                                                                                                                                                                                                                                            |
| <b>TRPA Conclusion(s)</b>  | TRPA concurs with consultants' determination and rationale above.                                                                                                                                                                                                                  |
| <b>Applicable Area</b>     | Entire parcel                                                                                                                                                                                                                                                                      |

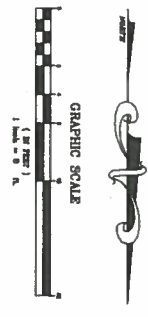
Attachments:

- A. Parcel map
- B. Mrs. Munnecke's soil profile description (1 pit)

Attachment A

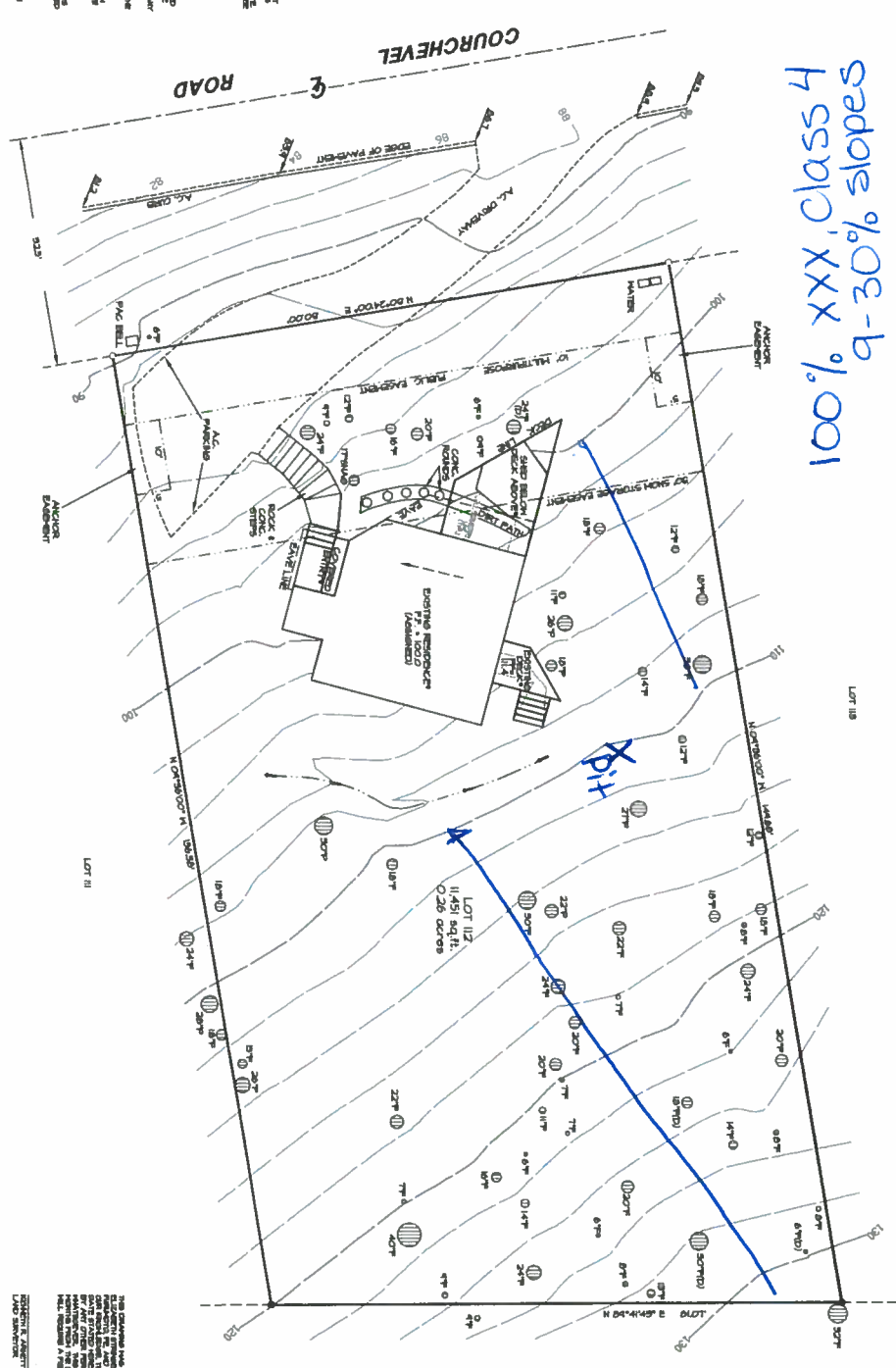
Parcel map



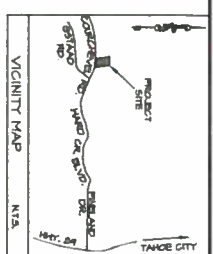


**TITLE NOTES:**  
 THIS SURVEY IS BASED ON THE FINAL, RECORDED, METRIC MAP OF ALPINE PEAKS NO. 1, LOT 112, PLACER COUNTY, CALIFORNIA, FILED FOR RECORDATION ON 08/20/2013 AT 11:53:00 AM. THE FOLLOWING ELEVATIONS AFFECT THE PARCELS:  
 1. THE ELEVATION OF THE SURFACE OF THE EARTH SHALL BE THE MEAN SEA LEVEL AS DETERMINED BY THE NATIONAL TIDE GAUGE NETWORK OPERATED BY THE NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE, AND THE NATIONAL WATER RESEARCH INSTITUTE, FORTH LEE, FLORIDA. THE MEAN SEA LEVEL SHALL BE THE MEAN SEA LEVEL AS DETERMINED BY THE NATIONAL TIDE GAUGE NETWORK OPERATED BY THE NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE, AND THE NATIONAL WATER RESEARCH INSTITUTE, FORTH LEE, FLORIDA.

100% XXX, Class 4  
 9-30% slopes



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**SCOURAGE CALCULATIONS**  
 LOT AREA = 11,451 SQ. FT.  
 IMPERVIOUS COVERAGE = 5,400 SQ. FT.  
 PERCENT IMPERVIOUS COVERAGE = 47.2%

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**ARMER & ASSOCIATES, INC.**  
 2007 THREE OAK BLVD. SUITE 200, SACRAMENTO, CA 95834  
 (916) 441-1111 FAX (916) 441-1112  
 www.armer.com

**IMPERVIOUS COVERAGE SURVEY**  
 LOT 112 ALPINE PEAKS NO. 1  
 APN 083-430-006 PLACER COUNTY, CALIFORNIA  
 OWNER: CHRISTOPHER & ELIZABETH STRINGER 4016  
**AGENDA ITEM NO. V.A.**





Attachment B

Mrs. Munnecke's soil profile description (1 pit)



## Stringer Land Capability Challenge

4076 Courchevel Road,  
Tahoe City, Placer County, CA.

APN 083-430-006, LCAP2016-0304.

### Soil Profile Description

Marchel Munnecke

Field Date: 9-6-2017



**Pit 083-430-006:**

**Soil Classification:** Medial-skeletal, mixed, frigid Humic Vitrixerands

**Soil Series:** XXX

**Drainage Class:** Well Drained

**Hydrologic Group:** B

**Parent Material:** Colluvium and till from andesitic material

**Slope:** 26      **Aspect:** South-southeast

**Description:**

- Oi\* 0 to 0.5 inch; slightly decomposed pine needles.
- A 0.5 to 9 inches; dark greyish brown (10YR 4/2), medial sandy loam, very dark brown (10YR 2/2) moist; moderate fine granular structure; soft, very friable, non-sticky and non-plastic; many very fine to fine and few medium roots; many very fine and fine interstitial pores; 10 percent gravel; gradual smooth boundary.
- AB 9 to 26 inches; brown (10YR 4/3), medial sandy loam, very dark greyish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine to coarse roots; many very fine and fine interstitial pores; 20 percent gravel and 2 percent cobbles; gradual smooth boundary.
- Bw1 26 to 36 inches; yellowish brown (10YR 5/4), extremely cobbly medial loamy sand, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; loose, loose, nonsticky and nonplastic; many fine and common medium roots; many very fine and fine interstitial pores; 45 percent gravel and 30 percent cobbles; gradual wavy boundary.
- Bw2 36 to 51 inches; yellowish brown (10YR 5/4), Extremely gravelly medial loamy coarse sand, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; loose, loose, nonsticky and nonslightly plastic; common fine and few medium and coarse roots; common very fine and fine interstitial pores; 40 percent gravel, 35 percent cobbles, and 2 percent stones; gradual wavy boundary.
- 2Bw3 51 to 60+ inches; light yellowish brown (10YR 6/4), extremely gravelly loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; few very fine to coarse roots; few very fine and dendritic tubular pores; many, distinct, yellow (10YR 7/6) dry, redox masses in the matrix; 65 percent gravel, 5 percent cobbles, and 2 percent stones; gradual wavy boundary.