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STAFF REPORT

Date: October 7, 2021

To: TRPA Hearings Officer

From: TRPA Staff

Subject: RGB Select LLC Land Capability Challenge; 6730 West Lake Boulevard, Placer County, CA; APN 098-180-011; TRPA File Number LCAP2020-0431

Staff Recommendation:

Staff recommends the TRPA Hearings Officer approve this land capability challenge which would replace Class 5 (TcB, 0 to 5% slopes, 16,286 sf.); with Class 1B-Backshore (1,441 sf.), Class 4 (16 to 30% slopes, 6,317 sf.), and Class 6 (0 to 16% slopes, 8,528 sf.). These changes are itemized on the table on Page 3 and depicted on a map included in Attachment C.

Required Motions:

In order to approve the proposed land capability challenge, the Hearings Officer must make the following motions, based on the staff report:

- 1) A motion to approve the required findings, including a finding of no significant effect; and
- 2) A motion to approve the proposed land capability challenge.

Staff recommends that the Hearings Officer take the following actions, based on this staff report.

Background:

The parcel being challenged is currently mapped as Class 5 soil. Although not formally verified, it has some steeper slopes and based on mapping would likely receive a Class 1b (Backshore), Class 3 and Class 1a designations (since the slopes exceed 5 and 15% slopes, respectively). The Soil Conservation Service Soil Survey of Tahoe Basin Area, California-Nevada (Rogers, 1974) identifies the Class 5 soils as Tallac gravelly coarse sandy loam, seeped (TcB, 0 to 5% slopes). This soil type is derived from glacial outwash and other alluvial materials (basic and volcanic mineralogy). The vicinity of the project has a geomorphic mapping of E-2 for Outwash, till and lake deposits (low hazard lands).

A land capability challenge (LCAP2020-0431) was originally filed with TRPA on October 26, 2020 by a prospective buyer; however, the application was temporarily suspended when the sale did not occur. The property owner submitted a new set of authorization signatures on April 15, 2021, which re-activated the application. The subject parcel has a surveyed size of 16,351 square feet (excludes land below Lake Tahoe high water line). The subject parcel contains a driveway that connects through a separate parcel to West Lake Boulevard. The property includes three structures -- a small, one-story residence on the west part, a one and a half-story residence on the east part, and a small pump house. The property also has a pier, several stone pathways, patios, seawall, boulder revetment, and landscaping. Land coverage and uses are not verified as part of this land capability challenge.

A detailed soil investigation was conducted for this land capability challenge by Sid Davis and Denny Churchill, Davis2 Consulting Earth Scientists, on September 20, 2020. On October 9, 2020 (prior to LCAP application submittal), the TRPA contractor (Phil Scoles, Terra Science, Inc.) examined the same two soil pits described by the applicant's soil consultant. The contractor reviewed the soil descriptions and technical report prepared by the applicant's soil consultant. The contractor agreed with the consultant's soil mapping and rationale, namely the observed soils did not match the mapped Tallac series and there were several slope classes that reflect the microtopography of the property. The TRPA contractor conducted a follow-up site visit on June 2, 2021 to get additional photographs and refamiliarize with site conditions.

Findings:

The subject parcel is part of an east sloping glacial outwash terrace composed of mixed rock materials (primarily volcanic/igneous origins), and a narrow terrace formed from ancient lake deposits. The outwash terrace has a colluvial layer at the surface (naturally eroded from slopes above). This outwash terrace has 18 to 28% slopes (in an east by northeast direction), that flattens to 10 to 15% slope for the lower, narrow lake terrace. The shoreline portion of the property has a natural escarpment that has been replaced by a boulder revetment in the south part and a cemented rock seawall in the north part. The revetment consists of large rocks with some vegetation growing between. Due to these shoreline reinforcements, the original escarpment slope is difficult to estimate, but it occurs entirely within the designated backshore area.

The mostly gravelly beach, boulder revetment, and cemented rock seawall qualify as Stream Environment Zone (SEZ). The mostly gravelly beach meets the criteria of the Beach (Be) soil map unit, while the boulder revetment is partially vegetated with mountain alder, willow and current (Type 7 Willow-Alder Thicket). If not for the large boulders, these plants would extend from the gravelly beach to an elevation just below the 1.5-story residence and adjacent patios. The remaining portions of the study area lacks any drainages, swales or features that qualify as SEZ.

This land capability challenge utilized one backhoe soil pit and one hand-dug soil pit/auger hole-- one in the upper portion of the property having 18 to 28% slopes; and one on less steep land having 10 to 16% slopes. These locations are shown on the land capability map in Attachment C. The hand-dug pit/auger hole location was situated adjacent to landscaped areas (also west of the 1.5-story residence), so it appeared to have minimal surface disturbance (not filled or excavated). No soil sampling was necessary for the Beach (Be) SEZ map unit (it was mapped by visual attributes and wave run-up elevation).

For each of the soil pits (labeled “Site 2” and “Site 3” by the soil consultant), the soils are excessively drained due to their very sandy and gravel composition. This sandy and gravel parent material also has a soil hydrologic group A (HSG-A), since it lacks any subsurface restrictions (that is, no silica-cemented layer associated with the Tallac series). Both soils have a cambic horizon indicating the profiles have remained relatively stable for several thousand years (albeit thin layer of colluvium at the surface).

The soil consultant found the onsite soils to contain more gravelly subsoils and coarser fines than the 1974 mapped Tallac series. Furthermore, the onsite soils also did not match the Elmira and Gefo soil series that can occur on terraces parallel to west shore of Lake Tahoe. As such, the onsite soils do not match known soil series described in the 1974 Soil Survey of the Lake Tahoe Basin (hence they are considered unnamed, XXX soils). The land capability classes for the XXX soils were determined from Page 20, Table 4 of Land-Capability Classification of the Lake Tahoe Basin, California-Nevada (Bailey, 1974). For these unnamed (XXX) soils, the capability classes are Class 4 (16 to 30% slopes) and Class 6 (0 to 16% slopes). The backshore area is considered Class 1B, which encompasses the Beach SEZ and 10-foot setback from the wave run-up elevation of 6,233 feet. The table on the following page summarizes the changes in land capability and allowable land coverage as concluded by this land capability challenge.

Land Capability District	Slope Class (Range)	TRPA Land Capability Map (sq. ft.)	2021 LCC Area (sq. ft.)	Net Change Total Area (sq. ft.)
Class 1B (Be and Backshore area)	N/A	N/A	1,506 ¹	+1,506
Class 4 (XXX)	16 to 30%	0	6,317	+6,317
Class 5 (TcB)	0 to 5%	16,351	0	-16,351
Class 6 (XXX)	0 to 16%	0	8,528	+8,528
Total Parcel Area		16,351	16,351	

(1) The Class 1B (SEZ) consists of mostly gravelly shoreline (Beach, Be). The backshore area consists of the wave run-up area (6,233 ft. elev.), plus 10 feet horizontally. Such area encompasses a cemented rock seawall, boulder revetment, and narrow band of mostly native vegetation and existing path/patio. Land capability challenge did not examine submerged land (below 6,229 ft. elevation).

Contact Information:

This memorandum was jointly prepared by TRPA contractor Phil Scoles (Terra Science, Inc.) and TRPA Senior Planner, Julie Roll. If you have questions on this Hearings Officer item, please contact Julie Roll at 775-589-5247 or jroll@trpa.gov.

BAILEY LAND CAPABILITY CHALLENGE FINDINGS

Site Information	
Assessor's Parcel Nos.	098-180-011
TRPA File No. / Submittal Date:	LCAP2020-0431 / October 26, 2020
Owner or Applicant:	RGB Select LLC Parcel (Richard Bianchina); 1212 Monticello Road, Lafayette, CA 94549
Site Address:	6730 West Lake Blvd., Tahoma, CA 95142; T. 14N, R. 17E, Sec. 07.

Environmental Setting	
Bailey Soil Mapping Unit / Hydrologic Soil Group (HSG) / Land Class / Geomorphic Hazard Unit	Tallac gravelly coarse sandy loam, seeped, 0 to 5% (TcB, HSG C) / E-2 Outwash, till and lake deposits (low hazard lands as per 1974 Bailey LC Report)
Landform and Soil Parent Material	Glacial outwash terrace and lake terrace with natural colluvial at surface.
Slopes and Aspect	14 to 28% slopes / East
Elevation and Datum	6229 (high lake level) to 6270 feet (from Tahoe Basin Land Surveying topo. survey, December 1996).
Rock Outcrops and Surface Configuration	No rock outcrops or surface boulders. Landscaped areas include some minor terracing or grading.
SEZ and Hydrology Source	Yes. SEZ encompasses the mostly gravelly shoreline. Vegetation above lake water line includes mountain alder, willow, golden currant, thimbleberry and forbs. Field investigation determined the mostly gravelly shoreline as Beach (Be).
Vegetation	Undeveloped areas support white fir, Jeffrey pine, incense cedar, dogwood, currant, whitethorn, thimbleberry, creeping snowberry, and ornamental trees, shrubs and forbs.
Ground Cover Condition	Good (vegetation 70 to 80%, duff 20 to 30%)
Site Features	2 residences, driveway, pathways, patio, decks, landscaped areas, plus boulder revetment and seawall along shoreline.

Field Investigation and Procedures	
Consultant and Address	Sid Davis, Davis2 Consulting Earth Scientists; Post Office Box 734, Georgetown, CA 95634 (530) 559-1405; sid@davis2consult.com
TRPA Contractor Field Dates	October 09, 2020 and June 02, 2021 (soil consultant work conducted on September 20, 2020, report completed August 20, 2021).
SEZ Mapping / NRCS Hydric Soil	Not previously mapped. Mostly gravelly shoreline Lake Tahoe and narrow strip of mountain alder, willow and currant thicket growing between and above boulders along shoreline.

Number of Soil Pits or Auger Holes and Description Depth	1 backhoe pit and 1 hand-dug soil pit/auger hole to 60+ inches.
Additional or Repetitive TRPA Sample Locations	Same 2 backhoe and hand-dug pit /auger hole (observed with land use planner Wyatt Ogilvy).
Areas Not Examined	Two residences, driveway, paths, decks, patios, pier, and seawall.

(continued on following page)

TRPA Findings	
2006 Soil Survey Map Unit¹	Tallac gravelly coarse sandy loam, mod. well drained, 5 to 9% slopes (map unit 7525, Class 5, HSG-A).
Consultant Soil Mapping Determination and Rationale	Soils across the site do not match any soils described in the 1974 soil survey, hence they are unnamed (XXX, HSG-A). While the soils have similar parent material as the Tallac series, they are more coarsely textured and lack a subsurface silica-cemented layer. These soils differ from the Gefo/Elmira series which are less gravelly and have more fines. The XXX soils are deep, excessive drained, with very gravelly and sandy textures. There is also a narrow band of mountain alder and willow parallel to the shoreline. The mostly gravelly shoreline (Be) is included in the backshore area (Class 1B, wave run-up and 10-ft. setback).
Slope Determination	10 to 15% slopes for lower lake terrace (above shoreline); and 18 to 28% slopes for upper, west portion of property.
TRPA Conclusion(s)	Backshore area (Class 1B and 10-foot setback), Class 4 Unnamed soil (XXX) for 16 to 30% slopes; Class 6 Unnamed soil (XXX) soil for 0 to 16% slopes.
Applicable Area	Entire site. 16,286 sf. (see map, Attachment C, August 2021)

Attachments:

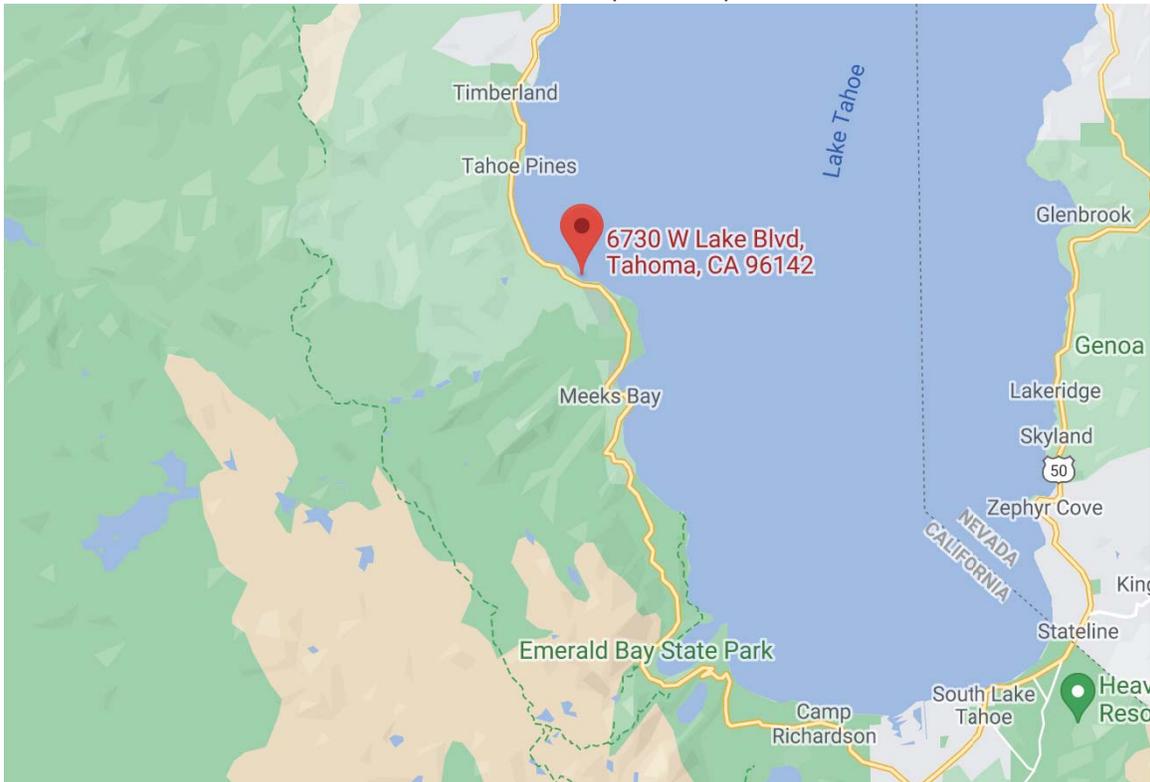
- A. Vicinity map and TRPA land capability map
- B. Site photographs
- C. Land capability challenge recommendation map
- D. Applicant's soil consultant land capability soil report (2 soil pits)

¹ 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. The 2006 soil survey update has not yet been formally adopted by TRPA for use with land capability matters.

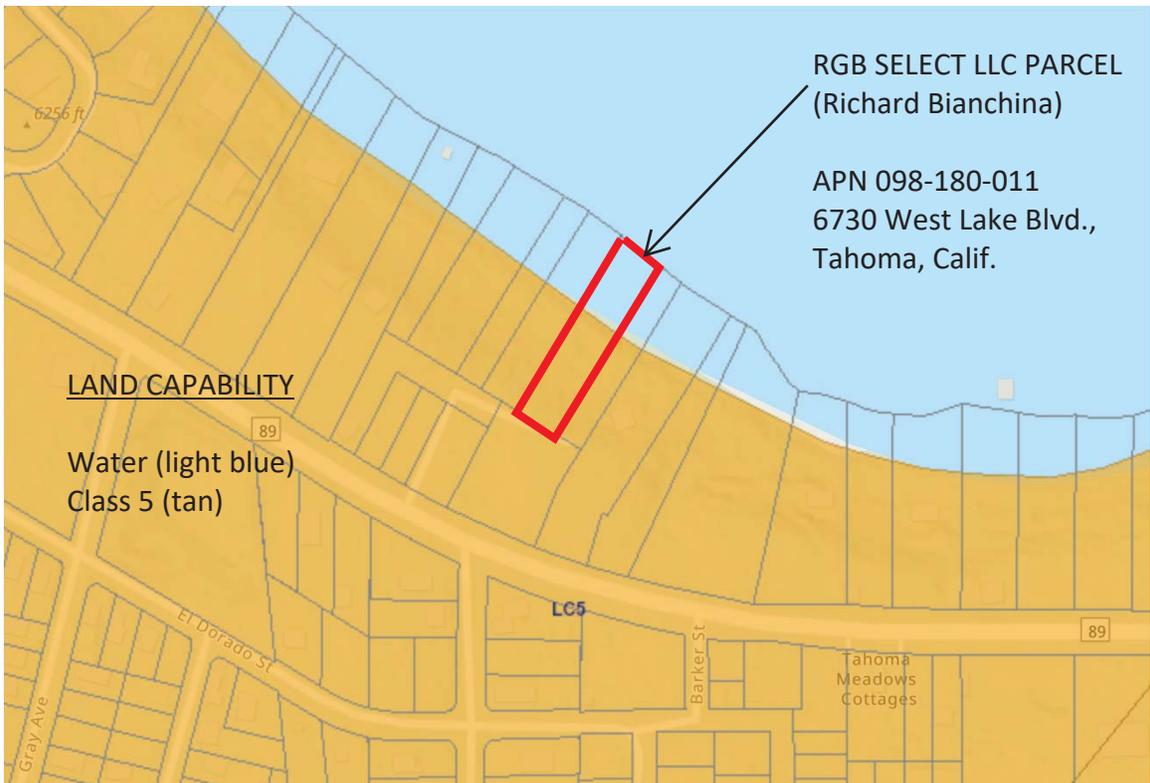
Attachment A

Vicinity Map and TRPA Land Capability Map

VICINITY MAP (no scale)



TRPA LAND CAPABILITY MAP



Attachment B
Site Photographs



RBG SELECT LLC PARCEL (BIACHINA), 6730 WEST LAKE BLVD., TAHOMA, CA. SITE PHOTOS (APN 098-180-011)



Photo 1 – View west (left) to north (right) toward “Site 3” soil pit, located in the west part of the subject parcel. This backhoe-dug pit occurs on an 18 to 28% slope of a glacial outwash terrace. Natural ground cover of fir and pine needles provides erosion protection atop sandy/gravelly soils. Soil profiles described by Davis2 Consulting Earth Scientists in September, 2020.



Photo 2 – View north (left) to northeast (right) toward “Site 2” hand-dug and augered soil pit. This location is part of a terrace formed from ancient lake sediment and colluvial material naturally eroded from higher ground. The soil lacks any indication of root-restricting layer or seasonally high water table.



Photo 3 – Soil profile for “Site 3” – upper sampling location (west of driveway). Topsoil layer is 20 in thick and composed of gravelly loamy sand. Underlying parent material is 40+ inches thick and generally has increasing gravel content (typical for outwash terrace). The profile has minimal in-situ soil development (cambic horizon). Profile lacks root-restricting layer (such as a seasonal high water table or dense fragipan). While similar to Tallac series, this unnamed soil has more gravels, and coarser sand textures than the mapped Tallac series. As per Table 4 of Land-Capability Classification of the Lake Tahoe Basin, California-Nevada, A Guide for Planning (Rbt. Bailey, 1974), this unnamed soil qualifies as Class 4 (XXX, 16 to 30% slopes).



Photo 4 – Soil profile for “Site 2” – lower sampling location (west of 1.5-story residence). The topsoil layer is 8 inches thick and composed of gravelly loamy sand. The underlying layers to 45 inches have increasing amounts of sand and gravels that were deposited when Lake Tahoe was naturally higher during ancient times. This soil is dissimilar from the mapped Tallac and Gefo soils due to greater volume of gravels and coarser sand textures. It also lacks of a root-restricting layer (such as a seasonal high water table or dense fragipan). This soil occurs on 0 to 16% slopes, hence, it qualifies as Class 6 (as per Table 4 of Land-Capability Classification (Bailey, 1974).



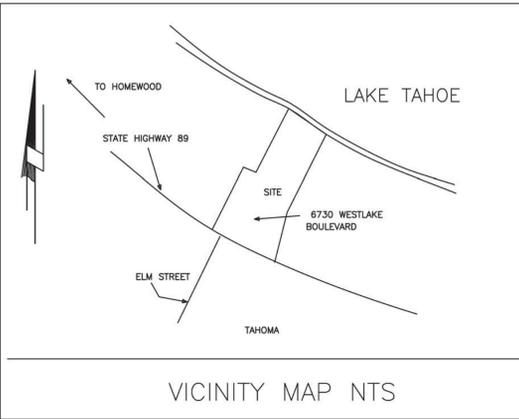
Photo 5 – View south at shoreline and backshore from north edge of study area. The backshore area includes the boulder revetment and a narrow band vegetated with mostly native trees and shrubs (mountain alder, willow, currant and thimbleberry). Soil conditions in this vicinity are mostly sandy/gravelly with cobbles and stones at depth.



Photo 6 – View southwest along shoreline. The south segment of the shoreline has a boulder revetment with mostly native vegetation growing above/behind the boulders. The north segment of the shoreline (not shown) consists of a cemented rock seawall. The area above the retaining wall includes a patio and pathway, then the residence. The wave run-up area is just above the water lines on exposed rocks.

Attachment C

Land Capability Challenge Recommendation Map



PARCELS 3 AND 4 PER DEED
 TOTAL PARCEL AREA = 31,660 S.F. OR 0.73 ACRES
 EXISTING COVERAGES PARCELS 3 AND 4, PLACER COUNTY APN 98-180-24

OFFSITE COVERAGE A.C. DRIVEWAY = 1106 S.F.

ONSITE COVERAGES

EXISTING A.C. PAVEMENT	= 4043 S.F.
DIRT ROAD	= 628 S.F.
COMPACTED DIRT PARKING	= 1100 S.F.

TOTAL EXISTING ON SITE COVERAGES APN 98-180-24 = 5771 S.F.

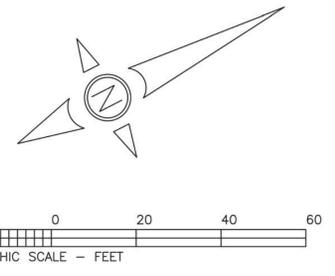
TOTAL PARCEL AREA, PARCEL 1 TO HIGHWATER = 9632 S.F. +-
 EXISTING COVERAGES ON SITE TO HIGHWATER, PARCEL 1
 APN 98-180-12

A.C. PAVING	= 302 S.F.
DIRT PATHS, STONE PATHS	= 398 S.F.
PORTION GUEST HOUSE	= 47 S.F.
PORTION DECK AND STAIR	= 19 S.F.
SHED AND STAIR	= 91 S.F.
LOG ROUND PATIO	= 374 S.F.

TOTAL EXISTING COVERAGE = 1231 S.F.

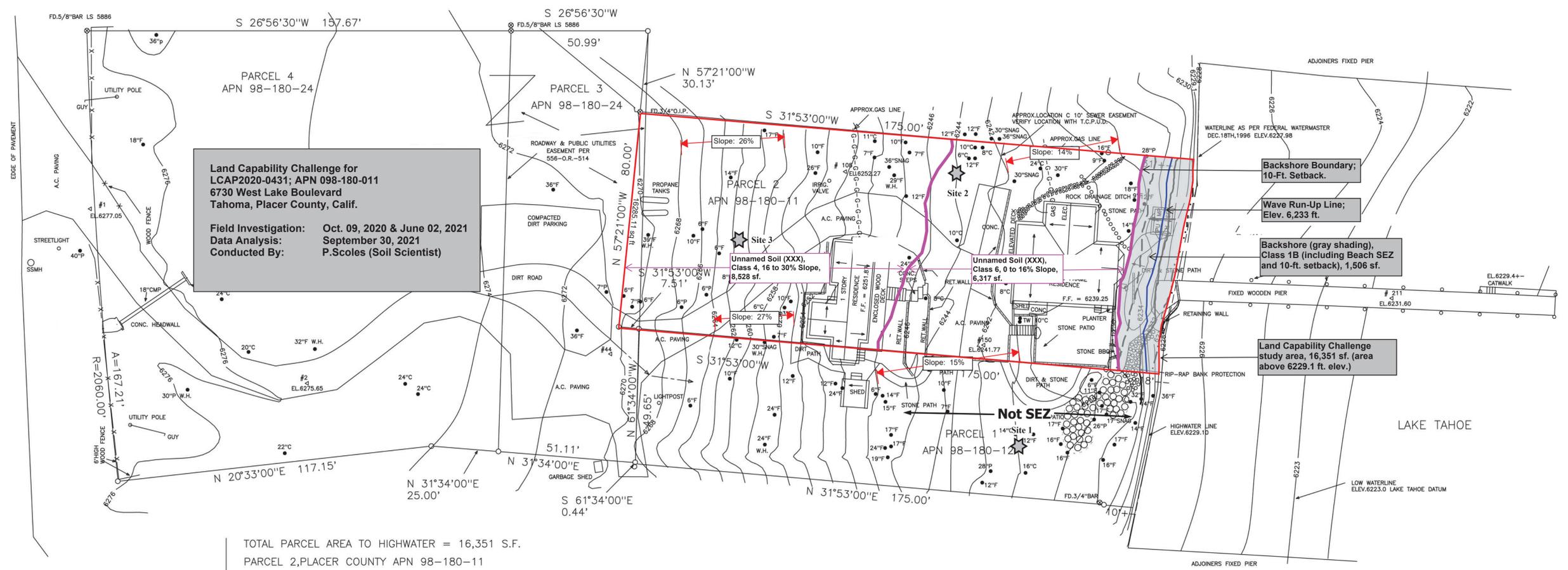
LEGEND
 ⊗ FOUND MONUMENT AS NOTED
 ○ SET 5/8" REBAR L.S. 5886
 ○ DIMENSION POINT ONLY
 ⊗ TREE-TRUNK DIAMETER & TYPE
 P-PINE F-FIR C-CEDAR
 + SPOT ELEVATION
 △ CONTROL POINT & ELEVATION

DAVIS²
CONSULTING EARTH SCIENTISTS, INC.
 P.O. Box 734, Georgetown, CA 95634
6730 West Lake Blvd., Tahoe, Placer County, CA
 August 21, 2021



D²
Consulting Earth Scientists, Inc.
 P.O. Box 734, Georgetown, CA 95634
 Tel: (530)-559-1405; email: sid@davis2consult.com

STATE HIGHWAY 89 (VARIABLE WIDTH R.O.W.)



Land Capability Challenge for LCAP2020-0431; APN 098-180-011 6730 West Lake Boulevard Tahoe, Placer County, Calif.

Field Investigation: Oct. 09, 2020 & June 02, 2021
Data Analysis: September 30, 2021
Conducted By: P.Scoles (Soil Scientist)

TOTAL PARCEL AREA TO HIGHWATER = 16,351 S.F.
 PARCEL 2, PLACER COUNTY APN 98-180-11

EXISTING COVERAGES ON SITE

A.C. PAVING	= 2444 S.F.
DIRT AND STONE PATHS	= 379 S.F.
PORTION GUEST HOUSE	= 609 S.F.
PORTION ENCLOSED DECK AND STAIRS, GUEST HOUSE	= 267 S.F.
CONC. STEPS, GUEST HOUSE	= 33 S.F.
CONC. PARKING	= 320 S.F.
STONE PATIO, STEPS AND CONC. MAIN HOUSE	= 739 S.F.
MAIN HOUSE	= 1185 S.F.
CONC. WALL BY PIER	= 38 S.F.
PORTION PIER TO HIGHWATER	= 87 S.F.
PUMPHOUSE	= 57 S.F.

TOTAL EXISTING ON SITE COVERAGES, PARCEL 2 = 6158 S.F.

THE BOUNDARY SHOWN HEREON IS BASED UPON RECORD INFORMATION AND DOES NOT REPRESENT A BOUNDARY SURVEY. ELEVATIONS SHOWN HEREON ARE BASED UPON AN ASSUMED DATUM UNLESS OTHERWISE NOTED.
 THE CONTOUR INTERVAL IS TWO FEET UNLESS OTHERWISE NOTED.
 ONLY TREES OVER 6" IN DIAMETER WERE LOCATED AND ONLY IN AREAS OF INTEREST, IF APPLICABLE.
 ONLY VISIBLE UTILITIES HAVE BEEN LOCATED, SURVEYOR IS NOT RESPONSIBLE FOR ANY SUBGRADE UTILITIES OR IMPROVEMENTS NOT SHOWN.
 THIS SURVEY HAS BEEN PREPARED WITHOUT BENEFIT OF A TITLE REPORT UNLESS OTHERWISE NOTED. SURVEYOR ASSUMES NO RESPONSIBILITY FOR ANY EASEMENTS, ETC. WHICH MAY AFFECT THIS PROPERTY.
 THIS DRAWING IS THE PROPERTY OF TAHOE BASIN LAND SURVEYING AND MAY NOT BE REPRODUCED OR USED WITHOUT OUR CONSENT.

TOPOGRAPHIC AND IMPERVIOUS COVERAGE SURVEY
 FOR: ELIZABETH S. BINGHAM
 BEING A PORTION OF SECTION 7, T.14 NORTH, RANGE 17 EAST
 MOUNT DIABLO BASE AND MERIDIAN
 PLACER COUNTY, CALIFORNIA A.P.N.s 98-180-11, 12 & 24
 SITE ADDRESS: 6730 WEST LAKE BOULEVARD
 DATE: DECEMBER, 1996 SCALE 1" = 20'
 SHEET 1 OF 1

TAHOE BASIN LAND SURVEYING
 THOMAS C. BUSWELL, PLS
 4917 WEST LAKE BOULEVARD, SUITE A
 HOMEWOOD OFFICE CENTER, HOMEWOOD, CALIFORNIA 96141
 POST OFFICE BOX 2, TAHOA, CALIFORNIA 96142
 FAX (916)525-1223 PHONE (916)525-7064

Attachment D

Applicant's Soil Consultant Land Capability Soil Report (2 soil pits)

NOTE: This report was prepared for several TRPA applications, including a land capability challenge and a separate SEZ refinement analysis. The strikethrough text is intended to focus attention on applicable portions of the report for LCAP2020-0431. The strikeout text does not infer any inaccuracies or rejection.

DAVIS²

CONSULTING EARTH SCIENTISTS

P.O. Box 734 · Georgetown, CA 95634 · Tel. (530) 559-1405; davis2consulting@sbcglobal.net

Bianchina Project **Land Capability ~~and SEZ~~ Challenge** **Placer County, California** (APNs 098-180-11, ~~12 & 24~~)

August 20, 2021

INTRODUCTION

A soil investigation was conducted on the parcels on September 30, 2020. The objective of the study was to identify soils and other features and relate them to Land Capability, which is administered by the Tahoe Regional Planning Agency (TRPA) for the purpose impervious coverage regulation, by Chapter 30 of the Code of Ordinances and Stream Environment Zone (SEZ) analysis, found in Chapter 53.

Three parcels were examined, one of which (APN 098-180-011) supports two existing single-family residential dwelling on 0.67 acres of land, located at 6730 West Lake Boulevard, Placer County, California. ~~Two additional parcels showing the same address were assessed for SEZ determinations (APNs 098-180-012 & 24). These two parcels represent 0.4 and 0.73 acres, respectively. This work is advanced at the request of Mr. Rick Bianchina, RGB Select, LLC.~~

Soil information contained in this report is for the strict use of land capability and it should not be used for building foundation design, slope stability, hazardous waste assessment or seismic analyses.

ENVIRONMENTAL SETTING

The site is located at 6730 West Lake Boulevard, Placer County, California. Vegetation consists of Jeffrey pine, white fir and manzanita. Slopes range between less than 5 percent to 28 percent on a northeasterly aspect. Other than the shore of Lake Tahoe, there are no stream environment zones (SEZ) influencing these parcels.

Soils are shown on TRPA map sheet C-11 as TcB (Tallac gravelly coarse sandy loam, seeped, 0 to 5 percent slopes) . Geology (Mathews, 1968) is characterized as Q1 (older lake beds). Bailey's (1974) geomorphic analysis shows the parcel within E₁ (Moraine land undifferentiated).

METHODOLOGY

The parcel was surveyed as well as areas nearby. Sites considered representative of the landform were chosen with excavations placed to open and examine the soil profile in detail. Standards of the National Cooperative Soil Survey were used to describe and interpret soil physical properties. Information gathered at the site was compared to the *Soil Survey of the Lake Tahoe Basin, California-Nevada* (Rogers et al, 1974) and to the *Land-Capability Classification of the Lake Tahoe Basin, California-Nevada* (Bailey,

1974) for proper placement in the appropriate land capability class. SEZ indicators were examined and compared to criteria found in Chapter 53, TRPA Code of Ordinances. A detailed topographic base map supplied by Tahoe Basin Land Surveying was available in the field for ground control and slope analysis. Information pertaining to land capability districts ~~and SEZ~~ are shown on the attached base map.

BACKGROUND INFORMATION

The three parcels are under single ownership. APN 098-180-011 has two existing residential structures on it and is evaluated in this report as Land Capability. ~~The other two parcels (APNs 098-180-12 & 24) were evaluated by IPES teams (1989) where an SEZ is shown on parcel 12. No other areas are showing as SEZ on the IPES field sheets. A 2007 Land Capability Verification placed a SEZ on the very northwest corner of parcel 24.~~

FINDINGS

~~Stop 1, on APN 098-180-12, is within the area shown as SEZ on the IPES field sheets. Soils are found to be deep and excessively drained, members of Soil Hydrologic Group A. They can be characterized having a dark brown loamy coarse sand topsoil approximately 24 thick, over dark yellowish loamy sand and sand substratum to greater than 60 inches depth. Within this profile there is no indication of wetness that could support a hydrophytic vegetation community. Although a single specie indicator exists, Thimbleberry (*Rubus parviflorus*), from the Primary indicator list, it does not by itself constitute a Type 9 Broadleaf community. The Type 9 Broadleaf requires a closed canopy of broadleaf trees such as aspen, black cottonwood, Scouler's willow and dogwood. The IPES field sheet documents an overstory of Incense cedar and fir, which is indicative of a non-indicator plant community, such as Type 17 (Mixed conifer) or Type 18 (Fir). Thimbleberry is known to thrive in shady areas where the snowpack malingers into late spring. The SEZ designation, in our opinion, is inaccurately identified.~~



This photo describes soil conditions south of study area for an SEZ refinement analysis.

~~Figure 1 - Area delimited as SEZ by IPES team.~~



This photo describes soil conditions west of study area for an SEZ refinement analysis.

~~Figure 2 - Soil profile in 'SEZ'. There are no hydric soil indicators or evidence of wetness.~~

Stop Numbers 2 and 3 (APN 098-180-11) are similar in relation to Runoff potential, as they are both members of Hydrologic Soil Group A. Stop 2 is representative of an upper terrace or glacial till and the lower terrace, Stop 3 is interpreted to be slough over older lake depositis.

The upper profile (Stop 2) reflects a thin dark brown gravelly loamy sand topsoil over a weakly developed dark yellowish brown gravelly and very gravelly loamy sand to 36 inches depth, where it is underlain by olive brown extremely gravelly coarse sand.



Figure 3 - Stop 2 upper landform



Figure 4 - Landscape view of upper terrace.

The lower profile (Stop 3) shows a thick topsoil of dark brown gravelly and very gravelly loamy coarse sand to 20 inches depth over a weakly developed subsoil consisting of dark brown and olive brown very gravelly loamy coarse sand to a depth of 60 inches. Beyond that is olive gravelly very fine sand to 72 inches depth.



Figure 5 - Stop 3, lower terrace.



Figure 6- Stop 3 landscape, lower terrace.

Neither of these soils fit the concept of Tallac seeped, because there is no evidence of wetness in the profile and the textures are coarser than sandy loam, throughout. There is

no evidence of a fragipan at depth in these profiles. Soils found are unnamed in the Lake Tahoe basin soil survey area.

~~The top of the escarpment at the edge of Lake Tahoe represents the backshore.~~

~~APN 098 180 24 is divided into 'Parcel 3' and 'Parcel 4', assessed by IPES to show no SEZ on it. Subsequent to the IPES evaluation, a very limited area of SEZ shows as a TRPA LCV in the northwest corner of 'Parcel 3', believed to have been placed there in 2007 as part of an offsite access project. The area above this feature has no bed or bank, supports no SEZ indicators, vegetation, or evidence shallow of groundwater, and in our opinion was correctly assessed as a "non-SEZ" area by the IPES team. The rock lined ditch is a man made feature, which is excluded from SEZ in Chapter 53 Code language:~~

53.9. PROCEDURE FOR ESTABLISHING SEZ BOUNDARIES AND SETBACKS

The IPES field evaluation teams shall use the following procedures for purposes of determining the presence and boundaries of an SEZ and establishing SEZ setbacks.

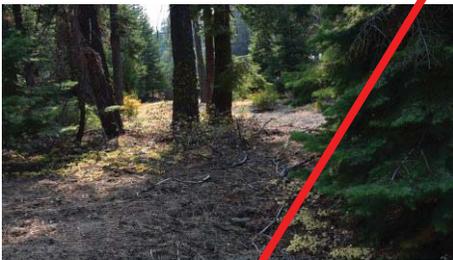
53.9.1. SEZ Identification

A stream environment zone (SEZ) shall be determined to be present if any one of the following key indicators is present or, in absence of a key indicator, where any three secondary indicators coincide; or, if Lo, Co, or Gr soils are present, where two secondary indicators coincide. Plant communities shall be identified in accordance with the definitions and procedures contained in the 1971 report entitled "Vegetation of the Lake Tahoe Region, A Guide for Planning."

A. Key Indicators

Key indicators are:

1. Evidence of surface water flow, including perennial, ephemeral, and intermittent streams, but not including rills or man-made channels;



~~Figure 7~~

These photos describe soil conditions west of study area for an SEZ refinement analysis.



~~Figure 8 - Looking downslope on 'Parcel 4' from near US Hwy 89.~~

CONCLUSIONS AND RECOMMENDATIONS

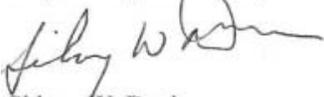
Soils found on APN 098-180-11 are unnamed (XXX) and place in Land Capability Class 6 where slopes are less than 16 percent and Class 4 where slopes measure between 15 to 30 percent. Class 6 receives 30 percent impervious coverage. Class 4 receives 20 percent impervious cover.

The backshore is ~~at the top of the escarpment with~~ Class 1b lakeward of there, with a 10-foot setback, landward. Class 1b receives 1 percent coverage.

~~The SEZs on APNs 098-180-12 & 24, in our opinion, do not meet the criteria found in Chapter 53 and should be removed from the record maps associated with these parcels.~~

Please refer to the following soil profile descriptions that support the findings and the attached map showing the spatial distribution of the appropriate land capability classes on the parcel.

Respectfully submitted,



Sidney W. Davis,
CPSS /SC No. 1031

Representative Soil Profile Descriptions

~~Stop No. 1 (APN 098-180-12)~~

- ~~Oi 0-1, pine needles and duff.~~
- ~~A 1-4 inches, brown (10YR 5/3) loamy sand, dark brown (10YR 3/3) moist; weak fine granular structure; soft, loose, nonsticky and nonplastic; many fine medium roots; many very fine and fine interstitial pores; two percent gravel; gradual smooth boundary.~~
- ~~AC 4-24 inches, light yellowish brown (10YR 6/4) loamy sand, dark yellowish brown (10YR 4/4) moist; moderate medium granular structure; soft, loose, nonsticky and nonplastic; many fine medium roots; many very fine and fine interstitial pores; two percent gravel; gradual wavy boundary.~~
- ~~C1 24-45 inches, yellowish brown (10YR 5/4) moist; single grain, soft, loose, nonsticky and nonplastic; common fine medium and few coarse roots; many very fine and fine interstitial pores; five percent gravel; gradual wavy boundary.~~
- ~~C2 45-60 inches, brownish yellowish (10YR 6/6) coarse sand, dark yellowish brown (10YR 4/6) moist; single grain; few fine roots; many very fine and fine interstitial pores; five percent gravel.~~

This profile describes soil conditions south of study area for an SEZ refinement analysis.

~~Notes: Other than Elmira, Gefe or Tallac. SEZ indicators non-existent. Lacks primary vegetation SEZ indicators. Profile to > 60 inches depth.~~

~~Soil Series: Unnamed (XX)
Soil Classification: Sandy
Soil Drainage Class: Excessive
Hydrologic Soil Group: A~~

This profile describes soil conditions south of study area for an SEZ refinement analysis.

Stop No. 2

- Oi 0 – 2 inches
- A 2 – 8 inches, light yellowish brown (10YR 6/4) gravelly loamy sand, dark yellowish brown (10YR 4/4) moist; moderate fine granular structure; soft, loose, nonsticky and nonplastic; many fine medium roots; many very fine and fine interstitial pores; twenty-five percent gravel; clear smooth boundary.
- Bw 8 – 26 inches, dark brown (10YR 4/3) moist; gravelly loamy sand; weak medium subangular blocky structure; soft, loose, nonsticky and nonplastic; many fine medium and common coarse roots; many very fine and fine interstitial pores; fifteen percent gravel; gradual wavy boundary.
- C1 26 – 36 inches, dark yellowish brown (10YR 4/4) moist; very gravelly loamy sand; single grain; soft, loose, nonsticky and nonplastic; common fine medium and few coarse roots; forty percent gravel and ten percent stones; gradual wavy boundary.
- 2C1 36 – 55 inches, olive brown (2.5Y 4/4) moist; extremely gravelly coarse sand; single grain; soft, loose, nonsticky and nonplastic; few fine medium roots; sixty percent gravel and ten percent stones.

Note: Till over lake terrace.

Soil Series: Unnamed (XXX)
Soil Classification: Sandy, mixed frigid, Humic Dystroxerepts
Soil Drainage Class: Excessive
Hydrologic Soil Group: A

Stop No. 3

- Oi 0 – 4 inches,

- A1 4 – 8 inches, brown (10YR 5/3) gravelly loamy sand, dark brown (10YR 3/3) moist, moderate fine granular structure; soft, loose, nonsticky and nonplastic; many very fine and fine medium roots; many very fine and fine interstitial pores; fifteen percent gravel and ten percent stones; clear smooth boundary.
- A2 8 – 20 inches, pale brown (10YR 6/3) very gravelly loamy sand, dark brown (10YR 4/3) moist; moderate medium granular structure; soft, loose, nonsticky and nonplastic; many fine medium and common coarse roots; many very fine and fine interstitial pores; thirty percent gravel and fifteen percent stones; gradual wavy boundary.
- Bw 20 – 40 inches, brown (10YR 5/3) very gravelly loamy coarse sand, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, loose, nonsticky and nonplastic; many fine medium coarse roots; common fine medium interstitial and tubular pores; common thin clay films; thirty-five percent gravel and ten percent stones; gradual wavy boundary.
- 2C1 40 – 60 inches, light olive gray (5Y 6/2) very gravelly coarse sand, olive (5Y 4/3) moist; moderate medium angular blocky structure; hard, friable, nonsticky and nonplastic; common fine medium and few coarse roots; common fine medium interstitial and tubular pores; thirty-five percent gravel and ten percent stones; gradual smooth boundary.
- 2C2 60 – 72 inches, light olive gray (5Y 6/2) gravelly very fine sand, olive (5Y 5/3) moist; massive; hard, friable, nonsticky and plastic; few fine medium roots; few fine interstitial pores; thirty-five percent gravel and ten percent stones.

Note: Granitic coarse fragments. Lake terrace below 40 inches.

Soil Series: Unnamed (XXX)

Soil Classification: Sandy-skeletal, mixed, frigid Humic Dystroxerepts

Soil Drainage Class: Excessive

Hydrologic Soil Group: A