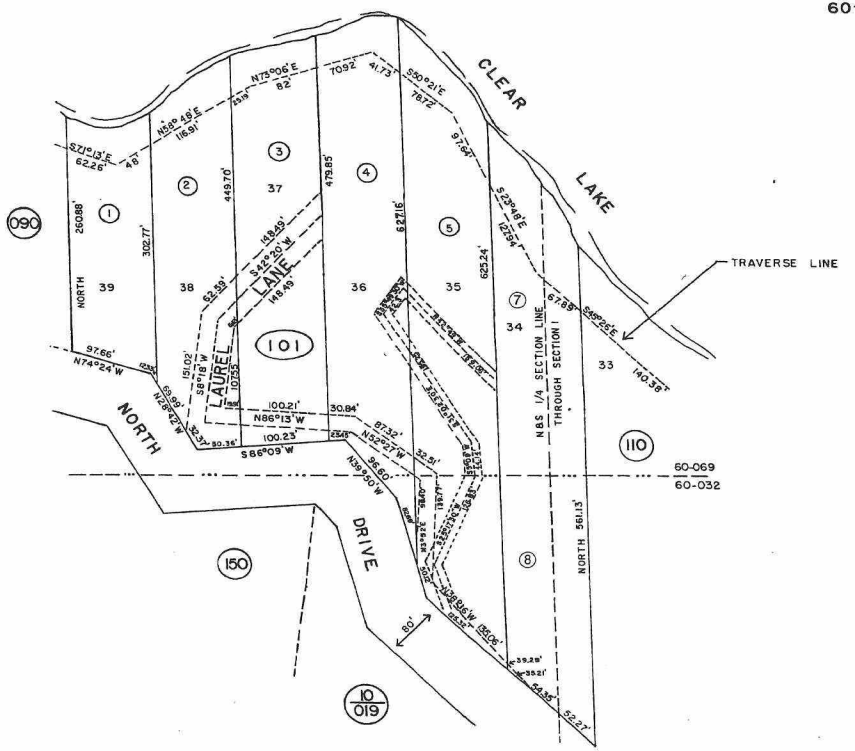
LAKESHORE PARK SUBDIVISION

T.R.A.
60-069
60-032

36-100



THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA DELINEATED HEREON.

Assessor, Lake County

Harding Lawson Associates

RECEIVED

March 24, 1989

18404,001.01

Mr. Joseph M. Whelan
5 Sunhill
Portola Valley, California 94025

Dear Mr. Whelan:

Soil and Foundation Investigation
Lot 36, Lakeshore Park Subdivision
Lake County, California

This letter is a report of our investigation of Lot 36 on March 22, 1989.

Lot 36 is a long narrow parcel extending an average of about 550 feet south from the edge of Clear Lake. It is 100 feet wide and occupies mainly steeply sloping terrain including a prominent nose toward the northerly end from which it descends steeply to the shore of Clear Lake. A small residence on the order of 35 feet square is planned on the nose overlooking the lake. The building will be one-story wood frame construction imposing light loads typical of its class. The site offers two possibilities for house location: the uppermost is a level pad that has been developed by a shallow cut and fill; the lower site is on the slope just below and adjacent to the aforementioned level pad. Both sites are in the curve of a roughly graded road leading down to the lake. The road cut discloses subsoils to a depth of about 6 feet along two sides of the building area. The cut exposes a thin topsoil mantle over deeply weathered and broken shale. The slopes of the nose are stable and well drained.

If the house is sited on the leveled bench it may be supported on conventional spread foundations, probably a perimeter footing with some interior pads, which should pentrate the topsoil layer and establish contact with the fragmented shale at an estimated depth of 12 to 18 inches. Bearing values of 2000 psf dead and 3000 psf total design loads are appropriate. If these recommendations are followed there should be essentially no settlement after construction. Nevertheless, we recommend nominal reinforcing at the tops and bottoms of foundation strips.

Engineers and Geoscientists
7655 Redwood Blvd. P.O. Box 578 Novato, CA 94948
Telephone 415/892-0821 Telex 340523
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If the lower site is selected the house may be within a few feet of the road cut along its east and north sides. In this case a similar foundation may be used. Its depth however should be great enough to extend below an imaginary plane extending upward from the toe of the road cut to beneath the house site at a slope of two horizontal to one vertical (2:1). This may be accomplished either by deepened strip footings or by using drilled piers connected at their tops by a grade beam. The purpose of the deepened foundation is to preserve the integrity of the structure in the event of future raveling or sloughing of the road cut and its consequent retreat toward the house.

If there are any questions concerning the opinions or recommendations expressed in this letter we shall be pleased to discuss them with you.

Yours very truly,

HARDING LAWSON ASSOCIATES

Robert T. Lawson
Geotechnical Engineer 507

RTL/mr



Harding Lawson Associates

March 24, 1989

18404,001.01

Mr. Joseph M. Whelan
5 Sunhill
Portola Valley, California 94025

Dear Mr. Whelan:

Soil and Foundation Investigation
Lot 37, Lakeshore Park Subdivision
Lake County, California

This letter is a record of our examination of and recommendations regarding the construction of a small home on the subject property.

Lot 37 is about 100 feet wide and some 460 feet deep extending along hilly terrain and terminating at its north end on the shore of Clear Lake. It is proposed to build a small residence on the high ground above the lake. The house will be about 35 feet square and of one-story wood frame construction.

The site is near the top of a southwest-northeast trending nose. The natural slope is on the order 3 or 4 horizontal to 1 vertical and is stable. Subsurface conditions as determined by examination of nearby road cuts (ranging from 30 to 100 and 125 feet away) show the hill mass to be comprised of deeply weathered and fractured shale overlain by a soil mantle ranging from a few inches to about 1½ feet in thickness.

The structure may be supported on conventional spread foundations which will probably be a perimeter footing with an appropriate number of interior individual footings, all of which should be founded beneath the topsoil layer in the fractured rock at a depth estimated to be 18 inches. Bearing values of 2000 psf dead and 3000 psf total design loads are appropriate. Strip or perimeter footings should be reinforced top and bottom. Settlement after construction, if any, will be slight.

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If there are any questions regarding our opinions of the suitablity of the lot or our recommendations for its development we shall be pleased to discuss them with you.

Yours very truly,

HARDING LAWSON ASSOCIATES

Robert T. Lawson
Geotechnical Engineer 507

RTL/mr



Harding Lawson Associates

March 24, 1989

18404,001.01

Mr. Joseph M. Whelan
500 Sunhill
Portola Valley, California 94025

Dear Mr. Whelan:

Soil and Foundation Evaluation
Lot 38, Lakeshore Park Subdivision
Lake County, California

This letter is a record of our examination of and recommendations regarding construction of a small home on the subject lot.

Lot 38 is about 100 feet wide and on the order of 450 feet deep on hilly terrain. Its north end is the shore of Clear Lake from which it rises steeply at first and eventually becomes gently sloping for approximately the southern 4/10 of the property. An entrance road serving adjacent Lots 37 and 36 as well as Lot 38 loops through the southeastern portion of the property. It is proposed to build a small residence on the high ground above the lake. The house will be of wood-frame construction and impose the light structural loads typical of its class.

One logical house site would be in the southwesterly quandrant of the property where the slopes are very gentle, on the order of 5 horizontal to 1 vertical (5:1). Alternatively, the house could be sited further to the north, though the slope steepens in that direction eventually to greater than 2:1. Access to a residence will be from the existing entrance road through the very gentle uppermost portion of the lot.

The property is part of the southwest-northeast trending nose which is comprised of deeply weathered and fractured shale overlain by a thin soil mantle. These conditions are clearly revealed on adjacent lots where the access road winds down to Clear Lake and terminates on the north end of Lot 38.

The slopes are stable. The structure may be supported on conventional spread footings which probably would include a perimeter footing with an appropriate number of interior individual footings, all of which should be founded beneath the topsoil layer in the fractured rock at an average depth estimated to be 18 inches. Bearing values of 2000 psf dead and 3000 psf total design loads are appropriate. Strip or perimeter footings should be reinforced top and bottom. Settlement after construction, if any, will be slight.

If the house site were to extend out over the steeper (2:1) slope, perimeter footings may be used. However, they would be stepped down the hill and poured in notches cut into the rock. Alternatively, drilled piers into the rock connected with a reinforced concrete grade beam would serve well.

If there are any questions regarding our opinions of the suitability of the lot or of our recommendations for development, we will be pleased to discuss them with you.

Yours very truly,

HARDING LAWSON ASSOCIATES

Robert T. Lawson

Robert T. Lawson
Geotechnical Engineer 507

RTL/mr

