

March 08, 2022

Ms. Linda Neal
Town of Fairfax
Dept of Planning and Building Services
142 Bolinas Avenue
Fairfax, CA 94930

W|A Project #: 21023

Subject: 152 Porteous Avenue – Residential Planning Application
APN: 002-071-09

Dear Ms. Neal,

This letter addresses plan review comments for the above-mentioned project prepared by the Miller Pacific Engineering Group, dated January 25, 2022, and the Fairfax Town Engineer, dated February 1, 2022. In addition to this letter, we are providing revised plans to reflect the changes noted here.

Additionally, Cal Engineering provided a response to the owner of 152 Porteous Avenue for the Town of Fairfax's February 1st review of the submitted plans with a revised geotechnical report within 48 hours of receiving said review. We appreciate his expedited service in this regard, demonstrating how much Cal Engineering backs up its report to the fullest.

Plan Check Comments - Response List

FAIRFAX TOWN ENGINEER

- Comment 1: Commentary from the Geotechnical Engineer on the project's exposure to risks associated with slope instability, settlement, and expansive soils.
Response: *Report revised per comment. Please see item 5 on page 8 for updated conclusions.*
- Comment 2: Development of geotechnical design criteria based on objective laboratory data and/or academic reference in accordance with the current California Building Code.
Response: *Report revised per comment. Please see item 5 on pages 8-15 for updated criteria.*
- Comment 3: Submittal of a current Fee Title Report for verification of property ownership and the provided survey information.
Response: *Current Fee Title Report submitted on February 7th email to Linda Neal. See attached.*

MP ENGINEERING

Comment 1: Section 17.072.080(B) -Topographic and Boundary Survey
We were provided a fee title report and recorded record of survey, which appear generally complete. However, we note that the recorded record of survey describes “Lands of Sudduth,” while the fee title report indicates the land is owned by Nooshin Behroyan. Neither of these entities appear to be associated with the application, and as such actual ownership of the land is unclear. The Applicants should submit an updated fee title report reflecting the current ownership.

Response: *Current updated Fee Title Report submitted on February 7th email to Linda Neal. See attached.*

Comment 2: Section 17.072.080(C) - Site Plan
The site plan shows the locations of existing gas meters and partial alignments of existing water and sanitary sewer services. However, the complete extents of the service laterals through the area of the planned parking and site retaining wall improvements are not shown. The Site Plan should be revised to clearly show all underground utilities, pipe/conduit sizes, and connection points. Any utilities proposed to be abandoned or relocated should be clearly labelled.

Response: *The existing site utilities have been included in the revised site plan. The sanitary sewer lateral was replaced in 2020 under an encroachment permit 20-99. At this time no utilities are to be abandoned or removed. See sheet C-1 “Existing Site Plan”.*

Comment 3: Section 17.072.080(C) - Site Plan
The site plan indicates that all new improvements will be constructed within the parcel boundaries, with no improvements planned within the public right-of-way. However, it is anticipated that the nature of the work will pose some risk of damage to existing Town improvements, primarily the existing concrete curb/gutter and asphalt roadway. We recommend that permit issuance include a clause requiring restoration/reconstruction of any public improvements damaged during the course of construction. An encroachment permit should be required for any proposed improvements within the public right of way.

Response: *The existing site plan notes has a new note describing the need for an encroachment for the construction activities. See sheet C-1 “Existing Site Plan”.*

Comment 4: Section 17.072.080(C) - Site Plan
There is conflicting information on the distance between the planned retaining wall and rear of the planned ADU. Sheet A-301 specifies 8'10", but most of the other plans indicate less than 5 feet. The planned separation should be clearly defined and consistently shown on the plans.

Response: *The planned space between the retaining wall and the rear of the new residence is 4 feet. This has been changed on Sheet A-301.*

Comment 5: Section 17.072.080(C) - Site Plan
Civil plans Sheet C-2 indicates the removal of three trees behind the planned wall and the tree protection plan Sheet T-1 indicates removal of one tree. This discrepancy should be clarified.

Response: *Sheet T-1 indicated the removal of a tree that requires a permit. The other two trees shown in this area are small enough not to require a permit. A clarifying note has been added to C-1 “Existing Site Plan”*

Comment 6: Section 17.072.080(C) - Site Plan

The planned new 4-inch storm drain lines shown on Sheet C-4 are shown going through a 28" oak tree and several existing retaining walls. Construction methods should be specified on how this would be accomplished without damaging existing trees and improvements, or the drain lines should be relocated.

Response: *The new 4-inch storm drain line has been shown further away from the roots of the existing tree. A note has been added to provide protection to the root ball of the tree. There is sufficient room to perform the construction without significantly impacting the health of the tree. See sheet C-1 "Existing Site Plan".*

Geotechnical Report

The project geotechnical report was prepared by California Engineering Co. of Berkeley, California on the basis of 2 exploratory soil borings extending to maximum depths of about 6-feet below the ground surface. Laboratory testing included determination of moisture content, dry density, and gradation. Values for plasticity ("non-plastic") and compressive strength are noted on the boring logs, although the methods used to generate those data are unclear.

The report provides discussion of regional seismicity, regional geologic mapping, local rainfall data, liquefaction, settlement, and expansive soil hazards. The report provides recommendations for site preparation and grading, site drainage, seismic design, drilled- pier and mat slab type foundations, retaining wall design, seismic design, and utility trench backfill.

Comment 7: Section 17.072.080(E) - Geotechnical Report

We note that the report contains multiple discussions and references that are irrelevant to the site. Specifically, Page 5 notes "the subject site lies within the eastern portion of the San Francisco Bay Area," and the following discussion details several active fault traces in yet omits much closer and more likely seismic sources such as the Rodgers Creek and San Gregorio Faults. Section 5.3.1 (Drilled Pier Foundation) refers to a deck. The Conclusions and Limitation section alludes to feasibility of swimming pool construction (not included in current plan set), and the references section contains mostly east-bay geologic and reconnaissance landslide maps. The Geotechnical Engineer should review his report to confirm that the data, discussions, conclusions, and recommendations presented therein are applicable to this site and project and are not "holdover" sections from prior reports, typos, or other errors.

Response: *Report revised to address inconsistencies and correct references.*

Comment 8: Section 17.072.080(E) - Geotechnical Report

The log for Boring PA-1 indicates that boring encountered "silty sandy rocks" from the ground surface to a depth of just under 6-feet, while Boring PA-2 encountered silty sand and sandy clay materials. A uses soil classification chart is included as Figure 10; however, materials encountered in the borings are not assigned uses classifications. The Engineer should review his boring logs and provide soil classifications in accordance with standard USCS nomenclature. "Silty sandy rocks" is insufficient and it is not clear whether those materials constitute bedrock, gravel, or other materials. If possible, the Engineer should identify which geologic formation(s) these materials represent, particularly if subsequent hazards analysis is based on empirical or other correlations in lieu of actual test data (see Comments #7 through 9).

Response: *Boring data corrected on pages 36 and 37.*

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Comment 9: Section 17.072.080(E) - Geotechnical Report

The Geotechnical Report (Page 4) indicates the "site is mapped ... as "Qpa," but provides no further information. The included map appears to show the site as being underlain by map unit "fsr". Page 8 of the report indicates alluvial soils (Qal) were found at the site. Our site observations indicate most of the site is moderately- to steeply-sloping, and basin deposits or alluvial soils do not appear at the site on regional geologic maps of the area. Regardless, the Engineer should clarify/expound on the meaning of the map symbols, or provide a map legend clarifying what type of geologic materials are shown in the site vicinity

Response: *Report revised per comment.*

Comment 10: Section 17.072.080(E) - Geotechnical Report

The Geotechnical Report (Page 7) states "The sub-soil is considered homogeneous so the earthquake-induced differential settlement is low. We estimate less than ½ inch. Overall settlement from a seismic event is on the order of ¾ to 1-inch." The Engineer should clarify what is meant by "homogeneous sub-soil," how that affects potential seismic settlements, and what calculations or analysis was performed to arrive at the stated estimates.

Response: *Report revised per comment. See page 6 "Settlement Considerations".*

Comment 11: Section 17.072.080(E) - Geotechnical Report

The Geotechnical Report (Page 7) states "Holocene and Pleistocene basin deposits which was found at the site...", again prior to referencing any site-specific information regarding materials encountered in onsite borings. Later in the same paragraph, the report states "the seismic induced settlement is low to very low based on the above consideration including the study by Idriss and Boulanger empirical formulas." It is unclear which study or empirical formula is referred to, as no reference is included. Further, since neither the regional maps nor borings logs seem to indicate basin or alluvial deposits actually underlie the site, the basis for concluding "low to very low" settlement potential is unclear. The Engineer should review his data to clarify.

Response: *Report revised per comment. See page 6 "Settlement Considerations".*

Comment 12: Section 17.072.080(E) - Geotechnical Report

The Geotechnical Report (Page 8) states "Atterberg limits are LL=0, PL=0, PI=0" and references ASTM D-4829. However, ASTM D-4829 is a method for Expansion Index of soil, which does not consider liquid or plastic limits. The tested sample from Boring PA-2 is logged as "silty sand," which may be non-plastic. However, silty and clayey soils were encountered in both borings (including up to almost 80% passing the #200 sieve in Boring PA-1) which, in our local experience, are often slightly to moderately plastic. In Section 5.3.1, the Engineer recommends application of a creep load during design of drilled piers, which would seem to indicate soils are plastic or expansive. The Engineer should clarify the basis for his conclusion that on-site soils are "non-plastic" and provide supporting laboratory data plots as needed, since the sample submitted for testing does not appear to be representative of clayey near-surface soils, where they occur.

Response: *Report revised per comment. See page 6.*

Comment 13: Section 17.072.080(E) - Geotechnical Report

The Geotechnical Report (Page 10) states "The existing native soil on top of any cut must be excavated to the depth of 1-2 foot, if directed by the site geotechnical engineer following soil inspection, and soil hauled away. Imported engineering fill or recycled concrete can be used in place of the excavated 2-foot of native soil. The soil under the cut is good...." It is unclear why and where removal and replacement is recommended and how that relates to any "cut." The Engineer should clarify what is meant by this paragraph.

Response: *Report revised per comment. See page 8, "5.1 Site prep and earthwork operations".*

Comment 14: Section 17.072.080(E) - Geotechnical Report

Section 5.3.3 Mat Foundation recommends an impermeable membrane over free draining gravel and 2" sand over membrane under the mat slab. Additional details for the capillary break including the membrane type, thickness and type of gravel should be provided.

Response: *Note added, see page 11, 5.3.3.*

Comment 15: Section 17.072.080(E) - Geotechnical Report

The Geotechnical Report (Page 13) recommends that retaining wall active pressures for sloping backfill be determined either via straight-line interpolation or "be designed for the lateral pressure generated from the 95% relative compaction needed for the driveway and based on ASTM D-1557." The planned parking area is below all of the planned retaining walls, and as such it is unclear how driveway compaction relates to retaining wall active pressures. The Engineer should review his report and clarify how active pressures from soil compaction should be incorporated into the wall design.

Response: *Note revised, see page 11-12, 5.4 retaining walls.*

Comment 16: Section 17.072.080(E) - Geotechnical Report

The Geotechnical Report (Page 14) quotes the 2013/2016 CBC which has been superseded by the 2019 CBC. The Engineer should review and update his report as needed to confirm the information presented reflects the current edition of the CBC.

Response: *Reference removed.*

Comment 17: Section 17.072.080(E) - Geotechnical Report

Page 14 of the report refers to CBC Table 1610.1 for soil lateral loads. These values conflict with the recommended soil lateral loads on Page 13 of the report. Engineer should clarify which soil lateral loads should be used.

Response: *Reference removed, see 5.4.*

Comment 18: Section 17.072.080(E) - Geotechnical Report

The Geotechnical Report (Page 16) refers to the 2016 CBC for seismic design, which has been superseded by the 2019 CBC. The Report also indicates the site should be classified as Site Class "D" for the purpose of seismic design. Site Class "D" is defined as "stiff soil;" however, Boring PA-2 seems to indicate bedrock may underlie the site at relatively shallow depth. The Engineer should review his data, confirm the applicable recommended Site Class, and confirm that the seismic design recommendations are in accordance with the current 2019 CBC.

Response: *Updated per comment.*

- Comment 19: Section 17.072.080(E) - Geotechnical Report
The Geotechnical Report (Page 16) recommends jetted sand utility bedding. Jetting is an outdated practice and rarely used. The report should specify recommended percent compaction of the pipe bedding.
- Response:** *Report revised and updated. See page 14.*
- Comment 20: Section 17.072.080(E) - Geotechnical Report
The Geotechnical Report (Page 16) states "post-construction settlementshould not exceed 1-2 inch, however due to the nature of this soil, settlements may exceed the above- stated values." This is somewhat contradictory to the previous statement regarding seismic settlements and the basis for this conclusion is unclear. Further, if the structure will be prone to settlements, the Engineer should provide recommendations to mitigate such settlements.
- Response:** *Conclusion revised, see page 14, 5.7.*
- Comment 21: Section 17.072.080(E) - Geotechnical Report
The Geotechnical Report does not provide Cal/OSHA soil-type classifications or recommendations for temporary cut slopes, such as will be needed while retaining walls are constructed and backfilled. The Engineer should provide soil-type classifications in accordance with Cai/OSHA guidelines along with recommended maximum allowable inclination of temporary cut slopes.
- Response:** *Report revised, see page 15, 5.11.*
- Comment 22: Section 17.072.080(F) -Grading and Erosion-Control Plan
The grading and drainage plan shows planned downspout collector pipes and alignments but does not show either retaining wall back drains or any other surface improvements. Additionally, no detail is provided regarding proposed surfaced treatment around the new addition. If new hardscape will be provided around the perimeter of the new addition, or near the entry area above the lower retaining wall, that needs to be shown. Surface drainage improvements should also be shown as recommended by the Geotechnical Engineer.
- Response:** *Retaining wall and Foundation drains have been included with cleanouts that daylight into the landscaping downhill. The hardscape around the new construction has been added along with the extents of the existing concrete pathways to remain. See sheet C-1 "Existing Site Plan" and sheet C-2 "Proposed Site Plan".*
- Comment 23: Section 17.072.110(C) - Geotechnical Report Adequacy
It is our opinion that the current geotechnical report does not clearly address potential geologic hazards which may impact the site. The report provides outdated and/or irrelevant references and appears to provide limited data and analysis to justify the conclusions and recommendations, some of which are contradictory. The report should be updated to reflect the comments above and resubmitted.
- Response:** *Report updated and revised per comment.*

End of List

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We trust the above responses adequately address all your concerns. Feel free to call us if you have any questions or need additional clarification.

Sincerely,

A handwritten signature in black ink, appearing to read 'William Yee', with a long horizontal flourish extending to the right.

William Yee
Senior Project Manager

Enclosures: 152 Porteous Revocable Trust Deed
Revised Civil Sheets, C-1 & C-2 – Dated 3/07/2022

WY/kp

PROJECT NARRATIVE AND SCOPE

Residential addition to existing structure, new building access, stair entry and roofing. No additional bedrooms or bathrooms to be added.

It is the intent of this renovation to ensure the good design and congruency of appearance of the project with surrounding residential properties. There has been a focused attention to maintain the aesthetic and functional aspects of the project to this accord.

HILL AREA RESIDENTIAL DEVELOPMENT (HRD) ADDITIONAL INFORMATION

EROSION CONTROL PLAN

During construction, regular mist spraying of adjacent here is expected to be a low intensity level of the work to be done with this project, and no existing trees are in the construction area, so there is little danger of damage to the live oaks and other trees currently on the property.

Waddles will be used to retain any drainage that may occur, installed with wooden stakes to keep them in place. These can be fixed in place during the entire construction project.

GRADING PLAN

Re-vegetation program as described in Vegetative Management Plan schedule.

Project has been designed to comply with the Ross Valley Fire Authority HRD OVERLAY ZONE DEVELOPMENT STANDARDS, Chapter 17.072 of the Fairfax Zoning Ordinance to include maximum retention of topographic features (i.e. drainage ways, slopes, trees, etc.). There will be a minimal grading of the hillside, and as a result, any water runoff will be channeled into installed 4" drainage pipe, leaching out in perforated 4" pipe upon clearance of the structure. This shall create a minimal amount of drainage runoff and soil erosion problems during and after construction as this issue has been addressed prior to approval of the project.

USE PERMIT APPLICATIONS

The project is for residential family use by the owner-builder, and any labor shall utilize family members for supply, labor, and expertise. There will be no known busy shifts as the project is to be owner builder in method.

The hours of construction shall be between 8am and 5pm to comply with local noise ordinances. Any weekend work shall comply with said ordinances as well.

Special equipment is noted on the Floor Plan submittal with approximate location during construction.

No employee living areas are needed, and the immediate family consisting of 2 adults will be residing in the lower unit (152-A) on the property during the construction.

The approval of this use permit shall not interfere nor contravene with the doctrines and ordinances of the Town of Fairfax, and “shall not create a public nuisance, cause excessive or unreasonable detriment to adjoining properties or premises, or cause adverse physical or economic effects thereto, or create undue or excessive burdens in the use and enjoyment thereof, any or all of which effects are substantially beyond that. Which miht occur without approval or issuance of the use permit”.

“Approval of the use permit is not contrary to those objectives, goals or standards pertinent. To the particular case and contained or set forth in any master plan, development plan or other plan or policy, officially adopted by the town”(1.)

PERSONAL SUMMARY

As recent transplants from Sacramento, we have fallen in love with the town of Fairfax. We have enjoyed our first 14 months of living in this community and have gotten to know many of our neighbors already in such a short time frame.

We cherish the place we have found, and are grateful to have found such a friendly, safe, and child friendly environment in our little enclave of Deer Park, and wish to continue to live in harmony and peace. We are eager to do this remodel in order to fully add value to the location and livability of our property.

All of our choices in design, materials, scope and functionality have been made with this credo in mind.

We appreciate the opportunity to present this project with that mindset to its fullest potential.

Thank you!

Peter Brown and family

TOPOGRAPHICAL SURVEY

Imperative to note that two survey marker pins have been found at the property boundary of the Southeast neighbor (160 Porteous Avenue). These pins mark the property boundary between 152 Porteous and 160 Porteous Avenue. As they have been documented in our topographical survey submitted with this proposal, and signed with seal by Benjamin P. Jordan, P.E. California Civil Engineer CA#66196, they are being utilized to serve as property markers in lieu of a formal boundary survey. The probability of obtaining such a boundary survey has been problematic in our quest to avoid waiting many months for a licensed engineer to be available to complete the task.

It is the aspiration of this proposal to apply the two market pins for purposes of satisfying the requirements for a boundary survey as part of the Town of Fairfax Planning needs.

LANDSCAPE PLAN

New plantings will be native, drought tolerant as specified in Vegetative Management Plan (VMP). Since there is a limited number of these, they will only need hand watering until established. Existing plants and shrubs are all established without irrigation lines. Locations are identified by plant/shrub type on the VMP for existing and future plantings with two-letter abbreviations to denote specific locations.

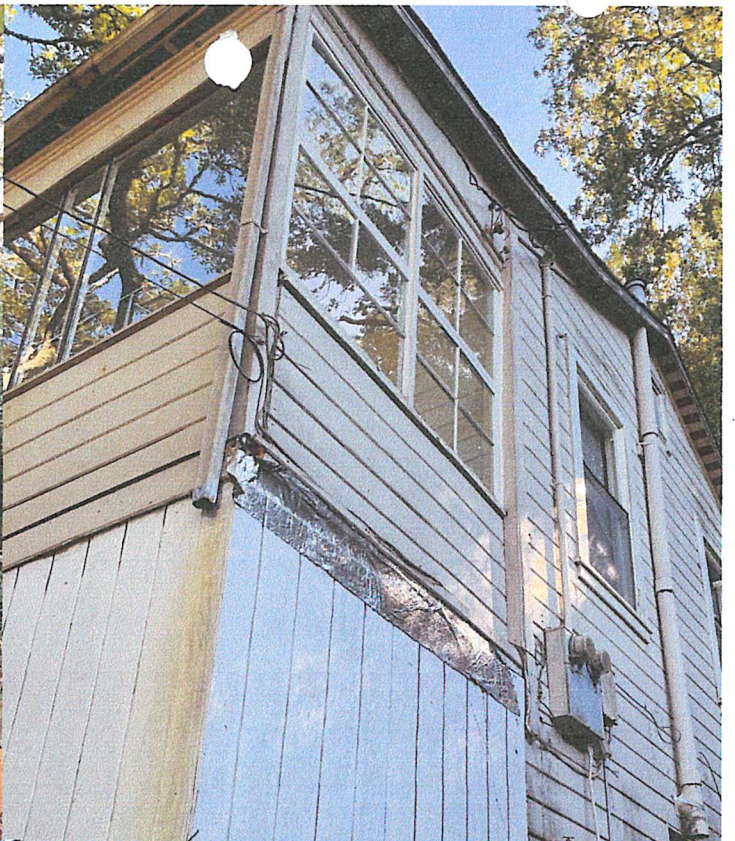
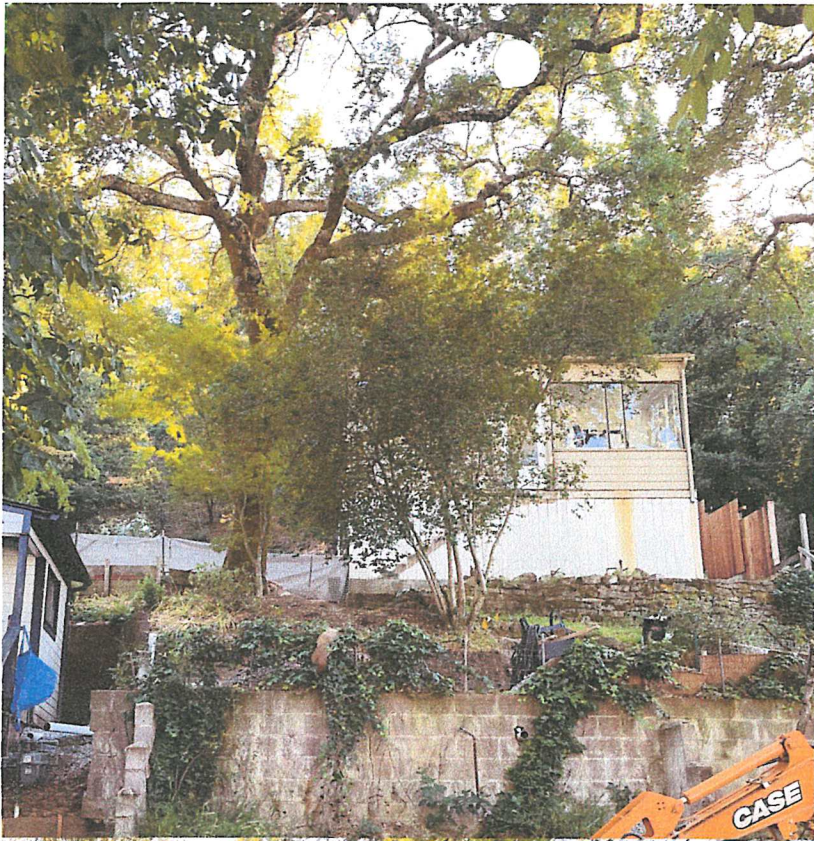
LIGHTING PLAN

Repurpose existing outdoor lighting fixture (photo attached exhibit A) on east side of main structure above front entry stairs. The new portion of the project will have lighting at each exterior penetration door (front and back), also low-wattage lighting. This makes a total of 3 lights. These shall be no more than 65-Watt LED bulbs for all locations. We will NOT be installing any obtrusive or undesirable lighting (i.e. flood lighting, high wattage) that would hinder or disrupt our neighbors.

Lighting Plan



Exhibit "A"





April 29, 2022
File: 201.207cltr.doc

Town of Fairfax
Planning and Building Services Department
142 Bolinas Avenue
Fairfax, California 94930

Attn: Ms. Linda Neal, Principal Planner

Re: Third Planning-Level Geologic, Geotechnical, and Civil Engineering Review
New Residential Addition, Site Retaining Walls, and Associated Improvements
152 Porteous Avenue (APN 002-071-09)
Fairfax, California

Introduction

In response to your request and in accordance with our agreement dated March 20, 2018, this letter summarizes our second planning-level review of project plans and supporting documentation for the planned new residential addition, site retaining walls, and associated improvements at 152 Porteous Avenue (APN 002-071-09) in Fairfax, California. We previously performed a First Review of project submittal documents and summarized our comments in a letter dated January 31, 2022.

The purpose of our services is to review the submitted documents, comment on the completeness and adequacy of the submittal in consideration of Town requirements, and to provide a recommendation to Town Planning staff regarding project approval.

The scope of our services to date has included:

- A site reconnaissance to observe existing conditions and review proposed development features;
- Development of opinions regarding project compliance with applicable Town Hill Area Residential Development Overlay Zone requirements; and
- Development of recommendations to Town staff as to whether the project may be safely constructed in consideration of any geologic, hydrologic, or geotechnical hazards.

The purpose of our current review is to determine whether all planning-level geotechnical comments and conditions of approval are appropriately reflected by the building plans. It should be noted that the scope of our review is limited solely to geologic, geotechnical, and civil portions of the project, and does not include review of structural, architectural, mechanical, or other items beyond the scope of our qualifications. We recommend that non-geotechnical aspects of the plans be reviewed by suitably qualified professionals.

Project Description

The project includes construction of a new, approximately 300 square-foot, addition to the rear/upslope side of the existing single-story residence. The new addition will accommodate an updated/renovated interior layout and a new upper-floor loft area. New site retaining walls 6-feet high will be required to retain the cut planned for the new construction. Additional improvements include a new landscape area, new access/entry stairs, new concrete parking, storm drains and other miscellaneous items.

Project Review

We performed a brief site reconnaissance on January 21, 2021 to observe existing conditions at the site and we reviewed the following documents provided by the Town as part of our First Review.

- Arborlogic (2021), "Arborist Development Impact Assessment, Brown/Carter Residence Development, 152 Porteous Avenue, Fairfax, California 94930", dated November 12, 2021.
- Benjamin P. Jordan, P.E. (2021), "Brown/Carter Residential Addition, 152 Porteous Avenue, Fairfax, CA" (Civil Plans), Sheets C1 through C4, Plan Check comments set dated December 23, 2021.
- California Engineering Co. (2021), "Geotechnical Soil Report, Foundation for Retaining Walls and Additions, 152 Porteous Avenue, Fairfax, California", dated April 18, 2021.
- First American Title Company (2020), "Preliminary Report (Fee Title Report), Order Number 2103-6122318, dated January 2, 2020.
- Stephen Flatland Land Surveyor (2005), "Record of Survey, Lands of Sudduth, D.N. 00-536539", recorded May 17, 2005.
- Weir-Andrewson Associates (2021), "Brown/Carter Residential Addition, 152 Porteous Avenue, Fairfax, CA" (Architectural Plans), Sheets A-001 through A-401, Plan Check comment set dated November 30, 2021.

More recently, we reviewed the following documents for our second review:

- Benjamin P. Jordan, P.E. (2022), "Brown/Carter Residential Addition, 152 Porteous Avenue, Fairfax, CA" (Civil Plans), Sheets C1 and C2, Plan Check comments set dated December March 7, 2022.
- California Engineering Co. (2022), "Geotechnical Soil Report, Foundation for Retaining Walls and Additions, 152 Porteous Avenue, Fairfax, California", revised February 6, 2022.
- Marin County Assessor-Recorder, "Grant Deed," APN 002-071-09, record # 2021-0005442, dated January 6, 2021.
- Weir-Andrewson Associates (2022), "152 Porteous Avenue – Residential Planning Application" (Response to Plan Check Comments), W/A Project # 21023, dated March 8, 2022.

Finally, we have review the following responses to our Second Review comments:

- California Engineering Co. (2022), "Response to Second Review Letter by Miller Pacific Engineering Group dated March 18, 2022 for Soil Report dated Feb 6, 2021 for 152 Porteous Avenue, Fairfax, California", dated April 5, 2022.

Conclusions

Based on our site reconnaissance and document review, the following submittal items required by the Town of Fairfax Hill Area Residential Development Ordinance remain outstanding:

Hill Area Residential Development Ordinance

- Section 17.072.080(F) – Grading and Erosion-Control Plan
 - 1) The grading and drainage plan indicates that runoff from roof gutter downspouts (for the existing structures and new addition) will be collected and discharged via a pair of new 4-inch subdrain pipes cored through the curb. In general, we concur that site drainage should be discharged to the gutter pan along Manor Drive. However, given the planned new impermeable surface area and relatively limited capacity of the municipal storm drain system, new site drainage improvements should be designed on the basis of hydrologic analysis considering, at minimum, the effects of a 100-year storm, and which results in a post-project peak offsite flow rate less than or equal to current conditions.
- Section 17.072.110(C) – Geotechnical Report Adequacy

We judge that the responses provided by the Geotechnical Engineer to our Second Review comments are adequate. It is our opinion that the site may be safely developed on the basis of the Engineer's recommendations.

Recommendations

It our opinion that all of our planning-level comments have been substantially addressed, and recommend that project processing continue at the planning level.

Remaining comments, including review of design-level Grading, Drainage, Structural, and Erosion control plans and hydrologic calculations can be handled at the Building Permit submittal level with minimal anticipated impact. We should review these items prior to issuance of a building permit.

We trust that this letter contains the information you require at this time. If you have any questions, please call. We will directly discuss our comments with the applicant's consultants if they wish to do so.

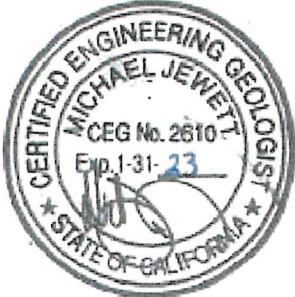
MILLER PACIFIC ENGINEERING GROUP

Town of Fairfax
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April 29, 2022

Yours very truly,
MILLER PACIFIC ENGINEERING GROUP

REVIEWED BY:



Mike Jewett
Town of Fairfax Contract Geologist
Engineering Geologist No. 2610
(Expires 1/31/23)



Scott Stephens
Town of Fairfax Contract Engineer
Geotechnical Engineer No. 2398
(Expires 6/30/23)



TOWN OF FAIRFAX

142 BOLINAS ROAD, FAIRFAX, CALIFORNIA 94930
(415) 453-1584 / FAX (415) 453-1618

Date: December 21, 2021

Permit #21-T-104

NOTICE OF TREE COMMITTEE ACTION

This action may be appealed to the Fairfax Town Council within 10 days of the Tree Committee decision. This permit is not in effect until the 10 day appeal period is over.

Request for a tree permit to remove: (1) Coast Live Oak

Address of Tree(s) to be removed: 152 Porteous Ave

Applicant's Phone: Peter Brown (415) 910-9060

On December 20, 2021 the Fairfax Tree Committee took the following action on the above referenced tree permit application:

FOR RECOMMENDATION ONLY TO PLANNING COMMISSION

 X APPROVED - Romaidis moved to approve this recommendation to the Planning Commission, seconded by Pugh.

Vote

Benson - Abstain

Childers - Aye

Pugh - Aye

Richardson-Mack - Abstain

Romaidis - Aye

Item 9 Vote Ayes-3, Noes-0, Abstain-2

REMINDER: PLEASE KEEP PERMIT NOTICE UP DURING THE 10 DAY WAITING PERIOD

 CONTINUED

 DENIED

CONDITIONS OF APPROVAL:

THIS APPROVED APPLICATION IS YOUR PERMIT-KEEP IT ON THE JOB SITE. FAILURE TO HAVE THE PERMIT ON THE SITE WHILE THE TREE WORK IS IN PROGRESS MAY RESULT IN THE WORK BEING HALTED UNTIL YOU SHOW PROOF OF APPROVAL.

Please verify that the tree company performing the work has a current Fairfax Business license and worker's compensation coverage.

THIS TREE PERMIT EXPIRES IN SIX MONTHS. If necessary, you may apply for an extension in writing prior to the expiration date.

ATTACHMENT F



FOR RECOMMENDATION ONLY TO PLANNING COMMISSION

TOWN OF FAIRFAX

142 BOLINAS ROAD, FAIRFAX, CA 94930
(415) 453-1584 / FAX (415) 453-1618

DEC 02 2021

APPLICATION FOR TREE REMOVAL OR ALTERATION

A permit is required to remove or alter one or more trees on any parcel in the Town of Fairfax. All trees for which a permit is requested shall be tagged with an orange ribbon, a minimum of 10 days prior to the Tree Advisory Committee meeting date. Applicants must also post a notice of intent to alter or remove the marked Tree(s) in a prominent location visible along the frontage of the affected property.

APPLICANT INFORMATION

OWNER (APPLICATIONS MUST BE FILED BY PROPERTY OWNER): <i>Peter Brown</i>	DATE OF APPLICATION: <i>11/19/21</i>
JOB ADDRESS/ASSESSOR'S PARCEL NO. IF SITE IS VACANT <i>152 Portals Ave.</i>	PHONE NUMBER: <i>415.910.9060</i>
EMAIL ADDRESS: <i>peterthomasbrown@gmail.com</i>	FAX NUMBER: —
PROPERTY OWNER'S ADDRESS IF DIFFERENT FROM ABOVE —	ALTERNATE PHONE NUMBER: —

TREE INFORMATION

SPECIES AND DESIGNATION OF HERITAGE/SPECIMEN/UNDESIRABLE TREE: <i>coast live oak (Quercus agrifolia)</i>	CIRCUMFERENCE BREAST HEIGHT: <i>diameter 7.1 & 6.3"</i>
	REASON FOR REMOVAL ALTERATION <i>poor condition, trunk decay.</i>
SPECIES AND DESIGNATION OF HERITAGE/SPECIMEN/UNDESIRABLE TREE:	CIRCUMFERENCE BREAST HEIGHT:
	REASON FOR REMOVAL/ALTERATION
SPECIES AND DESIGNATION OF HERITAGE/SPECIMEN/UNDESIRABLE TREE:	CIRCUMFERENCE BREAST HEIGHT:
	REASON FOR REMOVAL/ALTERATION
SPECIES AND DESIGNATION OF HERITAGE/SPECIMEN/UNDESIRABLE TREE:	CIRCUMFERENCE BREAST HEIGHT:
	REASON FOR REMOVAL/ALTERATION

Please attached a site plan to this application showing the location and species of all trees with a diameter of 4 inches (circumference of 12 inches or more), measured 4.5 feet above grade at tree base, property boundaries and easements, location of structures, foundation lines of neighboring structures and paved areas including driveways, .

AGENDA ITEM # 9

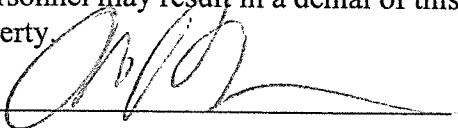
Any tree company used for the removal or alteration must have a current and valid Fairfax Business license. Please include the name, address, and phone number of the person or company doing the above listed work:

NAME: Flores Tree Service	PHONE NUMBER: 415.342.0105
ADDRESS: 1 St Vincent Dr, San Rafael	CONTRACTOR BUSINESS LICENSE NUMBER: 1005732

Please note the Tree Advisory Committee may require applicants to submit their application to a Qualified Arborist for a report or recommendation at the expense of the applicant. A Qualified Arborist is defined as a Certified Arborist, A Certified Urban Forester, a Registered Consulting Arborist, or a Registered Professional Forester.

OWNER'S STATEMENT

I understand that in order to properly process and evaluate this application, it may be necessary for Town personnel to inspect the property, which is the subject of the application. I also understand that due to time constraints it may not always be possible for Town personnel to provide advanced notice of such inspections. Therefore, this application will be deemed to constitute my authorization to enter upon the property for the purpose of inspecting the same, provided that Town personnel shall not enter any building on the property except in my presence or the presence of any other rightful occupant of such building. I understand that my refusal to permit reasonable inspection of any portion of the property by town personnel may result in a denial of this application due to the lack of adequate information regarding the property.



Signature of Property Owner

11/29/21

Date

[AREA BELOW FOR STAFF USE ONLY]

Permit Number: 21-T-104	
Date Received: 12-2-21	Received by: S. Water
Conditions of Approval:	
Tree Committee Action:	Date:

Tree Committee Actions can be appealed to the Town Council within 10 days of the Tree Committee Action. Contact Town Hall for more information.

TREE PROTECTION MEASURES:

1. SOME OF THE PROPOSED DEVELOPMENT IS LOCATED WITHIN THE MOST IMPROVED ZONES OF EXISTING PROTECTED TREES AND SPECIAL TREE AREAS. THE TREE PROTECTION PLAN SHALL BE PREPARED, REVISIONS REQUIRED AND APPROVED WITHIN THIS PLAN AND IMPLEMENTED.
2. THE TREE PROTECTION PLAN SHALL BE PREPARED PRIOR TO ANY TREE REMOVAL OR CONSTRUCTION ACTIVITIES.
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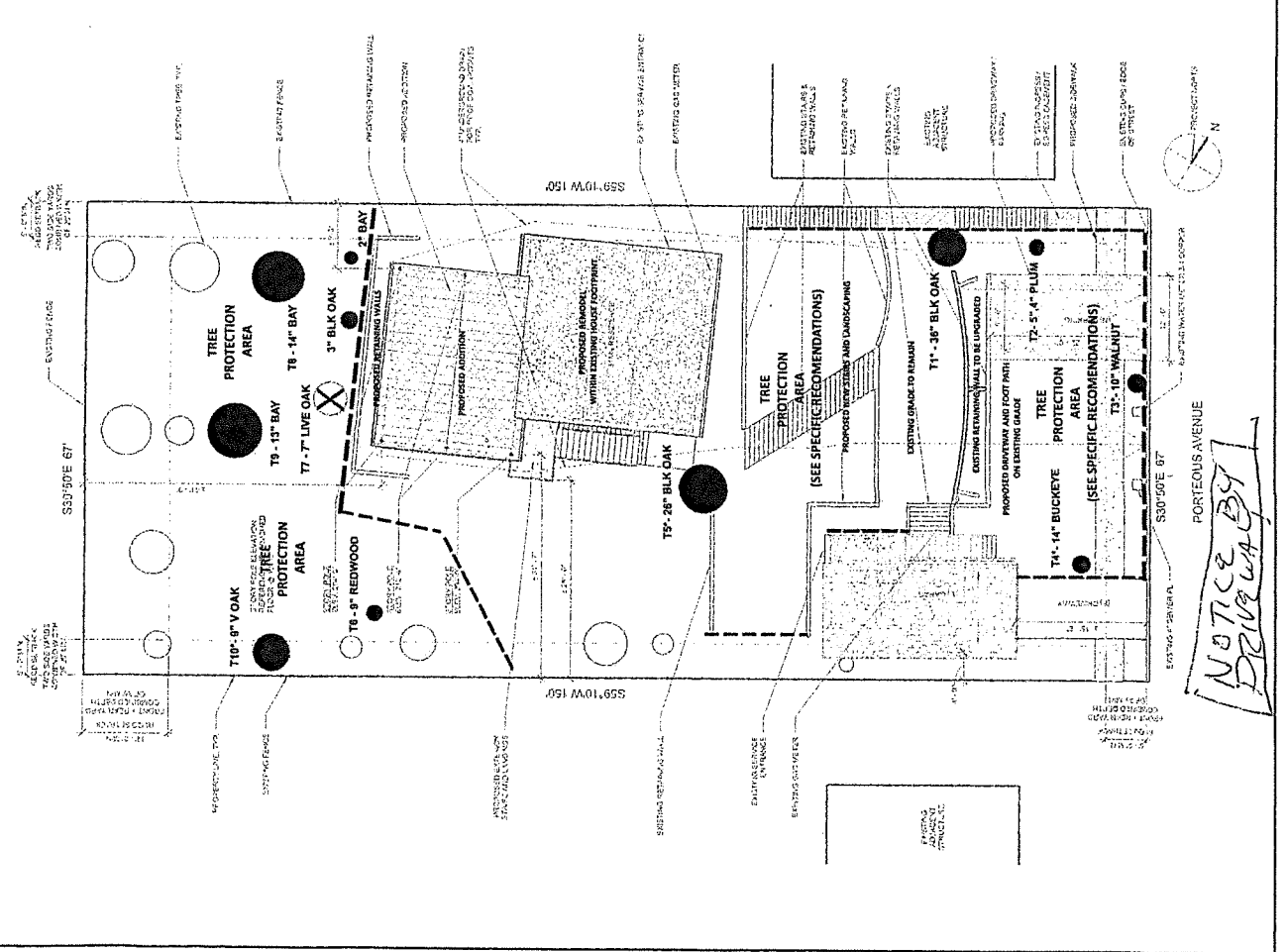
TREE ID	DATE	STATUS	HEIGHT	DBH	SP. SPECIES	COMMENTS
T1	10/15/21	REMOVED	12'	3"	REDWOOD	REMOVED FOR CONSTRUCTION
T2	10/15/21	REMOVED	10'	2"	REDWOOD	REMOVED FOR CONSTRUCTION
T3	10/15/21	REMOVED	15'	4"	REDWOOD	REMOVED FOR CONSTRUCTION
T4	10/15/21	REMOVED	18'	5"	REDWOOD	REMOVED FOR CONSTRUCTION
T5	10/15/21	REMOVED	20'	6"	REDWOOD	REMOVED FOR CONSTRUCTION
T6	10/15/21	REMOVED	22'	7"	REDWOOD	REMOVED FOR CONSTRUCTION
T7	10/15/21	REMOVED	24'	8"	REDWOOD	REMOVED FOR CONSTRUCTION
T8	10/15/21	REMOVED	26'	9"	REDWOOD	REMOVED FOR CONSTRUCTION
T9	10/15/21	REMOVED	28'	10"	REDWOOD	REMOVED FOR CONSTRUCTION
T10	10/15/21	REMOVED	30'	11"	REDWOOD	REMOVED FOR CONSTRUCTION
T11	10/15/21	REMOVED	32'	12"	REDWOOD	REMOVED FOR CONSTRUCTION
T12	10/15/21	REMOVED	34'	13"	REDWOOD	REMOVED FOR CONSTRUCTION
T13	10/15/21	REMOVED	36'	14"	REDWOOD	REMOVED FOR CONSTRUCTION
T14	10/15/21	REMOVED	38'	15"	REDWOOD	REMOVED FOR CONSTRUCTION
T15	10/15/21	REMOVED	40'	16"	REDWOOD	REMOVED FOR CONSTRUCTION
T16	10/15/21	REMOVED	42'	17"	REDWOOD	REMOVED FOR CONSTRUCTION
T17	10/15/21	REMOVED	44'	18"	REDWOOD	REMOVED FOR CONSTRUCTION
T18	10/15/21	REMOVED	46'	19"	REDWOOD	REMOVED FOR CONSTRUCTION
T19	10/15/21	REMOVED	48'	20"	REDWOOD	REMOVED FOR CONSTRUCTION
T20	10/15/21	REMOVED	50'	21"	REDWOOD	REMOVED FOR CONSTRUCTION

LEGEND

- T1 - T20 - TREE NUMBERS
- TX - HERITAGE SIZE TREES
- X - TREE REMOVALS
- - PROTECTION FENCE

SPECIFIC TREE PROTECTION:

1. THE PROPOSED DEVELOPMENT IS LOCATED WITHIN THE MOST IMPROVED ZONES OF EXISTING PROTECTED TREES AND SPECIAL TREE AREAS. THE TREE PROTECTION PLAN SHALL BE PREPARED, REVISIONS REQUIRED AND APPROVED WITHIN THIS PLAN AND IMPLEMENTED.
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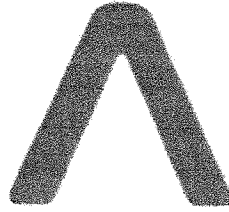
NOTICE DRIVEWAY

152 PORTEOUS AVE -

SITE PLAN: Provided by Wolf / Anderson & Associates, San Rafael, California. See Site Plan A-101 (current).

TREE DATA: Provided by ArborLogic Consulting Arborist, San Francisco, California. See Arborist Report dated November 12, 2021.

James H. Wolf, Principal Consulting Arborist
 152 Porteous Avenue, FAIRFAX, CA 94930



ARBORLOGIC
CONSULTING ARBORISTS

ARBORIST REPORT

November 12, 2021

Arborist Development Impact Assessment

Brown / Carter Residence Development

152 Porteous Avenue, Fairfax, California 93930

A.P.N. 002-071-09

Prepared for:
Town of Fairfax
Community Development: Planning Department

Prepared by:
ArborLogic Consulting Arborists
James Lascot, Principal Consulting Arborist
236 West Portal Ave. #311,
San Francisco, CA 94127
415.753.5022
jlascot@arborlogic.com

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TREE PROTECTION PLAN SHEET T1	ATTACHMENT

ARBORIST ASSIGNMENT

An 'Arborist Development Impact Assessment' is used to aid in planning and plan review, for the identification/location of trees on the site during the design of the project, placement of structures, driveways, utilities, and construction activities.

It also is used to identify trees of designated size and species that are protected under the municipal or county code that is applicable for the site location. And if required by the governing agency, can be used to establish monetary values and responsibility for potential loss of tree resources for the property owner and the community.

ArborLogic Consulting Arborists have been contracted to inspect existing trees on this property, to provide an inventory with condition assessment, to determine potential negative impact from proposed construction activity, and to recommend impact mitigation measures to be considered on 'Heritage' trees as defined by the Town of Fairfax Municipal Code (Chapter 8.36. Trees).

Consulting arborist, James Lascot, performed site visits and visual tree inspections on October 30, 2021.

Refer to Tree Protection Plan Sheet T-1 for tree locations and additional information.

SUMMARY

This site is a developed residential property that has proposed development that includes a remodel of the existing structure, a driveway with parking, an addition to the rear of the house, pathways, and retaining walls. The subject trees consist of existing trees within the vicinity of the proposed development and included within the site plan. The Subject Trees total ten (10) individuals consisting of eight (8) species. There are no subject trees located on neighboring property.

There are several trees designated for retention that are Heritage sized trees (T1, T3, T4, and T5) that are close to the proposed development and all trees will be fenced off within a tree protection area that will require special mitigation as outlined within this report and the tree protection plan sheet T-1.

There is one young Non-Heritage native oak tree T7 that is designated for removal due to chronic structural defects and its proximity to the proposed rear retaining wall.

RESOURCES

All information within this report is based on currently submitted plans and revisions as of the date of this report.

Resources are as follows:

- Site Plan Sheet (current) Provided by Weir / Anderson and Associates, Architects, San Rafael, California
- Town of Fairfax California Municipal Code Chapter 8.13: Trees

SUBJECT TREE SUMMARY**TOTAL SUBJECT REMOVALS:****TREE REMOVAL FOR PROPOSED DEVELOPMENT:**

'HERITAGE' size trees: Total = 0

'UNPROTECTED' size trees: Total = 1

1 Coast live oak (*Quercus agrifolia*) T7

TREE REMOVAL (DEAD, DYING, DISEASED, HAZARDOUS, FALLEN, AND FLAMMABLE):

'HERITAGE' size trees: Total = 0

'UNPROTECTED' size trees: Total = 0

SUBJECT SPECIES LIST**SUBJECT TREES: Total = 10 trees**

- 2 California black oak (*Quercus kelloggii*) T1* and T5*
- 2 California bay laurel (*Umbellularia californica*) T8, and T9
- 1 California Buckeye (*Aesculus californica*) – T4*
- 1 English walnut (*Juglans regia*) T3*
- 1 Coast live oak (*Quercus agrifolia*) – T7
- 1 American plum (*Prunus americana*) T2
- 1 Coast redwood (*Sequoia sempervirens*) T6
- 1 Valley oak (*Quercus lobata*) T10

* = Heritage size protected tree

INDIVIDUAL TREE ASSESSMENT**TREE T1:** California black Oak (*Quercus kelloggii*)

Trunk Diameter at 4.5 feet above soil grade: 36-inches

Trunk Circumference at 4.5 feet above soil grade: 113-inches

Status: Heritage Tree **Age:** Mature **Canopy spread:** 60-feet to the northeast

Health: Good **Condition:** Fair; tree is located on a steep slope on near existing retaining wall and slope requires ongoing upgrades to sustain slope and tree.

Suitability for Preservation Rating: 3-Fair

Root Intrusion Zone: Radius of 36-feet from trunk location

Critical Root Zone: Radius of 12-feet from trunk location

Recommendation: Preserve with mitigation.

Preservation specifications:

- 1.1 Tree Preservation Fencing shall be installed to designate the Tree Protection Zone of this tree and shall consist of no less than 4-foot tall metal fencing on no less than 5-foot posts that shall be maintained throughout construction unless otherwise recommended by a qualified project arborist.
- 1.2 Design driveway and pathways materials and elevations to avoid soil cuts within the root zones of this tree.
- 1.3 Design stairs with re-enforced cement or piers within the root intrusion zone of this tree to minimize excavation depths. All excavation shall be performed by hand retaining roots over two-inch (2") diameter. Any roots over two-inch (2") diameter shall only be removed under the direct supervision of the project arborist.
- 1.4 Projected arborist shall directly supervise all excavation within the root intrusion zone of this tree.

TREE T2: American plum (*Prunus americana*)

Trunk Diameter at 4.5 feet above soil grade: 5.3 and 3.6-inches

Trunk Circumference at 4.5 feet above soil grade: 28-inches

Status: Tree **Age:** Young **Canopy spread:** 10-feet to the east

Health: Good; no apparent health problems. **Condition:** Fair; no structural problems but has significantly broken driveway curbs and uplifting of driveway asphalt creating a pedestrian trip hazard.

Suitability for Preservation Rating: 3-Fair

Root Intrusion Zone: Radius of 3.6-feet from trunk location

Critical Root Zone: Radius of 2.4-feet from trunk location

Recommendation: Preserve with mitigation.

Preservation specifications:

- 1.5 Tree Preservation Fencing shall be installed to designate the Tree Protection Zone of this tree and shall consist of no less than 4-foot tall metal fencing on no less than 5-foot posts that shall be maintained throughout construction unless otherwise recommended by a qualified project arborist.
- 1.6 Design driveway and pathways materials and elevations to avoid soil cuts within the root zones of this tree.
- 1.7 Design stairs with re-enforced cement or piers within the root intrusion zone of this tree to minimize excavation depths. All excavation shall be performed by hand retaining roots over two-inch (2") diameter. Any roots over two-inch (2") diameter shall only be removed under the direct supervision of the project arborist.
- 1.8 Projected arborist shall directly supervise all excavation within the root intrusion zone of this tree.

TREE T3: English walnut (*Juglans regia*)

Trunk Diameter at 4.5 feet above grade: 10.4-inches

Trunk Circumference at 4.5 feet above soil grade: 33-inches

Status: Heritage Tree **Age:** Mature **Canopy spread:** 10-feet on center

Health: Good; no apparent health problems. **Condition:** Fair; this tree is old for its species, no structural problems, and is crowded from sunlight by surrounding trees.

Suitability for Preservation Rating: 3-Fair

Root Intrusion Zone: Radius of 10-feet from trunk location

Critical Root Zone: Radius of 3.5-feet from trunk location

Recommendation: Preserve with mitigation.

Preservation specifications:

- 1.9 Tree Preservation Fencing shall be installed to designate the Tree Protection Zone of this tree and shall consist of no less than 4-foot tall metal fencing on no less than 5-foot posts that shall be maintained throughout construction unless otherwise recommended by a qualified project arborist.
- 1.10 Design driveway and pathways materials and elevations to avoid soil cuts within the root zones of this tree.
- 1.11 Design stairs with re-enforced cement or piers within the root intrusion zone of this tree to minimize excavation depths. All excavation shall be performed by hand retaining roots over two-inch (2") diameter. Any roots over two-inch (2") diameter shall only be removed under the direct supervision of the project arborist.
- 1.12 Projected arborist shall directly supervise all excavation within the root intrusion zone of this tree.

TREE T4: California buckeye (*Aesculus californica*)

Trunk Diameter at 4.5 feet above grade: 10.4-inches

Trunk Circumference at 4.5 feet above soil grade: 33-inches

Status: Heritage Tree **Age:** Mature **Canopy spread:** 10-feet on center

Health: Good; no apparent health problems. **Condition:** Fair; this tree is old for its species, no structural problems, and is crowded from sunlight by surrounding trees.

Suitability for Preservation Rating: 3-Fair

Root Intrusion Zone: Radius of 10-feet from trunk location

Critical Root Zone: Radius of 3.5-feet from trunk location

Recommendation: Preserve with mitigation.

Preservation specifications:

- 1.13 Tree Preservation Fencing shall be installed to designate the Tree Protection Zone of this tree and shall consist of no less than 4-foot tall metal fencing on no less than 5-foot posts that shall be maintained throughout construction unless otherwise recommended by a qualified project arborist.
- 1.14 Design driveway and pathways materials and elevations to avoid soil cuts within the root zones of this tree.
- 1.15 Design stairs with re-enforced cement or piers within the root intrusion zone of this tree to minimize excavation depths. All excavation shall be performed by hand retaining roots over two-inch (2") diameter. Any roots over two-inch (2") diameter shall only be removed under the direct supervision of the project arborist.
- 1.16 Projected arborist shall directly supervise all excavation within the root intrusion zone of this tree.

TREE T5: California black Oak (*Quercus kelloggii*)

Trunk Diameter at 4.5 feet above grade: 26-inches

Trunk Circumference at 4.5 feet above soil grade: 82-inches

Status: Heritage Tree **Age:** Young **Canopy spread:** 60-feet on center

Health: Good **Condition:** Fair; tree is located on a steep slope on near existing main house.

Suitability for Preservation Rating: 2-Good

Root Intrusion Zone: Radius of 20-feet from trunk location

Critical Root Zone: Radius of 8.7-feet from trunk location

Recommendation: Preserve with mitigation.

Preservation specifications:

- 1.17 Tree Preservation Fencing shall be installed to designate the Tree Protection Zone of this tree and shall consist of no less than 4-foot tall metal fencing on no less than 5-foot posts that shall be maintained throughout construction unless otherwise recommended by a qualified project arborist.
- 1.18 Design stairs with re-enforced cement or piers within the root intrusion zone of this tree to minimize excavation depths. All excavation shall be performed by hand retaining roots over two-inch (2") diameter. Any roots over two-inch (2") diameter shall only be removed under the direct supervision of the project arborist.
- 1.19 Design landscape with drought tolerant plant species compatible with native oak trees.
- 1.20 Projected arborist shall directly supervise all excavation within the root intrusion zone of this tree.

TREE T6: Coast redwood (*Sequoia sempervirens*)

Trunk Diameter at 4.5 feet above grade: 9.2-inches

Trunk Circumference at 4.5 feet above soil grade: 29-inches

Status: Tree **Age:** Young **Canopy spread:** 8-feet on center

Health: Good **Condition:** Fair; tree is located on a steep slope on near existing main house.

Suitability for Preservation Rating: 2-Good

Root Intrusion Zone: Radius of 4.6-feet from trunk location

Critical Root Zone: Radius of 3.1-feet from trunk location

Recommendation: Preserve.

Preservation specifications:

- 1.21 Tree Preservation Fencing shall be installed to designate the Tree Protection Zone of this tree and shall consist of no less than 4-foot tall metal fencing on no less than 5-foot posts that shall be maintained throughout construction unless otherwise recommended by a qualified project arborist.
- 1.22 Projected arborist shall directly supervise all excavation within the root intrusion zone of this tree.

TREE T7: Coast live oak (*Quercus agrifolia*)

Trunk Diameter at 4.5 feet above grade: 7.1 and 6.3-inches

Trunk Circumference at 4.5 feet above soil grade: 42-inches

Status: Tree **Age:** Young **Canopy spread:** 20-feet to the east

Health: Good; no apparent problems. **Condition:** Poor; This tree is located at the edge of a soil cut for the proposed retaining wall. This tree has two trunks that are

narrowly with embedded bark, which is a sign of internal trunk decay, and this condition is considered a significant risk of trunk or total tree failure. The location over the proposed addition increases the possibility of damage to persons or property.

Suitability for Preservation Rating: 4-Poor

Root Intrusion Zone: Radius of 5.1-feet from trunk location

Critical Root Zone: Radius of 3.4-feet from trunk location

Recommendation: Remove due to hazardous condition and proximity to development.

Removal specifications: Remove to grade. Inhibit re-sprouting with stump removal or grind stump to 12-18 inches to below grade.

TREE T8: California bay laurel (*Umbellularia californica*)

Trunk Diameter at 4.5 feet above grade: 14-inches

Trunk Circumference at 4.5 feet above soil grade: 44-inches

Status: Tree **Age:** Young **Canopy spread:** 20-feet to the east

Health: Good; no apparent problems. **Condition:** Fair; This tree is located on a steep slope. This species may be considered a highly flammable species due to its high oil content and is often considered an undesirable species when within 100 feet of existing or proposed structures.

Suitability for Preservation Rating: 3-Fair

Root Intrusion Zone: Radius of 11-feet from trunk location

Critical Root Zone: Radius of 4.7-feet from trunk location

Recommendation: Preserve.

Preservation specifications:

- 1.23 Tree Preservation Fencing shall be installed to designate the Tree Protection Zone of this tree and shall consist of no less than 4-foot tall metal fencing on no less than 5-foot posts that shall be maintained throughout construction unless otherwise recommended by a qualified project arborist.
- 1.24 Projected arborist shall directly supervise all excavation within the root intrusion zone of this tree.

TREE T9: California bay laurel (*Umbellularia californica*)

Trunk Diameter at 4.5 feet above grade: 12.5-inches

Trunk Circumference at 4.5 feet above soil grade: 39-inches

Status: Tree **Age:** Young **Canopy spread:** 15-feet to the east

Health: Good; no apparent problems. **Condition:** Fair; This tree is located on a steep slope. This species may be considered a highly flammable species due to its high oil content and is often considered an undesirable species when within 100 feet of existing or proposed structures.

Suitability for Preservation Rating: 3-Fair

Root Intrusion Zone: Radius of 9.4-feet from trunk location

Critical Root Zone: Radius of 4.2-feet from trunk location

Recommendation: Preserve.

Preservation specifications:

- 1.25 Tree Preservation Fencing shall be installed to designate the Tree Protection Zone of this tree and shall consist of no less than 4-foot tall metal fencing on no less than

5-foot posts that shall be maintained throughout construction unless otherwise recommended by a qualified project arborist.

- 1.26 Projected arborist shall directly supervise all excavation within the root intrusion zone of this tree.

TREE T9: Valley oak (*Quercus lobata*)

Trunk Diameter at 4.5 feet above grade: 8.7-inches

Trunk Circumference at 4.5 feet above soil grade: 27-inches

Status: Heritage Tree **Age:** Young **Canopy spread:** 15-feet to the east

Health: Good; no apparent problems. **Condition:** Fair; This tree is located on a steep slope.

Suitability for Preservation Rating: 3-Fair

Root Intrusion Zone: Radius of 6.5-feet from trunk location

Critical Root Zone: Radius of 2.9-feet from trunk location

Recommendation: Preserve.

Preservation specifications:

- 1.27 Tree Preservation Fencing shall be installed to designate the Tree Protection Zone of this tree and shall consist of no less than 4-foot tall metal fencing on no less than 5-foot posts that shall be maintained throughout construction unless otherwise recommended by a qualified project arborist.
- 1.28 Projected arborist shall directly supervise all excavation within the root intrusion zone of this tree.

ROOT INTRUSION ZONES (RIZ)

The above ground portions of trees can easily be seen and protected but what is often overlooked, within the construction setting, is the importance of protecting the root crown and underground roots of the tree to preserve structural integrity and physiological health. Most roots are located within the topsoil that may only be 6"-18" in depth. Cutting of roots, grade changes, soil compaction and chemical spills or dumping can negatively affect tree health, stability, and survival, and should be avoided.

A "Root Intrusion Zone", abbreviated as RIZ, is an industry standard based on the Matheny / Clark tree protection zone designation of an area surrounding an individual tree that is provided as protection for the tree trunk, structural roots, and root zone. A Root Intrusion Zone is a radius, in feet, from a tree trunk location formulated from tree trunk diameter, age, and species tolerance to construction impacts. An individual or group of Root Intrusion Zones are designated by a fenced protection area that we call a "Tree Protection Area" (TPA).

Tree protection shall include the location of fencing of tree protection area (TPA) to protect tree roots, foliar canopy, limbs, and may include the armoring of the tree trunk and/or scaffold limbs with barriers to prevent mechanical damage.

Once the TPA is delineated and fenced (prior to any site work, equipment and materials move in), construction activities are only to be permitted within the TPA if allowed for and specified by the

project arborist. Restrictions and guidelines apply to the tree protection zones delineated within this report and trees protections plan (See the Tree Protection Plan Sheet T1 for Tree Protection recommendations).

CRITICAL ROOT ZONES (CRZ)

Critical Root Zone (CRZ) is the area of soil around the trunk of a tree where roots are located that provide critical stability, uptake of water and nutrients required for a tree's survival. The CRZ is the minimum distance from the trunk that trenching that requires root cutting should occur and can be calculated as three to the five times the trunk Diameter at Breast Height (DBH). For example, if a tree is one foot in trunk diameter then the CRZ is three to five feet from the trunk location. We will often average this as four times the trunk diameter or 1ft. DBH = 4ft. CRZ (Smiley, E.T., Fraedrich, B. and Hendrickson, N. 2007).

PROJECT ARBORIST DUTIES

The project arborist is the person(s) responsible for conducting technical tree inspections, assessment, arborist report preparation, consultation with designers and municipal planners, specifying tree protection measures, monitoring, progress reports and final inspection.

A qualified project arborist (or firm) should be designated, retained, and assigned to facilitate and insure tree preservation practices. He/she/they should perform the following inspections:

PROJECT ARBORIST INSPECTION SCHEDULE

- **Inspection of site: Prior to Equipment and Materials Move In, Site Work, Demolition and Tree Removal:** The Project Arborist will meet with the General Contractor, Architect / Engineer, and Owner or their representative to review tree preservation measures, designate tree removals, delineate the location of tree protection area fencing, specify equipment access routes and materials storage areas, review the existing condition of trees, and provide any necessary recommendations.
- **Inspection of site: After installation of TPA fencing:** Inspect site for the adequate installation of tree preservation measures. Review any requests by contractor for access, soil disturbance or excavation areas within root zones of protected trees. Assess any changes in the health of trees since last inspection.
- **Inspection of site: During excavation or any activities that could affect trees:** Inspect site during any activity within the Tree Protection Area of Protected trees and any recommendations implemented. Assess any changes in the health of trees since last inspection.
- **Final Inspection of Site:** Inspection of site following completion of construction. Inspect for tree health and make any necessary recommendations.

TREE REPLACEMENT PROGRAM

Protected Heritage sized trees have not been designated for removal to accommodate the property improvements. There is one non-Heritage oak tree designated for removal. Replacement tree or trees may be included within the scope of site development landscape plan, or in-lieu payment to the Town of Fairfax, are to be determined by project landscape architect and the planning department.

TREE WORK STANDARDS AND QUALIFICATIONS

All tree work, removal, pruning, planting, shall be performed using industry standards as established by the International Society of Arboriculture. Contractor must have a State of California Contractors License for Tree Service (C61-D49) or Landscaping (C-27) with general liability, worker's compensation, and commercial auto/equipment insurance. Contractor standards of workmanship shall adhere to current Best Management Practices of the International Society of Arboriculture (ISA) and the American National Standards Institute (ANSI) for tree pruning, fertilization and safety (ANSI A300 and Z133.1).

TREE PROTECTION GUIDELINES

- (1) Before the start of any clearing, excavation, construction, or other work on the site, or the issuance of a building or demolition permit, every significant and/or protected tree shall be securely fenced-off at the tree root zone, or other limit as may be delineated in approved plans. Such fences shall remain continuously in place for the duration of the work undertaken within the development.
- (2) If the proposed development, including any site work, will encroach upon the tree root zone of a significant and/or protected tree, special measures shall be utilized, as approved by the project arborist, to allow the roots to obtain necessary oxygen, water, and nutrients.
- (3) Underground trenching shall avoid the major support and absorbing tree roots of significant and/or protected trees. If avoidance is impractical, hand excavation undertaken under the supervision of the project arborist may be required. Trenches shall be consolidated to service as many units as possible.
- (4) Concrete or asphalt paving shall not be placed over the root zones of significant and/or protected trees, unless otherwise permitted by the project arborist.
- (5) Artificial irrigation shall not occur within the root zone of indigenous oaks, unless deemed appropriate on a temporary basis by the project arborist to improve tree vigor or mitigate root loss.
- (6) Compaction of the soil within the tree root zone of significant and/or protected trees shall be avoided.
- (7) Any excavation, cutting, or filling of the existing ground surface within the tree root zone shall be minimized and subject to such conditions as the project arborist may impose. Retaining walls shall likewise be designed, sited, and constructed to minimize their impact on significant and/or protected trees.

(8) Burning or use of equipment with an open flame near or within the tree root zone shall be avoided. All brush, earth, and other debris shall be removed in a manner that prevents injury to the significant tree.

(9) Oil, gas, chemicals, or other substances that may be harmful to trees shall not be stored or dumped within the non-intrusion zone of any significant and/or protected tree, or at any other location on the site from which such substances might enter the tree root zone of a significant and/or protected tree.

(10) Construction materials shall not be stored within the tree root zone of a significant and/or protected tree.

Additional general requirements for tree protection zones are described as follows:

1. Any new plantings within the root intrusion zone should be designed to be compatible with the cultural requirements of the retained tree(s), to include irrigation, plantings, and fertilizer application. In root intrusion zones where native drought tolerant trees are located, no summer irrigation should be installed, and no vegetation installed requiring excessive irrigation, such as turf and flowerbeds.
2. Surface drainage should not be altered to direct water into or out of the tree root intrusion zone unless specified by the consulting arborist as necessary to improve conditions for the tree.
3. Site drainage improvements should be designed to maintain the natural water flow and levels within tree retention areas. If water must be diverted, permanent irrigation systems should be provided to replace natural water sources for the trees.

TREE PROTECTION RECOMMENDATIONS

TREE PROTECTION MEASURES:

1. SOME OF THE PROPOSED DEVELOPMENT IS LOCATED WITHIN THE ROOT INTRUSION ZONES OF EXISTING PROTECTED TREES AND SPECIAL RECOMMENDATIONS FOR DEMOLITION AND CONSTRUCTION ARE REQUIRED AND ADDRESSED WITHIN THIS PLAN AND ACCOMPANYING ARBORIST REPORT. ALL RECOMENDATIONS SHALL BE IMPLEMENTED.
2. THE PROJECT ARBORIST SHALL MEET WITH THE GENERAL CONTRACTOR PRIOR TO ANY TREE REMOVAL, DEMOLITION OR CONSTRUCTION ACTIVITIES AND DISCUSS A CONSTRUCTION MANAGEMENT PLAN THAT INCLUDES THE TREE PROTECTION REQUIREMENTS WITHIN THIS PLAN AND DESIGNATE THE LOCATION OF THE ANY MATERIAL STORAGE, WASH OUTS, OFFICE MODULES, PORTABLE SANITATION, AND AREAS OF VEHICLE OR HEAVY EQUIPMENT ACCESS AND EGRESS AND SHALL BE CLEARLY POSTED ON SITE THROUGHOUT THE DURATION OF THE DEVELOPMENT PROJECT. THE CONTRACTOR AGREES TO IMMEDIATELY NOTIFY THE PROJECT ARBORIST IF ROOTS ARE DAMAGED OR EXPOSED OR IF TRUNK OR BRANCHES ARE WOUNDED.
3. THE PROJECT ARBORIST SHALL DESIGNATE ANY TREE REMOVALS AND LOCATIONS OF TREE PROTECTION FENCING PRIOR TO ANY TREE REMOVAL, DEMOLITION OR CONSTRUCTION.
4. ALL TREE AND STUMP REMOVALS WITHIN THE ROOT INTRUSION ZONES (RIZ) OF RETAINED TREES SHALL BE PERFORMED USING LIGHT HAND OPERATED EQUIPMENT WITHOUT ANY DAMAGE TO RETAINED TREES. ALL REMOVED STUMPS SHALL BE REMOVED OR GROUND TO A DEPTH OF NO LESS THAN TWELVE (12) INCHES.

5. FOLLOWING TPA FENCE INSTALLATION, THE PROJECT ARBORIST SHALL INSPECT AND CONFIRM THAT TREE PROTECTION FENCING HAS BEEN ADEQUATELY INSTALLED AND PROVIDE A WRITTEN REPORT, WITH PHOTOGRAPHS, THAT SHALL BE SUBMITTED TO THE TOWN OF FAIRFAX.
6. TREE PROTECTION AREA FENCING SHALL BE CONSTRUCTED OF NO LESS THAN 4-FOOT TALL METAL FENCING AND SUPPORTED BY NO LESS THAN 6-FOOT METAL POSTS ON NO LESS THAN 8-FOOT CENTERS UNLESS OTHERWISE DESIGNATED BY THE PROJECT ARBORIST.
7. RETAINED TREES NEAR EQUIPMENT ACCESS AREAS MAY HAVE THEIR TRUNKS WRAPPED WITH 2" X 4" WOODEN SLATS AND BOUND SECURELY EDGE TO EDGE, WITHOUT NAILS, AS PADDING FROM GRADE TO 8-FEET ABOVE GRADE. A LAYER OF ORANGE PLASTIC CONSTRUCTION FENCING IS TO BE WRAPPED AND SECURED AROUND THE OUTSIDE OF THE WOODEN SLATS. MAJOR SCAFFOLD LIMBS MAY REQUIRE ADDITIONAL PROTECTION AS DETERMINED BY THE PROJECT ARBORIST.
8. ALL RETAINED TREES MAY BE MAINTENANCE PRUNED TO INCLUDE CLEANING, THINNING OF BRANCHES USING INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) INDUSTRY STANDARDS. THIS SHALL BE PERFORMED AFTER CONSTRUCTION IS COMPLETED.
9. THE PROJECT ARBORIST SHALL REVIEW ANY PLAN REVISIONS WITHIN THE TREE PROTECTION AREAS OF PRESERVED TREES. THIS INCLUDES, BUT NOT LIMITED TO, PLANS FOR DEMOLITION, EROSION CONTROL, IMPROVEMENTS, UTILITIES, DRAINAGE, GRADING, LANDSCAPING, AND IRRIGATION.
10. THE PROJECT ARBORIST SHALL INSPECT THE SITE MONTHLY FOR THE ADEQUATE PERFORMANCE OF TREE PRESERVATION MEASURES AND DESIGNATE SOIL CUTTING AREAS WITHIN ROOT INTRUSION ZONES OF PROTECTED TREES AND ASSESS, DOCUMENT, AND SUBMIT A REPORT TO THE TOWN OF FAIRFAX OF ANY CHANGES IN THE HEALTH OF TREES SINCE THE LAST INSPECTION.
11. THE PROJECT ARBORIST SHALL INSPECT OR SUPERVISE ALL CONSTRUCTION ACTIVITIES WITHIN THE TREE PROTECTION AREAS AND WILL RECEIVE NO LESS THAN 72 HOUR NOTICE OF ANY PROPOSED ACTIVITIES WITHIN THE TREE PROTECTION ZONES OF RETAINED TREES AND THE PROJECT ARBORIST SHALL DOCUMENT AND PROVIDE ANY NECESSARY RECOMMENDATIONS TO THE TOWN OF FAIRFAX.
12. EXCAVATION SHALL ONLY OCCUR WITHIN THE ROOT INTRUSION ZONES OF RETAINED TREES, SUCH AS UTILITY TRENCHES, WHEN DESIGNATED BY THE PROJECT ARBORIST. THESE WILL BE EXCAVATED BY HAND, USING HIGH-PRESSURE AIR SPADE, OR OTHER METHOD PRESERVING ROOTS OVER TWO INCHES IN DIAMETER, OR AS DESIGNATED BY THE PROJECT ARBORIST. ANY ROOTS OVER TWO (2") INCHES IN DIAMETER SHALL ONLY BE REMOVED UNDER THE DIRECT SUPERVISION OF THE PROJECT ARBORIST OR AS OTHERWISE DESIGNATED BY THE PROJECT ARBORIST. ALL ROOT CUTTING SHALL BE PERFORMED UNDER INDUSTRY STANDARD METHODS, DOCUMENTED, AND A WRITTEN REPORT WITH PHOTOGRAPHS PROVIDED BY THE PROJECT ARBORIST TO THE TOWN OF FAIRFAX.
13. THE PROJECT ARBORIST SHALL INSPECT THE SITE FOLLOWING COMPLETION OF CONSTRUCTION, ASSESS TREE CONDITION, AND MAKE ANY NECESSARY RECOMMENDATIONS WITHIN THE FINAL ARBORIST REPORT THAT SHALL BE SUBMITTED TO THE TOWN OF FAIRFAX.
14. THE PROJECT ARBORIST SHALL PROVIDE ANY FURTHER RECOMMENDATIONS TO MITIGATE IMPACTS TO INCLUDE, BUT NOT LIMITED TO, HAND EXCAVATION, AIR SPADE EXCAVATION, VERTICAL DRILLING AND ROOT PRUNING, AND FERTILIZATION.

SPECIFIC TREE PROTECTION:

15. REMOVE TREES T7 AS DESIGNATED IN ITEMS 3 AND 4.
16. THE PROPOSED RETAINING WALL REPLACEMENTS, STAIRS, LANDINGS, AND DRIVEWAY REPLACEMENT WITHIN THE ROOT INTRUSION ZONE OF PROTECTED TREES SHALL BE DESIGNED TO MITIGATE ROOT LOSSES. ANY DESIGN CHANGES SHALL BE APPROVED BY THE PROJECT ARBORIST.
17. THE PROPOSED DRIVEWAY AND FOOT PATH IN THE LOWER TREE PROTECTION AREA SHALL BE ON EXISTING SOIL GRADE (NO SOIL CUTS) UNLESS HAND EXCAVATED AND PRESERVING SIGNIFICANT ROOTS AS DESIGNATED BY THE PROJECT ARBORIST.
18. ANY STRUCTURAL IMPROVEMENTS TO INCLUDE UTILITY LINE LOCATIONS, DRINING LINES, PIERS, TIEBACKS, ETC. PROPOSED BY THE ENGINEER SHALL BE REVIEWED AND APPROVED BY THE PROJECT ARBORIST.
19. SOME AREAS OUTSIDE OF THE TREE PROTECTION FENCING BUT WITHIN THE ROOT INTRUSION ZONES OF PROTECTED TREES MAY REQUIRE BASEROCK OR MULCH TO ALLOW FOR ACCESS AND EGRESS FOR CONSTRUCTION PERSONEL AND MACHINERY AS DESIGNATED BY THE PROJECT ARBORIST FOLLOWING PRE-CONSTRUCITON MEETING AS DESCRIBED WITHIN ITEM 2.
20. THE PROJECT ARBORIST SHALL DIRECTLY SUPERVISE AND DOCUMENT ANY DEMOLITION OR EXCAVATION WITHIN THE ROOT INTRUSION ZONE OF PROTECTED TREES AS PER ITEM 12 OF THIS PLAN UNLESS OTHERWISE DIRECTED BY THE PROJECT ARBORIST.

PHOTOGRAPHS

PHOTOGRAPH NO. 1: Subject Heritage oak tree T1 (center).



PHOTOGRAPH NO. 2: Subject Heritage oak tree T1 (center) and its proximity to existing retaining wall.



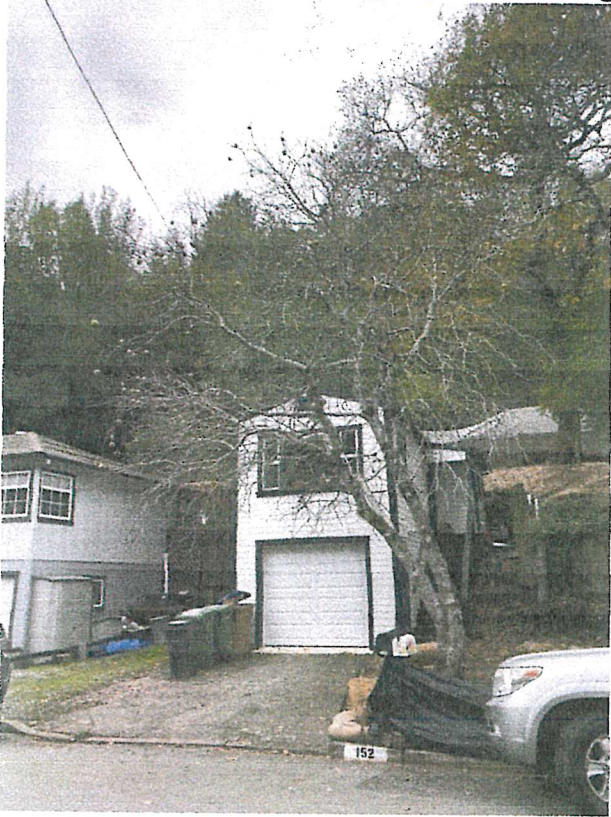
PHOTOGRAPH NO. 3: Subject Heritage oak tree T1 (center) and its proximity to existing stairs.



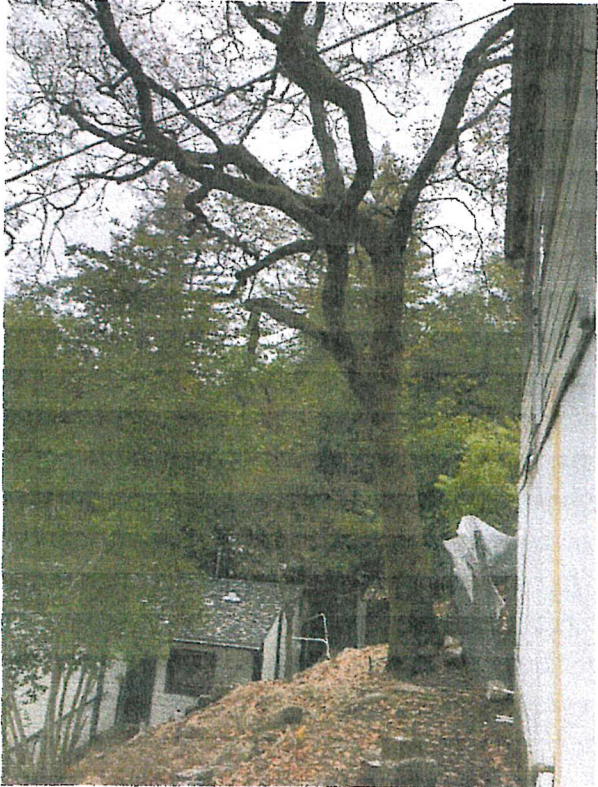
PHOTOGRAPH NO. 4: Subject walnut tree T3 (center) and buckeye T4 (far left).



PHOTOGRAPH NO. 5: Subject buckeye tree T4 showing lean over existing driveway.



PHOTOGRAPH NO. 6: Subject oak tree T5 (center) on existing slope.



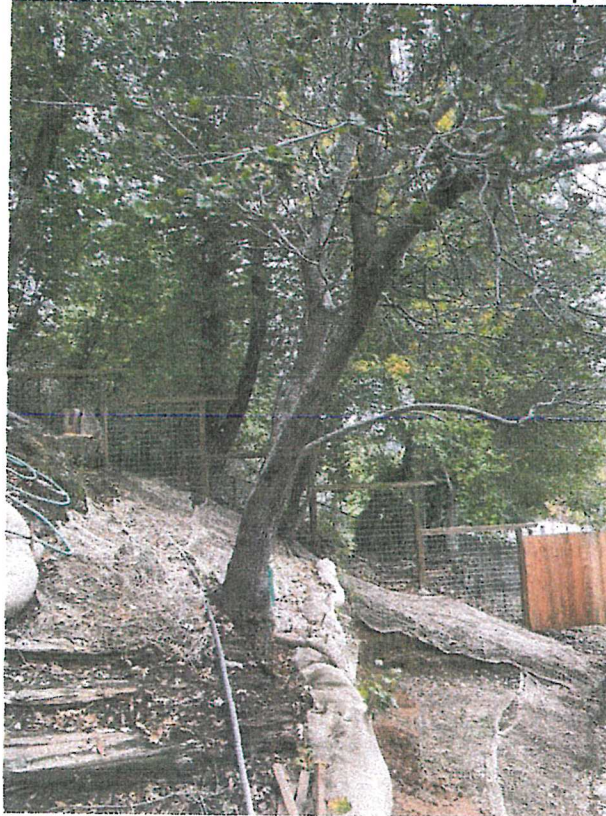
PHOTOGRAPH NO. 7: Subject Non-Heritage oak tree T7 (center) showing its two narrowly attached trunks that is considered a chronic structural defect and its proximity to soil cut.



PHOTOGRAPH NO. 8: Subject Non-Heritage oak tree T7 showing its two narrowly attached trunks that is considered a chronic structural defect and its proximity to soil cut.



PHOTOGRAPH NO. 9: Subject Non-Heritage oak tree T7 (center) showing its two narrowly attached trunks that is considered a chronic structural defect and its proximity to soil cut.



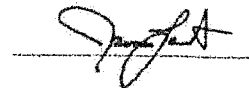
PHOTOGRAPH NO. 10: Subject bay tree T8 (center) on existing up slope.



ASSUMPTIONS AND LIMITING CONDITIONS

ArborLogic, James Lascot

1. Any legal description provided to the consultant / appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes, or other government regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified as far as possible; however, the consultant / appraiser can neither guarantee nor be responsible for the accuracy of information provided by others.
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