

TP19-0036

July 3, 2019 (revised 10/25/19)

Tambri Heyden
925-937-5777 | tambrij@yahoo.com

Re: Revised Arborist Report for 0 West Newell Avenue, Walnut Creek

Dear Tambri,

This arborist report addresses the proposed home at 0 West Newell Avenue. Per the Contra Costa County Tree Protection and Preservation Ordinance Chapter 816-6 for undeveloped property, the scope of work includes:

- Tag, identify and measure all trees with diameters 6.5" or larger within 50' of proposed improvements. Multi-stemmed trees shall be included if the sum of the stem circumferences is 40" or greater.
- Verify dripline locations on site plan.
- Assess individual tree health and structural condition.
- Assess proposed improvements for potential encroachment.
- Based on proposed encroachment, tree health, structure, and species susceptibility, make recommendations for preservation.

The only change in this 10/25/19 revision is more precise dripline measurements for tree #37. It should be used in tandem with the driveway addendum letter dated 10/10/19.



Figure 1. The property is heavily wooded and extends far up the hill off the right side of the photo. The three large oaks along the north property line (left) will be affected by the proposed construction.

Site Summary

The property is located at the end of W Newell Avenue, south of 2776 W Newell. The site is heavily wooded and extends uphill to the south (Figure 1). Overhead power lines extend along W Newell Avenue to the center of the property, where they change to a north-south orientation & connect to a power pole off Olympic Blvd. The hilly portion of the property, south of the utility easement, is essentially unusable due to the slope & utility restrictions. The proposed project will construct a single-family home on the property. The west run of the overhead power lines will also be undergrounded per PG&E requirements & to reduce fire risk.

I included thirty-seven (37) trees in my tree inventory, three of which are located on the 2776 W Newell property. Nearly every tree on the site is a native tree, consisting of valley oak, coast live oak, and California buckeye. The overall tree canopy cover is high.

The feasible building area restricted by terrain and utility easements. Due to these site limitations, nineteen (19) trees will need to be removed to accommodate the proposed improvements. The remaining eighteen (18) trees can be retained given that the tree protection measures within this report are followed. There are many trees beyond the inventoried area that also help to maintain canopy cover.

Assumptions & Limitations

This report is based on my site visit on 6/27/19, survey by APEX (dated 4/5/19), and grading & drainage plans by Juan Martinez (dated 6/8/19). It was assumed that the proposed improvements and trees were accurately surveyed.

The health and structure of the trees were assessed visually from ground level. No drilling, root excavation, or aerial inspections were performed. Internal or non-detectable defects may exist and could lead to part or whole tree failures. Due to the dynamic nature of trees and their environment, it is not possible for arborists to guarantee that trees will not fail in the future.



Figure 2. The largest oaks on the property (top #37, bottom #36) will be subjected to high encroachment & will need to be removed. The house location cannot be adjusted to save them, as the clearance required would unreasonably restrict development.

Tree Inventory & Assessment Table

#s: Each tree was given a numerical tag from #7-43. Their locations are given in the tree protection plan.

DBH (Diameter at Breast Height): Trunk diameters in inches were calculated from the circumference measured at 4.5' above average grade.

Health & Structural Condition Rating

Dead: Dead or declining past chance of recovery.

Poor (P): Stunted or declining canopy, poor foliar color, possible disease or insect issues. Severe structural defects that may or may not be correctable. Usually not a reliable specimen for preservation.

Fair (F): Fair to moderate vigor. Minor structural defects that can be corrected. More susceptible to construction impacts than a tree in good condition.

Good (G): Good vigor and color, with no obvious problems or defects. Generally more resilient to impacts.

Very Good (VG): Exceptional specimen with excellent vigor and structure. Unusually nice.

Age

Young (Y): Within the first 20% of expected life span. High resiliency to encroachment.

Mature (M): Between 20% - 80% of expected life span. Moderate resiliency to encroachment.

Overmature (OM): In >80% of expected life span. Low resiliency to encroachment.

DE: Dripline Encroachment (X indicates encroachment)

CI: Anticipated Construction Impact (L = Low, M = Moderate, H = High)

#	Species	DBH	Health	Structure	Dripline				Age	D E	CI	Comments	Action
					N	E	S	W					
7	Coast live oak (<i>Quercus agrifolia</i>)	10.5	G-F	G	10	10	10	10	Y		L	Power lines overhead. Slightly chlorotic. Clear of construction.	Install temporary fencing.
8	Coast live oak	10	G	G	10	12	10	10	Y		L	Power lines overhead. Clear of construction.	Install temporary fencing.
9	Coast live oak	16.5	G	G-F	12	15	10	3	M	X	H	Co-dominant stems at 6' with bark inclusion. Upper side of south canopy pruned for clearance. Proposed retaining wall 1' to N.	Remove.
10	Valley oak (<i>Quercus lobata</i>)	21	G-F	G-F	18	15	18	12	M	X	H	Sprouting from wood. Good summer shoots. Small twig dieback. Minor clearance pruning from power lines. In proposed driveway.	Remove.

#	Species	DBH	Health	Structure	Dripline				Age	D E	CI	Comments	Action
					N	E	S	W					
11	Plum (<i>Prunus</i> sp.)	5, 3, 3, 3, 4, 4, 2.5, 2.5	F	F	10	10	10	10	M	X	H	Crossing stems. In proposed driveway.	Remove.
12	Valley oak	14	G-F	F	0	12	15	10	M	X	H	Old tag #46. Trunk flare buried. Moderate branch dieback (1") with healthy sprouting. In proposed driveway.	Remove.
13	Valley oak	8	F	F	0	10	12	0	Y	X	H	Phototropic lean to S. Poor taper, sparse canopy. In proposed house.	Remove.
14	California buckeye (<i>Aesculus californica</i>)	8.5, 11	G	F	15	15	15	2	M	X	H	Co-dominant trunks. In proposed house.	Remove.
15	Valley oak	8.5	F-P	P	20 S				Y	X	H	Phototropic lean to S, upper trunk horizontal. Minimal taper. In proposed house.	Remove.
16	Coast live oak	15	G	F	10	12	12	6	M	X	H	On slope above graded area. Elongated large scaffold to SE. Minor sycamore borer damage. In proposed house.	Remove.
17	Coast live oak	13	G	F	12SE-SW				M	X	H	Phototropic lean to S. Multiple stems at 8'. Old tag #52. In proposed grading for retaining walls.	Remove.
18	Coast live oak	13.5	G	F-P	8	8	8	8	M	X	H	Co-dominant stems at 10' with narrow attachment. Tight canopy, mostly at top of tree. In proposed grading for retaining walls.	Remove.
19	Coast live oak	9	G-F	F	8	0	12	6	Y	X	H	Understory tree with swooping lean to S. Sparse canopy. Proposed retaining wall 3' to S & 7' to N.	Remove.
20	Coast live oak	17.5	G	G	18	6	20	18	M	X	M	Old tag #55. Co-dominant stems at 12'. Proposed retaining wall 4' to SE & 9' to N; largely on grade.	Install temporary protection fencing; arborist on site during RW excavation. Cleanly prune roots $\geq 2"$.
21	Coast live oak	21	G	G-F	15	10	10	10	M	X	H	5' from proposed patio (in graded area).	Remove.
22	Coast live oak	13	G	G-F	0	10	20	0	M		L	Phototropic lean to S, corrected. 8' from proposed patio.	Install temporary protection fencing.

#	Species	DBH	Health	Structure	Dripline				Age	D E	CI	Comments	Action
					N	E	S	W					
23	Valley oak	7.5, 7, 7	F	F	8	8	10	10	M	X	H	Stump sprouts off long-dead trunk. Topped; power lines above. In proposed utility trench.	Remove.
24	Coast live oak	8	G	F	12N-NW				Y	X	H	Phototropic lean to N. Power lines above. In proposed utility trench.	Remove.
25	Coast live oak	7	G	G-F	8	8	8	8	Y	X	M-H	Under power lines. 6' from proposed utility trench/within utility easement.	Remove.
26	California buckeye	6.5, 5.5	G-F	F	12	0	8	8	M	X	H	Lopsided canopy to N. Under power lines. In proposed utility trench.	Remove.
27	Coast live oak	16	G	G-F	10	10	15	12	M		L	Pruned away from power lines. 17' from proposed utility trench.	Install temporary fencing.
28	Coast live oak	6.5	G	F	10	0	0	0	Y		L	Phototropic lean to N. Clear of construction.	Install temporary fencing.
29	Coast live oak	29	G	G-F	18	18	18	18	M		L	Multiple stems at 3'-5' above grade, diameter measured below. Clear of construction.	None.
30	Coast live oak	7.5	G	G	8	8	8	8	Y		L	Clear of construction.	None.
31	Coast live oak	11, 7.5	F	F-P	10	10	10	10	M	X	M-H	Topped, under power lines. Co-dominant stems at 2'. Proposed utility trench 5' from tree.	Remove.
32	Coast live oak	9	G	G	8	8	8	0	Y	X	H	Under power lines. In proposed utility trench.	Remove.
33	Coast live oak	9.5, 10.5	F-P	P	10	10	10	10	M	X	M-H	Narrow co-dominant stems at 2'. Topped, sparse at top with stunted sprouts. 7' from proposed utility trench.	Remove.
34	Coast redwood (<i>Sequoia sempervirens</i>)	10	G	G	10	10	10	10	Y	X	L	No tag, neighbor's tree, not surveyed. About 6' back from property line fence & proposed retaining wall.	Provide supplemental irrigation. Cleanly prune roots $\geq 2"$.
35	Coast redwood	12	G	G	10	10	10	10	Y	X	L	No tag, neighbor's tree, not surveyed. About 6' back from property line fence & proposed retaining wall.	Provide supplemental irrigation. Cleanly prune roots $\geq 2"$.

#	Species	DBH	Health	Structure	Dripline				Age	D E	CI	Comments	Action
					N	E	S	W					
36	Coast live oak	43.5	F/F-P	G	25	25	25	25	M	X	H	Slightly sparse, lot of twig dieback & not much new growth. Sprouts along trunk also weak. Old tag #56. In proposed house.	Remove.
37	Valley oak	38	F-P	F	25	25	47S - 52 SW		M	X	H	Lions' tailed. Sparse canopy. Elongated branches with poor interior growth (per client measurement, three branches over the house measure 52' S-SW, 47' SW, 38' SW-W; revised 10/25/19). Small diameter dieback. Old tag #48. 5' N proposed walkway & retaining wall; 5' S of proposed retaining wall; 20' E & N of proposed house	Remove.
38	Valley oak	33	G-F	F	25	30	25	0	M	X	M	DBH estimated. Shared tree, straddles property line. Phototropic lean to E. Large crowded / elongated scaffolds. Healthy sprouting along wood. One scaffold ~ 20' over proposed driveway. Proposed retaining wall up to trunk; 18' N of proposed walkway, 25' N of proposed driveway & house. Proposed fill beneath dripline.	Coordinate pruning through arborist. Top 3' of RW footing to be dug by hand. Grading to be done by hand within 20' with arborist on site.
39	Coast live oak	7.5, 3.5	F	F-P	3	5	15	0	M		L	Topped for power line clearance. 14' from proposed utility undergrounding.	None.
40	Coast live oak	13.5, 6.5	F	F-P	10	10	10	10	M		L	Topped for power line clearance. Scaffold branch growing into power pole. >10' from proposed utility undergrounding.	None.
41	Coast live oak	9.5	F	F-P	10	0	0	6	M		L	Topped for power line clearance. 9' from power pole; proposed undergrounding S of pole.	None.
42	Coast live oak	7	G	G	8	8	8	8	Y		L	Between existing chain link and wood fence. 14' from proposed utility trench.	None.
43	Coast live oak	15.5, 13	G	F	12	15	15	15	M		L	Co-dominant stems at 3' above grade. Minor sycamore borer damage. Partially topped for power line clearance. >20' from proposed utility trench.	None.

Trees that will need to be removed: 9-19, 21, 23-26, 31-33, 36, 37 (21 trees)

Trees to be saved that will be subjected to dripline encroachment: 20, 34, 35, 38 (4 trees)

Trees to be saved that will not be encroached: 7, 8, 22, 27-30, 39-43 (12 trees)

Discussion

The trees on the property are mostly in good-fair health, with structures typical of trees growing in crowded woodland conditions. The feasible building area is limited by existing N-S & E-W utility easements, as well as the hillside south of the utility easement. Two large oaks (#36 & 37, Figure 2) are located along the north property line, in or surrounded by the proposed home. Unfortunately, although they are among the largest trees on the property, they cannot be saved without significantly restricting development.

The driplines of three of the neighbor's trees will be encroached. Oak #38 is located on the property line, with most of its trunk on the adjacent property (Figure 3). Proposed improvements within its dripline include a retaining wall, to be constructed on 6' deep piers that begin 4' from its trunk. A minimum of 6" of fill will also be required to maintain drainage within the property. The three closest piers will be located within the structural root plate (SRP) of the oak, which is the area proximal to the trunk where the largest diameter roots are found. These structural roots are responsible for anchoring & supporting the tree, and removal of structural roots can compromise its stability. I recommend hand digging the upper 3' of each pier within 15' of the tree, so the pier locations can be adjusted in case they are centered over significant-sized roots. Additionally, a minimum of 6" of fill is required to maintain drainage within property lines. Fill soil placed over roots increases the distance that oxygen & water must travel to reach the roots, which can have a negative impact on a tree's health. Fill placed against the trunk, especially on native oaks, can create a moist environment favorable for wood decay fungi. Since the fill is not intended to support structures or hardscape, I recommend not compacting the fill soil, and pulling it at least 12" from the base of the tree.

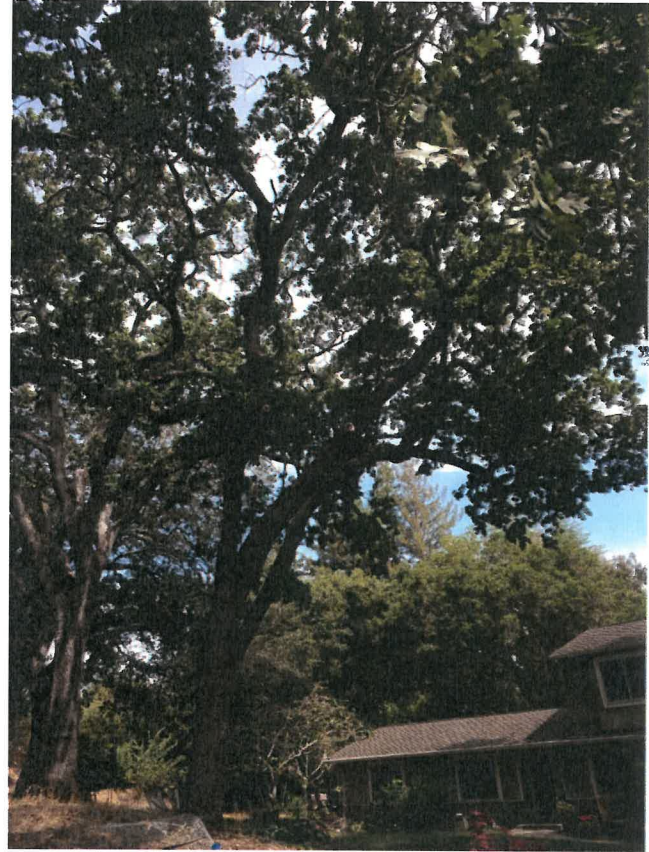


Figure 3. To reduce encroachment, proposed grading & footing excavation shall be done by hand within 15'-20' of tree #38.

Two off-site redwoods are located 6' from the property line (#34 & 35). A retaining wall is proposed along the property line, which requires excavation beneath their driplines but outside their SRPs. Since the redwoods are young, healthy, and growing in a grove with other redwoods, they will be highly resilient to construction impacts. The anticipated encroachment is low. Nevertheless, I recommend proper root pruning & supplemental irrigation to reduce construction stress.

The overhead utility lines will also be undergrounded per PG&E requirement, and will connect to the power pole north of the existing wooden fence. Since the exact trench location is unknown, all trees (#23-26 & 31-33) within the future utility easement may be affected & will need to be removed.

Recommendations (to be printed on site plans)

Pre-construction

- Remove trees #9-19, 21, 23-26, 31-33, 36 & 37 (21 trees).
- Mulch from tree removals may be spread out under the driplines of trees that will be retained, **keeping at least 12" away from the trunks.**
- Prior to construction or grading, contractor shall install **6' chain-link** fencing to construct a temporary Tree Protection Zone (TPZ) around each tree or grove of trees as indicated on the tree protection plan. Heavy duty orange poly fencing may be used west of the power lines; fencing shall be securely attached to **metal stakes spaced 6' apart.**
- TPZ fencing shall remain in an upright sturdy manner from the start of grading until the completion of construction. Fencing shall not be adjusted or removed without consulting the project arborist (PA).

Foundation, Grading, and Construction Phase

- **Footings of the proposed retaining wall within 15' of tree #38 shall be dug by hand for the top 3' of soil.** Project arborist (PA) shall be consulted for recommendations if roots $\geq 2"$ in diameter are encountered; footings shall be adjusted to save large roots.
- Fill/grading shall be done by hand within 20' of tree #38 with minimal compaction. Keep fill at least 12" clear of its trunk.
- Arborist shall be on-site during excavation for upper retaining wall by tree #20. Roots $\geq 2"$ diameter shall be cleanly pruned, covered, and kept moist till backfilled.
- If roots $\geq 2"$ diameter are encountered during excavation by trees #34 & 35, they shall be cleanly pruned, covered, and kept moist till backfilled. Provide supplemental irrigation if excavation occurs during summer months.
- Pruning shall be performed by personnel certified by the International Society of Arboriculture (ISA). All pruning shall adhere to ISA and American National Standards Institute (ANSI) Standards and Best Management Practices.
- Should TPZ encroachment be necessary, the contractor shall contact the PA for consultation and recommendations.
- Contractor shall keep TPZs free of all construction-related materials, debris, fill soil, equipment, etc. The only acceptable material is mulch spread out beneath the trees.
- Should any damage to the trees occur, the contractor shall promptly notify the PA to appropriately mitigate the damage.

Landscaping Phase (if applicable)

- TPZ fencing shall remain in place with the same restrictions until landscape contractor notifies and meets with PA.
- **All planting and irrigation shall be kept a minimum of 10' away from native oaks.** All irrigation within the driplines shall be targeted at specific plants, such as drip emitters or bubblers. No overhead irrigation shall occur within the driplines of native oaks.
- All planting within oak driplines shall be compatible with oaks, consisting of plant material that requires little to no water after two years' establishment. A list of oak-compatible plants can be found in a publication from the California Oak Foundation, available at: <http://californiaoaks.org/wp-content/uploads/2016/04/CompatiblePlantsUnderAroundOaks.pdf>

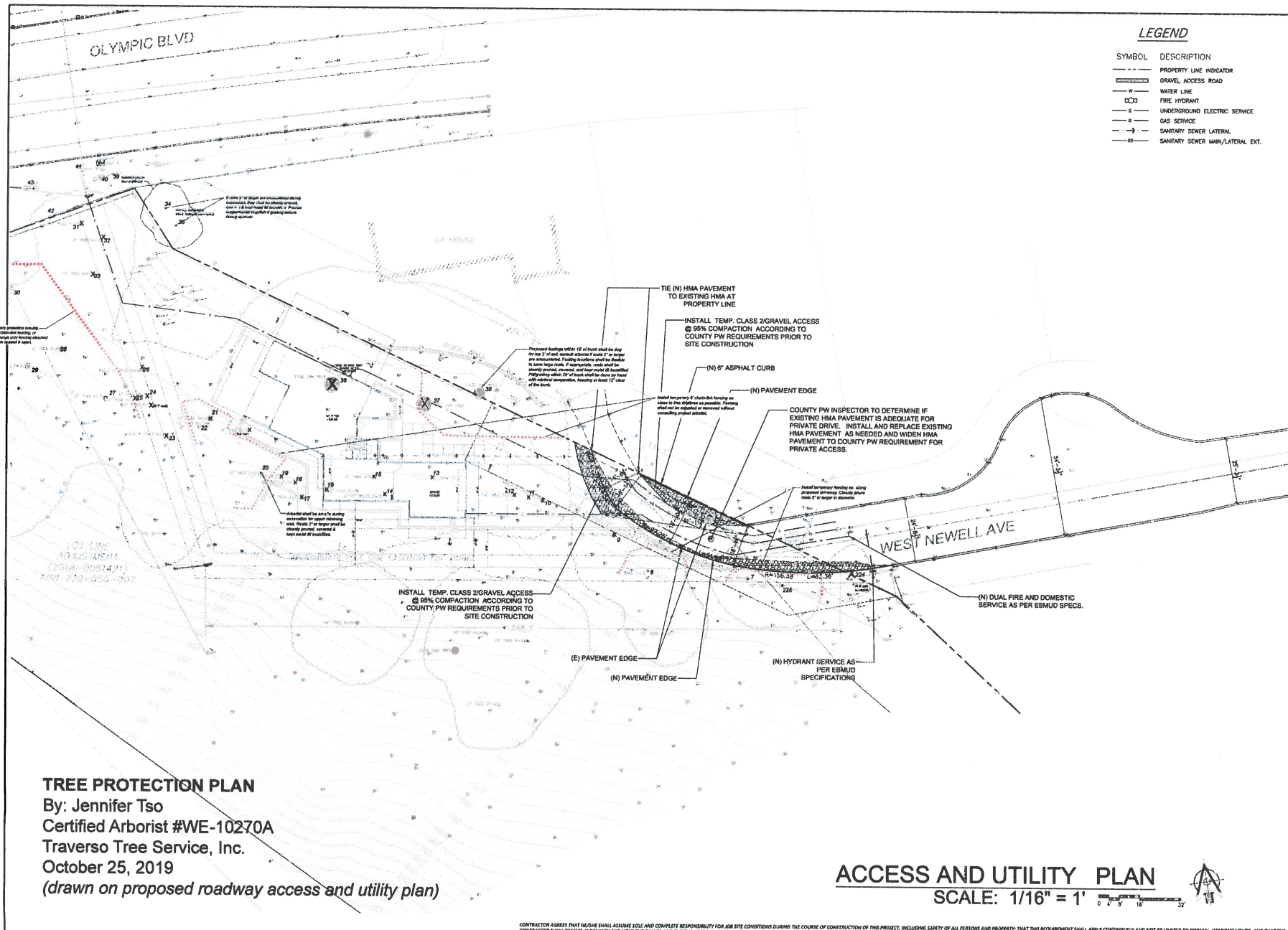
Thank you for the opportunity to provide this report, and please do not hesitate to contact me if there are any questions or concerns.

Please see attached tree protection plans (2 sheets).

Sincerely,

A handwritten signature in dark ink, appearing to read 'Jennifer Tso', with a stylized, flowing script.

Jennifer Tso
Certified Arborist #WE-10270A
Tree Risk Assessor Qualified



LEGEND

SYMBOL	DESCRIPTION
---	PROPERTY LINE INDICATOR
---	GRAVEL ACCESS ROAD
---	WATER LINE
---	FIRE HYDRANT
---	UNDERGROUND ELECTRIC SERVICE
---	GAS SERVICE
---	SANITARY SEWER LATERAL
---	SANITARY SEWER MAIN/LATERAL EXT.



OWNER:
DAVID MONTALVO &
TAMBRI HEYDEN
448 BLUE RIDGE DRIVE
MARTINEZ, CA 94553
(925) 872-5192

PROJECT ADDRESS:
0 W. NEWELL AVE.
WALNUT CREEK, CA 94595
APN: 238-050-007

**ROADWAY ACCESS AND
UTILITY PLAN**
0 WEST NEWELL AVE.

REVISION		
No.	DESCRIPTION	DATE
1		
2		
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5		
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10		

PROJECT No.:
DRAWN BY:
CHECKED BY:
DATE: 9/25/19

C.4.1

TREE PROTECTION PLAN
By: Jennifer Tso
Certified Arborist #WE-10270A
Traverso Tree Service, Inc.
October 25, 2019
(drawn on proposed roadway access and utility plan)

ACCESS AND UTILITY PLAN
SCALE: 1/16" = 1'



CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.