# ATTACHMENT H



### **Preliminary Arborist Report**

330 Distel Circle Los Altos, CA

PREPARED FOR EAH Housing 22 Pelican Way San Rafael, CA 94901

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### Preliminary Arborist Report 330 Distel Circle, Los Altos

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### Preliminary Arborist Report 330 Distel Circle, Los Altos CA

#### Introduction and Overview

EAH Housing is proposing to redevelop the property located at 330 Distel Circle, in Los Altos. The plan proposes to construct affordable housing using modern, flexible and sustainable building approaches. HortScience | Bartlett Consulting (HBC), Divisions of The F. A. Bartlett Tree Expert Co. was asked to prepare a **Preliminary Arborist Report** to meet the City of Los Altos' requirements.

This report provides the following information:

- 1. An assessment of trees within and immediately adjacent to the project site.
- 2. An assessment of the impacts of constructing the proposed project on the trees.
- 3. Preliminary recommendations for tree preservation and removal.
- 4. Preliminary guidelines for tree preservation during the design, construction and maintenance phases.

#### Assessment Methods

Trees were assessed on July 29, 2021. All trees measuring 6" or greater in diameter, within the project area or with portions of their crowns extending into the project area, were included (per City of Los Altos Chapter 11.08, Tree Protection Regulations). The assessment procedure consisted of the following steps:

- 1. Identifying the tree as to species;
- 2. Tagging each tree with an identifying number and recording its location on a map;
- 3. Measuring the trunk diameter at a point 48" above grade;
- 4. Evaluating the health and structural condition using a scale of 1–5:
  - **5** A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
  - 4 Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
  - 3 Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
  - 2 Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
  - Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.
- 5. Rating the suitability for preservation as "high", "moderate" or "low". Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.
  - *High*: Trees with good health and structural stability that have the potential for longevity at the site.
  - *Moderate*: Trees with somewhat declining health and/or structural defects than can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in 'good' category.
  - *Low*: Tree in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

#### **Description of Trees**

Twenty-seven (27) trees were assessed, representing 11 species (Table 1, following page). Eight (8) off-site trees with portions of their crowns extending onto the development site were included in the assessment (#449, 450 and 452-457). Descriptions of each tree are found in the *Tree Assessment Form* and locations are plotted on the *Tree Assessment Plan* (see Exhibits).

The site was a single-story office building, with perimeter landscaping. Vegetation at the site was primarily exotic species, with a handful of native coast live oaks and coast redwoods.

Nine (9) holly oaks made up the backbone of the landscaping, with #431-435 on the north side of the building and #440, 441, 445 and 450 (off-site) on the south side of the building. The majority of these were young to semi-mature, with trunk diameters from 7" to 15". Holly oak #433 was mature at 20" in trunk diameter and the only holly oak in good condition (Photo 1). Most had not been provided sufficient space for full development and were crowded by adjacent trees, producing onesided crowns and leaning trunks. Seven holly oaks were in fair condition, #435 was in poor and #433 was in good condition.

Photo 1: Looking north at holly oak#433. This was the only holly oak on the site that was mature (20" in diameter) and in good condition.



Four evergreen pears were growing adjacent to the building, with #437 and 438 on the west side and #443 and 444 on the east side. They were semi-mature (11" to 15" in trunk diameter) and primarily in fair condition, with #443 in good condition. Most leaned as a result of competition for light and #443 and 444 had been planted in close proximity to the existing building and parking lot, displacing the adjacent asphalt by an estimated 5".

Three coast live oaks were assessed, with #436 located in the northwest corner of the site and #449 (off-site) and 451 located to the south of the building. Coast live oak #436 was young (9" in diameter) and in fair condition. Coast live oaks #449 and 451 were both mature and in good condition.

Sweetgums #447 and 448 were growing in the planter behind the sidewalk along Distal Circle. Sweetgum #447 was young (10" in diameter) and #448 was semi-mature at 14" in diameter. Both were in fair condition, but #447 was in decline, with a very sparse crown.

Common Name	Scientific Name	Cor	No. of		
		Poor (1)	Fair (3)	Good (4-5)	trees
African fern pine	Afrocarpus falcatus	-	-	1	1
Hollywood juniper	Juniperus chinensis 'Kaizuka'	-	2	-	2
Sweetgum	Liquidambar styraciflua	-	2	-	2
Olive	Olea europaea	-	-	1	1
Calif. sycamore	Platanus racemosa	-	-	1	1
Callery pear	Pyrus kawakamii	-	3	1	4
Coast live oak	Quercus agrifolia	-	1	2	3
Holly oak	Quercus ilex	1	7	1	9
Coast redwood	Sequoia sempervirens	-	2	-	2
Mexican fan palm	Washingtonia robusta	-	-	1	1
Xylosma	Xylosma congestum	-	1	-	1
Total	· · ·	1	18	8	27
		4%	66%	30%	100%

## Table 1. Tree condition and frequency of occurrence.330 Distel Circle, Los Altos

A row of off-site tree were assessed along the northern fence line and included the following. All of the trees had been planted too close to the wall, with the bases of trees #452 and 454 growing against the wall (**Photo 2**).

- Hollywood junipers #452 and 453. Both were in fair condition but leaned.
- Coast redwoods #454 and 456 were mature and in fair condition. Both had sparse canopies.
- Xylosma #455 was in fair condition, with a low canopy that extended W. over the fence.

Photo 2: Looking southwest at trees #452-456 (L to R). The row of off-site trees were in fair condition but had been planted close to the wall separating the two properties. Inset below shows the base of coast redwood #454, which was growing against the wall.



The remaining species were represented by the following individuals:

- Mexican fan palm #439 was growing on the west side of the building. It was mature and in excellent condition.
- African fern pine #442 was growing in the planter in front of the building, adjacent to evergreen pears #443 and 444. It was mature (22" in diameter) and in good condition. However, it too had been planted too close to the building and parking lot and was displacing the adjacent asphalt by an estimated 5".
- Olive #446 was multi-stemmed and growing in the landscape along the Distal Circ. Frontage. It was in good condition, with good form and structure and a slightly sparse canopy.
- Calif. sycamore #457 was located just off-site on the west side of the property. It was mature (24" in diameter) and leaned northwest. It had been planted in a very small space and the base was growing against both the wall and curb.

Average tree condition for the site was fair, with 18 trees or 66% of the population. Eight (8) trees were in good condition (30%) and holly oak #435 was the only tree in poor condition (4%). Table 1 (previous page) provides a summary of condition by species.

The City of Los Altos protects all trees with diameters of 15" or greater located on private property. Removal of any tree with a diameter of 15" or greater requires a permit issued by the City, per Chapter 11.08 (Tree Protection Regulations). Based on this definition, 13 of the trees assessed at the 330 Distal Circ. Site qualified as *Protected*. All *Protected* trees are identified in the *Tree Assessment Form* (see Exhibits).

### Suitability for Preservation

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape.

Our goal is to identify trees that have the potential for long-term health, structural stability and longevity. For trees growing in open fields, away from areas where people and property are present, structural defects and/or poor health presents a low risk of damage or injury if they fail. However, we must be concerned about safety in use areas. Therefore, where development encroaches into existing plantings, we must consider their structural stability as well as their potential to grow and thrive in a new environment. Where development will not occur, the normal life cycles of decline, structural failure and death should be allowed to continue.

Evaluation of suitability for preservation considers several factors:

Tree health

Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.

#### Structural integrity

Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely. Holly oak #435 is an examples of such a tree.

#### Species response

There is a wide variation in the response of individual species to construction impacts and changes in the environment. In our experience, for example, holly oak, coast live oak and coast redwood are tolerant of site disturbance, while sweetgum is more sensitive to site disturbance.

#### Tree age and longevity

Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change.

#### Invasiveness

Species which spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. The California Invasive Plant Inventory Database (<u>http://www.cal-ipc.org/paf/</u>) lists species identified as being invasive. Los Altos is part of the Central West Floristic Province. Olive was the only species assessed at the 330 Distal Circ. site considered to have 'Limited' invasiveness.

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment. Table 2 provides a summary of suitability ratings. Suitability ratings for individual trees are provided in the *Tree Assessment Forms* (see Exhibits).

We consider trees with high suitability for preservation to be the best candidates for preservation. We do not recommend retention of trees with low suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

## Table 2: Tree Suitability for Preservation330 Distel Circle, Los Altos

High	These are trees with good health and structural stability that have the potential for longevity at the site. Three (3) of the trees were highly suitable for preservation, including Mexican fan palm #439, olive #446 and coast live oak #451.
Moderate	Trees in this category have fair health and/or structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring, and may have shorter life-spans than those in the "high" category. Sixteen (16) of the trees were of moderate suitability for preservation, including 4 holly oaks, 3 evergreen pears, 2 coast live oaks, 2 Hollywood junipers, 2 coast redwoods and one each of: African fern pine, xylosma and Calif. sycamore.
Low	Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. Eight (8) trees were of low suitability for preservation, including 5 holly oaks, sweetgums #447 and 448 and evergreen pear #437.

#### Preliminary Evaluation of Impacts and Recommendations

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The *Tree Assessment* was the reference point for tree condition and quality. Impacts from construction were evaluated using the Preliminary Grading & Utility Plan C3.0, prepared by BKF Engineers dated October 18, 2021.

The plans were preliminary however, included utilities and accurate trunk locations. However, a final assessment is based on final plans.

The plan proposes to redevelop the site into 90 residential units in 5-stories, with ground floor amenities and vertical/mechanical lift parking. Site amenities would include a courtyard, community room, laundry facility and lounge. The main entry would be located along the northeast property boundary, providing access to parking in the north corner of the building. A utility box will be located at the south corner of the site.

Impacts from construction were estimated for each tree. Based on my review of the plans, all of the on-site trees will be removed to accommodate development plan, including eight *Protected* trees (#432, 433, 438-440, 442, 443, and 451). Table 3 (following page) provides the recommendations for each tree along with a description of the impacts and their *Protected* status.

Eight trees have been identified for preservation, all of which are off-site. Five of the trees identified for preservation qualified as *Protected*. Preservation of trees is predicated on following the *Tree Preservation Guidelines* provided on the following page.

Some amount of root and canopy pruning of off-site trees may be required for construction clearance. Recommendations for Tree Protection Zones are provided in the *Tree Preservation Guidelines* (following page).

Tag #	Species	Diameter	Protected	Impacts
431	Holly oak	10	No	Remove within drive isle
432	Holly oak	15	Yes	Remove, within drive isle
433	Holly oak	20	Yes	Remove within drive isle
434	Holly oak	7	No	Remove, within drive isle
435	Holly oak	9	No	Remove, within drive isle
436	Coast live oak	9	No	Remove, within building footprint
437	Evergreen pear	11	No	Remove, within building footprint
438	Evergreen pear	15	Yes	Remove, within building footprint
439	Mexican fan palm	16	Yes	Remove, within building footprint
440	Holly oak	15	Yes	Remove, within building footprint
441	Holly oak	13	No	Remove, within building footprint
442	African fern pine	22	Yes	Remove, within building footprint
443	Evergreen pear	15	Yes	Remove, within building footprint
444	Evergreen pear	14	No	Remove, within building footprint
445	Holly oak	8	No	Remove, within building footprint
446	Olive	9,9,8,7,7	No	Remove, in area of impact
447	Sweetgum	10	No	Remove, low suitability
448	Sweetgum	14	No	Remove, low suitability
449	Coast live oak	15,15,13	Yes	Preserve, off-site
450	Holly oak	14	No	Preserve, off-site
451	Coast live oak	20	Yes	Remove, In utility box area

## Table 3. Recommendations for preservation and removal.330 Distel Circle, Los Altos

Tag #	Species	Diameter	Protected	Impacts
452	Hollywood juniper	8,7	No	Preserve, off-site
453	Hollywood juniper	16	Yes	Preserve, off-site
454	Coast redwood	18	Yes	Preserve, off-site
455	Xylosma	9	No	Preserve, off-site
456	Coast redwood	22	Yes	Preserve, off-site
457	Calif. sycamore	24	Yes	Preserve, off-site

#### **Preliminary Tree Preservation Guidelines**

The goal of tree preservation is not merely tree survival during development but maintenance of tree health and beauty for many years. Trees retained on sites that are either subject to extensive injury during construction or are inadequately maintained become a liability rather than an asset. The response of individual trees will depend on the amount of excavation and grading, the care with which demolition is undertaken, and the construction methods.

The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

#### **Design recommendations**

- 1. Any plan affecting trees should be reviewed by the Consulting Arborist with regard to tree impacts. These include, but are not limited to, improvement plans, utility and drainage plans, grading plans, landscape and irrigation plans and demolition plans.
- 2. A TREE PROTECTION ZONE must be established for trees to be preserved, in which no disturbance is permitted. No trenching, excavation, construction or storage of materials shall occur within that zone. No underground services including utilities, sub-drains, water or sewer shall be placed in the Tree Protection Zone. Spoil from trench, footing, utility or other excavation shall not be placed within the Tree Protection Zone, either temporarily or permanently. For design purposes, TREE PROTECTION ZONES for trees identified for preservation should be established at the dripline in all directions. As plans are refined, more specific TREE PROTECTION ZONES will be developed.
- 3. *Tree Preservation Guidelines* prepared by the Consulting Arborist should be included on all plans.
- 4. No underground services including utilities, sub-drains, water or sewer shall be placed in the **TREE PROTECTION ZONE**. To minimize impacts to trees, locate underground services to provide as much room as possible from trees identified for preservation.
- 5. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.
- 6. Irrigation systems must be designed to avoid trenching within the **TREE PROTECTION ZONE**.
- 7. Do not apply lime to soil for stabilization within 25' of trees to be preserved. Lime is toxic to tree roots.

#### Pre-construction treatments and recommendations

1. The demolition contractor and construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.

- Fence all trees to be retained to completely enclose the TREE PROTECTION ZONE prior to demolition, grubbing or grading. Fences shall be 6' chain link anchored firmly in the ground or on stanchions. Fences are to remain until all grading and construction is completed. Place weather proof signs, 2' x 2', on the fencing that read "Tree Protection Zone Keep Out" (eg. one sign for each of the four compass points).
- 3. Where possible, cap and abandon all existing underground utilities within the **TPZ** in place. Removal of utility boxes by hand is acceptable but no trenching should be performed within the **TPZ** in an effort to remove utilities, irrigation lines, etc.
- 4. Tree(s) to be removed that have branches extending into the canopy of tree(s) to remain must be removed by a qualified arborist and not by demolition or construction contractors. The qualified arborist shall remove the tree in a manner that causes no damage to the tree(s) and understory to remain. Stumps shall be ground below grade.
- 5. Any brush clearing required within the **TREE PROTECTION ZONE** shall be accomplished with hand-operated equipment.
- 6. Any work within the **TREE PROTECTION ZONE** shall be approved and monitored by the Consulting Arborist.
- 7. Prune trees to be preserved to provide adequate clearance and correct any existing defects in structure. All pruning shall be completed by a Certified Arborist or Tree Worker and adhere to the latest edition of the ANSI Z133 and A300 standards as well as the *Best Management Practices -- Tree Pruning* published by the International Society of Arboriculture.
- 8. All tree work shall comply with the Migratory Bird Treaty Act as well as California Fish and Wildlife code 3503-3513 to not disturb nesting birds. To the extent feasible tree pruning and removal should be scheduled outside of the breeding season. Breeding bird surveys should be conducted prior to tree work. Qualified biologists should be involved in establishing work buffers for active nests.
- 9. Apply and maintain 4-6" of wood chip mulch within the TREE PROTECTION ZONE.

#### Recommendations for tree protection during construction

- 1. Prior to beginning work, all contractors working in the vicinity of trees to be preserved are required to meet with the Consulting Arborist at the site to review all work procedures, access routes, storage areas and tree protection measures.
- 2. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.
- Fences have been erected to protect trees to be preserved. Fences define a specific TREE PROTECTION ZONE for each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without permission of the Consulting Arborist.
- 4. Construction trailers, traffic and storage areas must remain outside fenced areas at all times.
- 5. Prior to grading, pad preparation, excavation for foundations/footings/walls, trenching, trees may require root pruning outside the **TREE PROTECTION ZONE** by cutting all roots cleanly to the depth of the excavation. Roots shall be cut by manually digging a trench

and cutting exposed roots with a saw, with a vibrating knife, rock saw, narrow trencher with sharp blades, or other approved root pruning equipment. The Consulting Arborist will identify where root pruning is required and monitor all root pruning activities

- 6. Any roots damaged during grading or construction shall be exposed to sound tissue and cut cleanly with a saw.
- All underground utilities, drain lines or irrigation lines shall be routed outside the TREE PROTECTION ZONE. If lines must traverse through the protection area, they shall be tunneled or bored under the tree as directed by the Consulting Arborist.
- 8. No materials, equipment, spoil, waste or wash-out water may be deposited, stored, or parked within the **TREE PROTECTION ZONE** (fenced area).
- 9. Any additional tree pruning needed for clearance during construction must be performed by a qualified arborist and not by construction personnel.

#### Maintenance of impacted trees

Trees preserved at the 330 Distel Circ. site may experience a physical environment different from that pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. As trees age, the likelihood of failure of branches or entire trees increases. Therefore, annual inspection for structural condition is recommended.

#### HortScience | Bartlett Consulting

Certified Arborist WE-6757A Registered Consulting Arborist #693



## **Exhibits**

**Tree Assessment Form** 

**Tree Assessment Plan** 



## **Tree Assessment**

**330 Distal Circle** Los Altos, California July 2021



TREE No.	SPECIES	SIZE DIAMETER (in inches)	PROTECTED	<b>CONDITION</b> 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
431	Holly oak	10	No	3	Low	Multiple attachments at 10'; one sided NW.; trunk wound; in very narrow island.
432	Holly oak	15	Yes	3	Low	Multiple attachments at 5'; a little one sided NW.; base growing against wall.
433	Holly oak	20	Yes	4	Moderate	Multiple attachments at 10'; good form; sapsucker damage: base w/ in 1' of wall
434	Holly oak	7	No	3	Low	Suppressed; leans & one sided W.; base w/ in 1.5'
435	Holly oak	9	No	1	Low	All but dead; only basal sprouts remain; strong lean
436	Coast live oak	9	No	3	Moderate	Multiple attachments at 10'; fused stems at attachment: fair form and structure
437	Evergreen pear	11	No	3	Low	Codominant trunks at 10'; wide attachment; poor form and structure
438	Evergreen pear	15	Yes	3	Moderate	Multiple attachments at 7'; crown bowed N.; long
439	Mexican fan palm	16	Yes	5	High	Good form and structure; slight pencilling in upper crown; 45' of brown trunk.
440	Holly oak	15	Yes	3	Moderate	Codominant trunks at 10'; good form; moderate dieback: trunk w/ in 3' of bldg.
441	Holly oak	13	No	3	Moderate	Multiple attachments at 6'; crown bowed E.; moderate dieback.
442	African fern pine	22	Yes	4	Moderate	Multiple attachments at 6'; slight lean S.; trunk w/ in 1' of bldg.; displaced asphalt 5".
443	Evergreen pear	15	Yes	4	Moderate	Multiple attachments at 7'; leans S.; trunk w/ in 3' of bldg.; displaced asphalt 5".

## **Tree Assessment**

**330 Distal Circle** Los Altos, California July 2021



TREE No.	SPECIES	SIZE DIAMETER (in inches)	PROTECTED	<b>CONDITION</b> 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
444	Evergreen pear	14	No	3	Moderate	Multiple attachments at 10'; leaning & one sided S.; trunk w/ in 3' of bldg.; displaced asphalt 5".
445	Holly oak	8	No	3	Low	Small crown; trunk wound; in very narrow island.
446	Olive	9,9,8,7,7	No	4	High	Multiple attachments at 2'; good form; a little sparse.
447	Sweetgum	10	No	3	Low	Poor form and structure; declining.
448	Sweetgum	14	No	3	Low	Upright form; moderate dieback.
449	Coast live oak	15,15,13	Yes	4	Moderate	Off-site, no tag; multiple attachments at 3'; one sided W.; ~5' W. of PL, crown 10' E.
450	Holly oak	14	No	3	Moderate	Off-site, no tag; multiple attachments at 7'; one sided S.; base ~2' W. of PL, crown 12' E.
451	Coast live oak	20	Yes	5	High	Codominant trunks at 5'; good form and structure.
452	Hollywood juniper	8,7	No	3	Moderate	Off-site, no tag; one sided E.; trunk growing against wall.
453	Hollywood juniper	16	Yes	3	Moderate	Off-site, no tag; slight lean S.; base w/ in 6" of wall.
454	Coast redwood	18	Yes	3	Moderate	Off-site, no tag; lost top; sparse; base growing against wall.
455	Xylosma	9	No	3	Moderate	Off-site, no tag; low canopy; extends 15' W. over fence; trunk w/ in 6" of wall.
456	Coast redwood	22	Yes	3	Moderate	Off-site, no tag; sparse canopy; base w/ in 4' of wall.
457	Calif. sycamore	24	Yes	4	Moderate	Off-site, no tag; corrected lean N.; growing in very small island w/ base against wall & curb.