Nigel Belton
Consulting Arborist

A TREE RESOURCE ASSESSMENT AND PRELIMINARY RECOMMENDATIONS FOR TREE PRESERVATION CONCERNING THE PROPOSED SENIOR HOUSING DEVELOPMENT AT 126 EUCALYPTUS AVENUE SANTA CRUZ, CALIFORNIA

Prepared at the request of:
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Site visit by:
Nigel Belton – ISA Certified Arborist WE-0410A
July 8, 2020

Job – The Watermark at Santa Cruz – 7.24.20

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SUMMARY:

Forty-two trees were surveyed in preparation for this preliminary arborist report. The trees are identified with numbered tags affixed to their trunks. The dimensions and health and structural conditions of these trees are documented in the attached Tree Survey Matrix, which also serves to identify those trees that are suitable for preservation, based upon their good condition ratings.

Thirty-seven of these trees are suitable for preservation, based upon their health and structural condition ratings. Five trees are recommended for removal due to their poor condition ratings. A total of twenty-five of these trees will likely have to be removed because of their locations within the proposed construction footprint (see the attached preliminary site plan with the numbered tree locations shown on it). A number of the European Olives and the Queen Palms within the proposed construction area can be relocated to other sites.

Eleven of the surveyed trees qualify as protected Heritage Trees within the City of Santa Cruz. A total of six Heritage Trees are identified for removal because of their poor condition ratings and/or because of their locations within the proximity of the proposed construction footprint. The two of these Heritage Trees are Queen Palms which can also be relocated elsewhere on the site.

The trees that are to be preserved within the development site must be protected during both the design and the construction phases of this project. The project arborist must work with the design team to ensure the preservation and protection of the critical root zones of these trees during the construction period. The root zones of these trees must be preserved with protective fencing and by other means, as specified by the project arborist. The locations of the tree protection fences must be shown on the approved construction plans.

A number of these trees need to be pruned to improve their structural conditions and safety.

The project arborist must provide oversight and supervision throughout the entire construction period in order to ensure that tree protection measures are being properly implemented.

BACKGROUND:

Dylan Rusk of Oppidan Investment Company, contacted me regarding the proposed senior housing development on Eucalyptus Avenue. This project will entail the demolition of the existing structures and the construction of a new residential care facility, along with landscape improvements and the installation of a new parking lot. Mr. Rusk asked me to prepare a tree resource assessment and an arborist report concerning the trees that will be impacted by this project.

ASSIGNMENT:

This assignment entails the following elements:

1- Survey all of the trees located within the limits of the construction project area that have trunks measuring 4-inches and larger in diameter when measured at 54-inches above ground. Affix numbered tags to the trunks of these trees and plot their locations on a tree location map.

2- Document the surveyed tree's dimensions and note their health and structural condition ratings in a Tree Resource Survey Matrix. This Matrix identifies the trees that are suitable for preservation based upon their health and structural condition ratings. The matrix also serves to identify the trees that are unsuitable for preservation because of their poor condition ratings or because of their locations within the proposed construction footprints. The matrix identifies those trees that qualify as protected Heritage Trees (trees with trunk diameters equaling 14-inches and greater DBH).

3- Prepare an arborist report.
- Review the Existing Tree Plan and preliminary construction plan provided to me.
- Provide objective observations regarding the site and individual tree conditions.
- Provide preliminary tree preservation and protection recommendations for both the design and the construction phases of this project.
- Provide an inspection schedule, showing at which time the project arborist must be on site to provide inspections and supervision during the construction period.

LIMITATIONS:

This is a preliminary tree preservation report which serves to provide objective information concerning the conditions of existing trees within the project site. The report only provides preliminary tree protection recommendations based upon a review of preliminary development plan provided to me. This report does not provide final recommendations for tree protection during the design and construction phases of proposed improvement. I must review the Civil and Landscape Plans during the design period and provide further guidance concerning tree protection requirements as needed.

The inspection of these trees was made from the ground only. The subject tree's canopies were not accessed to assess their above ground structures, nor were their roots examined below soil grade. The inspections of these trees were limited to visual examinations and did not entail any advanced testing of their interior structures.

Recommendations for pruning work and the installation of support systems are intended to reduce the risk of tree failures. These recommendations must never be considered as being guarantees against such events ever occurring. Trees can and sometimes do fail unexpectedly, despite these procedures being implemented correctly. Trees are living organisms and their health and structural conditions can change within a short period of time. For these reasons, I recommend the implementation of periodic inspections in order to assess tree health and structural conditions and to maintain their health and safety over the long term.

OBSERVATIONS AND RECOMMENDATIONS:

Tree #1 – 7-inch DBH Avocado *(Persea americana)*:

This healthy tree will need to be removed because it is located within the proposed construction footprint.

Tree #2 – 5-inch DBH Pear Tree *(Pyrus spp.)*:
Tree #3 – 4.5, 4.5, 4 & 4-inch DBH California Buckeye *(Aesculus californica)*:

Both of these trees merit preservation based upon their health and structural condition ratings. The California Buckeye is a good specimen.

Tree #4 – 11-inch DBH Chinese Pistache *(Pistacia chinensis)*:

This tree is suitable for preservation based upon its good health and structural condition rating.

Tree #5 – 20.5 & 25-inch DBH Black Acacia *(Acacia melanoxylon)*:

This tree exhibits good health and vitality but it has a very poor structural condition as a result of the fungal decay in the base of the two codominant trunks and within the proximity of their area of attachment to the stump. I identified the fruiting bodies of the Western Artist's Conk Fungus *(Ganoderma brownii)*, on the west facing side of one of the trunks.

This tree is vulnerable to falling into Eucalyptus Avenue and it represents a significant potential hazard to life and property at this time. I recommend that this Black Acacia is removed as soon as possible in order to abate this potential hazard (a permit will be required for the removal of this protected Heritage Tree).

<u>Tree #6 – 4.5-inch Field Maple *(Acer campestre)*:</u>

This small tree is suitable for preservation based upon its health and structural condition ratings.

Tree #7 – 10 & 6.5-inch DBH Coast Live Oak *(Quercus agrifolia)*:

This oak exhibit's good health and vitality and it is suitable for preservation and protection during the development period.

Tree #8 – 14.5-inch DBH Wild Plum *(Prunus spp.)*:

This tree is located at the north end of the main classroom building. The plum is not suitable for preservation due to its poor health and structural condition ratings (I observed a dieback pattern in the upper canopy). Note that this tree qualifies as a protected Heritage tree (its trunk is greater than 14-inches diameter when measured at 54-inches above ground).

Tree #9 – 42-inch DBH Coast Redwood *(Sequoia sempervirens)*:

The topographic map shows that the trunk of this large tree transects the north property boundary. The redwood effectively belongs to both property owners. It is suitable for preservation based upon its overall health and vitality. The tree has a poor structural condition because of its codominant growth pattern (it divides into two trunks which share a relatively weak area of attachment) and the development of a broad canopy with a heavy limb structure. The broad canopy developed as a result of the top being removed or because its apical growth was suppressed by the influence of salt laden winds from the ocean. I understand that a large limb recently fell into the adjacent property.

I recommend that this protected Heritage Tree is preserved and that it is pruned to improve its structure and reduce the risk of limb failures. The heavy and overextended limb structure must be reduced in length and the width of the canopy reduced and shaped at the same time. These actions should effectively reduce the risk of limb failures occurring during strong winds and in storm conditions. Larger dead wood (over 1-inches diameter) and crossing limbs must also be removed at the same time. This work must be undertaken by a competent tree service provider and under the supervision of an ISA Certified Arborist (see that attached list of recommended tree service providers).

I noted that the preliminary development plan shows that the trunk of this tree will be situated within close proximity to the proposed building footprint in the northwest corner of the project site. Care will have to be taken during the design and construction phases of this project in order to preserve and protect as much of the Critical Root Zone area as possible (The CRZ is defined as the area within the tree canopy drip-line and it can also be calculated by a utilizing a factor of the trunk diameter).

Tree #10 – 5-inch DBH Kohuhu Pittosporum *(Pittosporum tenuifolium)*:
Tree #11 – 7.5-inch DBH Wild Plum:

These small trees are suitable for preservation based upon their good condition ratings.

Tree #12 – 11, 9, 8 & 9.5-inch DBH Black Acacia:

This acacia exhibits good health and vitality.

The tree has a poor structural condition due to the development of a codominant structure comprising of four separate trunks. The trunks are weakly attached to each other they are more vulnerable to splitting apart during storm conditions.

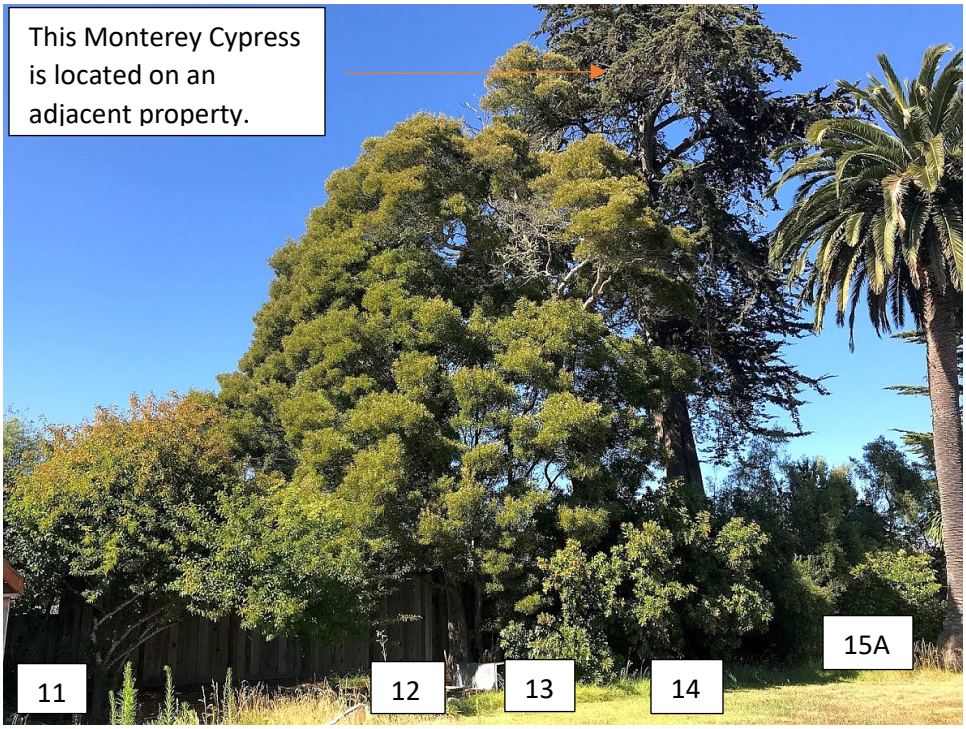
I determined that this tree is suitable for preservation despite its poor structural condition (which cannot be effectively mitigated by the installation of support cables). I recommend that it is preserved because of its location in the landscape. It will be setback from the closest building shown on the preliminary site plan.

I recommend that the tree is pruned to remove dead and crossing branches.

Tree #12 - The four codominant trunks that share weak attachments

Tree #13 – 27-inch DBH Black Acacia:

This acacia exhibits fair health and vitality.



This tree has a poor structural condition due to the development of a weak codominant growth pattern, comprising of two secondary trunks at about five-feet above ground. The narrow area of attachment in between these secondary trunks is vulnerable to failing because of an extensive area of trapped bark in this area which is a significant structural defect. The tree is vulnerable to splitting apart at this time. This failure pattern will most likely occur in storm conditions when strong winds are present.

Tree #13 - The weak area of attachment

I recommend that this tree is preserved at this time, despite its poor structural condition and the elevated risk of it failing. I recommend that a support cable must be installed in between the two codominant trunks. The galvanized steel cable must comprise of 5/16-inch EHS Grade material and it must be attached to 5/8 through rods or cable end stops (not J-Lags). The tree must also be pruned to remove larger dead wood and the weight in the ends of any heavy and overextended needs to be reduced at the same time.

Tree #14 – 4, 4 & 3-inch DBH European Olive *(Olea europaea)*:

This tree is suitable for preservation based upon its condition ratings.

Tree #15 – 45-inch DBH Canary Island Date Palm *(Phoenix canariensis)*:

This Heritage Tree is suitable for preservation and it must be protected during the construction period.

Tree #15A – 6 & 4-inch DBH European Olive:

This tree is suitable for preservation based upon its condition ratings.

Tree #16 – 38-inch DBH Canary Island Date Palm:

This Heritage Tree is suitable for preservation and it must be protected during the construction period.

Tree #17 – 8-inch DBH Persian Ironwood *(Parrotia persica)*:
Tree #18 – 5-inch DBH Persian Ironwood:

These trees are suitable for preservation based upon their good condition ratings. They will have to be removed because of their locations within the proposed construction footprint.

Tree #19 – 7 & 7-inch DBH Callery Pear *(Pyrus calleryana)*:
Tree #20 – 9, 8 & 4-inch DBH Callery Pear:
Tree #21 – 7, 7 &11-inch DBH Callery Pear:
Tree #22 – 13-inch DBH Callery Pear:

These pears are suitable for preservation based upon their good health condition ratings. The trees have poor structural conditions but can be pruned and strengthened by the installation support systems to improve their structural conditions. I observed that the tree's roots are damaging the surrounding asphalt surfaces.

These trees will likely need to be removed to facilitate the proposed development and landscape improvements as shown on the attached preliminary plan. In the event that they are to be preserved, they must be protected during the design and construction phases of this project (note that the root growth of these trees will not be compatible with the installation of any paved surfaces within their canopy drip-lines).

Tree #23 – 12.5-inch DBH Dawn Redwood *(Metasequoia glyptostroboides)*:

This tree is suitable for preservation based upon its condition ratings. The tree will likely have to be removed because of its location within the proposed construction footprint.

Tree #24 – 14-inch DBH Fruitless Mulberry *(Morus alba)*:
Tree #25 – 16-inch DBH Fruitless Mulberry:

Both of these trees qualify as protected Heritage Trees.

Both of these trees are unsuitable for preservation because of their poor structural conditions and their weak growth patterns. Both trees were previously topped which resulted in the development of weakly attached limbs. These limbs will become increasingly vulnerable to failure over time. The large diameter topping cuts will also progressively decay over time. I observed several cavities on the trunk of Tree #25 which have resulted from an earlier structural crack and the presence of internal decay.

I recommend that these structurally compromised trees are removed and that they are replaced with different species as a component of the new landscape plan for this development.

Tree #26 – 12-inch DBH European Olive:

This tree is suitable for preservation because of its good health and structural conditions. It is a good specimen.

The tree must be removed because of its location within the proposed parking lot footprint. The Olive is suitable for relocation to another area on the site.

Tree #27 – 11.5-inch DBH White Alder *(Alnus rhombifolia)*:
Tree #28 – 8.5 & 12.5-inch DBH Arroyo Willow *(Salix lasiolepis)*:
Tree #29 – 6-inch DBH Flowering Cherry *(Prunus spp.)*:

These trees are suitable for preservation because of their good overall condition ratings however they will have to be removed because of their locations within the proposed construction footprint.

Tree #30 – 5.5-inch DBH Flowering Cherry:
Tree #31 – 18-inch DBH Queen Palm *(Syragrus romanzoffiana)*:

Both of these trees are suitable for preservation based upon their good overall condition ratings however they must be removed because of their locations within the proposed construction footprint. The Queen Palm qualifies as a protected Heritage Tree and its relocation elsewhere on the site is also an option.

Tree #32 – 11.5-inch DBH Queen Palm:
Tree #33 – 11.5-inch DBH Queen Palm:
Tree #34 – 13.5-inch DBH Queen Palm:
Tree #35 – 8-inch DBH Queen Palm:

These palms are suitable for preservation because if their good overall condition ratings however they must be removed because they are located within the construction footprint (they could also be relocated to another site).

Tree #36 – 11-inch DBH European Olive:

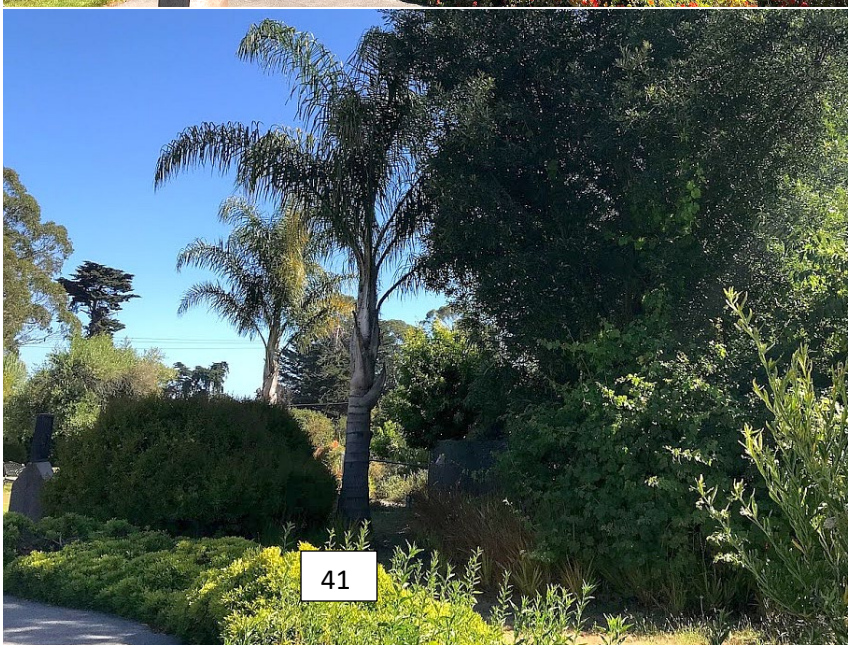
This tree is suitable for preservation based upon its good condition rating. The tree must be removed because of its location within the proposed parking lot footprint. The relocation of this tree to another site is also an option.

Tree #37 – 8-inch DBH European Olive:

This tree is not suitable for preservation because of its very poor structural condition. It is also situated within the footprint of the proposed parking lot.

Tree #38 – 10.5-inch DBH Queen Palm:
Tree #39 – 9.5-inch DBH European Olive:
Tree #40 – 13.5-inch DBH Queen Palm:
Tree #41 – 15.5-inch DBH Queen Palm:

These trees are suitable for preservation based upon their good condition ratings. They must be removed or relocated because of their locations within the footprint of the proposed parking lot and construction area. Note that Tree #41 qualifies as a protected Heritage Tree.



Tree #42 – Monterey Cypress *(Hesperocyparis macrocarpa)* - 69-inches at 30-inches above ground:

This significant Heritage Tree is located on the south side of the church sanctuary. It is situated outside of the proposed construction footprint. The tree is suitable for preservation and it must be protected during the design and construction phases of this development.

I recommend that this tree is pruned to improve its structure before construction work proceeds. The lower limbs one the west side of the canopy are vulnerable to failing because they are heavy and overextended. I recommend that the weight is reduced in the ends of these limbs and that dead and crossing branches are removed at the same time. The low limbs on the west side of the canopy will also need to be removed to facilitate the construction of the parking lot.

I estimate that the proposed parking lot will be setback approximately 20-feet from the trunk of this tree. This parking lot will be situated within this tree's Critical Root Zone as defined by its canopy drip-line and an extrapolation of its trunk diameter. Care must be taken to protect the Critical Root Zone Area beyond the edge of the new parking lot footprint. Significant roots must be pruned properly at the edge of the grading work and not be torn by equipment (prune all roots 2-inches and larger in diameter).

I recommend that the soil surface within the canopy perimeter is mulched with a four-inch deep layer of wood chips in order to conserve soil moisture and mitigate root loss. I also recommend that supplementary irrigation is installed around this tree and that it is irrigated for at least four-years after the construction ends (apply at a rate of 700-gallons every three weeks over the summer months).

PRELIMINARY RECOMMENDATIONS FOR TREE PROTECTION:

DESIGN PERIOD TREE PRESERVATION RECOMMENDATIONS:

The project arborist must provide recommendations concerning the protection of the trees identified for preservation during the design development phase of this project. These recommendations pertain the protection of the Critical Root Zone areas of the trees that will be impacted by construction activities. These activities include demolition work, grading work, construction work and the installation of underground utilities and storm drains.

1- The locations of required tree Protection Zone fences and Root Buffers must be shown on the Final Demolition, Grading and Drainage Plans.

2- The following Tree Protection Notes must be added to the Cover Sheet of the final construction plans:

(a)- Tree Protection Zone Fencing must be installed and approved of by the project arborist before demolition and construction work can proceed. These fences must not be dismantled or moved at any time during the construction period, without first obtaining the consent of the project arborist. The fences must comprise of steel chain-link material attached to steel posts driven into the ground. Laminated Tree Protection Notices must be attached to the TPZ fences at distances of every 15-feet (see the attached TPZ notice template).

(b)- The project arborist must attend a pre-construction meeting with the General Contractor and must also be notified concerning scheduled site meetings throughout the construction period.

(c)- Grading and construction activities must be excluded from fenced Tree Protection Zones. Vehicles and equipment must be excluded from Tree Protection Zones. No materials, chemicals or waste products may be stored or disposed of within these protected areas.

(d)- The project arborist must be notified in the event that significant roots over 2-inches diameter are encountered during any underground work.

TREE PRUNING & MAINTENANCE RECOMMENDATIONS:

The Project Arborist must meet with the approved Tree Service Provider to discuss the scope of all the recommended pruning work on this site before it proceeds and should also be available to inspect the work in progress in order to ensure that it is being performed correctly. This work must comply with ANSI A-300 Best Management Practices and ISA Standards for tree pruning and the installation of tree support systems (tree props and support cables). This work must also be performed under the supervision of an ISA Certified Arborist.

CONSTRUCTION PERIOD SITE INSPECTION SCHEDULE AND TREE PROTECTION RECOMMENDATIONS:

1- Tree Protection Zone Fencing must be installed and approved of by the project arborist before any site demolition and construction work proceeds.

TPZ fences must not be dismantled or moved at any time during the construction period, without first obtaining the consent of the project manager and the project arborist.

Note - All construction activities must be excluded from fenced Tree Protection Zones, unless such encroachments are unavoidable, in which case the project arborist must provide supervision regarding root protection and preservation within these areas. Vehicles and equipment must be excluded from Tree Protection Zones. No materials, chemicals or waste products may be stored or disposed of within these protected areas.

2- The project arborist must attend a pre-construction meeting with the General Contractor, the demolition contractor and the grading contractor and must also be notified concerning scheduled site meetings throughout the construction period.

3- The project arborist must be notified in the event that significant roots over 2-inches diameter are encountered during any underground work. Roots encountered within the limits of grading and excavation work that exceed 2-inches diameter must be pruned properly and not be torn by equipment.

4- The project arborist must also provide supervision oversight concerning all construction disturbances that will encroach within the Critical Root Zones Areas of Protected Trees (as defined by tree canopy drip line perimeters or a factor their trunk diameter measurements).

Please contact me if you have any questions regarding this report.

Respectfully submitted

Nigel Belton

Attachments:
- Tree Resource Survey Matrix
- Tree Location Map
- The Numbered Tree Locations shown on the Existing Tree Plan and Preliminary Site Plan
- Tree Protection Notice Template
- Recommended Tree Service Providers
- Assumptions & Limiting Conditions

Assumptions and limiting Conditions

1. Any legal description given by the appraiser/consultant is assumed to be correct. No responsibility is assumed for matters legal in character nor is any opinion rendered as to the quality of any title.

2. The appraiser /consultant can neither guarantee nor be responsible for accuracy of information provided by others.

3. The appraiser/consultant shall not be required to give testimony or to attend court by reason of this appraisal unless subsequent written arrangements are made, including payment of an additional fee for services.

4. Loss or removal of any part of this report invalidates the entire appraisal/evaluation.

5. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person(s) to whom it is addressed without written consent of the appraiser/consultant.

6. This report and the values expressed herein represent the opinion of the appraiser/consultant, and the appraiser's/consultant's fee is in no way contingent upon the reporting of a specified value nor upon any finding to be reported.

7. Sketches, diagrams, graphs, photos, etc in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys.

8. This report has been made in conformity with acceptable appraisal/evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.

9. When applying any pesticide, fungicide, or herbicide, always follow label instructions.

10. No tree described in this report was climbed, unless otherwise stated. We cannot take responsibility for any defects which only could have been discovered by climbing. A full root collar inspection, consisting of excavating the soil around the tree to uncover the root collar and major buttress roots was not performed, unless otherwise stated. We cannot take responsibility for any root defects which could only have been discovered by such an inspection.

Consulting Arborist Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within the trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

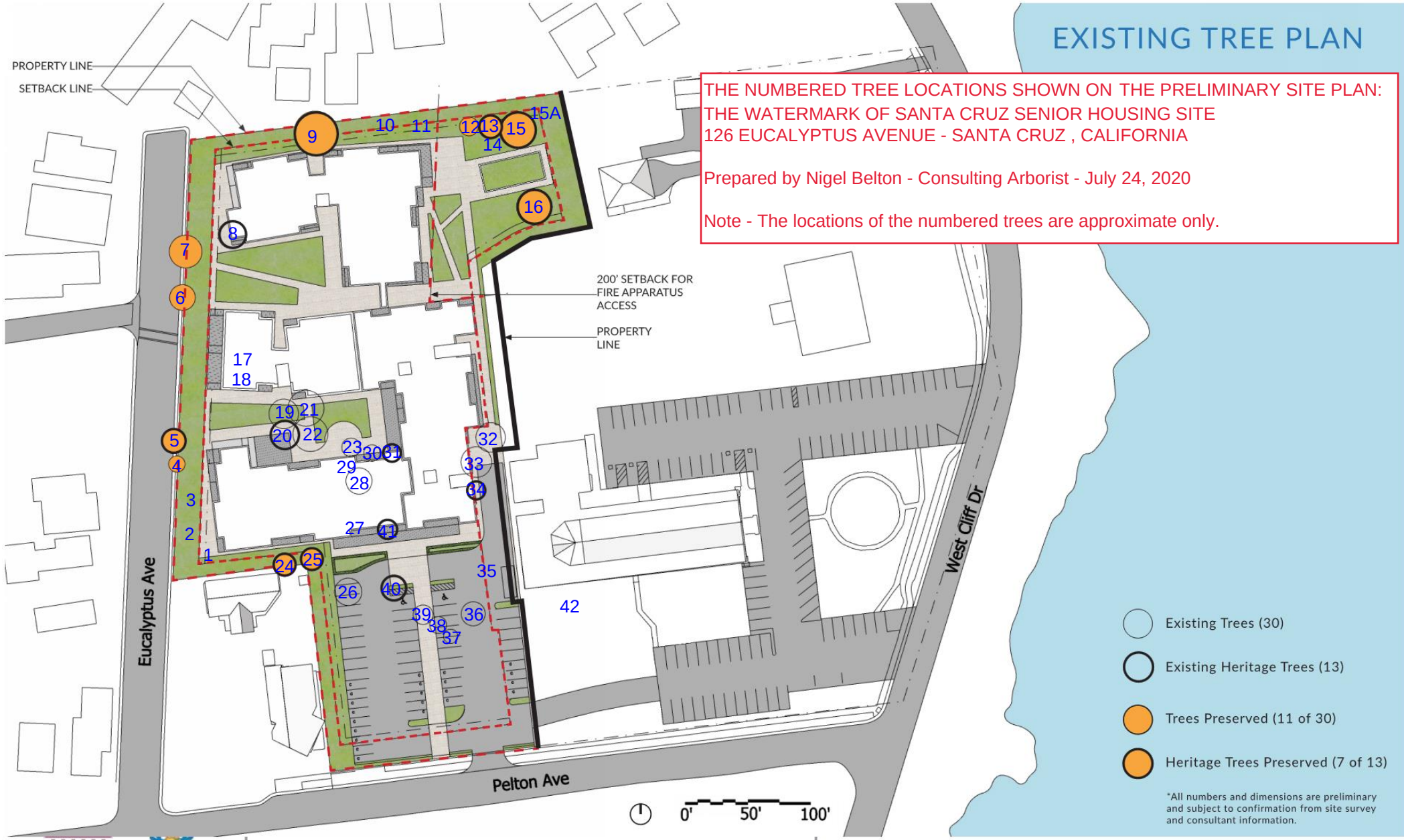
Nigel Belton
ISA Certified Arborist – WE 410A

EXISTING TREE PLAN

THE NUMBERED TREE LOCATIONS SHOWN ON THE PRELIMINARY SITE PLAN:
THE WATERMARK OF SANTA CRUZ SENIOR HOUSING SITE
126 EUCALYPTUS AVENUE - SANTA CRUZ , CALIFORNIA

Prepared by Nigel Belton - Consulting Arborist - July 24, 2020

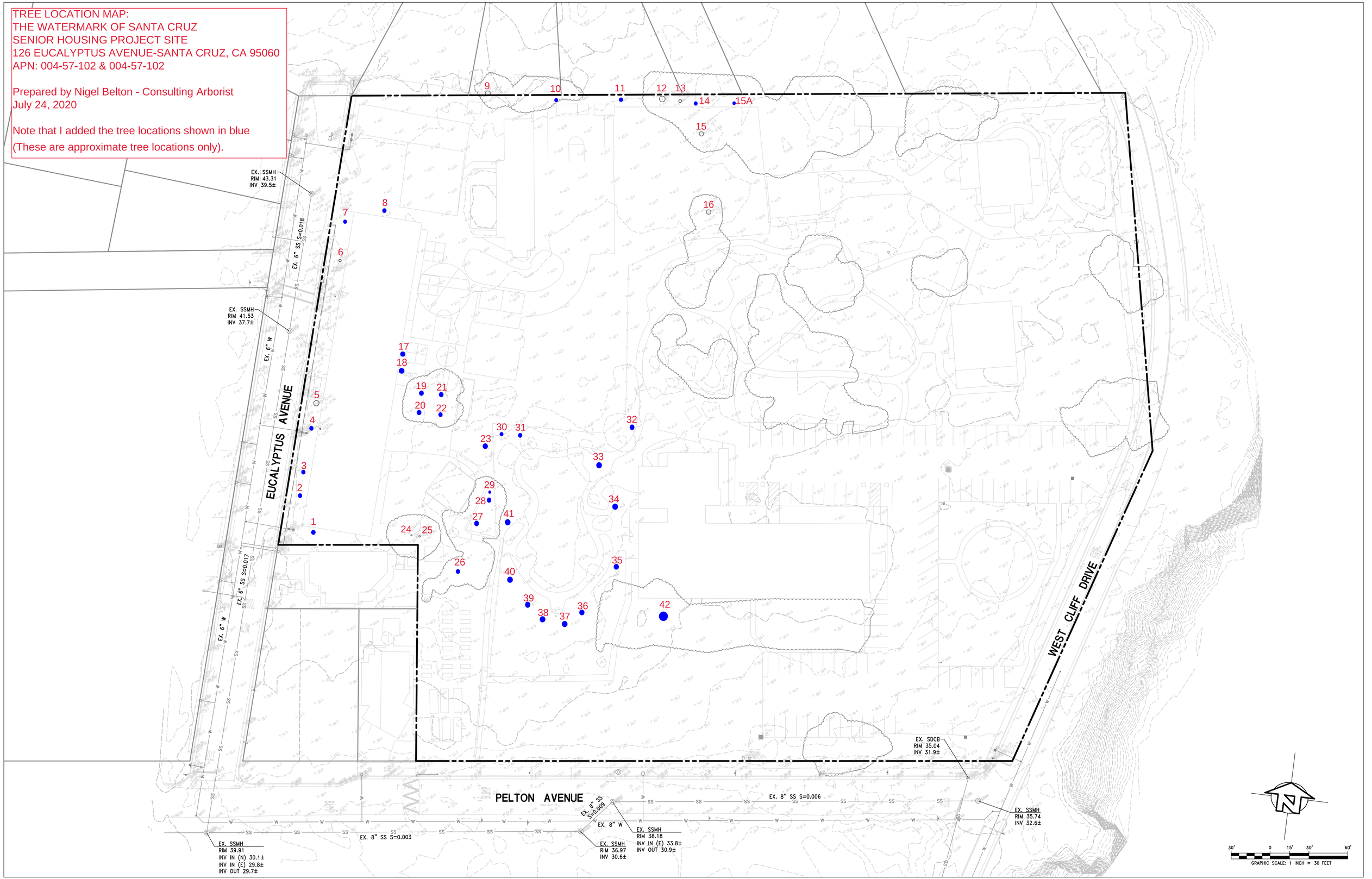
Note - The locations of the numbered trees are approximate only.



TREE LOCATION MAP:
THE WATERMARK OF SANTA CRUZ
SENIOR HOUSING PROJECT SITE
126 EUCALYPTUS AVENUE-SANTA CRUZ, CA 95060
APN: 004-57-102 & 004-57-102

Prepared by Nigel Belton - Consulting Arborist
July 24, 2020

Note that I added the tree locations shown in blue
(These are approximate tree locations only).



TREE PRESERVATION AREA – KEEP OUT

TREE PROTECTION ZONE FENCING MUST REMAIN IN PLACE DURING THE ENTIRE CONSTRUCTION PERIOD

FENCING MUST NOT BE MOVED OR DISMANTLED WITHOUT THE NOTIFICATION OF THE PROJECT MANAGER AND THE WRITTEN CONSENT OF THE PROJECT ARBORIST

TREE RESOURCE SURVEY MATRIX – THE WATERMARK OF SANTA CRUZ SENIOR HOUSING PROJECT SITE – EUCALYPTUS AVENUE – SANTA CRUZ, CALIFORNIA:

#	*SHEET 1 of 4.* SPECIES	TRUNK DIAMETER AT 54-INCHES ABOVE GRADE – (DBH)	PROTECTED HERITAGE TREE	ESTIMATED HEIGHT	ESTIMATED SPREAD	HEALTH (1 = BEST RATING)	STRUCTURE (1 = BEST RATING)	SUITABLE FOR PRESERVATION (BASED ON CONDITION RATING)	UNSUITABLE FOR PRESERVATION (BASED ON CONDITION RATING)	REMOVAL REQUIRED FOR PROPERTY IMPROVEMENTS	COMMENTS
1	Avocado *(Persea americana)*	7	-	15	15	2	3	**X**	-	**X**	Located next to the proposed construction footprint.
2	Pear Tree *(Pyrus spp.)*	5	-	15	10	2	2	**X**	-	-	Located on the frontage of Eucalyptus Avenue.
3	California Buckeye *(Aesculus californica)*	4.5/4.5 4/4	-	15	20	2	2	**X**	-	-	Located on the frontage of Eucalyptus Avenue. A good specimen.
4	Chinese Pistache *(Pistacia chinensis)*	11	-	25	35	2	2	**X**	-	-	Located on the frontage of Eucalyptus Avenue. A good specimen
5	Black Acacia *(Acacia melanoxylon)*	20.5/ 25	**X**	55	40	2	4	-	**X**	-	Located on the frontage of Eucalyptus Avenue. This tree is vulnerable to falling at this time because of the extensive Area of fungal decay in the base of the trunk. I recommend that it is removed as soon as possible in order to abate a significant potential hazard.
6	Field Maple *(Acer campestre)*	4.5	-	10	10	2	3	**X**	-	-	Located on the frontage of Eucalyptus Avenue.
7	Coast Live Oak *(Quercus agrifolia)*	10/6.5	-	15	25	1	3	**X**	-	-	Located on the frontage of Eucalyptus Avenue.
8	Wild Plum *(Prunus spp.)*	14.5	**X**	20	15	4	4	-	**X**	**X**	Located within the proposed building construction footprint. This tree is diseased and is declining in health.

Site visit by Nigel Belton, ISA Certified Arborist WE-0410A – July 8, 2020

TREE RESOURCE SURVEY MATRIX – THE WATERMARK OF SANTA CRUZ SENIOR HOUSING PROJECT SITE – EUCALYPTUS AVENUE – SANTA CRUZ, CALIFORNIA:

#	*SHEET 2 of 4.* SPECIES	TRUNK DIAMETER AT 54-INCHES ABOVE GRADE – (DBH)	PROTECTED HERITAGE TREE	ESTIMATED HEIGHT	ESTIMATED SPREAD	HEALTH (1 = BEST RATING)	STRUCTURE (1 = BEST RATING)	SUITABLE FOR PRESERVATION (BASED ON CONDITION RATING)	UNSUITABLE FOR PRESERVATION (BASED ON CONDITION RATING)	REMOVAL REQUIRED FOR PROPERTY IMPROVEMENTS	COMMENTS
9	Coast Redwood *(Sequoia sempervirens)*	42	**X**	70	30	2	4	**X**	-	-	The trunk transects the north boundary. This tree has a heavy limb structure which is vulnerable failure during strong winds. It is situated within close proximity to the proposed building footprint.
10	Kohuhu Pittosporum *(Pittosporum tenuifolium)*	5	-	20	10	2	2	**X**	-	-	Located near north boundary.
11	Wild Plum	7.5	-	20	20	2	3	**X**	-	-	Located near north boundary.
12	Black Acacia	11/9/8 /9.5	-	65	30	2	4	X	-	-	Located near north boundary. The acacia has a weak codominant growth pattern comprising of four trunks at ground level.
13	Black Acacia	27	**X**	75	45	3	4	X	-	-	Located near north boundary. This tree has a very poor structure comprising of two codominant trunks which share a weak area of attachment with the main trunk. A support cable is requied.
14	European Olive *(Olea europaea)*	4/4/3	-	20	15	2	3	**X**	-	-	Located near north boundary.
15	Canary Island Date Palm *(Phoenix canariensis)*	45	**X**	65	25	2	3	**X**	-	-	Located near north boundary. Well setback from proposed construction work.
15-A	European Olive	6/4	-	25	25	2	2	**X**	-	-	Located near north boundary.
16	Canary Island Date Palm	38	**X**	70	25	2	2	**X**	-	-	Located near the west boundary. Well setback from proposed construction work.
17	Persian Ironwood *(Parrotia persica)*	8	-	20	15	2	2	**X**	-	**X**	Located within the proposed construction footprint.
18	Persian Ironwood	5	-	25	10	2	2	**X**	-	**X**	Located within the proposed construction footprint.

Site visit by Nigel Belton, ISA Certified Arborist WE-0410A – July 8, 2020

TREE RESOURCE SURVEY MATRIX – THE WATERMARK OF SANTA CRUZ SENIOR HOUSING PROJECT SITE – EUCALYPTUS AVENUE – SANTA CRUZ, CALIFORNIA:

#	*SHEET 3 of 4.* SPECIES	TRUNK DIAMETER AT 54-INCHES ABOVE GRADE – (DBH)	PROTECTED HERITAGE TREE	ESTIMATED HEIGHT	ESTIMATED SPREAD	HEALTH (1 = BEST RATING)	STRUCTURE (1 = BEST RATING)	SUITABLE FOR PRESERVATION (BASED ON CONDITION RATING)	UNSUITABLE FOR PRESERVATION (BASED ON CONDITION RATING)	REMOVAL REQUIRED FOR PROPERTY IMPROVEMENTS	COMMENTS
19	Callery Pear *(Pyrus calleryana)*	7/7	-	25	20	2	4	**X**	-	**X**	Located within the proposed construction footprint. Noted significant root damage to the surrounding paved area.
20	Callery Pear	9/8/4	-	25	20	2	4	**X**	-	**X**	Located within the proposed construction footprint. Noted significant root damage to the surrounding paved area.
21	Callery Pear	7/7/11	-	25	20	2	4	**X**	-	**X**	Located within the proposed construction footprint. Noted significant root damage to the surrounding paved area.
22	Callery Pear	13	-	20	20	2	4	**X**	-	**X**	Located within the proposed construction footprint. Noted significant root damage to the surrounding paved area.
23	Dawn Redwood *(Metasequoia glyptostroboides)*	12.5	-	20	15	2	2	**X**	-	**X**	Located within the proposed construction footprint.
24	Fruitless Mulberry *(Morus alba)*	14	**X**	30	20	2	4	-	**X**	-	Located near the southern limits of the proposed construction footprint. This tree was topped. The regrowth is vulnerable to failure.
25	Fruitless Mulberry	16	**X**	30	20	2	4	-	**X**	-	Located near the southern limits of the proposed construction area. This tree was topped and the regrowth is vulnerable to failure. I observed cracks and fungal decay in the trunk.
26	European Olive	12	-	20	25	2	2	**X**	-	**X**	Located within the proposed construction footprint.
27	White Alder *(Alnus rhombifolia)*	11.5	-	30	25	2	2	**X**	-	**X**	Located within the proposed construction footprint.
28	Arroyo Willow *(Salix lasiolepis)*	8.5/ 12.5	-	35	30	2	3	**X**	-	**X**	Located within the proposed construction footprint.

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TREE RESOURCE SURVEY MATRIX – THE WATERMARK OF SANTA CRUZ SENIOR HOUSING PROJECT SITE – EUCALYPTUS AVENUE – SANTA CRUZ, CALIFORNIA:

#	*SHEET 4 of 4.* SPECIES	TRUNK DIAMETER AT 54-INCHES ABOVE GRADE – (DBH)	PROTECTED HERITAGE TREE	ESTIMATED HEIGHT	ESTIMATED SPREAD	HEALTH (1 = BEST RATING)	STRUCTURE (1 = BEST RATING)	SUITABLE FOR PRESERVATION (BASED ON CONDITION RATING)	UNSUITABLE FOR PRESERVATION (BASED ON CONDITION RATING)	REMOVAL REQUIRED FOR PROPERTY IMPROVEMENTS	COMMENTS
29	Flowering Cherry *(Prunus spp.)*	6	-	15	15	2	3	**X**	-	**X**	Located within the proposed construction footprint.
30	Flowering Cherry	5.5	-	20	10	2	2	**X**	-	**X**	Located within the proposed construction footprint.
31	Queen Palm *(Syragrus romanzoffiana)*	18	**X**	20	15	3	2	**X**	-	**X**	Located within the proposed construction footprint.
32	Queen Palm	11.5	-	30	10	2	2	**X**	-	**X**	Located within the proposed construction footprint.
33	Queen Palm	11.5	-	15	10	2	2	**X**	-	**X**	Located within the proposed construction footprint.
34	Queen Palm	13.5	-	35	20	2	2	**X**	-	**X**	Located within the proposed construction footprint.
35	Queen Palm	8	-	15	5	2	2	**X**	-	**X**	Located within the proposed parking lot footprint.
36	European Olive	11	-	20	25	2	2	**X**	-	**X**	Located within the proposed parking lot footprint.
37	European Olive	8	-	15	15	2	4	-	**X**	**X**	Located within the proposed parking lot footprint.
38	Queen Palm	10.5	-	15	10	2	2	**X**	-	**X**	Located within the proposed parking lot footprint.
39	European Olive	9.5	-	15	15	2	3	**X**	-	**X**	Located within the proposed parking lot footprint.
40	Queen Palm	13.5	-	35	20	2	2	**X**	-	**X**	Located within the proposed parking lot footprint.
41	Queen Palm	15.5	**X**	30	20	2	2	**X**	-	**X**	Located within the proposed parking lot footprint.
42	Monterey Cypress *(Hesperocyparis macrocarpa)*	69” at 30” above grade	**X**	80	60	2	3	**X**	-	-	This significant tree is located next to the south side of the church. It will be located within close proximity to the proposed parking lot and care must be taken to protect its root zone during the construction work.

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