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Project:
1930 Ocean Street Extension
Santa Cruz, Ca.
A.P.N. 008-044-02

In response to a request for an updated arborist review by the City of Santa Cruz I reexamined the existing trees on the proposed development site that are to be preserved and protected.

The trees are numbered on the attached tree maps and on the Landscape Plan by Janet Pollack Landscape Architect. The drip line for each tree is mapped on the Grading Plan prepared by Bowman & Williams, dated February 22, 2010. A plan view of the major limbs of the trees are shown on the Site Plan A1.1, prepared by architect Dennis Diego, dated March 2, 2010. Following are comments regarding each of the 6 Coast Live Oak trees to be saved. Revisions and additions to the initial arborist report are in **bold letters**.

Tree #10 is a *Quercus agrifolia* (Coast Live Oak). **It is approximately 40' tall with an average crown spread of 60'**. The tree is a Heritage Tree as defined by the City of Santa Cruz Heritage Tree Ordinance. There are two trunks with **DBH's of 19" and 21"**. The crotch between the two trunks is soft, suggesting that some decay is present. There is included bark at this crotch as well indicating a weak union. The canopy is full and the foliage is in good condition. Proposed apartment buildings 2A and 3A will be built on either side of this tree.

Building 2A encroaches into the drip line of Tree #10. Two branches will need to be removed to accommodate the building. The pruning shall take place before any clearing or grading of the site. Each branch to be removed has a diameter of 12" where it meets the parent limb. The cuts shall be thinning cuts, not heading cuts. In addition thinning cuts shall be utilized to balance the canopy and reduce end weight where appropriate. Pruning shall be performed by a licensed arborist and as recommended in the Pruning Standards prepared by the International Society of Arborists

I recommend that the 2 main trunks be cabled to control the fall if there is a limb failure at the main crotch.

Building 3A falls outside the drip line of the tree. The building will be built at grade with no significant cut or fill. The trenching for the spread footings and utilities will occur outside the drip line of the tree. Building 2 will be built at grade, requiring no significant cut or fill. There will be trenching for the spread footings and utilities outside the drip line.

Tree protection fencing shall be erected and inspected by the project arborist after the pruning has taken place but prior to any other site work. The fencing shall be moved to 5' from the building wall, for installation of windows, installation of siding and for painting.

This tree shall be monitored annually by a licensed arborist, as the tree matures and the trunks expands.

Tree # 11 is a *Quercus agrifolia* (Coast Live Oak). The tree is a Heritage Tree as defined by City of Santa Cruz Heritage Tree Ordinance. It is approximately 30' tall with an average crown spread of 40'. The drip line is mapped on the Grading Plan. There are two trunks with **DBH's of 17" and 18"**. **There is significant twig dieback at the top of the crown suggesting the presence of root or heart decay. This has progressed each time I have looked at the tree from 2010 to 2016.** The foliage is in fair to good condition. **There are a few areas in the lower north west side of the canopy where the foliage has died.**

The upper crown shall be tip pruned to remove dead or dying branches and twigs. This pruning should take place after the foundation for Building 2A has been laid out. Refer to the fencing and other protective measures outlined above in the discussion for Tree #10. This pruning shall take place

at the direction of the project arborist, after the first floor is framed. . Debris shall be removed from the main crotch. **I recommend that the 2 main trunks be cabled to control the fall if there is a limb failure at the main crotch**

The building will be built at grade, requiring no significant cut or fill. There will be trenching for the spread footings and utilities outside the drip line.

The tree shall be fenced and the root zone protected according to the measures described in the section of this report titled “Fencing and Protective Measures”. Building 2A will encroach into the drip line of the tree. The fencing shall be moved to 5’ from the building wall for installation of windows, siding and for painting.

This tree shall be monitored annually by a licensed arborist, as the tree matures and the trunks expands.

Tree #12 is a *Quercus agrifolia* (Coast Live Oak). It is approximately 40’ tall with an average crown spread of 50’. The tree is a Heritage Tree as defined by City of Santa Cruz Heritage Tree Ordinance. There are two trunks with **DBH’s of 18” and 20”**. The crotch between the two trunks is soft suggesting some decay is present. The canopy is full except for some twig dieback in the upper canopy and the foliage is in good condition. Debris shall be removed from the main crotch. **I recommend that the 2 trunks be cabled to control the fall if there is a limb failure at the main crotch.**

Tree #12 will be adjacent to Building 4B. There will be significant grading required for the foundation of this building. However, the cut slope will fall outside the drip line of the tree. In addition there will be trenching for the spread footings and utilities. The trenching will also fall outside the drip line of the tree. Construction of the retaining wall located down slope of the tree, above the road, will fall within the drip line. The proposed Site Plan indicates that a 2’ retaining wall will be built approximately 10’ from the trunk of this tree. If roots over 3” diameter are revealed during grading for the retaining wall, the road, parking spaces and the foundation of Building 4B, they should be cut cleanly, not ripped, and wrapped with burlap. The burlap shall be secured with string and kept moist until back filling occurs.

The tree shall be fenced and the root zone protected according to the measures described in the section of this report titled “Fencing and Protective Measures”. The fencing shall be moved to allow for the over cut for this wall and drainage behind the wall. Root protection measures outlined in the Arborist Report shall be followed during grading and construction of the roadway and the retaining wall.

This tree shall be monitored annually by a licensed arborist, as the tree matures and the trunks expands.

Tree #13 is a *Quercus agrifolia* (Coast Live Oak). **It is approximately 50’ tall with an average crown spread of 50’.** The tree is a Heritage Tree as defined by City of Santa Cruz Heritage Tree Ordinance. There are three trunks from 2’ above grade. **The DBH’s of these trunks are 15”, 14”, and 14”.** The crotch between the three trunks is a very soft suggesting decay is present. There is included bark at this crotch. The presence of decay and included bark indicates that this is a weak junction and could lead to trunk failure and collapse as the trunks increase in size. Debris shall be removed from this crotch. **I recommend that the trunks be cabled to control the fall if there is a limb failure at this crotch.**

Tree #13 will be adjacent to Building 5. Significant grading will be required for the foundation of this building. Some grading will occur within the drip line of the tree as described in the Arborist Report and some pruning may need to take place. The grading for the foundation will include an additional cut of 30” to facilitate foundation waterproofing. The proposed Site Plan indicates that some filling will take place up slope of the trunk under the drip line of the tree. The site plan also shows 2 parking places and a 6’ retaining wall adjacent to the building. Grading for this wall will occur at the edge of the drip line of this tree. If any roots over 3” diameter are revealed during grading, they should be cut cleanly, not ripped, and wrapped with burlap. The burlap shall be secured with string and kept moist until back filling occurs. The entire drip line of this tree cannot be fenced due to the proximity of the fill slope.

The tree shall be fenced at the limit of grading line shown on the Grading and Drainage Plan and the root zone protected according to the measures

described in the section of this report titled “Fencing and Protective Measures”. Tree protection fencing shall be erected and inspected by the project arborist after the pruning has taken place but prior to any other site work. The location of the protective fencing at the limit of grading line may need to be adjusted during window placement, siding and painting. grading and construction.

This tree shall be monitored annually by a licensed arborist, as the tree matures and the trunks expands.

The developers have proposed moving Building 5, the retaining wall and the 2 parking spaces, 3' to the south: away from the tree.

Tree #14 is a Quercus agrifolia (Coast Live Oak). **It is approximately 45' tall, with a DBH of 28" and an average crown spread of 45'.** The tree is a Heritage Tree as defined by City of Santa Cruz Heritage Tree Ordinance. The tree is located part way down a steep slope that drops to a gully adjacent to the property. Existing ivy growing around the base and up the trunk shall be removed.

The grading plan indicates that this gully will be regraded and restored with native vegetation. The project arborist shall determine in the field if/how the tree can be saved and how to best protect this tree during grading.

This tree has moderate dieback suggesting possible root or heart rot. January 2016

Tree # 15 is a Quercus agrifolia (Coast Live Oak). It is approximately **40' tall with an average crown spread of 45'. There are 3 trunks from 3'-6" above grade.** The tree is a Heritage Tree as defined by City of Santa Cruz Heritage Tree Ordinance. The tree is located at the top of a steep slope that drops down to a ravine adjacent to the property. There is a second small trunk near the base of the tree. This trunk shall be removed by a licensed arborist. **This tree has moderate dieback suggesting possible root or heart rot. January 2016**

The proposed Site Plan indicates that a 3' retaining wall will be necessary to level the area for the 3 adjacent compact parking spaces. The north wall of

Building 4B is approximately 20' from the tree. The entire drip line of the tree cannot be fenced due to the proximity of the retaining wall and parking spaces. Some pruning may be required and shall be determined in the field by a licensed arborist after the foundation for Building 4B has been laid out. If roots over 3" diameter are revealed during grading for the retaining wall, the road, parking spaces and the foundation of Building 4B, they should be cut cleanly, not ripped, and wrapped with burlap. The burlap shall be secured with string and kept moist until back filling occurs.

The tree shall be fenced at the limit of grading line shown on the Grading and Drainage Plan and the root zone protected according to the measures described in the section of this report titled "Fencing and Protective Measures".

There are several Live Oak trees and numerous acacia trees in the gully/drainage ditch adjacent to the property. The gully is an existing topographic feature located north west of the project site that appears to have been formed in part by erosive action following placement of a large drain pipe in conjunction with the construction of Graham Hill Road. The proposed project entails maintaining the existing drain pipe, filling of the gully and placement of additional drainage features.

All of the trees are somewhat larger than measured in 2010 and in similar condition

The trees shall be preserved as deemed possible by the project arborist. An on site preconstruction meeting shall take place prior to any clearing or grading. The meeting shall include the civil engineer, grading contractor and equipment operator and the City of Santa Cruz Urban Forester.

Trees 1 and 2 will need to have pre construction root pruning for grading and development of the containment pond. The arborist will be present at the time of excavation to work with contractors on proper root pruning technique and treatment. The project arborist shall be on site during all grading in this area. See 'Fencing and Tree Protection Measures' below.

There are numerous small diameter dead or broken Acacia, Cotoneaster and Siberian Elm trees in the gully and on the steep sides of the gully. These are all non-native species that readily spread on disturbed ground. These are not Heritage trees or protected tree. All of these trees shall be removed.

All small diameter oaks on the top margin of the gully shall be preserved.. Grading within the drip lines of these trees shall be conducted under the supervision of the project arborist.

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All of the oaks have pockets of rot on the trunk and limbs. There are also patches of irregular bark indicating animal damage or Sycamore Borer. All these trees should be examined when the site is cleared by the Project Arborist and a Tree Care Specialist to determine the best prescriptive measures to ensure the health, structural integrity and the safety of these trees.

Fencing and Tree Protection Measures

The trees to be protected shall be fenced at the drip line or as shown on the Grading and Drainage plan. Fencing shall be 6' chain link fencing on concrete footings.

Fencing shall be put in place after the initial pruning is completed and before clearing or grading operations commence. The fencing shall stay in place until after final inspection. No dumping or storage of any kind shall occur within the fenced areas. The existing grass or leaf mulch shall be left undisturbed in the enclosed areas. Prior to foundation layout, sheets of plywood shall be laid over 3" of redwood bark in the areas between the building sites or graded areas and the fencing to reduce compaction, if deemed necessary by the project arborist. Once installed the fencing and other protection measures shall be inspected by a licensed arborist.

Replacement Trees

There are 9 trees recommended for removal. These shall be replaced with 15 gallon specimen trees at a ratio of 3 to 1. The 27 replacement trees shall be located throughout the project. The landscape plan indicates there are 75 new trees to be planted on the site.

Monitoring

The protected trees, fencing and other protection measures shall be monitored bi-monthly by a licensed arborist, from the beginning of clearing and grading until after final inspection.

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