

KASSABIAN PROTECTED TREE REPORT

**Prepared Exclusively For:
Hratch Kassabian**

Job Site: 2331 Ramsay Drive, Glendale CA 91206

Mailing Address: 9260 Lashell Drive, Tujunga CA 91042

818 395-0832 cell

818 951-7075 fax

May 28, 2009

Prepared by:

Mellinger Tree and Landscape Service

P.O. Box 1135

Pacific Palisades, CA 90272

(310) 454-2033

(310) 454-6915 fax

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May 28, 2009

Dear Hratch Kassabian,

Here is your report for your project.

As required by the City urban forester, the project arborist shall monitor all impacts to the protected trees and steps taken to protect the trees.

- Monitoring shall include unannounced visits to the project site as needed to observe and report on the implementation of tree protection and on impacts on trees.
- Frequency of visits is expected to be greater at the onset of construction to provide adequate monitoring of tree protection.
- If tree protection measures are implemented thoroughly, it will be possible to keep the frequency of monitoring visits to the least number feasible.

There will periodic site visits to monitor protected trees will be billed separately. This could possibly be 1-2 times monthly depending on the tree protection measures being instituted and time line of project. If you have any questions please call us.

Sincerely,



Carl Mellinger
WCISA # 1976

SUMMARY

The applicant is proposing to build a single family home on an undeveloped property in the City of Glendale. There are trees on the property that are protected by the city’s tree ordinance. We were asked to provide an arborist report as required to obtain construction permits.

23 protected oaks were observed on or near the property. All were coast live oaks (*Quercus agrifolia*). One protected tree will need to be removed if this project is to be built, for the purpose of improving the public right-of-way per the City’s requirement. The planting of four native coast live oaks (15-gallon or 24-inch box) onsite is recommended as mitigation for the loss of the single protected tree.

22 protected trees will be retained as part of this project. Seven are not expected to be impacted by the proposed project.

The construction may impact up to fifteen trees. Three trees may have minor to almost no impacts. Impacts to twelve other trees are expected to range from minor to major. If tree protection measures in the recommendations section are carefully followed, the impacted and non-impacted trees should survive construction of the project. The goal of the recommendations is to prevent construction from causing unnecessary damage to these protected trees. Implementation of the protection measures, especially **tree protection fencing***, will be central to the survival and future condition of the protected trees.

SUMMARY OF PROPOSED IMPACTS TO PROTECTED TREES

Number of protected trees (DBH ≥ 6").....	23
Proposed trees to be removed - #4OP	1
Protected trees with encroachments.....	15
Protected trees without impacts	7

* Definitions of terms in bold are provided in the Glossary.

ASSIGNMENT

Our assignment was to prepare a report in accordance with the requirements of the City of Glendale Indigenous Tree Ordinance. The following tasks are included as part of this report:

- Locate, tag, and inventory all protected trees on site; include protected trees off site that may be impacted, if needed
- Determine how construction is likely to impact the protected trees, and provide mitigation and tree protection recommendations

OBSERVATIONS

The observations below are based on site visits to the subject property between 2/07/08 and 2/12/09, and on site plans, data, and information provided by the applicant and his representatives.

PROPOSED CONSTRUCTION

The property is in a semi-undeveloped, hilly area in the City of Glendale, a short distance up Ramsay Drive, an unpaved road (see Exhibit 1, Thomas Guide page 564-J3). It consists of two irregularly-shaped vacant lots, totaling 21,376 square feet and framed by Ramsay Drive to the south and Barnett Drive to the north. The main part of the property is a small, uneven ridge descending towards, and ending at, a fifteen to thirty-foot drop down to Ramsay Drive. The east side of the property drops into a ravine, but the bottom of the ravine does not appear to be part of the property. The property includes the ridge overlooking Ramsay Drive. A ravine west of the property is entirely outside the property boundaries. The property is covered with mostly native vegetation, including shrubs and trees, especially laurel sumac (*Rhus laurina*). There is an existing partial foundation for a structure at the top of the bluff, but no other structures were observed.

The applicant is proposing to build a single-family dwelling. The project entails two parts, grading and paving the section of Ramsay Drive leading up to the private driveway and construction on the applicant's property itself. Existing conditions and proposed construction are shown on Exhibit 3, Protected Tree Plan.

Proposed road paving

Per the City of Glendale requirements, the applicant will need to grade and pave a lower section of Ramsay Drive forty-five feet past the proposed driveway.

- The proposed road paving will be widened relative to the existing unpaved road.
- Per the applicant, road paving will be reduced to the 20-foot minimum width set by the City, relative to what is shown on the Protected Tree Plan (Exhibit 3). This is being proposed so as to reduce impacts to protected trees.
- The road will consist of an aggregate base up to six inches deep and asphalt paving four inches deep.
- Tall vehicles may need up to sixteen feet of clearance over Ramsay Drive.
- Utilities, including the sewer main, will be installed about seven feet below finished grade at the center of the proposed road.

Proposed home construction

The applicant is proposing to build the following:

- A two-story house on the east side of the ridge. There also is a garage below and a roof level.
 - Over-excavation and compaction for the house foundations is expected to extend three to five feet out from the footprint of the house.
- Driveway onto the property meeting Ramsay Drive at an elevation of about 773 feet.
- Two patio areas as follows:
 - Behind (north of) the house, and
 - West of the house at the end of the ridge before the steep drop down to Ramsay Drive. This will require grading of the top of the ridge.
- The driveway, house, and patios will be almost completely surrounded by retaining walls of various heights to accommodate the proposed changes in grade.
- The existing foundations will be removed as part of site preparation.

PROTECTED TREES

Twenty-three protected trees were observed on or near the proposed project site. All are coast live oaks (*Quercus agrifolia*). The protected trees were marked on the trunk with round numbered metal identification tags (Trees 16, 17 and 23 were not tagged).

Fifteen of the oaks are either in the public right-of-way of Ramsay Drive, or on other private property adjacent to the applicant's property. Eight of the oaks are on the applicant's property. The trees' locations are indicated on the attached Protected Tree Plan (Exhibit 3) by the trees' tag number. (Trees that are not on the applicant's property also were marked "OP" for off-property.)

Ten oaks, Trees #1OP through 10OP are adjacent to the existing unpaved Ramsay Drive. Four oaks, Trees #11OP through 14OP, form a grove in the ravine west of the applicant's property (these four trees may actually be four trunks sharing one root system). Three oaks, Trees #15, 16OP, and 17OP, are near Ramsay Drive in the ravine on the east side of the applicant's property. Lastly, six oaks, Trees #18 through 23OP, are on or near the east side of the top of the property, accessible from Barnett Drive.¹

The protected oaks appeared to be in fair condition and average to below-average vigor. Many have had their **root crowns** buried. A number of the oaks along Ramsay Drive appear to have been subjected to **lion's tail** pruning, including Trees #1OP, 3OP, 4OP, 5OP, 6OP, and 9OP. Per the applicant, utilities were installed along Ramsay Drive by the City, however the distance from the trees and impacts to the oaks, especially root cutting, are not known. Other significant observations are as follows:

Tree #1OP – A large branch over road is being struck by tall vehicles.

Tree #2OP – This oak leans out over Ramsay Drive. The base of the tree is possibly being undermined by erosion.

Tree #4OP – The trunk is leaning and **canopy** is unbalanced over the road.

Tree #5OP – A large branch over road is being struck by tall vehicles. Manual excavation of the soil area between the trunk and Ramsay Drive revealed a major amount of oak roots varying in size from four inches to less than one inch diameter.

Tree #6OP – Manual excavation of the soil area between the trunk and Ramsay Drive to a depth of up to twelve inches numerous revealed numerous roots all less than one inch diameter.

Tree #7 – A seventeen-inch branch located thirteen-feet above grade has excessive canopy weight at the ends, and may have decay at the point of attachment to the trunk. This oak has two wounds on the lower trunk facing the road, probably due to mechanical damage. One wound is nine inches wide; the second is three inches wide and eight inches tall. A large diameter root on the south side of the root crown was previously cut and calloused over.

Tree #8 – This oak is not very healthy as a result of growing in the rock face about fifteen feet up the side of the cliff.

Tree #10OP – This oak has two trunks with a narrow angle of attachment and included bark. The tree has a major infestation of Ehrhorn's scale.

Tree #11OP – The oak has a severely unbalanced canopy and leaning trunk. It is at an elevated risk of failing.

Tree #13OP – Its canopy is severely unbalanced and its trunk is leaning; six feet of trunk is on the ground.

Tree #14OP – This oak may have lower trunk decay.

Trees #15 – The codominant main branches have developed swellings at the point of attachment, suggesting the possibility of internal cracking.

¹ An oak stump on the applicant's property is located at the end of the ridge above Ramsay Drive. Per the applicant, the removal of this oak was already separately resolved with the City of Glendale.

Tree #17OP – This oak’s three trunks may have narrow angles of attachment (the tree could not be observed close-up).

Tree #20 – The upright trunk has a basal cavity with decay.

Tree #21 – The canopy is unbalanced. One large branch has copious oozing. The tree has a significant amount of dead wood.

Tree #22 – This oak also has a significant amount of dead wood and canopy thinning.

Tree data including trunk diameters, height and canopy dimensions, and health status are included in Exhibit 2, the Protected Oak Inventory.

PROXIMITY OF PROTECTED TREES TO CONSTRUCTION

Based on observations, and plans and information provided by the applicant, the following table provides details on each of the protected trees’ locations relative to the proposed construction. It also considers potential overhead interference with trunks or branches, assuming up to sixteen feet of clearance above the finished road and driveway grade will be needed.

Tree #	General Location	Proximity to and Clearance Over Work to be Done
1 OP	At the intersection of Cascadia and Ramsay Drives	The proposed road paving is two feet from the trunk as shown on the Protected Tree Plan. The applicant intends to reduce road width next to this oak to the extent allowed by the City, thereby increasing the distance of paving from the trunk. An 11-inch diameter branch is eleven feet above the existing road.
2 OP	East of Ramsay Drive near Cascadia Drive	The proposed road paving is three feet from the trunk. The root crown may be about three feet above the proposed road elevation. A low five-inch limb may interfere with overhead clearance of sixteen feet.
3 OP	Open planter area west of Ramsay Drive	The trunk is twenty feet from the Ramsay Drive right-of-way (ROW). Proposed road paving is about two to five feet outside the dripline.
4 OP	West of Ramsay Drive in public Right-of-Way	Inside footprint of proposed road paving.
5 OP	West of Ramsay Drive in public Right-of-Way	The root crown is within one to two feet of proposed road paving as shown on the Protected Tree Plan. The applicant intends to reduce road width next to this oak to the extent allowed by the City, thereby moving paving one foot further from the trunk. A 9-inch diameter branch blocks overhead clearance.
6 OP	West of Ramsay Drive in public Right-of-Way	The root crown is about 1.75 feet from edge of proposed road paving as shown on the Protected Tree Plan. The applicant intends to reduce road width next to this oak to the extent allowed by the City (this could move the road 2.5 feet further from the tree). Smaller branches of three-inch diameter and

		less are blocking overhead clearance.
7	North of Ramsay Drive, at the base of the ravine on the east side of the applicant's property.	Tree #7 is two feet from proposed road paving as shown on the Protected Tree Plan. The applicant intends to reduce road width next to this oak to the extent allowed by the City. This could move the road 4.0 feet further from the tree. The trunk is at an elevation of 769'. The surface of the paved road may be at an elevation of 770-771 feet. Trunk is about eighteen feet east of the retaining wall at the edge of the driveway. A 17-inch diameter branch over the proposed driveway may be about eleven to twelve feet above the proposed driveway. Two branches (7-inch and 9-inch diameters) attached to the 17-inch branch contribute to the low clearance.
8	On applicant's property next to Ramsay Drive (on cliff side next to road, elevation 781')	<p>Tree #8 is about nine feet above Ramsay Drive on the side of the cliff face, above a section of the proposed road paving.</p> <ul style="list-style-type: none"> - Construction above and to the sides of the oak is just at the dripline, about 15 to 17 feet from the trunk. <ul style="list-style-type: none"> o Facing the cliff, the proposed driveway is on the right and a set of stairs is on the left. o These activities both will require cuts into the side of the cliff. - Above the oak, about three feet of the top of the ridge will be graded away and a low retaining wall will be built.
9 OP	14 feet south of unpaved portion of Ramsay Dr	The tree is next to the unpaved road more than forty feet past the proposed road paving. There are low branches of about three inches diameter over Ramsay Drive. The area next to this oak could be used for vehicles, equipment and materials during the construction period.
10 OP	17 feet south of unpaved portion of Ramsay Dr	The tree is next to the unpaved road about 65 feet past the proposed road paving. The area next to this oak could be used for vehicles, equipment and materials during the construction period.
11 OP	West ravine, ~17 feet from edge of unpaved road	A retaining wall is being built on the hill above the tree about 24-feet from the trunk (at the dripline).
12 OP	West ravine, ~13 feet from edge of unpaved road	Tree #12 is 29-feet away from the retaining wall described under Tree #11 above. The retaining wall is ten feet outside the dripline.
13 OP	West ravine, ~12 feet from edge of unpaved road	Tree #13 is 36-feet away from the retaining wall described under Tree #11 above.
14 OP	West ravine, ~20 feet from edge of unpaved road	Tree #14 is 27-feet away from the retaining wall described under Tree #11 above. The retaining wall is ten feet outside the dripline.
15	In ravine on east side of applicant's property, closer to Ramsay Drive	<p>The house will be excavated into the side of the ravine on the east side of the property at the same elevation as the oak.</p> <ul style="list-style-type: none"> - Over-excavation and compaction for a retaining wall (next to side yard) and patio will take place about nine feet from the trunk.

		- The low canopy will probably need minor clearance pruning of one 12-inch and one 4-inch diameter branch.
16 OP (no tag)	In ravine on east side of applicant's property, closer to Ramsay Drive	35 feet east of the proposed construction footprint (23 feet outside the dripline).
17 OP (no tag)	In ravine on east side of applicant's property, closer to Ramsay Drive	48 feet east of the proposed construction footprint.
18	In ravine on east side of applicant's property	Grading to stabilize the steep terrain, and installation of a metal railing around the graded area, will be twenty feet from the trunk, about two feet outside the dripline.
19	In ravine on east side of applicant's property (access from Barnett Drive)	All proposed construction is toward the south part of the property, well outside the protected zone of this oak. - Roadside next to Barnett Drive could be used for vehicles, equipment and materials.
20	In ravine on east side of applicant's property (access from Barnett Drive)	Same as for Tree #19.
21	In ravine on east side of applicant's property (access from Barnett Drive)	See #18. Construction of a drainage line and retaining walls for slope stabilization is at the dripline, about 22 to 28 feet from the root crown respectively.
22	In ravine on east side of applicant's property (access from Barnett Drive)	Same as for Tree #19.
23 OP (no tag)	Off-property, in ravine on east side of applicant's property (access from Barnett Drive)	Same as for Tree #19.

OP Off-property trees. These are located either in the public right-of-way or on other private property.

ANALYSIS & TESTING

Visual tree assessments and data collection were conducted on the protected trees only.

Appraisal of the value of Tree #4OP was performed using appraisal methodologies established by the Council of Tree and Landscape Appraisers, as set forth in the *Guide for Plant Appraisal, Ninth Edition*. Factors taken into account in determining the appraised value of Tree #4, proposed for removal, include the tree's location, its species, health, and structure.

Based on these factors, the value of Tree #4 was determined to be \$10,600.

DISCUSSION & OPINIONS

Exhibit 2, the Protected Oak Inventory, summarizes which trees are being impacted and at what levels.

PROTECTED TREES TO BE REMOVED

Based on our observations, one tree only – #4OP – will need to be removed to build this project. Tree #4OP is within the footprint of the proposed road paving. This tree cannot be saved if the project is to be built.

Mitigation of trees to be removed is likely to be requested by the City. The quantity, size, and species of mitigation trees to be planted should be proportional to the protected trees to be removed. Per the City ordinance, the difference between the value of protected trees that are removed, and the value of replacement trees planted, shall be paid into the City's urban forestry fund. Based on this, the applicant has the option to plant replacement trees with a value equal to the tree being removed, or pay the City an amount equal to the tree being removed, or some combination of the two approaches.

The property has areas where replacement trees could be planted. Specific mitigation details are provided in the recommendations section.

IMPACTED TREES

Up to fifteen protected trees are expected to be impacted by construction without resulting in removal.

Several factors affect the extent of impacts, including:

- Maximizing opportunities to reduce the width of road paving near protected trees to the twenty-foot minimum required by the City,
- The project's ability to preserve oak roots during grading and road paving,
- Requirements by the City for trunk and branch clearance over the finished road, and
- The applicant's careful implementation of tree protection measures.

In particular, tree protection measures can be critical for maintaining the health and safety of protected trees. Indeed, the construction impacts described in this section assume that tree protection measures will be carried out thoroughly. (For tree protection measures, see the Recommendations section.)

Below are details about how construction is expected to impact the protected oaks.

Tree #1OP – The eleven-inch diameter branch over Ramsay Drive will need to be removed for overhead clearance. Proposed road paving as shown on the plan, at two feet from the trunk, would likely to result in root removal. As previously discussed, the applicant intends to reduce road width to the minimum allowed by the City in order to protect the oak. Root removal will need to be controlled to keep this oak from becoming unsafe. This determination can be made only when the limits of road construction are marked and the area manually excavated to inspect for roots. **Impact: moderate to major.**

Tree #2OP – Overhead clearance may require the removal of a five-inch diameter branch. There may be some root loss due to road paving. **Impact: moderate.**

Tree #3OP – There is likely to be minor root loss at the edges of the protected zone (PZ) where Ramsay Drive will be paved. **Impact: minor.**

Tree #5OP – If the road were to be paved less than two feet from the root crown as shown on the Protected Tree Plan, there would be a major loss of viable root zone on the east side of the oak. This impact will be reduced if the applicant is able to move road paving away from the trunk as previously discussed. The applicant will be preserving roots on the east side of the tree that were observed through manual excavation, in order to avoid excessively damaging the oak. The nine-inch diameter limb to the east will probably need to be removed for overhead clearance.

This oak is expected to survive construction. However it should be noted that predictions about tree responses to construction impacts generally have a wide range of uncertainty. If any changes are made to this tree from construction not mentioned in this report then it is not known what this oak's long term health would be. **Impact: moderate to major.**

Tree #6OP – Potential impacts due to road paving are the similar to that described for Tree #5. Branches of three inches diameter and less will need to be pruned for overhead clearance. Grading within this tree's PZ will be minimized as a tree protection measure. **Impacts: moderate to major.**

Tree #7 – Road paving south of the oak's root crown will increase the grade over the root zone by about two feet. The extent of roots in this area is unknown; however it should be considered a reduction of viable root zone. Per the applicant, road paving will be reduced to the twenty-foot minimum width required by the City so as to reduce impacts to this oak. This should help reduce construction stress on this oak.

The seventeen-inch diameter branch that is about eleven or twelve feet above the proposed driveway cannot be removed at its point of attachment at the trunk without resulting in excessive damage to the tree. An alternative would be to remove the low seven-inch and nine-inch branches from this larger branch and provide some additional clearance that way. Root and branch loss due to driveway construction probably is a major impact. This tree is expected to survive construction impacts; however it may remain stressed for a longer period after construction. Extra steps in caring for this tree during construction will need to be taken to improve the rate at which it overcomes construction stress. **Impacts: moderate to major.**

Tree #8 – All construction is expected to remain fifteen to seventeen feet from the trunk of this oak. Therefore a significant portion of its PZ will be unimpacted. Other potential impacts, including striking the canopy with equipment, or pushing soil down onto the tree, should not be difficult to avoid. Therefore, impacts are expected to be minor. **Impacts: minor.**

Trees #9OP and 10OP – These two oaks are outside the construction zone and are not expected to be directly impacted. Low branches on oak #9OP probably will need to be pruned for clearance, since construction vehicles with tall profiles are likely to be passing under the canopy. There may be soil compaction within the two oaks' PZ next to the road, resulting from vehicle and equipment parking and other activities ancillary to construction. **Impacts: none to minor.**

Tree #11OP – Construction of the retaining wall 24-feet from the trunk at the dripline may result in a minor impact to the PZ. Parking on the side of the road and other ancillary construction activities could have a minor impact on this tree. **Impacts: minor.**

Trees #12OP and 13OP – Parking on the side of the road and other ancillary construction activities could have a minor impact on these two trees. **Impacts: none to minor.**

Tree #15 – Over-excavation and compaction for the retaining walls next to the house's side yard and patio, plus clearance pruning of branches, is expected to have a minor cumulative impact on Tree #15. **Impacts: minor.**

Tree #18 – There may be a very small amount of root loss and small branch pruning at the dripline south of Tree #18, where the applicant is planning to grade and stabilize the slope and install railings. The maximum anticipated impact is very minor. **Impacts: minor.**

Tree #21 – Construction at the dripline, 22-28 feet from the root crown, will result in minor impacts. Tree protection fencing will be needed to limit the work to that shown on the Protected Tree Plan. **Impacts: minor.**

TREES WITHOUT IMPACTS

Seven protected trees are expected to remain unaffected by the proposed project, including #14OP, 16OP, 17OP, 19OP, 20OP, 22OP, and 23OP.

If the top of the applicant's property at Barnett Drive is used for parking, staging, and other ancillary activities, then Trees #19, 20, 22, and 23OP could be affected to a minor degree. Tree protection fencing completely enclosing these trees, and impacted trees #18 and 21 as well, would minimize potential impacts.

CONCLUSIONS

One protected tree, #4OP, will be removed as the result of this project. The removal of the protected tree cannot be avoided and will be mitigated for as described in the next section below.

Twenty-two protected trees on or near the project site will be saved. Fifteen trees are expected to have at least minor impacts due to the construction. Seven protected trees will have no impacts. Impact levels are summarized in Exhibit 2, Protected Oak Inventory.

Four protected trees, #1OP, 5OP, 6OP, and 7, will have moderate to major impacts from the proposed road paving and driveway construction. The level of impacts are in part due to direct root pruning, in part due to grade increases and the permanent loss of root zone under the road paving, and in also due to anticipated clearance pruning. Construction work near these trees will need to be very carefully planned and carried out to ensure that they remain safe and in adequate health as much as possible. Tree protection measures also will be important to these trees' survival.

The condition of protected trees at the end of the project is dependent on the thorough implementation of a Protected Tree Plan. Without such a plan, the trees are at risk of additional impacts beyond what is necessary to complete the project. Tree protection is aimed at minimizing construction impacts and stress, and at improving the protected trees' health and post-construction viability. Recommendations are described in detail below.

RECOMMENDATIONS

The aim of recommendations provided here is to:

1. Provide for replacement planting (mitigation) that successfully replaces the protected tree to be removed,
2. Minimize construction impacts to the greatest extent possible, thereby protecting the safety and survival of all protected trees to be retained on the property, and
3. Assist applicant in monitoring protected trees during a critical post-construction period, and recommending steps in response to any issues that arise.

Detailed guidelines to achieve these objectives are provided below. These guidelines must be carefully and consistently implemented throughout construction for tree protection to be successful.

MITIGATION FOR TREE REMOVALS

The loss of one protected tree from the site resulting from the proposed construction should be mitigated with the onsite planting of four coast live oaks (*Quercus agrifolia*) in 15-gallon or 24-inch boxed containers. The trunk diameter of Tree #4 is nineteen inches, so this provides for the planting of one coast live oak for roughly every five inches of trunk diameter of the tree to be removed.

As required by the City, the difference in value between the trees removed and the mitigation planting shall be paid into the City's urban forestry fund. The cost for mitigation should include the cost for post-construction monitoring by the project arborist and establishment maintenance of the replacement trees. The amount to be paid, if any, would be subject to approval by the City of Glendale.

The placement of new trees should be reviewed by a qualified arborist and approved by the City. The following planting and establishment guidelines should be followed:

Planting Guidelines

1. Existing landscaping, shrubs, ground cover, and weed trees should be cleared as needed before planting.
2. Trees used for planting should meet the most current guidelines for good-quality tree stock (trees should not be overgrown for their container size, there should be no girdling roots, trunks should be free of all damage, etc.)

3. Planting should be done according to professional arboricultural standards, including but not limited to:
 - Top of root ball should be cleared of soil buildup until root crown and young buttress roots extending from the trunk flare are exposed.
 - Planting space should be dug about two times as wide as the trees' root balls. The depth of the planting space should be as high as the root ball.
 - No gravel or other substrate should be used below the root balls.
 - Use existing soil dug from the planting pit as is, without incorporating amendments. All construction debris, rocks, and other foreign material should be excluded. Concerns about soil quality should be referred to the project arborist.
 - The tree's root crown should be planted at or just above grade.
 - Trees should have nursery stakes removed at an appropriate time to allow development of trunk strength (restaking further out from trunks may be needed.)

4. The trees should be watered with a temporary, automatic irrigation system until they are established. This may require an establishment period of two to three years.

TREE PROTECTION GUIDELINES

The objective of these tree protection guidelines is to preserve tree canopy, trunk, and roots within the protected zones. Tree protection is achieved by preventing direct damage, such as tearing branches with backhoes, and by preventing indirect damage, such as compacting soil in the protected zone and causing root decline. These preservation measures must be implemented to preserve the protected trees.

Some of the protected trees are mature, in below-average health, or faced with potentially major impacts, or all three. Diligent attention to tree protection will be required to maintain the best possible health and safety for these trees.

Protected Zone (PZ)

The protected zone is defined as a zone underneath and immediately outside the canopy of a protected tree. Within this zone, construction is likely to affect a tree's health and must be carefully managed. Per City requirements, the protected zone of the trees addressed by this report is the area within fifteen feet of the trunk, or within the dripline and extending five feet beyond the dripline, whichever is greater². In situations where the canopy has been pruned back or the radius from the trunk to the dripline is variable, the project arborist should mark or otherwise delineate the optimal location of the PZ. This area must be observed and respected during all construction activities near the protected trees. This will ensure preservation of the trees. **This area is to be clean and clear of any construction material, debris, equipment, portable toilets, and foot or equipment traffic.**

If any construction, grading, or similar processes are to be done within the protected zone extreme caution must be taken to minimize injury to the roots to the extent possible. All such work shall be approved by the project arborist.

Monitoring

As required by the City urban forester, the project arborist shall monitor all impacts to the protected trees and steps taken to protect the trees. Monitoring shall be done as follows:

- Any changes to the proposed project must be reviewed by the project arborist to determine their effects on the protected trees.
- A minimum of 48-hour advance notice is to be provided to the certified arborist of work being done in the protected zone of any trees.
- The project arborist may make additional or revised tree protection recommendations that shall then be carried out by the applicant to ensure the survival of the trees to be retained. (The project arborist may provide recommendations verbally, unless requested in writing to do otherwise.)
- Monitoring shall include unannounced visits to the project site as needed to observe and report on the implementation of tree protection and on impacts on trees.
- Frequency of visits will typically be greater at the onset of construction to provide adequate monitoring of tree protection.
- If tree protection measures are implemented thoroughly, it will be possible to keep the frequency of monitoring visits to the least number feasible.

² The dripline of a protected tree is a line which can be drawn around a tree under the tips of the outermost branches. It is the location where rainwater tends to drip from the tree.

Root Crown Inspections

Root crown inspection should be done on all trees to insure proper soil level and tree health.

Removal of vines, groundcover, and soil:

- Trees #15 has excessive soil buildup against the root crown. The soil shall be removed and the root crown inspected for disease or structural issues.
- Removal of soil shall be done manually only. The bark shall not be damaged in the process of clearing the root crown.

Tree Protection Fencing (TPF)

Of all protection measures, setting up tree protection fencing around the protected zone is the most basic step for the safety of the trees. The purpose of tree protection fencing is to prevent staging, vehicle parking and storage, equipment operation or storage, and all other construction related activities from taking place inside the protected zone of trees.

A five foot high chain link fence with posts driven into the ground shall be installed at the locations indicated on the Protected Tree Plan (see Exhibit 3) or as marked by the project arborist.

Unless otherwise indicated, fencing shall be installed at the edge of the PZ of all protected trees. Posts should be placed every eight to ten feet along the chain link and each post should be inserted two feet deep into the natural grade. This fencing must be installed prior to staging of equipment, demolition, grubbing or grading operations or any construction in general. Fencing must remain in place until the entire construction project is completed, including paving and walkways, roofing, and stucco.

Signs must be installed on the fence as described below.

- Signs shall have a minimum size of two feet by two feet.
- Signs must be visible from various locations on the construction site.
- Fencing encircling a tree shall have at least three signs.
- The signs must include the following wording: "Warning: This fence is in place for the protection of these trees and shall not be removed or relocated."
- Signs shall include Spanish translations wherever Spanish-speaking workers are present.

Tree protection fencing for protected oaks next to Ramsay Drive will be installed at Location A at the edges of the existing unpaved road, as shown on the Protected Tree Plan (Exhibit 3). The fencing shall be moved to Location B as shown on the plan only when all other construction has been completed and paving work on Ramsay Drive is being started.

(Please note that TPF shown on the Protected Tree Plan extends onto neighboring private property in some locations. Permission should be obtained from the relevant owners for the installation of the TPF in these locations.)

Staking

Areas of road paving, grading, excavation, and other construction within the protected zone of any trees shall be clearly staked in advance, to visually assess the potential impact on protected trees. The locations of all protected trees relative to construction should be verified.

Grubbing, Clearing, and Grading

All grubbing and clearing within the protected zone of a tree shall be done manually. No equipment shall be driven in the protected zone of any trees. Tree protection fencing shall be installed prior to any grubbing and clearing to the extent possible. No grading shall be done until all protective fencing is in place.

Demolition of Existing Structures

All other demolition shall be done only *after* tree protection fencing is in place.

Limit of Over-excavation

Over-excavation and compaction near Tree #15 shall be no more than three feet beyond the proposed retaining wall. In no case shall over-excavation encroach on tree protection fencing.

Soil Excavation, Trenching and Removal

All excavations of soil or trenching within the PZ of any tree must be done by hand, without power equipment. These measures will protect any roots in the ground. This includes over-excavation of soil for backfilling and compaction next to foundations. All over-excavation that extends more than five feet beyond any building footprints must be reviewed in advance with a certified consulting arborist. In no case shall over-excavation encroach on tree protection fencing.

All soil removal must be done with hand tools (shovels, picks, hand trowels, and similar equipment). The tool of choice is an **Air Spade**. The Air Spade excavates soil without damaging the roots. Jackhammers should not be used to remove the soil. When a root is encountered, **soil removal is to be done without chipping, marring, or damaging the root bark in any way.** Damaging the root bark will open up the bark barrier so that disease can enter the tree. This will allow rot to develop or fungus to take over, and can result in root death.

All exposed roots should be covered from the sun until they are reburied.

Soil levels must be returned to the original grade, at which the trees' roots were first established. Existing fill soil above that original grade shall be removed to the extent possible; no additional fill soil shall be placed over the original grade.

If soil is filled back to the original grade, compaction shall be done manually only (no equipment shall be used). Compaction shall be done in layers of three to six inches depending on soil structure. No gaps or pockets shall remain in the soil.

Root Pruning

After manual soil removal and before mechanical grading or excavation, if roots are to be pruned, it should be done manually by the project arborist only. This pruning needs to be done at the limits of construction such that no further root damage will be caused later into construction. Grading equipment should not be used to cut roots, as these will unnecessarily damage roots by tearing, scraping, and other causing other injuries. Mechanical damage can injure roots or the root crown, resulting in unsafe trees or unanticipated health problems.

It is not recommended to cut roots larger than one inch. If any roots over one inch in diameter are damaged, they must be clean-cut with a sharp hand tool. Roots should not be sealed. Wrapping and bridging over the roots is recommended. If this is not possible, the use of caissons and then bridging over the caissons with bond beams will aid in root preservation.

Underground Utilities and Road Paving

The location of utilities beneath Ramsay Drive, and trenching details, shall be reviewed with the project arborist prior to installation.

The applicant shall plan the proposed road paving in such a way as to minimize impacts to the protected trees, several of which are less than two feet from the construction zone.

- Road elevation next to Tree #5OP shall be raised only as much as needed to avoid removing major / critical roots.
- The finished grade of the road shall be kept as low as possible in other areas to minimize clearance conflicts with low branches on the protected trees.
- Road paving near Trees #1OP, 5OP, 6OP, and 7 shall be reduced to the 20-foot minimum width required by the City, moving the paving away from the trunks and maximizing root protection.
- The edge of road paving within eight feet of Tree #1OP shall be excavated manually and all exposed roots inspected by the project arborist before any roots are cut.
- The root crown of Trees #1OP, 5OP and 6OP may be lower than the finished grade of the road. The trunks and root crowns of these trees shall be left exposed and not buried below grade. If needed, retaining walls shall be built between the road and the trees (without causing root crown damage) to keep soil off the trees.
- Road paving details shall be reviewed with the project arborist prior to installation.
- Overhead clearance shall be reviewed after road paving is completed. Branch pruning shall be done as recommended by the project arborist only.

Perimeter Walls/Fencing

These activities can have major impacts on the trees' condition and safety if done inside the PZ. Excavation and trenching for perimeter walls and fencing can result in the removal of protected tree roots in the critical top eighteen to twenty-four inches of soil. Compaction from construction traffic, including both workers and equipment, can damage roots and destroy soil structure, adding to further problems.

If these activities are planned, they should be reviewed carefully with the project arborist to evaluate how the trees could be affected to ensure that the trees can tolerate what is being proposed.

Mulching

All existing leaf litter within the protected zone of trees shall be retained. This natural leaf litter is abundant within the dripline of some of the oaks, and is one of the best aids a protected oak has for maintaining its health. Where leaf litter depth is less than three inches, mulch shall be applied, but no closer than one foot of the trunk of a tree.

Periodic Deep Watering

During construction, trees shall only be watered under the guidance of the project arborist.

Where it is needed, temporary irrigation (drip, leaking tubing or other) shall be installed at intervals throughout the fenced PZ to allow periodic deep watering during construction. The entire protected zone of the trees should be watered to a soil depth of four feet. This may require slow irrigation for 8-24 hours or more, or may require repeat waterings of shorter duration to promote saturation. The soil should be allowed to dry out completely before watering is repeated. The period between waterings may be a month or more. The project arborist should monitor the protected trees and provide recommendations on the effectiveness and duration of temporary irrigation.

Pruning

All pruning shall be done in accordance with ANSI A300 **pruning standards**. The project arborist shall be present during all pruning activities to provide recommendations as to locations of pruning cuts that maximize the safety and health of the protected oaks.

Canopy pruning of any protected trees not on the project site may require notification and/or permission from those owners.

Individual Tree Recommendations

It should be noted that protected trees with major impacts, or in below average condition, are at greater risk of declining than trees with fewer impacts or trees in good condition. The recommendations made here are intended to maximize survival. However, even if these steps are taken, a tree with major impacts or that has compromised health can still unexpectedly get worse. Following these steps should not be taken as a guarantee that no problems will arise.

Steps shall be taken to manage the health of Trees #1OP, 2OP, 3OP, 5OP, 6OP, and 7 during construction as follows:

1. Manually remove ivy within the maximum dripline radius of the trunk.
2. Manually remove soil buildup to expose the root crown and tops of main roots.
3. Retain any existing leaf litter and add organic mulch to a total depth of five to six inches throughout the fenced PZ area around each oak. Keep mulch one foot away from the root crown. In areas where unfenced PZ will be impacted by equipment or foot traffic, mulch shall be eight inches deep.
4. Install temporary irrigation (drip, leaking tubing or other) at intervals throughout the fenced protected zone to allow periodic deep watering during construction when instructed by the project arborist.
5. All pruning of roots or branches with diameters of more than one inch shall be evaluated and approved by the project arborist prior to being carried out.
6. To the extent possible, root and branch pruning should be done separately with a long a time interval of at least one year separating the two activities. The time lag would allow some recovery time between each pruning loss impacting affected oaks.
7. Epicormic and adventitious sprouts that will grow due to branch pruning or removal should be preserved and trained as new canopy. This will aid affected oaks in stabilizing the stress and recovering from construction impacts.

Additional recommendations are as follows:

Tree #7: Root pruning on the different sides of this oak should be done in phases. Half the root pruning should be done as soon as feasible, with as much lead time as possible before the second half of root pruning is carried out. A meaningful time lapse to allow for some recovery time would be at least one year.

Periodic deep watering should be started as soon as possible before root and canopy pruning is done to boost the health of the oak.

Tree #8: There shall be no grading within the fenced protected zone of Tree #8. All grading at the top of the bluff within five feet of the oak's dripline shall be done manually to avoid damage to the canopy. Soil shall be kept out of the PZ of the oak.

Tree #11OP: All grading at the top of the bluff within five feet of this oak's dripline shall be done manually to avoid damage to the canopy. Soil shall be kept out of the PZ of the oak.

Landscaping Around Native Trees

- There shall be no irrigation, irrigation overspray, or runoff within the dripline of a protected oak.
 - No irrigation, irrigation overspray, or runoff from irrigation shall wet the trunks, root crowns, or buttress roots of any protected trees.
 - If the canopy is unbalanced (off to one side from the trunk), then the distance from the trunk to any wetting by irrigation shall be at least half as many feet as the trunk diameter. (For example, if the trunk diameter is twenty inches, then irrigation wetting shall be no closer than ten feet. For multi-trunk trees, the project arborist shall be consulted as to the appropriate distance.)
- The area inside the PZ of protected oaks shall be preserved in their natural condition to the extent possible. All leaf litter shall be left in place to provide mulch over the PZ.
- All landscaping requiring irrigation shall be kept outside the PZ of existing protected oaks.
- Landscaping near native oaks shall be drought tolerant only.
- Mitigation oaks may be established using a temporary irrigation system.
- All landscaping shall be kept away from the trunk of any mitigation tree by a minimum of two feet.

No new trees shall be planted within the maximum radius of the dripline of any protected trees except as approved by the project arborist.

POST-CONSTRUCTION INSPECTIONS AND FOLLOW-UP

At the very least, a follow up inspection of the protected trees by the project arborist should be conducted one year after construction is completed. Preferably, follow up visits should be conducted quarterly during the first year after construction and two times yearly for two years after construction. More frequent monitoring and/or post-construction steps to improve any trees that are doing poorly should be carried out as recommended by the arborist.

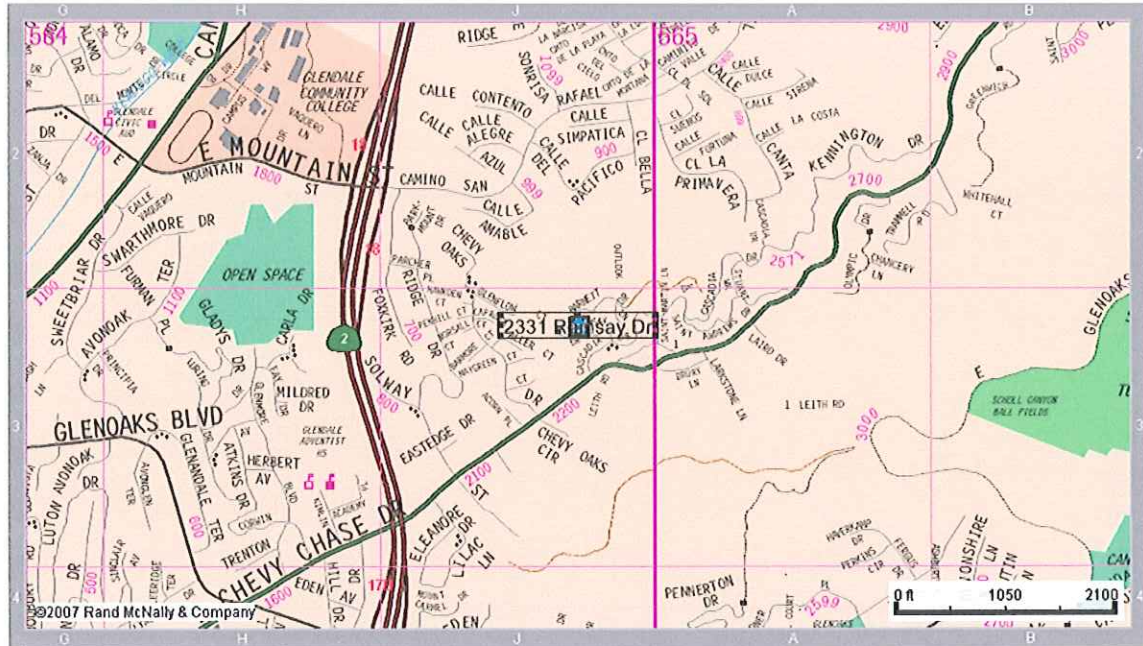
Mitigation Planting

New trees that are planted as directed by the City should be evaluated immediately following installation, then monitored every three months during the first year after planting. Monitoring for two additional years should be done twice yearly for a total of three years. All monitoring should be done by the project arborist, who should submit a written report of the observations and recommendations as needed to the applicant. More frequent monitoring and/or post-construction steps to improve any trees that are doing poorly should be carried out as recommended by the arborist.

ASSUMPTIONS AND LIMITING CONDITIONS

- 1) Any description that is assumed to be legal that has been provided to me by the client is assumed to be correct and the property is free and clear of all liens and judgments.
- 2) I have no knowledge of and codes or government regulations which may or may not have been violated with this property.
- 3) Thoughtful care was taken to get all pertinent information and there is no implied guarantee for the accuracy of the information provided by others.
- 4) Any request to attend court, depositions, or hearings will be by written contract only, and is not included in this report.
- 5) Any change of the content of this report invalidates the whole report.
- 6) This report is for the addressee of the report only, and the report writer must approve any reproduction. The addressee may use this report in any fashion that he deems appropriate.
- 7) I have been hired as a consultant only and the information within this report is bound by client and attorney privilege.

EXHIBIT 1: THOMAS GUIDE MAP PAGE 564-J3



DETAIL

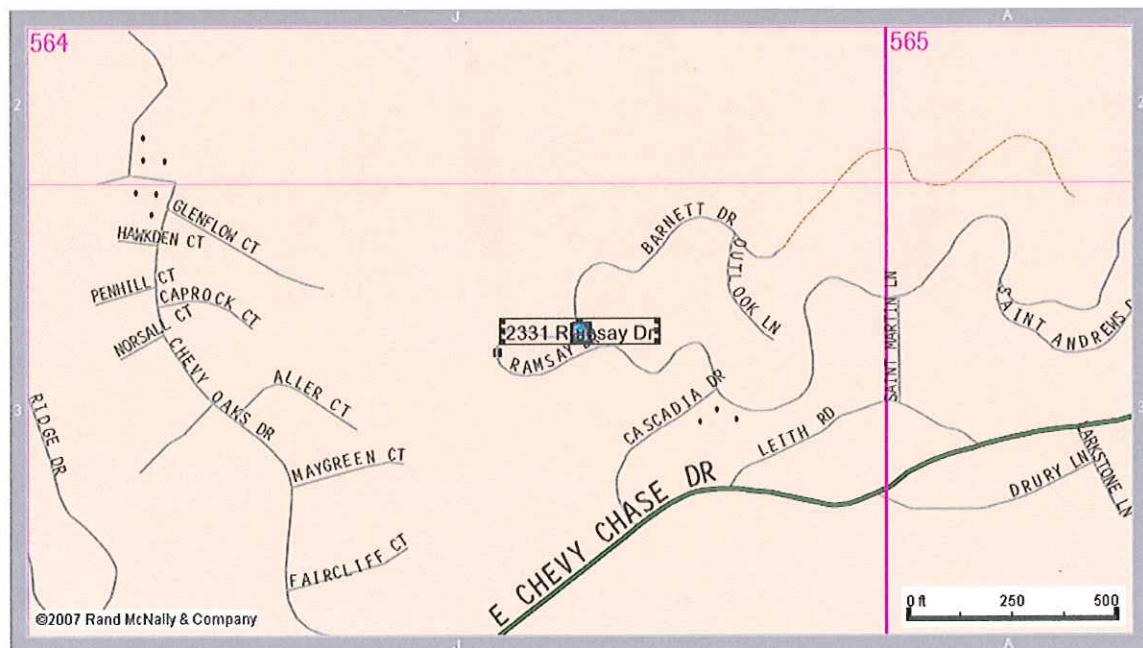


EXHIBIT 2: PROTECTED OAK INVENTORYNote: All protected trees observed are coast live oaks (*Quercus agrifolia*).

Tree #	DSH (inches)	Canopy (NESW) (feet)	Height (estimated, in feet)	Drip Line	Health	No Impacts	Encroachments			Remove
							Minor	Moderate	Major	
1 OP	24@3'	25/30/29/11	38	29	C			X	X	
2 OP	14	12/12/17/19	40	19	C			X		
3 OP	~31	28/24/37/28	45	37	C		X			
4 OP	19	17/21/13/12	36	21	C					X
5 OP	17@3'	20/25/19/15	45	25	C			X	X	
6 OP	17	21/18/12/19	45	21	C			X	X	
7	22	11/23/29/27	42	29	C+			X	X	
8	15,12@4'	17/18/18/17	33	18	C-		X			
9 OP	24	28/24/20/28	40	28	C		X			
10 OP	13,11	19/15/16/17	28	19	C	X	X			
11 OP	16	6/21/28/3	18	28	C-		X			
12 OP	16	9/15/28/16	28	28	C	X	X			
13 OP	20	28/4/5/23	20	28	C	X	X			
14 OP	21	25/16/17/10	32	25	C-	X				
15	18@3'	15/21/18/14	35	21	C		X			
16 OP (no tag)	~(10,10)	14/22/37/13	35	37	C-	X				
17 OP (no tag)	~(11,11,11)	Not available	45	~15	C	X				
18	23	24/20/29/27	28	35	C		X			
19	17,16,9	22/25/27/15	30	28	C-	X				
20	18,17	14/18/35/7	27	27	C-	X				
21	14,11,11	-/12/31/21	25	30	C		X			
22	17@1'	18/15/18/14	28	16	D+	X				
23 OP (no tag)	20	18/25/32/8	38	29	C	X				

Key to Protected Oak Inventory Table (previous page)

- OP = Off property tree
- DSH = Trunk diameter measured at the standard height of 4-feet 6-inches above natural grade, expressed in inches, except as otherwise noted.
- Canopy = Canopy radius in the four cardinal directions is taken from the site plan
- Drip Line – the maximum canopy radius

EXHIBIT 4: PHOTOS

LEAF DETAILS CAN BE PROVIDED ON REQUEST

TREE #10P, LOOKING WEST - MODERATE TO MAJOR IMPACTS DUE TO ROAD IMPROVEMENTS



TREE #10P CLEARANCE OVER EXISTING UNPAVED ROAD, LOOKING SOUTH



L TO R: TREES #2OP, 4OP (TO BE REMOVED), AND 5OP



TREE #2OP - MODERATE IMPACTS DUE TO ROAD IMPROVEMENTS



TREE #30P – LOOKING NORTH



TREE #40P – TO BE REMOVED



TREE #5OP – MODERATE TO MAJOR IMPACTS DUE TO ROAD IMPROVEMENTS



TREE #6OP – MODERATE TO MAJOR IMPACTS DUE TO ROAD IMPROVEMENTS



TREE #7, LOOKING EAST – MODERATE TO MAJOR IMPACTS



TREE #7, LOOKING NORTH



TREE #8, LOOKING WEST



TREE #8, LOOKING EAST



FROM LEFT TO RIGHT, TREES #9OP AND 10OP – LOOKING WEST –MINOR IMPACTS DUE TO CLEARANCE PRUNING, VEHICLE PARKING AND OTHER ANCILLARY ACTIVITIES



TREE #11OP – MINOR IMPACTS JUST OUTSIDE DRIPLINE



TREE #15 (ARROW), LOOKING NORTH (TREE #7 IN FOREGROUND)



TREE #15, LOOKING NORTH/NORTHEAST



TREE #18 – LOOKING EAST – MINOR IMPACTS



TREE #18, TRUNK DETAIL



TREE #21 AND 20, LOOKING NORTH FROM TREE #5



TREE #21 – MINOR IMPACTS



EXHIBIT 5: CERTIFICATIONS AND LICENSES



State of California
Contractors State License Board

Pursuant to Chapter 9 of Division 3 of the Business and Professions Code
and the Rules and Regulations of the Contractors State License Board,
the Registrar of Contractors does hereby issue this license to:

MELLINGER TREE AND LANDSCAPE SERVICE



to engage in the business or act in the capacity of a contractor
in the following classification(s):

C27 - LANDSCAPING



Witness my hand and seal this day,
October 11, 1996

Issued October 10, 1996

Signature of Licensee

Paul A. Jensen

Registrar of Contractors

Signature of License Qualifier

This license is the property of the Registrar of Contractors, is not
transferable, and shall be returned to the Registrar upon demand
when suspended, revoked, or invalidated for any reason. It becomes
void if not renewed.

728538
License Number

GLOSSARY

Air Spade	Air excavation tool for removing soil expediently and efficiently without damaging root tissue or surrounding structures.
ASCA	American Society of Consulting Arborists
A 300 Standards	Pruning standards set by the American National Standards Institute (1995)
Canopy	Makes up the entire foliage portion of a tree with height, width and density, and delineates the drip line
Dripline	Demarcation line that falls at the edge of the canopy of a tree
DSH	Trunk diameter at standard height (four and one half feet, above soil level). Same as DBH, or diameter at breast height.
ISA	International Society of Arboriculture
Root crown	The area at the base of a tree's trunk, including the tops of the main buttress roots. Normally, the root crown is just above soil level. The root crown is critical physiologically, and is often the locus of health or safety issues.
Protected zone	Per City of Glendale requirements, the protected zone of a protected tree is the area within fifteen feet of the trunk, or within the dripline and extending five feet beyond the dripline, whichever is greater.
Tree protection fencing	Tree protection fencing that is installed beyond the drip line of the tree.

BIBLIOGRAPHY

Harris, Richard W., James R. Clark, and Nelda P. Matheny. Arboriculture Integrated Management of Landscape Trees, Shrubs, and Vines. 4th ed. Upper Saddle River, NJ: Prentice Hall, 2004.

Matheny, Nelda and James R. Clark. Trees and Development A Technical Guide to Preservation of Trees During Land Development. Mattoon, IL: The International Society of Arboriculture, 1998.

Council of Tree & Landscape Appraisers. Guide for Plant Appraisal, 9th Edition. Champaign, IL: International Society of Arboriculture, 2000.

Thomas Brothers Map Program. Rand McNally Publishing, 2003.

CERTIFICATION OF PERFORMANCE

We, Angela Liu and Carl Mellinger, certify:

That we have inspected the protected trees on the property referred to in this report and have stated our findings accurately. The extent of the evaluation is stated in the attached report and the Terms and Conditions;

That the health of any trees declared diseased or dying was inspected and verified, per City of Glendale requirements;

That we have no current or prospective interest in the vegetation or the property that is the subject of this report, and we have no personal interest or bias with respect to the parties involved;

That the analysis, opinions and conclusions stated herein are our own, and are based on current scientific procedures and facts;

That our compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events;

That our analysis, opinions and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices;

That no one provided significant professional assistance to the consultant, except as indicated within the report;

We further certify that we are members of the American Society of Consulting Arborists and International Society of Arboriculture Certified Arborists.

Signed: _____

Angela Liu

Signed: _____

Carl Mellinger

Date: _____

5/28/2009

TERMS OF ASSIGNMENT

The following terms and conditions apply to all oral and written reports and correspondence pertaining to the consultations, inspections and activities of Mellinger Tree and Landscaping Services:

1. All property lines and ownership of property, trees and landscape plants and fixtures are assumed to be accurate and reliable as presented and described to the consultant, either verbally or in writing. The consultant assumes no responsibility for verification of ownership or locations of property lines, or for results of any actions or recommendations based on inaccurate information.
2. It is assumed that any property referred to in any report or in conjunction with any services performed by Mellinger Tree and Landscape Services, is not in violation of any applicable codes, ordinances, statutes, or other governmental regulations, and that any titles and ownership to any property are assumed to be good and marketable. Any existing liens and encumbrances have been disregarded.
3. All reports and other correspondence are confidential and are the property of Mellinger Tree and Landscape Services and it's named clients and their assigns or agents. Possession of this report or a copy thereof does not imply any right of publication or use for any purpose, without the express permission of the consultant and the client to whom the report was issued. Loss, removal or alteration of any part of a report invalidates the entire appraisal/evaluation.
4. The scope of any report or other correspondence is limited to the trees and conditions specifically mentioned in those reports and correspondence. Mellinger tree and Landscaping Services and the consultant assume no liability for the failure of trees or parts of trees, either inspected or otherwise. The consultant assumes no responsibility to report on the condition of any tree or landscape feature not specifically requested by the named client.
5. All inspections are limited to visual examination of accessible parts, without dissection, excavation, probing, boring or other invasive procedures, unless otherwise noted in the report. No warrantee or guarantee is made, expressed or implied that problems or deficiencies of the plants or the property will not occur in the future, from any cause. The consultant shall not be responsible for damages caused by any tree defects, and assumes no responsibility for the correction of defects or tree related problems.
6. The consultant shall not be required to provide further documentation, give testimony, be deposed, or to attend court by reason of this appraisal/report unless subsequent contractual arrangements are made, including payments of additional fees for such services as described by the consultant or in the fee schedules or contract.
7. Mellinger Tree and Landscaping Services makes no warrantee, either expressed or implied, as to the suitability of the information contained in the reports for any purpose. It remains the responsibility of the client to determine applicability to his particular case.
8. Any report and the values, observations and recommendations expressed therein represent the professional opinion of the consultant and the fee for services is in no manner contingent upon the reporting of a specified value nor upon any particular finding to be reported.
9. Any photograph, diagrams, graphs, sketches, or other graphic material included in any report, being intended solely as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys, unless otherwise noted in the report. Any reproductions of graphic material or the work product of any other persons is intended solely for the purpose of clarification and ease of reference. Inclusion of said information does not constitute a representation by Mellinger Tree and Landscaping Services or the consultant as to the sufficiency or accuracy of the information.
10. Payment terms are net payable upon receipt of invoice. All balances due beyond 30 days of invoice date will be charged a service fee of 0.833 percent per month (10.0% APR). All checks returned for insufficient funds or any other reason will be subject to a \$25.00 service fee. Advance payment of fees may be required in some cases.

RESUME OF CARL MELLINGER
EXPERIENCE AND CREDENTIALS:

Tree Management - owner full tree care service	Since 1983
Consulting Arborist	Since 1985
Research (plant sciences)	6 years
California State Licensed Landscape Contractor	
ISA Certified Arborist	

EMPLOYMENT:

1982 – present	Self-employed Arborist
1980 – 1982	Analytical laboratory technician

EDUCATION:

Biological Sciences, University of Southern California	(1973-1976)
Biological, Animal, and Microbiological Sciences, Santa Monica College	(1979-1983)
Continuing Education (list available upon request)	
Graduate of the American Society of Consulting Arborist Academy	

CONSULTING SERVICES:

Forensic Arboriculture: expert witness, liability assessment, risk tree evaluation
 Tree evaluation: appraisal of property value of trees: damage assessment
 Tree management: tree preservation/ maintenance programs and implementations; work safety analysis; landscape design analysis; tree selection; performance standards
 Tree problem diagnosis and corrective measures; tree root/soil/hardscape interactions

PROFESSIONAL ORGANIZATIONS:

Past President & Board Director of the Western Chapter International Society of Arboriculture (Total 9 years)
 International Society of Arboriculture (ISA) & Western Chapter of ISA
 American Society of Consulting Arborists (ASCA)
 Tree Care Industry Association (TCIA) formerly National Arborist Association (NAA)
 Society of Commercial Arboriculture
 Street Tree Seminar
 WCISA Committee: Species Classification Guide Revision (2001-Present)
 Western Chapter ISA Committee: Chairperson for 1998 Yosemite Conference
 Chairperson Fundraising 1999 Ventura Conference
 Chairperson Fundraising 2001 Modesto Conference
 Chairman for 2002 Annual Conference Cruise San Pedro/Catalina/Baja Calif.
 Co-Chair 2005, Chair 2006 WCISA Workday: Catalina

COMMUNITY SERVICES/ VOLUNTEER WORK:

Palisades Village Green Committee
 Palisades Civic League- President / Landscape expert (1993- Present)
 Palisades Beautiful- Consultant
 Community Forest Advisory Committee of LA (CFAC): Participated in the brainstorming
 Formulation of Sustainable Community Forest Ecosystem: Vision Workshop

CONSULTING PROJECTS:

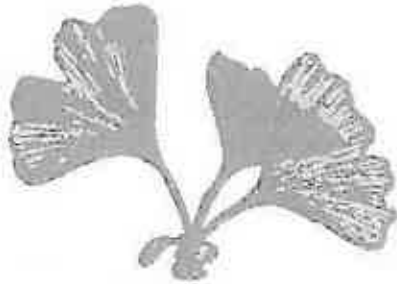
Palisades Pride Committee's installation of new street trees for town- Consultant and selection of trees
 Parks and Recreation Council- Participated in creating a new Street Tree Ordinance Policy for Santa Monica
 Santa Monica Beautiful: Street Trees
 Palisades Beautiful: Street Trees

TEACHING EXPERIENCE:

Lectures to Elementary School
 Lectures: Western Chapter ISA Annual Conference '99 -Integrity in Your Tree Care Business
 Western Chapter ISA Annual Conference '01 -Preserving the Rainforest & Our Urban Plantation
 Palisades Garden Club: Invasion of the Eucalyptus Long horned Borer
 Diagnosing and Identifying Tree Diseases and Problems
 Tree Care for the Millennium: To Trim Or Not To Trim?

SEMINARS AND CONFERENCES:

Ongoing participation. List available upon request.



**KASSABIAN
2331 RAMSAY DR.
APPRAISAL ADDENDUM**

**Prepared Exclusively For:
Hratch Kassabian**

7/22/15

**Prepared by:
Mellinger Tree and Landscape Service
P.O. Box 1135
Pacific Palisades, CA 90272
(310) 454-2033
(310) 454-6915 fax
© 2015 Carl Mellinger - All rights reserved**

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SUMMARY

This report is an addendum to the previous report for the site written 5/28/09. The appraisal is for four *Quercus agrifolia* (Coast live Oak) numbered 1, 4, 9 and 13.

Appraised Value of Trees 1, 4, 9, and 13.

Trunk Formula Method: \$75,500

See Exhibit #1 for break down for each tree

ASSIGNMENT

The assignment was to prepare an addendum to previous reports written by us for this project. The city has requested appraisal figures for four trees: #1, 4, 9, and 13. Report on the following:

- Provide the appraisal using the trunk formula method.
- Present my findings in an appraisal report

OBSERVATIONS

All observations are based on the report from 5/28/09. Please see that report for all backup information on each tree. For brevity, this data is not duplicated in this report.

TESTING AND ANALYSIS

No lab tests or internal investigation was administered for this report.

DISCUSSION AND OPINIONS

The purpose of this report is to have values added to the four trees if they were to be impacted during the construction process. All previous preservation measures are to remain. If any changes occur, this arborist will need to reevaluate the specific trees impacted.

APPRAISAL OF PLANT MATERIAL

The appraisal of the trees was done in accordance with methodology as described in the *Guide for Plant Appraisal* of the Council of Tree & Landscape Appraisers. In addition, Tree Tracker, a software program for plant appraisal, was used to calculate the figures. The display of the results is shown in Exhibit #1.

The value of trees is usually determined by use of the methods described in the *Guide for Plant Appraisal*, Ninth Edition, 2000. The *Guide* was authored by the Council of Tree and Landscape Appraisers, and published by the International Society of Arboriculture. The valuation methods take into account the tree size, its species, its condition, and its location in the community and in the landscape. The benefits and detriments of the individual tree are also considered. A monetary value is derived by applying these methods to the assessed factors and characteristics of the tree.

EXHIBIT 1: APPRAISAL

Hatch Kassabian
Kassabian 2331 Ramsay Dr Appraisal Addendum
June 25, 2015

Inventory Summary

Client Totals		Tree Count: 4	Value Total	\$75,500.00
Project:		Tree Count: 4	Value Total	\$75,500.00
Tree #	Scientific Name / Common Name	Diameter	Tree Location	Recommendations
11	Quercus agrifolia, Coast live oak	24.0 in		
				Appraised Value (loss)
				\$22,500.00
4	Quercus agrifolia, Coast live oak	19.0 in		
				\$14,500.00
9	Quercus agrifolia, Coast live oak	24.0 in		
				\$22,500.00
13	Quercus agrifolia, Coast live oak	20.0 in		
				\$16,000.00

Mellinger Tree Service PO Box 1135 Pac. Pal., Ca. 90272 310-454-2033

page 1

BIBLIOGRAPHY

Council of Tree & Landscape Appraisers. Guide for Plant Appraisal, 9th Edition.
Champaign, IL: International Society of Arboriculture, 2000.

Species Classification and Group Assignment, A Regional Supplement to the CTLA
Guide for Plant Appraisal, 9th Edition. Cohasset, CA: Western Chapter of the
International Society of Arboriculture, 2004.

CERTIFICATION OF PERFORMANCE

I, Carl Mellinger, certify:

That I have personally inspected the trees on the property referred to in this report and have stated my findings accurately. The extent of the evaluation is stated in the attached report and the Terms and Conditions;

That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;

That the analysis, opinions and conclusions stated herein are my own, and are based on current scientific procedures and facts;

That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events;

That my analysis, opinions and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices;

That no one provided significant professional assistance to the consultant, except as indicated within the report;

I further certify that I am a member of the American Society of Consulting Arborists and that I also am an International Society of Arboriculture Certified Arborist. I have been involved in the practice of Arboriculture and the care and study of trees for over twenty-five years.

Signed: _____



Date: _____

7/22/15

TERMS OF ASSIGNMENT

The following terms and conditions apply to all oral and written reports and correspondence pertaining to the consultations, inspections and activities of Mellinger Tree and Landscaping Services:

1. All property lines and ownership of property, trees and landscape plants and fixtures are assumed to be accurate and reliable as presented and described to the consultant, either verbally or in writing. The consultant assumes no responsibility for verification of ownership or locations of property lines, or for results of any actions or recommendations based on inaccurate information.
2. It is assumed that any property referred to in any report or in conjunction with any services performed by Mellinger Tree and Landscape Services, is not in violation of any applicable codes, ordinances, statutes, or other governmental regulations, and that any titles and ownership to any property are assumed to be good and marketable. Any existing liens and encumbrances have been disregarded.
3. All reports and other correspondence are confidential and are the property of Mellinger Tree and Landscape Services and its named clients and their assigns or agents. Possession of this report or a copy thereof does not imply any right of publication or use for any purpose, without the express permission of the consultant and the client to whom the report was issued. Loss, removal or alteration of any part of a report invalidates the entire appraisal/evaluation.
4. The scope of any report or other correspondence is limited to the trees and conditions specifically mentioned in those reports and correspondence. Mellinger tree and Landscaping Services and the consultant assume no liability for the failure of trees or parts of trees, either inspected or otherwise. The consultant assumes no responsibility to report on the condition of any tree or landscape feature not specifically requested by the named client.
5. All inspections are limited to visual examination of accessible parts, without dissection, excavation, probing, boring or other invasive procedures, unless otherwise noted in the report. No warrantee or guarantee is made, expressed or implied that problems or deficiencies of the plants or the property will not occur in the future, from any cause. The consultant shall not be responsible for damages caused by any tree defects, and assumes no responsibility for the correction of defects or tree related problems.
6. The consultant shall not be required to provide further documentation, give testimony, be deposed, or to attend court by reason of this appraisal/report unless subsequent contractual arrangements are made, including payments of additional fees for such services as described by the consultant or in the fee schedules or contract.
7. Mellinger Tree and Landscaping Services makes no warrantee, either expressed or implied, as to the suitability of the information contained in the reports for any purpose. It remains the responsibility of the client to determine applicability to his particular case.
8. Any report and the values, observations and recommendations expressed therein represent the professional opinion of the consultant and the fee for services is in no manner contingent upon the reporting of a specified value nor upon any particular finding to be reported.
9. Any photograph, diagrams, graphs, sketches, or other graphic material included in any report, being intended solely as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys, unless otherwise noted in the report. Any reproductions of graphic material or the work product of any other persons is intended solely for the purpose of clarification and ease of reference. Inclusion of said information does not constitute a representation by Mellinger Tree and Landscaping Services or the consultant as to the sufficiency or accuracy of the information.
10. Payment terms are net payable upon receipt of invoice. All balances due beyond 30 days of invoice date will be charged a service fee of 1.5 percent per month (18.0% APR). All checks returned for insufficient funds or any other reason will be subject to a \$25.00 service fee. Advance payment of fees may be required in some cases.

RESUME OF CARL MELLINGER**EXPERIENCE AND CREDENTIALS:**

Certified Tree Risk Assessor	Since 2011
ISA Certified Arborist	Since 1998
California State Licensed Landscape Contractor	Since 1996
Research (plant sciences)	6 years
Consulting Arborist	Since 1985
Tree Management - owner full tree care service	Since 1983

EMPLOYMENT:

Self-employed Arborist	1982 – Present
Analytical laboratory technician	1980 – 1982

EDUCATION:

Graduate of the American Society of Consulting Arborists Academy	
Biological, Animal, and Microbiological Sciences, Santa Monica College	1979 – 1983
Biological Sciences, University of Southern California	1973 – 1976
Continuing Education (list available upon request)	

CONSULTING SERVICES:

Forensic Arboriculture: expert witness, liability assessment, risk tree evaluation
 Tree evaluation: appraisal of value of trees and landscape; damage assessment
 Tree management: tree preservation/maintenance programs and implementations; work safety analysis; landscape design analysis; tree selection; performance standards
 Tree problem diagnosis and corrective measures; tree root/soil/hardscape interactions

PROFESSIONAL ORGANIZATIONS:

Past President of the Western Chapter International Society of Arboriculture (Board Director 4 years) 9 years total
 International Society of Arboriculture (ISA) & Western Chapter of ISA
 American Society of Consulting Arborists (ASCA)
 Tree Care Industry Association (TCIA) formerly National Arborist Association (NAA)
 Society of Commercial Arboriculture, Street Tree Seminar
 WCISA Committee: Species Classification Guide Revision (2001 - Present)
 Western Chapter ISA Committee: Current Chapter Historian, Magazine Committee Chair, Awards Committee Chair since 2007
 Co Chair 2009, 2005 and Chair 2006 WCISA Workday Catalina, Britton Fund Board Director
 Chairman for 2002 Annual Conference San Pedro/Catalina/Baja Calif.
 Committee Member: Bylaws Committee Member, Britton Fund Research
 Chairperson Fundraising 2001 Modesto, 1999 Ventura, and 1998 Yosemite Conferences

COMMUNITY SERVICES/ VOLUNTEER WORK

Palisades Village Green Committee
 Palisades Civic League - President (current), Board member / Landscape expert (1993 - Present)
 Palisades Beautiful: Consultant
 Community Forest Advisory Committee of LA (CFAC): Participated in the brainstorming
 Formulation of Sustainable Community Forest Ecosystem: Vision Workshop

CONSULTING PROJECTS (Community):

Palisades Pride Committee's installation of new street trees for town: Consultant and selection of trees
 Parks and Recreation Council: Participated in creating a new Street Tree Ordinance Policy for Santa Monica
 Santa Monica Beautiful: Street Trees
 Palisades Beautiful: Street Trees

TEACHING EXPERIENCE:

Lectures to Elementary School
 Lectures: Eucalyptus ID Seminar: Structural Problems with Eucalyptus LA Arboretum '08
 Western Chapter ISA Annual Conference '01 - Preserving the Rainforest & Our Urban Plantation
 Western Chapter ISA Annual Conference '99 - Integrity in Your Tree Care Business
 Palisades Garden Club: Invasion of the Eucalyptus Long horned Borer
 Diagnosing and Identifying Tree Diseases and Problems
 Tree Care for the Millennium: To Trim Or Not To Trim?

SEMINARS AND CONFERENCES:

Ongoing participation. List available upon request



CLIENT: Hrach Kassabian
SITE ADDRESS: 2331 Ramsay Drive, Glendale, CA 91206
TELEPHONE: (818) 395-0832 cell **FAX:** (818) 951-7075

ADDENDUM TO 5/28/09 PROTECTED TREE REPORT

BACKGROUND AND ASSIGNMENT

This addendum is for the proposed single-family residence at 2331 Ramsay Drive. The following documents were previously provided to Mr. Kassabian for the purposes of obtaining a tree encroachment permit from the City of Glendale:

1. 5/28/09 – Protected Tree Report
2. 11/04/10 – Addendum to the 5/28/09 Tree Report

These reports detailed the impacts to the protected trees anticipated to result from the proposed construction. Recently, Mr. Kassabian's engineer forwarded me the grading plan showing proposed utilities to be installed. A follow-up site visit was conducted to verify that site conditions and the trees are unchanged. Per Mr. Kassabian's request, this report provides updated analysis and summary of tree impacts anticipated to result from the proposed construction.

DESCRIPTION OF PROPOSED UTILITIES

The proposed utilities are shown on the revised Protected Tree Plan accompanying this report.

Sewer – Sewer pipes are clay 10" diameter, laid in 5' lengths

- Trench is 7-8 foot depth, 24" wide with shored steel shield
- Compacted sand base and compaction of fill soil required
- Sewer Manholes (SMHs) – Total diameter 7 feet - 5' diameter pre-fabricated concrete sleeve, plus over excavation on all sides by 1' for installation (total radius = 3.5 feet)
- Sewers must have a SMH at every direction change in sewer line or every 300'.

Water – Water mains are cast iron 8" diameter, 20' lengths, cement coated on the outside.

- Trench: 3' deep 12" width
- Compacted sand base and compaction of fill soil required
- Cement coating may not push through a tunnel, or could become damaged.
- Concrete slurry is used to fill voids around a water pipe. If tunneling, gaps could occur easily.

- To tunnel, there would need to be space behind the pipe location to line up and insert the pipe.
- Open trench may be needed at joints to connect segments.
- The water line is required to have a 10-foot horizontal separation from the sewer line. (Water and sewer may cross as long as solid sections of water pipe are used at the intersection).

Electrical and telecommunication –

- Trench: 3' deep, 20" width
- These two utility lines require a horizontal separation of 12".
- Electrical is in a 4" diameter steel or plastic conduit.
- Telecomm conduit less than 4"
- Tunneling is more easily used during installation compared to sewer or water line installation
- May need to be encased in concrete

Gas –

- Trench: 3' deep, 12" width
- Gas must be separated from electrical conduits; however its location relative to water and sewer is flexible.
- Gas line location is not shown on the accompanying plan, and will be determined at a later date.

Overhead clearance for equipment and construction is not expected to exceed existing canopy heights.

Tunneling Versus Open Trench

Installation of utilities in the Protected Zone of the oak trees will result in root loss. Based on the location of utilities shown on the current plan, impacts to Trees #5OP and #6OP from sewer line installation, and Tree #7OP from installation of electrical conduits, are the most significant concerns compared to impacts to other oak trees.

If utility installation next to these oaks can be done by tunneling under the oaks' roots, then it will be much more feasible to retain these trees. Factors associated with this choice include:

- If open trenches must be used next to Trees #6OP and 5OP, and all oak roots in the trenches are removed, then Tree #6OP will require removal and Tree #5OP also is likely to require the same.
- Tunneling may limit the effectiveness of soil compaction and other steps needed to stabilize the sewer and water lines. The City of Glendale may disallow this method of installation for sewer and water lines.
- Tunneling for installation of electrical and telecommunications (near Tree #7OP) involves fewer construction problems and is more easily done.

- Improved equipment and methods for installing utilities may become available over time, and make it possible to tunnel under roots and save the oaks.
- The exact placement of the utilities may be adjusted in the future or at the time of construction, allowing for the oaks to be retained.

PROTECTED TREE IMPACTS

This report assumes that tree protection measures described in this and other tree reports will be implemented in a timely and thorough way. Failure to do so could greatly increase impacts to the protected trees and result in decline, tree death, or tree failure.

Tree #	Radius of Critical PZ (feet)	Sewer	Water	Electrical / Telecomm.	Additional Impact	Cumulative Impacts
1OP	24.0	23	20	> 24'	Minor	Major
2OP	10.5	>10.5	8	6.5	Minor	Mod-Major
3OP	23.5	26	(41)	43	Minor	Minor
4OP	N/A – Previously Proposed for Removal					
5OP	13.0	Trench @ ~4'; SMH @ 6'	(18)	20	Moderate to major	Major
6OP	13.0	Trench @ ~1.5	11.5	20.5	Moderate to major	Major
7	16.5	15.5'	21	5	Moderate to major	Major
8	14.5	9'	21	N/A	Minor to moderate	Moderate
<i>Continued on next page</i>						

Tree #	Radius of Critical PZ (feet)	Sewer	Water	Electrical / Telecomm.	Additional Impact	Cumulative Impacts
<i>Continued from previous page</i>						
9OP	18.0	14.5'; SMH @ 17'	22.5	N/A	Minor	Minor
10OP	13.0	16.5'; SMH @ 14'	24	N/A	Minor	Minor
11OP	N/A – City-Owned tree, to be removed by City					
12OP	12.0	SMH @ 18'	10	N/A	Minor	Minor
13OP	15.0	SMH @ 19'	N/A	N/A	None	Minor
14OP	16.0	SMH @ 26'	N/A	N/A	None	No Impacts

Critical PZ = Critical Protection Zone

SMH = Sewer Manhole

Measurements in parentheses indicate locations of existing utilities

Anticipated Tree Removals, Tunneling Option

In the event that the project is able to tunnel under the roots of oaks with major impacts, then no additional tree removals are anticipated.

Anticipated Tree Removals, Open Trench Option

In the event that the project is unable to tunnel under the roots of oaks #5OP, 6OP, and 7OP, then additional tree removals are expected:

- Tree #5OP – This oak may be at moderate to high risk of failure. A judgment as to whether it will be possible to retain it can be made only at the time of construction, and will depend on factors including possible canopy reduction to reduce risk of failure, the effectiveness of tree health management, and the location and quantities of roots affected. This can be reviewed when roots are encountered and or cut.
- Tree #6OP – Root cutting at 12” to 18” close to the root crown will result in excessive risk of failure. This oak would be recommended for removal.

- Tree #7OP – The electrical and telecommunication conduits will be at about 5 feet from the root crown. These utilities are easier to tunnel, however if this is not feasible then this could jeopardize the retention of this tree. It is possible that roots on this side of the oak were previously cut and are not present, in which case trenching for the utilities will not further impact the oak.

Other impacts

Per the report of 5/28/09, it had been expected that, near the oaks with major impacts, the road width would be reduced to 20-feet as permitted by the City. The accompanying grading plan does not show this modification, however this option should be used to maximize the chances of the oaks' long-term survival.

Tree #12OP – Canopy is in the road. See tree plan. Protect this tree from damage from trucks or high equipment.

MITIGATION FOR POTENTIAL TREE REMOVALS

In the event the oaks cannot be retained, the City of Glendale is to be compensated for the loss of the value of Trees #5OP and #6OP. To determine the value of these two trees, appraisals were performed using methodologies established by the Council of Tree and Landscape Appraisers, as set forth in the *Guide for Plant Appraisal, Ninth Edition*. Factors taken into account in determining the appraised value of the trees include the tree's location, its species, health, and structure. Based on these factors, the value of the trees was determined to be as follows:

Tree #5OP – This 17-inch diameter coast live oak is in fair condition. It is rated highly for its species, since the City gives the coast live oaks a protected status. As a large specimen, it is effective at providing benefits to the municipality at large. However, its placement in the right-of-way is extremely detrimental and greatly impacts its value. For these reasons, the value of this oak is estimated at \$10,300.

Tree #6OP – This tree also is a 17-inch diameter coast live oak. Its condition, qualities, benefits, and ratings are very similar to that of Tree #5OP. The value of this oak is estimated to be \$10,300.

Tree #7 – This 22-inch diameter oak is less likely to require removal, but its outcome remains uncertain. Its condition, qualities, benefits and ratings are similar to that of the other two oaks, except that its diameter is larger by five inches. The value of this oak is estimated to be \$16,600.

TREE PROTECTION RECOMMENDATIONS

All work is expected to be done by City personnel or contractors engaged by the City. Tree protection measures must be implemented in a timely, consistent and thorough manner. This is especially the case for trees in below-average condition or that will have moderate to major impacts. However, even trees in good condition can decline, die, or become unsafe if tree protection measures are not fully carried out. Tree protection recommendations are found in the tree report of 5/28/09, the addendum of 11/04/10, and as described below. Additional or modified recommendations may be supplied by the project arborist when the project is underway.

Irrigation During Construction

The protected oaks shall be provided with supplemental deep watering prior to and during construction by a qualified arborist. When construction inside the root protection zone has been completed, supplemental irrigation shall be maintained for at least one additional year.

Trenching and Soil Removal

Trenching within the critical protection zone (CPZ) of each tree shall be done manually only. Soil removal shall be done using a pneumatic air device (Air Spade) to the extent possible. It is likely that additional soil will need to be removed in some locations in order to access and install pipes under tree roots.

- All roots with a diameter of 1.5 inches or more shall be preserved during the course of trenching.
- The bark on tree roots shall not be scraped off, split, chipped, or otherwise damaged. (Damage of any kind results in a lesion larger than the original wound, and can result in root death.)
- Where additional soil must be removed to provide access, this shall be done on the side of the trenches away from the nearest oak, to minimize impacts.

Soil Backfill

Backfilling shall be done with existing soil. The project arborist shall oversee and recommend the use of amendments if appropriate.

Root protection

- The project arborist shall monitor and provide documentation of roots requiring removal. If root removal poses a risk of tree decline or failure, proper notification shall be provided to the City contact identified by the owner.
- Roots requiring removal shall be pruned per guidelines provided in the tree report of 5/28/09.

- Where roots to be retained are located in areas to be filled with concrete, the following steps shall be taken:
 - o Roots shall be wrapped with or encased in foam (or other approved material by the arborist) to a thickness determined by the project arborist. Foam shall be of sufficient rigidity to hold up against any concrete and compaction that may be applied.
 - o Foam shall be used to separate the entire length of the root from contact with any concrete being poured.

Sincerely,



Carl Mellinger

CERTIFIED ARBORIST WCISA #1976
CONSULTING ARBORIST (ASCA)



CLIENT: Hratch Kassabian
SITE ADDRESS: 2331 Ramsay Drive, Glendale, CA 91206
TELEPHONE: (818) 395-0832 cell **FAX:** (818) 951-7075

ADDENDUM TO 5/28/09 PROTECTED TREE REPORT

PW MAINTENANCE SVS
2010 NOV 9 AM 8:38

BACKGROUND AND ASSIGNMENT

Mr. Hratch Kassabian is planning the construction of a single-family home at 2331 Ramsay Drive. On 5/28/09 we provided him with a Protected Tree Report for submittal to the City of Glendale. Mr. Kassabian subsequently revised his project plans, requiring an arborist's review of potential impacts.

This addendum to the report of 5/28/09 provides our opinion as to the anticipated impacts to the protected trees taking into account the project revisions. Our opinions are based on a revised site plan provided to us by Mr. Kassabian on our site visit of 9/24/10 and based on the email from the City of Glendale's Urban Forestry Division dated 10/07/10.

PROJECT REVISIONS

Mr. Kassabian's project at 2331 Ramsay Drive was revised. The driveway location was moved to the western portion of the property. The footprint of the house has changed and moved as shown on the attached Protected Tree Plan. There were no changes to the proposed paving of Ramsay Drive.

PROTECTED TREE IMPACTS

Protected tree impacts discussed in the protected tree report, dated 5/28/09, remain the same except as detailed below.

- The driveway has been moved to a location outside this Tree #7OP dripline. Impacts to Tree #7OP will now be minor; impacts were previously expected to be moderate to major.
- Tree #11OP cannot be kept if the driveway is to be built as planned. Per the City of Glendale's email of 10/07/10, protected tree #11OP was identified as a city-owned tree. The City plans to remove it.

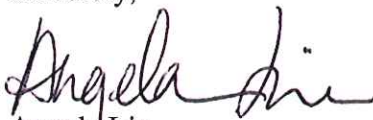
- Tree #12OP will need to be cut back for driveway clearance. It is expected that one 6" diameter branch will be cut, as well as one 3.5" diameter branch or two 2" diameter branches. This impact is expected to be minor to moderate.
- Impacts to Trees #15 and #21, previously expected to be minor, are now expected to be very minor.

TREE PROTECTION RECOMMENDATIONS

All previous tree protection recommendations remain the same as discussed in the 5/28/09 report and plan, with the exception of changes noted below.

- Tree protection fencing requirements for protected trees along Ramsay Drive (#1OP, #2OP, #3OP, #5OP, #6OP, #9OP, and #10OP).
- Tree protection fencing for all other protected trees was revised and is shown on the attached Protected Tree Plan.

Sincerely,



Angela Liu
CERTIFIED ARBORIST WCISA #3267
CONSULTING ARBORIST (ASCA)



Carl Mellinger

CERTIFIED ARBORIST WCISA #1976
CONSULTING ARBORIST (ASCA)