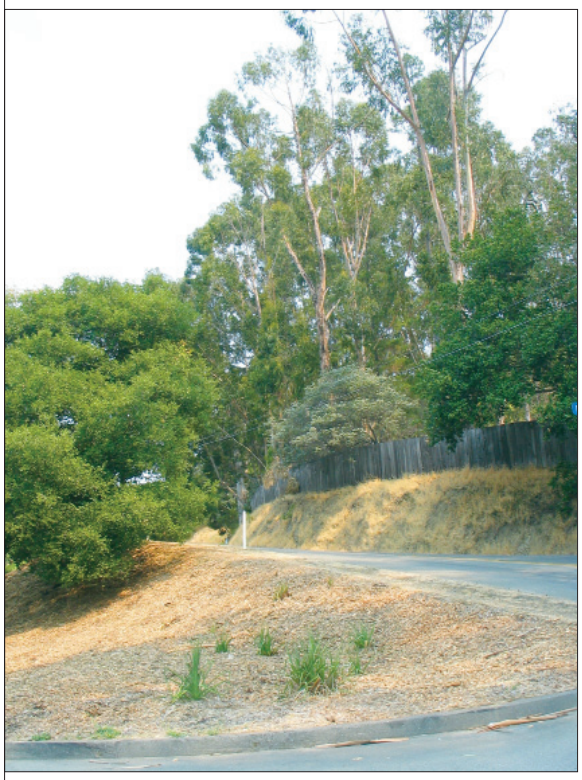
650 North San Pedro Road Amended Final EIR

State Clearinghouse Number: 2004062004



County of Marin | October 22, 2010

DESIGN, COMMUNITY & ENVIRONMENT

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1 INTRODUCTION

This Second Amendment to the 650 North San Pedro Road Final Environmental Impact Report (FEIR) was prepared to respond to issues raised at the Planning Commission Public Hearing (hearing) held on December 14, 2009, including written submittals to the Planning Commission, Public Testimony, and questions from Planning Commissioners, and to incorporate several additional staff-initiated changes to the FEIR. Not all topics raised at the Planning Commission Hearing are addressed in this document. County staff and the EIR consultant addressed several issues not requiring changes to the text of the FEIR at the December 14th hearing.

Chapter 2 of this Amendment covers the following topics:

- Biological Resources and Trees
- Project driveway sight distance
- Revised visual analysis
- Revised No Project Alternative Evaluation
- Other miscellaneous changes to the FEIR as described below

This Second Amendment includes several minor revisions to Mitigation Measures from the September 2009 FEIR and the December 2009 Amended FEIR that were prompted by questions or concerns raised at the Hearing. None of the changes fundamentally alters any of the mitigation measures, nor changes the conclusions regarding the effectiveness of the measures in reducing impacts to less-than-significant levels. Instead, the changes simply clarify or amplify impact discussions and mitigation measures, and in some cases alter the stated implementation schedule. All new mitigation measures included as part of this amendment address previously identified impacts, and the applicant has not declined to implement any new mitigation measures. Pursuant to CEQA Guidelines §15088.5, recirculation of the EIR prior to certification is not required.

Chapter 3 of this amendment includes a list of additional minor changes to the FEIR. Also included in this Amendment are Appendix A, which contains materials referenced in Chapter 2, and Appendix B, which contains an up-

dated Mitigation Monitoring and Reporting Program based on this Amendment.

This Amendment will be distributed to interested parties prior to the Marin County Planning Commission's consideration of recommendation to the Board of Supervisors for certification of the EIR as adequate and complete pursuant to CEQA.

2 ISSUES RAISED AND ADDRESSED

This chapter identifies changes that have been made to the Final EIR. In each case, exact text from the FEIR is shown and modified as necessary. Omitted text is shown in ~~strikethrough~~ and new text is underlined.

A. Biological Resources and Trees

1. Explanation that the designated open space will meet the requirements of Mitigation Measure 4.3-E.1

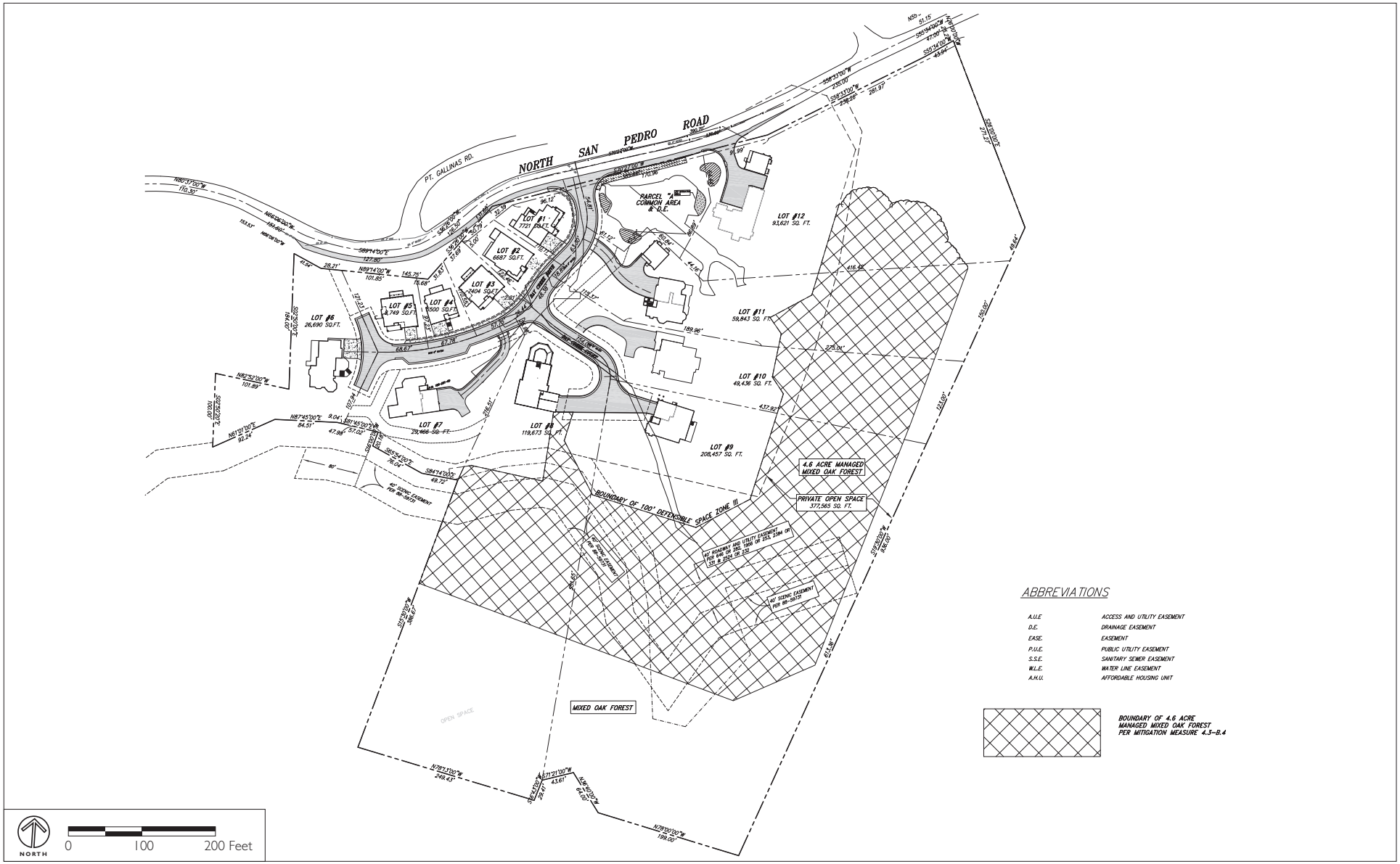
Concerns regarding the location and adequacy of the designated open space area were expressed at the Public Hearing. Figure 3-5 of the DEIR has been updated to show the location of the designated open space within the project site in relation to Defensible Space Zones. Defensible Space Zones are the landscaped and natural areas around each structure that would be designed and maintained to reduce fire danger. Mitigation Measure 4.3-E.2 states that at least 4.5 acres of mixed oak forest within the 8.6 acres of the open space on the site will be maintained as defensible space.

As discussed below, the Fire Hazard and Open Space Management Plan (included in Appendix H) shows the open space within the project site in relation to defensible space.

2. Interface between defensible area and designated open space areas

Concerns were raised at the Public Hearing regarding the defensible areas surroundings proposed residential structures, and how the defensible areas are different than the designated open space area. Additionally, concerns regarding the spread of French broom resulting from the clearing of vegetation within the project site were also expressed. Below is language included as part of the Fire Hazard and Open Space Management Plan (included in Appendix H of this document) to define defensible areas surrounding the proposed residential sturctures. This language is included to provide a distinction between managed Defensible Space Zones and designated open space.

As shown on the Fire Hazard and Open Space Management Plan, the boundary of the 4.5-acre managed open space (as per Mitigation Measure 4.3-B.4) is



Source: ILS Associates, Inc.

FIGURE 3-5

LOT PLAN - REVISED

located outside of Defensible Zone III, at a distance of 110 feet from proposed residential units. Additional language regarding Defensible Zones is included below.

As identified in discussion of Impact 4.3-E, the development of the project would remove a limited amount of mixed oak forest and mature trees from the project site. Due to tree removal, there is a possibility that with the management of defensible zones and the reduction of tree crown within the project site, the development of the project could result in the spread of French Broom.

However, at a minimum, the requirements included in the Fire Hazard and Open Space Management Plan, and listed below would limit the spread of French Broom.

Management practices associated with Defensible Space Zones I, II and III would be required as part of the proposed project. As described in detail below, the different Defensible Space Zones would provide management of vegetation within 100 feet of propose residential structures, and would include removal and trimming of vegetation to reduce the potential impact of fire hazards. The Defensible Space Zones are defined by the following distances from proposed residential structures:

Defensible Space Zone I: 0 – 10 feet
Defensible Space Zone II: 10 – 50 feet
Defensible Space Zone III: 50 – 100 feet

Initial Fuel Modification:
Minimal initial fuel modification is required in the building envelopes. Woody shrub species are required to be removed within 50 feet of structure locations. Isolated shrubs (such as manzanita specimens) may be retained on a limited basis provided the location and use complies with the following Minimum Defensible Space Requirements.

Defensible Space Zone I (10 feet):
This zone consists of areas within 10 feet of building structures. Generally, tall shrubs and trees are not allowed in this zone. The goal is to avoid plant material capable of transmitting fire to wall and roof eaves upon ignition. Landscape options include the use of hardscape (patios, walkways), rock gardens, and low growing, well-irrigated groundcovers with low foliage volume.

Defensible Space Zone II (50 feet):
This zone extends from the edge of Zone I to a 50-foot distance from building structures. Existing oaks should be preserved with trees pruned to remove dead wood and thin dense structures. Depending upon the density of the woodland, the removal of oaks may be required to create canopy separation between trees or tree clusters. Mature trees should have all ladder fuel (shrubs, brush) removed within 10 feet of the tree dripline, and lower limbs pruned to provide a 10-foot clearance over the surrounding uphill grade.

Young, or semi-mature trees less than 40 feet in height should have the lower limbs removed to a height equal to 25 percent of the total tree height above the uphill grade (example: a 20-foot tree requires a 5-foot uphill grade clearance). All ladder fuels are to be removed within 10 feet of the tree dripline.

Smaller diameter firs, bays, and madrones (less than 12-inch trunk diameter at 4.5-feet above grade) should be primarily selected for removal with the larger trunk diameter firs and oaks of all sizes having the highest priority for preservation.

Landscape guidelines include the following elements:

1. Use well-irrigated, fire resistant plant species. Landscape shrubs and groundcovers should generally be low growing with low foliage density. All pyrophytic[1] plant 1 species should be removed from this zone.

[1] Pyrophytic plant is a fire prone plant which ignites quickly and burns intensely. Examples include juniper, cypress, eucalyptus, and acacia.

2. Landscape plantings should be grouped in island-type configurations with a maximum 18-foot diameter. Shrub/groundcover island plantings should be separated by a distance no less than two times the height of the overall shrub group (use mature or maintained height). The maximum amount of woody shrubs or groundcovers should not exceed 30 percent of the total area within Zone II.
3. New tree plantings should use fire resistant species. Fire resistant trees include species which are deciduous and have large fleshy leaves and open limb structures. Trees to avoid include conifers (i.e., pines, cedars, cypress, junipers) and evergreen trees with foliage containing oils or wax components (i.e., eucalypus, bay laurels). Native oak species are naturally fire resistant and a desirable tree species.
4. Trees or tree clusters of limited size should be separated by distances of at least 15 to 20 feet on moderate slopes and by 10 feet on flat areas. Shrub and groundcover plantings are generally not recommended for use below tree driplines, especially below native oak species. The use of a two to four inch deep bark mulch is the preferred landscape treatment below native tree crown driplines. If a groundcover is to be used below an ornamental tree, then the height should be limited to a maximum of 18 inches and the plants should receive regular irrigation.
5. Irrigated lawns are a desirable fire resistant element.
6. Non-irrigated grass areas require annual mowing to a maximum three-inch height.

Defensible Space Zone III (100 feet):

This zone extends from 50 to 100 feet from building structures. The same guidelines as described above should be applied. It is advised that the overall landscape be less dense with greater separation between planting islands. Tree clearance and pruning requirements are the same. All pyrophytic plant species should be removed from this zone, including small diameter firs, bays, and madrones.

The Planning Commission also asked that Mitigation Measure 4.3-B.4 be clarified to state that fire management will occur only in the defensible space areas, and not in the designated open space area. Additional text has been added to Mitigation Measure 4.3-B-4 to clarify where fire management activities will occur and who is responsible before sale of the units.

Mitigation Measure

4.3-B.4 ~~When managing vegetation for fire control~~ Prior to occupancy and during implementation of the project Vegetation Management Plan, the applicant shall contract with a certified arborist to conduct a site visit with the appointed fire prevention specialist. During the site visit, the fire prevention specialist and arborist shall collaborate to identify tall trees within Defensible Space Zones I—III~~the extent of the open space area~~ that could be preserved, provided they do not present a fire risk and are in a good state of health. All other open space areas shall remain untouched. Prior to sale of the units~~occupancy~~, the project developer~~applicant~~ shall present the outcome of this collaboration to the County CDA for approval, including a list of tree species within the open space to be preserved, approximate location within the open space, and approximate diameter at breast height (dbh). ~~health~~~~property owners shall maintain large trees in the areas designated as open space, so as to provide potential future rookery sites.~~

3. Adequacy of tree replacement as mitigation for woodland loss

A comment from the Planning Commission stated that there was no mitigation for woodland loss in the Final EIR. Impact 4.3-E specifically addresses woodland loss, and identifies the loss of 1.5 acres of woodland as a significant impact. Impacts to woodland loss are reduced to a less-than-significant level through the implementation of Mitigation Measures 4.3-E.1 and 4.3-E.2. Mitigation Measure 4.3-E.1 protects trees through avoidance and minimization of construction impacts, and, consistent with the Tree Mitigation Plan, Mitigation Measure 4.3-E.2 specifically requires that oak forest is maintained

within the protected open space of 8.6 acres, at a ratio of 3:1 for the loss of 1.5 acres of oak forest.

The implementation of the Tree Mitigation Plan, in combination with the preservation of 8.6 acres of open space will mitigate the loss of woodland within the project site. Two biology firms were employed for the EIR and they utilized professional biologists who have substantial expertise and experience in conducting field biology evaluations and studies. These firms also peer reviewed submittals by the applicant's biologist and independently conducted field investigations and literature review to reach their own conclusions.

The proposed mitigation for tree removal, which includes planting native replacement trees, is consistent with County policy. Mitigation measures 4.3-E.1 and 4.3-E.2 were specifically developed to meet the standards in the County Development Code and the requirements in the Native Tree Preservation and Protection Ordinance. As such, Mitigation Measures 4.3-E.1 and 4.3-E.2 would reduce potential impacts from loss of mature oak trees and mixed forest to a less-than-significant level.

4. Additional language added to Mitigation Measure 4.3-F.2 to provide clarification that monitoring will be completed by a consulting wetland specialist

To provide clarification on the preparation and of a detailed Wetland Mitigation Enhancement Plan, Mitigation Measure 4.3-F.2 has been modified.

4.3-F.2 A detailed Wetland Mitigation and Enhancement Plan (WMEP) shall be prepared by a qualified wetland specialist to mitigate project fill in the jurisdictional wetlands and address potential impacts stemming from the proximity between the wetland boundary and the limits of development. The WMEP shall be approved by regulatory agencies and the County Community Development Agency prior to approval of the final map. The WMEP <u>will be prepared and monitored by a</u>

consulting wetland specialist, and shall include the following information and provisions:

- The applicant shall provide evidence to the County Community Development Agency that they have secured appropriate authorizations from CDFG, Army Corps and RWQCB prior to issuance of a grading or building permit for the project. This shall ensure that all appropriate authorizations have been secured, and that the applicant is responsible for addressing any and all additional concerns and conditions of the regulatory agencies.
- The total area of jurisdictional wetlands affected by proposed improvements (10 cubic feet from installation of the weir outlet structure).
- The wetland type to be affected (seasonal pond).
- Mitigation ratios for each wetland type, and the total area of wetlands and adjacent uplands to be created, restored, or enhanced. ~~It is expected that w~~Wetlands shall be replaced on-site at a minimum 2:1 ratio consistent with Countywide Policy BIO-3.2. For this project, this shall be achieved through the creation of at least 375 square feet of wetland habitat on the eastern side of and immediately contiguous with the existing, delineated wetland area, surrounded by an upland parcel of at least 0.33 acre.
- A timeline for creation of the mitigation wetlands, and installation of plantings and other improvements. The additional wetland shall be created by grading within 1 year of starting project construction.
- Specific performance criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures. A timeline for the monitoring requirements, performance criteria, and associated reports shall also be specified. Monitoring shall be conducted by the consulting wetland specialist for five years; annual monitoring reports shall be submitted to the County until these criteria are met.

- Performance criteria shall include both the area of the created wetlands, and ~~be based on~~ functional parameters such as the presence of wetland hydrology and hydrophytic vegetation. The area of the created wetlands ~~will~~shall be determined by a standard wetland delineation (using methods presented by the Army Corps of Engineers) with the understanding that hydric soil indicators may not develop within the monitoring timeframe. Functional performance criteria shall include dominance of hydrophytic vegetation, and hydrological functioning as a wetland. It is expected that adequately functioning created wetlands would support an average absolute percent cover of wetland indicator species equal to at least 80 percent of the average percent cover in the existing wetland, with a similar composition and cover of native species; created wetlands would also exhibit similar wetland hydrology. If the final success criteria have not been met within the five-year timeframe, remedial actions shall be implemented and monitoring ~~will~~ shall continue until the criteria are achieved.

- A comprehensive program to remove invasive exotics and provide enhancement plantings of native wetland indicator, transitional and upland species to improve the overall habitat functions and values of the area surrounding the existing wetlands. The WMEP ~~will~~shall specify undesirable invasive weeds and noxious plants species; these plants shall be initially removed within one year of wetland creation. Native species shall be planted in the wetland and transition area immediately following the removal of these species. The monitoring plan shall include monitoring and subsequent management of these undesirable species.

- For the three proposed storm drains that would be directed toward the pond, energy dissipaters and biofiltration structures shall be constructed at the outlet of each drain to treat the water before it enters the pond.

- The surrounding upland space shall be managed to maintain and enhance the functions and values of the wetland. The WMEP ~~will~~

shall specify monitoring of this surrounding upland, including issues such as presence of exotics, and general upkeep (e.g., trash, human disturbance, etc.).

- The WMEP shall specify procedures and responsible parties for implementing any remedial or corrective actions needed for the wetland or upland area throughout the monitoring period. The WMEP shall specify long-term maintenance and monitoring provisions to be managed and funded by the Homeowner's Association.

- ~~The total area of wetlands and adjacent uplands to be created, restored, or enhanced as part of the wetland. Any replacement wetlands shall be consolidated to improve existing habitat values, and be replaced on site at a minimum 2:1 ratio consistent with Countywide Policy BIO-3.2. For this project, this shall be achieved through the creation of 375 square feet of wetland habitat on the eastern side of and immediately contiguous with the existing, delineated wetland area.~~

- ~~Performance criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures. Monitoring shall be conducted by the consulting wetland specialist for up to five years or until the identified success criteria are met.~~

- ~~The area surrounding the wetland shall be a common parcel that would encompass at least 0.33 acres. The space shall be managed to maintain and enhance the functional values of the wetland. The WMEP shall specify long-term maintenance and monitoring provisions.~~

5. Impact 4.3-D revised to clarify why 0.6 acres is the required area for preservation.

Impact 4.3-D.1 has been clarified to explain how the recommendation of 0.6 acres of planting was determined. The FEIR states that 0.19 acres of native grassland could be impacted by the proposed project. After rounding 0.19 acres up to 0.20 acres, 0.6 acres is required for preservation represents a 3:1

ratio of area that could be affected. The following impact discussion has been amended as follows.

Impact 4.3-D Development could affect native grassland habitat, which CDFG tracks because it is declining statewide and provides high value for native plants and wildlife.

The CDFG has identified Native Grassland and Valley Needlegrass Grassland as plant communities of interest.[2] While these communities have no formal legal protection, the CDFG is interested in tracking their status because they provide high value for native plants and wildlife and are declining statewide. The native grassland (approximately 1 acre) at the northeastern end of the project site could be of interest to the CDFG or the County because it contains approximately 20 percent cover of native grasses, including purple needlegrass.~~, and could potentially support special-status plant species~~. No development is proposed in this area; however, future changes in land uses associated with the project, including possible increases in pedestrian traffic through this area, could affect species composition and habitat quality in this area. As a result, 0.19-acre of native grassland, as identified in Table 4.3-1 could be impacted by development and shall be required to be replaced at a ratio of 3:1 within the open space reserve, located east of Lot 12 within the project site. This would be a *potentially significant* impact.

6. Wetland Conservation Area Setback within Lot 12

A comment from the Planning Commission stated that the location of Lot 12 within the Wetland Conservation Area is not acceptable as it violates the Countywide Plan policy for setback area. The Tree Mitigation Plan, project grading plan, and Final EIR were reviewed by consulting biologist Environmental Collaborative to confirm whether the driveway to Lot 12 is adequate with respect to the wetland conservation area setback (WCA). Environmental Collaborative reviewed the revised Tree Mitigation Plan. The Tree

[2] California Department of Fish & Game (CDFG), 2002. California Wildlife Habitat Relationships System. Electronic database, Version 8.0. California Interagency Wildlife Task Group, Sacramento, CA.

Mitigation Plan shows native valley oak and California buckeye plantings between the proposed driveway to Lot 12 and the wetland area, and additional California buckeye and coast live oak plantings along the east side of the driveway and frontage to North San Pedro Road, all of which would be appropriate for those locations. The Grading and Drainage Plan for the project shows the limits of new fills and the wetland replacement and drainage filtration areas between the proposed driveway and wetland area, all of which could be accommodated as shown.

As discussed in the Final EIR, Marin Countywide Plan Policy BIO 3.1 Protect Wetlands calls for establishing a minimum 100-foot setback from jurisdictional wetlands for parcels of 2 acres in size or greater in the City-Centered Corridor. Exceptions to this setback requirement are allowed where the net functions and values of the actual jurisdictional wetland are not significantly compromised. It is opinion of Environmental Collaborative, that the entire driveway and both residences on Lot 12 would fall within the 100-foot setback from the limits of jurisdictional wetlands on the site. GANDA has concluded that due to the degraded condition of the existing wetland and the area surrounding the wetland, it is feasible to develop within the 100-foot setback of this particular wetland and still improve wetland functions and values at the same time. Mitigation Measures BIO-5a through BIO-5g of the Final EIR address the potential impacts to wetlands.

7. Additional explanation provided regarding impacts from lawn irrigation on replacement trees

The possibility of impacts on replacement trees from the installation and operation of lawn irrigation has been identified as a possible adverse impact. The arborist for the Project Applicant submitted a letter that includes a discussion of the lawn area impacts on replacement trees (included in Appendix J). The arborist states that no trees will be planted in the lawn areas and the trees will be irrigated with a dedicated irrigation valve to allow correct and appropriate irrigations during the establishment period. Therefore, irrigation of lawn areas will not have a negative impact on the replacement native trees. The arborist further states that damage from overwatering oak trees occurs

when irrigation spray is allowed to constantly wet the trunk, or if soils are not allowed to dry between irrigation cycles, resulting in a high potential for disease problems. However, with irrigation management, oaks will benefit from periodic irrigation during the dry season. Mitigation Measure 4.3-H.2 states that a Tree Protection Plan must be developed to maximize tree survivability by implementing all of the guidelines recommended in the 2007 Tree Inventory Evaluation. Among the provisions listed is a requirement that site drainage be consistent with the recommendations in the 2007 Tree Inventory Evaluation and that the Tree Protection Plan must be approved by the County prior to starting site preparation and construction activities.

4.3-H.2 Develop a Tree Protection Plan that details procedures to maximize tree survivability by implementing all of the guidelines recommended in the 2007 Tree Inventory and Evaluation. The plan shall include, at a minimum, the following topics:

- Developing a Tree Protection Zone (TPZ) around trees to be protected.
- Construction observation and supervision by a certified arborist, or County designated representative.
- Installation for tree protection fencing around TPZs.
- Requirements for demolition and/or site clearing near TPZs.
- Requirements for site grading, trenching, and root pruning.
- Requirements for foundation and wall ~~C~~construction within the TPZ.
- Requirements for site drainage.
- Standard requirements for pruning and cabling.
- Tree damage mitigation requirements.
- Post-construction recommendations.
- Recommendations for planting around native oak trees.

The Plan must be approved by the County prior to starting site preparation and construction activities.

8. Revision required for the Tree Mitigation Plan to address discrepancy in tree heights.

The Tree Mitigation Plan has been revised to match the tree descriptions in the Proposed Mitigation Tree Container Sizes table. The updated Tree Mitigation Plan is included in Appendix E.

9. Additional explanation provided regarding the removal of eucalyptus trees and the resulting impact on water uptake and stormwater runoff.

Concerns were raised regarding runoff impacts to site hydrology and drainage resulting from the elimination of mature trees within the project site. The water demand of trees is based upon a variety of variables including prevailing climatic conditions, species characteristics, the size of the tree, phenological status (timing within annual growth cycle), and the condition of the tree.

Evapo-transpiration (ET) is a term used to describe the water requirements of plants based upon prevailing environmental conditions of solar exposure, temperature, humidity, and wind. ET refers to the total amount of water taken up by a plant and utilized through transpiration and evaporation. ET rates vary according to location and season. June and July are typically the highest ET months due to the long daylight hours and high temperatures, while December and January are conversely the lowest months.

Rainfall usually far exceeds the ET requirements of plants during the winter months and their rate of water uptake. Consequently, normal rainfall rates will exceed plant water use substantially during the rainy season. Trees and vegetation in general provide protection against erosion by dissipating the kinetic energy of rain, slowing run-off rates, and facilitating water infiltration into soils during high rainfall events. But the plants themselves are not uptaking water at rates sufficient to have a significant impact on run-off during the winter months. During March and April plants will increase water uptake rates due to spring growth cycles in support of new vegetative production. There is a theoretical potential for a limited increase in runoff rates during these two months between the removal of existing trees and establishment of

the new plantings. The arborist's opinion is that any potential adverse impact resulting in increase runoff during this narrow time period is negated by the poor condition of the eucalyptus, which is the dominant tree on the site. As tree health declines, their physiological functions diminish, including the ability to produce new growth and to maintain foliage density. This decline directly affects the demand by the tree for water as well as the functional ability to uptake water.

In regards to the other tree species on the site, the deciduous trees, such as oak trees, are not using water during their dormant period, and the evergreen species (like the eucalyptus) are using very limited amounts due to the low ET rates. Also, as discussed in the arborist report, many of the trees on this site are in poor condition, which reduces water uptake and evapo-transpiration rates. While water uptake by trees is not a critical factor affecting run-off during winter months, it is essential that potential soil erosion and water run-off rates be physically controlled once the trees are removed. These issues are addressed in the Grading and Drainage Plan prepared by the project civil engineer, ILS Associates.

It is the arborist's opinion that any potential adverse impact resulting in increase runoff during construction of the project is negated by the poor condition of the existing eucalyptus.

10. Explanation of Mitigation Measure 4.3-B.1 implementation.

The Planning Commission requested that additional information be provided to better explain implementation of Mitigation Measure 4.3-B.1 related to the on and off-site actions planned to mitigate or reduce the impact of the project resulting from the removal of the heron rookery. Mitigation Measure 4.3-B.1 specifically relates to actions the applicant shall take to ensure the implementation of off-site mitigation. To ensure that Mitigation Measure 4.3-B.1 is implemented, the applicant shall complete each item of the following program.

a. Applicant's biologist shall contact CDFG biologist and arrange a meeting to review potential habitat enhancement and protection

programs CDFG already has underway. If CDFG preference is to have the project sponsor participate financially with a fair share money contribution toward an on-going and underfunded effort now underway the project sponsor shall consider this opportunity providing that the CDFG program meets specific performance standards specified in Mitigation Measure 4.3-B-1.

b. If CDFG does not have any preferred programs underway the project sponsors' biologist shall meet with and consult with managers of existing heron rookeries including West Marin Island and/or other locations that have been identified as potential habitat that would also meet the specification and performance standards contained in the FEIR Volume #1 Page 4.3-31. The project sponsors' biologist shall work with the managers of existing rookeries to ensure that an existing program that meets mitigation performance standards is supported and/or assist the site manager with development of a new program that is compensatory with and in the scale and proportionality of the project impact on a 1:1 ratio.

c. Project sponsors' biologist shall work with CDFG to develop a program on-site that could, in addition to what is required and specified in Mitigation Measures 4.3-B.2, 4.3-B.3, and 4.3-B.4 enhance the trees and vegetation in the proposed Open Space to encourage establishment of a new future heron rookery on-site in addition to the off-site rookery.

d. The project sponsors' biologist shall contact other resource protection agencies in the Bay Area including the Army Corps, USFWS, San Francisco Bay Joint Venture, and others to explore collaboration with their on-going efforts to preserve heron rookeries in programs they already have underway. The project sponsor shall research details of other programs and present the project sponsors' participation opportunity to the CDFG along with an analysis and demonstration of how the program participation would comply with the performance standards specified in the FEIR.

e. Compensation for the heron rookery loss and the program details shall be worked out with the CDFG staff and would be completed

and certified by CDFG for presentation to the County CDA prior to the removal of the tree and prior to the project construction as specified in Mitigation Measure 4.3-B.1.

The letter from the contract planner for the Project Applicant is included in Appendix K.

B. Feasibility of Sight Distance from Lot 1

The following discussion addresses questions raised by the Planning Commission regarding adequacy of sight distance from Lot 1. Additionally, more detail was added to Mitigation Measure 4.6-E.1 to address sight distance from the Bay Creek Drive to North San Pedro Road.

Appendix L, Sight Distance and Lot 1, has been added to the Final EIR to provide additional information. In Appendix L, Figure 1 shows the project site plan with Mitigation Measure 4.6-E.1 pertaining to sight distance incorporated into Lot 1. The footprint for the proposed residence has been relocated to allow for grading and adequate sight distance. Figures 2 shows the sight line from Bay Creek in a westerly direction and Figure 3 shows the sight line profiles from Bay Creek Drive, in a westerly direction. The profiles show sight distance resulting from recontouring the hillside on Lot 1. The diagrams validate the assertion in Mitigation Measure 4.6-E.1 that site distance would be possible subsequent to recontouring of the hillside on Lot 1. Additionally, new photo simulations were created to show what Lot 1 would look like from North San Pedro Road. The photo simulations are now included in the Final EIR as Figures 5-6, 5-7a and 5-7b, and are discussed in this amendment in Section C.2.

Figures 4 and 5 in Appendix L, show photos of markers demonstrating a direct line of sight 250 feet in each direction from the exit point of the driveway to Lot 12. Figure 6 shows the sight distance line from the Lot 12 driveway. Figures 7 and 8 show sight line profiles from Lot 12. Additional language,

FIGURE 5-6

SOUTHWESTERN VIEW OF LOT 1 FROM NORTH SAN PEDRO ROAD

FIGURE 5-7A

SIMULATED VIEW OF LOT 1 FROM NORTH SAN PEDRO ROAD

FIGURE 5-7B

SIMULATED VIEW OF LOT 1 FROM NORTH SAN PEDRO ROAD

included below, has been added to page 4.6-20 of the Final EIR to state that sight distance from Lot 12 is feasible.

The Planning Commission also requested information regarding the required number of truck trips to remove soil in accordance with Mitigation Measure 4.6-E.1. According to the Project Applicant's engineer, ILS Associates, reconfiguration of Lot 1 would not change the final grading quantities. Therefore, the truck trips required to remove soil would remain the same as the proposed project. As discussed in the Final EIR, the project would result in 4,500 cubic yards of offhaul. Using semi-end dumps, each carrying approximately 20 cubic yards, 225 trips would be required. This would result in a significant impact to traffic, however, as described in the Final EIR, Mitigation Measure 4.6-A.1 would reduce the impact to a less-than-significant level.

Text on page 4.6-20 and has been amended as follows:

With the removal of the existing trees, vegetation and fences at the project's easterly driveway, the required 250 feet sight distance to and from this driveway would be provided. Therefore, the project would provide adequate sight distance at the easterly driveway. The sight distance easement to and from this driveway is illustrated in Figure 3-7~~5~~ in the Project Description.

Sight distance from the Lot 12 driveway meets the minimum requirement of 250 feet. Additional information, including sight line profiles and photographs are included in Appendix L, Sight Distance and Lot 1.

Mitigation Measures

4.6-E.1 ~~Project Lot 1 should be redesigned to allow t~~The rear yard fence of Project Lot 1 shall~~should to~~ be relocated to approximately 10 feet south of the location currently shown on the Grading and Drainage Plan. ~~If necessary, the footprint of the proposed residence on Lot 1 should also be redesigned.~~

Prior to grading activity for road and driveway construction being undertaken, the applicant shall submit for review and approval of the DPW traffic engineer, detailed engineering cross sections of the roadway frontage and detailed plan specifications with traffic engineering graphic data that more specifically depicts driveway configurations and sight distance from driveway exit points to provide 250 feet of sight distance to the west of Bay Creek Drive. Confirmation by the County of adequate sight distance shall be required prior to the start of construction.

Impact Significance After Mitigation

The implementation of this mitigation measure will provide the required 250 feet of sight distance and reduce the impact to a *less-than-significant* level. The change in the location of the fence would not result in any impacts not already identified and mitigated. Furthermore, as explained in the Project Description, adequate sight distance from project driveways to applicable distance points along North San Pedro Road shall be preserved through ~~the~~ establishment of sight easements. The purpose of these easements will be to prevent future landscaping or development that would limit the sight distance required for vehicles to safely enter and exit the project site. The easements are shown on Figure 3-5. Also, included in Appendix L, Sight Distance and Lot 1, is a site plan showing the location of the residential unit on Lot 1 based on Mitigation Measure 4.6-E.1. Additionally included is a sight line profile to the westerly direction from Bay Creek Drive.

C. Visual Analysis

1. Photo simulations modified to show planting palate from planting plan at time of installation and after 5 years

During the Public Hearing, it was requested that the photo simulations show trees at time of installation and at a time when the trees are not fully mature. Figures 4.8-5 through 4.8-7 have been revised to provide representations of the Proposed Project that are consistent with the Planting Plan, included in

FIGURE 4.8-5A

SIMULATED VIEW OF SITE FROM PT. GALLINAS ROAD - 2ND REVISED

FIGURE 4.8-5B

SIMULATED VIEW OF SITE FROM PT. GALLINAS ROAD - 2ND REVISED

FIGURE 4.8-6A

SIMULATED VIEW OF SITE FROM UPPER ROAD LOOKING SOUTH - 2ND REVISED

FIGURE 4.8-6B

SIMULATED VIEW OF SITE FROM UPPER ROAD LOOKING SOUTH - 2ND REVISED

FIGURE 4.8-7A

SIMULATED VIEW OF SITE FROM UPPER ROAD LOOKING SOUTHWEST - 2ND REVISED

FIGURE 4.8-7B

SIMULATED VIEW OF SITE FROM UPPER ROAD LOOKING SOUTHWEST - 2ND REVISED

Figure 4.8-5a
8.5, color

Figure 4.8-5b
8.5, color

Figure 4.8-6a
8.5, color

Figure 4.8-6b
8.5, color

Figure 4.8-7a
8.5, color

Figure 4.8-7b
8.5, color

Appendix E. Figures 4.8-5a, 4.8-6a, and 4.8-7a show vegetation on the project site at time of installation, when the trees are approximately five years of age. Figures 4.8-5b, 4.8-6b, and 4.8-7b show vegetation on the project site at five years after installation, at approximately ten years of age. Although many variables contribute to the growth rate of trees, the size and maturity of the trees in Figures 4.8-5b, 4.8-6b, and 4.8-7b were shown based on percentage of mature growth size. For example, in 20 years, the California buckeye (Aesculus californica) will reach full maturity at an overall height of approximately 10-20 feet and an approximate width of 30 feet. The trees in Figures 4.8-5b, 4.8-6b, and 4.8-7b depict trees at ten years of age, at approximately 50 percent of their mature size.

In consultation with County staff, photo simulations of the Revised Project Alternative from the existing viewpoints were not completed because the Revised Project Alternative proposes to locate several residential units at lower elevations when compared to the proposed project. As described in the Final EIR, when compared to the proposed project, the Revised Project Alternative modifies the locations of buildings on Lots 8-12 and the driveways serving Lots 8-11. The locations of the buildings on Lots 9-11 are at lower elevations when compared to the Proposed Project, and therefore, due to the relocation, the Revised Project Alternative would result in a reduced visual impact when compared to the proposed project and it was identified in the FEIR as the environmentally superior alternative. Due to the reduced level of impact, it was decided that the existing photo simulations, as shown in the Final EIR would be updated to reflect the current planting plan under the proposed project.

In preparing the revised photo simulations, story poles were constructed within the project site that indicated the highest elevation of each proposed residence under the proposed project. The story poles did not provide a beneficial service when preparing the photo simulations because they could not be seen from adjoining viewpoints due to changes in vegetation not located within the project site.

2. New photo simulation of Lot 1 from westbound approach

As discussed above, two figures have been added to Chapter 5, Alternatives, of the Final EIR. Figure 5-6 shows a photo of the existing condition of Lot 1 from a westbound approach on North San Pedro Road. Figure 5-7a shows a photo simulation of Lot 1 (at time of tree installation) that includes incorporation of Mitigation Measure 4.6-E.1 (sight-line enhancement). Figure 5-7b shows trees five years after installation. These photo simulations depict the grading on Lot 1 to provide for 250 feet of sight distance from Bay Creek Drive.

3. Modified impact analyses in Chapter 4.8, Aesthetics

A concern was raised at the Public Hearing regarding the identification of significant impacts in Chapter 4.8, Aesthetics. Several impact discussions evaluate the proposed project, and determine that, after proposed project features have been implemented, aesthetic impacts would be considered less than significant. The following impact discussions have been modified to show that several impacts previously identified as less-than-significant are now considered significant impacts. A mitigation measure has been included that requires the project to implement proposed project features to reduce the impacts to less-than-significant levels. Impact statements for Impacts 4.2-A, 4.2-C, 4.8-F, and 4.8-G have been modified.

Impact 4.8-A on page 4.8-16 has been modified as follows:

~~Therefore, although the project would substantially change the appearance of the site, but not adversely affect a scenic vista, it would have a less than significant impact.~~ As listed above in this impact discussion, the proposed project includes several components that would mitigate the impacts to scenic vistas. However, until these components have been implemented within the project site, impacts to scenic vistas are considered a *significant impact*.

Mitigation Measure

4.8-A.1 The project shall be required to implement the project plans that include, but are not limited to, the preservation of 8.6 acres of open space, grouping the dwelling units in an area away from the wooded ridgeline, implementation of the Tree Mitigation and Planting Plan, and constructing the new units to be visually compatible with existing uses in the vicinity of the project site.

Impact 4.8-C on pages 4.8-16 and 4.8-17 has been modified as follows:

Although the project would permanently change the appearance of the site, key features and attributes that contribute to the site's visual quality would be maintained. More specifically, as shown in Figures 4.8-6 and 4.8-7, the project would not affect the wooded ridgeline above the site to the south. Furthermore, through preservation of some existing trees on-site and through implementation of the Tree Mitigation Plan and the Planting Plan, the wooded appearance of the site would be maintained, however to a lesser degree than under existing conditions. ~~Therefore, the project would have a less-than-significant impact on the visual character or quality project site. Although the visual character of the site would become more residential, prevailing character would be that of a heavily wooded property.~~ However, until the project plans and Tree Mitigation and Planting Plan are implemented as components of the project, impacts to the visual character of the project site are considered a *significant impact*.

a. Project Effect on the Surroundings

The project would not degrade the existing visual character or quality of the site's surroundings either. The areas surrounding the site to the south and east are currently undeveloped and defined by densely wooded slopes. The surrounding areas to the west and north of the site are defined by single-family residential uses.

As shown on Figures 4.8-5 through 4.8-7, the height, scale, and massing of the proposed homes are such that they would not represent a significant contrast in relation to existing residential uses to the west or north of the site. The

character of the new homes would be visually compatible with existing uses. As a result, the project would not have a significant impact on the character or quality of the surroundings. However, until the project plans are implemented as components of the project, impacts to the visual character of the surrounding area are considered a *significant impact*.

Mitigation Measure

4.8-C.1 The mitigation measure recommended for Impact 4.8-A also applies to this impact.

Impact 4.8-F on pages 4.8-19 and 4.8-20 has been modified as follows:

In regards to vegetation, a substantial amount of groundcover and trees would be removed from the site, as discussed in response to criteria 1) above. A Tree Removal Plan has been completed for the project in tandem with a Tree Mitigation Plan. The Tree Mitigation Plan would achieve a 3:1 replacement ratio for trees that would be removed from the site. This replacement protocol would be supplemented with a Planting Plan prepared for the project, which identifies several native species that will be planted on-site following construction. Although gGrading and other site preparation activities would result in substantial vegetation removal, implementation of the Tree Mitigation Plan and the Planting Plan would ~~reduce potential visual effects of vegetation loss to a less than significant level.~~result in a significant impact to the natural viewshed.

Mitigation Measure

4.8-F.1 The mitigation measure recommended for Impact 4.8-A also applies to this impact.

Impact 4.8-G on page 4.8-20 has been modified as follows:

Visual Quality

Impact 4.8-G Significant change to the existing visual quality of the region.

The proposed project will displace some existing trees and vegetation and introduce 12 new dwelling units, and two secondary units on a site that is largely undeveloped. As a result, the proposed project would affect the sense of open space that exists in the vicinity of the site. ~~However, the change would not be substantial.~~ Although ~~T~~the proposed project would include 8.6 acres (377,565 square feet) of private open space to help maintain the existing visual quality of the site., ~~T~~the heavily wooded ridgeline above the site to the south would not be affected by the development~~.~~, ~~Furthermore,~~ and much of the displaced vegetation would be replaced with new trees and plantings, as discussed above in response to criteria 6)~~.~~, the effects of the project on the visual quality of the project site would be considered a *significant impact* until the project plans have been implemented. ~~As a result, the prevailing sense of open space in the site vicinity would be maintained and the project would not substantially detract from the region's visual quality or value. A less than significant impact would occur.~~

Mitigation Measures

4.8-G.1 The mitigation measure recommended for Impact 4.8-A also applies to this impact.

D. No Project Alternative Evaluation

1. Identification of parcels subject to Discretionary Review.

According to Marin County Community Development Agency Staff, design review would be required only for parcels 180-291-04 and 180-231-07.[3] Reviews pursuant to Marin County Code section 22.42.30 (Design Review for Development along Paper Streets and for Specific Driveways) would be required because of the length of the driveways that would need to be constructed to access these properties. Tree removal associated with the development would be addressed during the Design Review process.

The Project Applicant has submitted a letter stating that if they were to proceed with developing the individual parcels under the current entitlements, they would be careful not to trigger discretionary approval. The letter from the contract planner for the Project Applicant is included in Appendix K.

2. Wetland Conservation Area shown in No Project Alternative

Figure 1 in Appendix M shows the Wetland Conservation Area (WCA) on the 5-lot subdivision plan to show which lots would encroach into the WCA.

E. Miscellaneous Changes to the Document

1. Land Use Compatibility Analysis Map

The size of the proposed homes in relation to existing development in the vicinity (within 500 feet) was questioned by the Planning Commission. In order to provide a comparison of nearby home and lot sizes to the project site, a neighborhood parcel analysis was performed for the area immediately surrounding the project site. The following text, as included in Master Response 5 – Land Use Incompatibility with Neighborhood in the Final EIR, describes the analysis:

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[3] Tejirian, Jeremy. Principal Planner, Marin County Community Development Agency. Email correspondence with Ted Heyd of DC&E on November 20, 2009.

Using the GIS-based MarinMap Planners application, all parcels located either partially or entirely within a 500-foot "buffer zone" of existing parcel 180-321-05 were surveyed. According to MarinMap, this area contained 31 properties with residential improvements. Each was surveyed for lot square footage as well as property square footage. The average size of the homes surveyed was 2,109 square feet, or 828 square feet smaller than the average size of the 12 residences of the proposed project, at 2,937 square feet. The average lot size for the 31 properties was 191, 656 square feet, while the average lot size for the proposed project would be 51,937 square feet. Among the 31 existing lots evaluated, four large lots (12 percent) ranged between 92,000 and 3,000,000 square feet, which is substantially larger than the average lot under the proposed project. However, the remaining 27 existing lots (88 percent) ranged in size from 8,896 square feet to 44,790 square feet, with an average of 16,195 square feet. Eight (8) of the 12 lots proposed under the project would be less than 50,000 square feet, with an average of 17,706 square feet. Based on this evaluation of lot size and home size, the building scale and intensity (home size vs. lot size) of the proposed project would not be substantially different than the majority of existing development in the vicinity of the project site.

The GIS map used in this analysis is provided in Figure 1 of Appendix N to show the parcels compared to the project site.

2. Responsibilities of Homeowners Association clarified in Mitigation Monitoring and Reporting Program

The Final EIR text has been modified to further address the responsibilities of the Homeowners Association for implementation, monitoring, or verification of these mitigation measures. Homeowners Associations are identified as a responsible entity in Mitigation Measures 4.3-B.4, 4.3-E.1, and 4.4-F.2, respectively. Each is discussed below.

a. Mitigation Measure 4.3-B.4

To ensure the implementation of Mitigation Measure 4.3-B.4, the entity responsible for monitoring and verifying the adequacy of implementation of Defensible Space Zones I-III, the Homeowners Association has been removed from the MMRP, and has been replaced by the San Rafael Fire Department.

b. Mitigation Measure 4.3-F.2

The following mitigation measure has been added to require long-term stewardship of the WMEP, as stated in Mitigation Measure 4.3-F.2.

4.3-F.3 The Project Applicant shall include language within the covenants, conditions, and restrictions (CC&Rs) of the Homeowners Association bylaws requiring the Homeowners Association to manage and fund long-term maintenance and monitoring provisions of the WMEP.

c. Mitigation Measure 4.4-E.1

The following mitigation measure has been added to require long-term maintenance of the pond, as stated in Mitigation Measure 4.4-E.1.

4.4-E.2 The Project Applicant shall include language within the covenants, conditions, and restrictions (CC&Rs) of the Homeowners Association bylaws requiring the Homeowners Association to be responsible for maintaining the pond, including debris removal, and monitoring the structural integrity of the berm, and the proper function of the weir inlet.

3. Additional information provided regarding fire flow rate

Concerns were raised at the Planning Commission Hearing regarding the fire flow requirement to the project site. Chapter 4.14, Utilities, of the Final EIR, states that the Marin Municipal Water District (MMWD) will size the required water facilities based upon the fire flow requirement set by the San Rafael Fire Department (SRFD). The SRFD requires that new projects comply with the California Fire Code, which establishes fire flow requirements

for buildings depending on the size of the structure.[4] For single-family dwelling units not exceeding 3,600 square feet, the minimum fire flow requirement is 1,000 gallons per minute (gpm).[5] The largest dwelling unit proposed by this project is 3,598 square feet and, consistent with SRFD policy, all dwelling units will include the installation of automatic sprinkler systems. For projects utilizing automatic sprinkler systems, an exception to the requirement of 1,000 gpm is allowed and reduced by 50 percent. Therefore, the fire flow requirement for the project is 500 gpm, per dwelling unit.

The Final EIR includes an evaluation of water supply for the project site, and identifies a less-than-significant impact to water supply and consumption.

4. Additional information regarding use of 20 cubic yard trucks for off-hauling.

Trucks capable of exporting 20 cubic yards of material would be feasible within the project site as noted in the email supplied by the Project Applicant's engineer after confirmation was requested regarding soil export. The email has been included in Appendix O.

It should be noted that consistency with Mitigation Measure 4.6-A.1 requires the project applicant to develop a traffic management plan that could include lane closures to facilitate construction activity, including the use of dump trucks.

5. Additional discussion regarding pond berm.

It was requested that the berm to be used to meet the peak flow reduction objective of 0.62 acre-feet included discussion regarding the intent and purpose of the berm, as well as the construction and frequency of the structural monitoring. The berm is described on page 4.4-30 as such:

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[4] Lippitt, John. Deputy Fire Marshal, San Rafael Fire Department. Phone conversation with Kyle Simpson of DC&E, September 20, 2010.

[5] 2007 California Fire Code, Title 24, Part 9, B105.1 One- and two-family dwellings.

As discussed in Impact 4.4-A, the pond berm will be modified and raised to elevation 35.2 feet with 1-foot freeboard above the normal pool elevation 34.2 feet. The storage volume between the normal pool elevation and elevation at 34.7 feet is estimated to be about 0.13 acre-ft (see Figure 4.4-3), indicating that the modified pond berm will still have a freeboard of 0.5-foot after attenuating the 100-year peak flows even if the pond water is at normal pool elevation prior to a 100-year storm event. Therefore, the proposed design of the pond for storm water quality protection and enhancement would also be adequate to offset peak flow increases from Drainage Area 1.

Following this discussion, Mitigation Measure 4.4-E.1 states the following:

4.4-E.1 Design pond to meet a peak flow reduction objective of 0.62 acre-feet for Drainage Area 1. Ongoing maintenance of the pond, including debris removal, and monitoring the structural integrity of the berm, and the proper functioning of the weir inlet shall be the responsibility of a Homeowners Association.

The analysis included in Section 4.4, Hydrology and Water Quality, does not identify a significant impact related to the structural integrity of the existing berm or future monitoring. As such, there is no nexus between the existing condition of the berm and responding to the concerns with an additional mitigation measure. No additional input regarding the integrity of the berm is necessary.

3 ADDITIONAL MINOR CHANGES

This chapter identifies changes that have been made to the Final EIR. In each case, exact text from the FEIR is shown and modified as necessary. Omitted text is shown in ~~strikethrough~~ and new text is underlined.

Mitigation Measure 4.2-B.1

4.2-B.1 The following seismic Best Management Practices (BMPs) shall~~should~~ be employed:

- Structures shall~~should~~ be designed in accordance with all building design requirements as established by the International Building Code (IBC) of 2000 and the California Building Code of 2007.
- A State-licensed architect and civil engineer shall~~should~~ design all structures.
- All design may undergo a plan review by an independent Civil Engineer with structural expertise retained by the County at the applicant's expense.
- Utilities shall~~should~~ be designed to provide sufficient flexibility or rigidity to withstand the expected ground motions during an earthquake.
- Water heaters and other fixtures shall~~should~~ be secured in accordance with County guidelines.
- Design and construction of foundations, concrete structures, and pavements shall~~should~~ be performed under the oversight of state-licensed civil, geotechnical, and/or structural engineers and shall~~should~~ be reviewed by the Building Official.

Mitigation Measure 4.2-F.1

4.2-F.1 All proposed structures in those areas identified shall~~should~~ be founded in the underlying bedrock. In areas of significant cuts, foundations and retaining walls should be constructed to accommodate the lateral pressures of the upslope colluvium soil. Where necessary, colluvium shall~~should~~ be removed to expose bedrock.

Mitigation Meaure 4.3-B.1

4.3-B.1 Through direct consultation with a CDFG biologist, t~~T~~he applicant shall develop an off-site mitigation program that would ~~will~~ improve the condition of an ~~the~~ existing heron rookery at West Marin Island or other location, if deemed more suitable by CDFG. A preference shall~~should~~ be given to sites that have already been identified as potential habitat that would also benefit by further enhancement and protection in the opinion of CDFG. ~~In developing the program and methods for its implementation, the applicant shall coordinate with Jeremy Sarrow, California Department of Fish and Game and officials responsible for monitoring the heron rookery at West Marin Island. Compensatory mitigation on West Marin Island should consider actions such as rat control, invasive weed control, and/or native plant restoration~~. The program, which would require CDFG approval prior to construction, would create or enhance habitat for great blue heron nesting and would adhere, at a minimum, to the following site specifications and performance standards:

- Predators such as northern raccoons would be controlled so as not to threatened potential eggs and chicks.
- Trees of suitable stature (> 35 feet tall) and thermal qualities would be available for nesting habitat.
- Human intrusion during the nesting season would be controlled.
- The potential nest trees would not be closer than 100 feet to a built structure such as a house or road.
- Suitable foraging areas would be within acceptable distance (<0.5 mile) from the nest habitat.
- Native habitat values would be created or enhanced on the site, including but not limited to removal and control of non-native species.
- Periodic monitoring and adaptive management of habitat values and enhancements would be undertaken at least until such time that a biologist has determined that a stable, suitable habitat for nesting herons can be maintained.

Mitigation Measure 4.3-C.1

4.3-C.1 Throughout the entire construction period, install and maintain temporary fencing or exclusion-zone signs at least 20 feet from the ephemeral stream to ensure consistency with County setback policies.

Mitigation Measure 4.3-E.1

4.3-E.1 Avoid tree removal and minimize impacts to individual trees and oak forest through the following measures. Install fencing at the drip lines of trees to be retained, or other distances approved by a qualified arborist, and avoid operating equipment and vehicles within those buffers. Install fencing along the boundary between ~~proposed~~ private open space and areas to be developed and restrict equipment and vehicles from the areas of ~~proposed~~ private open space.

Mitigation Measure 4.3-F.1

4.3-F.1 Direct impacts to jurisdictional waters associated with installation of the new weir outlet structure in the pond shall be mitigated by providing replacement habitat around the perimeter of the feature. The weir outlet structure would result in approximately 10 cubic feet of fill in the wetland, decreasing the size of the pond and its value for water storage. A minimum of 375 square feet of additional wetland habitat shall be created as replacement habitat by grading to appropriate elevations and establishing native wetland plants. This wetland mitigation shall be accomplished as part of the overall Wetland Mitigation and Enhancement Plan, called for in Mitigation Measure 4.3-F.2~~3~~.

Mitigation Measure 4.3-F.2

4.3-F.2 A detailed Wetland Mitigation and Enhancement Plan (WMEP) shall be prepared by a qualified wetland specialist to mitigate project fill in the jurisdictional wetlands and address potential impacts stemming from the proximity between the wetland boundary and the limits of development. The WMEP shall be approved by regulatory agencies

and the County Community Development Agency prior to approval of the final map. The WMEP shall include the following information and provisions:

- The applicant shall provide evidence to the County Community Development Agency that they have secured appropriate authorizations from CDFG, Army Corps and RWQCB prior to issuance of a grading or building permit for the project. This shall ensure that all appropriate authorizations have been secured, and that the applicant is responsible for addressing any and all additional concerns and conditions of the regulatory agencies.
- The total area of jurisdictional wetlands affected by proposed improvements (10 cubic feet from installation of the weir outlet structure).
- The wetland type to be affected (seasonal pond).
- Mitigation ratios for each wetland type, and the total area of wetlands and adjacent uplands to be created, restored, or enhanced. It is expected that wetlands shall be replaced on-site at a minimum 2:1 ratio consistent with Countywide Policy BIO-3.2. For this project, this shall be achieved through the creation of at least 375 square feet of wetland habitat on the eastern side of and immediately contiguous with the existing, delineated wetland area, surrounded by an upland parcel of at least 0.33 acre.
- A timeline for creation of the mitigation wetlands, and installation of plantings and other improvements. The additional wetland shall be created by grading within 1 year of starting project construction.
- Specific performance criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures. A timeline for the monitoring requirements, performance criteria, and associated reports shall also be specified. Monitoring shall be conducted by the consulting wetland specialist

for five years; annual monitoring reports shall be submitted to the County until these criteria are met.

- Performance criteria shall include both the area of the created wetlands, and ~~be based on~~ functional parameters such as the presence of wetland hydrology and hydrophytic vegetation. The area of the created wetlands will be determined by a standard wetland delineation (using methods presented by the Army Corps of Engineers) with the understanding that hydric soil indicators may not develop within the monitoring timeframe. Functional performance criteria shall include dominance of hydrophytic vegetation, and hydrological functioning as a wetland. It is expected that adequately functioning created wetlands would support an average absolute percent cover of wetland indicator species equal to at least 80 percent of the average percent cover in the existing wetland, with a similar composition and cover of native species; created wetlands would also exhibit similar wetland hydrology. If the final success criteria have not been met within the five-year timeframe, remedial actions will be implemented and monitoring will continue until the criteria are achieved.

- A comprehensive program to remove invasive exotics and provide enhancement plantings of native wetland indicators, transitional and upland species to improve the overall habitat functions and values of the area surrounding the existing wetlands. The WMEP will specify undesirable invasive weeds and noxious plants species; these plants shall be initially removed within one year of wetland creation. Native species shall be planted in the wetland and transition area immediately following the removal of these species. The monitoring plan will include monitoring and subsequent management of these undesirable species.

- For the three proposed storm drains that would be directed toward the pond, energy dissipaters and biofiltration structures shall be constructed at the outlet of each drain to treat the water before it enters the pond.

- The surrounding upland space shall be managed to maintain and enhance the functions and values of the wetland. The WMEP will specify monitoring of this surrounding upland, including issues such as presence of exotics, and general upkeep (e.g. trash, human disturbance, etc.).
- The WMEP shall specify procedures and responsible parties for implementing any remedial or corrective actions needed for the wetland or upland area throughout the monitoring period. The WMEP shall specify long-term maintenance and monitoring provisions to be managed and funded by the Homeowner's Association.
- ~~The total area of wetlands and adjacent uplands to be created, restored, or enhanced as part of the wetland. Any replacement wetlands shall be consolidated to improve existing habitat values, and be replaced on site at a minimum 2:1 ratio consistent with Countywide Policy BIO-3.2. For this project, this shall be achieved through the creation of 375 square feet of wetland habitat on the eastern side of and immediately contiguous with the existing, delineated wetland area.~~
- ~~Performance criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures. Monitoring shall be conducted by the consulting wetland specialist for up to five years or until the identified success criteria are met.~~
- ~~The area surrounding the wetland shall be a common parcel that would encompass at least 0.33 acres. The space shall be managed to maintain and enhance the functional values of the wetland. The WMEP shall specify long-term maintenance and monitoring provisions.~~

Mitigation Mesaure 4.3-H.1

4.3-H.1 To mitigate the loss of 53 protected trees, replant on site with native tree species at a minimum 3:1 ratio (at least 159 trees). Native tree species shall~~should~~ include black oak, California buckeye, coast live oak, Oregon white oak, and valley oak and will range in size 10 feet

to 16 feet when planted, reaching 20 feet to 40 feet when mature. Conduct monitoring for three years following planting or until an arborist verifies that the trees have successfully reestablished.

Mitigation Measure 4.4-A.1

4.4-A.1 The final drainage plan for the project shall~~should~~ incorporate the following Best Management Practices (BMPs) to ensure that project development does not result in an increase in NPS pollutants to on-site and off-site wetlands, to lower Gallinas Creek, and ultimately, to San Pablo Bay.

- The existing pond within Drainage Area 1 of the site has been designated as a wetland. The runoff from Drainage Area 1 needs to be treated before it reaches the pond, or it might potentially pollute the wetland. This is also true for the off-site wetland across North San Pedro Road. The runoff from Drainage Area 2 of the site goes into a culvert under North San Pedro Road and then into the off-site wetland. To avoid the potential of pollutants entering the pond, ~~A~~all stormwater shall~~should~~ be treated for water quality before it reaches any wetland. The current drainage design needs to be revised to incorporate permanent BMPs for meeting the County's LID standards. This may require more substantial changes to the landscape design. Permanent BMPs for meeting the County's LID standards may include but are not limited to site and drainage design features that route runoff from roofs and paved surfaces to landscaped areas, engineered bioretention facilities, roofs over areas where vehicles are washed or repaired, facilities for cleaning equipment such as mats used in restaurant kitchens, use of permeable concrete and asphalt surfaces for driveways and roads, and construction of a drainage swale along the west side of the new two-way driveway. Permanent BMPs for treating the stormwater runoff before it reaches the reconfigured pond and the off-site wetland may include but are not limited to: installation of one continuous deflective separation (CDS) unit to remove silt and pollutants from stormwater at each of the three storm drain pipes discharging to the reconfigured pond and at the fire turn around for the storm drain that discharges to the roadside ditch adjacent to North San Pedro Road. The MCSTOPPP's Stormwater Quality

Manual for Development Projects in Marin County contains specific guidance applicable to the project category.

- The applicant shall~~should~~ prepare a Stormwater Control Plan that consists of all the information identified in the Stormwater Control Plan checklist in the MCSTOPPP's Stormwater Quality Manual for Development Projects in Marin County. This re-quires calculations for different Drainage Management Areas, a report, and an exhibit, which the applicant would be required to provide as a mitigation measure. The acceptable methods of achieving consistency with the County's LID standards are also discussed in this Manual. The Manual encourages the incorporation of LID approach into the project design.
- The applicant shall~~should~~ prepare an operation and maintenance plan of stormwater facilities and identify how and what entity would operate and maintain the storm pond.
- The applicant shall~~should~~ prepare informational literature and guidance on residential BMPs to minimize pollutant contributions from the proposed development. This information shall~~should~~ be distributed to future employees and residences at the project site. At a minimum the information shall~~should~~ cover: (1) Proper disposal of household and commercial chemicals; (2) Proper use of landscaping chemicals; (3) Clean-up and appropriate disposal of yard cuttings and leaf litter; and (4) Prohibition of any washing and dumping of materials and chemicals into storm drains.

Mitigation Measure 4.5-A.1

4.5-A.1 During construction, the developer shall~~should~~ implement all of the following measures that are feasible to control dust and PM_{10} from construction activities:

- Water all active construction areas at least twice daily and more often during windy periods. Active areas adjacent to residences shall~~should~~ be kept damp at all times.
- Cover all hauling trucks or maintain at least 2 feet of freeboard. Dust-proof chutes shall~~should~~ be used as appropriate to load debris onto trucks during demolition.

- ♦ Pave, apply water at least twice daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas.
- ♦ Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas and sweep streets daily (with water sweepers) if visible soil material is deposited onto the adjacent roads.
- ♦ Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously-graded areas that are inactive for ten days or more).
- ♦ Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles.
- ♦ Limit traffic speeds on any unpaved roads to 15 mph.
- ♦ Replant vegetation in disturbed areas as quickly as possible.
- ♦ Opacity is an indicator of exhaust particulate emissions from off-road diesel powered equipment. The project shall~~should~~ ensure that emissions from all construction diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately
- ♦ The contractor shall install temporary electrical service as soon as possible to avoid the need for independently powered equipment (e.g. diesel-powered compressors).
- ♦ Diesel equipment standing idle for more than three minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate, or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were on-site and away from residences.
- ♦ Properly tune and maintain equipment for low emissions.

Mitigation Measure 4.6-A.1

4.6-A.1 The applicant shall~~should~~ be required to develop a traffic management plan that includes the following provisions:

- ♦ Truck trips to and from the site for purposes of transporting fill would be prohibited during AM and PM peak hours;

- No more than two trucks would be allowed to receive soil from the project site at one time;
- In the event of lane closures in front of the project site for purposes of truck parking, an adequate number of flaggers and the appropriate signage would be required to ensure the safe passage of vehicles, bicyclists, and pedestrians.
- If construction activity, equipment, vehicles and/or material delivery and storage cause damage to any existing facility (e.g. pavement, curb, gutter, sidewalk, landscaping) beyond normal wear and tear, and determined by the agency, then the permit~~ted~~ shall be responsible for the repair of the same. In order to ensure repair, the agency may require cash deposits prior to issuance of permits or may place holds on interim or final inspections.
- The applicant shall~~should~~ identify locations for contractor parking on site for the duration of the construction period so that spillover parking does not occur along North San Pedro Road or on adjacent streets (e.g. Pt. Gallinas Road).
- ~~Trucks that would be used to haul earthen material away from the site should be used to transport replacement trees to the site.~~
- The applicant shall~~should~~ be encouraged~~required~~ to use trucks with a capacity of at least 20 cubic yards (cy) in order to limit the amount of truck trips.

Mitigation Measure 4.6-E.1

4.6-E.1 ~~Project Lot 1 should be redesigned to allow t~~The rear yard fence of Project Lot 1 shall~~should to~~ be relocated to approximately 10 feet south of the location currently shown on the Grading and Drainage Plan. ~~If necessary, the footprint of the proposed residence on Lot 1 should also be redesigned.~~

Prior to grading activity for road and driveway construction being undertaken, the applicant shall submit for review and approval of the DPW traffic engineer, detailed engineering cross sections of the

roadway frontage and detailed plan specifications with traffic engineering graphic data that more specifically depicts driveway configurations and site distance from driveway exit points. Confirmation of adequate sight distance shall~~would~~ be required prior to occupancy of any proposed units.

Mitigation Measure 4.9-A.1

4.9-A.1 In the event that unique historical, archeological, paleontological or geologic features are discovered during ground disturbing activities, work on the site shall~~should~~ stop immediately until a State-registered professional archeologist, paleontologist, or geologist can assess the nature and importance of the find and recommend appropriate treatment.

Mitigation Measure 4.9-A.2

4.9-A.2 In the event that the project site is identified as an archeological, paleontological, or geologic resource, development shall~~should~~ be situated or designed to avoid impacts on the archeological resources. This may be accomplished though one or more of the following methods:

- ♦ Siting buildings to completely avoid the archeological site.
- ♦ Covering the site with a layer of soil, also known as "capping".
- ♦ Deeding the site as a permanent conservation easement.

Mitigation Measure 4.9-C.1

4.9-C.1 In the event that unique historical, archeological, paleontological, or geologic features are discovered during ground disturbing activities, work on the site shall~~should~~ stop immediately until a State-registered professional archeologist, paleontologist, or geologist can assess the nature and importance of the find and recommend appropriate treatment.

Mitigation Measure 4.9-C.2

4.9-C.2 In the event that the project site is identified as an archeological, paleontological, or geologic resource, development shall~~should~~ be situated or designed to avoid impacts on the paleontological~~archeological~~ resources. This may be accomplished though one or more of the following methods:

- ♦ Siting buildings to completely avoid the archeological site.
- ♦ Covering the site with a layer of soil, also known as "capping".
- ♦ Deeding the site as a permanent conservation easement.

Mitigation Measure 4.9-D.1

4.9-D.1 If previously unknown human remains are encountered during construction, the County Coroner and an appropriate representative of the Native American Heritage Commission shall~~should~~ be informed and consulted, as required by State law and in accordance with the provisions of Section 7050.5 of the Health and Safety Code, Section 15064.5 (e) of the CEQA Guidelines, and Section 5097.98 pf the Public Resources Code.

Mitigation Measure 4.10-A.1

4.10-A.1 Consistent with Sections 6.70.030(5) and 6.70.040 of the Marin County Development Code, the applicant shall~~should~~ develop a construction noise reduction plan prior to construction to establish allowable hours of operation for construction-related activities and to designate a noise disturbance coordinator at the construction site to implement the provisions of the plan. The noise disturbance coordinator shall~~should~~ be responsible for responding to any local complaints about construction noise. In the event of complaints, the coordinator shall~~should~~ determine the cause of the complaint (e.g. starting too early, bad muffler, etc.) and would require that reasonable measures warranted to correct the problem be implemented.

Provisions that shall~~should~~ be included in the plan include, but are not necessarily limited to, the following:

- Limit construction activities, deliveries of materials, or equipment to the site, to the hours between 9:00 a.m. and 6:00 p.m. Monday through Saturday.~~, and 10:00 a.m. to 6:00 p.m. Sundays and all holidays recognized by Marin County.~~
- Prohibit construction on all Sundays and holidays recognized by Marin County.
- Do not allow start up of construction related machinery or equipment prior to 8:00 a.m. Monday through Friday, and 9:00 a.m. Saturday~~, and 10:00 a.m. on Sunday and holidays~~.
- Select quiet construction equipment, particularly air compressors, whenever possible.
- Properly muffle and maintain all construction equipment powered by internal combustion engines.
- Prohibit unnecessary idling of internal combustion engines. Equipment shall~~should~~ be turned off when not in use.
- Do not allow machinery to be cleaned or serviced past 6:00 p.m. Monday through Saturday~~Friday, and 6:00 p.m. on Saturdays, and 6:00 p.m. on Sundays and holidays~~.
- Locate all stationary noise-generating construction equipment such as air compressors as far as practical from existing nearby residences and other noise-sensitive land uses. Acoustically shield such equipment.
- Notify adjacent residents to the project site of the construction schedule in writing.
- Control noise from construction workers' radios so they are not audible at existing residences that border the project site.

- Conspicuously post a telephone number for the noise disturbance coordinator at the construction site and include it in the written notice sent to neighbors regarding the construction schedule.

Mitigation Measure 4.11-B.1

4.11-B.1 Prior to demolition of the dwelling unit and auxiliary buildings located on the project site, the applicant shall~~should~~ coordinate with the Bay Area Air Quality Management District (BAAQMD) to arrange for an inspection of structures to be demolished. If asbestos is detected in either structure, the demolition and removal of asbestos-containing building materials will be subject to applicable BAAQMD Regulations and the applicant would be required to obtain a Job Number from the BAAQMD. The applicant would be required to present the Job Number to the County Building Department before demolition could commence.

Page 4.14-14

The last paragraph on Page 4.14-14 has been amended as follows.

Residential services include weekly curbside garbage and recycling pick-up and bi-weekly curbside yard waste pick-up. All recyclables are taken to the Marin Recycling Center at 535 Jacoby Street in San Rafael, designed and built by Marin Sanitary Service in 1980.[1] Yardwaste is taken to the Marin Resource Recovery Center at 565 Jacoby Street in San Rafael. Non-recyclable waste is taken to the Marin Sanitary Service Transfer Station at 1050 Anderson Drive in San Rafael. At the transfer station, the waste is sorted and all materials that are not recyclable are hauled to either Keller Canyon Landfill in Contra Costa County, Potrero Hills Landfill in Solano County or Redwood Sanitary Landfill in Marin~~Sonoma~~ County. Redwood Sanitary Landfill and Potrero Hills Landfill are Class III landfills which accept municipal solid waste, tires, grease, sludge, green waste, ash, etc. Keller Canyon Landfill is a Class II Landfill which accepts mixed municipal solid waste, construc-

tion/demolition waste, green waste, etc. The transfer station currently processes approximately 351 tons of waste per day.

[1] Marin Sanitary Services, website, http://www.marinsanitary.com/mss.html, accessed on April 7, 2008.

APPENDIX B

MITIGATION MONITORING AND REPORTING PROGRAM

MITIGATION MONITORING AND REPORTING PROGRAM

This document is a Mitigation Monitoring and Reporting Program (MMRP) for the proposed 650 North San Pedro Road Project. The MMRP contains the following components:

- Table 1: Mitigation Monitoring and Reporting Program

The purpose of the MMRP is to ensure the implementation of mitigation measures identified as part of the environmental review for the Project. The MMRP includes the following information:

- A list of impacts and their corresponding mitigation measures.
- The party responsible for implementing the mitigation measures.
- The timing and procedure for implementation of the mitigation measure.
- The agency responsible for monitoring the implementation.
- The timing or frequency of monitoring activities.

The County of Marin must adopt this Mitigation Monitoring and Reporting Program, or an equally effective program, if it approves the proposed Project with the mitigation measures included in the EIR. Public Resources Code sec. 21081.6(a) requires an agency to adopt a program for reporting or monitoring mitigation measures that were adopted or made conditions of Project approval.

The MMRP presented in the following pages includes changes to the version that appeared in Appendix B of the 2009 FEIR. New changes to the text of the FEIR are shown in <u>underline</u> and ~~strike-through~~ text.

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM**

	Impacts		Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
4.2 GEOLOGY AND SOILS							
4.2-B	The project could result in the exposure of people, structures, and/or property to seismic ground shaking.	4.2-B.1	The following seismic Best Management Practices (BMPs) shall~~should~~ be employed: ♦ Structures shall~~should~~ be designed in accordance with all building design requirements as established by the International Building Code (IBC) of 2000 and the California Building Code of 2007. ♦ A State-licensed architect and civil engineer shall~~should~~ design all structures. ♦ All design may undergo a plan review by an independent Civil Engineer with structural expertise retained by the County at the applicant's expense. ♦ Utilities shall~~should~~ be designed to provide sufficient flexibility or rigidity to withstand the expected ground motions during an earthquake. ♦ Water heaters and other fixtures shall~~should~~ be secured in accordance with County guidelines. ♦ Design and construction of foundations, concrete structures, and pavements shall~~should~~ be performed under the oversight of state-licensed civil, geotechnical, and/or structural engineers and shall~~should~~ be reviewed by the Building Official.	Project Engineer	Precise Development Plan (PDP)	Marin County CDA	Marin County CDA Approval of PDP
4.2-C	Seismic-related ground failure, including liquefaction.	4.2-C.1	Adherence to the Association of Bay Area Government's Manual of Standards for Erosion and Sediment Control Measures Soils during the design, construction and maintenance of the project would limit downhill movements.	Project Engineer	Precise Development Plan (PDP)	Marin County CDA	Marin County CDA Approval of PDP
4.2-D	Landslides.	4.2-D.1	The mitigation measure recommended for Impact 4.2-C also applies to this impact.	See the cited mitigation measure			
4.2-F	Unstable geologic units.	4.2-F.1	All proposed structures in those areas identified shall~~should~~ be founded in the underlying bedrock. In areas of significant cuts, foundations and retaining walls should be constructed	Project Engineer Project	Precise Development Plan	Marin County CDA	Marin County CDA Approval of PDP

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

	Impacts		Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
			to accommodate the lateral pressures of the upslope colluvium soil. Where necessary, colluvium shall~~should~~ be removed to expose bedrock.				
4.3 BIOLOGICAL RESOURCES							
4.3-B	Removal of tree on-site containing the heron nest prior to construction will impact an active great blue heron rookery.	4.3-B.1	Through direct consultation with a CDFG biologist, t~~T~~he applicant shall~~should~~ develop an off-site mitigation program that would ~~will~~ improve the condition of an ~~the~~ existing heron rookery at West Marin Island or other location, if deemed more suitable by CDFG. A preference shall~~should~~ be given to sites that have already been identified as potential habitat that would also benefit by further enhancement and protection in the opinion of CDFG. ~~In developing the program and methods for its implementation, the applicant shall coordinate with Jeremy Sarrow, California Department of Fish and Game and officials responsible for monitoring the heron rookery at West Marin Island. Compensatory mitigation on West Marin Island should consider actions such as rat control, invasive weed control, and/or native plant restoration~~. The program, which would require CDFG approval prior to construction, would create or enhance habitat for great blue heron nesting and would adhere, at a minimum, to the following site specifications and performance standards: ♦ Predators such as northern raccoons would be controlled so as not to threatened potential eggs and chicks. ♦ Trees of suitable stature (> 35 feet tall) and thermal qualities would be available for nesting habitat. ♦ Human intrusion during the nesting season would be controlled. ♦ The potential nest trees would not be closer than 100 feet	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA

TABLE 1 **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts		Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
		to a built structure such as a house or road. ♦ Suitable foraging areas would be within acceptable distance (<0.5 mile) from the nest habitat. ♦ Native habitat values would be created or enhanced on the site, including but not limited to removal and control of non-native species. ♦ Periodic monitoring and adaptive management of habitat values and enhancements would be undertaken at least until such time that a biologist has determined that a stable, suitable habitat for nesting herons can be maintained.				
	4.3-B.2	Removal and any trimming of the tree containing the rookery shall occur only during the non-nesting season, from September 1 to January 31.	Project Applicant	Precise Development Plan Implementation prior to end of construction	Marin County CDA	Marin County CDA Approval of PDP Marin County CDA until construction is complete
	4.3-B.3	The applicant shall revegetate the edges of the wetland on-site with a cluster of tall-growing, riparian tree species.~~, which could provide a location for a future rookery site.~~	Project Applicant	Precise Development Plan Implementation prior to end of construction	Marin County CDA	Marin County CDA Approval of PDP Marin County CDA until construction is complete
	4.3-B.4	~~When managing vegetation for fire control~~ Prior to occupancy and during implementation of the project Vegetation Management Plan, the applicant shall contract with a certified arborist to conduct a site visit with the appointed fire prevention specialist. During the site visit, the fire prevention specialist and arborist shall collaborate to identify tall trees within Defensible Space Zones I—III~~the extent of the open space area~~ that could be preserved, provided they do not present a fire risk and are in a good	Project Applicant Property Owners	Implementation prior to end of construction Occupational phase of development	~~Homeowners Association~~ Project Developer Marin County CDA San Rafael Fire	~~Homeowners Association~~ Marin County CDA San Rafael Fire Department

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

	Impacts		Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
			state of health. All other open space areas shall remain untouched. Prior to sale of the units~~occupancy~~, the project developer~~applicant~~ shall present the outcome of this collaboration to the County CDA for approval, including a list of tree species within the open space to be preserved, approximate location within the open space, and approximate diameter at breast height (dbh). ~~health~~~~property owners shall maintain large trees in the areas designated as open space, so as to provide potential future rookery sites.~~			Department	
4.3-C	Development could impact the channel, bed or banks of the ephemeral creek on-site.	4.3-C.1	Throughout the entire construction period, install and maintain temporary fencing or exclusion-zone signs at least 20 feet from the ephemeral stream to ensure consistency with County setback policies.	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA
4.3-D	Development could affect native grassland habitat, which CDFG tracks because it is declining statewide and provides high value for native plants and wildlife.	4.3-D.1	Preserve at least 0.6-acre of the existing native grassland on the property in the open space reserve to the east of Lot 12. This preserve shall be beyond the lot line for Lot 12.	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA
4.3-E	Development would remove mixed oak forest and mature trees.	4.3-E.1	Avoid tree removal and minimize impacts to individual trees and oak forest through the following measures. Install fencing at the drip lines of trees to be retained, or other distances approved by a qualified arborist, and avoid operating equipment and vehicles within those buffers. Install fencing along the boundary between ~~proposed~~ private open space and areas to be developed and restrict equipment and vehicles from the areas of ~~proposed~~ private open space.	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA
		4.3-E.2	Compensate for the loss of 1.5 acres of oak forest by maintaining at least 4.5 acres (3:1 ratio) of mixed oak forest within the 8.6 acres of ~~in~~ open space on the site. Each of the private open space areas shall have deed restrictions on the lots relating to the use and maintenance of the private open space. The deed restrictions will ban the building of any	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

	Impacts		Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
			structures or fencing in those areas and require that the areas be maintained in their natural state. The deed restrictions would be permanent and be applicable to future owners.				
4.3-F	Substantial adverse effect on federally protected wetlands.	4.3-F.1	Direct impacts to jurisdictional waters associated with installation of the new weir outlet structure in the pond shall be mitigated by providing replacement habitat around the perimeter of the feature. The weir outlet structure would result in approximately 10 cubic feet of fill in the wetland, decreasing the size of the pond and its value for water storage. A minimum of 375 square feet of additional wetland habitat shall be created as replacement habitat by grading to appropriate elevations and establishing native wetland plants. This wetland mitigation shall be accomplished as part of the overall Wetland Mitigation and Enhancement Plan, called for in Mitigation Measure 4.3-F.2~~3~~.	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA
		4.3-F.2	A detailed Wetland Mitigation and Enhancement Plan (WMEP) shall be prepared by a qualified wetland specialist to mitigate project fill in the jurisdictional wetlands and address potential impacts stemming from the proximity between the wetland boundary and the limits of development. The WMEP shall be approved by regulatory agencies and the County Community Development Agency prior to approval of the final map. The WMEP will be prepared and monitored by a consulting wetland specialist, and shall include the following information and provisions: ♦ The applicant shall provide evidence to the County Community Development Agency that they have secured appropriate authorizations from CDFG, Army Corps and RWQCB prior to issuance of a grading or building permit for the project. This shall ensure that all appropriate authorizations have been secured, and	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts	Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
	that the applicant is responsible for addressing any and all additional concerns and conditions of the regulatory agencies. ♦ The total area of jurisdictional wetlands affected by proposed improvements (10 cubic feet from installation of the weir outlet structure). ♦ The wetland type to be affected (seasonal pond). ♦ Mitigation ratios for each wetland type, and the total area of wetlands and adjacent uplands to be created, restored, or enhanced. ~~It is expected that w~~Wetlands shall be replaced on-site at a minimum 2:1 ratio consistent with Countywide Policy BIO-3.2. For this project, this shall be achieved through the creation of at least 375 square feet of wetland habitat on the eastern side of and immediately contiguous with the existing, delineated wetland area, surrounded by an upland parcel of at least 0.33 acre. ♦ A timeline for creation of the mitigation wetlands, and installation of plantings and other improvements. The additional wetland shall be created by grading within 1 year of starting project construction. ♦ Specific performance criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures. A timeline for the monitoring requirements, performance criteria, and associated reports shall also be specified. Monitoring shall be conducted by the consulting wetland specialist for five years; annual monitoring reports shall be submitted to the County until these criteria are met.				

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts	Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
	♦ Performance criteria shall include both the area of the created wetlands, and ~~be based on~~ functional parameters such as the presence of wetland hydrology and hydrophytic vegetation. The area of the created wetlands ~~will~~shall be determined by a standard wetland delineation (using methods presented by the Army Corps of Engineers) with the understanding that hydric soil indicators may not develop within the monitoring timeframe. Functional performance criteria shall include dominance of hydrophytic vegetation, and hydrological functioning as a wetland. It is expected that adequately functioning created wetlands would support an average absolute percent cover of wetland indicator species equal to at least 80 percent of the average percent cover in the existing wetland, with a similar composition and cover of native species; created wetlands would also exhibit similar wetland hydrology. If the final success criteria have not been met within the five-year timeframe, remedial actions ~~will~~shall be implemented and monitoring will continue until the criteria are achieved. ♦ A comprehensive program to remove invasive exotics and provide enhancement plantings of native wetland indicators, transitional and upland species to improve the overall habitat functions and values of the area surrounding the existing wetlands. The WMEP ~~will~~shall specify undesirable invasive weeds and noxious plants species; these plants shall be initially removed within one year of wetland creation. Native species shall be planted in the wetland and transition area immediately following the removal of these species. The monitoring plan ~~will~~shall include monitoring and subsequent management of these				

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts	Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
	undesirable species. ♦ For the three proposed storm drains that would be directed toward the pond, energy dissipaters and biofiltration structures shall be constructed at the outlet of each drain to treat the water before it enters the pond. ♦ The surrounding upland space shall be managed to maintain and enhance the functions and values of the wetland. The WMEP ~~will~~shall specify monitoring of this surrounding upland, including issues such as presence of exotics, and general upkeep (e.g., trash, human disturbance, etc.). ♦ The WMEP shall specify procedures and responsible parties for implementing any remedial or corrective actions needed for the wetland or upland area throughout the monitoring period. The WMEP shall specify long-term maintenance and monitoring provisions to be managed and funded by the Homeowner's Association. ~~♦ The total area of wetlands and adjacent uplands to be created, restored, or enhanced as part of the wetland. Any replacement wetlands shall be consolidated to improve existing habitat values, and be replaced on site at a minimum 2:1 ratio consistent with Countywide Policy BIO-3.2. For this project, this shall be achieved through the creation of 375 square feet of wetland habitat on the eastern side of and immediately contiguous with the existing, delineated wetland area.~~ ~~♦ Performance criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures. Monitoring shall be~~				

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts		Mitigation		Implemented By	When Implemented	Monitored By	Verified By and Date
			~~conducted by the consulting wetland specialist for up to five years or until the identified success criteria are met.~~ ~~♦ The area surrounding the wetland shall be a common parcel that would encompass at least 0.33 acres. The space shall be managed to maintain and enhance the functional values of the wetland. The WMEP shall specify long-term maintenance and monitoring provisions.~~				
		4.3-F.3	The Project Applicant shall include language within the covenants, conditions, and restrictions (CC&Rs) of the Homeowners Association bylaws requiring the Homeowners Association to manage and fund long-term maintenance and monitoring provisions of the WMEP.	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA
4.3-G	Construction could impact nesting birds ~~and bats~~.	4.3-G.1	Clear and grub vegetation and remove structures in the non-nesting season (September 1 to January 15). If vegetation or buildings that provide potential nesting sites for birds ~~or bats~~ must be removed between January 15 and August 31, a qualified wildlife biologist shall conduct pre-construction surveys within one week of planned clearing. If an active nest is found, the species shall be identified and the approximate distance from the closest work site to the nest estimated. No additional measures need be implemented if active nests are more than the following distances from the nearest work site: (a) 300 feet for raptors; or (b) 75 feet for other non-special-status bird ~~and bat~~ species. These protection zones may be modified on a site-specific basis as determined by a qualified biologist or in coordination with CDFG. Active nests within the project area would be monitored for signs of disturbance. If the biological monitor determines that a disturbance is occurring, construction shall be halted. Disturbance of active nests shall be avoided until	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts		Mitigation		Implemented By	When Implemented	Monitored By	Verified By and Date
			it is determined that nesting is complete and the young have fledged.				
4.3-H	Site preparation would remove large trees native to Marin County.	4.3-H.1	To mitigate the loss of 53 protected trees, replant on site with native tree species at a minimum 3:1 ratio (at least 159 trees). Native tree species shall~~should~~ include black oak, California buckeye, coast live oak, Oregon white oak, and valley oak and will range in size 10 feet to 16 feet when planted, reaching 20 feet to 40 feet when mature. Conduct monitoring for three years following planting or until an arborist verifies that the trees have successfully reestablished.	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA
		4.3-H.2	Develop a Tree Protection Plan that details procedures to maximize tree survivability by implementing all of the guidelines recommended in the 2007 Tree Inventory and Evaluation. The plan shall include, at a minimum, the following topics: ♦ Developing a Tree Protection Zone (TPZ) around trees to be protected. ♦ Construction observation and supervision by a certified arborist, or County designated representative. ♦ Installation for tree protection fencing around TPZs. ♦ Requirements for demolition and/or site clearing near TPZs. ♦ Requirements for site grading, trenching, and root pruning. ♦ Requirements for foundation and wall ~~C~~construction within the TPZ. ♦ Requirements for site drainage. ♦ Standard requirements for pruning and cabling. ♦ Tree damage mitigation requirements. ♦ Post-construction recommendations.	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

	Impacts		Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
			♦ Recommendations for planting around native oak trees. The Plan must be approved by the County prior to starting site preparation and construction activities.				
4.3-I	Trimming and removing vegetation and operating track equipment in SOD-infected areas would spread the disease to unaffected areas.	4.3-I.1	Minimize the risk of spreading SOD to unaffected areas through the following measures. Retain vegetation on site or haul it to a permitted recycling center in Marin County. Prior to arrival and departure from the project area, all vehicles, equipment, tools and clothing shall be cleaned of vegetation and mud.	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA
4.4 HYDROLOGY AND WATER QUALITY							
4.4-A	Post development nonpoint source pollution.	4.4-A.1	The final drainage plan for the project shall~~should~~ incorporate the follow-ing Best Management Practices (BMPs) to ensure that project development does not result in an increase in NPS pollutants to on-site and off-site wetlands, to lower Gallinas Creek, and ultimately, to San Pablo Bay. ♦ The existing pond within Drainage Area 1 of the site has been designated as a wetland. The runoff from Drainage Area 1 needs to be treated before it reaches the pond, or it might potentially pollute the wetland. This is also true for the off-site wetland across North San Pedro Road. The runoff from Drainage Area 2 of the site goes into a culvert under North San Pedro Road and then into the off-site wetland. To avoid the potential of pollutants entering the pond, ~~A~~all stormwater shall~~should~~ be treated for water quality before it reaches any wetland. The current drainage design needs to be revised to incorporate permanent BMPs for meeting the County's LID standards. This may require more substantial changes to the landscape design. Permanent BMPs for meeting the County's LID standards may include but are	Project Engineer Project Applicant	Precise Development Plan and During Construction	Marin County CDA	Marin County CDA

TABLE 1 **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts	Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
	not limited to site and drainage design features that route runoff from roofs and paved surfaces to landscaped areas, engineered bioretention facilities, roofs over areas where vehicles are washed or repaired, facilities for cleaning equipment such as mats used in restaurant kitchens, use of permeable concrete and asphalt surfaces for driveways and roads, and construction of a drainage swale along the west side of the new two-way driveway. Permanent BMPs for treating the stormwater runoff before it reaches the reconfigured pond and the off-site wetland may include but are not limited to: installation of one continuous deflective separation (CDS) unit to remove silt and pollutants from stormwater at each of the three storm drain pipes discharging to the reconfigured pond and at the fire turn around for the storm drain that discharges to the roadside ditch adjacent to North San Pedro Road. The MCSTOPPP's Stormwater Quality Manual for Development Projects in Marin County contains specific guidance applicable to the project category. ♦ The applicant shall~~should~~ prepare a Stormwater Control Plan that consists of all the information identified in the Stormwater Control Plan checklist in the MCSTOPPP's Stormwater Quality Manual for Development Projects in Marin County. This requires calculations for different Drainage Management Areas, a report, and an exhibit, which the applicant would be required to provide as a mitigation measure. The acceptable methods of achieving consistency with the County's LID standards are also discussed in this Manual. The Manual encourages the incorporation of LID approach into the project design. ♦ The applicant shall~~should~~ prepare an operation and				

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

	Impacts		Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
			maintenance plan of stormwater facilities and identify how and what entity would operate and maintain the storm pond. ♦ The applicant shall~~should~~ prepare informational literature and guidance on residential BMPs to minimize pollutant contributions from the proposed development. This information shall~~should~~ be distributed to future employees and residences at the project site. At a minimum the information shall~~should~~ cover: (1) Proper disposal of household and commercial chemicals; (2) Proper use of landscaping chemicals; (3) Clean-up and appropriate disposal of yard cuttings and leaf litter; and (4) Prohibition of any washing and dumping of materials and chemicals into storm drains.				
4.4-D	Construction-related erosion and siltation and water quality impact.	4.4-D.1	The project applicant is required to comply with all NPDES Permit requirements for the construction period. Under the NPDES program, the applicant is required to submit a Notice of Intent (NOI) with the State Water Resource Control Board's (SWRCB) Division of Water Quality. The NOI includes general information on the types of construction activities that will occur on the site. The applicant will also be required to prepare a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will include a description of appropriate BMPs to minimize the discharge of pollutants from the site. BMPs appropriate for construction activities can be organized into four major categories: 1) Erosion Control: Measures that prevent erosion and keep soil particles from entering stormwater, lessening the eroded sediment that must be trapped, both during and at completion of construction. 2) Sediment Control: Feasible methods of trapping	Project Applicant	Precise Development Plan and During Construction	Marin County CDA	Marin County and San Francisco Bay Region RWQCB

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts	Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
	eroded sediments so as to prevent a net increase in sediment load in stormwater discharges from the site. 3) Site Management: Methods to manage the construction site and construction activities in a manner that prevents pollutants from entering stormwater, drainage systems or receiving waters. 4) Materials and Waste Management: Methods to manage construction materials and waste that prevent their entry into stormwater, drainage systems or receiving waters. The SWPPP shall fully comply with RWQCB requirements and shall contain specific BMPs to be implemented during project construction to reduce erosion and sedimentation to the maximum extent practical. Typical BMPs to be required on-site during construction include, but are not limited to, the following: ♦ Performing major vehicle maintenance, repair jobs, and equipment washing at appropriate off-site locations; ♦ Maintaining all vehicles and heavy equipment and frequently inspecting for leaks; ♦ Designating one area of the construction site, well away from streams or storm drain inlets, for auto and equipment parking and routine vehicle and equipment maintenance; ♦ Cleaning-up spilled dry materials immediately. Spills are not to be "washed away" with water or buried; ♦ Using the minimum amount of water necessary for dust control; ♦ Cleaning-up liquid spills on paved or impermeable surfaces using "dry" cleanup methods (e.g. absorbent				

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts		Mitigation		Implemented By	When Implemented	Monitored By	Verified By and Date
			materials such as cat litter, and/or rags); ♦ Cleaning-up spills on dirt areas by removing and properly disposing of the contaminated soil; ♦ Storing stockpiled materials, wastes, containers and dumpsters under a temporary roof or secured plastic sheeting; ♦ Properly storing containers of paints, chemicals, solvents, and other hazardous materials in garages or sheds with double containment during rainy periods; ♦ Applying concrete, asphalt, and seal coat during dry weather. Keeping contaminants from fresh concrete and asphalt out of the storm drains and creeks by scheduling paving jobs during periods of dry weather and allowing new pavement to cure before storm water flows across it; ♦ Covering catch basins and manholes when applying seal coat, slurry seal and fog seal. BMPs identified in the SWPPP shall also include soil stabilization techniques such as: hydroseeding and short-term biodegradable erosion control blankets; silt fences or some kind of inlet protection at downstream storm drain inlets; post-construction inspection of all drainage facilities for accumulated sediment; and post-construction clearing of all drainage structures of debris and sediment. Finally, the project applicant will be required to submit a Notice of Termination (NOT) when site soils are stable and permanent erosion and sediment control is in place.				
4.4-E	Increased peak runoff and changes in drainage pattern.	4.4-E.1	Design pond to meet a peak flow reduction objective of 0.62 acre-feet for Drainage Area 1. Ongoing maintenance of the pond, including debris removal, and monitoring the structural integrity of the berm, and the proper functioning of the weir inlet shall be the responsibility of a Homeowners	Project Engineer	Precise Development Plan	Marin Count CDA	Marin County CDA

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts		Mitigation		Implemented By	When Implemented	Monitored By	Verified By and Date
			Association.				
		4.4-E.2	The Project Applicant shall include language within the covenants, conditions, and restrictions (CC&Rs) of the Homeowners Association bylaws requiring the Homeowners Association to be responsible for maintaining the pond, including debris removal, and monitoring the structural integrity of the berm, and the proper function of the weir inlet.	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA
4.5 AIR QUALTY							
4.5-A	Construction of the new homes could generate temporary emissions of PM_{10} that could cause localized exceedances of ambient air quality standards and contribute to regional violations of the ambient air quality standards.	4.5-A.1	During construction, the developer shall~~should~~ implement all of the following measures that are feasible to control dust and PM_{10} from construction activities: ♦ Water all active construction areas at least twice daily and more often during windy periods. Active areas adjacent to residences shall~~should~~ be kept damp at all times. ♦ Cover all hauling trucks or maintain at least 2 feet of freeboard. Dust-proof chutes shall~~should~~ be used as appropriate to load debris onto trucks during demolition. ♦ Pave, apply water at least twice daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas. ♦ Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas and sweep streets daily (with water sweepers) if visible soil material is deposited onto the adjacent roads. ♦ Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously-graded areas that are inactive for ten days or more).	Project Applicant	Precise Development Plan (PDP) or Design Review	Marin County CDA	Marin County CDA Design Review

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts		Mitigation		Implemented By	When Implemented	Monitored By	Verified By and Date
			♦ Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles. ♦ Limit traffic speeds on any unpaved roads to 15 mph. ♦ Replant vegetation in disturbed areas as quickly as possible. ♦ Opacity is an indicator of exhaust particulate emissions from off-road diesel powered equipment. The project shall~~should~~ ensure that emissions from all construction diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately ♦ The contractor shall install temporary electrical service as soon as possible to avoid the need for independently powered equipment (e.g. diesel-powered compressors). ♦ Diesel equipment standing idle for more than three minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate, or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were on-site and away from residences. ♦ Properly tune and maintain equipment for low emissions.				
4.6 TRAFFIC AND CIRCULATION							
4.6-A	During the AM or PM peak hour, the volume of truck trips required could result in a substantial, temporary increase of truck trip volumes on San Pedro Road in	4.6-A.1	The applicant shall~~should~~ be required to develop a traffic management plan that includes the following provisions: ♦ Truck trips to and from the site for purposes of transporting fill would be prohibited during AM and PM peak hours;	Project Applicant	During Construction	Marin County CDA	Marin County CDA

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts	Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
relation to existing conditions. The increase, although temporary, would be notable in relation to the existing traffic load.	♦ No more than two trucks would be allowed to receive soil from the project site at one time; ♦ In the event of lane closures in front of the project site for purposes of truck parking, an adequate number of flaggers and the appropriate signage would be required to ensure the safe passage of vehicles, bicyclists, and pedestrians. ♦ If construction activity, equipment, vehicles and/or material delivery and storage cause damage to any existing facility (e.g. pavement, curb, gutter, sidewalk, landscaping) beyond normal wear and tear, and determined by the agency, then the permit~~ted~~ shall be responsible for the repair of the same. In order to ensure repair, the agency may require cash deposits prior to issuance of permits or may place holds on interim or final inspections. ♦ The applicant shall~~should~~ identify locations for contractor parking on site for the duration of the construction period so that spillover parking does not occur along North San Pedro Road or on adjacent streets (e.g. Pt. Gallinas Road). ~~♦ Trucks that would be used to haul earthen material away from the site should be used to transport replacement trees to the site.~~ ♦ The applicant shall~~should~~ be encouraged~~required~~ to use trucks with a capacity of at least 20 cubic yards (cy) in order to limit the amount of truck trips.				

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

	Impacts		Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
4.6-E	Failure to provide the required 250 feet of sight distance at the project driveway, Bay Creek Drive, to the west is considered a *significant* impact.	4.6-E.1	~~Project Lot 1 should be redesigned to allow~~ ~~t~~The rear yard fence of Project Lot 1 shall~~should to~~ be relocated to approximately 10 feet south of the location currently shown on the Grading and Drainage Plan. ~~If necessary, the footprint of the proposed residence on Lot 1 should also be redesigned.~~ Prior to grading activity for road and driveway construction being undertaken, the applicant shall submit for review and approval of the DPW traffic engineer, detailed engineering cross sections of the roadway frontage and detailed plan specifications with traffic engineering graphic data that more specifically depicts driveway configurations and site distance from driveway exit points~~,~~ to provide 250 feet of sight distance to the west of Bay Creek Drive. Confirmation by the County of adequate sight distance ~~would~~shall be required prior to the start of construction.	Project Applicant	~~During Construction~~ Precise Development Plan	Marin County CDA	Marin County CDA
4.8 AESTHETICS							
4.8-A	Substantial adverse effect on a scenic resource.	4.8-A.1	The project shall be required to implement the project plans that include, but are not limited to, the preservation of 8.6 acres of open space, grouping the dwelling units in an area away from the wooded ridgeline, implementation of the Tree Mitigation and Planting Plan, and constructing the new units to be visually compatible with existing uses in the vicinity of the project site.	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA
4.8-C	Substantial degradation of existing visual character or quality of the site and its surroundings.	4.8-C.1	The mitigation measure recommended for Impact 4.8-A also applies to this impact.	See the cited mitigation measure			
4.8-F	Significant alteration to the existing natural viewsheds, including changes in nature terrain or vegetation.	4.8-F.1	The mitigation measure recommended for Impact 4.8-A also applies to this impact.	See the cited mitigation measure			

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

	Impacts		Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
4.8-G	Significant change to the existing visual quality of the region.	4.8-G.1	The mitigation measure recommended for Impact 4.8-A also applies to this impact.	See the cited mitigation measure			
4.9 CULTURAL RESOURCES							
4.9-A	An archaeological site or sites may be adversely impacted or destroyed by construction activities.	4.9-A.1	In the event that unique historical, archeological, paleontological or geologic features are discovered during ground disturbing activities, work on the site shall~~should~~ stop immediately until a State-registered professional archeologist, paleontologist, or geologist can assess the nature and importance of the find and recommend appropriate treatment.	Project Applicant Project Construction Manager	Precise Development Plan During Construction	Marin County CDA	Marin County CDA Approval of PDP Completion of construction for implementation
		4.9-A.2	In the event that the project site is identified as an archeological, paleontological, or geologic resource, development shall~~should~~ be situated or designed to avoid impacts on the archeological resources. This may be accomplished though one or more of the following methods: ♦ Siting buildings to completely avoid the archeological site. ♦ Covering the site with a layer of soil, also known as "capping". ♦ Deeding the site as a permanent conservation easement.	Project Applicant Project Construction Manager	Precise Development Plan During Construction	Marin County CDA	Marin County CDA Approval of PDP Completion of construction for implementation
4.9-C	A unique paleontological resource or geologic feature could potentially be impacted by construction activity.	4.9-C.1	In the event that unique historical, archeological, paleontological, or geologic features are discovered during ground disturbing activities, work on the site shall~~should~~ stop immediately until a State-registered professional archeologist, paleontologist, or geologist can assess the nature and importance of the find and recommend appropriate treatment.	Project Applicant Project Construction Manager	Precise Development Plan During Construction	Marin County CDA	Marin County CDA Approval of PDP Completion of construction for implementtation
		4.9-C.2	In the event that the project site is identified as an archeological, paleontological, or geologic resource, development shall~~should~~ be situated or designed to avoid	Project Applicant Project Construction Manager	Precise Development Plan	Marin County CDA	Marin County CDA Approval of PDP Completion of

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

	Impacts		Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
			impacts on the paleontological~~archeological~~ resources. This may be accomplished though one or more of the following methods: ♦ Siting buildings to completely avoid the archeological site. ♦ Covering the site with a layer of soil, also known as "capping". ♦ Deeding the site as a permanent conservation easement.		During Construction		construction for implementtation
4.9-D	Human remains may potentially be disturbed by construction activity.	4.9-D.1	If previously unknown human remains are encountered during construction, the County Coroner and an appropriate representative of the Native American Heritage Commission shall~~should~~ be informed and consulted, as required by State law and in accordance with the provisions of Section 7050.5 of the Health and Safety Code, Section 15064.5 (e) of the CEQA Guidelines, and Section 5097.98 pf the Public Resources Code.	Project Applicant Project Construction Manager	Precise Development Plan During Construction	Marin County CDA	Marin County CDA Approval of PDP Completion of construction for implementtation
4.10 NOISE							
4.10-A	Noise produced by construction activities would be au-dible and would intermittently exceed existing noise lev-els during the construction period at residences to the north and west of the site, would raise the Ldn by more than 5 dBA or exceed the "normally acceptable" standard (60 dBA), as established by the Marin Countywide Plan.	4.10-A.1	Consistent with Sections 6.70.030(5) and 6.70.040 of the Marin County Development Code, the applicant shall~~should~~ develop a construction noise reduction plan prior to construction to establish allowable hours of operation for construction-related activities and to designate a noise disturbance coordinator at the construction site to implement the provisions of the plan. The noise disturbance coordinator shall~~should~~ be responsible for responding to any local complaints about construction noise. In the event of complaints, the coordinator shall~~should~~ determine the cause of the complaint (e.g. starting too early, bad muffler, etc.) and would require that reasonable measures warranted to correct the problem be implemented.	Project Construction Manager	Throughout project construction	Marin County CDA	Marin County CDA Completion of construction

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts	Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
	Provisions that shall~~should~~ be included in the plan include, but are not necessarily limited to, the following: ♦ Limit construction activities, deliveries of materials, or equipment to the site, to the hours between 9:00 a.m. and 6:00 p.m. Monday through Saturday.~~, and 10:00 a.m. to 6:00 p.m. Sundays and all holidays recognized by Marin County.~~ ♦ Prohibit construction on all Sundays and holidays recognized by Marin County. ♦ Do not allow start up of construction related machinery or equipment prior to 8:00 a.m. Monday through Friday, and 9:00 a.m. Saturday~~, and 10:00 a.m. on Sunday and holidays.~~ ♦ Select quiet construction equipment, particularly air compressors, whenever possible. ♦ Properly muffle and maintain all construction equipment powered by internal combustion engines. ♦ Prohibit unnecessary idling of internal combustion engines. Equipment shall~~should~~ be turned off when not in use. ♦ Do not allow machinery to be cleaned or serviced past 6:00 p.m. Monday through Saturday~~Friday, 6:00 p.m. on Saturdays, and 6:00 p.m. on Sundays and holidays~~. ♦ Locate all stationary noise-generating construction equipment such as air compressors as far as practical from existing nearby residences and other noise-sensitive land uses. Acoustically shield such equipment. ♦ Notify adjacent residents to the project site of the construction schedule in writing. ♦ Control noise from construction workers' radios so they are not audible at existing residences that border the				

TABLE I **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

	Impacts		Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
			project site. ♦ Conspicuously post a telephone number for the noise disturbance coordinator at the construction site and include it in the written notice sent to neighbors regarding the construction schedule.				
4.11 HAZARDS AND HAZARDOUS MATERIALS							
4.11-B	Demolition of the existing dwelling unit and auxiliary buildings may result in worker exposure to asbestos containing materials (ACMs) and the release of airborne asbestos.	4.11-B.1	Prior to demolition of the dwelling unit and auxiliary buildings located on the project site, the applicant shall~~should~~ coordinate with the Bay Area Air Quality Management District (BAAQMD) to arrange for an inspection of structures to be demolished. If asbestos is detected in either structure, the demolition and removal of asbestos-containing building materials will be subject to applicable BAAQMD Regulations and the applicant would be required to obtain a Job Number from the BAAQMD. The applicant would be required to present the Job Number to the County Building Department before demolition could commence.	Project Construction Manager	During Construction	Marin County CDA	Marin County CDA
4.11-J	The potential fall of the mature, blue gum eucalyptus tree located near the center of the site is an existing safety hazard.	4.11-J.1	The applicant shall contract a service to remove the tree prior to construction to ensure the safety of contractors during the construction period and future residents of the development.	Project Applicant	Prior to Construction	Marin County CDA	Marin County CDA
4.14 UTILITIES							
4.14-H	The 6-inch diameter sewer line that the project would tie into may have subsided over time and lost the degree of grade necessary to allow for the adequate transfer of sanitary wastewater.	4.14-H.1	Prior to issuance of a building permit, the applicant shall contract a qualified technician to probe the existing, 6-inch sanitary sewer line located along the northern edge of San Pedro Road. The probe shall be conducted downstream between Point Gallinas Road and the intersection with Vendola Drive to determine if this section has sufficient grade. Results of the probe shall be submitted to the Las	Project Applicant	Precise Development Plan	Marin County CDA	Marin County CDA Approval

TABLE 1 **MITIGATION MONITORING AND REPORTING PROGRAM** (CONTINUED)

Impacts	Mitigation	Implemented By	When Implemented	Monitored By	Verified By and Date
	Gallinas Valley Sanitary District (LGVSD) for review and based on the outcome, the applicant shall pay necessary fees to LGVSD for improvements to the pipe that would ensure adequate capacity for the project.				

APPENDIX E

TREE REMOVAL AND MITIGATION PLANS

MACNAIR & ASSOCIATES
CONSULTING ARBORISTS AND HORTICULTURISTS

MEMORANDUM

DATE:	8/14/08
TO:	Michael Marovich
CC:	
FROM:	James MacNair
SUBJECT:	San Pedro Court Subdivision
RE:	Tree Mitigation Plan

Michael,

This memorandum documents a proposed approach to the tree mitigation requirements for the San Pedro Court Subdivision. Mr. Jeremy Sarrow of the California Department of Fish and Game requested a tree mitigation approach that focused on establishing native tree and plant habitats within the project limits. He also requested that specimen sized trees be included within the new landscape and tree mitigation plan.

Attached is a compilation of documents addressing these requests. These are

1.) A revised Tree Mitigation Plan prepared by Donald Blayney and Associates that focuses on the use of native trees within the new project. While fulfilling the full tree mitigation requirements, the plan maintains tree canopy separation and uses non-pyrophytic tree species as required as part of a vegetation management plan for fire safety.
2.) A chart showing proposed tree mitigation sizes for the160 new trees with trees from 15 gallon to 48 inch boxed specimens.
3.) The native plant list recommended for the project prepared by Prunuske Chatham, Inc., project biologists.
4.) Examples of specifications and photographs of specimen trees showing various container sizes proposed for use.

Please contact me with any questions, or if additional information is required.

POST OFFICE BOX 1150 • GLEN ELLEN, CA 95442 • FAX: 707.938.1837 • PHONE: 707.938.1822

Table 1. Proposed Mitigation Tree Container Sizes

Tree Species	#15 gallon	24" box	36" box	48" box	Total Mitigation Trees
black oak (*Quercus kelloggii*)	4	3			7
California buckeye (*Aesculus californica*)	40	10			50
coast live oak (*Q. agrifolia*)	16	30	5	2	53
Oregon white oak (*Q. garryana*)	5	4			9
valley oak (*Q. lobata*)	10	23	5	3	41
Total Trees:	75	70	10	5	160

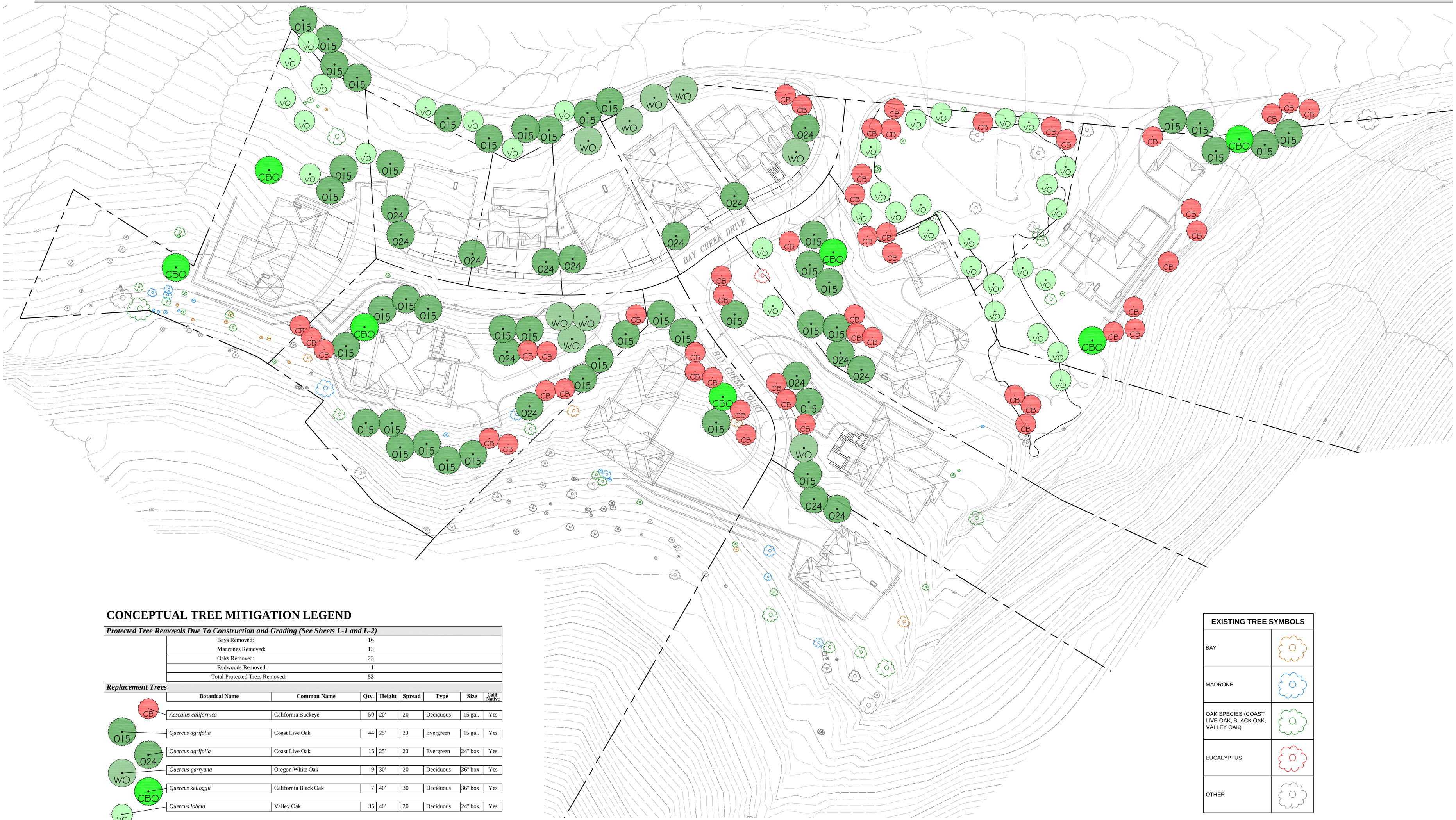
160 mitigation trees is approximately a 3:1 replacement ratio for removed 'protected' trees as defined by Section 22.27.020 of the Marin Development Code

Black oak, California buckeye, and Oregon white oak are not typically grown in larger nursery container sizes. If larger specimens of these species of good quality are located, then they will be used. Sizes shown are intended to demonstrate range of tree sizes to be planted. These box sizes will replace those shown on the attached Tree Mitigation Plan (Donald L. Blayney and Associates).

Table 2. Recommended Revegetation Species

Trees	Common Name	Plant Requirements
Aesculus californica	California buckeye	well drained sites
Quercus agrifolia	coast live oak	well drained sites
Quercus garryana	Oregon (white) oak	Tolerates moist, north-facing slopes
Quercus kelloggii	black oak	well drained sites
Quercus lobata	valley oak	tolerates flooding – plant around edge of wetland
Shrubs & Vines		
Arctostaphylos manzanita	common manzanita	sun
Corylus cornuta	hazelnut	sun to shade
Heteromeles arbutifolia	toyon	sun to shade, tolerates aridity
Lonicera hispidula	California honeysuckle	understory
Mimulus aurantiacus	bush monkeyflower	sun to part shade
Rhamnus californica	California coffeeberry	sun to part shade
Symphoricarpos mollis	creeping snowberry	understory
Vitis californicus	California grape	sun to part shade
grasses		
Bromus carinatus	California brome	various habitats
Elymus glaucus	blue wildrye	various habitats
Festuca californica	red fescue, Molate	partial shade
Nassella pulchra	purple needle grass	open exposed sites

Recommended revegetation plant list was prepared by Prunuske Chatham. Shrubs and vines will be incorporated into planting plan upon approval of conceptual tree planting plan.



CONCEPTUAL TREE MITIGATION LEGEND

Protected Tree Removals Due To Construction and Grading (See Sheets L-1 and L-2)	
Bays Removed:	16
Madrones Removed:	13
Oaks Removed:	23
Redwoods Removed:	1
Total Protected Trees Removed:	**53**

Replacement Trees

	Botanical Name	Common Name	Qty.	Height	Spread	Type	Size	Calif. Native
CB	*Aesculus californica*	California Buckeye	50	20'	20'	Deciduous	15 gal.	Yes
O15	*Quercus agrifolia*	Coast Live Oak	44	25'	20'	Evergreen	15 gal.	Yes
O24	*Quercus agrifolia*	Coast Live Oak	15	25'	20'	Evergreen	24" box	Yes
WO	*Quercus garryana*	Oregon White Oak	9	30'	20'	Deciduous	36" box	Yes
CBO	*Quercus kelloggii*	California Black Oak	7	40'	30'	Deciduous	36" box	Yes
VO	*Quercus lobata*	Valley Oak	35	40'	20'	Deciduous	24" box	Yes
	Total New Trees Planted		**160**					

Summary

Tree Replacement Ratio:	**3.0 : 1**

Refer to Tree Mitigation Chart for New Tree Sizes

EXISTING TREE SYMBOLS	
BAY	
MADRONE	
OAK SPECIES (COAST LIVE OAK, BLACK OAK, VALLEY OAK)	
EUCALYPTUS	
OTHER	

NORTH

Revisions:
1 08/06/08 TREE RECOMMENDATIONS

FOR PLANNING REVIEW ONLY - *NOT* FOR CONSTRUCTION

DONALD L. BLAYNEY & ASSOCIATES
LANDSCAPE ARCHITECTURE & PLANNING
Urban Design ☐ ☐ *Campus Planning*
Park Planning ☐ ☐ *Residential Design*
Land Use Planning ☐ ☐ *Golf Course Design*
415.258.9666 Tel ☐ ☐ *Fax 415.258.9888*
990 'A' Street, Suite 202, San Rafael, California 94901
California Registration # 3370 ☐ ☐ *New Mexico Registration # 115*

TREE MITIGATION PLAN

650 NORTH SAN PEDRO ROAD
Prepared for: West Bay Builders
A.P.N.'s: 180-231-05, -06, -07, -09, & 180-291-04

Date: August 6, 2008
Scale: 1" = 30.0'
Drawn by: JDG
Approved by: DLB

LICENSED LANDSCAPE ARCHITECT
Donald L. Blayney, No. 3370
Signature
12/31/2008
Renewal Date
Date
STATE OF CALIFORNIA

Sheet Number
L-3
Sheet _____ of _____

36” Box *Quercus agrifolia* (coast live oak)
(Photo 1)

Specifications:

Height:	12’-13’
Crown Spread:	4’-5’
Caliper (@6”)	2.5”-2.75”

36” Box *Quercus agrifolia* (coast live oak)
(Photo 2)

48” Box *Quercus agrifolia* (coast live oak)
(Photo 1)

Specifications:

Height:	14’-16’
Crown Spread:	5’-6”
Caliper (@6”)	3.0”-3.5”

48” Box *Quercus agrifolia* (coast live oak)
(Photo 2)

48” Box *Quercus agrifolia* (coast live oak) (natural form
(Photo 1)

Specifications:

Height:	10’-12’
Crown Spread:	6’-8’
Caliper (@6”)	3.25”-4”

Norman’s Nursery (Linden)

VALLEY CREST TREE COMPANY
The Tree Growing & Tree Moving Company

December 6, 2005

To: James @ MacNair & Associates
From: Glenn Hansen

36” Quercus lobata 12-14’x4-5’x2.5-2.75”

Thank you for choosing **Valley Crest Tree Company**.

VALLEY CREST TREE COMPANY
The Tree Growing & Tree Moving Company

December 6, 2005

To: James @ MacNair & Associates
From: Glenn Hansen

48” Quercus lobata 14-15’x5-6’x2.75-3”

Thank you for choosing **Valley Crest Tree Company**.

EXISTING TREE SYMBOLS		TOTAL Nº TO BE REMOVED	Nº PROT'D TO BE REMOVED
BAY		29	16
MADRONE		17	13
OAK SPECIES (COAST LIVE OAK, BLACK OAK, VALLEY OAK)		28	23
EUCALYPTUS		108	---
OTHER (ACACIA, CITRUS, CRABAPPLE, PINE/CEDAR, WILLOW, PISTACHE, REDWWOD)		33	---
"X" AT TRUNK INDICATES TREE TO BE REMOVED -- SEE TREE SURVEY (SHEET L-2) FOR TREE #'s & EVALS	#123	TOTAL: 215	TOTAL: 53
INDICATES TREE TO REMAIN & BE PROTECTED DURING CONSTRUCTION			

Revisions:

FOR PLANNING REVIEW ONLY - *NOT* FOR CONSTRUCTION

DONALD L. BLAYNEY & ASSOCIATES
LANDSCAPE ARCHITECTURE & PLANNING
Urban Design ☐ ☐ *Campus Planning*
Park Planning ☐ ☐ *Residential Design*
Land Use Planning ☐ ☐ *Golf Course Design*
415.258.9666 Tel ☐ ☐ *Fax 415.258.9888*
990 'A' Street, Suite 202, San Rafael, California 94901
California Registration # 3370 ☐ ☐ *New Mexico Registration # 115*

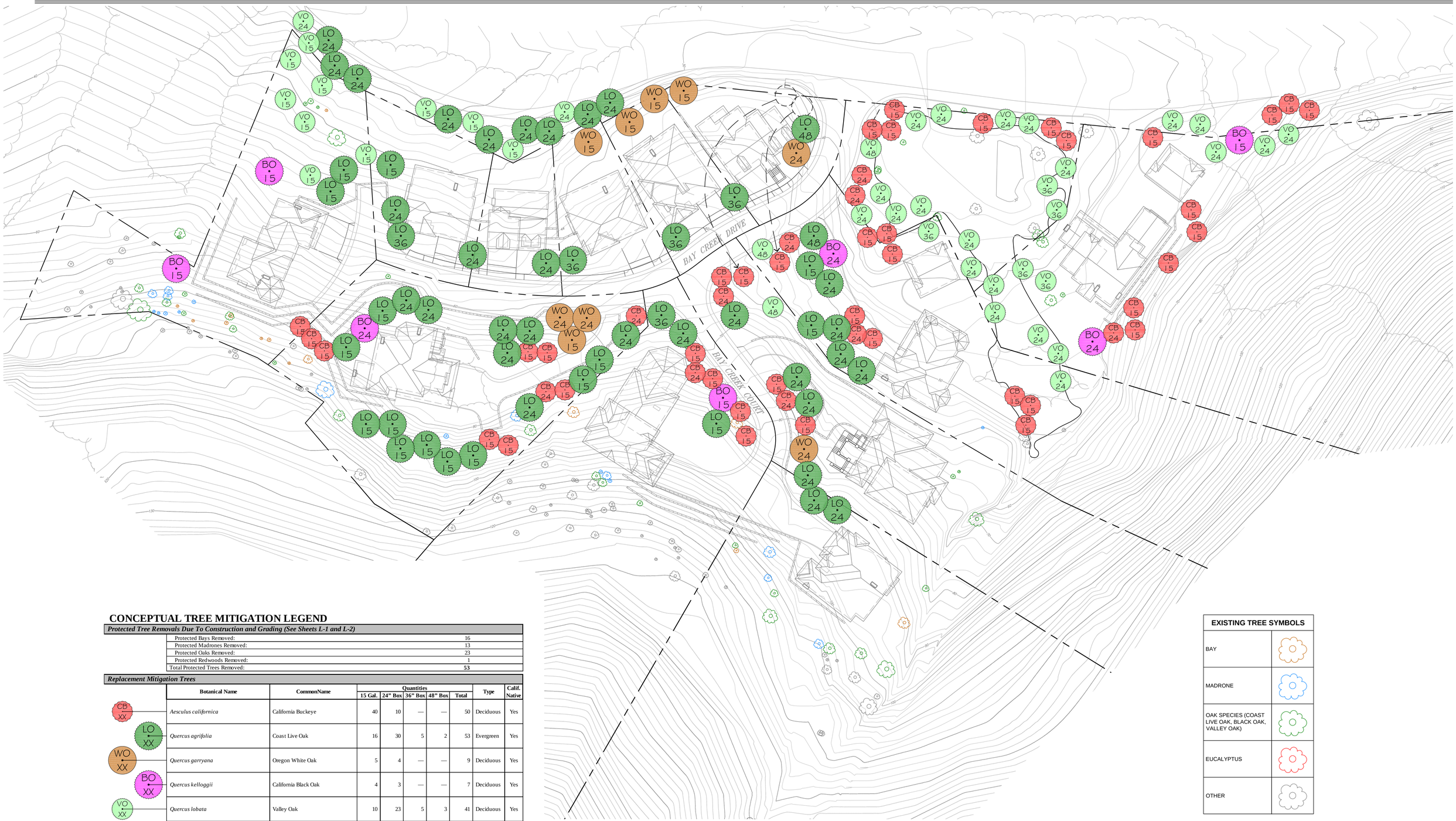
EXISTING TREE INVENTORY & REMOVAL PLAN

650 NORTH SAN PEDRO ROAD
Prepared for: West Bay Builders
A.P.N.'s: 180-231-05, -06, -07, -09, & 180-291-04

Date: March 20, 2007
Scale: 1" = 30.0'
Drawn by: JDG
Approved by: DLB

LICENSED LANDSCAPE ARCHITECT · Donald L. Blayney · № 3370 · STATE OF CALIFORNIA
Signature
12/31/2007
Renewal Date
Date

Sheet Number
L-1
Sheet _____ of _____



CONCEPTUAL TREE MITIGATION LEGEND

Protected Tree Removals Due To Construction and Grading (See Sheets L-1 and L-2)	
Protected Bays Removed:	16
Protected Madrones Removed:	13
Protected Oaks Removed:	23
Protected Redwoods Removed:	1
Total Protected Trees Removed:	**53**

Replacement Mitigation Trees

Botanical Name	CommonName	Quantities 15 Gal.	24" Box	36" Box	48" Box	Total	Type	Calif. Native
Aesculus californica	California Buckeye	40	10	—	—	50	Deciduous	Yes
Quercus agrifolia	Coast Live Oak	16	30	5	2	53	Evergreen	Yes
Quercus garryana	Oregon White Oak	5	4	—	—	9	Deciduous	Yes
Quercus kelloggii	California Black Oak	4	3	—	—	7	Deciduous	Yes
Quercus lobata	Valley Oak	10	23	5	3	41	Deciduous	Yes
Total New Trees Planted:		75	70	10	5	**160**		

Summary	
Tree Replacement Ratio:	**3.0 : 1**

NOTE: "XX" FOR SYMBOLS ON LEGEND INDICATES TREE CONTAINER SIZE FOR SYMBOLS ON PLAN:
"15" = 15 Gallon; "24" = 24 in. Box; "36" = 36 in. Box; "48" = 48 in. Box

EXISTING TREE SYMBOLS	
BAY	
MADRONE	
OAK SPECIES (COAST LIVE OAK, BLACK OAK, VALLEY OAK)	
EUCALYPTUS	
OTHER	

NORTH

Revisions:
1 08/06/08 TREE RECOMMENDATIONS
2 04/08/10 EIR RECONCILIATION

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990 'A' Street, Suite 202, San Rafael, California 94901
California Registration # 3370 ☐ ☐ *New Mexico Registration # 115*

TREE MITIGATION PLAN

650 NORTH SAN PEDRO ROAD
Prepared for: West Bay Builders
A.P.N.'s: 180-231-05, -06, -07, -09, & 180-291-04

Date: April 8, 2010
Scale: 1" = 30.0'
Drawn by: JDG
Approved by: DLB

LICENSED LANDSCAPE ARCHITECT · Donald L. Blayney · No. 3370 · STATE OF CALIFORNIA
Signature
12/31/2010
Renewal Date
Date

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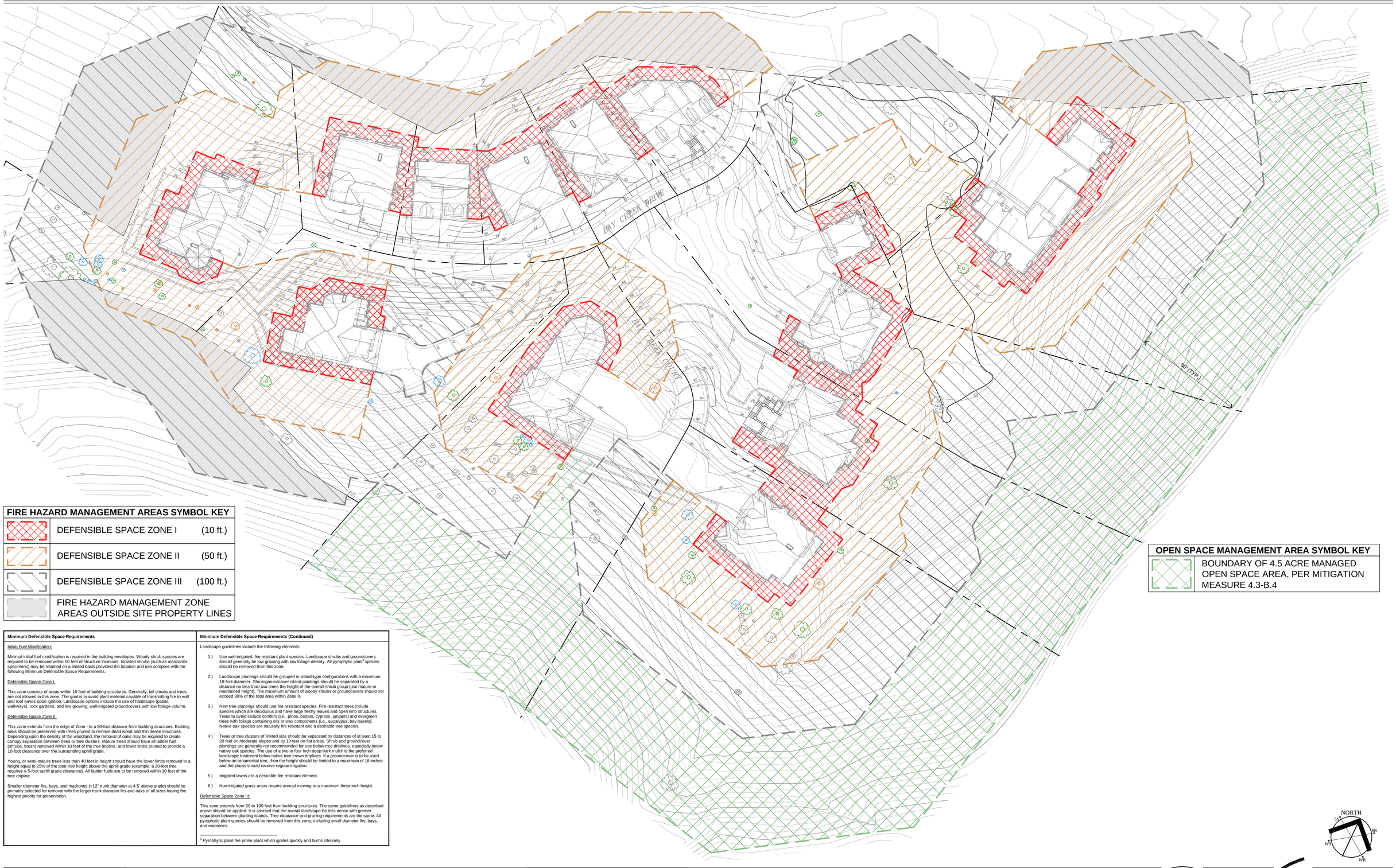
APPENDIX H

FIRE HAZARD AND OPEN SPACE MANAGEMENT PLAN



FIRE HAZARD MANAGEMENT AREAS SYMBOL KEY	
	DEFENSIBLE SPACE ZONE I (10 ft.)
	DEFENSIBLE SPACE ZONE II (50 ft.)
	DEFENSIBLE SPACE ZONE III (100 ft.)
	FIRE HAZARD MANAGEMENT ZONE AREAS OUTSIDE SITE PROPERTY LINES

OPEN SPACE MANAGEMENT AREA SYMBOL KEY	
	BOUNDARY OF 4.5 ACRE MANAGED OPEN SPACE AREA, PER MITIGATION MEASURE 4.3-B.4

Minimum Defensible Space Requirements	Minimum Defensible Space Requirements (Continued)
Initial Fuel Modification: Minimal initial fuel modification is required in the building envelopes. Woody shrub species are required to be removed within 50 feet of structure locations. Isolated shrubs (such as manzanita specimens) may be retained on a limited basis provided the location and use complies with the following Minimum Defensible Space Requirements. Defensible Space Zone I: This zone consists of areas within 10 feet of building structures. Generally, tall shrubs and trees are not allowed in this zone. The goal is to avoid plant material capable of transmitting fire to wall and roof eaves upon ignition. Landscape options include the use of hardscape (patios, walkways), rock gardens, and low growing, well-irrigated groundcovers with low foliage volume. Defensible Space Zone II: This zone extends from the edge of Zone I to a 50-foot distance from building structures. Existing oaks should be preserved with trees pruned to remove dead wood and thin dense structures. Depending upon the density of the woodland, the removal of oaks may be required to create canopy separation between trees or tree clusters. Mature trees should have all ladder fuel (shrubs, brush) removed within 10 feet of the tree dripline, and lower limbs pruned to provide a 10-foot clearance over the surrounding uphill grade. Young, or semi-mature trees less than 40 feet in height should have the lower limbs removed to a height equal to 25% of the total tree height above the uphill grade (example: a 20-foot tree requires a 5-foot uphill grade clearance). All ladder fuels are to be removed within 10 feet of the tree dripline. Smaller diameter firs, bays, and madrones (<12" trunk diameter at 4.5' above grade) should be primarily selected for removal with the larger trunk diameter firs and oaks of all sizes having the highest priority for preservation.	Landscape guidelines include the following elements: 1.) Use well-irrigated, fire resistant plant species. Landscape shrubs and groundcovers should generally be low growing with low foliage density. All pyrophytic plant[1] species should be removed from this zone. 2.) Landscape plantings should be grouped in island-type configurations with a maximum 18-foot diameter. Shrub/groundcover island plantings should be separated by a distance no less than two times the height of the overall shrub group (use mature or maintained height). The maximum amount of woody shrubs or groundcovers should not exceed 30% of the total area within Zone II. 3.) New tree plantings should use fire resistant species. Fire resistant trees include species which are deciduous and have large fleshy leaves and open limb structures. Trees to avoid include conifers (i.e., pines, cedars, cypress, junipers) and evergreen trees with foliage containing oils or wax components (i.e., eucalyptus, bay laurels). Native oak species are naturally fire resistant and a desirable tree species. 4.) Trees or tree clusters of limited size should be separated by distances of at least 15 to 20 feet on moderate slopes and by 10 feet on flat areas. Shrub and groundcover plantings are generally not recommended for use below tree driplines, especially below native oak species. The use of a two to four inch deep bark mulch is the preferred landscape treatment below native tree crown driplines. If a groundcover is to be used below an ornamental tree, then the height should be limited to a maximum of 18 inches and the plants should receive regular irrigation. 5.) Irrigated lawns are a desirable fire resistant element. 6.) Non-irrigated grass areas require annual mowing to a maximum three-inch height. Defensible Space Zone III: This zone extends from 50 to 100 feet from building structures. The same guidelines as described above should be applied. It is advised that the overall landscape be less dense with greater separation between planting islands. Tree clearance and pruning requirements are the same. All pyrophytic plant species should be removed from this zone, including small diameter firs, bays, and madrones. [1] Pyrophytic plant-fire prone plant which ignites quickly and burns intensely

Revisions:

2 04/08/10 EIR RECONCILIATION

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FIRE HAZARD & OPEN SPACE MANAGEMENT PLAN

650 NORTH SAN PEDRO ROAD
Prepared for: West Bay Builders
A.P.N.'s: 180-231-05, -06, -07, -09, & 180-291-04

Date:	April 8, 2010
Scale:	1" = 30.0'
Drawn by:	JDG
Approved by:	DLB

LICENSED LANDSCAPE ARCHITECT · Donald L. Blayney · No. 3370 · STATE OF CALIFORNIA
Signature
12/31/2010
Renewal Date
Date

Sheet Number
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APPENDIX I

LETTER FROM CONSULTING BIOLOGIST

ENVIRONMENTAL COLLABORATIVE

Consultation • Documentation • Restoration
1268 64th Street • Emeryville, CA 94608
Phone 510/654-4444 • FAX 510/655-4444

MEMORANDUM

TO: Kyle Simpson
Design Community & Environment
1625 Shattuck Avenue, Suite 300
Berkeley, CA 94608

DATE: 22 September 2010

FROM: Jim Martin
ENVIRONMENTAL COLLABORATIVE

SUBJECT: Review of Driveway to Lot 12
650 North San Pedro Road
San Rafael, California

As requested, I've performed a review of the Tree Mitigation Plan, Project Grading Plan and Final EIR to confirm whether the driveway to Lot 12 is adequate with respect to the wetland conservation area setback. The revised Tree Mitigation Plan by MacNair & Associates shows native valley oak and California buckeye plantings between the proposed driveway to Lot 12 and the wetland area, and additional California buckeye and coast live oak plantings along the east side of the driveway and frontage to San Pedro Road, all of with would be appropriate for those locations. The Grading and Drainage Plan for the project shows the limits of new fills and the wetland replacement and drainage filtration areas between the proposed driveway and wetland area, all of which could be accommodated as shown.

As discussed in the Final EIR, Marin Countywide Plan Policy **BIO 3.1 Protect Wetlands** calls for establishing a minimum 100-foot setback from jurisdictional wetlands for parcels of 2 acres in size or greater in the City-Centered Corridor. Exceptions to this setback requirements are allowed where the net functions and values of the actual jurisdictional wetland are not significantly compromised. The entire driveway and both residences on Lot 12 would fall within the 100 foot setback from the limits of jurisdictional wetlands on the site. GANDA has concluded that due to the degraded condition of the existing wetland and the area surrounding the wetland, it is feasible to develop within the 100-foot setback of this particular wetland and still improve wetland functions and values at the same time. Mitigation Measures BIO-5a through BIO-5g of the Final EIR address the potential impacts to wetlands.

APPENDIX J

TREE REPORT AND LETTER FROM ARBORIST

MACNAIR & ASSOCIATES

CONSULTING ARBORISTS AND HORTICULTURISTS

650 NORTH SAN PEDRO ROAD
TREE INVENTORY AND EVALUATION
(Revised)

Marin County, California

October 7, 2007

MACNAIR & ASSOCIATES
CONSULTING ARBORISTS AND HORTICULTURISTS

650 North San Pedro Road
Tree Inventory and Evaluation (Revised)

Marin County, California

October 7. 2007

PREFACE

This report was prepared at the request of Thompson Development, Inc (previously West Bay Builders), developer of the property at 650 North San Pedro Road in Marin County. This report is a revised version of the March 9, 2007 report documenting trees growing on the project site within areas subject to impact as shown on the Grading and Drainage Plan prepared by ILS Associates, dated November 2006. The evaluated trees are shown on the Existing Tree Inventory and Removal Plan prepared by Donald Blayney and Associates dated March 2007.

This revised report responds to recommendations contained in the September 13, 2007 peer review report prepared by Garcia and Associates.

James MacNair, principal of MacNair and Associates, ISA Certified Arborist WE-0603A, and Member American Society of Consulting Arborists prepared this evaluation and report.

Unless expressed otherwise, the information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection. The inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in questions may not arise in the future.

POST OFFICE BOX 1150 • GLEN ELLEN, CA 95442 • FAX: 707.938.1837 • PHONE: 707.938.1822

Table of Contents

650 North San Pedro Road- Tree Inventory and Evaluation

650 NORTH SAN PEDRO ROAD TREE INVENTORY AND EVALUATION (REVISED)

INTRODUCTION

This report is a revised version of the March 9, 2007 report that documented the results of an inventory and evaluation of 292 trees growing within or near the proposed building lots and driveways of the 650 North San Pedro Road project site. The project is located in an unincorporated area near north San Rafael and consists of 12 new residential lots with new access driveways. This revised report responds to recommendations contained in the September 13, 2007 peer review report prepared by Garcia and Associates.

The 14.8-acre site consists of mixed oak woodlands as well as introduced plantings of blue gum eucalyptus, Monterey pine, and a non-native seasonal wetland containing a limited number of native willow species. A significant portion of the oak woodlands are in marginal condition due to old fire damage, high tree densities, and oak tree death due to probable SOD infection (*Phytophthora ramorum*). The high density of trees has resulted in overcrowding, excessive shade, and decreased vigor due to competition for limited soil, sunlight, and water resources. Many portions of the project site are heavily infested with stands of French broom.

The project site has not been proactively managed for many years. Numerous trees are in decline due to overcrowding, decay, and pest and disease problems, with many trees recommended for removal due to their poor health, and/or hazardous structural condition. The risk of wildfire is high due to the crowded woodland conditions, the presence of pyrophytic tree species, dense ground fuel, and the high number of declining trees with excessive amounts of dead wood in the tree canopy.

Assignment

The purpose of this evaluation is to:

- Assess the health and structural condition of the trees growing within and bordering the proposed project construction limits.
- Assess the probable construction impact of the evaluated trees based upon the preliminary grading and drainage plans.
- Establish the number of protected trees requiring removal as defined by Section 22.27.020 of the Marin Development Code. The ordinance provides that the tree protection and preservation measures of the code only apply to “protected trees” as defined in Article VIII of the code. Article VIII then refers to a list of ‘Trees Native to Marin County’ that is maintained by the Marin Community Development Agency–Planning Division.

The evaluated trees are tagged and numbered with tree locations shown on the Existing Tree Inventory and Removal Plan prepared by Donald Blayney and Associates dated March 2007. Two hundred and ninety-two trees are evaluated as part of this report with all of the trees located within the project limits.

The Existing Tree Inventory and Removal Plan is based upon the 650 North San Pedro Road Grading and Drainage Plan prepared by ILS Associates. This grading and drainage plan depicts existing trees, property boundaries, and proposed grading limits and is the basis for determining impact to trees from the proposed property improvements. Existing on-site staking for brush

clearing does not reflect future grading limits and was not used to assess probable construction impact.

Evaluated trees include all native species with trunk diameters (measured at 4.5 feet above grade, or dbh) of 6 inches or larger (although numerous smaller diameter trees are also included) and non-native species of with trunk diameters of 8 inches or greater. Small diameter blue gum eucalyptus stems with less than 12 inch diameters in dense grove areas were omitted for clarity of the inventory and are not considered significant given the grove characteristics.

Two small *Acacia dealbata* (5" dbh) were not included in evaluation, but are noted on the original tree numbering plan. This tree species is generally considered undesirable and these specific trees were not considered large enough to meet the threshold for inclusion in the inventory. The individual tree evaluation data is provided on the attached tree database (Appendix A).

Tree Condition Discussion:

Following is a summary discussion generally describing the condition of the various tree species occurring on the project site.

Blue gum eucalyptus (*Eucalyptus globulus*):

Windrow plantings of blue gum eucalyptus have naturalized in various portions of the project and comprise over one third (107) of the evaluated trees. The original plantings occur along North San Pedro Road frontage and in sporadic locations near the pond area and above the existing residence. Blue gum eucalypts are subject to high rates of limb failure as well as windthrow and are considered hazardous when located near homes and roadways. The blue gums at this site are rated as poor to marginal in both health and structural condition.

There is significant age distribution in the eucalyptus population with evaluated trees ranging from approximately 12-inch trunk diameters (at 4.5 feet above grade) to 36 inches and occasionally larger. The older trees tend to have very large and open limb structures with heights exceeding 90 to 100 feet and crown diameters often extending 60 to 80 feet. The younger trees tend to have narrow, high branch structures (low crown to height ratios) with low trunk taper due to growing in a shaded woodland environment. A significant number of the mature trees have low, multiple trunk structures due to topping procedures occurring many years previously.

The eucalyptus long-horned borer (*Phoracantha semipunctata*) (ELB), with contributing damage by the eucalyptus tortoise beetle *(Trachymela sloanei*) (ETB), have killed or severely damaged a significant number of standing trees. All of the blue gums were observed to have varying degrees of foliar damage from the eucalyptus tortoise beetle. Dead trees and limbs killed by ELB are common throughout the site.

In addition to the insect infestations, the eucalypts have various structural problems associated with limb and trunk attachment defects, trunk decay or damage, and weak structure development due to shade suppression. The eucalyptus located upslope and overhanging the electrical lines on San Pedro Road are a significant risk with limb failure and entire tree windthrow common in this tree species. The location of these trees on the lower slopes of the site in combination with the excessive fuel loads on the site constitute a high fire risk for the project site and woodlands surrounding the property. The trees in the northwest corner of the site were observed to have trunk and limb fire damage indicating at least a small fire has already occurred on the site.

Blue gum eucalyptus produce large amounts of foliage, bark, and seed capsule litter. This litter has high oil content and effectively suppresses growth or establishment of understory trees or shrubs. In addition to tree litter, eucalypts are capable of transpiring large amounts of water. The combination of dense litter and high water use allows eucalyptus to out compete and displace native plant species. Consequently, these tree species are classified as naturalized exotics and a pest in natural environments.

Bay laurel (California bay) (*Umbellularia californica*):

The bay laurels are located throughout the project limits with most trees relatively young. A limited number of semi-mature trees are also present with most having multiple trunk structures originating as basal sprouts. Many of the young trees are growing in shaded conditions and have developed narrow high-branched structures, often forming canopies over adjacent oaks and madrone.

The bay laurels are generally in moderate condition. The older, multiple trunk trees tend to have trunk attachment and decay defects. Bay laurels are considered a primary host of the SOD pathogen with numerous bay laurels exhibiting foliar symptoms of SOD infection.

Black oak (*Quercus kelloggii*):

The 15 black oaks range in maturity from young to semi-mature. Their condition is variable with the younger trees tending to have better vigor and structural condition. Most of the mature trees have significant decay issues with three of the trees rated as in poor structural condition. Dead black oaks were observed in the upper portion of the site with their decline likely due to SOD infection.

Coast live oak (*Quercus agrifolia*):

The coast live oaks occurring within the project limits generally range in maturity from young trees to semi-mature. A few mature trees over 30 inches in trunk diameter are located within the project limits. The upper portion of the site has a significant number of dead and collapsed trees, likely due to SOD infection.

A majority of the trees are in fair condition with vigor affected by shade suppression, competition from non-native species, and insect problems. In areas of high woodland density, the shading has also affected the structural forms of the trees, creating trees with high-branched structures (low crown to height ratio) and low trunk taper. Where trees are growing in more open exposures and away from SOD infected bay laurels, they are in significantly better health and structural condition.

Valley oak (*Quercus lobata*):

Eleven valley oaks are located within the project limits. Four are mature trees with two in marginal condition and one in decline with extensive decay. One of the marginal trees is growing adjacent to the seasonal drainage channel with most of its structural root system exposed by erosion. The remaining seven trees are in variable condition with most of the small trees shade suppressed. Valley oaks are recommended as a primary replacement tree due to its resistance to SOD infection and the history of valley oaks on the site.

Madrone (*Arbutus menziesii*):

A majority of the madrone are in marginal health and/or structural condition due to old fire damage, excessive shading, and infection from the fungal disease *Botryosphaeria dothidea*. Most of the 35 madrone growing within the project area are small trees with trunk diameters of 10 inches or less. Many have leaning and high-branched structures due to locations below larger trees.

Monterey pine (*Pinus radiata*):

The Monterey pines are in marginal health due to this species susceptibility to bark beetle infestations. The pine disease, pine pitch canker (*Fusarium circinatum*), does not appear established in the Monterey pine population on this site, although the disease is well established in most areas of Marin County.

The most significant issue is the history of tree windrow that has occurred on the site. Numerous mature pines have collapsed with one nearly missing the existing residence last winter. The pines tend to be shallow rooted with limited top soils and a high susceptibility to windthrow and large limb failure.

Miscellaneous Tree Species:

Other tree species occurring on the site include blackwood acacia (*Acacia melanoxylon*), *Acacia dealbata*, coast redwood (*Sequoia sempervirens*), Canary Island pine (*Pinus canariensis*), Japanese pagoda tree (*Sophora japonica*), Citrus (*Citrus spp*.), Crabapple (*Malus* spp.), Deodar cedar (*Cedrus deodara*), incense cedar (*Calocedrus decurrens*), pink ironbark (*Eucalyptus sideroxylon* 'Rosea'), plum (*Prunus cerasifera*), and willow (*Salix* spp.).

Health and structural condition of the trees varies with most in varying degree of chronic drought stress. The Canary island pines are mature trees with high-branched structures, with one of the pines having a significant lean due to shading during its early development.

Inventory Methodology

The individual trees within proposed construction areas (building envelopes, driveways, and grading limits) were evaluated for the following information:

Tree number
Tree species
Number of trunks and trunk diameter (4.5' above grade)
Height and crown diameter
Health and structural ratings
Comments/Observations
Suitability for Preservation
Assessment of construction impact
Protected tree status

Health and Structural Ratings and Descriptions:

The following chart describes the health and structural rating system used in the evaluation. It is a rating of relative conditions such as vigor, extent of decay, structure, and insect or disease problems. Good and moderate ratings indicate limited structural problems, acceptable vigor, and

an absence of significant pest or disease problems. Poor and marginal ratings indicate serious health or structural problems especially if the tree is situated near structures or public areas. Trees rated as poor or marginal are often hazardous.

Rating Chart:

4	Good condition	Relatively minor structural concerns and no serious insect or disease problems.
3	Moderate condition	Normal and correctable problems of structure or pests and diseases.
2	Marginal condition	Indicates serious problems with structure, decay, or significant insect or disease problems.
1	Poor condition	Indicates very poor health, vigor, or hazardous structural condition

Trees may be rated between two conditions, such as 2.5 or 3.5. This indicates the tree does not precisely meet the criteria for either of the two categories and allows the rating system to be used as a continuum. The health defect descriptions describe the basis for the health and structural rating. The specific pests, disease, and structural defects observed are described and identified where possible.

This evaluation is of above ground structures only, and additional defects may exist at root collars or within the root systems. Many of the larger mature and over-mature trees in areas of the proposed improvements may require root collar examinations to evaluate the primary structural roots and root collar for decay and disease.

PROJECT CONSTRUCTION

An evaluation of the current grading and drainage plan (ILS Associates, November 2006) indicates 200 trees are within the project's grading limits and require removal. Of these 200 trees, 5 are dead and 145 are rated as having poor or marginal suitability for preservation due to the condition of the tree. Fifty-one of the removed trees are rated as having moderate to good suitability for preservation.

An additional 47 trees are located relatively close to grading limits and are listed as 'possibly impacted'. These trees will require specific tree protection procedures to retain these trees. Additionally, 16 eucalyptus, acacia, and Monterey pine are recommended for removal due to their susceptibility to structural failure and locations close to future residences and roadways. Twenty-nine trees are located a sufficient distance from grading limits to assume there will be no impact.

Protected Trees:

Section 22.27.020 of the Marin Development Code provides that the tree protection and preservation measures of the code only apply to "protected trees" as defined in Article VIII of the code. Article VIII then refers to a list of 'Trees Native to Marin County' that is maintained by the Marin Community Development Agency – Planning Division. The tree inventory found seven species of trees (bay laurel, black oak, coast live oak, coast redwood, madrone, valley oak, and willow) that met the definition of a 'protected tree'. The provisions of the Development Code

prohibit the removal of a 'protected tree' without first requesting and receiving a tree removal permit.

List of Protected Tree Species Occurring On-Site and Minimum Trunk Diameter Requirement

Botanical Name	Common Name	Minimum Trunk Diameter
Arbutus menziesii	madrone	6 inches
Quercus agrifolia	coast live oak	6 inches
Quercus kelloggii	California black oak	6 inches
Quercus lobata	valley oak	6 inches
Salix spp.	willow	6 inches
Sequoia sempervirens	coast redwood	10 inches
Umbellularia californica	California bay (bay laurel)	10 inches

Section 22.27.100 of the Marin Development Code establishes mitigation measures for the removal of trees protected under the provisions of Chapter 22.27. Mitigation must be provided for all trees removed except for those trees exempted under Section 22.27.040. A tree meeting any one of the criteria listed in Section 22.27.040 is exempt from the provisions of Chapter 22.27 including the mitigation requirements of Section 22.27.100.

The attached Table A lists the tree species occurring within the project limits and the current assessment of construction impact. The trees qualifying as 'protected' trees are also shown as well as the exempted trees due to poor condition (where "the general health of the tree is so poor due to disease, damage, or age that efforts to ensure its long-term health and survival are unlikely to be successful").

Table A

Tree Species	Total Number	Removed for Construction	Recommended for Removal	Possible Impact	No Impact	'Protected' Trees Removed	Exempted Protected Trees Removed
Acacia dealbata	1	1	0	0	0	n/a	
bay laurel	42	29	0	8	5	19	3
black oak	15	4	0	9	2	4	1
blackwood acacia	5	3	2	0	0	n/a	
blue gum eucalyptus	107	94	13	0	0	n/a	
Canary Island pine	4	4	0	0	0	n/a	
Chinese pistache	1	1	0	0	0	n/a	
citrus	1	1	0	0	0	n/a	
coast live oak	42	21	0	15	6	19	1
coast redwood	1	1	0	0	0	1	0

Tree Species	Total Number	Removed for Construction	Recommended for Removal	Possible Impact	No Impact	'Protected' Trees Removed	Exempted Protected Trees Removed
crabapple	1	1	0	0	0	n/a	
Deodara cedar	4	4	0	0	0	n/a	
incense cedar	3	3	0	0	0	n/a	
madrone	35	17	0	8	10	16	3
Monterey pine	12	11	1	0	0	n/a	
pink ironbark	2	2	0	0	0	n/a	
plum	1	0	0	1	0	n/a	
valley oak	11	3	0	4	4	3	1
willow	4	0	0	2	2	0	0
Totals:	292	200	16	47	29	62	9

TREE PROTECTION PROCEDURES

Development of the project infrastructure, including roads, utilities, drainage facilities, etc. will alter the natural terrain and affect existing trees growing close to the construction areas. Impacts will primarily occur as a result of the site grading requirements. The following guidelines are recommended to maximize tree survivability. These are general tree protection specifications and specific procedures and recommendations will be prepared once final construction plans are approved.

1.0 Tree Protection Zone

1.1 All construction activity (grading, filling, paving, landscaping) will respect a Tree Protection Zone (TPZ) around trees to be protected. The TPZ will be a distance of one-foot radial distance from the trunk for each one-inch of trunk diameter. Exceptions to this standard may occur depending upon the age and condition of individual trees.

2.0 Construction Observation and Supervision

2.1. All arboricultural and related soil work should be performed under the observation of an International Society of Arboriculture (ISA) Certified Arborist, or County designated representative.

2.2. All specified arboricultural work should be completed prior to site grading (root pruning, canopy pruning, fencing, etc.)

2.3. The contractor is required to meet with the Supervising Arborist or County designated representative to review all the tree protection requirements.

3.0 Tree Protection Fencing

3.1 Fencing at a minimum of four feet in height and clearly marked to prevent inadvertent encroachment by heavy machinery should be installed either at the edge of the Tree

Protection Zone (TPZ), crown drip line (whichever is further from the trunk), or at the edge of the construction zone if the construction zone protrudes into the TPZ. The Supervising Arborist, or County designated representative, should approve location of fencing. All fencing should be in place prior to any site grading.

3.2. Contractor should maintain the protection fencing and prohibit all access to fenced areas by construction personnel or equipment until all site work is completed.

3.3. All structures including construction trailers, equipment storage areas and any other construction traffic are prohibited within fenced areas. Burning or debris piles are prohibited within fenced areas. No materials, equipment, spoil, waste, or washout water should be deposited or stored within fenced areas. Fences may not be moved without written permission of the Supervising Arborist or County designated representative.

3.4 If temporary access within a fenced area is determined to be necessary, then a six-inch layer of bark mulch should be placed in all areas requiring access. This requirement for mulching should apply to all areas within the fenced area and subject to access. If equipment access is required, then the mulch should be overlaid with metal plates of sufficient thickness to adequately distribute bearing load.

4.0 Demolition/Site Clearing

4.1 A qualified arborist should review any tree removal work within 50 feet of a TPZ. Trees requiring removal should be felled away from protected trees. Roots of trees to be removed may require pruning with approved root cutting equipment prior to felling if intermingled with roots of retained trees.

4.2 Excavation equipment should operate from outside the TPZ. Brush and wood chips generated from tree and brush removal should be placed in the TPZ To a maximum depth of six inches.

4.3 All required pruning should conform to the pruning section of these guidelines.

4.4 All brush removal should be performed with hand equipment when within a TPZ.

5.0 Site Grading, Trenching, and Root Pruning

5.1 Keep site grading within designated construction zones. Grading cuts or trenching within the TPZ of a retained tree trunk requires special trenching procedures. Trenches should be dug manually with an air spade or with the use of a root cutting machine, rock cutter, or other approved root-pruning equipment. This root-pruning trench should be placed one foot inside the edge of the grading cut or trench edge. The depth of the trench should equal the depth of the grading cut to a maximum depth of 40 inches.

5.2 A trench may be mechanically dug toward a tree until the edge of the TPZ is reached. From the edge of the TPZ, the special trenching procedures should apply.

5.3 Underground utilities, drain, and irrigation lines should be routed outside the TPZs. When lines must cross the TPZ, the lines should be bored or tunneled through the area at a depth approved by the supervising arborist. In these instances, a single shared utility conduit should be used to reduce impacts to trees.

5.4. Any roots one inch in diameter or larger requiring removal should be cut cleanly in sound tissue. The roots and surrounding soil should be moistened and covered with a thick mulch (4") to prevent desiccation. No pruning seals or paints should be used on wounds. Cut and exposed roots should be protected from drying. A water absorbent material (i.e. burlap) should be secured at the top of the trench and should be draped over the exposed roots. This material should be kept moistened and soil should be replaced as soon as practicable.

5.5 Use of retaining walls is recommended to protect retained trees rather than mass grading.

5.5. Fill placement areas covering 30% or more of the TPZ of trees larger than 24 inches dbh and over one foot in depth should be mitigated with a retaining wall or well. Installation of aeration systems may also be required depending upon the extent, depth, and type of the fill.

5.6 The established method for protecting trees subjected to deep grading fills is to construct a well around the trunk and install an aeration system over the root system at the original grade level. The aeration system utilizes perforated plastic pipe laid out in a radially spoked pattern from the tree well with vertical pipes providing connection to surface oxygen and water. This aeration system should facilitate drainage away from the trunk. The fill is then placed over the aeration system.

5.7 Porous pavements are recommended for use within the TPZ. Construction of the pavement sub-base should avoid grading cuts where possible.

6.0 Foundation and Wall Construction

6.1. Foundation construction within the TPZ of retained trees is recommended to be either a pier and grade beam construction which bridges root areas, cantilevered structures, or raised foundations using pier footings.

6.2 Wall construction within a TPZ should be a design that requires minimal excavation within the TPZ. Walls requiring over-excavation for tieback structures should not be used within a TPZ.

7.0 Site Drainage

7.1 All grading shall be designed to provide positive drainage away from the base of the tree trunk, and not create ponding within the TPZ.

7.2 Drainage features such as v-ditches and French drains will be utilized upslope from existing trees to divert runoff away from roots and the TPZ. These v-ditches are best-utilized downslope of any irrigated landscape areas.

8.0 Pruning and Cabling

8.1 Any tree pruning, cabling, or other similar activity which may be proposed as part of site construction will be included on site plans and be reviewed by a qualified arborist or City representative.

8.2 Pruning methods shall conform to the ANSI A 300-2001 Pruning Standard Practices and be performed by an ISA Certified Arborist or Certified Tree Worker. Cabling or other support systems shall conform to the ANSI A 300 (part 3)-2000 Standard Practices

9.0 Tree Damage Mitigation

9.1 Trees damaged during construction shall be evaluated by the Supervising Arborist or City representative. Proper mitigation measures shall be specified and may include:

a.) Pruning of damaged and dead wood.
b.) Installation of a drip irrigation system to provide supplemental irrigation for three to five seasons following damage.
c.) Proper low nitrogen fertilization timed to growth response and phenological development of the tree.
d.) Periodic hazard evaluation of tree.
e.) Replacement of tree per city requirements.
f.) Alleviation of severe compaction by vertical mulching with augers or hydraulic soil probes.
g.) Alleviation of surface compaction by light cultivation or raking and the application of a mulch.

Post-Construction Recommendations:

Retained trees subject to significant construction impact are recommended to receive the following cultural procedures:

1.0 Drip Irrigation System:

An in-line emitter drip system is recommended for placement at edge of the canopy drip line for trees subject to construction impact. The emitters should have a 2-gallon per hour flow rate and be spaced at 24 inches on center. This system should be installed for all trees deemed important to preserve and which would benefit from supplemental irrigation.

Irrigate one time per month from May through September for ten hours. If excessive run-off occurs reduce run time by 50% and repeat application in two days.

2.0 Fertilization (Under Recommendation of Supervising Arborist)

Post-construction a slow release nitrogen formulation should be applied in non-graded areas in a 10-foot wide band at the canopy edge. Rate of application should be .5-pound actual nitrogen per 1000 square feet. Timing of application is in November after winter rains have begun. The supervising arborist shall determine all fertilization requirements.

3.0 Mulch Application:

Apply a four to six inch depth of bark mulch below and 10 feet beyond canopy where appropriate.

4.0 Pest and Disease Control:

Pit scale, bark beetles, and other significant insect infestations, as well as mistletoe and disease problems are to be controlled as part of intra- and post-construction maintenance procedures.

5.0 Soil Scarification:

Compacted soil areas below and within 10 feet of canopy areas require shallow scarification to improve soil porosity. Soils should be tilled to a depth of four inches by discing or ripping.

The insect/pathogen syndrome named Sudden Oak Death (SOD) (Western oak bark beetle, ambrosia beetle, and *Phytophthora ramorum* fungus) is infecting and killing live oak (*Quercus agrifolia*) and black oak (*Quercus kelloggii*) in Marin, Napa, and Sonoma Counties. Trees, which are over mature, stressed, fire damaged, and/or damaged are particularly susceptible to attack. Symptoms of SOD were observed on this site.

Following are general recommendations pertaining to management of this insect/disease syndrome:

1.) Oaks should be checked during the months of March to October for symptoms of bark beetle infestations. Trees with symptoms or trees deemed critical for preservations should be sprayed with permethrin (Astro®) from soil level to at least eight feet above grade. Certain fungicides (phosphonates) are now approved for use to prevent and treat SOD infections.

2.) Dead trees are likely to drop limbs or collapse completely. Dead trees located close to construction areas or where they may be hazardous should be removed promptly.

3.) All removed trees and pruning debris should be retained on site or disposed of at a local landfill site (check with the County Agricultural Commissioner for approved locations). Do not transport dirt from infected sites.

4.) Prune oaks only during the months of June to August. Pruning of live wood should be avoided, if possible. Damaged, dead, or low vigor limbs should be removed. Sanitize pruning equipment with Lysol, 70% alcohol, or 10% bleach prior to pruning healthy trees or working in a disease free area.

5.) Any stumps should be cut as close to the ground as practical. Stump grinders should not be used to avoid contamination of the grinder.

6.) Prompt treatment of insect foliar pests (oak worm, loopers, tent caterpillars) should be done to prevent further stress of trees.

7.) Provide supplemental irrigation during summer months (May though September) to oaks subject to root loss from construction or if trees are drought stressed due to insufficient rainfall. Irrigation can be applied with drip lines or soaker hoses and should be limited to a ten-foot band at the canopy edge. Frequency of irrigation should be every three to six weeks depending upon soil and root depth.

8.) Avoid soil compaction and excessive irrigation near oaks. Provide positive drainage away from tree trunks.

Landscaping

The following guidelines apply to landscaping around native oak trees.

Planting Issues:

a.) Do not plant within 10' of the trunk. Use deep mulches (4") in this area.

b.) Do not allow irrigation to spray on trunk or within a 15' radius of the trunk.

c.) Do not plant lawn or high water requiring groundcovers. Use drought tolerant plants that require minimal irrigation.

d.) Irrigation frequencies should be no more than once every three weeks May through November. Choose irrigation systems that best fit the needs of the plants. This can be drip (with multiple emitters), bubblers, or low volume spray heads.

e.) Do not over plant. Use wide plant spacing to increase the drought tolerance of the plants and to limit competition with the oak.

f.) Fertilize only in late winter and only as needed. Plants naturally adaptive to oak woodlands will require minimal fertilization.

Appendix A
Tree Evaluation Database

650 North San Pedro Road- Appendix A Tree Inventory and Evaluation

Health and Structural Rating Key: 3.0 = moderate or better condition
2.5 = marginal to moderate
2.0 = marginal condition
1.5 = poor to marginal condition
1.0 = poor condition

Construction Impact Code: RC= Removal Due to Construction
RR- Removal Recommended Due to Condition
PI= Possible Impact- Tree Protection Required
NI= No Impact

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
1	blue gum eucalyptus (Eucalyptus globulus)	34"	1	80'-100'±	60'-80'±	2.0	2.0	Mature tree with moderately asymmetrical crown extending to south. Fire scarring observed on lower trunk. Vigor is low with significant branch and twig dieback occurring. History of limb failure. Tortoise shell beetle foliar damage observed.	Poor	Grading cut to west for existing wall and drain line. Located outside proposed grading limits.	No		RR
2	blue gum eucalyptus	30"	1	80'-100'±	60'-80'±	2.0	2.0	High-branched crown structure (low crown to height ratio). Fire scarring on trunk base. Vigor is low with significant branch and twig dieback occurring. History of limb failure. Tortoise shell beetle foliar damage observed.	Poor	Fill soils placed on north side of tree. Located outside proposed grading limits.	No		RR
3	coast live oak (Quercus agrifolia)	8"	1	30'±	20'±	2.5	2.0	Young tree with significant trunk damage from wall construction. Also old fire damage and trunk charring. Vigor and foliage density are moderate.	Marginal	Fill soils currently placed at base of tree. Located outside proposed grading limits.	Yes		NI
4	coast live oak	5"; 9.5"	2	30'±	25'±	2.5	2.5	Young tree with co-dominant trunks forming at base. Tree is moderately shade suppressed. Possible SOD infection with Hypoxylon fruiting bodies and bleeding occurring. Smaller trunk has been damaged from grading equipment.	Marginal	Fill soils placed around tree. Located outside proposed grading limits.	Yes		NI
5	coast live oak	5.5"	1	25'±	15'±	2.5	2.0	Small tree with high-branched structure. Tree is shade suppressed with significant fire scarring present. Limited trunk damage and fill soils observed. Vigor and foliage density are moderately low.	Marginal	Fill soils placed around tree. Located outside proposed grading limits.	No		NI
6	bay laurel (Umbellularia californica)	5.5"	1	35'±	25'±	3.0	2.5	Young tree with no significant structural defects. Limited trunk damage present. Vigor and foliage density are moderate.	Moderate	Located 15' from future drainage easement.	No		NI
7	coast live oak	4.5"	1	15'±	12'±	2.5	3.0	Young tree, moderately shade suppressed. No significant structural defects observed. Vigor and foliage density are moderately low.	Moderate	Located approximately 6' from future drainage easement.	No		PI
8	blue gum eucalyptus	15"-24"	5	90'-100'±	60'-80'±	2.0	1.5	Low, multiple trunk structure with significant lower trunk damage. Grove edge tree with asymmetrical structure extending over roadway.	Poor	Located adjacent to drainage easement.	No		RR

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
9	blue gum eucalyptus	13"-18"	4	90'-100'±	60'-80'±	2.5	2.0	Multiple trunk structure forming at grade. Vigor and foliage density are typical with tortoise shell damage present.	Poor	Located adjacent to drainage easement.	No		RR
10	blue gum eucalyptus	10"; 10"; 14"	3	60'±	40'±	2.5	2.0	Low, multiple trunk structure with narrow trunk attachments. Vigor and foliage density are moderately low, with ETB damage.	Poor	Located within drainage easement.	No		RC
11	blue gum eucalyptus	7"; 18"; 20"	3	90'±	40'±	2.5	2.0	Low, multiple trunk structure with narrow trunk attachments. High-branched structure. Vigor and foliage density are moderately low, with ETB damage. Fire scarring on trunk.	Poor	Located within drainage easement.	No		RC
12	blue gum eucalyptus	24"; 32"	2	80'±	60'±	2.5	2.0	Low, co-dominant trunk structure, moderately asymmetrical. Bark ridge at trunk union with possible internal fracture. Areas of twig dieback occurring in crown.	Poor	Located within drainage easement.	No		RC
13	blue gum eucalyptus	6"; 18"	2	90'±	40'±	2.5	2.0	Narrow, high-branched structure with co-dominant trunks forming at 25'. Vigor and foliage density are moderately low, with ETB damage.	Poor	Located within 10'-15' of proposed grading limits for San Pedro Road.	No		RC
14	blue gum eucalyptus	14"	1	80'±	30'40'±	2.5	2.5	High-branched structure with bow in upper trunk towards roadway. Vigor and foliage density are variable.	Poor	Located within 10'-15' of proposed grading limits for San Pedro Road.	No		RC
15	blue gum eucalyptus	43"	1	100'±	70'±	2.5	2.0	Dominant tree in area with moderately asymmetrical structure extending to south. High voltage lines are below extended limbs. Vigor and foliage density are moderate, with ETB damage.	Poor	Existing water line is located west of tree. Located within 10'-15' of proposed grading limits for San Pedro Road.	No		RC
16	blue gum eucalyptus	7"; 10"	2	20'±	10'±	2.0	1.5	Tree has been topped below high voltage electrical lines.	Poor	Located within 10'-15' of proposed grading limits for San Pedro Road.	No		RC
17	blue gum eucalyptus	4"; 6"; 9"; 11"	4	50'±	25'±	2.0	2.0	Small tree topped below electrical lines. 11" trunk is shade suppressed.	Poor	Located within 10'-15' of proposed grading limits for San Pedro Road.	No		RC
18	blue gum eucalyptus	30"	1	90'±	50'-65'±	2.5	2.0	High-branched structure. Vigor and foliage density are variable.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
19	blue gum eucalyptus	12"; 14"	2	40'±	20'±	2.0	1.5	Tree has been topped below high voltage electrical lines.	Poor	Located within 10'-15' of proposed grading limits.	No		RC

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
20	blue gum eucalyptus	24"	1	90'±	40'-50'±	2.5	1.0	Serious trunk defect observed at 25' on south side of trunk.	Poor	Located within 10'-15' of proposed grading limits for San Pedro Road.	No		RC
21	blue gum eucalyptus	18"	1	90'±	40'-50'±	2.5	2.0	Tree has moderately asymmetrical structure and lean over roadway. Vigor and foliage density are moderately low, with ETB damage.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
22	blue gum eucalyptus	24"	1	90'±	40'-50'±	2.5	2.5	High-branched structure. Vigor and foliage density are variable.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
23	blue gum eucalyptus	24"	1	90'±	40'-50'±	2.5	2.5	High-branched structure. Vigor and foliage density are variable.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
24	blue gum eucalyptus	11"	1	60'±	45'±	2.0	2.0	Structure is bowed over roadway. Vigor and foliage density are low.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
25	blue gum eucalyptus	10"	1	45'±	35'±	2.0	2.0	Shade suppressed tree with bowed structure extending over roadway.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
26	blue gum eucalyptus	17"	1	90'±	40'±	2.5	2.0	High-branched crown structure (low crown to height ratio) with possible fire scarring on trunk base. Vigor is low with significant branch and twig dieback occurring. History of limb failure. Tortoise shell beetle foliar damage observed.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
27	blue gum eucalyptus	10"	1	40'±	20'±	0.0	0.0	Tree is dead with eucalyptus longhorned borer (ELB) galleries.	Dead	Located within 10'-15' of proposed grading limits.	No		RC
28	blue gum eucalyptus	24"	1	90'±	40'-50'±	2.5	2.0	High-branched structure. Vigor and foliage density are variable.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
29	blue gum eucalyptus	36"	1	90'±	40'-50'±	2.0	2.0	Asymmetrical structure extending to the southwest. Heavy limb structure. Significant branch and twig dieback occurring in portions of crown.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
30	blue gum eucalyptus	12"	1	60'±	30'±	2.0	2.0	High-branched structure with co-dominant trunks forming at 25'. Tree is shade suppressed.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
31	blue gum eucalyptus	24"	1	80'±	40'±	0.0	0.0	Tree is dead with eucalyptus longhorned borer (ELB) galleries.	Dead	Located within 10'-15' of proposed grading limits.	No		RC
32	blue gum eucalyptus	18"	1	80'±	40'±	1.5	2.0	Asymmetrical structure extending to the south. Vigor and foliage density are low with significant branch dieback occurring.	Poor	Located within 10'-15' of proposed grading limits.	No		RC

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
33	blue gum eucalyptus	24"	1	90'±	40'-50'±	2.5	2.0	High-branched structure with weak limb structure. Vigor and foliage density are moderately low due to shade suppression.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
34	blue gum eucalyptus	26"	1	60'±	40'±	0.0	0.0	Tree is dead with eucalyptus longhorned borer (ELB) galleries.	Dead	Located within 10'-15' of proposed grading limits.	No		RC
35	blue gum eucalyptus	36"	1	90'±	40'-50'±	2.5	2.0	High-branched structure with bow in upper trunk towards roadway. Vigor and foliage density are variable. Lower trunk scarring from fire.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
36	blue gum eucalyptus	30"	1	90'±	60'±	2.5	2.0	High-branched crown structure (low crown to height ratio). Fire scarring on trunk base. Vigor is low with significant branch and twig dieback occurring. Large horizontal limbs present.	Poor	Located within 10'-15' of proposed grading limits.	No		RC
37	coast live oak	8"; 11"; 11"	3	30'±	30'±	3.0	3.0	Low, multiple trunk structure with moderately asymmetrical form extending to the north. Tree is moderately shade suppressed from eucalyptus canopy. No significant structural defects. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC
38	coast live oak	12"; 13"	2	30'±	30'±	3.0	3.0	Low, co-dominant trunk structure, moderately asymmetrical to north. Growing below large valley oak and is moderately shade suppressed. No significant structural defects observed.	Moderate	Located within project grading limits.	Yes		RC
39	coast live oak	43" (low)	2	55'±	60'-70'±	3.0	3.0	Mature tree with co-dominant trunks forming at 5'. Wide, open limb structure with limited limb decay. Vigor and foliage density are moderate. Shaded by eucalyptus canopy.	Moderate	Located within project grading limits.	Yes		RC
40	valley oak (Quercus lobata)	50" (approx.)	6	50'±	60'±	2.0	1.0	Mature tree with multiple trunk structure. Tree as probably topped early in life. Significant trunk decay and limb dieback occurring. History of large limb failure. Tree is likely in decline.	Poor	Located within project grading limits.	Yes	Exempt	RC
41	blue gum eucalyptus	18"	1	90'±	40'±	2.5	2.0	Three trunks form at 35'. Vigor is variable with twig dieback occurring. Extensive debris at base.	Poor	Located within project grading limits.	No		RC
42	incense cedar (Calocedrus decurrens)	6"	1	15'±	10'±	2.0	2.5	Small tree with marginal vigor. Possible trunk canker present.	Marginal	Located within project grading limits.	No		RC
43	blue gum eucalyptus	16"	1	70'±	30'±	2.0	2.5	Narrow, crown form. Branch dieback occurring in upper crown..	Poor	Located within project grading limits.	No		RC

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
44	Monterey pine (Pinus radiata)	15"	1	60'±	25'±	2.0	2.5	Narrow, high-branched structure with limited limb decay. Red turpentine beetle activity and probable Ips damage. Tree is in early decline.	Poor	Located within project grading limits.	No		RC
45	Acacia dealbata	8.5"	1	20'±	20'±	2.5	2.0	Young tree with significant lower trunk damage. Vigor and foliage density are moderately low from shading.	Moderate	Located within project grading limits.	No		RC
46	blue gum eucalyptus	24"	1	90'±	40'±	2.5	2.0	Moderately asymmetrical structure extending to southeast. High-branched structure with branch dieback occurring in upper crown.	Poor	Located within project grading limits.	No		RC
47	Monterey pine	10"	1	45'±	20'±	2.5	3.0	Small tree moderate shade suppressed. No significant structural defects observed.	Marginal	Located within project grading limits.	No		RC
48	blue gum eucalyptus	18"	1	90'±	50'±	2.5	2.5	high-branched structure with three trunks forming open crown form. Vigor and foliage density are moderately low.	Poor	Located within project grading limits.	No		RC
49	Monterey pine	12"	1	60'±	30'±	2.0	3.0	Narrow, high-branched structure. Vigor and foliage density are moderately low, from shading	Poor	Located within project grading limits.	No		RC
50	blue gum eucalyptus	13"	1	80'±	30'±	2.0	2.5	Narrow, high-branched structure Branch dieback occurring in upper crown.	Poor	Located within project grading limits.	No		RC
51	blue gum eucalyptus	14"	1	80'±	30'±	2.5	2.5	Narrow, high-branched structure Moderately low vigor and foliage density.	Poor	Located within project grading limits.	No		RC
52	blue gum eucalyptus	10"	1	50'±	20'±	2.5	2.5	Small tree moderate shade suppressed. Other small diameter eucalyptus in area.	Poor	Located within project grading limits.	No		RC
53	Monterey pine	13.5"	1	60'±	25'±	2.5	3.0	Small tree moderate shade suppressed. No significant structural defects observed.	Marginal	Located within project grading limits.	No		RC
54	blue gum eucalyptus	13"	1	80'±	25'±	2.5	2.5	Very high-branched structure. Weak limb development.	Poor	Located within project grading limits.	No		RC
55	blue gum eucalyptus	13"	1	80'±	25'±	2.5	2.5	Very high-branched structure. Weak limb development.	Poor	Located within project grading limits.	No		RC
56	blue gum eucalyptus	36"	1	90'±	100'±	2.5	2.0	Mature tree with wide open limb structure. Large diameter limbs present in crown with one downed limb having ELB galleries. Vigor is variable with branch dieback occurring. Growing at edge of cut slope.	Poor	Located within project grading limits.	No		RC
57	blue gum eucalyptus	16"; 24"; 30"	3	90'±	60'±	2.5	2.0	Low, multiple trunk tree with moderately asymmetrical form extending towards San Pedro Road and over electrical lines. Growing at edge of cut slope. Vigor is variable.	Poor	Located within project grading limits.	No		RC
58	blue gum eucalyptus	36"	1	90'±	60'±	2.5	2.0	Mature tree with asymmetrical forma and bowed limbs towards electrical lines. Large diameter root damaged at driveway edge.	Poor	Located within project grading limits.	No		RC

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
59	coast live oak	6.5"	1	20'±	18'±	2.0	3.0	Young tree, shade suppressed. No significant structural defects observed. Vigor and foliage density are low. Growing below tree #60.	Marginal	Located within project grading limits.	Yes		RC
60	blue gum eucalyptus	30"	1	90'±	40'-50'±	2.5	2.0	High-branched structure. Vigor and foliage density are variable with twig dieback occurring.	Poor	Located within project grading limits.	No		RC
61	blue gum eucalyptus	20"	1	90'±	40'±	2.5	2.0	Moderately asymmetrical structure extending to east High-branched structure with twig dieback occurring in upper crown.	Poor	Located within project grading limits.	No		RC
62	blue gum eucalyptus	38"	1	90'±	60'±	2.5	2.0	Mature tree with secondary trunks forming at 12' and at 40'. High-branched structure. Twig dieback occurring.	Poor	Located within project grading limits.	No		RC
63	Monterey pine	14"	1	60'±	25'±	2.0	3.0	Weak, shade suppressed tree. High-branched structure.	Poor	Located within project grading limits.	No		RC
64	Monterey pine	30"	1	70'±	40'±	2.0	1.5	Mature tree with high-branched structure. Girdling steel band around base of tree. Vigor and foliage density are low.	Poor	Located within project grading limits.	No		RC
65	coast live oak	14"	1	30'±	35'±	3.0	2.0	Co-dominant trunks forms at 5.5' with included attachment formed Possible trunk canker present. Vigor and foliage density are moderate.	Marginal	Located adjacent to grading fill.	Yes		PI
66	coast live oak	12.5"	1	20'±	30'±	3.0	3.0	Growing at edge of seasonal pond. Structure is moderately contorted. No significant structural defects observed. Vigor and foliage density are moderate.	Moderate	Located 5' from drainage line.	Yes		PI
67	Monterey pine	10"	1	20'±	20'±	2.0	2.0	Small tree in low vigor with twig dieback occurring.	Poor	Located adjacent to driveway entrance and San Pedro Road improvements.	No		RC
68	coast live oak	7"; 8"	2	25'±	20'±	3.0	2.5	Young tree with co-dominant trunk forming at 4.5'. Seam and included attachment present. Vigor and foliage density are moderate.	Moderate	Located 5' from San Pedro Road improvements.	Yes		PI
69	willow (Salix spp.)	12"; 13"	2	30'±	30'±	3.0	2.5	Low, co-dominant trunk structure with root collar and roots exposed due to erosion at pond edge. Possible trunk decay occurring.	Marginal	Located approximately 20' from grading and drainage line.	Yes		NI
70	blue gum eucalyptus	20"	1	80'±	30'±	2.5	2.5	High-branched structure. Vigor and foliage density are variable with twig dieback occurring.	Poor	Located within project grading limits.	No		RC
71	coast live oak	18"; 24"	2	40'±	50'±	2.0	3.0	Mature tree with co-dominant trunks forming at 4'. Wide, open limb structure. Significant bark beetle activity with abundant frass. Vigor and foliage density are low with significant twig dieback occurring.	Marginal	Located within project grading limits.	Yes		RC

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
72	blackwood acacia (Acacia melanoxylon)	13"; 16"; 20"	3	60'±	50'±	3.0	1.5	Low, multiple trunk structure with significant trunk damage an included attachment. Asymmetrical root distribution. 7" blackwood acacia nearby.	Poor	Located within 10'-15' of proposed grading limits for San Pedro Road.	No		RR
73	blue gum eucalyptus	15"	1	80'±	35'±	2.5	2.5	High-branched structure. Vigor and foliage density are variable. Growing at edge of drainage channel.	Poor	Located within 15' of proposed grading limits.	No		RC
74	plum (Prunus cerasifera)	11"	3	25'±	25'±	2.0	2.0	Volunteer seedling, Shaded structure with variable vigor and branch dieback occurring.	Marginal	Located within 10'-15' of proposed grading limits for San Pedro Road.	No		PI
75	blue gum eucalyptus	26"	1	90'±	60'-70'±	2.5	2.0	Narrow, co-dominant trunk structure with trunk union at 12'. Growing over roadway.	Poor	Located within project grading limits.	No		RC
76	blue gum eucalyptus	30"	1	80'±	60'±	2.5	2.0	Multiple trunk attachments form at 20' with large lateral limbs present. History of large limb failure over roadway.	Poor	Located within project grading limits.	No		RC
77	blue gum eucalyptus	18"; 24"; 26"	3	90'±	70'-80'±	2.5	2.0	Low, multiple trunk structure with probable attachment defects. Wide, spreading crown form. Vigor and foliage density are variable with twig dieback and ETB damage. 12" trunk located 20' downslope.	Poor	Located within project grading limits.	No		RC
78	blue gum eucalyptus	24"	1	90'±	40'-50'±	2.5	2.0	High-branched tree growing at edge of drainage channel. Vigor and foliage density are variable.	Poor	Located adjacent to drainage line.	No		RC
79	blue gum eucalyptus	20"	1	90'±	40'-50'±	2.0	2.0	High-branched structure with probable defect in upper crown where new leader has formed. Significant branch dieback occurring. Growing at edge of steep drainage.	Poor	Located 15' from drainage line.	No		RR
80	willow	8"; 10"; 12"; 18"	4	50'±	40'-50'±	2.0	1.5	Willow cluster growing at edge of pond. 18" trunk has significant lower trunk decay. Limb decay is common and tree has a history of limb failure.	Poor	Located 5' from drainage line.	Yes		PI
81	coast live oak	9"; 17"	2	45'±	40'±	2.0	3.0	Two trunk structure forming at grade, with one trunk curving around the other. Open limb structure with no significant defects observed. Vigor and foliage density are low with significant twig dieback occurring.	Marginal	Located adjacent to grading fill.	Yes		PI
82	willow	22" approx.	1	45'±	45'±	2.5	1.5	Willow growing at edge of pond. Significant lower trunk decay present and contorted upper limb structure. Vigor and foliage density are moderate with limited branch dieback occurring.	Poor	Located approximately 20' from grading limits.	Yes		NI

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
83	willow	14"	1	30'±	35'±	2.0	2.0	Leaning, horizontal structure growing at edge of pond. Adjacent 24" tree has failed. Vigor appears low.	Marginal	Located adjacent or within grading fill zone.	Yes		PI
84	coast live oak	10"	1	35'±	30'±	3.0	2.5	Small tree with asymmetrical form and co-dominant trunks forming at 6.5'. Vigor and foliage density are moderate.	Moderate	Located adjacent or within grading fill zone.	Yes		PI
85	coast live oak	12"	1	40'±	35'±	3.0	3.0	Upright structure growing adjacent to tree #84. No significant structural defects observed. Vigor and foliage density are moderate.	Moderate	Located adjacent or within grading fill zone and approximately 10' from structure footprint.	Yes		PI
86	blue gum eucalyptus	20"	1	90'±	45'±	2.5	3.0	Semi-mature tree with high-branched structure. Vigor and foliage density are moderately low with ETB damage occurring.	Poor	Located within project grading limits.	No		RC
87	blue gum eucalyptus	60"	2 @ 8'	90'±	60'-70'±	2.5	2.0	Mature tree with co-dominant trunk structure and large diameter limbs. History of limb failure. Vigor and foliage density are variable with twig dieback and ETB damage.	Poor	Located within project grading limits.	No		RC
88	blue gum eucalyptus	24"	1	90'±	35'±	2.5	2.5	Semi-mature tree with asymmetrical structure at edge of three trunk cluster. Old grading trunk damage observed. Located at top of mound. Vigor and foliage density are moderately low with ETB damage occurring.	Poor	Located within project grading limits.	No		RC
89	blue gum eucalyptus	36"	1	90'±	50'±	2.5	2.0	Mature tree with large diameter limb structure. Vigor and foliage density are moderately low with ETB damage occurring.	Poor	Located within project grading limits.	No		RC
90	coast live oak	8.5"	1	15'±	20'±	2.5	2.5	Low, horizontal and contorted structure from shading by adjacent blackwood acacia. Vigor and foliage density are moderately low.	Moderate	Located close to shallow grading cut.	Yes		PI
91	blackwood acacia	15"	1	60'±	40'±	3.0	2.0	Narrow, upright structure with co-dominant trunks forming at 15'. Vigor and foliage density are moderate. Tree #90 growing at base of trunk.	Marginal	Located close to shallow grading cut.	No		RR
92	coast live oak	11"; 15"; 15"	3	40'±	45'±	3.0	2.5	Low, multiple trunk structure with possible attachment defect. Symmetrical crown form. Moderate to good vigor and foliage density.	Moderate	Located close to shallow grading cut.	Yes		PI
93	blue gum eucalyptus	36"	1	90'±	60'±	2.0	2.5	Single trunk structure with fungal basidiocarps on lower trunk. Vigor is low with significant branch dieback occurring.	Poor	Located adjacent to grading fill.	No		RR

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
94	blue gum eucalyptus	30"	1	90'±	50'±	2.5	2.5	Semi-mature tree with asymmetrical form/ Located at end of row of eucalyptus. Vigor is moderately low with branch dieback occurring.	Poor	Located within project grading limits.	No		RC
95	blue gum eucalyptus	12"; 14"	2	60'±	40'±	2.0	2.0	Low, co-dominant structure with included attachment and lean. Vigor is low with branch dieback occurring.	Poor	Located within project grading limits.	No		RC
96	blue gum eucalyptus	20"	1	90'±	50'±	2.5	2.5	High-branched structure. Vigor and foliage density are variable with twig dieback occurring.	Poor	Located within project grading limits.	No		RC
97	blue gum eucalyptus	18"	1	90'±	40'±	2.5	2.5	High-branched structure. Vigor and foliage density are variable with twig dieback occurring.	Poor	Located within project grading limits.	No		RC
98	blue gum eucalyptus	20"	1	90'±	40'±	2.5	2.5	High-branched structure. Vigor and foliage density are variable with twig dieback occurring.	Poor	Located within project grading limits.	No		RC
99	blue gum eucalyptus	7"; 8"; 10"; 10"	4	60'±	40'±	2.5	2.0	Multiple trunk structure forming at grade with included attachments. Vigor and foliage density are typical with tortoise shell damage present.	Poor	Located within project grading limits.	No		RC
100	blue gum eucalyptus	12"	1	60'±	30'±	2.5	2.5	Suppressed tree growing in interior of row.	Poor	Located within project grading limits.	No		RC
101	blue gum eucalyptus	12"	1	60'±	40'±	2.5	2.0	Leaning structure growing across tree #100. Suppressed, interior tree.	Poor	Located within project grading limits.	No		RC
102	blue gum eucalyptus	24"	1	70'±	50'±	2.5	2.5	Semi-mature tree with moderately asymmetrical form extending to south. Open limb structure. Vigor and foliage density are moderately low.	Poor	Located within project grading limits.	No		RC
103	blue gum eucalyptus	24"	1	90'±	40'±	2.5	2.5	High-branched structure. Vigor and foliage density are variable with twig dieback occurring.	Poor	Located within project grading limits.	No		RC
104	blue gum eucalyptus	24"	1	70'±	75'±	1.5	2.0	High-branched structure with top of crown dying. One large 45° limb growing to south. Lower portion of crown is in moderate vigor.	Poor	Located within project grading limits.	No		RC
105	blue gum eucalyptus	29"	1	90'±	60'-70'±	2.5	1.5	Mature tree with history of epicormic sprouting. Old trunk wound present, although appears healed. Tree is located between two graded areas. One large structural root is exposed and decayed from grading damage. Vigor and foliage density are moderately low with twig dieback and ETB damage occurring.	Poor	Located within 15' of proposed grading limits.	No		RR
106	blue gum eucalyptus	36"	1	90'±	50'±	2.0	2.0	Tree is growing at top of cut slope. Crown has an open limb structure with significant dead wood present. Vigor and foliage density are low with twig and branch dieback occurring.	Poor	Located within project grading limits.	No		RC

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
107	blue gum eucalyptus	36"	1	70'±	40'±	1.0	1.0	Entire upper portion of crown is dead. ELB galleries present. Tree is likely unstable.	Poor	Located within project grading limits.	No		RC
108	Deodar cedar (Cedrus deodara)	13"	1	40'±	20'±	2.5	2.0	Young tree with no significant structural defects. Tree appears drought stressed. Vigor and foliage density are moderately low.	Marginal	Located within project grading limits.	No		RC
109	Deodar cedar	8"	1	30'±	15'±	2.5	3.0	Young tree, shade suppressed. No significant structural defects observed. Vigor and foliage density are low.	Moderate	Located within project grading limits.	No		RC
110	blue gum eucalyptus	13"	1	90'±	40'±	2.5	2.5	Young tree with high-branched structure. Very limited limb development. Moderately low vigor.	Poor	Located within project grading limits.	No		RC
111	blue gum eucalyptus	13"	1	60'±	20'±	2.5	2.5	Young tree with co-dominant trunk forming at 40'. Vigor and foliage density are moderately low.	Poor	Located within project grading limits.	No		RC
112	blue gum eucalyptus	16"	1	90'±	40'-50'±	2.5	2.0	High-branched structure with multiple limb attachments forming at 40'. Minimal limb development.	Poor	Located within project grading limits.	No		RC
113	blue gum eucalyptus	6"; 9"	2	35'±	20'±	3.0	2.0	Low, co-dominant structure with moderate vigor. ETB feeding occurring.	Poor	Located within project grading limits.	No		RC
114	blue gum eucalyptus	14"	1	70'±	40'±	2.0	2.5	High-branched structure with co-dominant trunks forming at 35'. Vigor and foliage density are low with twig dieback occurring.	Poor	Located within project grading limits.	No		RC
115	blue gum eucalyptus	10"	1	45'±	15'±	2.5	2.0	Young tree, shade suppressed. Co-dominant trunks form at 30' with high-branched structure. Vigor and foliage density are low.	Poor	Located within project grading limits.	No		RC
116	blue gum eucalyptus	7"; 8"	2	60'±	30'±	2.5	2.5	Co-dominant trunks form at grade. High-branched structure. Moderately low vigor and foliage density.	Poor	Located within project grading limits.	No		RC
117	blue gum eucalyptus	10"	1	45'±	25'±	2.5	2.0	Young tree with co-dominant trunk forming at 20'. Vigor and foliage density are moderately low with twig dieback occurring.	Poor	Located within project grading limits.	No		RC
118	Japanese pagoda tree (Sophora japonica)	6"	1	20'±	20'±	3.0	3.0	Young tree in moderate drought stress. No significant structural defects observed.	Moderate	Located within project grading limits.	No		RC
119	citrus (Citrus spp.)	2.5"; 4"	2	15'±	15'±	1.0	2.0	Tree is in poor condition and in decline from freeze damage.	Poor	Located within project grading limits.	No		RC
120	coast live oak	18"; 24"	2	50'±	60'±	3.0	2.5	Low, co-dominant trunk structure with included attachment and reaction ridge. Growing on slope. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC
121	coast live oak	12.5"	1	40'±	30'±	3.0	2.5	Co-dominant trunks form at 8' with asymmetrical lean due to tree #120. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
122	coast live oak	15"	1	35'±	35'±	3.0	2.5	Co-dominant trunks form at 9' with reaction ridge. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC
123	bay laurel	13"; 20"	2	40'±	45'±	2.5	2.5	Low, co-dominant trunk structure with possible decay at trunk union. Symmetrical crown form. Vigor and foliage density are moderately low.	Moderate	Located within project grading limits.	Yes		RC
124	blue gum eucalyptus	11"; 14"; 20"	3	70'±	60'±	2.5	2.0	Multiple trunk structure forming at grade with included attachments. One trunk is horizontal with ascending terminal growth. History of limb failure. Vigor and foliage density are typical with tortoise shell damage present.	Poor	Located within project grading limits.	No		RC
125	bay laurel	10"; 15"	2	35'±	35'±	2.5	3.0	Two trunk structure forming from basal sprouts. No significant structural defects observed. Moderately low vigor with twig dieback occurring.	Moderate	Located within project grading limits.	Yes		RC
126	bay laurel	8"	1	25'±	15'±	3.0	3.0	Young tree with upright structure. Multiple limb attachment form at 8'. Growing adjacent to tree #127.	Moderate	Located within project grading limits.	No		RC
127	bay laurel	13"	2 @ 6'	35'±	30'±	3.0	2.5	Co-dominant trunk structure forming at 6'. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC
128	bay laurel	12"	1	35'±	30'±	3.0	2.0	Tree has pronounced kink in lower trunk with crown spouts growing from angled trunk. Vigor and foliage density are moderate.	Marginal	Located within project grading limits.	Yes		RC
129	valley oak	34"	1	60'±	60'±	2.5	3.0	Mature tree with open, symmetrical crown form. Limited lower trunk damage and fire scarring present. Vigor appears moderate with possible pit scale infestation occurring. Tree is growing on a moderate slope.	Moderate	Located within project grading limits.	Yes		RC
130	bay laurel	10"; 12"; 12"; 14"; 15"	5	60'±	50'±	3.0	2.5	Multiple trunk structure forming from basal sprouts. Exposed root flare down slope. Fence post is embedded in trunk. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC
131	coast live oak	5.5"	1	20'±	20'±	3.0	3.0	Young tree with no significant structural defects. Vigor and foliage density are moderate. Tree is growing at edge of existing driveway.	Moderate	Located within project grading limits.	No		RC
132	blue gum eucalyptus	8"; 10"	2	45'±	40'±	3.0	2.0	Co-dominant trunk structure with one trunk bowed at grade. Vigor is variable.	Poor	Located within project grading limits.	No		RC
133	blue gum eucalyptus	35"	1	70'±	40'-50'±	1.5	1.5	Mature tree with history of lower trunk damage. Significant limb dieback is occurring. Vigor is variable with ETB damage.	Poor	Located within project grading limits.	No		RC

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
134	blue gum eucalyptus	9"	1	45'±	35'±	2.0	2.0	Young tree, shade suppressed. Co-dominant trunks form at 15' with high-branched structure. Vigor and foliage density are low with significant branch dieback occurring.	Poor	Located within project grading limits.	No		RC
135	pink iron bark (Eucalyptus sideroxylon 'Rosea'	28"	1	60'±	40'-50'±	3.0	2.0	Mature tree with a 12" secondary trunk wrapped around primary trunk. Small diameter limb failure occurring.	Poor	Located within project grading limits.	No		RC
136	bay laurel	6.5"; 7"	2	35'±	30'±	3.0	2.5	Low, co-dominant trunk structure, previously topped at 10'. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC
137	Monterey pine	27"	1	90'±	40'-50'±	2.5	3.0	Mature tree with no significant structural defects observed. Growing on slope. Probable Ips beetle activity in lower limbs.	Marginal	Located within project grading limits.	No		RC
138	bay laurel	5"; 6"; 7"	3	30'±	30'±	3.0	2.5	Low, multiple trunk structure forming from basal sprouts. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC
139	crabapple (Malus spp.)	5"; 6"	2	20'±	20'±	2.5	1.0	Collapsed pine is against trunk. Tree is untrained with significant trunk damage. Vigor is variable.	Poor	Located within project grading limits.	No		RC
140	Deodar cedar	14"	1	45'±	35'±	1.5	3.0	Semi-mature tree with no significant structural defects observed. Vigor is low, tree appears in decline.	Poor	Located within project grading limits.	No		RC
141	Monterey pine	40" approx.	1	90'±	60'±	1.5	1.5	Mature tree in decline. Tree has a moderate lean with large extended limbs over hanging electrical lines. Significant limb dieback occurring. Bark beetle infestation RTB at base of trunk.	Poor	Located within project grading limits.	No		RC
142	black oak (Quercus kelloggii)	8"	1	25'±	20'±	3.0	3.0	Young tree growing down slope of tree #141. Tree has moderate lean. Vigor and foliage density are moderate.	Moderate	Located outside grading limits.	Yes		NI
143	coast live oak	8"; 9"; 10" 13"; 14"	5	50'±	50'±	3.0	2.5	Low, multiple trunk structure forming from basal sprouts. One attachment is included and one partly included. Vigor and foliage density are moderate.	Moderate	Located outside grading limits.	Yes		NI
144	madrone (Arbutus menziesii)	5.5"	1	20'±	20'±	2.5	2.5	Low, contorted structure due to shading. Growing in dense area adjacent to tree #143. Vigor and foliage density are moderately low.	Moderate	Located outside grading limits.	No		NI
145	madrone	5.5"	1	30'±	15'±	2.0	3.0	High-branched structure with extensive Botryosphaeria infection damage. Vigor is low.	Marginal	Located outside grading limits.	No		NI
146	madrone	8"	1	40'±	20'±	2.0	3.0	High-branched structure with co-dominant trunks forming at 10'. Vigor and foliage density are low with Botryosphaeria infection occurring.	Marginal	Located outside grading limits.	Yes		NI

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
147	bay laurel	7"	1	25'±	20'±	3.0	3.0	Young tree with curved lower trunk. Vigor and foliage density are moderate.	Moderate	Located outside grading limits.	No		NI
148	madrone	5.25"	1	30'±	10'±	2.5	2.5	Shaded, high-branched structure with limited Botryosphaeria infection.	Moderate	Located outside grading limits.	No		NI
149	valley oak	11"	1	35'±	35'±	2.0	2.0	Shaded, suppressed tree with co-dominant trunks forming at 5'. Wide, open structure. Vigor is variable with significant branch dieback.	Marginal	Located outside grading limits.	Yes		NI
150	bay laurel	6.5"	1	35'±	20'±	3.0	3.0	Shaded, high-branched structure. Vigor and foliage density are moderate.	Moderate	Located outside grading limits.	No		NI
151	valley oak	8.5"	1	40'±	20'±	2.5	2.5	Shaded, open, high-branched structure. Vigor and foliage density are moderately low.	Moderate	Located outside grading limits.	Yes		NI
152	madrone	7.5"	1	25'±	30'±	2.5	2.5	Low, horizontal structure extending down slope with ascending terminal. Vigor and foliage density are moderately low with limited Botryosphaeria infection.	Moderate	Located outside grading limits.	Yes		NI
153	madrone	6"	1	30'±	15'±	2.5	2.5	Part of dense cluster. Moderate lean extending down slope. Vigor and foliage density are moderately low with limited Botryosphaeria infection.	Moderate	Located outside grading limits.	Yes		NI
154	madrone	6"	1	30'±	15'±	2.5	2.5	Part of dense cluster. Moderate lean extending down slope. Vigor and foliage density are moderately low with limited Botryosphaeria infection. Upslope 18" from tree #153.	Moderate	Located outside grading limits.	Yes		NI
155	valley oak	6"	1	30'±	15'±	2.0	2.0	Shaded, open, high-branched structure. Vigor and foliage density are low with branch dieback occurring in upper crown.	Marginal	Located outside grading limits.	Yes		NI
156	black oak	22" approx.	1	35'±	35'±	2.5	2.5	Mature tree with low, open limb structure. History of limb dieback and sprouting. Vigor and foliage density are moderately low.	Moderate	Located 20' of proposed grading limits.	Yes		PI
157	valley oak	8"	1	25'±	30'±	2.5	2.5	Small tree growing at base of tree #156. Asymmetrical form extending upslope. Minimal limb structure development. Moderately low vigor and foliage density.	Moderate	Located 20' of proposed grading limits.	Yes		PI
158	valley oak	8"; 9"	2	40'±	35'±	2.5	2.5	High-branched trunk structure with co-dominant trunk forming at 4.5'. Vigor is moderate with limited twig and branch dieback occurring.	Moderate	Located within 10' of proposed grading limits.	Yes		PI
159	madrone	7"	1	40'±	20'±	2.0	3.0	High-branched structure with co-dominant trunk forming at 12'. Smaller trunk is dead. Vigor and foliage density are moderately low.	Marginal	Located within 10' of proposed grading limits.	Yes		PI

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160	madrone	7.5"	1	30'±	30'±	2.5	2.5	Low, horizontal structure extending down slope with ascending terminal. Vigor and foliage density are moderately low with limited Botryosphaeria infection.	Moderate	Located within project grading limits.	Yes		RC
161	bay laurel	6"; 9"	2	45'±	30'±	2.0	2.5	Low, co-dominant trunk structure growing at the base of tree #162. 6" trunk has low vigor, while 9" trunk has moderately low vigor. (Ganda reports good vigor 9-13-07)	Moderate	Located within 10' of proposed grading limits.	Yes		PI
162	black oak	15.5"	1	50'±	40'-50'±	3.0	3.0	Semi-mature tree with multiple attachments forming at 10'. Open, asymmetrical structure extending downslope. Possible lower trunk decay at grade. Vigor and foliage density are moderate.	Moderate	Located within 10' of proposed grading limits.	Yes		PI
163	bay laurel	7"	1	35'±	30'±	3.0	3.0	High-branched structure with co-dominant trunks forming at 15'. Collapsed coast live oak is around base. Vigor and foliage density are moderate.	Moderate	Located within 10' of proposed grading limits.	No		PI
164	black oak	15" approx.	1	50'±	40'±	2.0	3.0	Semi-mature tree with high-branched structure. Vigor is low with significant branch and limb dieback occurring.	Marginal	Located within 10' of proposed grading limits.	Yes		PI
165	madrone	9.5"	1	35'±	35'±	2.5	2.5	Tree has 45° lean downslope. Vigor is moderately low with Botryosphaeria infection occurring.	Moderate	Located within project grading limits.	Yes		RC
166	madrone	10" approx.	1	45'±	25'±	1.5	2.0	High-branched structure with significant limb dieback and trunk canker present. Poison oak is growing on tree..	Poor	Located within project grading limits.	Yes	Exempt	RC
167	coast live oak	13.5"	1	35'±	30'±	3.0	1.5	Symmetrical crown form. Extensive lower trunk decay present, possibly from old fire damage.	Poor	Located within project grading limits.	Yes	Exempt	RC
168	bay laurel	5"	1	30'±	25'±	3.0	2.5	Young tree with high-branched structure and co-dominant trunks forming at 12'. Contorted limb structure. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	No		RC
169	bay laurel	6.5"	1	35'±	25'±	3.0	2.5	Wide, co-dominant structure forming at 8'. Tree #117 merges with crown. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	No		RC
170	bay laurel	5"	1	30'±	15'±	2.5	2.0	Growing at base of tree #171. Contorted lower trunk. Vigor and foliage density are moderately low with twig dieback occurring.	Marginal	Located within project grading limits.	No		RC
171	madrone	10"	1	35'±	35'±	2.5	2.5	Leaning, 45° structure extending downslope. Coast live oak debris around tree. Limited Botryosphaeria infection occurring.	Moderate	Located within project grading limits.	Yes		RC

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
172	bay laurel	12"	1	50'±	45'±	3.0	2.0	Semi-mature tree with asymmetrical structure due to shading from now collapsed coast live oak. Contorted trunk form. Dead limb in crown. Vigor and foliage density are moderate. (Ganda requests change to moderate SFP rating 9-13-07.)	Moderate	Located within project grading limits.	Yes		RC
173	bay laurel	6"	1	40'±	20'±	2.5	2.5	Narrow, upright structure. Vigor and foliage density are moderately low.	Moderate	Located within 10' of proposed grading limits.	No		PI
174	bay laurel	9"	1	50'±	30'±	2.0	2.5	High-branched, contorted structure. Significant branch dieback occurring in upper crown. (Ganda requests change to moderate SFP rating 9-13-07.)	Moderate	Located within 10' of proposed grading limits.	No		PI
175	black oak	9"	1	50'±	30'±	2.5	2.5	High-branched structure with low trunk taper. Limited branch dieback occurring due to shading. Larger trees are up slope.	Moderate	Located outside grading limits.	Yes		NI
176	bay laurel	6"	1	40'±	25'±	3.0	2.5	High-branched trunk structure with co-dominant trunk forming at 12'. Vigor is moderate.	Moderate	Located outside grading limits.	No		NI
177	bay laurel	5.5"; 10.5"	2	50'±	35'±	3.0	3.0	High-branched structure with trunks forming as basal sprouts. Dead madrone at base. Vigor and foliage density are moderate.	Moderate	Located within 10' of proposed grading limits.	Yes		PI
178	madrone	12"; 16"	2	50'±	40'±	2.5	1.0	Two basal sprouts from base of old, decayed stump. Tree is probably not stable. Vigor and foliage density are moderately low with limited Botryosphaeria occurring.	Poor	Located within 10' of proposed grading limits.	Yes	Exempt	PI
179	black oak	12"	1	45'±	35'±	2.5	1.0	Sprout from older, much larger decayed stump. Two small trunks are dead. High risk of failure.	Poor	Located within 10' of proposed grading limits.	Yes	Exempt	PI
180	bay laurel	7"	1	40'±	30'±	3.0	2.0	Young tree growing at top of retaining wall. One large root is cut. Vigor and foliage density are moderate.	Marginal	Located within project grading limits.	No		RC
181	madrone	9"	1	40'±	30'±	1.5	2.0	Tree has horizontal and ascending form. Growing on sloe. Vigor is low with extensive branch dieback and lower trunk canker.	Poor	Located within project grading limits.	Yes	Exempt	RC
182	bay laurel	11.5"	1	45'±	35'±	3.0	3.0	Semi-mature tree growing at top of slope. No significant structural defects. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC
183	madrone	6"	1	30'±	20'±	1.5	2.0	Asymmetrical structure with extensive dieback from Botryosphaeria infection. Tree is growing on slope.	Poor	Located within project grading limits.	Yes	Exempt	RC

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184	Deodar cedar	14.5"	1	70'±	40'±	3.0	3.0	Semi-mature tree growing at top of slope, Shaded, high-branched structure. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	No		RC
185	coast redwood (Sequoia sempervirens)	16"	1	70'±	40'±	3.0	3.0	Semi-mature tree with no significant structural defects observed. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC
186	Monterey pine	28"	1	80'±	50'-60'±	2.5	1.5	Mature tree with large diameter limbs in upper crown. Lean in lower trunk with marginal root development. Possible lower trunk bark buckling occurring. Vigor and foliage density are moderately low.	Poor	Located within 10' of proposed grading limits.	No		RR
187	Monterey pine	24"	1	90'±	60'±	2.5	2.0	High-branched structure with multiple limb attachments forming in upper crown. Likely defective limb attachments.	Poor	Located at concrete drainage ditch.	No		RC
188	Monterey pine	19"	1	70'±	60'±	2.0	1.5	Co-dominant trunks with contorted form in upper crown. Vigor and foliage density are low.	Poor	Located at concrete drainage ditch.	No		RC
189	blackwood acacia	16.5"	1	60'±	50'±	3.0	1.0	This tree is failing with significant lean over existing house. Roots are lifting and fissure present in lower trunk.	Poor	Located at concrete drainage ditch.	No		RC
190	blackwood acacia	12"	1	50'±	30'±	3.0	2.0	Located at top of retaining wall. Multiple limb attachments form in upper crown. Vigor and foliage density are moderate.	Marginal	Located adjacent to grading limits.	No		RC
191	madrone	8"	1	40'±	30'±	1.5	2.0	High-branched structure with significant limb dieback and trunk canker present. Vigor is low. Growing on steep slope.	Poor	Located 20' of proposed grading limits.	Yes	Exempt	NI
192	blue gum eucalyptus	10"; 13"	2	70'±	40'±	2.5	2.0	High-branched trunk structure with co-dominant trunks forming at grade. Vigor is moderately low ETB damage evident.	Poor	Located outside grading limits.	No		RR
193	blue gum eucalyptus	12"; 16"	2	70'±	40'±	2.5	2.0	High-branched trunk structure with co-dominant trunks forming at grade. Vigor is moderately low ETB damage evident.	Poor	Located outside grading limits.	No		RR
194	blue gum eucalyptus	9"	1	70'±	25'±	2.5	2.0	High-branched structure. Vigor and foliage density are variable.	Poor	Located outside grading limits.	No		RR
195	blue gum eucalyptus	11"; 15"; 18"	3	90'±	45'±	2.5	2.0	Multiple trunk structure forming from at grade. High-branched structure. Vigor is moderately low with twig dieback occurring.	Poor	Located outside grading limits.	No		RR
196	blackwood acacia	9"	1	35'±	25'±	3.0	3.0	Young tree with no significant structural defects. Vigor and foliage density are moderate.	Moderate	Located at concrete drainage ditch.	No		RC
197	blue gum eucalyptus	13"; 13"; 14"; 15"	4	90'±	60'±	2.5	2.0	Multiple trunk structure forming from at grade. High-branched structure. Vigor is moderately low with twig dieback occurring.	Poor	Located at concrete drainage ditch.	No		RC

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198	blue gum eucalyptus	8"; 10"	2	90'±	30'±	2.5	2.0	Co-dominant trunks forming at grade. Very high-branched structure. Vigor is moderately low with twig dieback occurring.	Poor	Located at concrete drainage ditch.	No		RC
199	blue gum eucalyptus	13"; 14"; 16"	3	90'±	40'±	2.5	2.0	Multiple trunks from basal sprouts forming at grade. Very high-branched structure. Vigor is moderately low with twig dieback occurring.	Poor	Located at concrete drainage ditch.	No		RC
200	blue gum eucalyptus	11"; 14"; 16"	3	90'±	40'±	2.5	2.0	Multiple trunks from basal sprouts forming at grade. Very high-branched structure. Vigor is moderately low with twig dieback occurring.	Poor	Located at concrete drainage ditch.	No		RC
201	blue gum eucalyptus	10"; 11"	2	90'±	30'±	2.5	2.0	Multiple trunks from basal sprouts forming at grade. Very high-branched structure. Vigor is moderately low with twig dieback occurring.	Poor	Located at concrete drainage ditch.	No		RC
202	madrone	6.5"	1	30'±	20'±	3.0	3.0	Young tree with no significant structural defects. Vigor and foliage density are moderate with limited Botryosphaeria infection. Wire fence embedded in trunk.	Moderate	Located within 10' of proposed grading limits.	Yes		PI
203	black oak	6"	1	35'±	20'±	3.0	3.0	Young tree with no significant structural defects. Vigor and foliage density are moderate.	Moderate	Located 20' of proposed grading limits.	Yes		PI
204	blue gum eucalyptus	15"	1	90'±	30'±	2.5	2.5	High-branched structure. Moderately low vigor and foliage density with ETB damage.	Poor	Located outside grading limits.	No		RR
205	blue gum eucalyptus	6"; 12"; 18"	3	90'±	50'±	2.5	2.0	Multiple trunk structure forming from at grade. High-branched structure. Vigor is moderately low with twig dieback occurring.	Poor	Located outside grading limits.	No		RR
206	Canary Island pine (Pinus canariensis)	25"	1	80'±	50'±	2.5	2.0	Mature tree growing at edge of cut swale. Possible root plate lift. Bark beetle activity noted. Vigor is moderately low.	Marginal	Located within 10' of proposed grading limits.	No		RC
207	bay laurel	6"; 10"; 12"	3	55'±	45'±	2.5	3.0	Multiple trunk structure forming from at grade. Vigor is moderately low with sporadic twig dieback occurring.	Moderate	Located outside grading limits.	Yes		NI
208	Canary Island pine	24" approx.	1	70'±	60'±	2.5	1.5	Lower trunk has severe lean upslope. Limited branch dieback occurring. Vigor is moderately low.	Poor	Located within 10' of building footprint.	No		RC
209	coast live oak	6.5"	1	30'±	20'±	3.0	3.0	Young tree, shade suppressed. No significant structural defects observed. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC
210	coast live oak	7"	1	25'±	20'±	2.5	3.0	Young tree, moderately asymmetrical due to shading. Lower trunk bleeding noted. Vigor is moderately low.	Moderate	Located within project grading limits.	Yes		RC

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211	bay laurel	12.5" (low)	1	45'±	40'±	2.5	3.0	Low-branched trees growing on slope. No significant structural defects noted. Vigor is moderately low.	Moderate	Located within project grading limits.	Yes		RC
212	bay laurel	11"	1	45'±	40'±	2.5	3.0	Low-branched trees growing on slope with lean in lower trunk. No significant structural defects noted. Vigor is moderately low	Moderate	Located within project grading limits.	Yes		RC
213	Canary Island pine	17"	1	80'±	45'±	3.0	3.0	Semi-mature tree with no significant structural defects observed. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	No		RC
214	pink iron bark	22"	1	70'±	50'±	2.0	2.0	Mature tree with high-branched structure. Contorted upper crown limb structure. Significant dead wood present.	Poor	Located adjacent to grading limits.	No		RC
215	coast live oak	5.5"	1	20'±	20'±	2.5	3.0	Young tree, shade suppressed. No significant structural defects observed. Vigor and foliage density are moderately low.	Moderate	Located within 10' of building footprint.	No		PI
216	blue gum eucalyptus	12"	1	70'±	30'±	2.5	2.5	Narrow, upright structure. Vigor and foliage density are moderately low.	Poor	Located within 10' of proposed grading limits.	No		RC
217	Canary Island pine	15"	1	80'±	60'±	2.0	1.5	Tree has been severely shade suppressed with asymmetrical growth extending to the west at a 30° to 45° angle. Very high-branched structure. Vigor and foliage density are low.	Poor	Located within 10' of proposed grading limits.	No		RC
218	blue gum eucalyptus	36" approx.	2 @ 15'	90'±	80'-100'±	3.0	2.0	Very wide and open crown structure with larger secondary trunk. Limbs are large diameter and extended. Vigor and foliage density are moderate.	Poor	Located within 10' of proposed grading limits.	No		RC
219	blue gum eucalyptus	24"	1	70'±	40'±	0.0	0.0	Tree is dead with eucalyptus longhorned borer (ELB) galleries.	Dead	Located within 10' of proposed grading limits.	No		RC
220	blue gum eucalyptus	6"; 16"	2	90'±	40'-50'±	2.5	2.0	Row of semi-mature blue gum eucalyptus. Growing graded area on slope. All have high-branched structures due to dense woodland conditions. Vigor and foliage density are generally moderate with ETB damage observed.	Poor	Located adjacent to grading limits.	No		RC
221	blue gum eucalyptus	10"; 18"	2	90'±	40'-50'±	2.5	2.0	Row of semi-mature blue gum eucalyptus. Growing graded area on slope. All have high-branched structures due to dense woodland conditions. Vigor and foliage density are generally moderate with ETB damage observed.	Poor	Located adjacent to grading limits.	No		RC

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222	blue gum eucalyptus	13"	1	90'±	40'-50'±	2.5	2.0	Row of semi-mature blue gum eucalyptus. Growing graded area on slope. All have high-branched structures due to dense woodland conditions. Vigor and foliage density are generally moderate with ETB damage observed.	Poor	Located adjacent to grading limits.	No		RC
223	blue gum eucalyptus	8"; 18"	2	90'±	40'-50'±	2.5	2.0	Row of semi-mature blue gum eucalyptus. Growing graded area on slope. All have high-branched structures due to dense woodland conditions. Vigor and foliage density are generally moderate with ETB damage observed.	Poor	Located adjacent to grading limits.	No		RC
224	blue gum eucalyptus	20"	1	90'±	40'-50'±	2.5	2.0	Row of semi-mature blue gum eucalyptus. Growing graded area on slope. All have high-branched structures due to dense woodland conditions. Vigor and foliage density are generally moderate with ETB damage observed.	Poor	Located adjacent to grading limits.	No		RC
225	blue gum eucalyptus	10"; 11"; 17"	3	90'±	40'-50'±	2.5	2.0	Row of semi-mature blue gum eucalyptus. Growing graded area on slope. All have high-branched structures due to dense woodland conditions. Vigor and foliage density are generally moderate with ETB damage observed.	Poor	Located within project grading limits.	No		RC
226	blue gum eucalyptus	4"; 10"; 13"; 18"	4	90'±	40'-50'±	2.5	2.0	Row of semi-mature blue gum eucalyptus. Growing graded area on slope. All have high-branched structures due to dense woodland conditions. Vigor and foliage density are generally moderate with ETB damage observed.	Poor	Located within project grading limits.	No		RC
227	coast live oak	8"	1	20'±	20'±	2.5	3.0	Shaded tree with co-dominant trunks forming at 5'. No significant structural defects observed. Vigor and foliage density are moderately low.	Moderate	Located within project grading limits.	Yes		RC
228	bay laurel	5"; 6.5"	2	25'±	20'±	1.5	2.5	Low, co-dominant trunk structure. One trunk is in decline.	Poor	Located within project grading limits.	Yes	Exempt	RC
229	bay laurel	8.5"	1	30'±	15'±	2.0	3.0	Narrow structure with significant branch dieback occurring. Vigor is low.	Marginal	Located within project grading limits.	No		RC
230	bay laurel	5.5"	1	30'±	20'±	3.0	3.0	High-branched structure. Vigor and foliage density are moderate.	Moderate	Located adjacent to retaining wall.	No		RC
231	bay laurel	5"; 5"	1	40'±	15'±	1.5	2.0	Low, Co-dominant trunk structure. Significant limb and branch dieback occurring.	Poor	Located adjacent to retaining wall.	Yes	Exempt	RC
232	bay laurel	7"	2	35'±	20'±	3.0	2.0	Co-dominant trunk structure. Vigor and foliage density are moderate.	Marginal	Located within project grading limits.	No		RC
233	coast live oak	7"	1	35'±	25'±	2.0	2.0	Shaded tree with high-branched structure. Lower trunk canker observed. Vigor and foliage are low.	Marginal	Located adjacent to fill grading limits.	Yes		PI

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234	coast live oak	6.5"	1	35'±	25'±	2.0	3.0	High-branched structure. Tree is shaded with vigor and foliage density are low.	Marginal	Located adjacent to fill grading limits.	Yes		RC
235	incense cedar	5.5"; 8"	2	35'±	20'±	2.5	2.0	Low, co-dominant trunk structure with included attachment. Twig dieback is occurring with possible Botryosphaeria infection.	Marginal	Located adjacent to fill grading limits.	No		RC
236	incense cedar	10"	1	35'±	15'±	1.5	3.0	Vigor is very low with extensive branch dieback occurring.	Poor	Located adjacent to fill grading limits.	No		RC
237	blue gum eucalyptus	24"	1	90'±	60'±	2.0	2.5	Single trunk structure. Significant branch dieback occurring. Vigor is low with ETB damage evident.	Poor	Located adjacent to fill grading limits.	No		RC
238	coast live oak	8"	2 @ 8'	30'±	20'±	2.5	3.0	Young tree with no significant structural defects. Vigor and foliage density are moderately low.	Moderate	Located adjacent to fill grading limits.	Yes		RC
239	coast live oak	4"; 6.5"	2	30'±	25'±	3.0	2.5	Low, co-dominant trunk structure. Vigor and foliage density are moderate.	Moderate	Located adjacent to fill grading limits.	Yes		RC
240	coast live oak	8.5"	2 @ 5'	30'±	20'±	3.0	2.5	Co-dominant trunks forming at 5'. Vigor and foliage density are moderate.	Moderate	Located adjacent to fill grading limits.	Yes		RC
241	madrone	6"	1	20'±	15'±	2.0	2.5	Young tree, growing at top of bank. Marginal limb structure development. Moderately low vigor and foliage density with limited Botryosphaeria infection.	Marginal	Located outside grading limits.	Yes		NI
242	coast live oak	5.5"	1	20'±	20'±	2.5	2.0	Young tree growing with asymmetrical structure on steep slope. Tree is shaded with moderately low vigor and foliage density.	Moderate	Located within project grading limits.	No		RC
243	bay laurel	5"	1	25'±	15'±	3.0	3.0	Young tree with vertical crown form. Growing on steep slope. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	No		RC
244	bay laurel	16"	1	40'±	35'±	3.0	3.0	Semi-mature tree with curved lower trunk and contorted limbs. Growing on steep slope. Vigor and foliage density are moderate.	Moderate	Located adjacent to grading limits.	Yes		PI
245	bay laurel	12"; 12"; 17"	3	45'±	35'±	2.0	1.0	Low, multiple trunk structure originating as basal sprouts. Extensive lower trunk decay. Only one trunk is viable. Significant limb and branch dieback is occurring. Tree is probably unstable.	Poor	Located adjacent to grading limits.	Yes	Exempt	RC
246	bay laurel	5"; 6"; 7"; 9"; 10"	5	45'±	40'±	2.5	3.0	Low, multiple trunk structure originating from basal sprouts. Vigor and foliage density are variable with twig dieback occurring.	Moderate	Located within project grading limits.	Yes		RC
247	bay laurel	7"	1	40'±	20'±	2.5	2.5	Shaded tree with asymmetrical form and vertically ascending limbs. Vigor is variable with twig dieback occurring.	Moderate	Located within project grading limits.	No		RC
248	bay laurel	8"; 8.5"	2	45'±	25'±	3.0	2.5	Low, co-dominant trunk structure with high-branched structure. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC

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249	bay laurel	5.5"; 12"	2	45'±	25'±	2.5	2.0	Probably two trees. 12" trunk has significant level of decay. Vigor is variable with twig dieback occurring.	Marginal	Located within project grading limits.	Yes		RC
250	bay laurel	6"; 8" 11"; 14"	4	45'±	50'±	2.0	2.5	Low, multiple trunk structure originating as basal sprouts. Symmetrical crown form. Vigor is variable with areas of branch and twig dieback occurring.	Marginal	Located within project grading limits.	Yes		RC
251	coast live oak	9"	1	40'±	25'±	2.5	2.5	High-branched structure with lower trunk damage on uphill side. Growing at edge of tree #250. Vigor and foliage density are moderately low.	Moderate	Located within project grading limits.	Yes		RC
252	coast live oak	6"	1	12'±	15'±	2.5	2.5	Young tree with shaded, asymmetrical structure. Vigor and foliage density are moderately low. Growing adjacent to tree #250.	Moderate	Located within 10' of building footprint.	Yes		PI
253	coast live oak	8.5"	2 @ 5'	25'±	20'±	2.5	2.5	Co-dominant trunks forming at 5' with included attachment. Vigor and foliage density are moderately low.	Moderate	Located within 10' of building footprint.	Yes		PI
254	valley oak	30"-36"	2 @ 7'	60'±	60'±	3.0	2.0	Mature tree with symmetrical crown form. Co-dominant trunks form at 7'. Most of primary root system is undermined and suspended over drainage channel. Vigor and foliage density are moderate.	Marginal	Located outside grading limits.	Yes		NI
255	coast live oak	7"	1	25'±	20'±	2.5	3.0	Young tree growing at edge of drainage channel. Vigor and foliage density are moderately low.	Moderate	Located within project grading limits.	Yes		RC
256	valley oak	18"	1	50'±	50'±	3.0	2.5	Semi-mature with symmetrical crown structure. Growing at top of steep slope. Old soil pile on base of trunk from road cut. Vigor and foliage density are moderate.	Moderate	Located within project grading limits.	Yes		RC
257	valley oak	16"	2 @ 7'	50'±	40'±	2.5	2.0	Semi-mature tree growing at edge of drainage channel. Debris and collapsed tree is adjacent. Vigor appears variable with twig dieback occurring.	Marginal	Located 20' of proposed grading limits.	Yes		PI
258	bay laurel	9" (low)	2	40'±	25'±	3.0	3.0	Young tree with low, multiple trunk structure. No significant structural defects observed. Growing at top of slope. Vigor and foliage density are moderate.	Moderate	Located 20' of proposed grading limits.	No		PI
259	coast live oak	24"	1	65'-70'±	60'±	2.0	2.5	Mature tree with high-branched structure. Growing at edge of creek. Lower trunk bleeding occurring with obvious trunk canker. Vigor and foliage density are variable with twig dieback occurring. (Ganda requests change to moderate SFP rating 9-13-07.)	Moderate	Located 10' from drainage structures.	Yes		PI

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
260	valley oak	26" approx.	1	60'-65'±	50'±	2.5	1.0	Mature tree with high-branched structure. Extensive lower trunk decay present. Vigor is variable with twig dieback occurring.	Poor	Located 10' from drainage structures.	Yes	Exempt	PI
261	coast live oak	11"; 13"	2	60'±	50'±	3.0	2.0	Low, co-dominant trunk structure with included attachment and trunk separation occurring. Structure is high-branched and moderately asymmetrical. Vigor and foliage density are moderate.	Marginal	Located outside grading limits.	Yes		NI
262	madrone	12"; 13"	2	60'±	50'±	2.0	2.5	Semi-mature tree with high-branched structure. Possible old trunk stump at base. Significant areas of Botryosphaeria infection occurring.	Marginal	Located outside grading limits.	Yes		NI
263	coast live oak	23"	1	50'±	45'±	2.5	2.5	Mature tree with leaning, asymmetrical structure extending across slope. Significant reaction ridge present on trunk. Vigor is variable with twig dieback occurring.	Moderate	Located outside grading limits.	Yes		NI
264	coast live oak	14"	1	40'±	40'±	2.5	2.0	Semi-mature tree with significant lower trunk cavity and decay. Vigor and foliage density are moderately low.	Marginal	Located within 15' of retaining wall.	Yes		PI
265	madrone	16" (low)	2	55'±	35'±	2.0	1.5	High-branched structure with extensive lower trunk decay. Possibly old fire damage. One small trunk has extensive dieback.. Moderate level of Botryosphaeria infection.	Poor	Located within 15' of retaining wall.	Yes	Exempt	PI
266	madrone	14.5"	2 @ 12'	40'±	35'±	2.5	2.5	Semi-mature tree with significant trunk canker. Co-dominant trunks form at 12'. Limited Botryosphaeria infection.	Moderate	Located within 10' of retaining wall.	Yes		PI
267	bay laurel	10"	1	45'±	30'±	3.0	3.0	Young tree with high-branched structure. Vigor and foliage density are moderate. (Ganda requests change to good SFP rating 9-13-07.)	Good	Located within 10' of retaining wall.	Yes		PI
268	black oak	12"	1	45'±	40'±	2.5	2.5	Leaning, asymmetrical structure extending downslope. High-branched structure with areas of limb decay. Vigor and foliage density are moderately low.	Moderate	Located within 10' of retaining wall.	Yes		PI
269	madrone	5"; 6.5"; 7"	3	25'±	25'±	2.0	2.0	Cluster of three trees with significant lower trunk decay. Vigor is low with Botryosphaeria infection occurring.	Marginal	Located within project grading limits.	Yes		RC
270	madrone	3"; 7"; 9"	3	30'±	35'±	2.5	2.5	Shaded tree with contorted, horizontal form. Vigor is moderately low with limited Botryosphaeria infection occurring.	Moderate	Located within project grading limits.	Yes		RC

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
271	black oak	19"	1	50'±	45'±	2.5	2.0	High-branched and moderately asymmetrical crown structure. Possible lower trunk decay present. Significant limb decay observed. Vigor and foliage density are variable with twig dieback occurring.	Marginal	Located within project grading limits.	Yes		RC
272	madrone	10"	1	40'±	30'±	2.0	2.0	Young tree with extensive lower trunk cavity. Vigor is low with significant Botryosphaeria infection occurring.	Marginal	Located within project grading limits.	Yes		RC
273	madrone	10"	1	40'±	30'±	3.0	2.5	Shaded tree with curving lower trunk. Vigor and foliage density are moderate with limited Botryosphaeria infection.	Moderate	Located within project grading limits.	Yes		RC
274	black oak	14"	1	35'±	20'±	1.5	1.0	Semi-mature tree in decline with extensive limb dieback and very low vigor. Other dead black oaks are in this area.	Poor	Located within project grading limits.	Yes	Exempt	RC
275	madrone	8"	1	20'±	20'±	0.0	0.0	Tree is dead.	Dead	Located within project grading limits.	No		RC
276	madrone	9"	1	30'±	20'±	2.0	2.0	Young tree with extensive lower trunk cavity. Vigor is low with significant Botryosphaeria infection occurring.	Marginal	Located within project grading limits.	Yes		RC
277	madrone	10.5"	1	30'±	30'±	2.0	2.5	Leaning, asymmetrical structure. Vigor is low with significant Botryosphaeria infection occurring.	Marginal	Located within project grading limits.	Yes		RC
278	madrone	3"; 6.5"	2	25'±	25'±	2.0	2.0	Low, two trunk structure with shaded, asymmetrical structure. Vigor is low with significant Botryosphaeria infection occurring.	Marginal	Located within project grading limits.	Yes		RC
279	black oak	11"	1	40'±	25'±	2.5	2.5	Young tree with shaded, high-branched structure. Vigor and foliage density are moderately low.	Moderate	Located within project grading limits.	Yes		RC
280	bay laurel	4"; 4"; 5"; 5.5"; 7"	5	35'±	30'±	3.0	2.0	Multiple trunk tree originating as basal sprouts. Areas of trunk decay observed. Vigor and foliage density are moderate.	Marginal	Located within project grading limits.	Yes		RC
281	black oak	16.5"	1	50'±	40'±	2.0	1.0	Semi-mature tree with high-branched structure, Tree is weak with extensive lower trunk decay present.	Poor	Located within 10' of retaining wall.	Yes	Exempt	PI
282	black oak	11.5"; 13"	2	50'±	40'±	2.5	2.0	Multiple trunks form at 4'. Crown is moderately asymmetrical with areas of limb decay observed. Vigor and foliage density are moderately low.	Marginal	Located adjacent to retaining wall.	Yes		RC
283	madrone	10"	1	30'±	20'±	2.5	2.5	Young tree with high-branched and asymmetrical crown form. Vigor and foliage density are moderately low with limited Botryosphaeria infection occurring.	Moderate	Located within 10' to 15' of building footprint.	Yes		PI

Tree #	Species	Trunk Diameter @ 4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based on Condition)	Construction Impact	Protected Tree Status	Protected Tree Exempt to Tree Removal Permit (Due to Poor Condition)	Impact Code
284	madrone	17"	1	40'±	40'±	2.0	2.0	Mature tree growing at edge of grading cut. Significant lower trunk canker present. Vigor and foliage density are moderately low with significant Botryosphaeria infection occurring.	Marginal	Located within 10' to 15' of building footprint.	Yes		PI
285	madrone	6.5"	1	15'±	15'±	2.5	2.5	Small tree with leaning structure. Vigor and foliage density are moderately low with limited Botryosphaeria infection occurring.	Moderate	Located within 5' of building footprint.	Yes		RC
286	black oak	13"	1	45'±	30'±	2.5	2.0	Shaded, high-branched structure with curving upper crown. Vigor and foliage density are moderately low with limited twig dieback occurring.	Marginal	Located within 10' to 15' of building footprint.	Yes		PI
287	black oak	11"	1	40'±	20'±	2.5	2.0	Weak, shaded tree with high-branched structure. Vigor and foliage density are moderately low.	Marginal	Located within 10' to 15' of building footprint.	Yes		PI
288	madrone	13"	1	40'±	30'±	2.0	3.0	Co-dominant trunk structure forming at 8'. Tree is shaded with asymmetrical form. Significant Botryosphaeria infection occurring.	Marginal	Located within 10' to 15' of building footprint.	Yes		PI
289	madrone	6"	1	20'±	20'±	2.5	2.5	Small tree with asymmetrical structure extending down slope. Vigor and foliage density are moderately low with limited Botryosphaeria infection occurring. Located below two dead oaks.	Marginal	Located adjacent to retaining wall.	Yes		RC
290	madrone	8"	1	20'±	20'±	2.0	2.0	Small tree with significant lower trunk damage. Horizontal form extending downslope. Vigor and foliage density are low with significant branch dieback occurring.	Marginal	Located adjacent to retaining wall.	Yes		RC
291	coast live oak	16"	1	40'±	35'±	3.0	3.0	Semi-mature tree with co-dominant trunks forming at 7'. Dense branch structure, No significant structural defects observed. Dense poison oak growing into tree. Vigor and foliage density are moderate.	Moderate	Located within building footprint.	Yes		RC
292	blue gum eucalyptus	3"; 6"; 9"	3	60'±	20'±	2.0	2.0	Multiple trunk cluster originating from basal sprouts. Trees is severely shade suppressed. Significant ETB damage observed. Other small diameter eucalyptus are in area.	Poor	Located within 10' of proposed grading limits.	No		RC

Appendix B
Site/Tree Photographs

Limb dieback in blue gum eucalyptus. Both the eucalyptus tortoise beetle and the eucalyptus long-horned borer are active on the site.

Mature eucalyptus along existing driveway.

Young blue gums with high-branched structures and low trunk taper.

Base of blue gum with reported heron nest. Primary structural root has been damaged at edge of existing driveway (arrow).

Upper canopy dieback in blue gum. Note thinning and notched foliage on branches in foreground from eucalyptus tortoise beetle.

Galleries of eucalyptus long-horned borer in heartwood of dead eucalyptus.

Multiple trunk form of blue gum and debris accumulation at base of tree.

Mature blue gum overhanging high voltage lines along North San Pedro Road.

Semi-mature bay laurel with dense stand of French broom.

Young madrone with high-branched structure due to shading and branch dieback from Botryosphaeria infection (arrow).

Semi-mature valley oak in dense stand of broom.

Upper portion of site with dense stands of small diameter trees, poison oak, and French broom. Madrone in this area are generally shad suppressed with old fire damage and Botryosphaeria

infections. There has also been a significant loss of oaks in this zone. Arrow is at old fire damage.

Lower portion of site above eucalyptus row along North San Pedro. Mature valley oak and coast live oak are in moderate to good condition.

Mature Monterey pine. Limited bark beetle damage is occurring.

Recent failure of mature Monterey pine near existing residence.

Collapsed mature coast live oak with decline likely due to SOD infection.

Collapsed blue gum near North San Pedro Road.

Lower pond area with willows, coast live oak, eucalyptus, and Monterey pine.

MACNAIR
&
ASSOCIATES
CONSULTING ARBORISTS AND HORTICULTURISTS

October 7, 2007

Ms. Eve Wengler
Thompson Development, Inc.
250 Bel Marin Keys Blvd., Bldg. A
Novato, CA 94949

RE: 650 North San Pedro Road- Tree Report Revision

Dear Ms. Wengler:

Pursuant to your request, I have prepared a revised tree report for the 650 North San Pedro Road project. This report is prepared in response to a peer review by Garcia and Associates (GANDA), EIR consultants for Marin County DCE.

Generally, I have incorporated the recommendations discussed in the 9/13/07 Peer Review of the 2007 Arborist Report for 650 North San Pedro Road which are summarized as follows:

1.) Correction of tree species identification. Three trees were incorrectly listed in the original report and are now corrected.
2.) Clarification on trunk diameter criteria for the tree inventory. Specifically, all native trees with trunk diameters of six inches and larger were evaluated (although numerous smaller diameter native trees are also included). Non-native tree species with trunk diameters eight inches or larger were listed. The primary exception was the blue gum eucalyptus where generally a minimum 12-inch trunk diameter was used due to the high density of trees occurring in the groves.
3.) Property boundaries and grading limits. The EIR consultants observed surveying staking on the site that were used for brush clearing limits and questioned if the stakes represented grading limits. They also were not clear on boundaries defining the inventory limits. The tree report and Existing Tree Inventory and Removal Plan (Donald Blayney and Associates) is based upon the 650 North San Pedro Road Grading and Drainage Plan prepared by ILS Associates. This grading and drainage plan depicts existing trees, property boundaries, and proposed grading limits and is the basis for determining impact to trees from the proposed property improvements. The on-site staking for brush clearing does not reflect future grading limits and was not used to assess probable construction impact.
4.) 'Protected' tree and exemption criteria definitions. As recommended in the GANDA review, a description of 'Protected' trees with minimum trunk diameters is now included. Additionally, all 'exempted' trees are now listed as 'protected' and another column has been added to the Appendix A tree database to separately list 'exempted' trees. These exempted trees are now considered 'protected' trees, but due to their poor health or structural condition are not subject to tree removal permit or mitigation requirements. The Appendix A list also corresponds directly to the tree impact categories shown in Table A.
5.) Recommended changes in Suitability Ratings. The GANDA review suggested five changes in the original report's ratings for suitability for preservation. Four of these changes involved California bays and one was for a small coast live oak. All recommended higher ratings. These rating recommendations were incorporated with

reservation. In addition to differences in opinion relative to structural characteristics, bays are the primary host plant for the SOD pathogen. Recent research indicates that higher rates of oak infection occur when infected bays are within three to five meters (12 to 15 feet) of susceptible oak species (California black oak and coast live oak). Assuming we want to protect oaks on the site, then it is a logical management goal to remove bays when growing close to oaks designated for preservation. This information should be a part of the future woodland management plan.

Please contact me with any questions, of if additional information is required.

Sincerely,

_____

James MacNair
International Society of Arboriculture Certified Arborist WE-0603A
Member American Society of Arboricultural Consultants

MACNAIR
&
ASSOCIATES
CONSULTING ARBORISTS AND HORTICULTURISTS

April 11, 2010

Ms. Casey Clement
Thompson Development
250 Bel Marin Keys Blvd., Suite A
Novato, CA 94949

RE: 650 North San Pedro- FEIR Issues Discussion

Dear Ms. Clement:

Following are my comments and professional opinions responding to issues raised by the Marin County Planning Commission pertaining to the Final EIR report for the 650 North San Pedro project. The purpose of this letter is to clarify information relating to comments and questions by the Planning Commission relating to trees.

These issues are:

1.) Impact on site water run-off due to removal of existing eucalyptus and oaks.
2.) Assessment of potential negative impacts to new replacement tree plantings by proposed lawn areas.
3.) Consistency of tree container sizes and estimated tree heights between Tree Mitigation Plan (Donald L. Blayney and Associates) and the Proposed Mitigation Tree Container Sizes table (MacNair and Associates).
4.) Measures to control French broom in existing infestation areas and where clearing and increased sunlight exposure might encourage spread of this weed species.

Tree Removal and Water Run-Off:

The water demand of trees is based upon a variety of variables including prevailing climatic conditions, species characteristics, the size of the tree, phenological status (timing within annual growth cycle), and the condition of the tree.

Evapo-transpiration (ET) is a term used to describe the water requirements of plants based upon prevailing environmental conditions of solar exposure, temperature, humidity, and wind. ET refers to the total amount of water taken up by a plant and utilized through transpiration and evaporation. ET rates vary according to location and season. June and July are typically the highest ET months due to the long daylight hours and high temperatures, while December and January are conversely the lowest months.

Rainfall usually far exceeds the ET requirements of plants during the winter months and their rate of water uptake. Consequently, normal rainfall rates will exceed plant water use substantially during the rainy season. Trees and vegetation in general provide protection against erosion by dissipating the kinetic energy of rain, slowing run-off rates, and facilitating water infiltration into soils

during high rainfall events. But the plants themselves are not up taking water at rates sufficient to have a significant impact on run-off during the winter months.

During March and April plants will increase water uptake rates due to spring growth cycles in support of new vegetative production. There is a theoretical potential for a limited increase in run-off rates during these two months between the removal of existing trees and establishment of the new plantings. It is my opinion that any potential impact in this narrow time period is negated by the poor condition of the eucalyptus, which is the dominant tree on the site. As trees decline their physiological functions diminish, including the ability to produce new growth and to maintain foliage density. This decline directly affects the demand by the tree for water as well as the functional ability to uptake water.

In regards to the other tree species on the site, the deciduous oaks and trees are not using water during their dormant period, and the evergreen species (like the eucalyptus) are using very limited amounts due to the low ET rates. Also, as discussed in the arborist report, many of the trees on this site are in poor condition, which reduces water uptake and evapo-transpiration rates.

While water uptake by trees is not a critical factor affecting run-off during winter months, it is essential that potential soil erosion and water run-off rates be physically controlled once the trees are removed. These issues are addressed in the Grading and Drainage Plan prepared by the project civil engineer, ILS Associates.

Lawn Area Impacts to Replacement Trees:

It is my opinion that the proposed lawn areas will not have a negative impact on the replacement native trees. There are no trees planted in the lawn areas and the trees will be irrigated with a dedicated irrigation valve to allow correct and appropriate irrigations during the establishment period.

All trees need water and it is myth that oaks cannot tolerate summer irrigation. Tree loss due to overwatering is management issue. If a tree is overwatered, or irrigation spray is allowed to constantly wet the trunk, or soils are not allowed to dry between irrigation cycles, then there is a high potential for disease problems. But with thoughtful irrigation management, oaks will benefit from periodic irrigation during the dry season. The largest and healthiest native trees are found where they have a source of water and deep soils. Consistently, this occurs in riparian zones, or in valley floors where soils are deep and there is a water table providing a consistent source of water throughout the year.

Consistency of Tree Mitigation Sizes:

The Tree Mitigation Plan has been revised to match the tree descriptions in the Proposed Mitigation Tree Container Sizes table.

French Broom Control:

The following discussion outlines the procedures recommended for implementation within the defensible space zones on the project site for control of existing or future infestations of any of the broom species.

Species Description:

The three exotic broom species occurring in California are French broom (*Genista monspessulana*), Scotch broom (*Cytisus scoparius*) and Spanish broom (*Spartium junceum*). All three species are considered invasive perennial shrubs that grow in grasslands, scrub, and woodland habitats. The broom species reproduces from either seed or vegetative cuttings. Their yellow flowers that generally bloom March through June, with a second flowering often occurring in the fall, characterize brooms.

In August and September, brown seedpods burst open and seeds are shot out onto the soil. Broom can produce 2,000 to 3,500 seedpods per bush, with each seedpod containing several seeds. Further, broom seeds persist and can stay viable for up to five years, and potentially longer. Broom seeds often germinate with early winter rains, establishing a flush of new seedlings from December to July. Broom has many characteristics of a species adapted to disturbance; it grows rapidly; flowers at a young age (as young as two years old); has a long life span (up to seventeen years); a persistent seed bank; and individuals can re-sprout from the stem base. As a result, repeated treatments conducted over successive seasons are required to effectively reduce or eradicate this invasive weed.

Control Requirements:

1.) Hand pulling, scraping with a hula hoe, or digging with hand tools is required for controlling young broom plants, seedlings and small infestations between January and May.
2.) Removal of larger mature plants will require the use of a specialized tool called a weed wrench, which acts as a lever to pull the entire plant out, including roots, so that re-sprouting does not occur.
3.) Cutting should be employed where broom individuals are too large to pull. Cutting minimizes soil disturbance and requires tools such as brush cutters, power saws, axes, machetes, hand pruners, loppers, and clippers. Stems should be cut as close to the ground as possible to reduce re-sprouting.
4.) Broom shall be cut at or below ground level in late July or early September, after the broom has set seed (but prior to seed dispersal) and when soil moisture is at its lowest. This will increase the mortality of adult plants and decrease re-sprouting because nutrient reserves are at their lowest. The warm, cleared soil will stimulate seedling germination with repeated cutting and hand removal required to gradually deplete the seed bank.
5.) Re-sprouting stumps should be cut again the following year, either in late spring or the dry season. Repeat this treatment annually until the plant's energy sources are depleted.
6.) Seedlings should be mowed the following summer using a brush-cutter. At this stage, seedlings are still vulnerable and can be killed by cutting the stems at or below the root crown. Treatments should be repeated until the seed bank is depleted. Upon removal of mature plants, emerging seedlings will require control for the duration of the mitigation control period.
7.) Broom should be cleared from the site or stacked in piles to increase light penetration to the soil. This will flush out the seedlings, deplete the seed bank, and allow easier access for follow-up treatments. Pulled plants that have not gone to seed can be piled on-site to decompose. Plants that have gone to seed should be piled on tarps or bagged to reduce the number of seeds falling to the ground and germinating. Tarps should be visited annually and eventually removed when materials have decomposed.

Other methods as described in the Weed Workers Handbook may be considered (http://www.cal-ipc.org/ip/management/wwh/pdf/18601.pdf). All herbicide or pesticide use are subject to applicable State and local laws.

Please contact me with any questions, or if additional information is required.

Sincerely,

_____

James MacNair
International Society of Arboriculture Certified Arborist WE-0603A
Member American Society of Arboricultural Consultants

APPENDIX K

LETTER FROM CONTRACT PLANNER FOR PROJECT APPLICANT

Scott L. Hochstrasser

IPA, Inc

E-Mail slh1ipa@aol.com
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June 15, 2010

Ms. Casey Clement, Project Manager
Thompson Development
250 Bel Marin Keys Blvd., Suite A
Novato, CA 94949

RE: 650 N. San Pedro – FEIR Clarifications and Amplifications

Dear Ms. Clement:

The following are my comments and professional opinions responding to the two issues raised by the Marin County Planning Commission pertaining to the Final Environmental Impact Report for the 650 N. San Pedro development project. The two specific issues this letter addresses are as follows:

1. **No Project Alternative – Individual Development of 5 legal lots of record.**

2. **Implementation - MM 4.3-B.1- regarding off-site mitigation for heron nest.**

No Project Alternative – Individual Development of 5 legal lots of record

The Planning Commission raised the question about the FEIR erratum on pages 5-2 and 5-3 of the FEIR where in the report states that three of the five (5) existing legal lots of record would not be subject to discretionary approval for development. The report notes that due to the size and location of the three lots (APN's 180-231-09,180-231-05, 180-231-06) they could be developed in conformance with the development standards specified in the governing zoning, R-E:B-3 district. The Commission felt that given the site constraints that these three lots, in addition to the other two legal lots, would also require discretionary approvals. The following clarification is provided to amplify on the FEIR consultants reasoning:

a. APN 180-231-05 is approximately 6 acres and is currently developed with a driveway on N. San Pedro Road, a single family home and accessory buildings that generally comply with the standards of the governing zoning district. In fact, the existing plus or minus 1,200 sq ft house could be removed and replaced with a home that is larger, up to 3,000 sf house and a new 540 sq ft garage without the need for

design review. No tree removal permit would be required because the logical building pad for redevelopment of the site and expansion of the existing house is surrounded with non-native trees that are not protected by the current county tree ordinance. The county records indicate that this lot was developed without discretionary permits.

b. APN 180-231-06 is a vacant 2 plus acre lot with approximately 280 feet of frontage on N. San Pedro Road. Approximately 130 feet of N. San Pedro Road frontage has a slope of less than 20% and includes a bench cut driveway with an existing gate. The lot provides a triangular area at the toe of a steep slope that is about 20,000 sq ft in area with 20-25% slope. The logical building envelope area has existing rough cut driveway entrance, ample land area for development of a single family detached residential unit and garage that meets the standards for development in the R-E:B-3 governing zone district. Trees on the lot are mostly non-native and their removal would not require a permit. In my opinion this lot could be developed with one new single family home up to 3,000 sq ft in size and with a 540 sq ft garage all within the development standards specified in the zoning without any discretionary permits.

c. APN 180-231-09 is a vacant approximately 1 ac lot with approximately 100 ft of frontage on N. San Pedro Road. The site could be accessed from a new driveway cut on N. San Pedro Road or by grant of private driveway easement and extension of an existing driveway located on APN 180-231-05. The lot is generally vegetated with non-native trees and has an average slope of about 30%. The site has signs of previous disturbance by grading and a grade break exists on the site that could provide an ample future building envelope for development of a single family home up to 3,000 sq ft in size and a 540 sq ft garage. In my opinion development of this lot without tree permit and/or other discretionary planning and zoning permits is possible with careful site planning and if the adjacent property owner agreed to granting a driveway easement over the existing developed property at APN 180-231-05.

Summary and Conclusion

Each of the three legal lots of record described below clearly have ample land area; frontage on a public road with existing utility infrastructure, and potential building envelopes to provide for reasonable development of a single family home on each lot. In fact, each of the lots has an obvious potential building envelope and existing or roughed graded road access and each lot has more than twice the building area required for site development based on the governing standards of the R-E:B-3 zoning. In my opinion it is practical, logical and reasonable to conclude, based on evidence in the administrative record, that individual owners of each of the three parcels could and likely would pursue development entitlements using every effort to design development to fit within the zone district standards so as to avoid the time, expense and high level of scrutiny involved in the discretionary planning and zoning process. One lot is currently developed with a single family detached home with about ½ the house size permitted in the zone. The

county records are replete with evidence to demonstrate that in fact this lot was developed without discretionary permits.

Implementation – Mitigation Monitoring 4.3 – B-1 regarding off-site mitigation for heron nest.

The Planning Commission raised the question about specific implementation of MM 4.3-B-1 related to the on and off-site actions planned to mitigate or reduce the impact of the project resulting from the removal of the heron rookery. Mitigation 4.3-B-1 specifically relates to actions the applicant shall take to ensure off-site mitigation. The applicant's off-site implementation program is as follows:

a. Applicant's biologist will contact CDFG (FG) biologist and arrange a meeting to review potential habitat enhancement and protection programs FG already has underway. If the FG preference is to have the project sponsor participate financially with a fair share money contribution toward an on-going and underfunded effort now underway the project sponsor will consider this opportunity providing the FG program meets specific performance standards specified in the mitigation 4.3-B-1.
b. If FG does not have any preferred programs underway the project sponsors biologist will meet with and consult with managers of existing heron rookeries including West Marin Island and/or other locations that have been identified as potential habitat that would also meet the specification and performance standards contained in the FEIR Volume #1 Page 4.3-31. The project sponsors biologist will work with the managers of existing rookeries to ensure that an existing program that meets mitigation performance standards is supported and/or assist the site manager with development of a new program that is compensatory with and in the scale and proportionality of the project impact on a 1:1 ratio.
c. Project sponsors biologist will work with FG to develop a program on-site that could, in addition to what is required and specified in mitigation 4.3-B-2,3,4 , enhance the trees and vegetation in the proposed Open Space to encourage establishment of a new future heron rookery on-site.
d. The project sponsors biologist will contact other resource protection agencies in the Bay area including the Army Corps, USFWS, San Francisco Bay Joint Venture and others to explore collaboration with their on-going efforts to preserve heron rookery in programs they already have underway. The project sponsor will research details of other programs and present the project sponsors participation opportunity to the FG along with an analysis and demonstration of how the program participation would comply with the performance standards specified in the FEIR.
e. Compensation for the heron rookery loss and the program details will be worked out with the FG staff and would be completed and certified by FG for

presentation to the County CDA prior to the removal of the tree and prior to the project construction as specified in mitigation 4.3-B.1

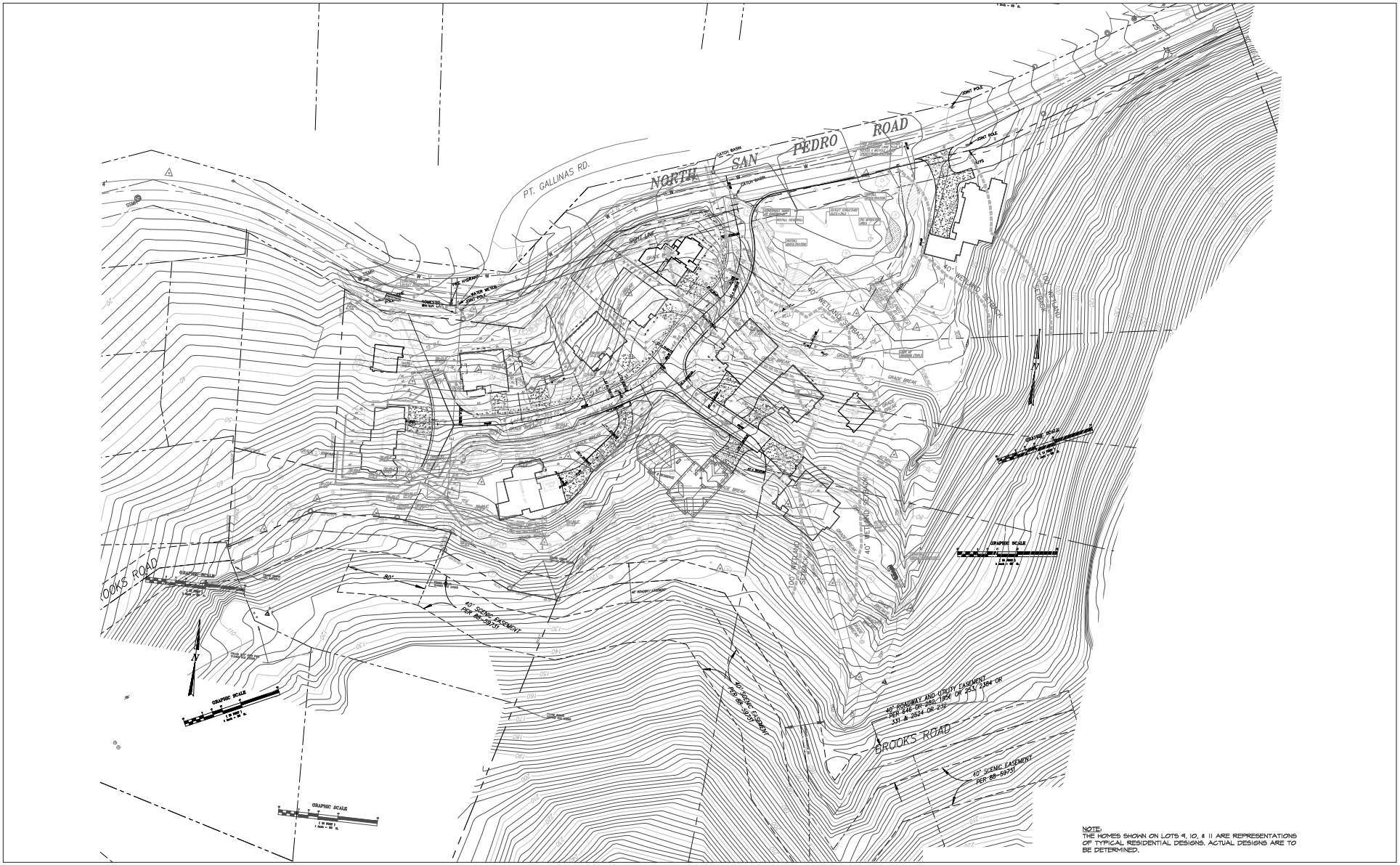
Please contact me with any questions, or if additional information is required.

Sincerely,

Scott L, Hochstrasser

APPENDIX L

SIGHT DISTANCE AND LOT 1



Source: ILS Associates, Inc.

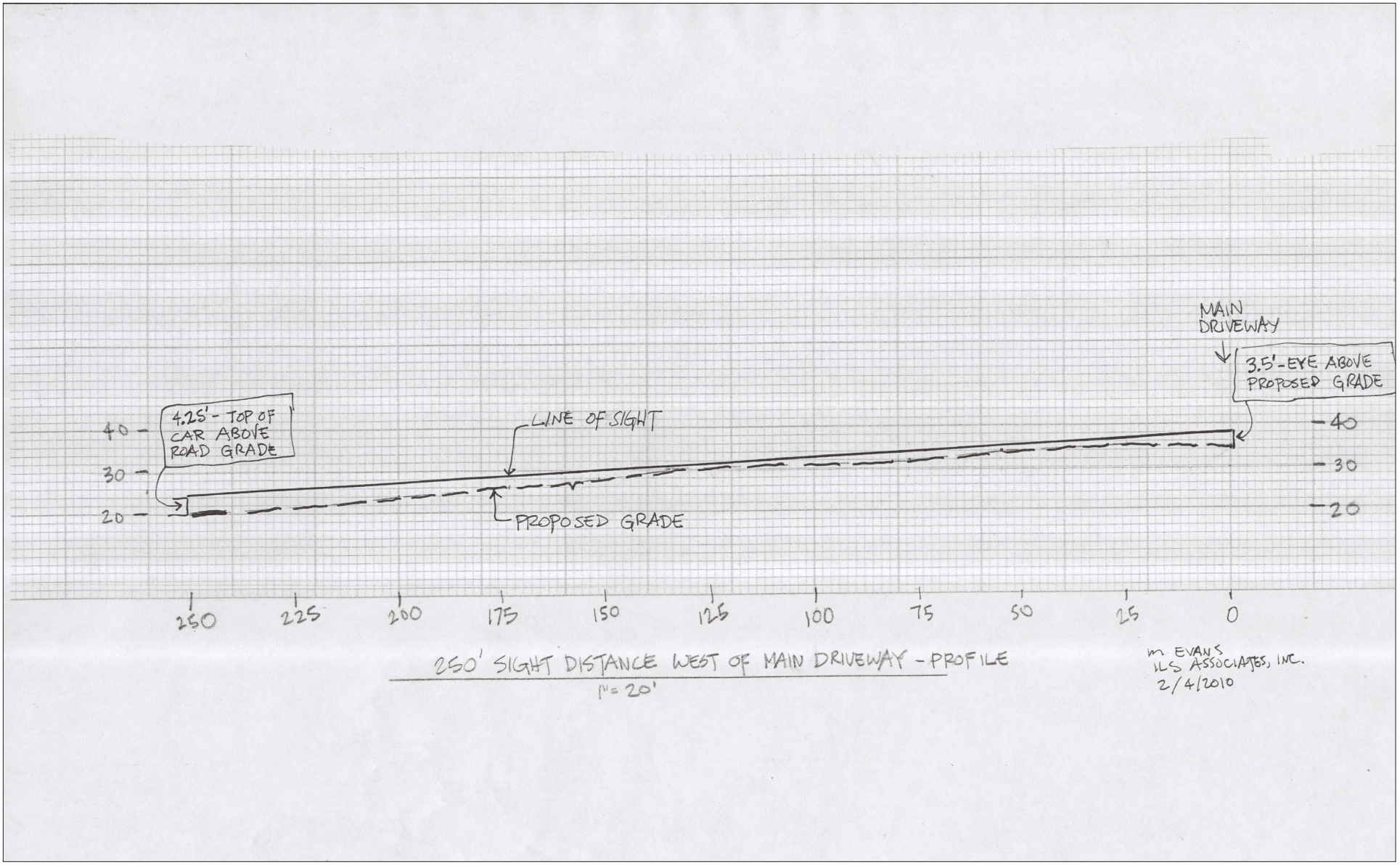
FIGURE 1

SITE PLAN SHOWING RECONFIGURED LOT 1

Source: ILS Associates, Inc.

FIGURE 2

SIGHT DISTANCE TO WEST FROM MAIN DRIVEWAY



Source: ILS Associates, Inc.

FIGURE 3

SIGHT DISTANCE PROFILE TO WEST FROM MAIN DRIVEWAY

Source: ILS Associates, Inc.

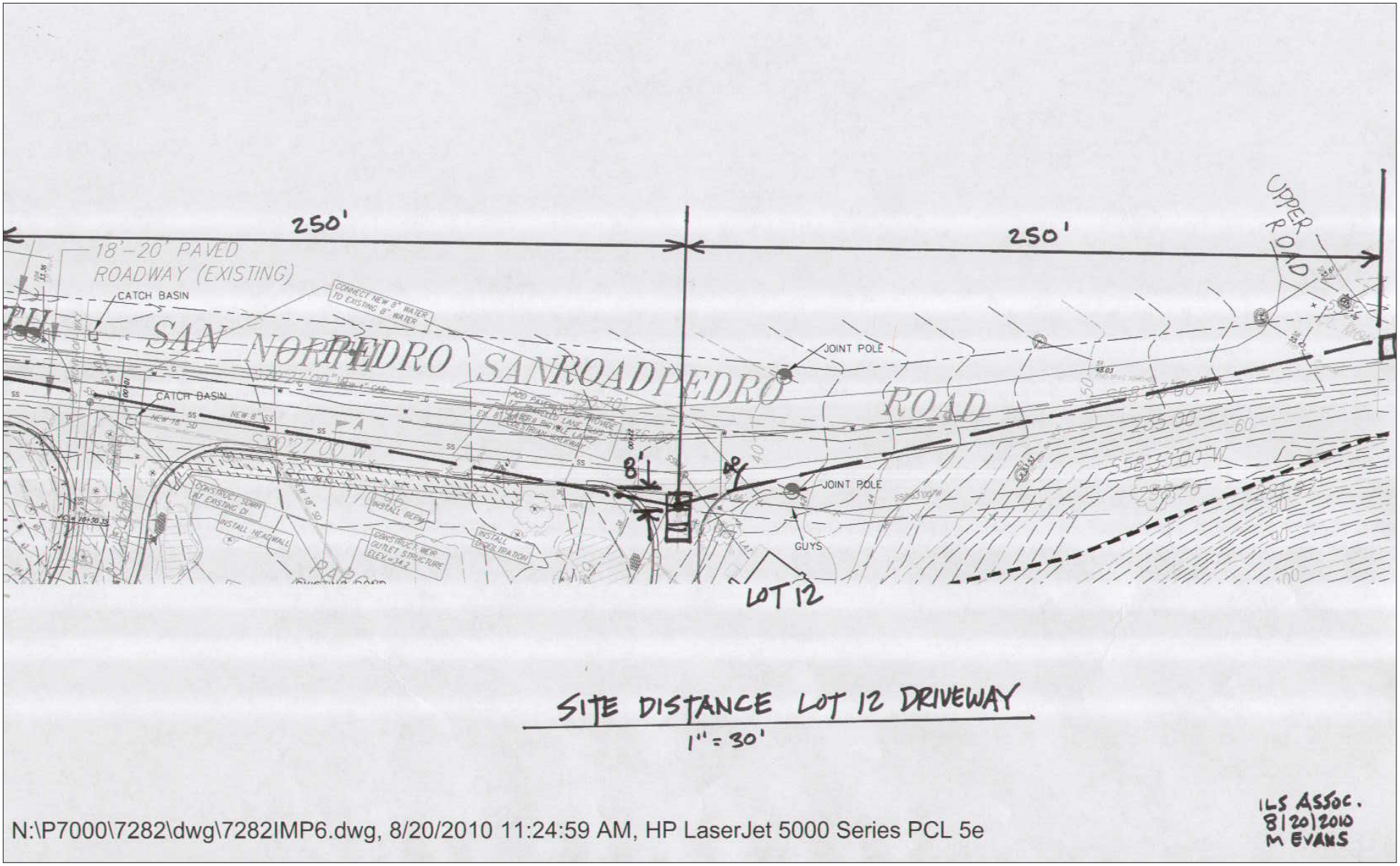
FIGURE 4

PHOTO TO WEST FROM LOT 12 DRIVEWAY

Source: ILS Associates, Inc.

FIGURE 5

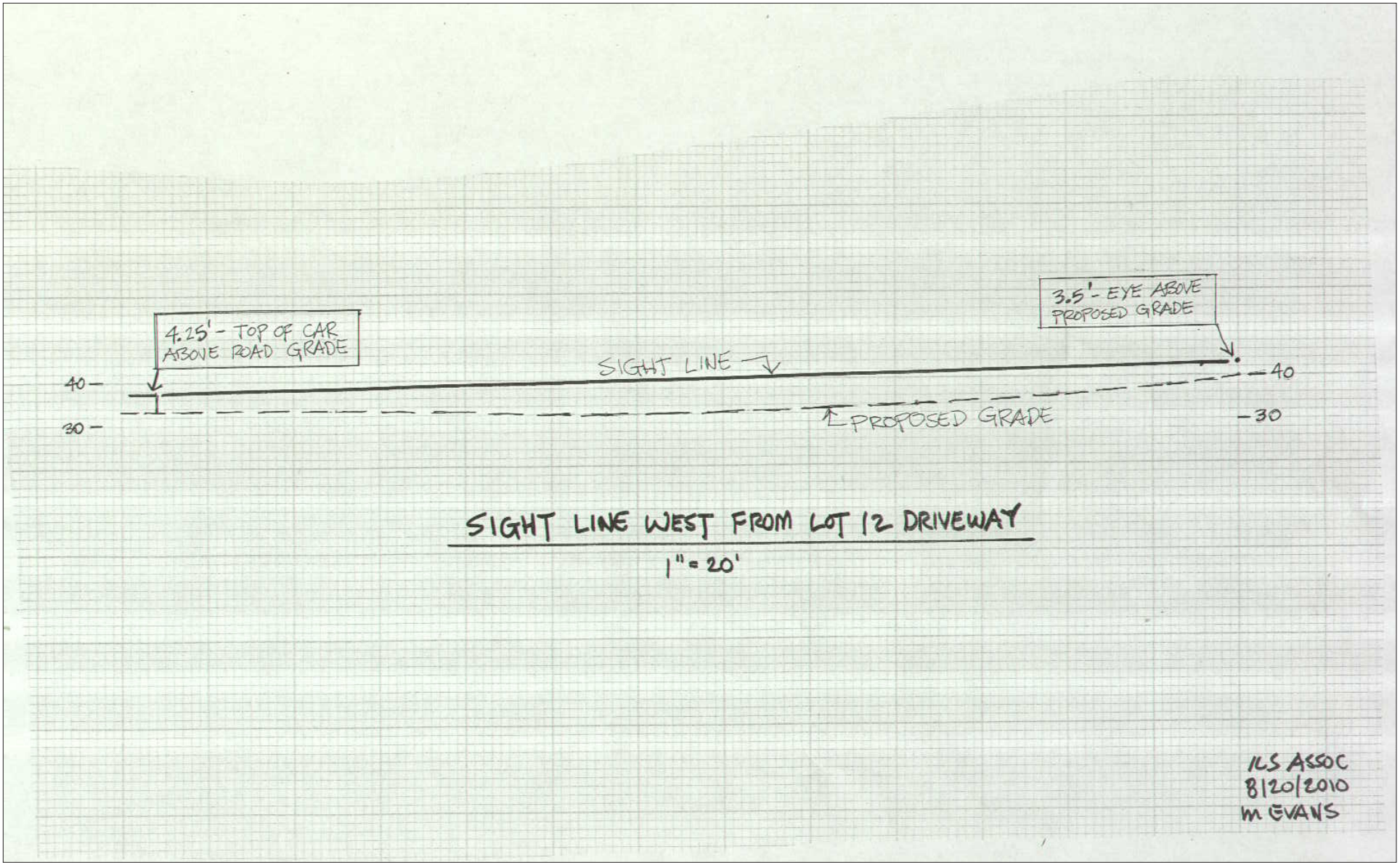
PHOTO TO EAST FROM LOT 12 DRIVEWAY



Source: ILS Associates, Inc.

FIGURE 6

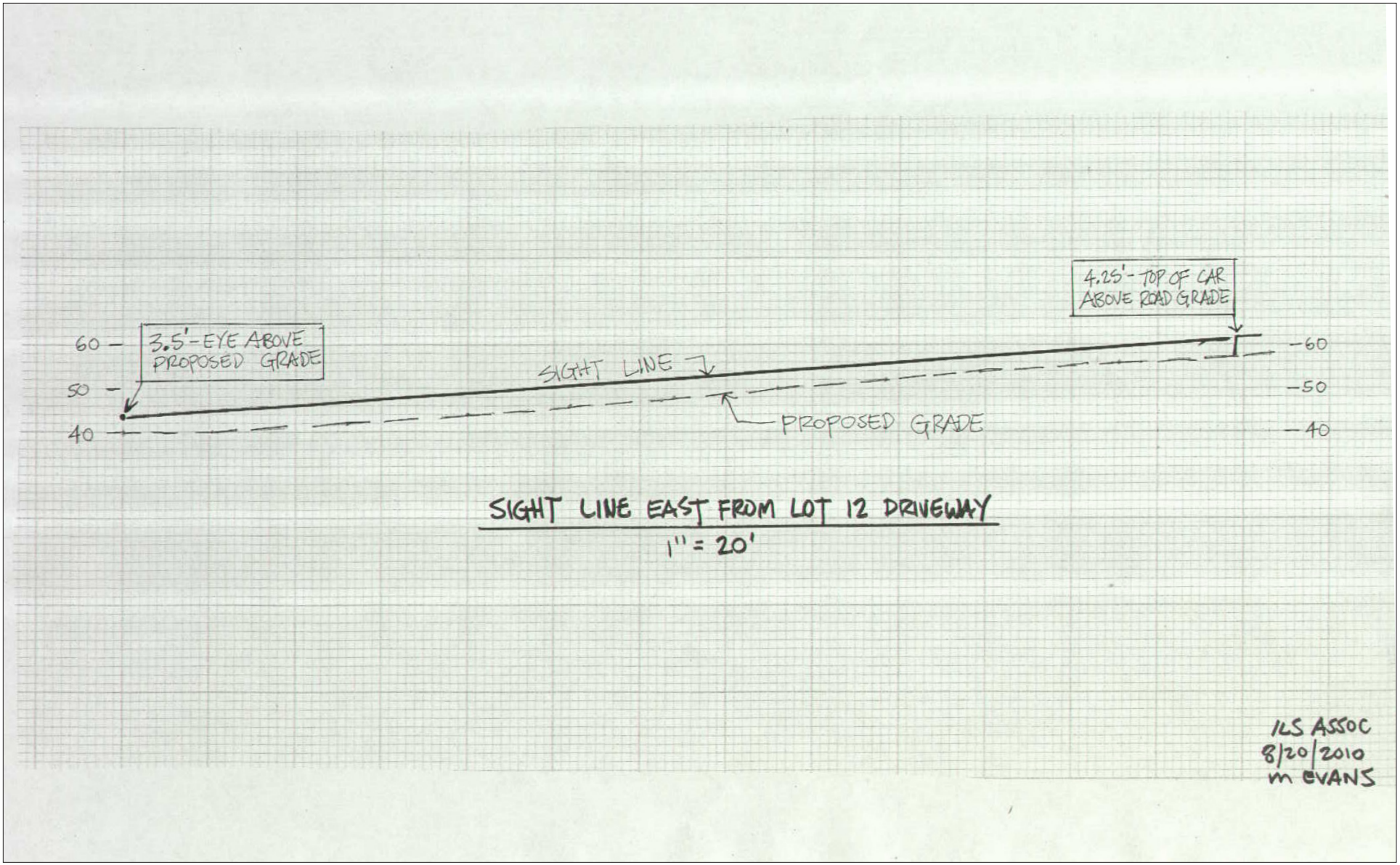
SITE DISTANCE FROM LOT 12 DRIVEWAY



Source: ILS Associates, Inc.

FIGURE 7

SIGHT DISTANCE PROFILE TO WEST FROM LOT 12 DRIVEWAY



Source: ILS Associates, Inc.

FIGURE 8

SIGHT DISTANCE PROFILE TO EAST FROM LOT 12 DRIVEWAY

APPENDIX M

WETLAND CONSERVATION AREA IN NO PROJECT ALTERNATIVE

Source: ILS Engineers and Marin County Community Development Agency

FIGURE 1

WETLAND CONSERVATION AREA AND NO PROJECT ALTERNATIVE

APPENDIX N

LAND USE COMPATIBILITY ANALYSIS MAP

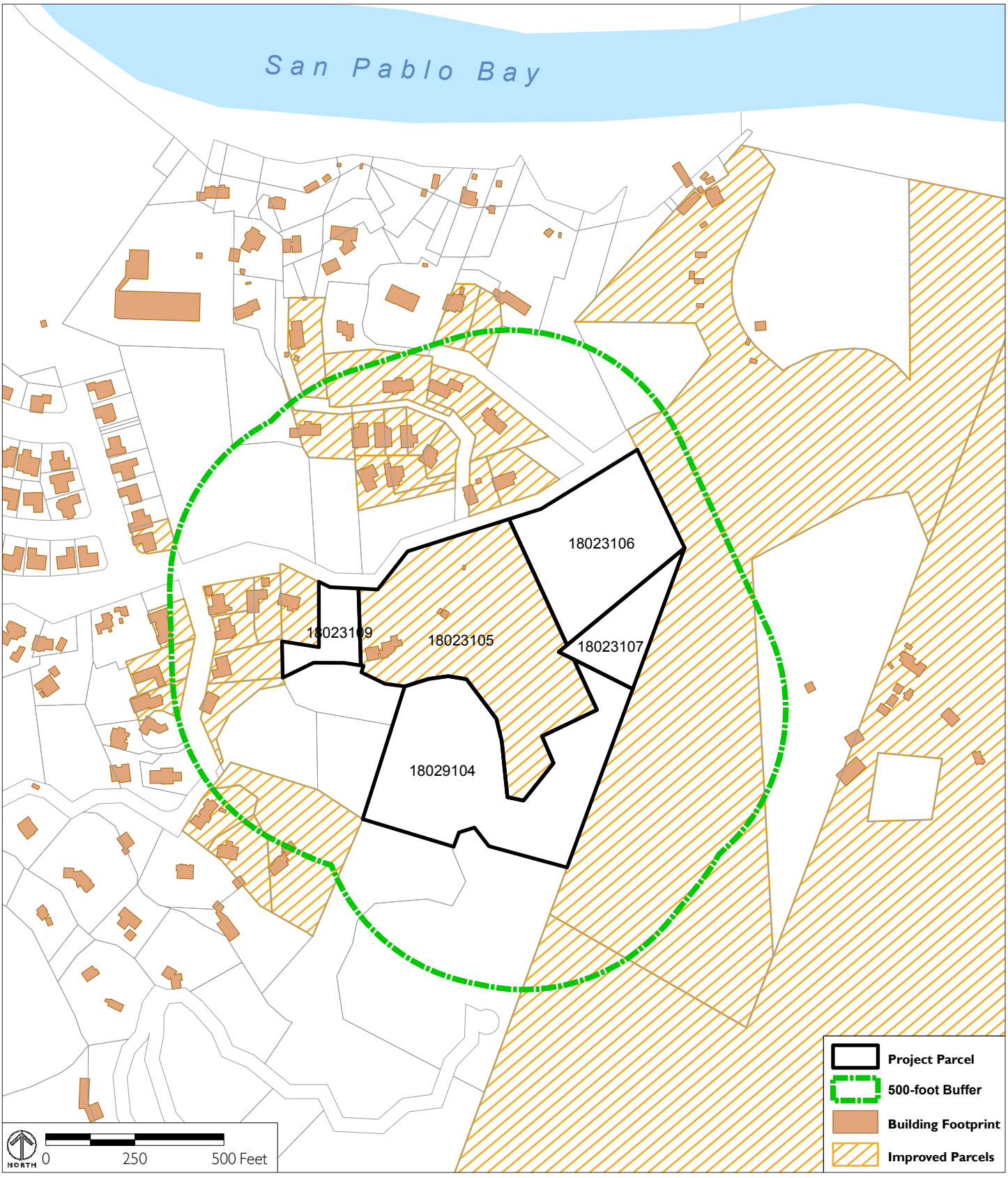


FIGURE 1

LAND USE COMPATIBILITY ANALYSIS MAP

APPENDIX O

CORRESPONDENCE REGARDING OFFHAUL TRUCKS

From: Joe Hass
Sent: Tuesday, May 11, 2010 4:05 PM
To: Casey Clement
Subject: RE: 650 NSP

Based on the ILS Grading and Drainage Plan dated 1-31-08 there is 5700 cubic yards of offhaul. Using semi-end dumps, each carrying approximately 20cy there are 285 truckloads.

From: Casey Clement
Sent: Tuesday, May 11, 2010 4:02 PM
To: Joe Hass
Subject: RE: 650 NSP

Thanks! Is there a specific size or is that standard?

From: Joe Hass
Sent: Tuesday, May 11, 2010 3:51 PM
To: Casey Clement
Subject: RE: 650 NSP

I found the information. 285 truckloads.

From: Casey Clement
Sent: Tuesday, May 11, 2010 3:46 PM
To: Joe Hass
Subject: 650 NSP

Joe,

For the Amendment to the Final EIR, we need to include an estimate of the number of truck trips associated with the cut and grading phase. I remember that you did some estimating for the earthwork not too long ago, and I'm hoping that you can estimate what these figures would be?

Thanks,
Case

Casey Clement
Development Manager

Thompson Development Inc.
250 Bel Marin Keys Blvd., Suite A
Novato, CA 94949
Ph: 415.456.8972
Cell: 415.717.2574
Fax: 415.382.9896
caseyc@westbaybuilders.com