# APPENDIX A:
# PRELIMINARY TREE EVALUATION

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June 3, 2015

Coastside Fire Protection District
Attn: Mr. Neil Martin
1191 Main Street
Half Moon Bay, CA 94019

Site: Coastside Fire Station #41, El Granada, CA

As requested on Wednesday, May 27, 2015, I visited the above site to inspect and comment on the trees. New fire station is planned for this site and your concern for the future health and safety of the trees has prompted this visit.

**Method:**
All inspections were made from the ground; the tree was not climbed for this inspection. The tree in question was located on a "Not- to-Scale" map provided by me. The tree was then measured for diameter at 54 inches above ground level (DBH or diameter at breast height). The tree was given a condition rating for form and vitality. The trees' condition rating is based on 50 percent vitality and 50 percent form, using the following scale.

| | | | |
|---|---|---|---|
| 1 | - | 29 | Very Poor |
| 50 | - | 69 | Fair |
| 70 | - | 89 | Good |
| 90 | - | 100 | Excellent |

The height of the tree was measured using a Nikon Forestry 550 Hypsometer. The spread was paced off. Comments and recommendations for future maintenance are provided.

**Tree #1 with a large failed leader at the base.**

Coastside fire/6/3/15 (2)

**Survey:**

| Tree# | Species | DBH | CON | HT/SP | Comments |
|---|---|---|---|---|---|
| 1 | Monterey pine *(Pinus radiata)* | 10.4-9.2 | 45 | 35/25 | Poor vigor, poor form, leans east, bark beetle on trunk, pine pitch canker. |
| 2 | Monterey pine *(Pinus radiata)* | 24.4-30 | 40 | 40/45 | Poor vigor, poor form, large failed leader on ground, failed limbs. Bark beetle at base. |
| 3 | Blue gum *(Eucalyptus globulus)* | 6.5 | 55 | 35/10 | Fair vigor, fair form, volunteer. |
| 4 | Monterey pine *(Pinus radiata)* | 30.6 | 0 | 30/35 | Dead. |
| 5 | Monterey pine *(Pinus radiata)* | 20.9-13.4 | 30 | 35/25 | Poor vigor, poor form, in decline, large failed limbs, bark beetle. |
| 7 | Monterey pine *(Pinus radiata)* | 9.2 | 65 | 25/15 | Good vigor, fair form, shares root zone with #8. |
| 8 | Monterey pine *(Pinus radiata)* | 25.7-26.9 | 50 | 45/40 | Poor-fair vigor, poor form, codominant at 3 feet. Bark beetle. |
| 9 | Acacia *(Acacia longifolia)* | 4.2 | 55 | 15/20 | Fair vigor, poor form, largest trunk of several. |
| 10 | Black acacia *(Acacia melanoxylon)* | 11.3 | 45 | 20/20 | Poor-fair vigor, poor form, trunk bends south. |
| 11 | Black acacia *(Acacia melanoxylon)* | 8.1 | 40 | 20/15 | Fair vigor, poor form, trunk bends south. One of several. |

**Summary:**

The trees on site are a mix of imported trees, there are no trees native to the El Granada area. The Monterey pines on site are in decline. The trees have a history of large limb and leader failure. Bark beetle has infested the trees and the trees will soon be dead. Pine tree #4 has already dead and the remaining will follow. Remove the Monterey pines prior to construction and replace as required with appropriate trees for the fire station. Natives are highly recommended.

**Dead Monterey pine #4. Bark beetle and pine pitch canker has contributed to the death of this tree.**

The acacias and the eucalyptus are of an invasive species that are known to be flammable. Remove these invasive trees and replace with appropriate trees at the time of landscaping. If any trees are retained the following tree protection plan should be followed. Tree protection will lessen impacts to retained trees and the riparian area.

**Grove of acacias, the photo depicts the invasive nature of the species.**

**Tree Protection Plan:**
Tree protection zones should be established and maintained throughout the entire length of the project. Fencing for the protection zones should be 4 foot orange plastic fencing supported by metal stakes pounded into the ground. The support poles should be spaced no more than 10 feet apart on center. The location for the protection fencing should be as close to the dripline as possible still allowing room for construction to safely continue. Signs should be placed on fencing signifying "Tree Protection Zone - Keep Out". No materials or equipment should be stored or cleaned inside the tree protection zones. Areas outside the fencing but still beneath the dripline of protected trees, where foot traffic is expected to be heavy, should be mulched with 4 to 6 inches of chipper chips. The riparian area shall be fenced off with construction fencing and no access to the area should be allowed.

Trenching for irrigation, electrical, drainage or any other reason should be hand dug when beneath the driplines of protected trees. Hand digging and carefully laying pipes below or beside protected roots will dramatically reduce root loss of desired trees thus reducing trauma to the entire tree. Trenches should be backfilled as soon as possible with native material and compacted to near its original level. Trenches that must be left exposed for a period of time should also be covered with layers of burlap or straw wattle and kept moist. Plywood over the top of the trench will also help protect exposed roots below.

Normal irrigation should be maintained throughout the entire length of the project. If the trees on this site is traumatized it should receive heavy flood type irrigation 2 times a month. During the fall and winter 1 time a month should suffice. Mulching the root zone of protected trees will help the soil retain moisture, thus reducing water consumption. The redwood trees will require regular irrigation until winter rains saturate the soil.

The information included in this report is believed to be true and based on sound arboricultural principles and practices.

Sincerely,

Kevin R. Kielty
Certified Arborist WE#0476A