

Appendix C
Arborist Report



DENISE DUFFY & ASSOCIATES, INC.

PLANNING AND ENVIRONMENTAL CONSULTING

MEMORANDUM

Date: December 19, 2023

To: Ryan Altemeyer, Associate Superintendent of Business Services
Monterey Peninsula Unified School District

From: Patric Krabacher, ISA Certified Arborist 11759
Denise Duffy & Associates, Inc.

SUBJECT: Arborist Report for the Marina High School Multi-Sports Field Project

Denise Duffy & Associates, Inc. (DD&A) is contracted by the Monterey Peninsula Unified School District (MPUSD) to provide arborist services for the Marina High School Multi-Sports Field Project (project or proposed project), located in the City of Marina (City) in Monterey County, California. The project site consists of various improvements to the existing athletic fields and adjacent areas at Marina High School. Tree removal within the project site is regulated by Marina Municipal Code (MMC or City Code) Chapter 17.62 (Tree Removal, Preservation, and Protection). Removal of any living tree requires a tree removal permit from the City.

To inform the development of project design plans that preserve as many healthy, native trees as practicable, DD&A conducted a field inventory of trees within and directly adjacent the project site in October 2022. This report documents the trees which are recommended for removal to facilitate construction of the project, and the measures which are recommended to mitigate potential impacts to the trees and other sensitive biological resources in the area.

METHODS

Limitations

It is not the intent of this report to provide a monetary valuation of the trees or provide risk assessment for any tree on this parcel, as any tree can fail at any time. No clinical diagnosis was performed on any pest or pathogen that may or may not be present within the site. In addition to an inspection of the property, DD&A relied on information provided by the project proponent (such as survey data, property boundaries, and property ownership information) to prepare this report, and must reasonably rely on the accuracy of the information provided. DD&A shall not be responsible for another's means, methods, techniques, schedules, or procedures, or for contractor safety or any other related programs, or for another's failure to complete work in accordance with approved plans and specifications.

Regulatory Setting

City of Marina Municipal Code

MMC Section 17.62.030 requires a tree removal permit to remove, damage, or relocate, or cause to be removed, damaged, or relocated any tree on any property within City limits, unless exempted by MMC Sections 17.62.040 or 17.62.050. MMC Section 17.62.030 also prohibits construction activities within the dripline of any tree, unless these activities are conducted in compliance with tree protection guidelines adopted by resolution of the planning commission.

MMC defines “tree” as any living woody perennial plant having a single stem of six (6) inches or more diameter at breast height (DBH; measured at 4.5 feet above ground) or a multi-stemmed plant having an aggregate diameter of ten inches or more measured at DBH, and any living woody perennial plant which was planted in accordance with requirements of an approved compensation plan or was planted as part of a landscaping plan approved by the city. MMC defines a “Healthy tree” as a tree that is continuing to thrive and is not in decline as determined by a tree expert. MMC defines “Dripline” as the greater of the outermost edge of the tree’s canopy, or fifteen times DBH measured from the center point of the tree. Saplings which do not meet the City’s definition of a tree (i.e., are less than six [6] inches DBH), are not protected by City Code and may be removed, damaged, or relocated without any regulatory constraints.

California Fish and Game Code

In accordance with Section 3503 of the California Fish and Game Code, it is “unlawful to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Section 3503.5 prohibits the killing, possession, or destruction of any birds in the orders Falconiformes or Strigiformes (birds-of-prey). Section 3511 prohibits take or possession of fully protected birds. Section 3513 prohibits the take or possession of any migratory nongame birds designated under the federal Migratory Bird Treaty Act. Section 3800 prohibits take of nongame birds.

Survey Methods

DD&A biologists, led by certified arborist Patric Krabacher, conducted a tree inventory of the project site on October 14, 2022. Trees within and directly adjacent to the project site were inventoried in accordance with the following protocol, which incorporates the requirements of MMC Chapter 17.62:

- All trees were tagged with a GPS location and a numbered aluminum marker (on the most feasible/visible location possible). For trees which were previously tagged during previous surveys, the existing physical marker was recorded.
- Tree diameter was recorded at breast height (4.5 feet above ground) or (for multi-stemmed trees) at the most representable location.
- Multi-stemmed trees were recorded as one tree if the root crown (the point where the trunk meets natural grade) was contiguous. Multi-stemmed tree DBH was calculated by taking the square root of the squared sum of all stems measured ($\sqrt{[\text{Stem 1 DBH}^2 + \text{Stem 2 DBH}^2 + \text{Stem 3 DBH}^2 \dots]}$). This equation returns the diameter at the base of the tree (Chojnacky, 1999).
- Species, size, health class, and photographs were recorded for each tree. Tree health was recorded based on the following definitions:

- *Good*. Tree is healthy and vigorous, as indicated by foliage color and density, and has no apparent signs of insect, disease, structural defects, or mechanical injury. Tree has good form and structure.
- *Fair*. Tree is in average condition and vigor for the area, but may show minor insect, disease, or physiological problems. Trees in fair condition may be improved with correctional pruning.
- *Poor*. Tree is in a general state of decline. Tree may show severe structural or mechanical defects which may lead to failure, and may have insect or disease damage, but is not dead.

Tree health was evaluated by visually inspecting each tree from its root crown to its foliar canopy for signs of decay, disease, or insect infestations. In accordance with MMC's definition of a "tree," dead trees were not inventoried.

GPS data were collected using a Trimble® Geo 7 Series GPS and were then digitized using Trimble® GPS Pathfinder and ESRI® ArcGIS 10.4. GPS data were collected using geographic coordinate system Universal Transverse Mercator (UTM) Zone 10 North and the World Geodetic System 1984 (WGS84) datum.

RESULTS

DD&A inventoried 78 trees within and directly adjacent to the project site (see **Figure 1** and **Appendix A**). Tree species identified include 36 Monterey cypresses (*Hesperocyparis macrocarpa*), 21 Monterey pines (*Pinus radiata*), 18 coast live oaks (*Quercus agrifolia*), and three (3) acacias (*Acacia* sp.). Most trees are in fair condition (see **Appendix A**); they are in average vigor for the area and are showing small signs of decay, disease, or and/or insect infestations, including seiridium canker fungus, pine beetle and *Phytophthora* root and crown rot. However, 10 trees are in poor condition; they are showing signs of significant decline, including seiridium canker fungus, pine beetle and *Phytophthora* root and crown rot. No indicators or symptoms of sudden oak death were observed.

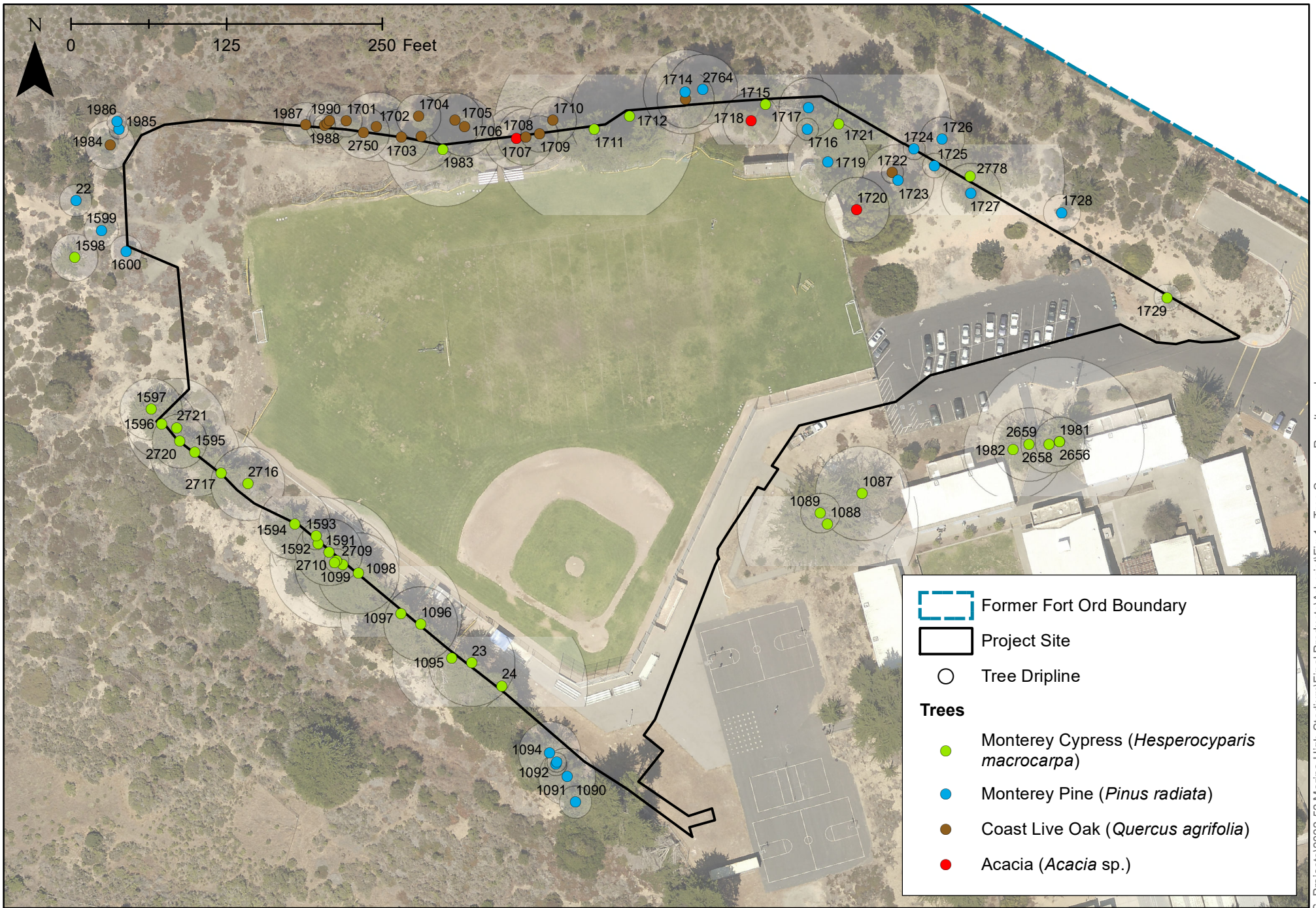
The following 31 trees lie within the currently proposed project site:

- 16 Monterey cypresses in fair condition and one (1) Monterey cypress in poor condition,
- Two (2) Monterey pines in fair condition and four (4) Monterey pines in poor condition,
- Four (4) coast live oaks in fair condition and one (1) coast live oak in poor condition, and
- Three (3) acacias in fair condition.

Although they are located outside the project site, the following 18 trees have a significant portion (more than 25 percent) of their driplines within the site:

- Nine (9) Monterey cypresses in good or fair condition,
- One (1) Monterey pine in fair condition, and one (1) Monterey pine in poor condition, and
- Seven (7) coast live oaks in fair condition.

The remaining 29 trees are located outside the currently proposed project site.



Tree Survey Results

Date
12/18/2023

Scale
1 in = 100 ft



Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

Figure
1

DISSCUSSION

As described above, 31 trees lie within the proposed project site. Nine (9) of those trees are recommended for removal because they are in poor condition or are non-native (see **Appendix A**). It is recommended that the remaining 22 trees located within the project site are protected in place to the extent feasible in accordance with Best Management Practices (BMPs) described in **Appendix B**; however, these trees may need to be removed to facilitate construction of the project and, therefore, should be included in the tree removal permit as “potential removals.” See **Figure 2** for the tree removal plan and **Appendix C** for a photo log of trees which are recommended for removal, or which may need to be removed to facilitate construction of the project.

In accordance with MMC Section 17.62.030, MPUSD must obtain a tree removal permit from the City prior to removal of all living trees, including non-native trees or trees in poor condition. Tree removal must be accomplished in accordance with any conditions specified in the removal permit. In addition, the following mitigation measures are recommended to avoid or minimize impacts to adjacent trees and other sensitive biological resources during tree removal:

1. Tree removal can be timed to avoid the breeding and nesting season for raptors and other protected avian species. If tree removal must occur during the avian breeding and nesting season (February 1 through September 15), pre-construction surveys for nesting birds shall be conducted no more than 15 days prior to construction in all areas within 300 feet of the construction footprint that may provide suitable nesting habitat. If nesting birds are identified during pre-construction surveys, tree removal shall be postponed. No work shall proceed in the vicinity of an active nest until such time as all young are fledged or until after September 15, when young are assumed fledged.
2. Pursuant to Section 17.62.030 of MMC, MPUSD must comply with the City’s Tree Protection Guidelines. To reduce impacts to trees not scheduled for removal, MPUSD and/or the project contractor shall implement the best managements practices for working near trees outlined in **Appendix B**. Trees which will be retained on site shall be allowed to develop their natural forms and shall not be trimmed as topiaries or other unnatural forms. All tree trimming shall conform to trimming standards identified in **Appendix B**.
3. Prior to ground-disturbing activities, MPUSD shall install protective fencing around trees directly adjacent to the work area which are not scheduled for removal. Protective fencing shall be maintained throughout the duration of construction. A qualified arborist, forester, or biological monitor shall conduct a site visit at least once per week throughout the duration of construction to ensure that protective fencing remains intact.
4. A qualified arborist, forester, or biological monitor shall be on-site during all initial ground-disturbing activities and vegetation removal. Following initial ground-disturbing activities, the qualified arborist, foresters, or biological monitor shall conduct a site visit at least once per week throughout the duration of construction to ensure that the tree protection measures identified in **Appendix B** are implemented.

As further described above, 18 additional trees directly adjacent to the project site have a significant portion of their driplines within the site; excavation activities in these areas could result in decline or mortality of these trees. It is recommended that MPUSD avoid significant impacts to the 17 healthy, native trees to the greatest extent feasible by limiting excavation beyond two (2) feet deep in least 25 percent of each tree's dripline, and/or applying BMPs provided in **Appendix B**. Implementation of **Mitigation Measures 2-4** above would ensure that impacts to trees outside the project footprint are avoided. It is recommended that one (1) Monterey pine in poor condition (see **Appendix B**) is removed because it is already in decline (**Figure 2**).

Per MMC 17.62.060, compensation (i.e., tree replacement) at a 2:1 ratio is only required for removal of healthy trees. Seven (7) native tree species in poor condition are proposed for removal due to the hazard they present, and proximity to high pedestrian traffic areas. In addition, the City considers *Acacia* species to be a pest; it is therefore recommended that no compensation be required for the removal of three (3) healthy acacia trees, only that the invasive plant material be hauled offsite. However, compensation requirements for healthy trees, including acacias, would be determined by the City in its tree removal permit.

If you have any comments or questions about this report, please contact Patric Krabacher at pkrabacher@ddaplanning.com or (831) 373-4341 ext. 29.

REFERENCES

David C. Chojnacky. 1999. Converting Tree Diameter Measured at Root Collar to Diameter at Breast Height.

APPENDIX A

Tree Table

Marina High School Multi-Sports Field Project
Tree Table

<i>Tree ID</i>	<i>Scientific Name</i>	<i>Common Name</i>	<i>Individual Stem DBH (in)</i>								<i>Total DBH (in)</i>	<i>Dripline (ft)</i>	<i>Health</i>	<i>Recommendation</i>
23	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	28								28	35	Fair	Avoid If Feasible
24	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	24	36	20	10	10	9	20	10	55	69	Fair	Avoid If Feasible
1096	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	18	10	12						24	30	Fair	Avoid If Feasible
1098	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	26								26	33	Fair	Avoid If Feasible
1593	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	9								9	11	Fair	Avoid If Feasible
1595	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	18	15	15	6					28	36	Fair	Avoid If Feasible
1596	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	22								22	28	Fair	Avoid If Feasible
1703	<i>Quercus agrifolia</i>	Coast Live Oak	18								18	23	Fair	Avoid If Feasible
1708	<i>Quercus agrifolia</i>	Coast Live Oak	13	13							18	23	Fair	Avoid If Feasible
1709	<i>Quercus agrifolia</i>	Coast Live Oak	12								12	15	Fair	Avoid If Feasible
1711	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	65								65	81	Fair	Avoid If Feasible
1712	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	38								38	48	Fair	Avoid If Feasible
1721	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	18	32	9	42	45				72	90	Fair	Avoid If Feasible
1723	<i>Pinus radiata</i>	Monterey Pine	23								23	29	Fair	Avoid If Feasible
1725	<i>Pinus radiata</i>	Monterey Pine	8								8	10	Fair	Avoid If Feasible
1729	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	9								9	11	Fair	Avoid If Feasible
1983	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	37								37	46	Fair	Avoid If Feasible
2716	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	13	13	16						24	30	Fair	Avoid If Feasible
2717	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	24	10	6	10					28	36	Fair	Avoid If Feasible
2720	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	10	10	9	6					18	22	Fair	Avoid If Feasible
2721	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	32								32	40	Fair	Avoid If Feasible
2750	<i>Quercus agrifolia</i>	Coast Live Oak	11	11	6						17	21	Fair	Avoid If Feasible
1095	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	38								38	48	Fair	Avoid Dripline If Feasible
1097	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	34	19							39	49	Fair	Avoid Dripline If Feasible
1099	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	31								31	39	Good	Avoid Dripline If Feasible
1591	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	18	12							22	27	Fair	Avoid Dripline If Feasible
1592	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	30								30	38	Fair	Avoid Dripline If Feasible
1594	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	23								23	29	Fair	Avoid Dripline If Feasible
1702	<i>Quercus agrifolia</i>	Coast Live Oak	12	16	10						22	28	Fair	Avoid Dripline If Feasible
1713	<i>Quercus agrifolia</i>	Coast Live Oak	18								18	23	Fair	Avoid Dripline If Feasible
1714	<i>Pinus radiata</i>	Monterey Pine	27								27	34	Fair	Avoid Dripline If Feasible
1724	<i>Pinus radiata</i>	Monterey Pine	7								7	9	Poor	Avoid Dripline If Feasible
1987	<i>Quercus agrifolia</i>	Coast Live Oak	14								14	18	Fair	Avoid Dripline If Feasible
1988	<i>Quercus agrifolia</i>	Coast Live Oak	7								7	9	Fair	Avoid Dripline If Feasible
1989	<i>Quercus agrifolia</i>	Coast Live Oak	10	9							13	17	Fair	Avoid Dripline If Feasible
1990	<i>Quercus agrifolia</i>	Coast Live Oak	13								13	16	Fair	Avoid Dripline If Feasible
2709	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	8								8	10	Fair	Avoid Dripline If Feasible
2710	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	38	8	12	10					42	52	Fair	Avoid Dripline If Feasible

<i>Tree ID</i>	<i>Scientific Name</i>	<i>Common Name</i>	<i>Individual Stem DBH (in)</i>				<i>Total DBH (in)</i>	<i>Dripline (ft)</i>	<i>Health</i>	<i>Recommendation</i>
2752	<i>Quercus agrifolia</i>	Coast Live Oak	22				22	28	Fair	Avoid Dripline If Feasible
2778	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	15	54	24		61	76	Fair	Avoid Dripline If Feasible
1707	<i>Acacia sp.</i>	Acacia	14	10	10	6	21	26	Fair	Remove
1715	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	24	32			40	50	Poor	Remove
1716	<i>Pinus radiata</i>	Monterey Pine	7				7	9	Poor	Remove
1717	<i>Pinus radiata</i>	Monterey Pine	19				19	24	Poor	Remove
1718	<i>Acacia sp.</i>	Acacia	18				18	23	Fair	Remove
1719	<i>Pinus radiata</i>	Monterey Pine	26				26	33	Poor	Remove
1720	<i>Acacia sp.</i>	Acacia	11	12	10	8	21	26	Fair	Remove
1722	<i>Quercus agrifolia</i>	Coast Live Oak	7				7	9	Poor	Remove
1727	<i>Pinus radiata</i>	Monterey Pine	19				19	24	Poor	Remove
22	<i>Pinus radiata</i>	Monterey Pine	10				10	13	Poor	Retain
1087	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	30				30	38	Fair	Retain
1088	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	41	37	19		58	73	Fair	Retain
1089	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	8	10			13	16	Fair	Retain
1090	<i>Pinus radiata</i>	Monterey Pine	10				10	13	Poor	Retain
1091	<i>Pinus radiata</i>	Monterey Pine	18				18	23	Fair	Retain
1092	<i>Pinus radiata</i>	Monterey Pine	7				7	9	Fair	Retain
1093	<i>Pinus radiata</i>	Monterey Pine	6				6	8	Fair	Retain
1094	<i>Pinus radiata</i>	Monterey Pine	20				20	25	Fair	Retain
1597	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	20				20	25	Fair	Retain
1598	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	11	10			15	19	Fair	Retain
1599	<i>Pinus radiata</i>	Monterey Pine	11				11	14	Fair	Retain
1600	<i>Pinus radiata</i>	Monterey Pine	10				10	13	Poor	Retain
1701	<i>Quercus agrifolia</i>	Coast Live Oak	10				10	13	Fair	Retain
1704	<i>Quercus agrifolia</i>	Coast Live Oak	14				14	18	Fair	Retain
1705	<i>Quercus agrifolia</i>	Coast Live Oak	16	7			17	22	Fair	Retain
1706	<i>Quercus agrifolia</i>	Coast Live Oak	19				19	24	Fair	Retain
1710	<i>Quercus agrifolia</i>	Coast Live Oak	15				15	19	Fair	Retain
1726	<i>Pinus radiata</i>	Monterey Pine	14				14	18	Fair	Retain
1728	<i>Pinus radiata</i>	Monterey Pine	12				12	15	Fair	Retain
1981	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	16				16	20	Fair	Retain
1982	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	32				32	40	Fair	Retain
1984	<i>Quercus agrifolia</i>	Coast Live Oak	16				16	20	Fair	Retain
1985	<i>Pinus radiata</i>	Monterey Pine	6				6	8	Fair	Retain
1986	<i>Pinus radiata</i>	Monterey Pine	6				6	8	Fair	Retain
2656	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	54				54	68	Fair	Retain
2658	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	18				18	23	Fair	Retain
2659	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	24				24	30	Fair	Retain
2764	<i>Pinus radiata</i>	Monterey Pine	22				22	28	Fair	Retain

APPENDIX B

Best Management Practices When Working Near Trees

Fencing and Barricades

All trees in the project area which are scheduled for preservation shall be temporarily fenced prior to all project-related activities. Fencing shall be installed at the edge of the root zone (the area located within 15 times the trunk diameter in all directions) or located at the edge of pavement furthest from the trunk (whichever comes first). Fencing shall consist of chain link or plastic link fence which is maintained at a minimum height of four feet above grade during all phases of construction.

Fenced areas shall not be used for material stockpile, storage, or vehicle parking. Dumping of materials, chemicals, or garbage shall be prohibited within fenced areas. Fenced areas shall be maintained in natural condition at natural or existing grade and shall not be compacted.

All approved construction within the root zone shall include construction barricades. Barricades shall be upright and be constructed from two-inch by four-inch planks standing a minimum of eight feet vertically, conforming to the tree, and shall be tied with wire or rope forming a maximum of one-inch space between the planks. If the tree's configuration or site conditions do not lend themselves to the installation of this type barricade, a certified arborist or City Forester shall designate alternate tree protection methods. Under certain conditions where soil compaction is probable, fences may also be required around a tree or grouping of trees. The use of recycled lumber, synthetic lumber, or similar materials approved by a certified arborist or City Forester is encouraged.

Tree Pruning

Tree pruning shall be minimal but, when necessary, shall be performed in accordance with American National Safety Institute (ANSI) A300 Pruning Standards. Pruning may include the larger canopied trees that have deadwood or are exhibiting some minor structural defect or minor disease that must be compensated. Should the health and vigor of any tree decline, it shall be treated as appropriately recommended by a certified arborist or qualified forester. In general, trees shall be assessed then pruned first for safety (e.g., broken and cracked limbs shall be removed in high-traffic areas of concern), next for health, and finally for aesthetics. No more than 25% of the overall tree crown shall be pruned in one season.

Tree pruning may include crown thinning, crown raising, crown reduction, or crown restoration, as described below.

Crown Thinning

Crown thinning is the cleaning out of or removal of dead, diseased, weakly attached, or low vigor branches from a tree crown. Crown thinning shall be conducted as follows:

- All trees shall be pre-assessed on how the tree will be pruned from the top down.
- Tree trimmers shall favor branches with strong, U-shaped angles of attachment and, where possible, remove branches with weak, V-shaped angles of attachment and/or included bark.
- Lateral branches shall be evenly spaced on the main stem of young trees and areas of fine pruning.
- Branches that rub or cross another branch shall be removed where possible.
- Lateral branches shall be no more than one-half to three-quarters of the diameter of the stem to discourage the development of co-dominant stems where feasible.
- In most cases, trimmers shall not remove more than one-quarter of the living crown of a tree at one time. If it is necessary to remove more, it shall be done over successive years.

Crown Raising

Crown raising removes the lower branches of a tree to provide clearance for buildings, vehicles, pedestrians, and vistas. Crown raising shall be conducted as follows:

- Live branches on at least two-thirds of a tree's total height shall be maintained wherever possible. The removal of too many lower branches would hinder the development of a strong stem.
- All basal sprouts and vigorous epicormic sprouts shall be removed where feasible.

Crown Reduction

Crown reduction is used to reduce the height and/or spread of trees and is used for maintaining the structural integrity and natural form of a tree. Crown reduction shall be conducted only when absolutely necessary, as follows:

- Pruning cuts shall be at a lateral branch that is at least one-third the diameter of the stem to be removed wherever possible.
- When it is necessary to remove more than half of the foliage from a branch, it may be necessary remove the entire branch.

Crown Restoration

Crown restoration is used to improve the structure and appearance of trees that have been topped or severely pruned using heading cuts. One of three sprouts on main branch stubs should be selected to reform a natural appearing crown. Selected vigorous sprouts may need to be thinned to ensure adequate attachment for the size of the sprout. Restoration may require several years of pruning.

Root Pruning

Where alternative routes are not available, any subsurface construction related activities for the project shall avoid cutting major roots with a diameter of greater than or equal to two inches, unless necessary. All approved construction within the root zone shall conform to the following construction practices:

- Hand trenching at point or line of grade cuts closest to the trunk to expose major roots two inches or more in diameter.
- In cases where rock or unusually dense soil prevents hand trenching, mechanical trenching may be permitted provided that work inside the dripline is closely supervised to prevent tearing or other damage to major roots (greater than or equal to two inches).
- Exposed major roots shall be cut with a saw to form a smooth surface and avoid tearing or jagged edges.
- Absorbent tarp or heavy cloth fabric shall be placed over grade cuts where roots are exposed and secured with stakes and two to four inches of compost or wood chips spread over the tarp to prevent moisture loss. Care shall be taken that moisture levels beneath tarped areas remain comparable to surrounding areas until backfilling occurs. Some watering of these areas may be necessary to maintain moisture levels, and such measures shall remain in effect through all phases of construction, including all delays and other periods of inactivity.

APPENDIX C

Photo Log of Trees Recommended for Removal



23.JPG



24.JPG



1095.JPG



1096.JPG



1097.JPG



1098.JPG



1099.JPG



1591.JPG



1592.JPG



1593.JPG



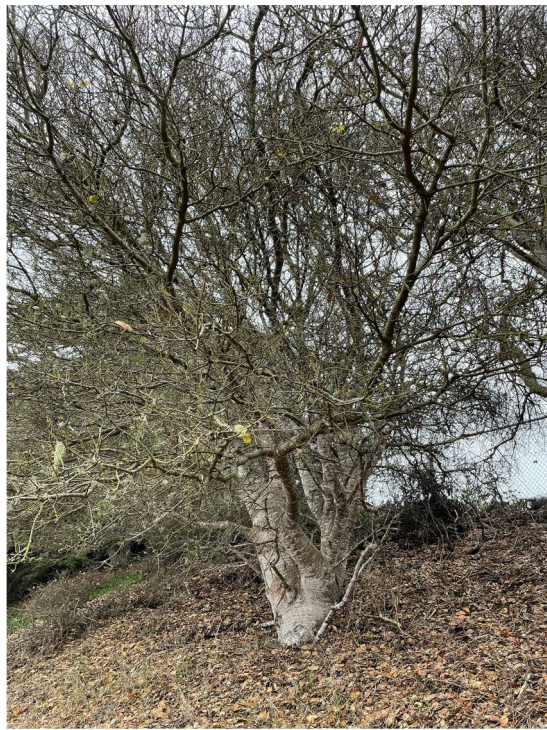
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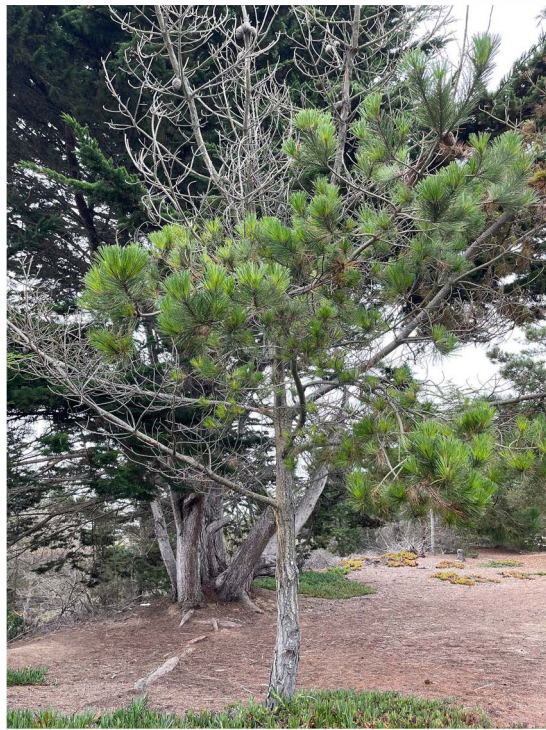
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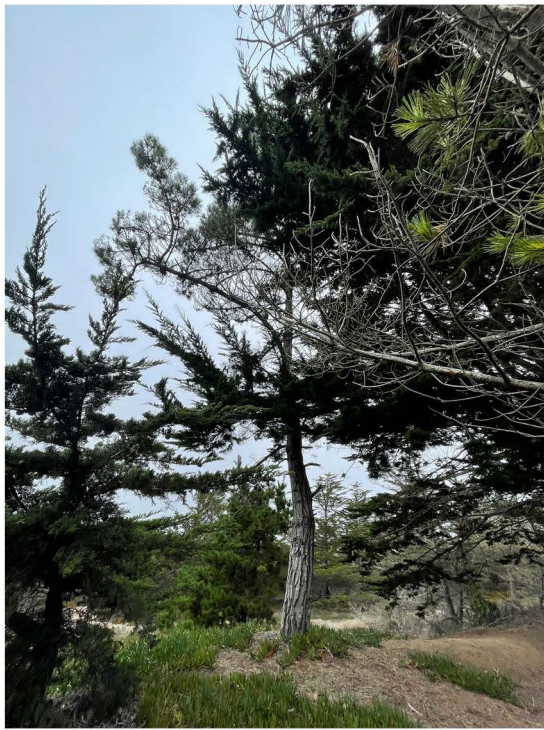
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1719.JPG



1720.JPG



1721.JPG



1722.JPG



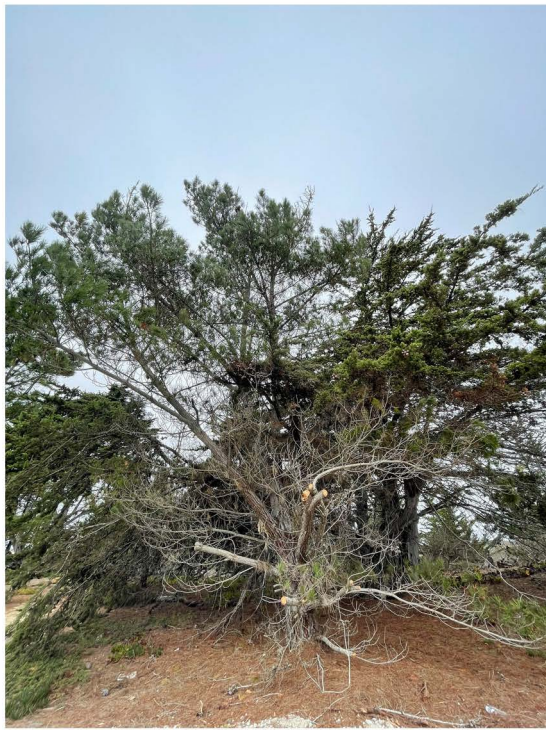
1723.JPG



1724.JPG



1725.JPG



1727.JPG



1729.JPG



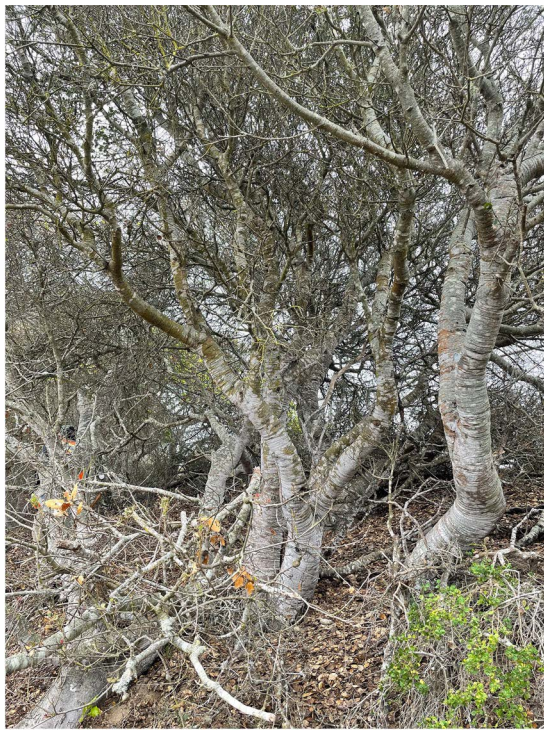
1983.JPG



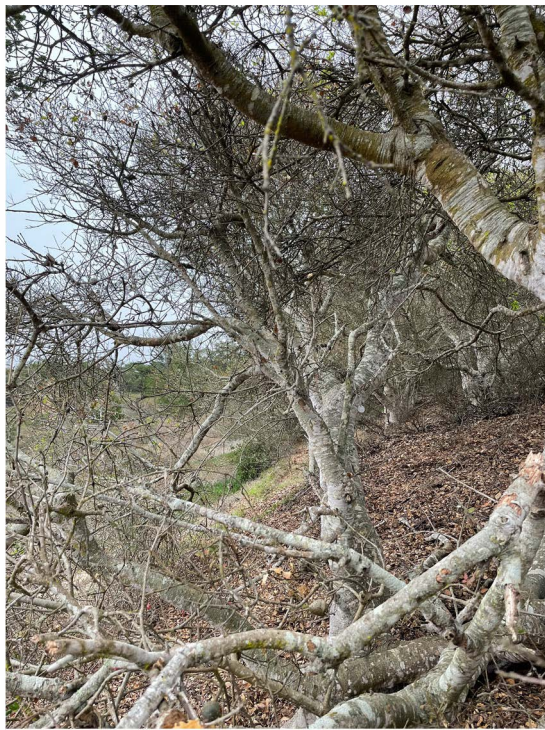
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1988.JPG



1989.JPG



1990.JPG



2709.JPG



2710.JPG



2716.JPG



2717.JPG



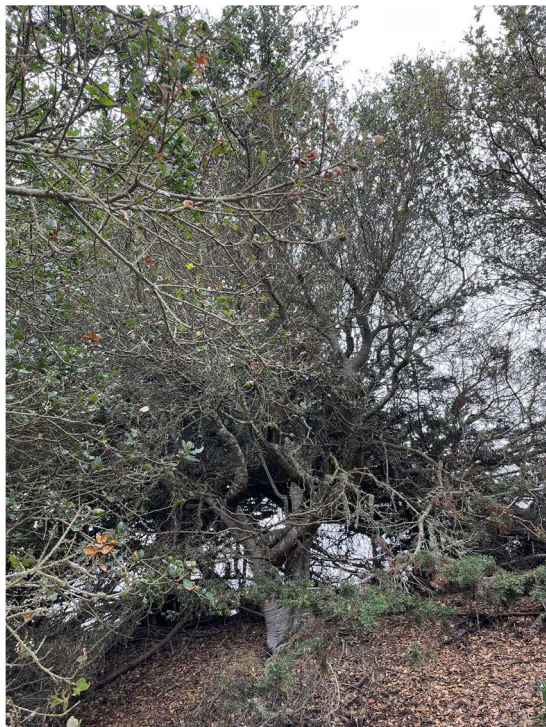
2720.JPG



2721.JPG



2750.JPG



2752.JPG



2778.JPG