



DENISE DUFFY & ASSOCIATES, INC.

PLANNING AND ENVIRONMENTAL CONSULTING

MEMORANDUM

Date: November 9, 2023

To: Peter Meyerhofer, PE
Kimley-Horn & Associates, Inc.

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

Subject: Arborist Report and Tree Removal Plan for the Monterey-Salinas Transit SURF! Busway and Rapid Transit Project

Denise Duffy & Associates, Inc. (DD&A) is contracted by Kimley-Horn & Associates, Inc. (Kimley-Horn), working on behalf of the Monterey-Salinas Transit (MST), to provide environmental consulting services for the MST SURF! Busway and Rapid Transit Project (project). The project is located within the Transportation Agency for Monterey County (TAMC) Monterey Branch Line rail corridor right-of-way (ROW) in several jurisdictions, including the City of Marina, Sand City, and the County of Monterey (County). Construction of the project will result in the removal of trees within and directly adjacent to the project's grading limits. The City of Marina, Sand City, and the County regulate the removal of protected trees within their jurisdictions and require a tree removal permit to remove, damage, or relocate those trees.

This report describes the proposed tree removals associated with the project and the specific regulatory requirements of each jurisdiction. This report also recommends mitigation, where necessary, to avoid, reduce, or mitigate potential project impacts which may result from tree removal.

METHODS

DD&A biologists, led by International Society of Arboriculture (ISA) Certified Arborist Patric Krabacher, conducted tree surveys of the project site on September 1, 2, and 7, 2022. The surveys included the mapping and tagging of protected trees, as defined by the appropriate jurisdiction, within the project's grading limits and immediately adjacent areas.

Some trees at the planned 5th Street Station were inventoried on August 17, 2021 as part of surveys for the Dunes on Monterey Bay Project; however, DD&A updated the condition of these trees, where appropriate, during the September 2022 surveys.

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 Kimley-Horn (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.

Survey Methods

Protected trees (as defined by each jurisdiction under *Regulatory Setting* below) in and within 25 feet of the project's grading limits were inventoried in accordance with the following protocol¹:

- Trees were tagged with a GPS location and a numbered aluminum marker (on the most feasible/visible location possible).
- Tree diameter at breast height (DBH) was recorded at 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. Dead trees were not inventoried.

¹ Several trees were inaccessible due to fencing or active homeless encampments; DBH for these trees were estimated and the trees were not tagged with a physical marker.

GPS data were collected using a Trimble® Geo 7 Series GPS and were then digitized using Trimble® GPS Pathfinder and ESRI® ArcGIS 10.4 or were collected using a Trimble® TDC600 GPS and were then digitized using Trimble® TerraFlex 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.

Regulatory Setting

Local Tree Ordinances

City of Marina Municipal Code

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 of Marina 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) or a multi-stemmed plant having an aggregate diameter of ten (10) 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 “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.

Sand City Municipal Code

Sand City Municipal Code (SCMC) Section 16.12 requires a tree removal permit from the City to perform or cause to be performed the removal, cutting down, or trimming of more than one-third of the green foliage of, poisoning, or otherwise killing or destroying, any significant tree within City limits, unless exempted by SCMC Section 16.12.080.

SCMC defines “significant tree” as any tree which is equal to or greater than ten (10) inches diameter at breast height (DBH). SCMC defines “DBH” as the average diameter of a tree outside the bark measured at four and one-half (4.5) feet above ground level (uphill side if tree is on a slope).

Monterey County Code of Ordinances

Monterey County Code (County Code) Section 21.64.260 requires a tree removal permit from the County to remove, cut down, or trim more than one-third of the green foliage of any native oak tree within the County’s Greater Monterey Peninsula Planning Area. Removal of more than three (3) protected trees on a lot in a one-year period requires a Forest Management Plan and approval of a Use Permit by the County.

MST SURF! Initial Study/Mitigated Negative Declaration

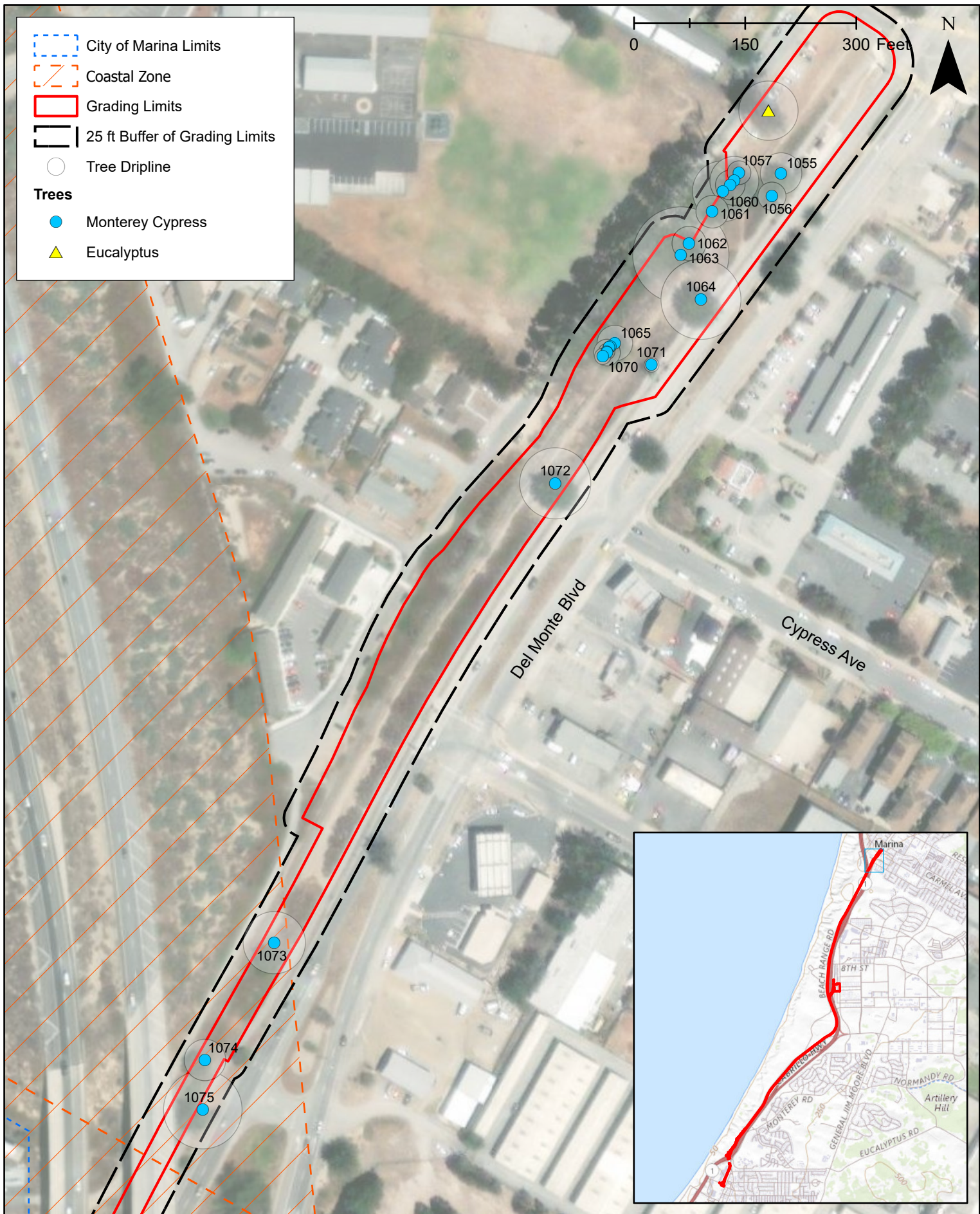
In accordance with the California Environmental Quality Act (CEQA), MST prepared and adopted an Initial Study/Mitigated Negative Declaration (IS/MND) for the proposed project in 2021. The IS/MND analyzed the potential project impacts to sensitive resources and mitigation measures were identified to reduce potentially significant impacts to a less-than-significant level. The mitigation measures were adopted in the Mitigation Monitoring and Reporting Program (MMRP) for the proposed project, and implementation of the adopted mitigation measures are required in compliance with CEQA. Specific measures required by the MMRP that apply to trees or tree removal are identified under *Discussion and Mitigation* below.

RESULTS

DD&A inventoried 189 protected trees in and within 25 feet of the project's grading limits (**Figures 1a-1f; Appendix A**). The following protected trees were inventoried in each jurisdiction:

- City of Marina:
 - 64 Monterey cypresses (*Hesperocyparis macrocarpa*),
 - 31 Monterey pines (*Pinus radiata*),
 - 30 eucalyptuses (*Eucalyptus* sp.),
 - Eight (8) Torrey pines (*Pinus torreyana*),
 - Five (5) acacias (*Acacia* sp.), and
 - One (1) coast live oak (*Quercus agrifolia*).
- Sand City:
 - 41 Monterey cypresses,
 - Three (3) red flowering gums (*Corymbia ficifolia*),
 - Two (2) broad-leaved paperbarks (*Melaleuca quinquenervia*),
 - One (1) Monterey pine,
 - One (1) Torrey pine, and
 - One (1) Mexican fan palm (*Washingtonia robusta*).
- County of Monterey:
 - One (1) coast live oak.

Most of these trees are in fair condition; they are in average vigor for the area but are showing signs of diseases and insect infestations, including Cypress canker (*Seiridium cardinale*), California oakworm, pitch canker, oak branch canker, foamy bark canker, oak ambrosia beetles, oak bark beetles, Armillaria root, and/or *Phytophthora* root and crown rot. No symptoms of sudden oak death were observed.



Tree Survey Results

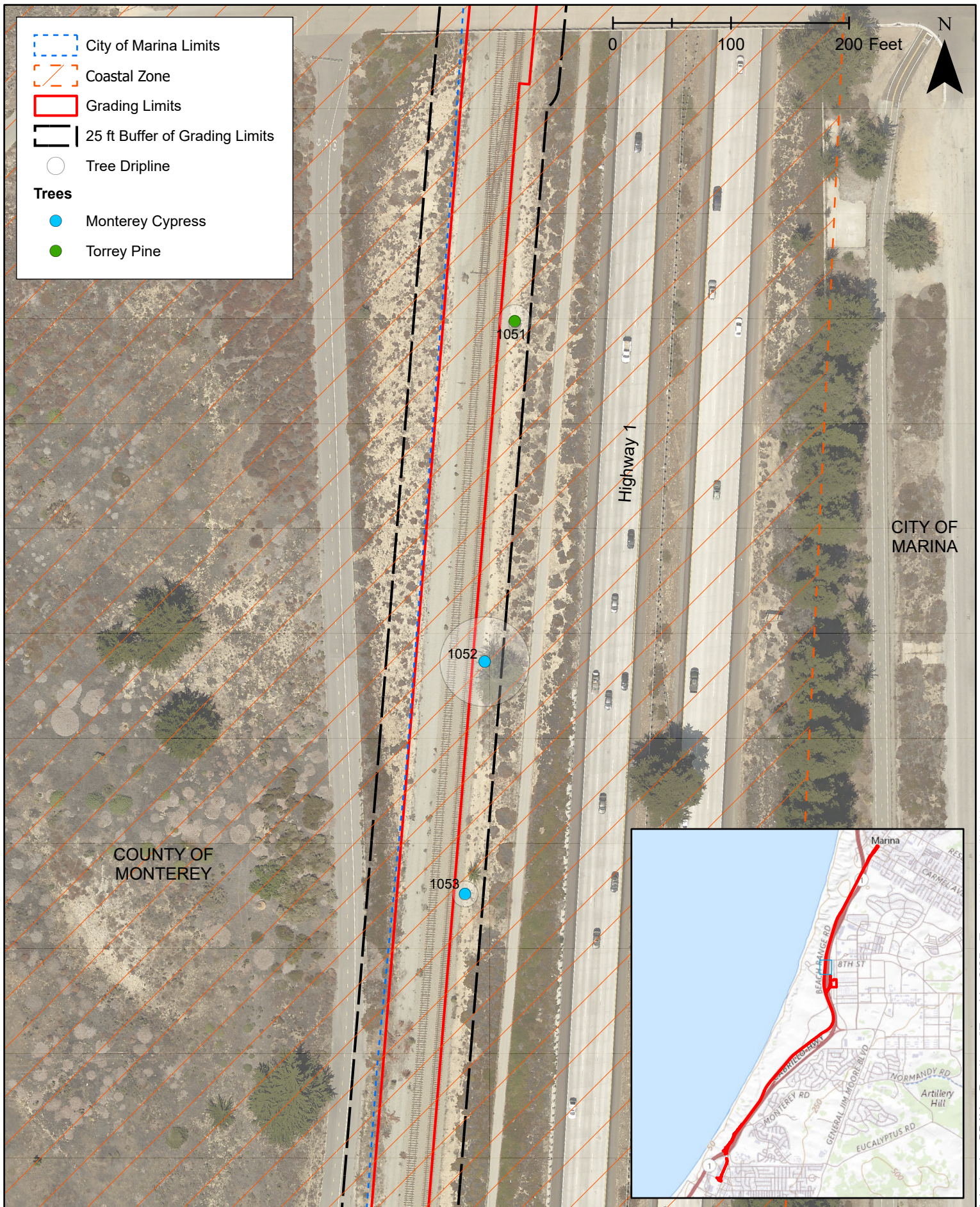
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Figure
1a



Tree Survey Results

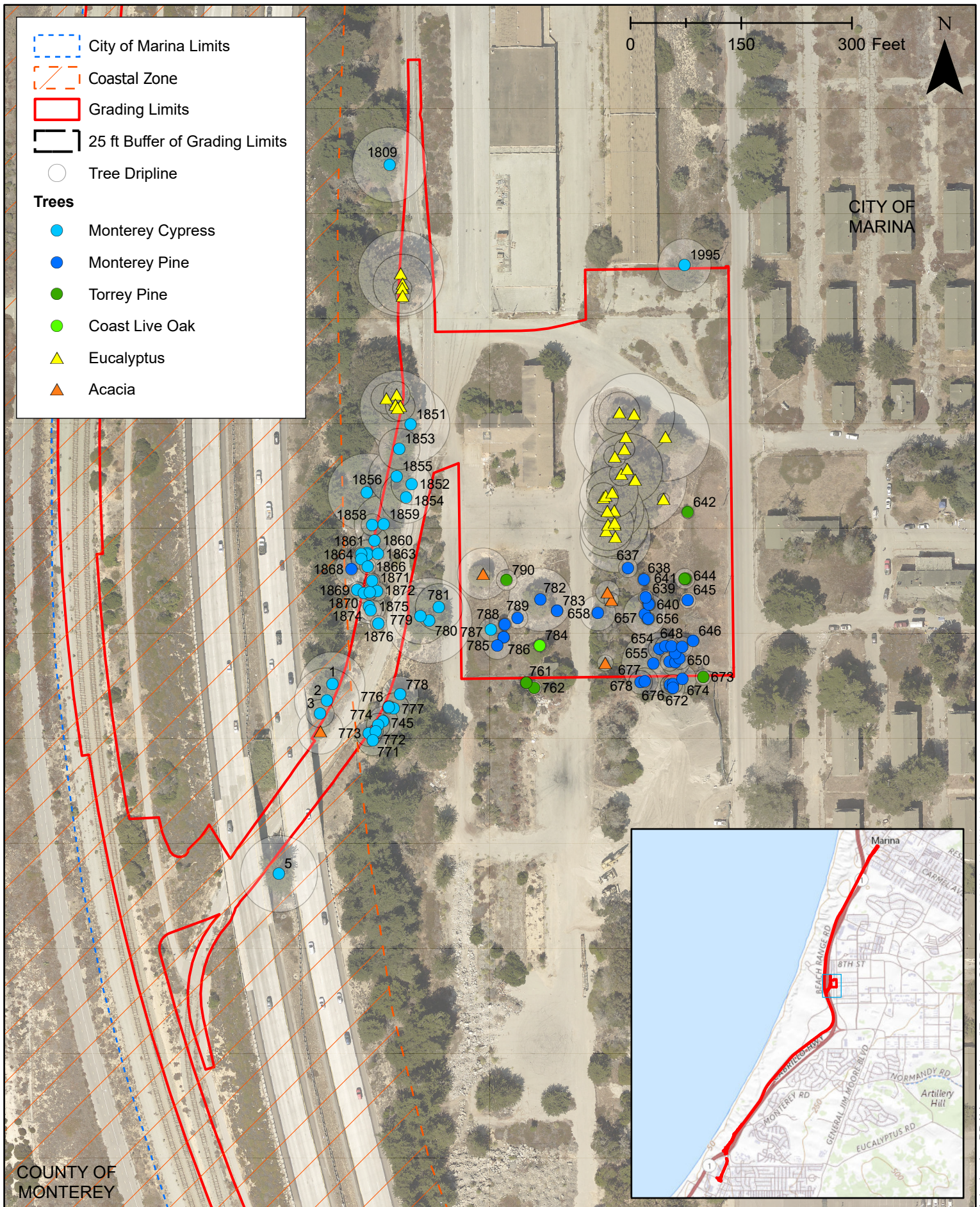
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Figure
1b



Tree Survey Results

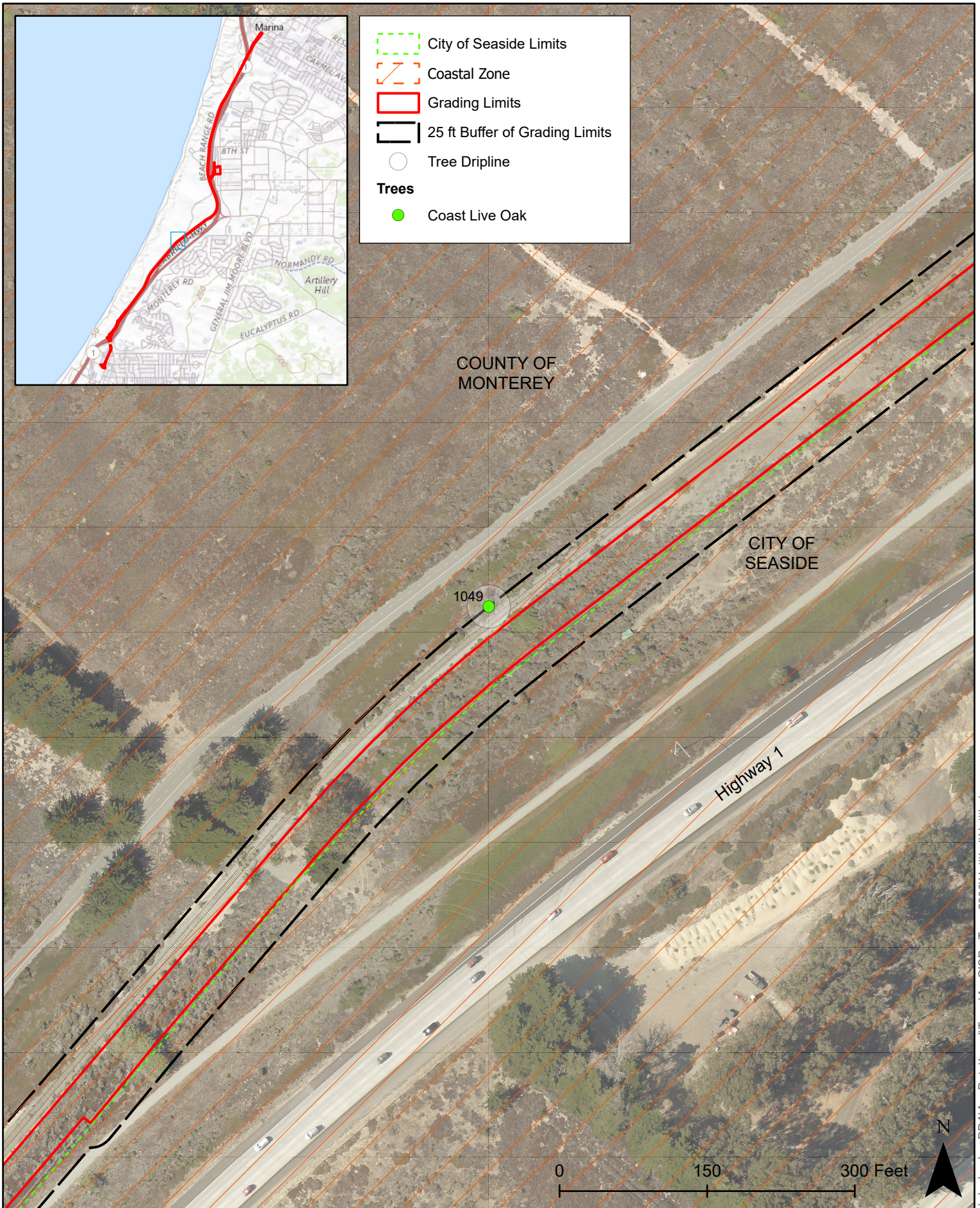
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Figure
1c



Tree Survey Results

Date
11/7/2023

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Denise Duffy & Associates, Inc.
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Figure
1d



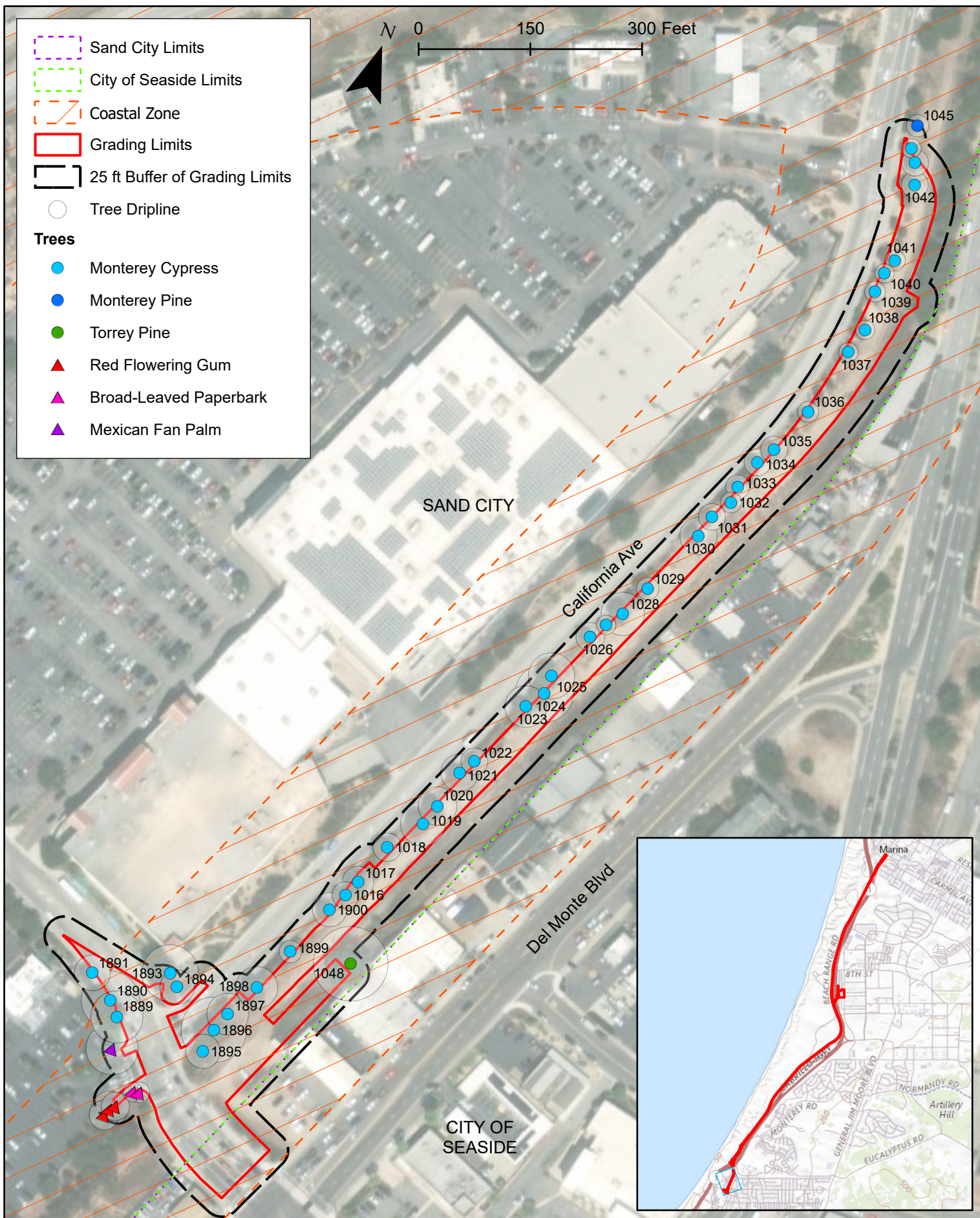
Tree Survey Results

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Denise Duffy & Associates, Inc.
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Figure
1e



Tree Survey Results

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11/7/2023

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1:2,000



Denise Duffy & Associates, Inc.
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Figure
1f

DISCUSSION AND MITIGATION

90 trees, including 49 trees within City of Marina limits, 39 trees within Sand City limits, and the one (1) tree within the County's jurisdiction, are located outside the project's grading limits and will be avoided and protected in place as necessary during construction. **Appendix A** identifies the trees that will be retained throughout construction of the project. The project's IS/MND and MMRP identify measures to avoid or minimize project impacts to trees. Implementation of the measures identified below, which are required by the IS/MND and MMRP, would avoid or minimize impacts from project activities to trees adjacent to but outside the project's construction footprint:

BIO-1.1: ...Trees and vegetation not planned for removal or trimming will be protected prior to and during construction to the maximum possible through the use of exclusionary fencing, such as hay bales for herbaceous and shrubby vegetation, and protective wood barriers for trees. Only certified weed-free straw will be used to avoid the introduction of non-native, invasive species. A biological monitor will supervise the installation of protective fencing and monitor at least once per week until construction is complete to ensure that the protective fencing remains intact. ...

BIO 4.12: To maximize native tree retention and protection, a forester, arborist, or other tree care professional shall be involved in the review and development of final grading and construction plans wherever trees occur within the site or at the grading margins. To avoid unintended impacts to native trees outside the construction area, the following native tree protection measures shall be implemented:

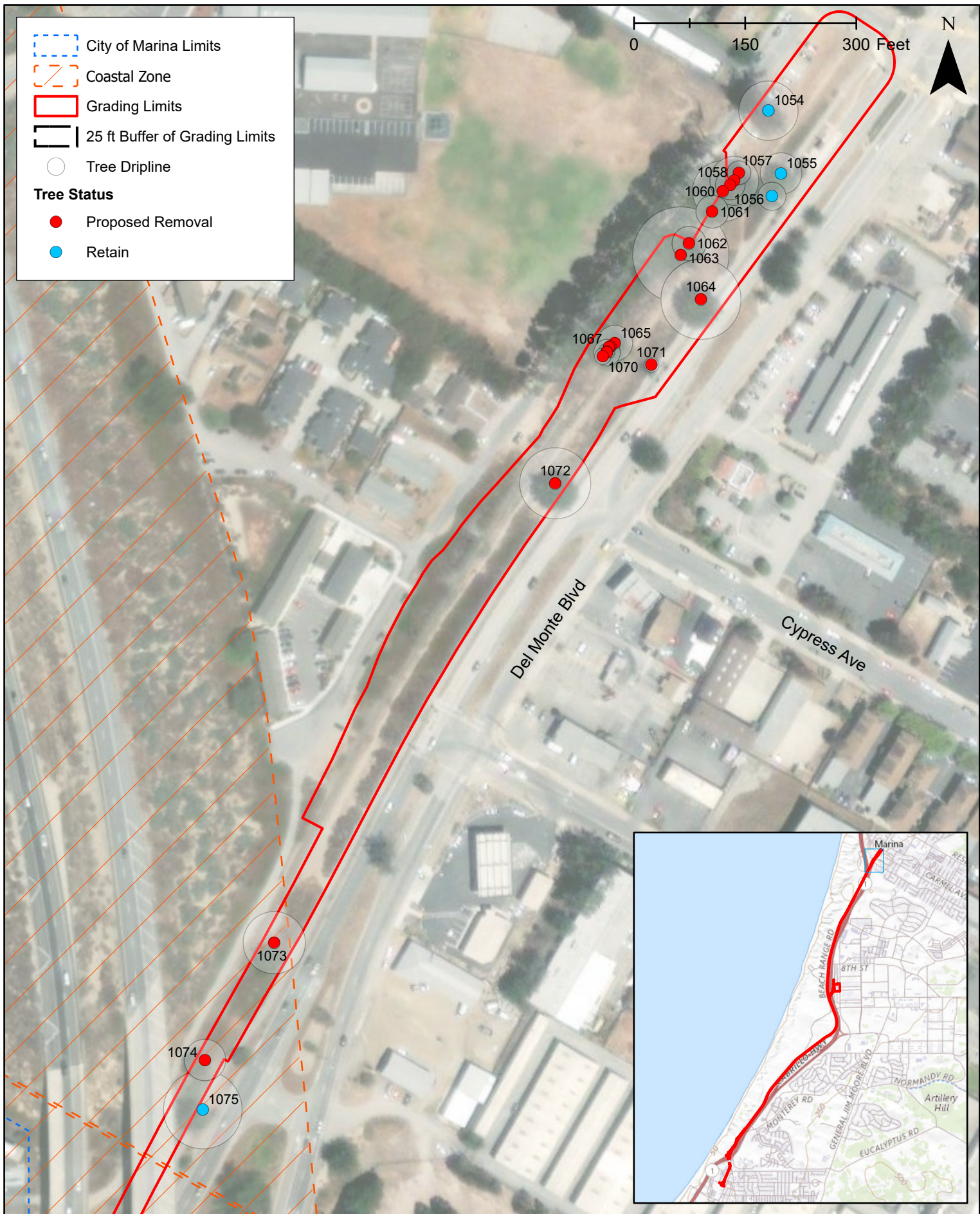
- Temporary construction fencing shall be placed at approximately 10 feet from the trunk, limiting work within the dripline (e.g., and no grading, trenching, or vegetative alteration shall occur within this environmental exclusion zone). Grading, vegetation removal, and other ground disturbing construction activities may not commence until the project forester has inspected and approved the protective fencing installed by the contractor. No equipment or materials, including soil, shall be stored within the established environmental exclusion zone. Prior to grading within 25 feet of retained trees, the project forester, arborist, or other tree care professional shall be consulted to determine whether pruning is necessary to protect limbs from grading equipment.
- To avoid soil compaction from damaging the roots, heavy equipment shall not be allowed to drive over the root area. If deemed necessary and approved by the forester, equipment may drive across one side of the tree. To reduce soil compaction, wood chips shall be spread 6-12 inches deep to disperse the weight of equipment and plywood sheets shall be placed over the wood chips for added protection.
- Roots exposed by excavation must be pruned and recovered as quickly as possible to promote callusing, closure, and healthy regrowth.

- Retained trees shall be watered periodically in accordance with species need to promote tree health. Transplanted trees and their intended planting areas shall be pre-watered. Post planting watering shall be done as needed to assure establishment.
- When project design is completed, an estimate of the appropriate number of replacement trees shall be made based on available planting space. These replacement trees (minimum five-gallon specimens) shall be planted along boundaries and within landscape areas. Planting density for replacement trees shall be accurately detailed to allow for some unavoidable mortality over time.
- Transplants are encouraged and shall be credited on a 1:1 basis. Final replanting numbers may be modified by additional tree retention and should be made part of the final landscaping plan.

Based on the project's grading limits, 92 protected trees are proposed for removal or potential removal within City of Marina limits and nine (9) protected trees are proposed for removal or potential removal within Sand City limits, as follows (see **Figures 2a-2f** and **Appendices A and B**):

- City of Marina:
 - 39 Monterey cypresses,
 - 20 eucalyptuses,
 - 24 Monterey pines,
 - Four (0) Torrey pines,
 - Four (4) acacias, and
 - One (1) coast live oak.
- Sand City:
 - Eight (8) Monterey cypresses, and
 - One (1) Torrey pine.

Trees proposed for removal lie within the project's grading limits and would need to be removed to facilitate construction of the project. Trees which are identified as "potential removal" lie outside the project's grading limits but at least 30 percent of their driplines lie inside the grading limits; as such, per SCMC and MMC requires a tree removal permit when working within a tree's dripline. Prior to construction of the project, MST must obtain a tree removal permit from the City of Marina for the 92 trees within City of Marina limits that are proposed for removal or potential removal, and MST must obtain a tree removal permit from Sand City for the nine (9) trees within Sand City limits that are proposed for removal or potential removal. Tree removal must be conducted in accordance with any conditions identified in the tree removal permits.



Tree Removal Plan

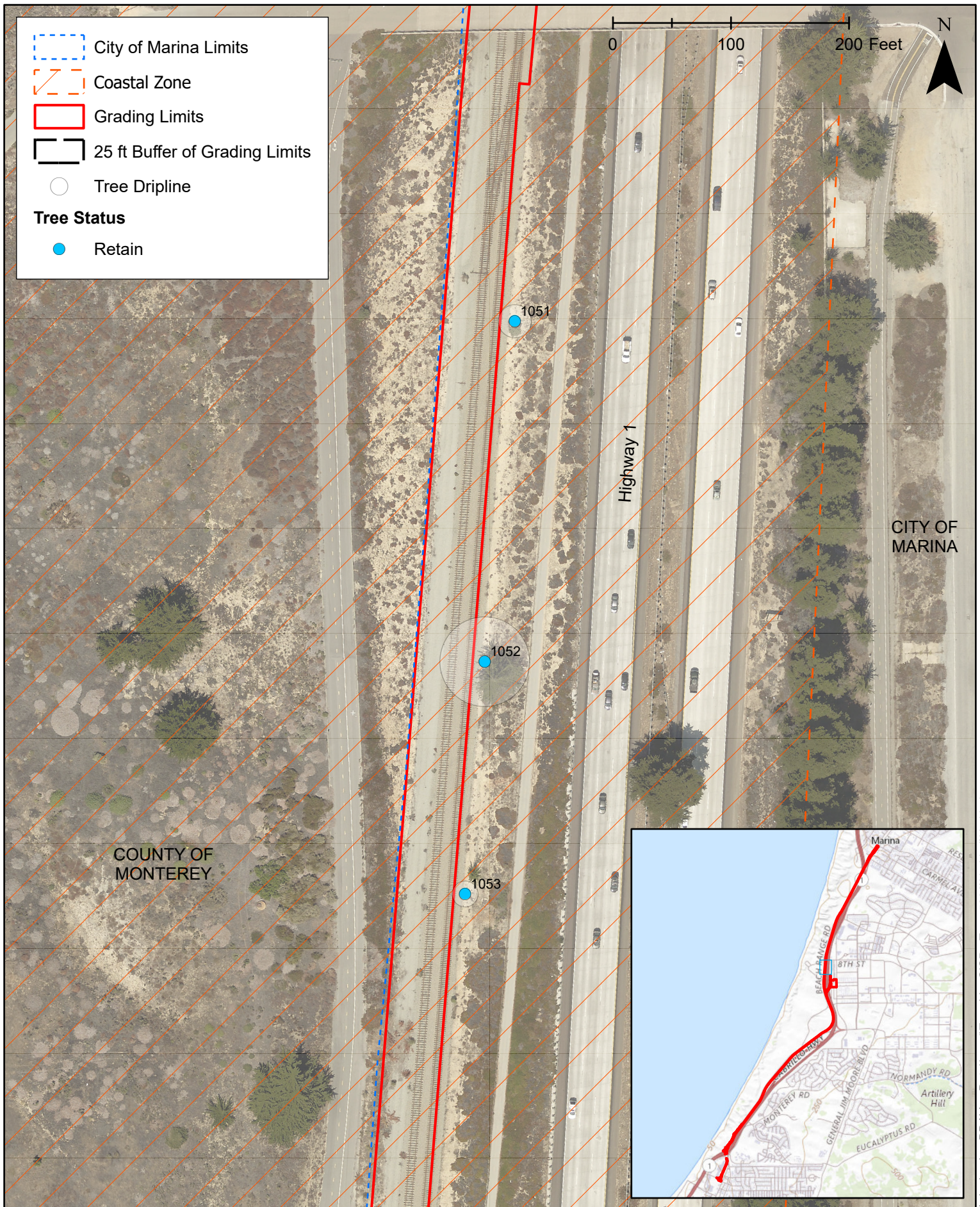
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Figure
2a



Tree Removal Plan

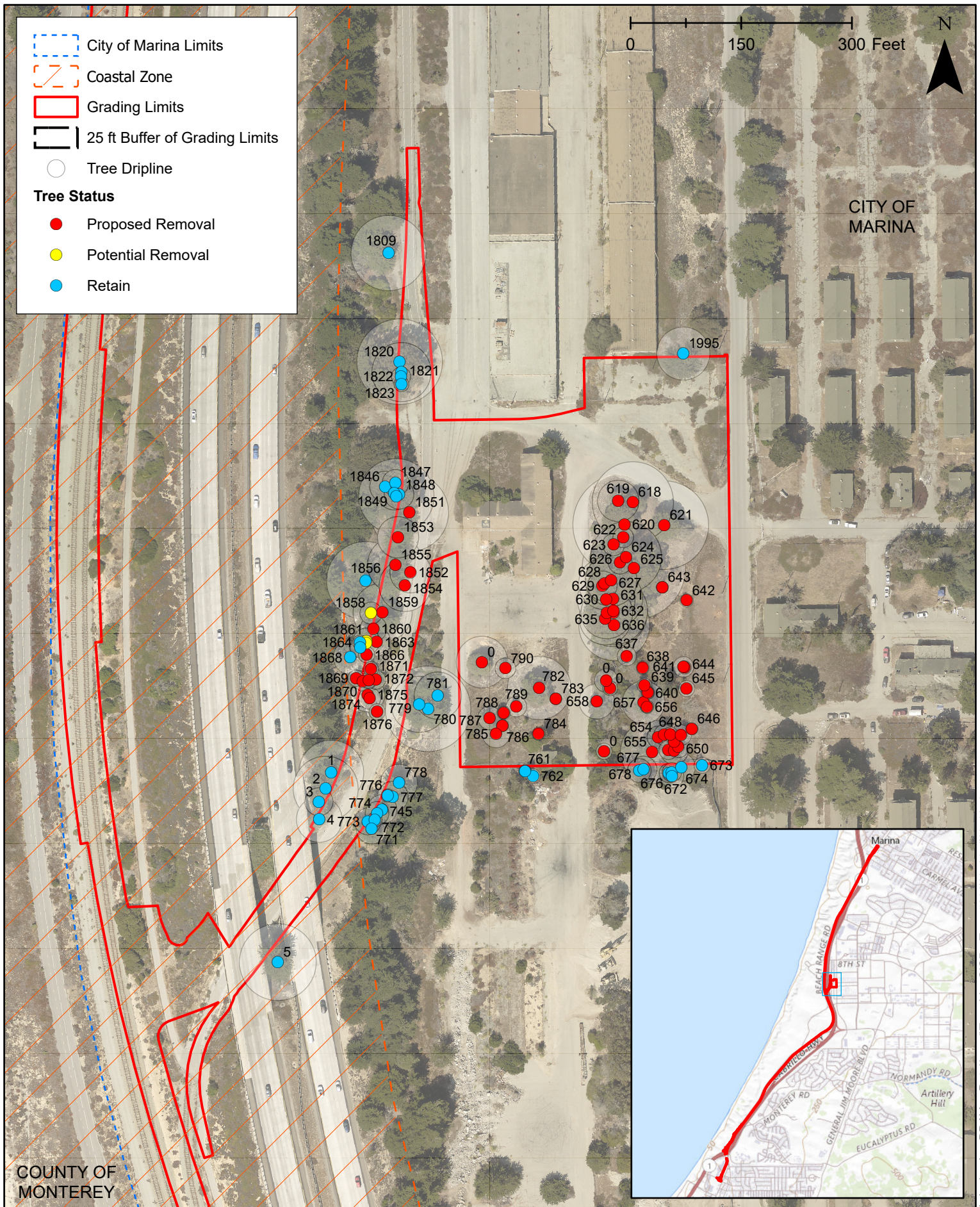
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Denise Duffy & Associates, Inc.
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Figure
2b



Tree Removal Plan

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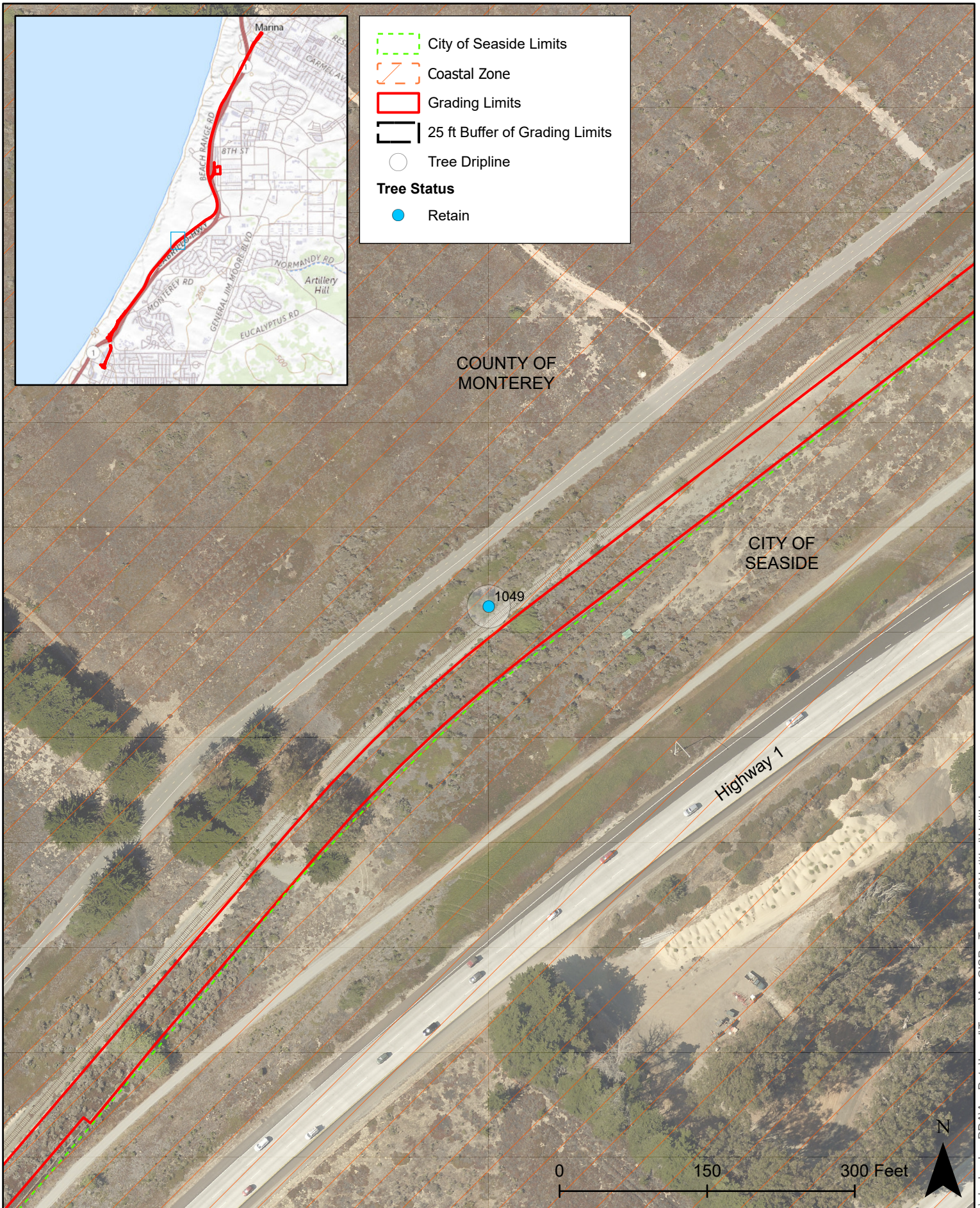
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Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

Figure

2c



Tree Removal Plan

Date
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Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

Figure
2d



Tree Removal Plan

Date
11/9/2023

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Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

Figure
2e



Tree Removal Plan

Date
11/9/2023

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Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

Figure
2f

In addition, tree removal must incorporate the requirements and the mitigation measures and regulatory requirements of the IS/MND and MMRP, including **Mitigation Measure BIO-1.4** and the following:

BIO 1.4: Construction activities that may directly (e.g., vegetation removal) or indirectly (e.g., noise/ground disturbance) affect protected nesting avian species will be timed to avoid the breeding and nesting season. Specifically, vegetation and/or tree removal can be scheduled after September 16 and before January 31. Alternatively, a qualified biologist will be retained by the project applicant to conduct pre-construction surveys for nesting raptors and other protected avian species within 500 feet of proposed construction activities if construction occurs between February 1 and September 15. Pre-construction surveys will be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). Because some bird species nest early in spring and others nest later in summer, surveys for nesting birds may be required to continue during construction to address new arrivals, and because some species breed multiple times in a season. The necessity and timing of these continued surveys will be determined by the qualified biologist based on review of the final construction plans and in coordination with the CDFW [California Department of Fish and Wildlife], as needed.

If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist will notify the project applicant and an appropriate no-disturbance buffer will be imposed within which no construction activities or disturbance should take place (generally 500 feet in all directions for raptors; other avian species may have species-specific requirements) until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

BIO 1.6: To avoid and reduce impacts to Townsend's big-eared bat, if the project construction is planned during the reproductive season (May 1 through September 15), MST will retain a qualified bat specialist or wildlife biologist to conduct site surveys to characterize bat utilization within and adjacent to the project site and potential species present (techniques utilized to be determined by the biologist) prior to construction. Based on the results of these initial surveys, one or more of the following will occur:

- If it is determined that bats are not present within or adjacent to the site, no additional mitigation is required.
- If it is determined that bats are utilizing the trees or abandoned buildings within or adjacent to the site and may be impacted by the proposed project, pre-construction surveys will be conducted within 50 feet of construction limits no more than 30 days prior to the start of construction. If, according to the bat specialist, no bats or bat signs are observed in the course of the pre-construction surveys, construction may proceed. If bats and/or bat signs are observed during the pre-construction

surveys, the biologist will determine if disturbance would jeopardize the roost (i.e., maternity, foraging, day, or night).

CONCLUSION

To facilitate construction of the SURF! Busway and Rapid Transit Project, MST proposes to remove 92 protected trees within the City of Marina and nine (9) protected trees within Sand City. No protected trees are proposed for removal within the County's jurisdiction. Per City of Marina and Sand City ordinances, a tree removal permit from each city is required to remove the trees. Implementation of the measures identified above from the project's IS/MND and MMRP and any additional measures required by the tree removal permits would reduce or mitigate potential impacts to trees and other biological resources resulting from tree removal.

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

Tree ID	Scientific Name	Common Name	Individual Stem DBH (in)			Total DBH (in)	Dripline (ft)	Health	Recommendation	Coastal Zone	Jurisdiction
1	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	35	12		35	44	Fair	Retain	Yes	City of Marina
2	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	35			35	44	Poor	Retain	Yes	City of Marina
3	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	15			15	19	Poor	Retain	Yes	City of Marina
4	<i>Acacia</i> sp.	Acacia	25			25	31	Fair	Retain	Yes	City of Marina
5	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	40			42	52	Fair	Retain	Yes	City of Marina
618	<i>Eucalyptus</i> sp.	Eucalyptus	44	7	6	44	55	Fair	Remove	No	City of Marina
619	<i>Eucalyptus</i> sp.	Eucalyptus	20			22	28	Fair	Remove	No	City of Marina
620	<i>Eucalyptus</i> sp.	Eucalyptus	55			56	70	Fair	Remove	No	City of Marina
621	<i>Eucalyptus</i> sp.	Eucalyptus	48			48	60	Fair	Remove	No	City of Marina
622	<i>Eucalyptus</i> sp.	Eucalyptus	11			11	14	Fair	Remove	No	City of Marina
623	<i>Eucalyptus</i> sp.	Eucalyptus	12	12		12	15	Fair	Remove	No	City of Marina
624	<i>Eucalyptus</i> sp.	Eucalyptus	38			38	48	Fair	Remove	No	City of Marina
625	<i>Eucalyptus</i> sp.	Eucalyptus	56			56	70	Fair	Remove	No	City of Marina
626	<i>Eucalyptus</i> sp.	Eucalyptus	13			13	16	Fair	Remove	No	City of Marina
627	<i>Eucalyptus</i> sp.	Eucalyptus	28			28	35	Fair	Remove	No	City of Marina
628	<i>Eucalyptus</i> sp.	Eucalyptus	28	9		28	35	Fair	Remove	No	City of Marina
629	<i>Eucalyptus</i> sp.	Eucalyptus	16			16	20	Fair	Remove	No	City of Marina
630	<i>Eucalyptus</i> sp.	Eucalyptus	31			31	39	Fair	Remove	No	City of Marina
631	<i>Eucalyptus</i> sp.	Eucalyptus	32			32	40	Fair	Remove	No	City of Marina
632	<i>Eucalyptus</i> sp.	Eucalyptus	37			37	46	Fair	Remove	No	City of Marina
633	<i>Eucalyptus</i> sp.	Eucalyptus	28	28		28	35	Fair	Remove	No	City of Marina
634	<i>Eucalyptus</i> sp.	Eucalyptus	37			37	46	Fair	Remove	No	City of Marina
635	<i>Eucalyptus</i> sp.	Eucalyptus	28			28	35	Fair	Remove	No	City of Marina
636	<i>Eucalyptus</i> sp.	Eucalyptus	38			38	48	Fair	Remove	No	City of Marina
637	<i>Pinus radiata</i>	Monterey Pine	10			10	13	Poor	Remove	No	City of Marina
638	<i>Pinus radiata</i>	Monterey Pine	7	9		7	9	Poor	Remove	No	City of Marina
639	<i>Pinus radiata</i>	Monterey Pine	8			8	10	Poor	Remove	No	City of Marina
640	<i>Pinus radiata</i>	Monterey Pine	7			7	9	Poor	Remove	No	City of Marina
641	<i>Pinus torreyana</i>	Torrey Pine	7			11	14	Fair	Remove	No	City of Marina
642	<i>Pinus torreyana</i>	Torrey Pine	7			7	9	Fair	Remove	No	City of Marina
643	<i>Eucalyptus</i> sp.	Eucalyptus	6	28		6	8	Fair	Remove	No	City of Marina
644	<i>Pinus torreyana</i>	Torrey Pine	7			7	9	Fair	Remove	No	City of Marina
645	<i>Pinus radiata</i>	Monterey Pine	9			9	11	Fair	Remove	No	City of Marina
646	<i>Pinus radiata</i>	Monterey Pine	6			6	8	Fair	Remove	No	City of Marina
647	<i>Pinus radiata</i>	Monterey Pine	11			11	14	Fair	Remove	No	City of Marina
648	<i>Pinus radiata</i>	Monterey Pine	8	28		8	10	Poor	Remove	No	City of Marina
649	<i>Pinus radiata</i>	Monterey Pine	6			6	8	Poor	Remove	No	City of Marina
650	<i>Pinus radiata</i>	Monterey Pine	12			12	15	Fair	Remove	No	City of Marina
651	<i>Pinus radiata</i>	Monterey Pine	15			15	19	Fair	Remove	No	City of Marina
652	<i>Pinus radiata</i>	Monterey Pine	10			10	13	Fair	Remove	No	City of Marina
653	<i>Pinus radiata</i>	Monterey Pine	11	28		11	14	Fair	Remove	No	City of Marina
654	<i>Pinus radiata</i>	Monterey Pine	12			12	15	Fair	Remove	No	City of Marina
655	<i>Pinus radiata</i>	Monterey Pine	20			34	43	Fair	Remove	No	City of Marina
656	<i>Pinus radiata</i>	Monterey Pine	7			7	9	Fair	Remove	No	City of Marina
657	<i>Pinus radiata</i>	Monterey Pine	23			23	29	Fair	Remove	No	City of Marina
658	<i>Pinus radiata</i>	Monterey Pine	19	28		19	24	Fair	Remove	No	City of Marina
672	<i>Pinus radiata</i>	Monterey Pine	13			13	16	Fair	Retain	No	City of Marina
673	<i>Pinus torreyana</i>	Torrey Pine	9			9	11	Fair	Retain	No	City of Marina

Tree ID	Scientific Name	Common Name	Individual Stem DBH (in)								Total DBH (in)	Dripline (ft)	Health	Recommendation	Coastal Zone	Jurisdiction
674	<i>Pinus radiata</i>	Monterey Pine	15	18							15	19	Fair	Retain	No	City of Marina
675	<i>Pinus radiata</i>	Monterey Pine	10								10	13	Fair	Retain	No	City of Marina
676	<i>Pinus radiata</i>	Monterey Pine	10								10	13	Fair	Retain	No	City of Marina
677	<i>Pinus radiata</i>	Monterey Pine	14								14	18	Fair	Retain	No	City of Marina
678	<i>Pinus radiata</i>	Monterey Pine	13								13	16	Fair	Retain	No	City of Marina
745	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	16								16	20	Fair	Retain	No	City of Marina
761	<i>Pinus torreyana</i>	Torrey Pine	6								6	8	Good	Retain	No	City of Marina
762	<i>Pinus torreyana</i>	Torrey Pine	8								8	10	Fair	Retain	No	City of Marina
771	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	17								17	21	Fair	Retain	No	City of Marina
772	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	8								8	10	Fair	Retain	No	City of Marina
773	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	14	6							14	18	Fair	Retain	No	City of Marina
774	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	13								13	16	Fair	Retain	No	City of Marina
776	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	7								7	9	Fair	Retain	No	City of Marina
777	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	17								17	21	Fair	Retain	No	City of Marina
778	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	20								20	25	Fair	Retain	No	City of Marina
779	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	30								30	38	Fair	Retain	No	City of Marina
780	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	46								46	58	Fair	Retain	No	City of Marina
781	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	18								25	32	Fair	Retain	No	City of Marina
782	<i>Pinus radiata</i>	Monterey Pine	34								34	43	Poor	Remove	No	City of Marina
783	<i>Pinus radiata</i>	Monterey Pine	6								6	8	Good	Remove	No	City of Marina
784	<i>Quercus agrifolia</i>	Coast Live Oak	7	22	15						7	9	Fair	Remove	No	City of Marina
785	<i>Pinus radiata</i>	Monterey Pine	15								15	19	Fair	Remove	No	City of Marina
786	<i>Pinus radiata</i>	Monterey Pine	6								6	8	Fair	Remove	No	City of Marina
787	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	13								13	16	Fair	Remove	No	City of Marina
788	<i>Pinus radiata</i>	Monterey Pine	7								7	9	Fair	Remove	No	City of Marina
789	<i>Pinus radiata</i>	Monterey Pine	11								11	14	Fair	Remove	No	City of Marina
790	<i>Pinus torreyana</i>	Torrey Pine	11								11	14	Fair	Remove	No	City of Marina
1051	<i>Pinus torreyana</i>	Torrey Pine	11								11	14	Fair	Retain	Yes	City of Marina
1052	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	30								30	38	Fair	Retain	Yes	City of Marina
1053	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	6								8	11	Fair	Retain	Yes	City of Marina
1054	<i>Eucalyptus</i> sp.	Eucalyptus	32	17	13	19	21	10	15	8	32	40	Fair	Retain	No	City of Marina
1055	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	22								22	28	Good	Retain	No	City of Marina
1056	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	15								15	19	Fair	Retain	No	City of Marina
1057	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	13								13	16	Fair	Remove	No	City of Marina
1058	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	26								26	33	Good	Remove	No	City of Marina
1059	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	16								16	20	Good	Remove	No	City of Marina
1060	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	24								33	41	Fair	Remove	No	City of Marina
1061	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	9								17	22	Fair	Remove	No	City of Marina
1062	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	18								18	23	Fair	Remove	No	City of Marina
1063	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	52								52	65	Fair	Remove	No	City of Marina
1064	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	14								43	54	Good	Remove	No	City of Marina
1065	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	19								19	24	Fair	Remove	No	City of Marina
1066	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	6								6	8	Fair	Remove	No	City of Marina
1067	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	6								6	8	Fair	Remove	No	City of Marina
1068	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	9								9	11	Fair	Remove	No	City of Marina
1069	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	14								14	18	Fair	Remove	No	City of Marina
1070	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	9								9	11	Fair	Remove	No	City of Marina
1071	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	8								8	10	Fair	Remove	No	City of Marina

Tree ID	Scientific Name	Common Name	Individual Stem DBH (in)						Total DBH (in)	Dripline (ft)	Health	Recommendation	Coastal Zone	Jurisdiction
1072	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	14	25	15	15	9	10	38	48	Good	Remove	No	City of Marina
1073	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	22	20	15				33	42	Fair	Remove	Yes	City of Marina
1074	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	12	12	10	6	9		22	28	Fair	Remove	Yes	City of Marina
1075	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	42						42	53	Fair	Retain	Yes	City of Marina
1809	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	41						41	51	Poor	Retain	No	City of Marina
1820	<i>Eucalyptus</i> sp.	Eucalyptus	46						46	58	Fair	Retain	No	City of Marina
1821	<i>Eucalyptus</i> sp.	Eucalyptus	18	25	10				32	40	Fair	Retain	No	City of Marina
1822	<i>Eucalyptus</i> sp.	Eucalyptus	10						10	13	Fair	Retain	No	City of Marina
1823	<i>Eucalyptus</i> sp.	Eucalyptus	8						8	10	Fair	Retain	No	City of Marina
1846	<i>Eucalyptus</i> sp.	Eucalyptus	16	6					17	21	Fair	Retain	No	City of Marina
1847	<i>Eucalyptus</i> sp.	Eucalyptus	14						14	18	Fair	Retain	No	City of Marina
1848	<i>Eucalyptus</i> sp.	Eucalyptus	16						16	20	Fair	Retain	No	City of Marina
1849	<i>Eucalyptus</i> sp.	Eucalyptus	18						18	23	Fair	Retain	No	City of Marina
1850	<i>Eucalyptus</i> sp.	Eucalyptus	20	32	12	10			41	51	Fair	Retain	No	City of Marina
1851	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	42						42	53	Good	Remove	No	City of Marina
1852	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	22						22	28	Fair	Remove	No	City of Marina
1853	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	22						22	28	Good	Remove	No	City of Marina
1854	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	28						28	35	Fair	Remove	No	City of Marina
1855	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	30						30	38	Fair	Remove	No	City of Marina
1856	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	7	7	36	20			42	53	Fair	Retain	No	City of Marina
1858	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	7	10					12	15	Fair	Potential Remove	No	City of Marina
1859	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	32						32	40	Fair	Remove	No	City of Marina
1860	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	14						14	18	Good	Remove	No	City of Marina
1861	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	6	13					14	18	Fair	Potential Remove	No	City of Marina
1862	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	16						16	20	Fair	Potential Remove	No	City of Marina
1863	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	15						15	19	Poor	Remove	No	City of Marina
1864	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	8						8	10	Good	Retain	No	City of Marina
1865	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	11						11	14	Good	Retain	No	City of Marina
1866	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	9						9	11	Fair	Remove	No	City of Marina
1868	<i>Pinus radiata</i>	Monterey Pine	18						18	23	Fair	Retain	No	City of Marina
1869	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	9						9	11	Fair	Remove	No	City of Marina
1870	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	10						10	13	Fair	Remove	No	City of Marina
1871	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	8						8	10	Fair	Remove	No	City of Marina
1872	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	10						10	13	Fair	Remove	No	City of Marina
1873	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	9						9	11	Poor	Remove	No	City of Marina
1874	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	18						18	23	Good	Remove	No	City of Marina
1875	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	12						12	15	Fair	Remove	No	City of Marina
1876	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	9						9	11	Fair	Remove	No	City of Marina
1995	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	16	9	9	10	17		28	36	Fair	Retain	No	City of Marina
Acacia 1	<i>Acacia</i> sp.	Acacia	16	18	7	13			28	35	Fair	Remove	No	City of Marina
Acacia 2	<i>Acacia</i> sp.	Acacia	9						9	11	Fair	Remove	No	City of Marina
Acacia 3	<i>Acacia</i> sp.	Acacia	8						8	10	Fair	Remove	No	City of Marina
Acacia 4	<i>Acacia</i> sp.	Acacia	6	8	8				13	16	Fair	Remove	No	City of Marina
1049	<i>Quercus agrifolia</i>	Coast Live Oak	15	9					17	22	Fair	Retain	Yes	County of Monterey
1016	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	14						14	18	Poor	Retain	Yes	Sand City
1017	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	17						17	21	Fair	Retain	Yes	Sand City
1018	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	15						15	19	Fair	Retain	Yes	Sand City
1019	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	24						24	30	Fair	Retain	Yes	Sand City

Tree ID	Scientific Name	Common Name	Individual Stem DBH (in)	Total DBH (in)	Dripline (ft)	Health	Recommendation	Coastal Zone	Jurisdiction
1020	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	21	21	26	Fair	Retain	Yes	Sand City
1021	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	20	20	25	Poor	Retain	Yes	Sand City
1022	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	14	14	18	Fair	Retain	Yes	Sand City
1023	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	22	22	28	Fair	Retain	Yes	Sand City
1024	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	31	31	39	Good	Retain	Yes	Sand City
1025	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	25	25	31	Fair	Retain	Yes	Sand City
1026	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	15	15	19	Good	Retain	Yes	Sand City
1027	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	10	10	13	Fair	Retain	Yes	Sand City
1028	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	23	23	29	Fair	Retain	Yes	Sand City
1029	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	12	12	15	Good	Retain	Yes	Sand City
1030	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	20	20	25	Fair	Retain	Yes	Sand City
1031	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	14	14	18	Fair	Retain	Yes	Sand City
1032	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	11	11	14	Fair	Retain	Yes	Sand City
1033	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	13	13	16	Poor	Retain	Yes	Sand City
1034	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	14	14	18	Fair	Retain	Yes	Sand City
1035	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	14	14	18	Fair	Retain	Yes	Sand City
1036	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	11	11	14	Poor	Retain	Yes	Sand City
1037	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	10	10	13	Poor	Retain	Yes	Sand City
1038	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	10	10	13	Poor	Retain	Yes	Sand City
1039	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	11	11	14	Fair	Retain	Yes	Sand City
1040	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	10	10	13	Fair	Retain	Yes	Sand City
1041	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	11	11	14	Fair	Retain	Yes	Sand City
1042	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	14	14	18	Fair	Remove	Yes	Sand City
1043	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	14	14	18	Fair	Remove	Yes	Sand City
1044	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	10	10	13	Fair	Potential Remove	Yes	Sand City
1045	<i>Pinus radiata</i>	Monterey Pine	12	12	15	Fair	Retain	Yes	Sand City
1047	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	62	62	78	Fair	Retain	Yes	Sand City
1048	<i>Pinus torreyana</i>	Torrey Pine	40	40	50	Fair	Potential Remove	Yes	Sand City
1880	<i>Corymbia ficifolia</i>	Red Flowering Gum	16	16	20	Fair	Retain	Yes	Sand City
1881	<i>Corymbia ficifolia</i>	Red Flowering Gum	19	19	24	Fair	Retain	Yes	Sand City
1882	<i>Corymbia ficifolia</i>	Red Flowering Gum	15	15	19	Poor	Retain	Yes	Sand City
1885	<i>Melaleuca quinquenervia</i>	Broad-Leaved Paperbark	10	10	13	Fair	Retain	Yes	Sand City
1886	<i>Melaleuca quinquenervia</i>	Broad-Leaved Paperbark	11	11	14	Fair	Retain	Yes	Sand City
1888	<i>Washingtonia robusta</i>	Mexican Fan Palm	28	28	35	Fair	Retain	Yes	Sand City
1889	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	28	28	35	Good	Retain	Yes	Sand City
1890	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	31	31	39	Fair	Retain	Yes	Sand City
1891	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	19	19	24	Good	Retain	Yes	Sand City
1893	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	30	30	38	Fair	Retain	Yes	Sand City
1894	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	18	18	23	Fair	Retain	Yes	Sand City
1895	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	18	18	23	Fair	Remove	Yes	Sand City
1896	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	35	35	44	Fair	Remove	Yes	Sand City
1897	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	22	22	28	Poor	Remove	Yes	Sand City
1898	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	22	22	28	Poor	Potential Remove	Yes	Sand City
1899	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	12	12	15	Poor	Potential Remove	Yes	Sand City
1900	<i>Hesperocyparis macrocarpa</i>	Monterey Cypress	18	18	23	Fair	Retain	Yes	Sand City

APPENDIX B

Photo Log



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619.jpg



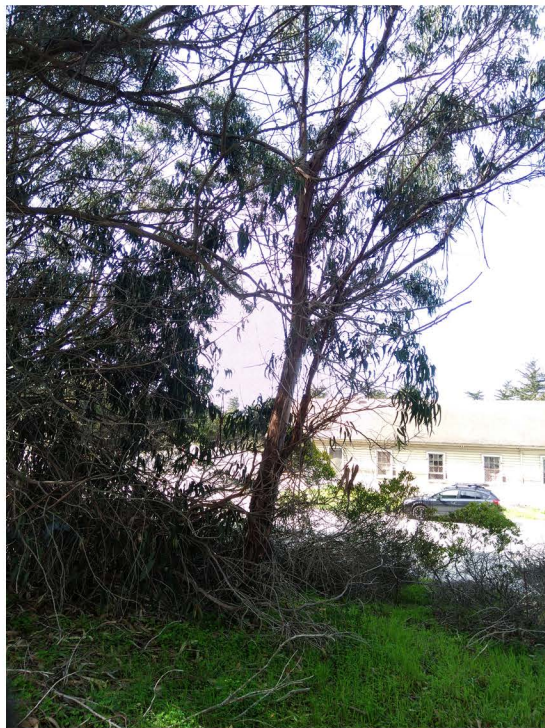
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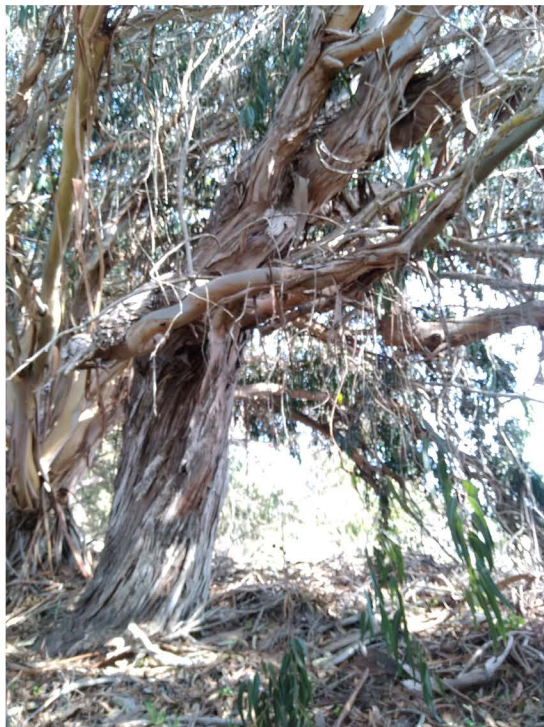
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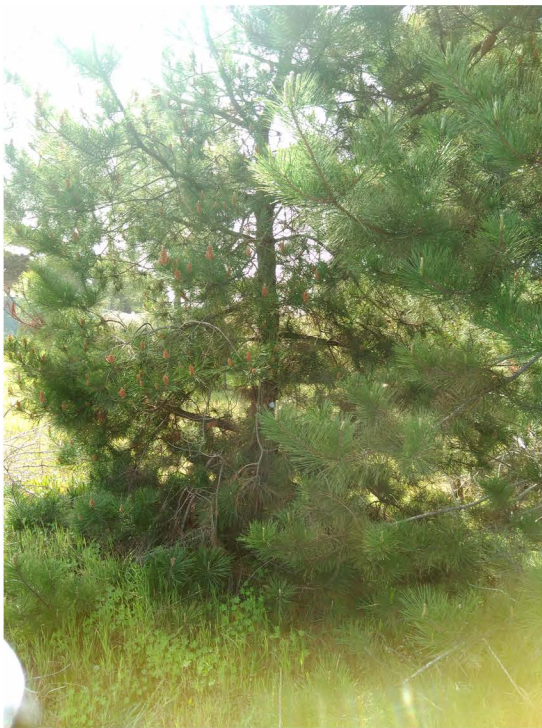
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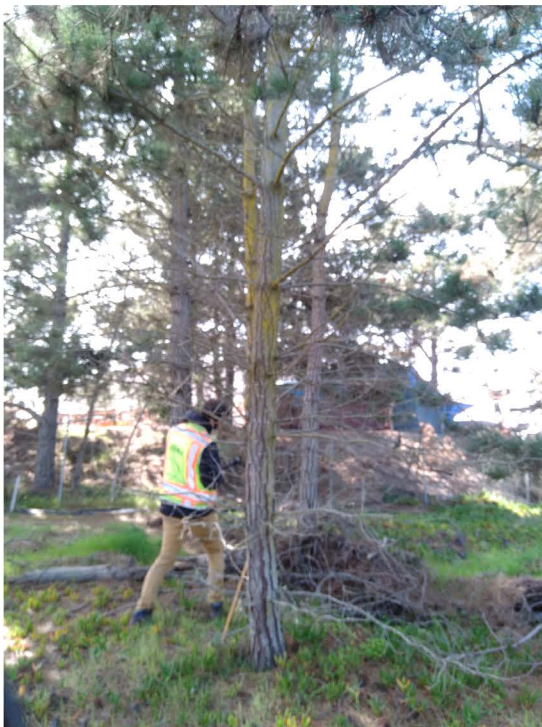
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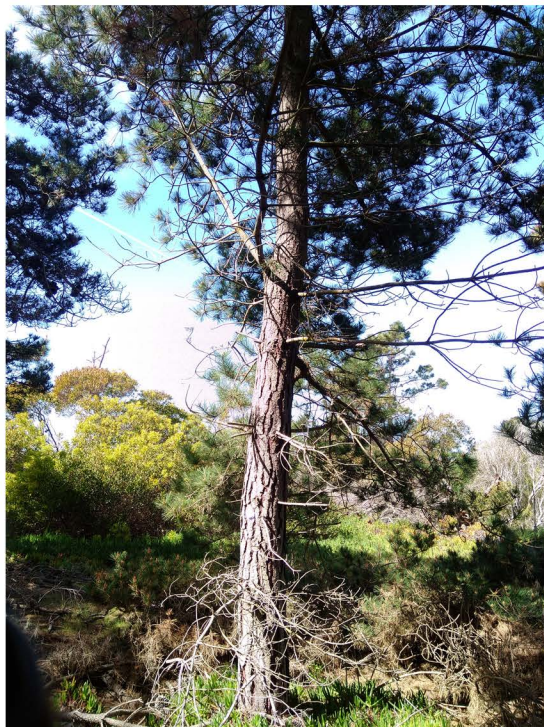
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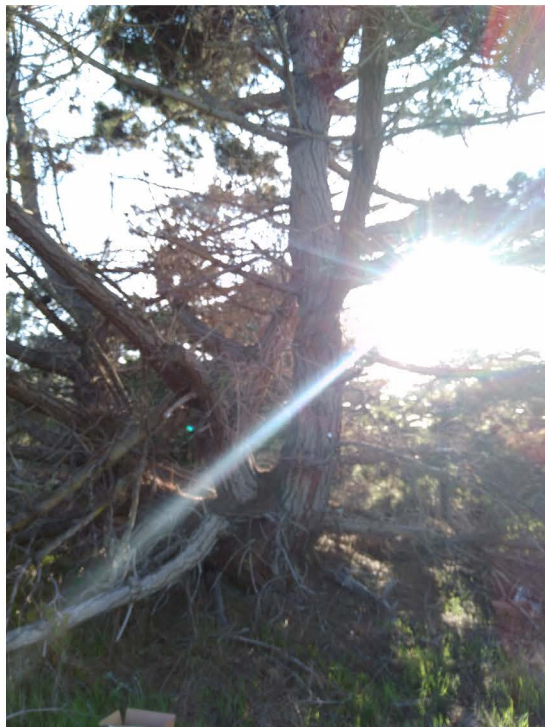
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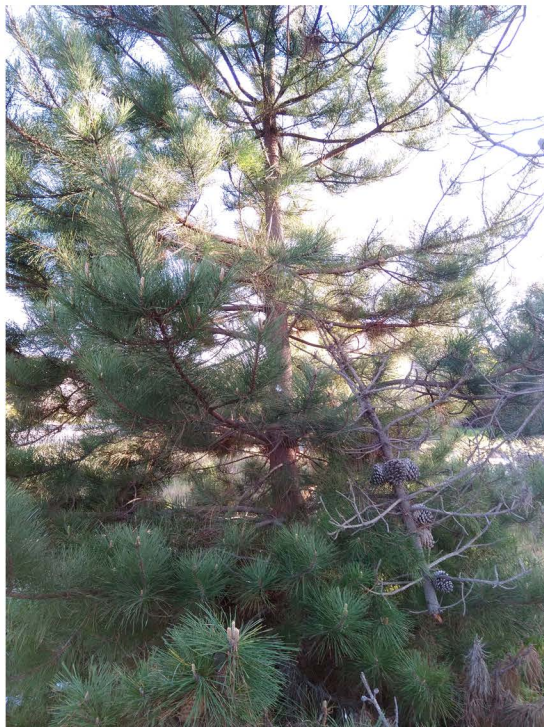
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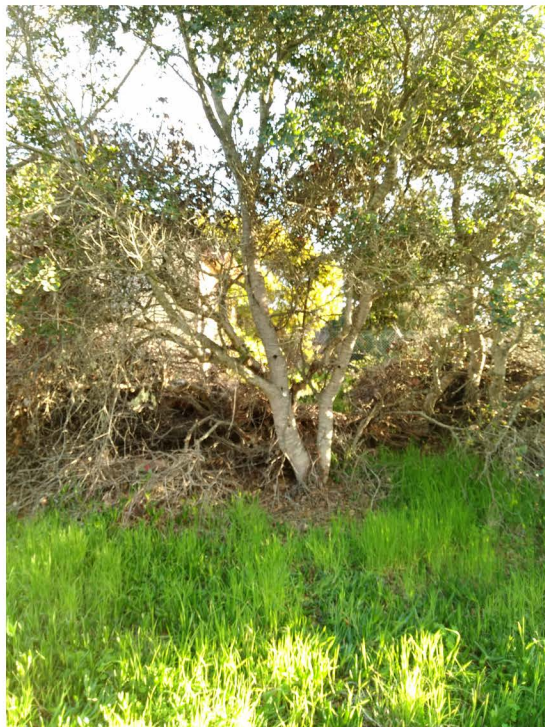
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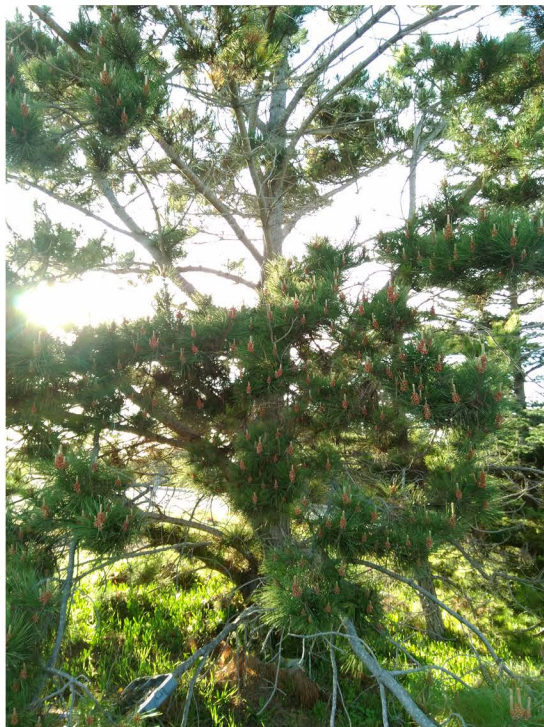
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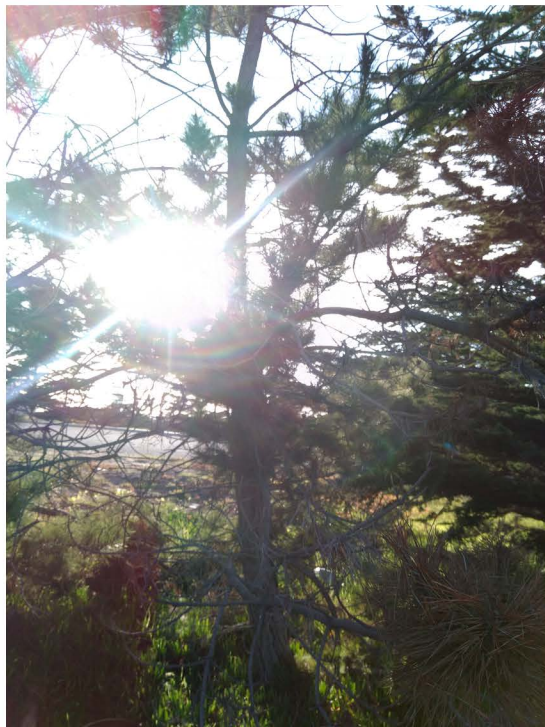
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789.jpg



790.jpg



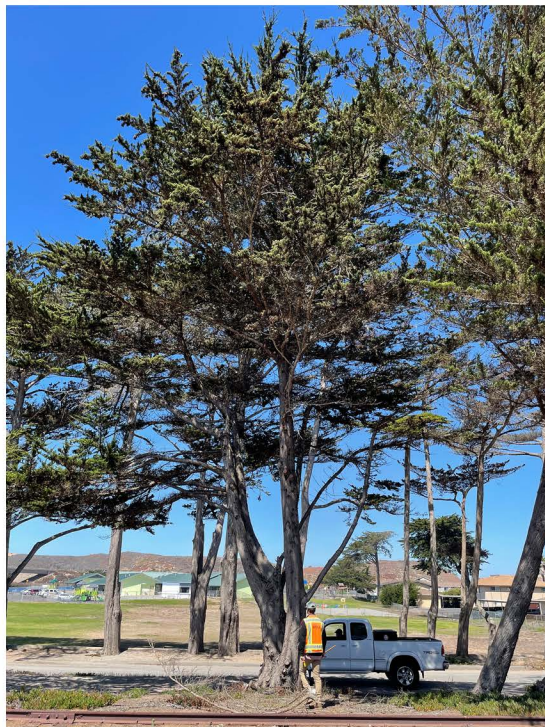
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1073.JPG



1074.JPG



1851.JPG



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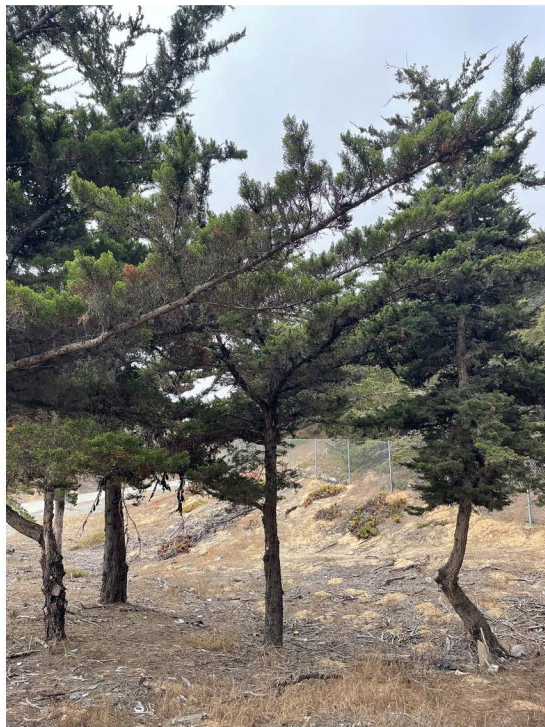
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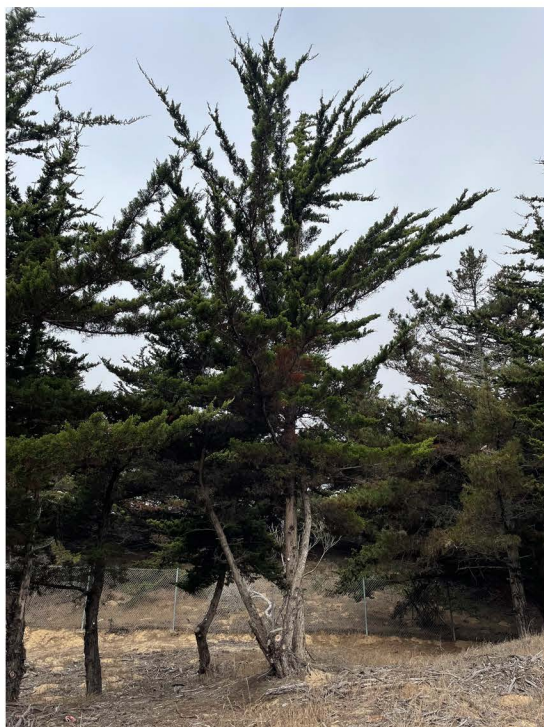
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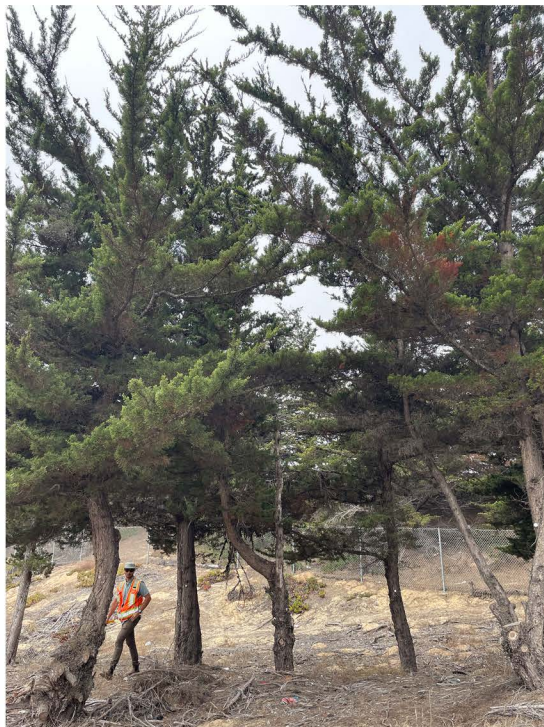
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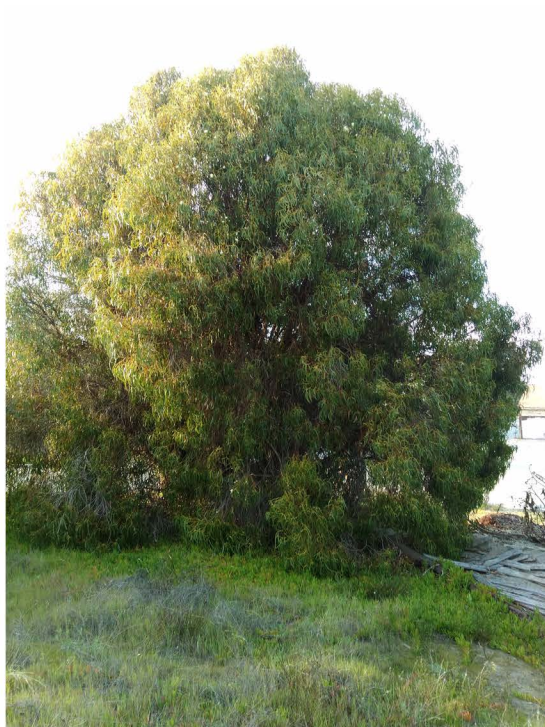
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1875.JPG



1876.JPG



Acacia 1.jpg



Acacia 2.jpg



Acacia 3.jpg



Acacia 4.jpg