DENISE DUFFY & ASSOCIATES, INC.
PLANNING AND ENVIRONMENTAL CONSULTING

MEMORANDUM

DATE: March 19, 2020

TO: Doug Yount, Project Director
Shea Homes

FROM: Patric Krabacher, ISA Certified Arborist 11759, Environmental Scientist
Denise Duffy & Associates, Inc.

RE: Tree Removal Application for The Dunes on Monterey Bay Project – Phase 2
University Villages East

Denise Duffy & Associates, Inc. (DD&A) is contracted by Shea Homes (SH) to provide environmental consulting services for the Dunes on Monterey Bay Project – Phase 2 (project), located within the City of Marina (City) in Monterey County, California. To inform development of project design plans, DD&A conducted a field inventory of protected trees within the project site (consisting of three separate evaluation areas [**Figure 1**]) in October 2019. The tree inventory was conducted in accordance with Section 5.9. Existing Tree Removal, Relocation, and Replacement Standards (Tree Standards) of the City-approved University Villages Specific Plan (UVSP; approved on May 31, 2005), the project's Final Environmental Impact Report (FEIR) and Resolution, the project's Mitigation Monitoring and Reporting Program (MMRP), and 2005 Marina Municipal Code (MMC) Chapter 12.04 (Tree Removal, Preservation, and Protection)[1] per MMRP Impact BR-2.2. The methods and results of the field inventory are detailed in the *Tree Survey Results for the Dunes on Monterey Bay Project – Phase 2* (DD&A, 2019), hereafter the "Arborist Report."

Based on the results of the Arborist Report and current design plans (**Appendix A**) for Evaluation Area 3, or "University Villages East," 168[2] of the 234 trees in Evaluation Area 3 are proposed for removal (**Figure 2; Appendix B**). In accordance with the 2005 MMC Chapter 12.04, a tree removal permit from the City is required to remove, damage, or relocate trees within City limits. This report also includes the required components of a tree removal permit application, including a statement on the reason for the requested action, the species, size, health, physical identification tag number, and location (including root zone dripline and canopy) of each tree proposed for removal (**Figure 2**, **Appendix B**), and photographs of each tree proposed for removal (**Appendix C**).

LIMITATIONS

At the direction of SH, this assessment is based exclusively on the UVSP Tree Standards. 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.

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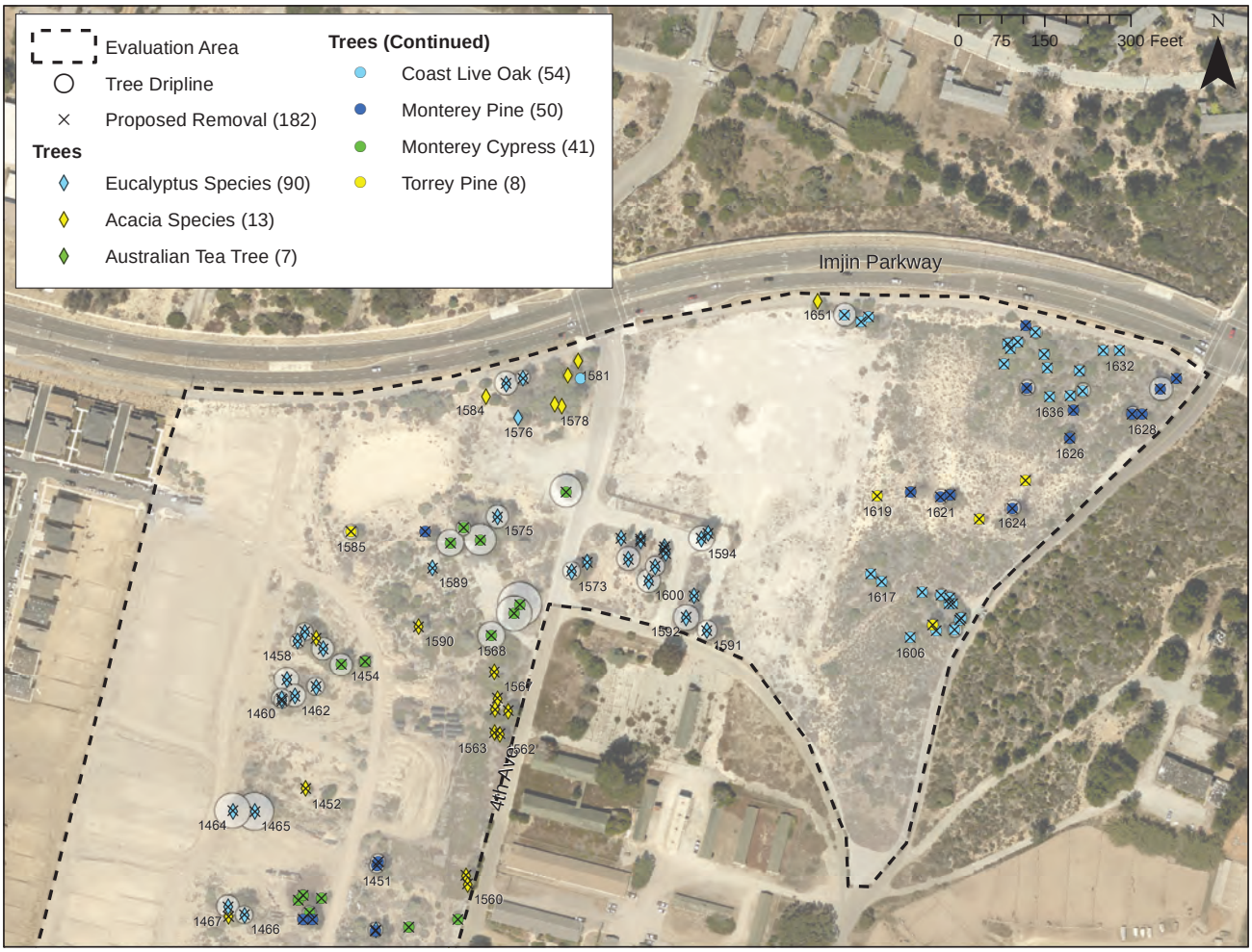
[1] To remain in compliance with the approved MMRP and FEIR, the 2005 MMC 12.04 was used instead of the current MMC 17.51.
[2] Please note that 14 additional acacia trees (*Acacia* spp.) were mapped in Evaluation Area 3 (Figure 2). However, UVSP Development Regulations, Page 118 acacia species were not recorded in the tree table (Appendix B) or in this report.

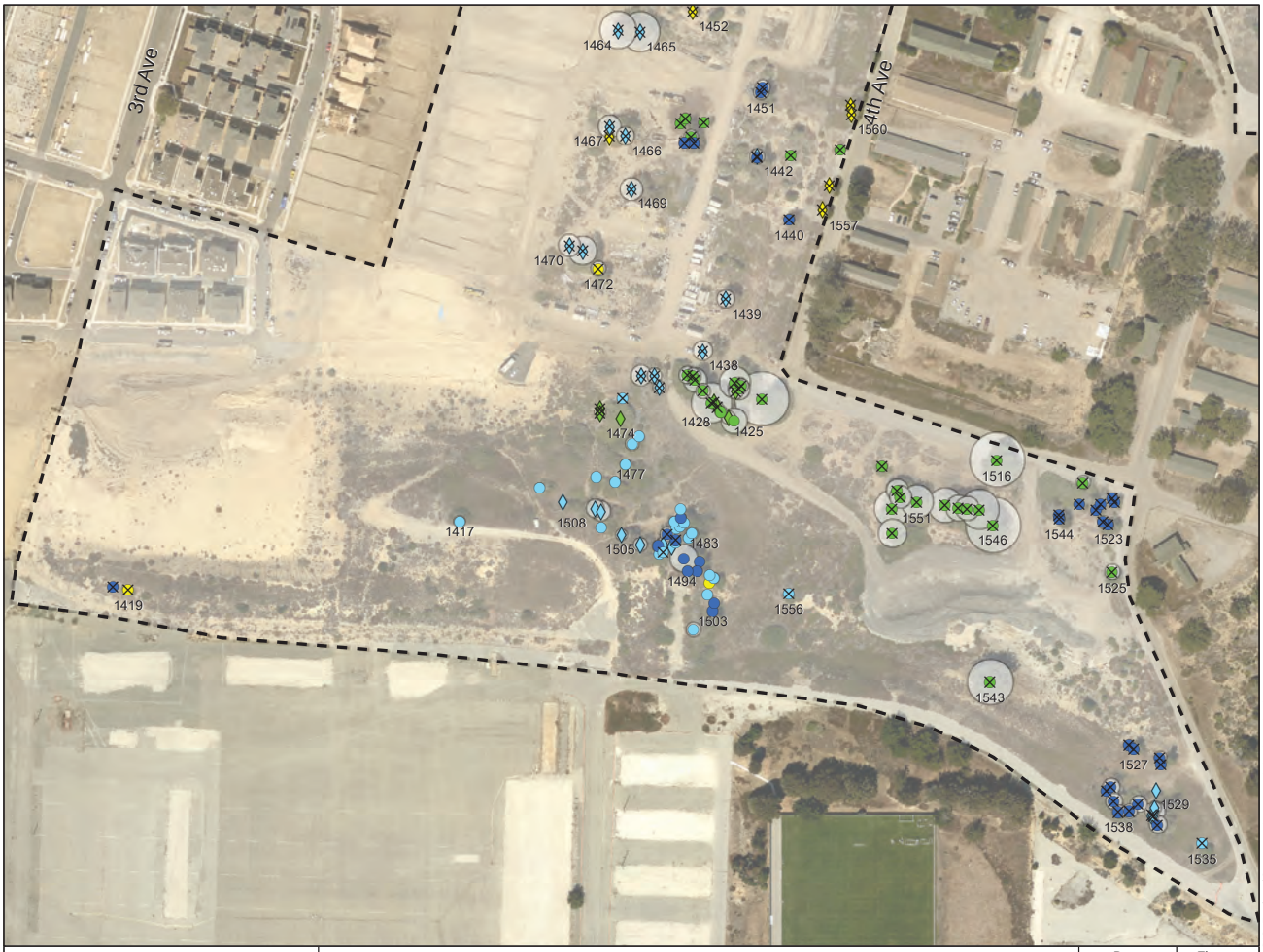
Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

The Dunes on Monterey Bay Project — Phase 2
Project Location Map

Date	Figure
3/17/2020	1
Scale: 1 in = 700 ft	

Path: D:\GIS\GIS_Projects\2017-47 The Dunes\Final Product\2019 Tree Survey\Tree Survey Area.mxd





Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

The Dunes on Monterey Bay Project — Phase 2
Univeristy Villages East Trees Proposed for Removal

Date 3/19/2020
Scale 1 in = 200 ft
Figure 2

Path: D:\GIS\GIS_Projects\2017-47 The Dunes\Final Product\Proposed Tree Removal\Proposed Tree Removal - Area 3.mxd

In addition to an inspection of the property, DD&A relied on information provided by SH (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 the work in accordance with approved plans and specifications.

TREES PROPOSED FOR REMOVAL

As a result of project activities, 168 trees are proposed for removal in Evaluation Area 3 (**Figure 2; Appendix B**). These include:

- 41 Monterey pine trees (*Pinus radiata*) ranging from 6" to 34" DBH,
- 39 Monterey cypress trees (*Hesperocyparis macrocarpa*, syn. *Cupressus macrocarpa*) ranging from 6" to 77" DBH,
- 33 Coast live oak trees (*Quercus agrifolia*) ranging from 6" to 32" DBH,
- Seven Torrey pine trees (*Pinus torreyana*) ranging from 6" to 21" DBH,
- Five Australian tea trees (*Leptospermum laevigatum*) ranging from 6" to 21" DBH, and
- 43 eucalyptus trees (*Eucalyptus* spp.) ranging from 6" to 55" DBH.

Per UVSP Tree Standards, Page 118, eucalyptus condition was not recorded. Of the remaining 125 trees planned for removal in Evaluation Area 3, five are dead, 21 are in poor condition, five are in good condition, and 94 are in fair condition (**Appendix B**). Trees in fair condition are in average vigor for the area, but are showing signs of decay, disease, and/or insect infestations, including root rot fungus (*Armillaria* sp.), bark beetles, coryneum canker fungus (also known as cypress canker), and *Phytophthora* root and crown rot.

A tree removal permit is not required for the five dead trees; however, per the UVSP Tree Standards, dead trees was recorded during the October 2019 field inventory.

DISCUSSION

Aside from the five dead trees, a tree removal permit from the City is required for all 163 live trees, and design plans must incorporate mitigation measures and regulatory requirements of UVSP Tree Standards, as follows:

- Existing trees in good or fair condition to be removed shall be replaced on site at a ratio of two replacement trees for each tree removed (2:1).
- The minimum size of tree selection is 15-gallon. Minimum 24" box trees shall be located in areas of special interest such as focal points and neighborhood entries.
- For any trees proposed to be removed or relocated between January and July, surveys for active nests of birds-of-prey birds shall be undertaken by a qualified biologist. If active nests are found and the biologist determines that construction activities would remove the nest or have the potential to cause abandonment, then those activities shall be avoided until the young have fledged and are no longer dependent upon the nests for survival.

CONCLUSION

Removal and replacement is recommended for 99 trees in good or fair condition (**Figure 1; Appendix B)**. Removal is also recommended for 43 eucalyptus trees; however, per UVSP Tree Standards, the condition of eucalyptus species was not recorded and, therefore, these trees are not required to be replaced. Five trees are dead and are also recommended for removal; however, per UVSP Tree Standards, mitigation for removal of dead trees is also not required. Therefore, per UVSP Tree Standards, a total of 198 replacement plantings are required to mitigate for the removal of the 99 healthy trees.

A tree removal permit from the City is required for all trees except the five dead trees. Best management practices while working around trees are included in **Appendix D.**

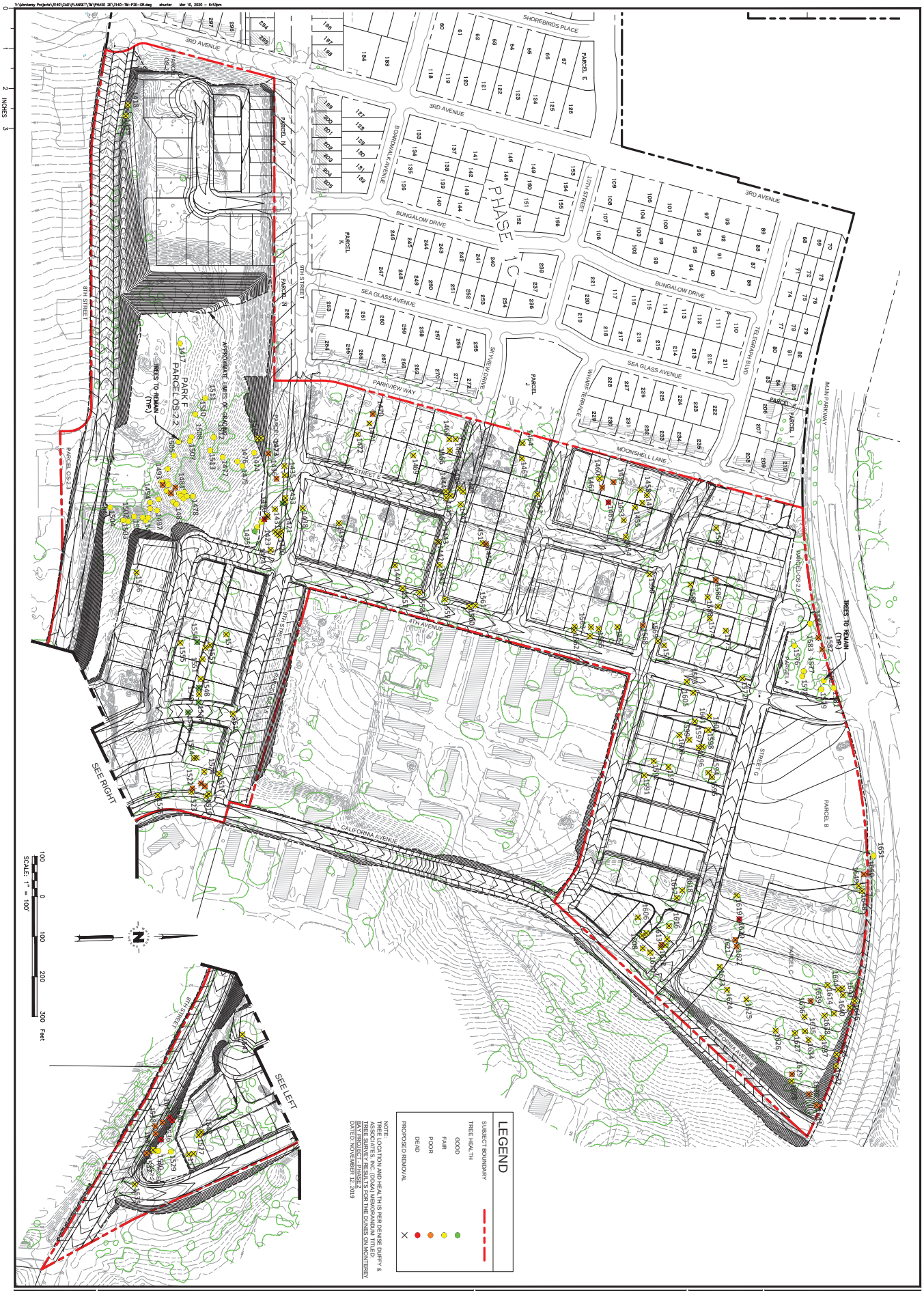
If you have any comments or questions regarding this report, please contact Patric Krabacher at pkrabacher@ddaplanning.com or at (831) 373-4341 ext. 29.

REFERENCES

Denise Duffy and Associates, Inc, 2019. Tree Survey Results for The Dunes on Monterey Bay Project – Phase 2.

APPENDIX A

Site Plan



SHEET	TR-1	SCALE	1" = 100'
OF	8	DRAWN	RAA
		JOB No.	3140.09

AMENDED TENTATIVE MAP
UNIVERSITY VILLAGES - PHASE 2 EAST

TREE PROTECTION AND REMOVAL PLAN

MARINA, CALIFORNIA

SUBMITTAL / REVISION		
	03/10/2020	DRAFT - PRE-SUBMITTAL
	APH	

REGISTERED PROFESSIONAL ENGINEER
ANDREW P. HUNTER
No. 67730
CIVIL
STATE OF CALIFORNIA

Whitson ENGINEERS
Civil Engineering
Land Surveying
6 Harris Court
Monterey, California
831.649.5225
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APPENDIX B

Table of Trees Proposed for Removal

Tree ID	Scientific Name	Common Name	Individual Stem DBH (in)					Total DBH (in)	Dripline (ft)	Condition	Status
1418	*Pinus radiata*	Monterey Pine	6	6				8	5	Fair	Remove and Replace
1419	*Pinus torreyana*	Torrey Pine	6					6	4	Fair	Remove and Replace
1420	*Hesperocyparis macrocarpa*	Monterey Cypress	19					19	12	Fair	Remove and Replace
1421	*Hesperocyparis macrocarpa*	Monterey Cypress	43					43	27	Fair	Remove and Replace
1422	*Hesperocyparis macrocarpa*	Monterey Cypress	31					31	19	Fair	Remove and Replace
1423	*Leptospermum laevigatum*	Australian Tea Tree	15	15				21	13	Fair	Remove and Replace
1424	*Hesperocyparis macrocarpa*	Monterey Cypress	75					75	47	Fair	Remove and Replace
1428	*Leptospermum laevigatum*	Australian Tea Tree	10	12				16	10	Dead	Remove
1429	*Leptospermum laevigatum*	Australian Tea Tree	6					6	4	Fair	Remove and Replace
1430	*Hesperocyparis macrocarpa*	Monterey Cypress	32	30	15	15	26	55	35	Fair	Remove and Replace
1431	*Hesperocyparis macrocarpa*	Monterey Cypress	21					21	13	Fair	Remove and Replace
1432	*Hesperocyparis macrocarpa*	Monterey Cypress	33					33	21	Good	Remove and Replace
1433	*Hesperocyparis macrocarpa*	Monterey Cypress	22					22	14	Fair	Remove and Replace
1434	*Hesperocyparis macrocarpa*	Monterey Cypress	24					24	15	Fair	Remove and Replace
1435	*Eucalyptus sp.*	Eucalyptus	20					20	13	*	Remove
1436	*Eucalyptus sp.*	Eucalyptus	17					17	11	*	Remove
1437	*Eucalyptus sp.*	Eucalyptus	28					28	18	*	Remove
1438	*Eucalyptus sp.*	Eucalyptus	20	11	12	6		26	17	*	Remove
1439	*Eucalyptus sp.*	Eucalyptus	26					26	16	*	Remove
1440	*Pinus radiata*	Monterey Pine	15					15	9	Fair	Remove and Replace
1441	*Hesperocyparis macrocarpa*	Monterey Cypress	7					7	4	Fair	Remove and Replace
1442	*Eucalyptus sp.*	Eucalyptus	21					21	13	*	Remove
1443	*Pinus radiata*	Monterey Pine	6	6				8	5	Fair	Remove and Replace
1444	*Pinus radiata*	Monterey Pine	15					15	9	Fair	Remove and Replace
1445	*Pinus radiata*	Monterey Pine	14					14	9	Fair	Remove and Replace
1446	*Hesperocyparis macrocarpa*	Monterey Cypress	10	10	8	8	6	19	12	Fair	Remove and Replace
1447	*Hesperocyparis macrocarpa*	Monterey Cypress	6					6	4	Fair	Remove and Replace
1448	*Hesperocyparis macrocarpa*	Monterey Cypress	6	13				14	9	Fair	Remove and Replace
1449	*Hesperocyparis macrocarpa*	Monterey Cypress	8					8	5	Fair	Remove and Replace
1450	*Quercus agrifolia*	Coast Live Oak	6	6				8	5	Fair	Remove and Replace
1451	*Pinus radiata*	Monterey Pine	23					23	14	Fair	Remove and Replace
1453	*Hesperocyparis macrocarpa*	Monterey Cypress	32					32	20	Fair	Remove and Replace
1454	*Hesperocyparis macrocarpa*	Monterey Cypress	16					16	10	Fair	Remove and Replace
1455	*Eucalyptus sp.*	Eucalyptus	20	20	10	11		32	20	*	Remove
1457	*Eucalyptus sp.*	Eucalyptus	16	16	11			25	16	*	Remove
1458	*Eucalyptus sp.*	Eucalyptus	6	8	8	17		21	13	*	Remove

Tree ID	Scientific Name	Common Name	Individual Stem DBH (in)							Total DBH (in)	Dripline (ft)	Condition	Status
1459	*Eucalyptus sp.*	Eucalyptus	30	18						35	22	*	Remove
1460	*Eucalyptus sp.*	Eucalyptus	22	16						27	17	*	Remove
1461	*Eucalyptus sp.*	Eucalyptus	22							22	14	*	Remove
1462	*Eucalyptus sp.*	Eucalyptus	32							32	20	*	Remove
1463	*Eucalyptus sp.*	Eucalyptus	25							25	16	*	Remove
1464	*Eucalyptus sp.*	Eucalyptus	32	32	23					51	32	*	Remove
1465	*Eucalyptus sp.*	Eucalyptus	25	25	16	24	8	30		55	34	*	Remove
1466	*Eucalyptus sp.*	Eucalyptus	25							25	16	*	Remove
1467	*Eucalyptus sp.*	Eucalyptus	32							32	20	*	Remove
1469	*Eucalyptus sp.*	Eucalyptus	18	14	14	10	12	6	6	32	20	*	Remove
1470	*Eucalyptus sp.*	Eucalyptus	30							30	19	*	Remove
1471	*Eucalyptus sp.*	Eucalyptus	26	24	14	11				40	25	*	Remove
1472	*Pinus torreyana*	Torrey Pine	20							20	13	Fair	Remove and Replace
1473	*Quercus agrifolia*	Coast Live Oak	7	6						9	6	Poor	Remove
1486	*Pinus radiata*	Monterey Pine	19	10						21	13	Poor	Remove
1487	*Pinus radiata*	Monterey Pine	11							11	7	Poor	Remove
1490	*Quercus agrifolia*	Coast Live Oak	8	7	7	6				14	9	Poor	Remove
1514	*Leptospermum laevigatum*	Australian Tea Tree	8	10	10					16	10	Fair	Remove and Replace
1515	*Leptospermum laevigatum*	Australian Tea Tree	9							9	6	Fair	Remove and Replace
1516	*Hesperocyparis macrocarpa*	Monterey Cypress	76							76	48	Fair	Remove and Replace
1517	*Hesperocyparis macrocarpa*	Monterey Cypress	17	7	7					20	12	Fair	Remove and Replace
1518	*Pinus radiata*	Monterey Pine	12							12	8	Fair	Remove and Replace
1519	*Pinus radiata*	Monterey Pine	6							6	4	Fair	Remove and Replace
1520	*Pinus radiata*	Monterey Pine	7							7	4	Poor	Remove
1521	*Pinus radiata*	Monterey Pine	9							9	6	Poor	Remove
1522	*Pinus radiata*	Monterey Pine	18							18	11	Poor	Remove
1523	*Pinus radiata*	Monterey Pine	13							13	8	Fair	Remove and Replace
1524	*Pinus radiata*	Monterey Pine	7							7	4	Fair	Remove and Replace
1525	*Hesperocyparis macrocarpa*	Monterey Cypress	23							23	14	Fair	Remove and Replace
1526	*Pinus radiata*	Monterey Pine	10							10	6	Fair	Remove and Replace
1527	*Pinus radiata*	Monterey Pine	9							9	6	Fair	Remove and Replace
1528	*Pinus radiata*	Monterey Pine	17							17	11	Fair	Remove and Replace
1532	*Pinus radiata*	Monterey Pine	25							25	16	Poor	Remove
1533	*Eucalyptus sp.*	Eucalyptus	11	10						15	9	*	Remove
1534	*Eucalyptus sp.*	Eucalyptus	14							14	9	*	Remove
1535	*Quercus agrifolia*	Coast Live Oak	6	6						8	5	Fair	Remove and Replace

Tree ID	Scientific Name	Common Name	Individual Stem DBH (in)			Total DBH (in)	Dripline (ft)	Condition	Status
1536	*Pinus radiata*	Monterey Pine	24			24	15	Dead	Remove
1537	*Pinus radiata*	Monterey Pine	21			21	13	Poor	Remove
1538	*Pinus radiata*	Monterey Pine	19			19	12	Poor	Remove
1539	*Pinus radiata*	Monterey Pine	24			24	15	Poor	Remove
1540	*Pinus radiata*	Monterey Pine	24			24	15	Dead	Remove
1541	*Pinus radiata*	Monterey Pine	12			12	8	Dead	Remove
1542	*Pinus radiata*	Monterey Pine	14			14	9	Fair	Remove and Replace
1543	*Hesperocyparis macrocarpa*	Monterey Cypress	64			64	40	Fair	Remove and Replace
1544	*Pinus radiata*	Monterey Pine	14			14	9	Fair	Remove and Replace
1545	*Pinus radiata*	Monterey Pine	6	9		11	7	Fair	Remove and Replace
1546	*Hesperocyparis macrocarpa*	Monterey Cypress	77			77	48	Good	Remove and Replace
1547	*Hesperocyparis macrocarpa*	Monterey Cypress	55			55	34	Good	Remove and Replace
1548	*Hesperocyparis macrocarpa*	Monterey Cypress	33			33	21	Fair	Remove and Replace
1549	*Hesperocyparis macrocarpa*	Monterey Cypress	35			35	22	Good	Remove and Replace
1550	*Hesperocyparis macrocarpa*	Monterey Cypress	48			48	30	Fair	Remove and Replace
1551	*Hesperocyparis macrocarpa*	Monterey Cypress	45			45	28	Fair	Remove and Replace
1552	*Hesperocyparis macrocarpa*	Monterey Cypress	30			30	19	Fair	Remove and Replace
1553	*Hesperocyparis macrocarpa*	Monterey Cypress	30			30	19	Fair	Remove and Replace
1554	*Hesperocyparis macrocarpa*	Monterey Cypress	50			50	31	Good	Remove and Replace
1555	*Hesperocyparis macrocarpa*	Monterey Cypress	40			40	25	Fair	Remove and Replace
1556	*Quercus agrifolia*	Coast Live Oak	10			10	6	Fair	Remove and Replace
1559	*Hesperocyparis macrocarpa*	Monterey Cypress	6	6	7	11	7	Fair	Remove and Replace
1568	*Hesperocyparis macrocarpa*	Monterey Cypress	39			39	24	Poor	Remove
1569	*Hesperocyparis macrocarpa*	Monterey Cypress	50			50	31	Fair	Remove and Replace
1570	*Hesperocyparis macrocarpa*	Monterey Cypress	62			62	39	Fair	Remove and Replace
1571	*Hesperocyparis macrocarpa*	Monterey Cypress	10	7		12	8	Fair	Remove and Replace
1572	*Hesperocyparis macrocarpa*	Monterey Cypress	44			44	28	Fair	Remove and Replace
1573	*Eucalyptus sp.*	Eucalyptus	13	11	19	26	16	*	Remove
1574	*Hesperocyparis macrocarpa*	Monterey Cypress	44			44	28	Fair	Remove and Replace
1575	*Eucalyptus sp.*	Eucalyptus	32	6		33	20	*	Remove
1582	*Eucalyptus sp.*	Eucalyptus	20			20	13	*	Remove
1583	*Eucalyptus sp.*	Eucalyptus	33			33	21	*	Remove
1585	*Pinus torreyana*	Torrey Pine	21			21	13	Fair	Remove and Replace
1586	*Pinus radiata*	Monterey Pine	15			15	9	Poor	Remove
1587	*Hesperocyparis macrocarpa*	Monterey Cypress	21			21	13	Fair	Remove and Replace
1588	*Hesperocyparis macrocarpa*	Monterey Cypress	39			39	24	Fair	Remove and Replace

Tree ID	Scientific Name	Common Name	Individual Stem DBH (in)																Total DBH (in)	Dripline (ft)	Condition	Status
1589	*Eucalyptus sp.*	Eucalyptus	7																7	4	*	Remove
1591	*Eucalyptus sp.*	Eucalyptus	8	10	10	10	11	12	10	7	7								29	18	*	Remove
1592	*Eucalyptus sp.*	Eucalyptus	11	11	10	6	6	13	12	6	10	6	10	9	7	12	8		37	23	*	Remove
1593	*Eucalyptus sp.*	Eucalyptus	17																17	11	*	Remove
1594	*Eucalyptus sp.*	Eucalyptus	13	15	15	13	12	9	17	8									37	23	*	Remove
1595	*Eucalyptus sp.*	Eucalyptus	13																13	8	*	Remove
1596	*Eucalyptus sp.*	Eucalyptus	6																6	4	*	Remove
1597	*Eucalyptus sp.*	Eucalyptus	8																8	5	*	Remove
1598	*Eucalyptus sp.*	Eucalyptus	9																9	6	*	Remove
1599	*Eucalyptus sp.*	Eucalyptus	13	10	8	11	10	11	9										27	17	*	Remove
1600	*Eucalyptus sp.*	Eucalyptus	33																33	21	*	Remove
1601	*Eucalyptus sp.*	Eucalyptus	16	13	13	8	6	15	11	9									33	21	*	Remove
1602	*Eucalyptus sp.*	Eucalyptus	9																9	6	*	Remove
1603	*Eucalyptus sp.*	Eucalyptus	9	9															13	8	*	Remove
1604	*Eucalyptus sp.*	Eucalyptus	6	12															13	8	*	Remove
1605	*Eucalyptus sp.*	Eucalyptus	9	9	8														15	9	*	Remove
1606	*Quercus agrifolia*	Coast Live Oak	6	6															8	5	Fair	Remove and Replace
1607	*Pinus torreyana*	Torrey Pine	16																16	10	Fair	Remove and Replace
1608	*Quercus agrifolia*	Coast Live Oak	9	6															11	7	Fair	Remove and Replace
1609	*Quercus agrifolia*	Coast Live Oak	13	10	6	8	6												20	13	Fair	Remove and Replace
1610	*Quercus agrifolia*	Coast Live Oak	16																16	10	Fair	Remove and Replace
1611	*Quercus agrifolia*	Coast Live Oak	7																7	4	Fair	Remove and Replace
1612	*Quercus agrifolia*	Coast Live Oak	8	6															10	6	Fair	Remove and Replace
1613	*Quercus agrifolia*	Coast Live Oak	7	7															10	6	Poor	Remove
1614	*Quercus agrifolia*	Coast Live Oak	6																6	4	Fair	Remove and Replace
1615	*Quercus agrifolia*	Coast Live Oak	13	10	6														17	11	Fair	Remove and Replace
1616	*Quercus agrifolia*	Coast Live Oak	9	7															11	7	Fair	Remove and Replace
1617	*Quercus agrifolia*	Coast Live Oak	7	6															9	6	Fair	Remove and Replace
1618	*Quercus agrifolia*	Coast Live Oak	6	6	8														12	7	Fair	Remove and Replace
1619	*Pinus torreyana*	Torrey Pine	7																7	4	Fair	Remove and Replace
1620	*Pinus radiata*	Monterey Pine	10	9															13	8	Dead	Remove
1621	*Pinus radiata*	Monterey Pine	20																20	13	Poor	Remove
1622	*Pinus radiata*	Monterey Pine	10	9	9														16	10	Poor	Remove
1623	*Pinus torreyana*	Torrey Pine	6																6	4	Fair	Remove and Replace
1624	*Pinus radiata*	Monterey Pine	22	6															23	14	Fair	Remove and Replace
1625	*Pinus torreyana*	Torrey Pine	6																6	4	Fair	Remove and Replace

Tree ID	Scientific Name	Common Name	Individual Stem DBH (in)					Total DBH (in)	Dripline (ft)	Condition	Status
1626	*Pinus radiata*	Monterey Pine	16					16	10	Fair	Remove and Replace
1627	*Pinus radiata*	Monterey Pine	11	7				13	8	Fair	Remove and Replace
1628	*Pinus radiata*	Monterey Pine	8					8	5	Fair	Remove and Replace
1629	*Pinus radiata*	Monterey Pine	19					19	12	Poor	Remove
1630	*Pinus radiata*	Monterey Pine	33	9				34	21	Poor	Remove
1631	*Pinus radiata*	Monterey Pine	7					7	4	Poor	Remove
1632	*Quercus agrifolia*	Coast Live Oak	7	6				9	6	Fair	Remove and Replace
1633	*Quercus agrifolia*	Coast Live Oak	7					7	4	Fair	Remove and Replace
1634	*Quercus agrifolia*	Coast Live Oak	13	11	7	6	8	21	13	Fair	Remove and Replace
1635	*Quercus agrifolia*	Coast Live Oak	12					12	8	Fair	Remove and Replace
1636	*Quercus agrifolia*	Coast Live Oak	6					6	4	Fair	Remove and Replace
1637	*Quercus agrifolia*	Coast Live Oak	12	6	10			17	10	Fair	Remove and Replace
1638	*Quercus agrifolia*	Coast Live Oak	6	6				8	5	Fair	Remove and Replace
1639	*Pinus radiata*	Monterey Pine	23					23	14	Poor	Remove
1640	*Quercus agrifolia*	Coast Live Oak	10	9				13	8	Fair	Remove and Replace
1641	*Quercus agrifolia*	Coast Live Oak	8	7	7			13	8	Fair	Remove and Replace
1643	*Quercus agrifolia*	Coast Live Oak	12	10				16	10	Fair	Remove and Replace
1644	*Quercus agrifolia*	Coast Live Oak	6	6				8	5	Fair	Remove and Replace
1645	*Quercus agrifolia*	Coast Live Oak	10	12				16	10	Fair	Remove and Replace
1646	*Pinus radiata*	Monterey Pine	7					7	4	Fair	Remove and Replace
1647	*Quercus agrifolia*	Coast Live Oak	11	11	9			18	11	Fair	Remove and Replace
1648	*Quercus agrifolia*	Coast Live Oak	8	7	6			12	8	Fair	Remove and Replace
1649	*Quercus agrifolia*	Coast Live Oak	7					7	4	Fair	Remove and Replace
1650	*Quercus agrifolia*	Coast Live Oak	13	22	20			32	20	Poor	Remove

*Per UVSP Tree Standards, eucalyptus condition was not recorded.

APPENDIX C

Photo Log

Tree 1418. Monterey Pine

Tree 1419. Torrey Pine

Tree 1420. Monterey Cypress

Tree 1421. Monterey Cypress

Tree 1422. Monterey Cypress

Tree 1423. Australian Tea Tree

Tree 1424. Monterey Cypress

Tree 1428. Australian Tea Tree

Tree 1429. Australian Tea Tree

Tree 1430. Monterey Cypress

Tree 1431. Monterey Cypress

1432. Tree Monterey Cypress

Tree 1433. Monterey Cypress

Tree 1434. Monterey Cypress

Tree 1435. Eucalyptus

Tree 1436. Eucalyptus

Tree 1437. Eucalyptus

Tree 1438. Eucalyptus

Tree 1439. Eucalyptus

Tree 1440. Monterey Pine

Tree 1441. Monterey Cypress

Tree 1442. Eucalyptus

Tree 1443. Monterey Pine

Tree 1444. Monterey Pine

Tree 1445. Monterey Pine

Tree 1446. Monterey Cypress

Tree 1447. Monterey Cypress

Tree 1448. Monterey Cypress

Tree 1449. Monterey Cypress

Tree 1450. Monterey Cypress

Tree 1451. Monterey Pine

Tree 1453. Monterey Cypress

Tree 1454. Monterey Cypress

Tree 1455. Eucalyptus

Tree 1457. Eucalyptus

Tree 1458. Eucalyptus

Tree 1459. Eucalyptus

Tree 1460. Eucalyptus

Tree 1461. Eucalyptus

Tree 1462. Eucalyptus

Tree 1463. Eucalyptus

Tree 1464. Eucalyptus

Tree 1465. Eucalyptus

Tree 1466. Eucalyptus

Tree 1467. Eucalyptus

Tree 1469. Eucalyptus

Tree 1470. Eucalyptus

Tree 1471. Eucalyptus

Tree 1472. Torrey Pine

Tree 1473. Coast Live Oak

Tree 1486. Monterey Pine

Tree 1487. Monterey Pine

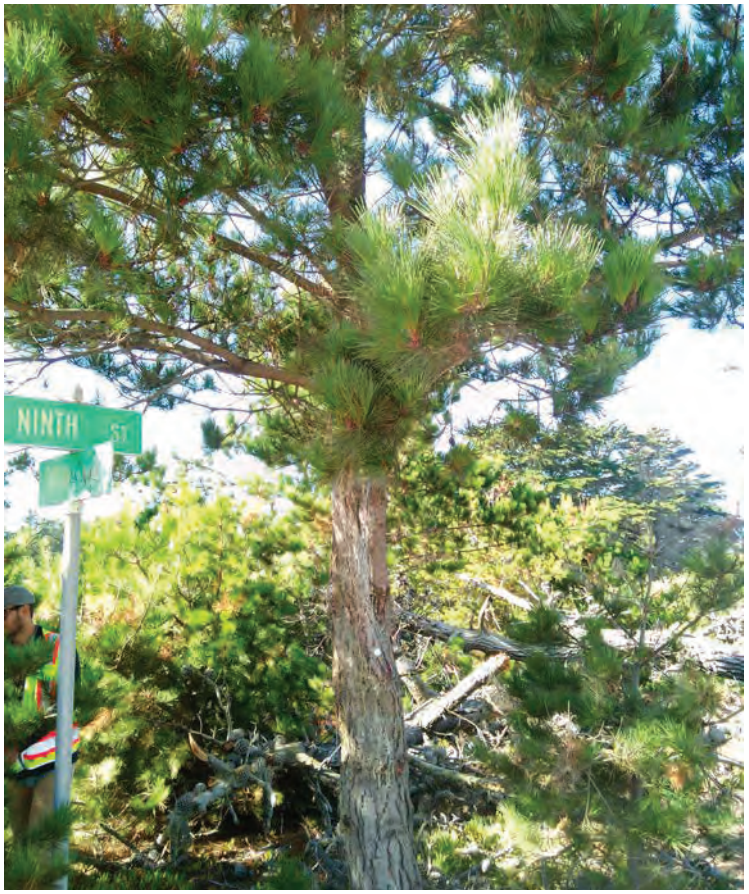
Tree 1490. Coast Live Oak

Tree 1514. Australian Tea Tree

Tree 1515. Australian Tea Tree

Tree 1516. Monterey Cypress

Tree 1517. Monterey Cypress



Tree 1518. Monterey Pine

Tree 1519. Monterey Pine

Tree 1520. Monterey Pine

Tree 1521. Monterey Pine

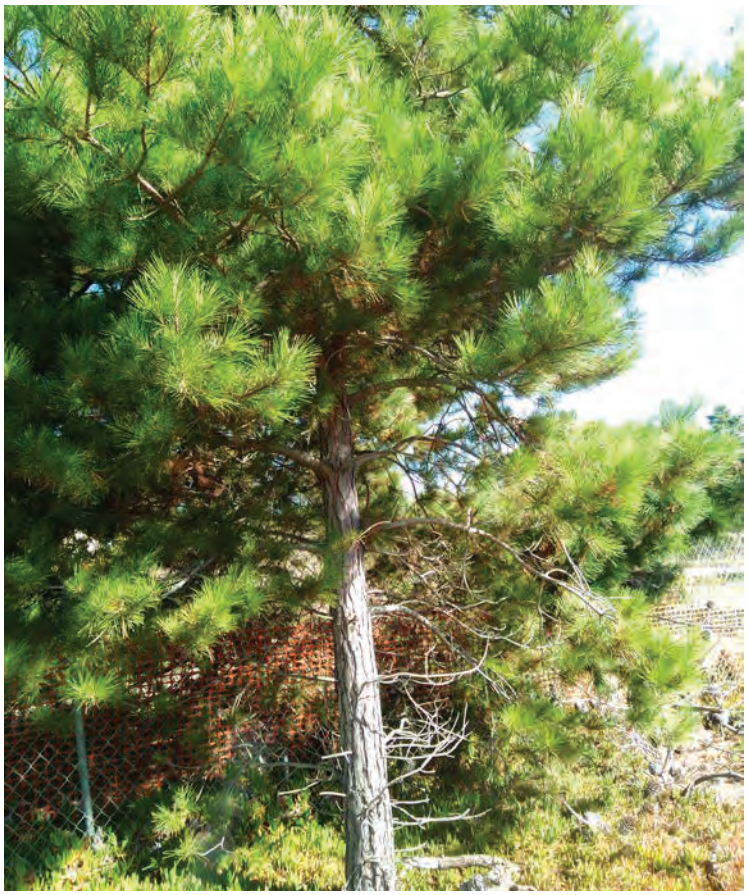
Tree 1522. Monterey Pine

Tree 1523. Monterey Pine

Tree 1524. Monterey Pine

Tree 1525. Monterey Cypress

Tree 1526. Monterey Pine



Tree 1527. Monterey Pine

Tree 1528. Monterey Pine

Tree 1532. Monterey Pine

Tree 1533. Eucalyptus

Tree 1534. Eucalyptus

Tree 1535. Coast Live Oak

Tree 1536. Monterey Pine

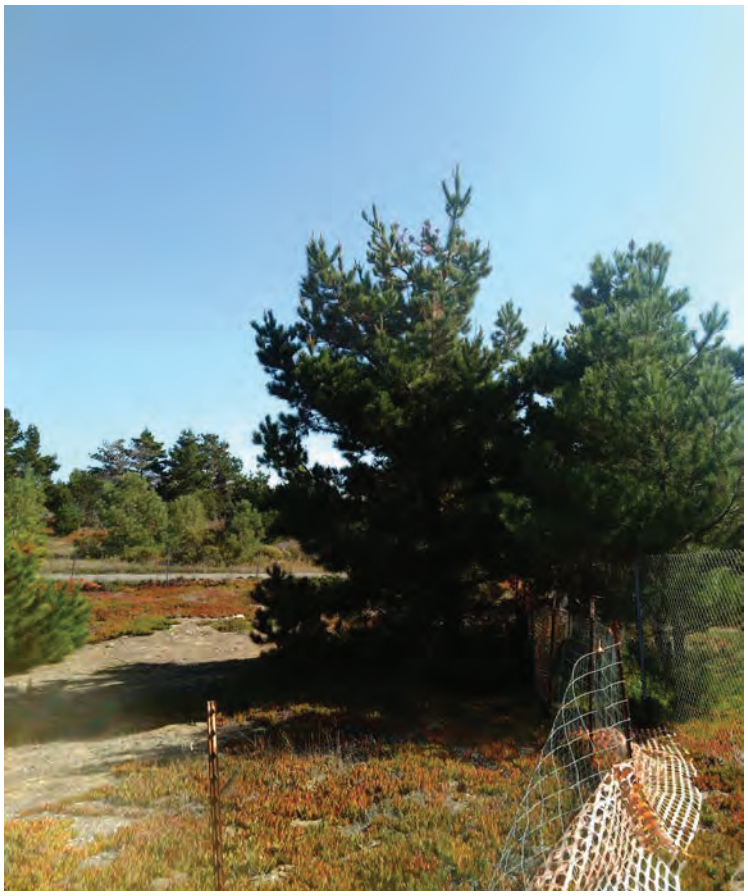
Tree 1537. Monterey Pine

Tree 1538. Monterey Pine

Tree 1539. Monterey Pine

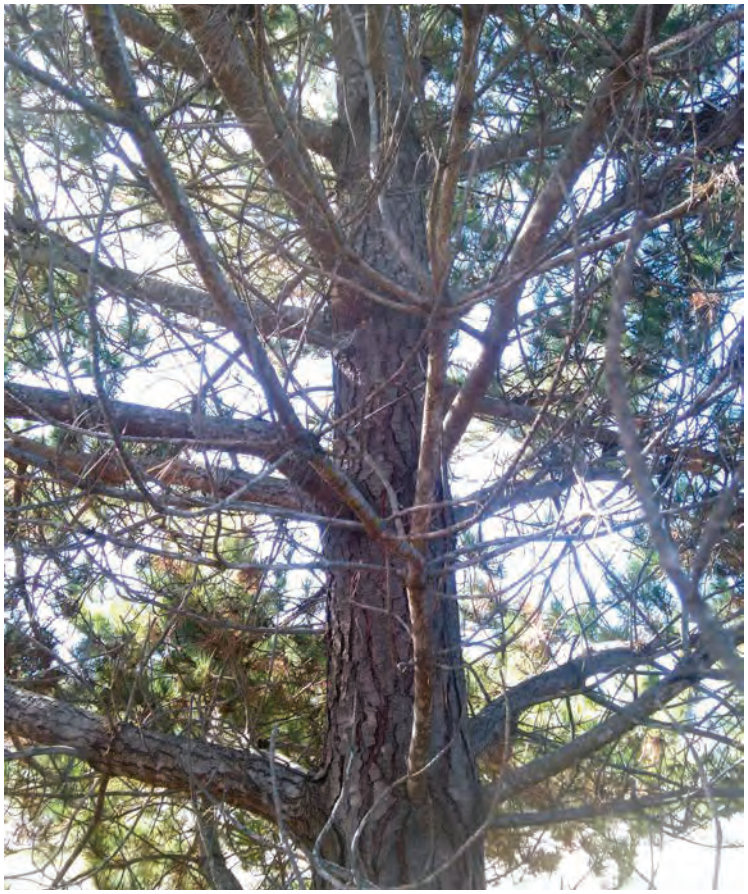
Tree 1540. Monterey Pine

Tree 1541. Monterey Pine



Tree 1542. Monterey Pine

Tree 1543. Monterey Cypress



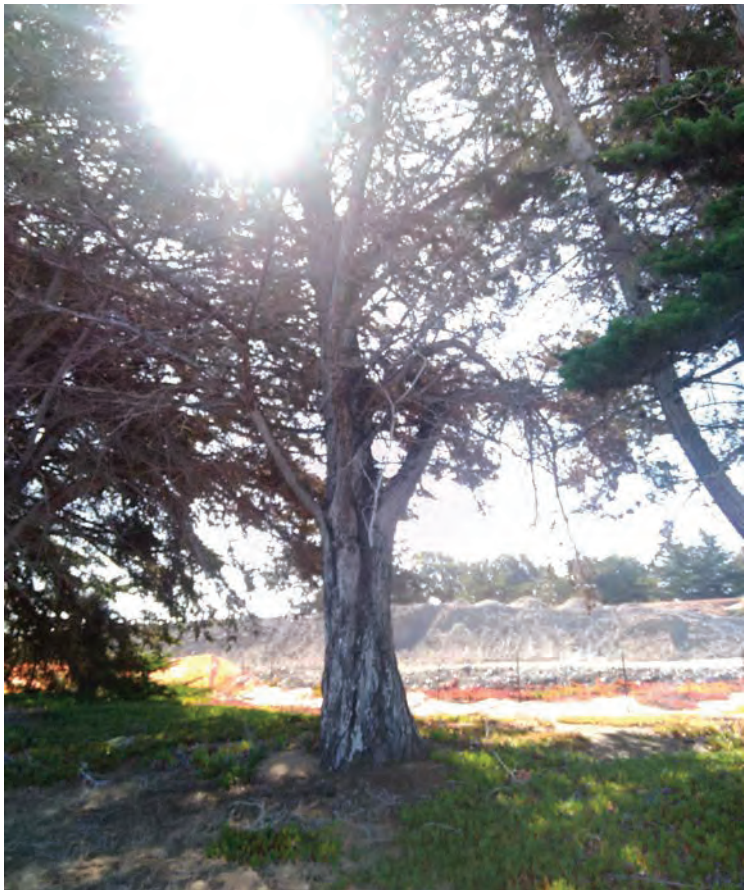
Tree 1544. Monterey Pine

Tree 1545. Monterey Pine

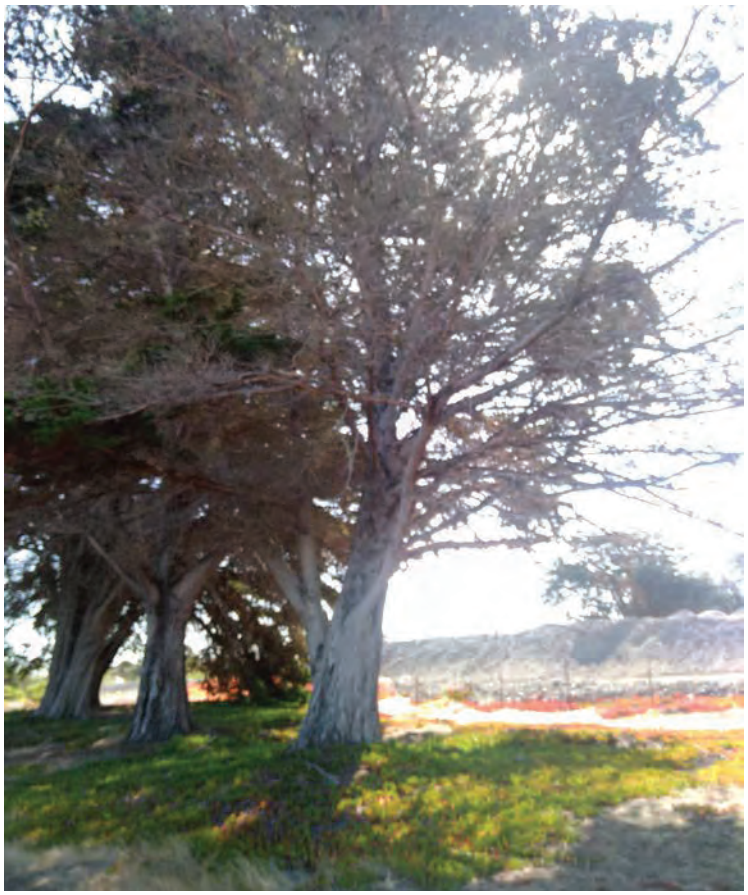
Tree 1546. Monterey Cypress

Tree 1547. Monterey Cypress

Tree 1548. Monterey Cypress



Tree 1549. Monterey Cypress



Tree 1550. Monterey Cypress

Tree 1551. Monterey Cypress

Tree 1552. Monterey Cypress

Tree 1553. Monterey Cypress

Tree 1554. Monterey Cypress

Tree 1555. Monterey Cypress

Tree 1556. Coast Live Oak

Tree 1559. Monterey Cypress

Tree 1568. Monterey Cypress

Tree 1569. Monterey Cypress

Tree 1570. Monterey Cypress

Tree 1571. Monterey Cypress

Tree 1572. Monterey Cypress

Tree 1573. Eucalyptus

Tree 1574. Monterey Cypress

Tree 1575. Eucalyptus

Tree 1582. Eucalyptus

Tree 1583. Eucalyptus

Tree 1585. Torrey Pine

Tree 1586. Monterey Pine

Tree 1587. Monterey Cypress

Tree 1588. Monterey Cypress

Tree 1589. Eucalyptus

Tree 1591. Eucalyptus

Tree 1592. Eucalyptus

Tree 1593. Eucalyptus

Tree 1594. Eucalyptus

Tree 1595. Eucalyptus

Tree 1596. Eucalyptus

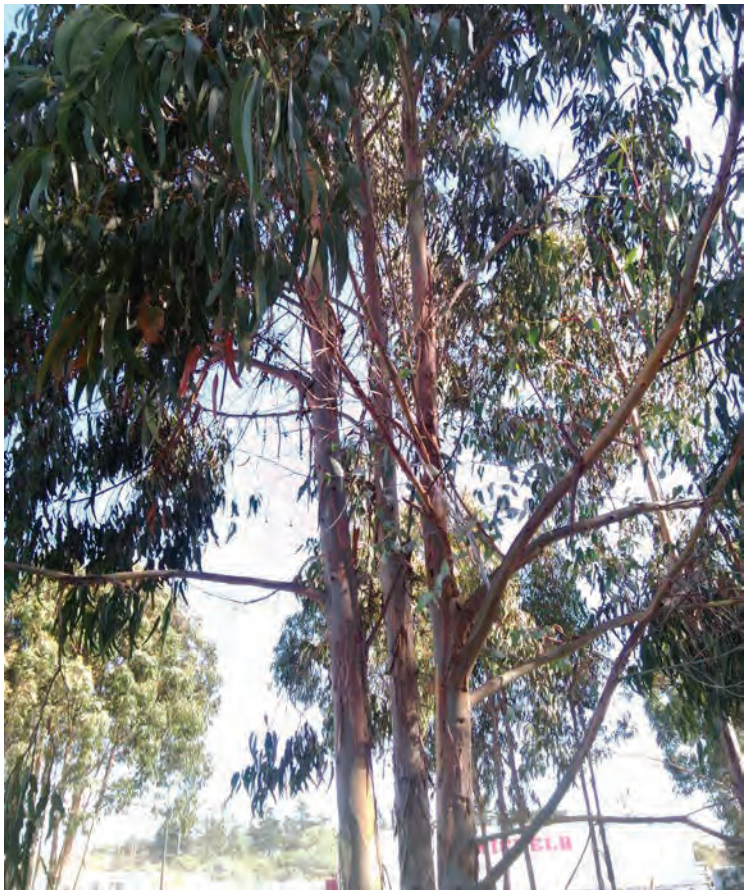
Tree 1597. Eucalyptus

Tree 1598. Eucalyptus

Tree 1600. Eucalyptus

Tree 1601. Eucalyptus

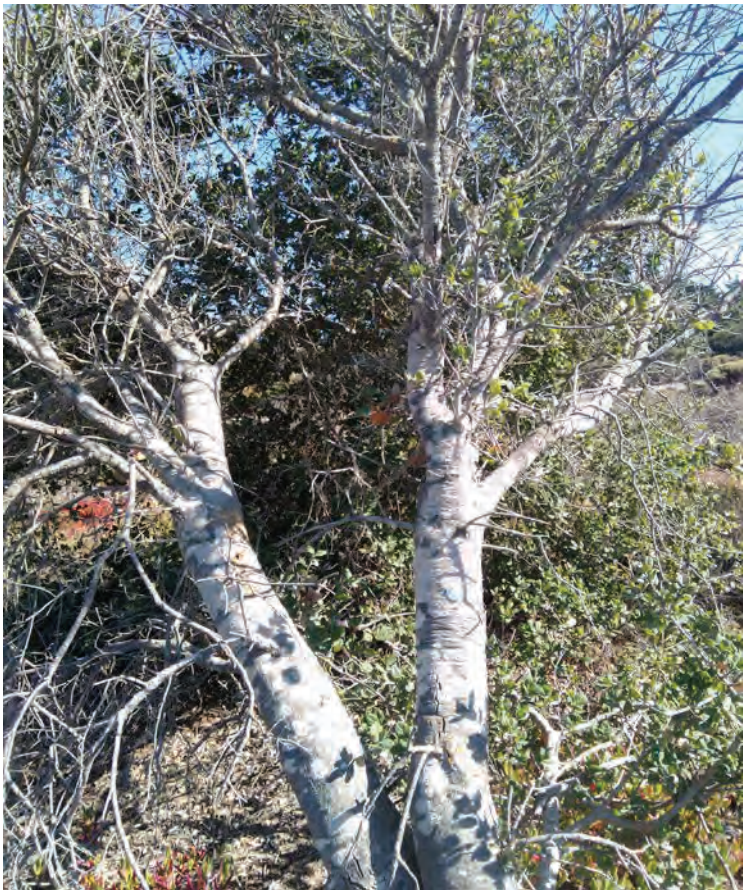
Tree 1602. Eucalyptus



Tree 1603. Eucalyptus

Tree 1604. Eucalyptus

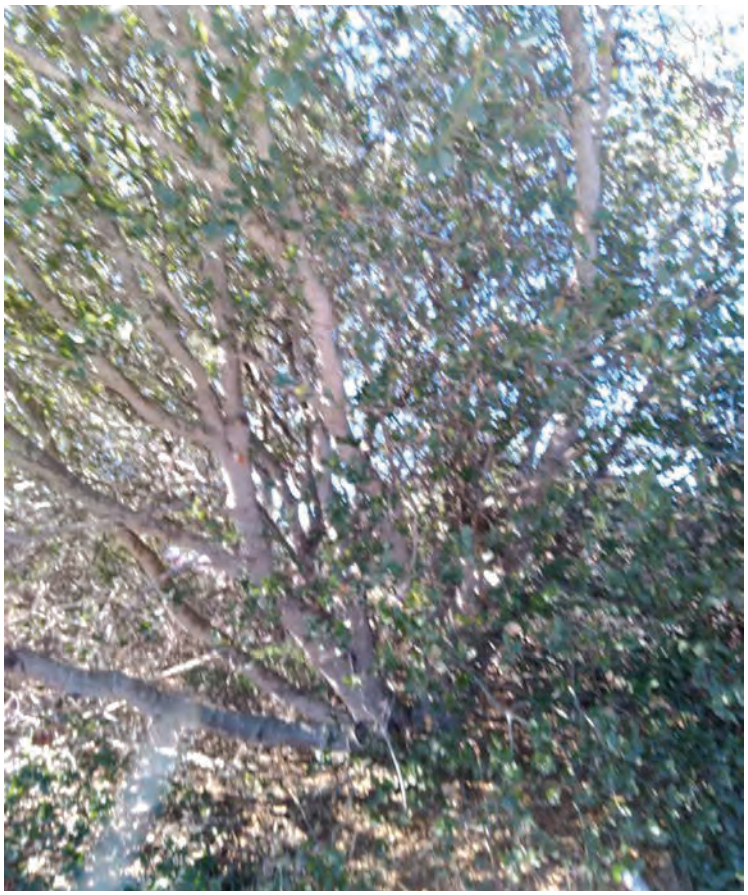
Tree 1605. Eucalyptus



Tree 1606. Coast Live Oak

Tree 1607. Torrey Pine

Tree 1608. Coast Live Oak



Tree 1609. Coast Live Oak

Tree 1610. Coast Live Oak

Tree 1611. Coast Live Oak

Tree 1612. Coast Live Oak

Tree 1613. Coast Live Oak

Tree 1614. Coast Live Oak

Tree 1615. Coast Live Oak

Tree 1616. Coast Live Oak

Tree 1617. Coast Live Oak

Tree 1618. Coast Live Oak

Tree 1619. Torrey Pine

Tree 1620. Monterey Pine

Tree 1621. Monterey Pine

Tree 1622. Monterey Pine

Tree 1623. Torrey Pine

Tree 1624. Monterey Pine

Tree 1625. Torrey Pine

Tree 1626. Monterey Pine

Tree 1627. Monterey Pine

Tree 1628. Monterey Pine

Tree 1629. Monterey Pine

Tree 1630. Monterey Pine

Tree 1631. Monterey Pine

Tree 1632. Coast Live Oak

Tree 1633. Coast Live Oak

Tree 1634. Coast Live Oak

Tree 1635. Coast Live Oak

Tree 1636. Coast Live Oak

Tree 1637. Coast Live Oak

Tree 1638. Coast Live Oak

Tree 1639. Monterey Pine

Tree 1640. Coast Live Oak

Tree 1641. Coast Live Oak

Tree 1643. Coast Live Oak

Tree 1644. Coast Live Oak

Tree 1645. Coast Live Oak

Tree 1646. Monterey Pine

Tree 1647. Coast Live Oak

Tree 1648. Coast Live Oak

Tree 1649. Coast Live Oak

Tree 1650. Coast Live Oak

APPENDIX D

Best Management Practices When Working Near Trees

RECOMMENDED BEST MANAGEMENT PRACTICIES FOR TREE PRESERVATION

Tree Protection

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) unless an alternate location is determined essential to the construction of the project. 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 two inches or more, 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.
- 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.